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THE TREATMENT OF ACUTE RHEUMATISM.

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IN a discussion of the treatment of acute rheumatism, the pathogenetic relations of the disease may seem to be a rather remote subject; but, to render my position clear, it is necessary to formulate, as briefly as may be, my conception of the nature of the rheumatic diathesis. The chemical theory which refers the joint troubles and the cardiac complications to an acid circulating in the blood, receives support from clinical facts and from the results of experiment. No theory can be true, however, which does not reconcile all the facts, and there are many which cannot be included in this chemical theory. There is an influence behind those chemical processes, which, in the so-called rheumatic diathesis, is concerned in the secondary assimilation to produce an excess of acid. That influence, we have many reasons for believing, proceeds from the nervous system. There are numerous facts which go to show that certain parts of the cerebro-spinal axis cause, when irritated, affections of the joints not unlike rheumatism. We owe more especially to Charcot¹ the accurate description of these joint diseases as they occur in connection with posterior spinal sclerosis, or locomotor ataxia. Long before Charcot's appearance on the medical stage, a neurotic theory of rheumatism had been propounded by that acute clinician, the late Prof. J. K. Mitchell, M.D., of Jefferson Medical College, Philadelphia. An account of his theory, based on the then existing knowledge of nervous pathology, may be found in a volume, prepared with a pious deference to a father's memory, by the more distinguished son, Dr. S. Weir Mitchell, of Philadelphia. It has happened, curiously enough, that the son has greatly enlarged the evidence on which the father's theory was based.

In his volume on "Wounds and Injuries of Nerves," Dr. Weir Mitchell gives many striking examples of joint troubles resulting from nerve and spinal injuries. Charcot, in connection with Joffroy,² Ball,³ Weir Mitchell,⁴ Buzzard,⁵ and others, have published numerous examples of arthropathy, in many features resembling the joint affection of acute rheumatism, only more severe and profounder in the depth and extent of the lesions. It is important to note in this connection that the joint changes of locomotor ataxia belong to the initial stage of tabes—to the stage of pains, and before the disorders of motility come on. It is evident, therefore, from this fact, that the spinal lesion is rather in the nature of an irritation. We may form a suspicion of the nature of the trophic lesions of joints due to centric affections by an examination of the nutritional changes wrought by irritation or inflammation of nerve-trunks. The data to be obtained on this point are very numerous. I can here hope to refer to the best-established facts as a groundwork on which to base my conception of the neurotic origin of rheumatism. In addition, then, to the

evidence furnished by the development of certain joint changes in the initial stage of tabes, we have some striking facts in regard to affections of joints produced by irritation of nerve-trunks. Thus, swelling of joints due to effusion has been observed in cases of neuritis. Indeed, Erb¹ affirms that these joint affections are in no way distinguishable from rheumatism. Friedreich,² in his monumental work, has collected a vast array of evidence showing the influence of nerve-inflammation on the nutrition of parts. Without occupying further space and time with this question, it may be affirmed that joint affections closely related to rheumatism are caused by certain spinal and nerve lesions, and hence we may regard it as probable, if not proved, that in the treatment of acute rheumatism we have to deal with a neurotic affection. Whilst it is a fundamental maxim in therapeutics to direct the remedies against the central lesion, the wise physician will not fail if he can remove the more prominent symptoms, for, in the present state of our knowledge, we are not often able to separate the lesion from its most accentuated symptoms in respect to the administration of remedies.

Having thus tried to establish the therapeutical diagnosis, the next point is to indicate the remedies which will supply the conditions thus furnished. There is no specific for rheumatism. We are, therefore, reduced to the necessity of proposing remedies for centric or peripheral nervous lesions, and for the more prominent symptomatic expression of these lesions.

No one can give anything like attentive consideration to the types of rheumatic cases without perceiving that they may be resolved into three groups, as regards the characteristics of the individuals composing them:

First.—Spare persons of considerable bodily vigor, good muscular development, and having a distinct family history of neurotic or rheumatismal disorders.

Second.—Obese subjects, addicted to malt liquors and good living, sometimes with—more often without—an inherited predisposition to rheumatic diseases: the gelatinous descendants of albuminous parents, as they have been entitled.

Third.—The feeble, pale anæmic subject, depressed by poor diet, and evil hygienic surroundings, including dampness and bad air.

No one can treat cases of rheumatism successfully unless he recognizes the type before him and adapts his remedies accordingly.

The first type is comparatively frequent, and found amongst the best elements of our mongrel population. Besides the inherited tendency, such subjects are prone to indulge in a rich diet of animal food, sauces, and wines, and to pursue rather sedentary occupations, or an indoor life. In these cases, salicylic acid, or the salicylate of soda, renders an incontestible service. It would be quite impossible to enter into details regarding this remedy's *modus operandi* just here, except to say that its antipyretic and antiseptic actions are quite inadequate to explain its curative effects in these cases of acute rheumatism. There can be little doubt that its curative effects are rather referable to its power to diminish the irritation of the trophic nervous system. There are, however, some practical details regarding its administration of great moment in respect to the permanency of

¹ Leçons sur les Maladies du Système Nerveux. Paris, 1873.

² Archives de Physiologie, Normale et Pathologique, 1868, 1865, and 1870; also Leçons, etc.

³ Gazette des Hôpitaux, various numbers during 1868 and 1869.

⁴ The American Journal of the Medical Sciences, April, 1875.

⁵ Clinical Lectures on the Diseases of the Nervous System. 1882.

¹ Ziemssen's Cyclopædia, vols. xi. and xii.

² Ueber progressive Muskelatrophie, ueber wahre und falsche Muskelhypertrophie. Berlin: Hirschwald, 1873.

the results. It is quite certain that in this group of rheumatic cases, full medicinal doses of salicylic acid, or of the salicylates, will speedily arrest the pain and diminish the fever. The lowering of the temperature seems to bear a constant ratio to the diminution of the pain. It is not possible to express in figures with exactitude the doses necessary; the curative effect is attained by that quantity which reduces the pain and the temperature. In suitable cases, the administration of this remedy removes all of the more prominent symptoms and establishes convalescence in three or four days. Unfortunately, in a considerable proportion of cases, the disease manifests a strong tendency to relapse, after a marked subsidence of the acute symptoms apparently indicates the beginning of convalescence. A rule of practice has been distinctly formulated since this tendency to relapses has become well known. It is this: Give the remedy for several days after the acute symptoms have ceased. I have attempted, from my own experience, to give numerical expression to this rule, with the following result:

Salicylic acid, or the salicylates, should be given after the subsidence of the acute symptoms, and the cessation of the fever and pain, for the same number of days as the acute attack lasted. Thus, if the decline of fever and pain occurred on the fourth day, the remedy should be continued as many days thereafter, or for four days subsequent to the apparent cessation of the acute symptoms.

The manner of its action is by no means clear. The pain ceasing coincidently with the decline of the fever, and the joint swelling disappearing at the same time, indicate that the action occurs simultaneously, or that the one is a consequence of the other. It may be, that the remarkable relief afforded by salicylic acid and the salicylates, is due to the arrest of action caused by an antiferment; but it must be admitted that we are, as yet, far from a true explanation.

The second class of rheumatic subjects contains the obese, or those of full habit, the rotund addicted to malt liquors and to good living, all of whom are apt to suffer from a form of acid indigestion. The cases of rheumatism occurring in such subjects are, as a rule, much benefited by the alkaline treatment. This method is an empirical attempt to cure a disease characterized by an excess of acid in the various secretions. As the substitution of the alkaline remedies, for the spoliative treatment before employed, resulted in great benefit to these rheumatic patients, and as the system had an air of scientific precision, it is not surprising that it became widely popular, and that, until the salicylic acid treatment was introduced, unquestionably occupied the first place in the professional esteem. Dr. Fuller, the author of an excellent work on rheumatism, has been the most prominent advocate of the alkaline method. In a paper in the *Practitioner*,¹ he shows that much of the practice passing under that name, is not a proper application of the alkaline plan. As it is important to have a clear conception of the limitations of this method, I transcribe, from the paper referred to, Dr. Fuller's definition:

"By the 'alkaline treatment,'" says Dr. Fuller, "I mean a plan of treatment in which alkalies play an important part, but which consists not only in the administration of alkalies, but in the careful regulation of the secretions, the strictest attention to diet, and the administration of tonics, such as quinine and bark, as soon as the patient can bear them. . . . My practice is to give not less than an ounce and a half of the alkaline carbonates, either alone or in combination with a vegetable acid, during the first twenty-four hours of treatment. . . . More commonly two drachms are ordered to be taken in effervescence every three or four hours in combination with an ounce of lemon-juice, or with half a drachm of citric acid dissolved in four ounces of water. At the same time, if the bowels are torpid, ten

grains of colocynth and calomel pill [British Pharm.] are prescribed at bedtime. As soon as the urine, when freshly voided, ceases to show an acid reaction—which is usually the case after twenty-four hours—the quantity of the alkali is diminished by one-half, six drachms only being administered during the succeeding twenty-four hours. At the expiration of that time, if the urine remains alkaline, three drachms only are given in the next twenty-four hours; and on the fourth day, if the urine still shows an alkaline reaction, the form of the medicine is altogether changed. The treatment ceases to be essentially alkaline; either a cinchona draught is ordered to be taken three times a day, containing a scruple or a half drachm of bicarbonate of potash—a little more or a little less, according to the condition of the urine, which should be kept nearly neutral—or three grains of quinine dissolved in lemon-juice is given three times a day in effervescence, with half a drachm of bicarbonate of potash or soda. . . . The diet is restricted to beef-tea or broth, with soda-water and milk, and barley-water as a drink, as the smallest quantity of solid food, given a day before the tongue has thoroughly cleaned, is apt to induce a recrudescence of the disease. Wine and spirits are strictly forbidden, though experience has convinced me that wine and spirits prove less hurtful than the smallest quantity of solid food."

I have thus given the details of the alkaline treatment in the words of its chief promoter, at the risk of wearying my readers, because of a conviction that, in this country as in England, the method is very inadequately carried out. Considerable experience in it justifies me in saying that, in the class of subjects now under consideration, it is of the utmost value. Although relief to pain, the disappearance of the joint swelling, and the subsidence of the fever, are the evidences of improvement, no one who has had any considerable clinical experience with acute rheumatism, is unaware of the fact that relapses of varying severity, a tedious convalescence—slow repair of the damages—are to be considered in any just estimate of the relative value of different plans of treatment. That these cases are relieved by salicylic acid, is undoubted; but they tend to relapse, and the process of recovery is slow, often imperfect. In my experience, the special peculiarity of acute rheumatism in these obese subjects is the tendency to assume a sub-acute character and to be delayed in the progress toward recovery. They are also more liable to heart complications. The alkaline treatment, carried out as above described, gives better results in respect to relief to suffering, to duration of the disease, and freedom from complications. Stated numerically, the results, in my experience, may be compared with those of Dr. Fuller. "In ninety-four consecutive cases," says Dr. Fuller, "which were tabulated with a view to this inquiry, the average duration of the disorder after the commencement of treatment was only eleven days." Some statistics of Dr. Dickinson,² are even more conclusive: The tables embrace cases treated by venesection, by mercury, by salines, by salines and mercury, by a partial alkaline treatment, and by the true alkaline method. The number of cases of heart complication was greatest in those treated by venesection, being 50 per cent., and least in those treated by the true alkaline plan, being one in twenty-three cases, or 4.3 per cent. The average duration of the disease bore the same ratio, the minimum being those cases treated by the alkaline plan. At that time (1869) salicylic acid had not been suggested as a remedy for rheumatism—hence in the foregoing comparative statements, there are no cases treated by means of it.

If the relation between the action of alkalies and the neurotic disturbance called rheumatism, be demanded, we are not without resources for an explanation. Pflüger's phenomena of electrotonus were long ago ex-

¹ Vol. xi, p. 123: The Alkaline Treatment of Rheumatic Fever

² The Lancet, January 23 and 30, and February 6, 1869.

plained by Matteucci, and the explanation confirmed by Becquerel on the ground of the chemical action developed by the passage of the current. Humboldt was the first to show that the excitability of a nerve is increased by contact with an alkaline solution, and diminished by contact with an acid solution. Now, as the condition called rheumatism may signify a depressed state of the trophic functions, the good effects of alkalies are at once apparent—that is, the increase of the functional activity—and thus counteract the depression.

Besides the administration of the alkaline remedies, there are other therapeutic questions to be answered in respect to the treatment of the second group of rheumatic subjects; but these will be more properly considered hereafter.

The third type of rheumatic cases and numerically the most important; probably, also, pathologically, the most serious, is the feeble and anæmic subject. A rheumatic of this kind is pale, rather thin, the muscles weak and wanting in firmness, the chest narrow and somewhat flat, the joints prominent and lax. In such persons an extension of the rheumatic inflammation from joint to joint, until almost all the joints of the body are involved, is to be feared, as it is of frequent occurrence. Cardiac complications are relatively frequent. It need hardly be observed that in such subjects the depressing effects of salicylic acid and of the alkalies are to be dreaded. Here clinical experience is in entire accord with theory. We owe to Dr. Russell Reynolds, of London, the introduction of a remedy for acute rheumatism, which is especially suited to this group of cases. I refer to the *tincture of the chloride of iron*. To be effective it must be given in full doses—from ʒ ss. ʒ j. in sufficient water every four to eight hours. It lessens the swelling and pain of the joints, lowers the fever, diminishes the tendency to heart complication, and, above all, sustains the vital powers in their struggle against the encroachments of the rheumatic disease.

I am far from denying that cases of rheumatic fever in these anæmic subjects would not be relieved by salicylic acid, but I do affirm that so much depression would result that relapses would occur, and the convalescence would be prolonged owing to the remarkable depression of the nutritive functions. The same state of things results from the administration of alkalies. The blood is spoiled, the heart enfeebled, and complications of various kinds invited. On the other hand, very conspicuous benefit results from the vigorous administration of the tincture of iron. Besides its influence over the course of the disease—shortening its duration by checking waste, and preventing complications by maintaining the vital resources—the tincture of iron, as shown by the late Dr. Anstie, has a distinct prophylactic effect, so that, when an attack is threatened, it will, by timely administration, prevent it.

During the period of convalescence from acute rheumatism, after the treatment by salicylic acid and by alkalies, the tincture of iron in the full doses already advised renders an important service. The tenderness and effusion about the affected joints, the subfebrile temperature, and the condition of anæmia, are alike greatly improved by its administration in efficient doses. I have repeatedly observed that cases which lingered long on the hands of the physician after the acute symptoms had subsided, quickly improved and recovered when efficient doses of the tincture of iron were administered, and, at the same time, suitable blisters were applied to, or about, the affected joints.

Independently of the considerations above expressed regarding the utility of blisters, the "blister treatment" of acute rheumatism is deserving of careful consideration. Blisters in various ways, and applied in accordance with various notions, have long been used in the treatment; but the "blister treatment," properly speaking, of acute rheumatism has been systematized by Dr. Davies, of the London Hospital, and Dr. Dechilly, of France. The

latter, however, applied a large blister to cover the joint, and permitted it to remain on until sufficient inflammation occurred to produce abundant serosity. Dr. Davies, on the other hand, was content to apply the blisters around rather than on the joint itself. It is a remarkable fact that blistering brings about a neutral or alkaline condition of the urine, how acid soever it may have been before the blisters were applied. More or less strangury occurs in some instances. So remarkable is the relief to pain produced by the blisters that patients petition for their renewal from time to time. Cardiac complications are comparatively infrequent, and the duration of the disease is reduced to the limits of the favorable cases. Indeed, I may sum up the testimony as to the efficiency of this method in the words of Dr. Greenhow, who affirms that the treatment of rheumatism by blisters is quite as successful and less objectionable than by salicylates.

The good effects of the blister treatment afford a strong justification of the neurotic theory. When first ascertained, the result was ascribed to the withdrawal of a quantity of acid serum from the neighborhood of the affected joints. The change in the character of the urine, induced by successive blisters, rendered further explanation necessary. The increase of our knowledge respecting the influence of peripheral irritation on the state of the nerve-centres, and especially on the trophic system, has paved the way to a better appreciation of the facts; nevertheless the final explanation remains to be made.

A combination of the blister treatment with salicylic acid, with alkalies, or with the tincture of iron, may often be made with signal advantage.

The importance of a proper diet is not less than is stated by Dr. Fuller in the quotation made from his paper. Solid food should not be allowed in any case. Liquids composed of starchy and saccharine matters are only less hurtful. Milk and animal broths are the articles to be depended on chiefly until the cessation of all joint troubles will permit the gradual restoration of a solid dietary. Lemonade and carbonic acid water are allowable, unless they produce flatulence, when they will excite fresh joint mischief. Anodynes are to be avoided if possible; when necessary, atropine is preferable to morphine, if adequate to relieve the pain, which it usually succeeds in doing. The complications which may arise in the course of rheumatic fever demand more careful treatment than I can give them at the conclusion of this article.

THE SIGNIFICANCE OF TEMPERATURE AFTER OVARIOTOMY.¹

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So much has been written on ovariectomy and the care of patients after that operation, that to some of you I fear the subject will appear hackneyed; to others I hope the short consideration of certain points in the diagnosis and treatment of conditions arising after, and, for the most part, due to that procedure, may not be without interest.

It will be impossible, in the brief time allotted, to do more than epitomize even a few points in the after-treatment, nor will it allow of illustrative cases.

Ovariectomy may be one of the simplest operations in the whole domain of surgery. On the other hand, it may be, and often is, one of the most difficult. At times it presents such problems for solution as to demand not only the calmest judgment, but that acquaintance, personal and traditional, with what has been done in similar cases, which we call experience, in order to give the patient the best possible chance for recovery, or to exorcise the operator from some serious dilemma. So also the after-treatment presents its problems, some of which we shall attempt to solve.

¹ Read before the New York Practitioners' Society, December 1, 1882.

With the completion of ovariectomy the operator's anxieties are but just beginning. Although they may exist actively during that procedure, he is in a position to deal promptly with complications which he can see, and which develop, so to speak, under his hand. He is then in a more special degree the active agent, controlling the *physical* conditions which he meets or creates; while *after* the operation he has to wait upon certain *vital* forces, which are variously modified by age, temperament, the physical condition of the patient, and the traumatism in each individual case. These factors exhibit themselves in unequal proportions and give color to the case as one or the other predominates.

In order to intelligently conduct a case we should have a clear idea of the processes set in operation by our surgical interference, that we may know in what direction to expect this or that manifestation and its import, and be ready to meet unfavorable symptoms at their very inception.

For practical purposes we may separate all cases into two classes:

First.—Simple cysts with few or no adhesions.

Second.—All other ovarian tumors, whether cystic or solid, having such parietal or visceral attachments as to necessitate much injury to surrounding structures on detachment, or whose contents are in themselves irritating or of such a character (thick colloid) as not to be readily removed from the peritoneal cavity, should they escape into it.

In the first class, assuming that by dexterous operation and careful ligation we have secured ourselves against shock and hemorrhage, there remains ordinarily but one source of *danger*—peritonitis—and that from the limited abdominal incision or the severed pedicle.

In the second class our list of dangers is largely increased, the principal ones being: 1. Shock: due to actual severity of case from violence done; due to hemorrhage; due to unnecessary and prolonged exposure from indecisive procedure. 2. Hemorrhage: From pedicle; from severed adhesions; from viscera from which adhesions have been torn; from hemorrhage occurring within the pedicle from incautious traction. 3. Peritonitis: visceral, parietal. 4. Septicæmia with concomitant peritonitis. 5. Cellulitis.

I have mentioned but five sources of elevation of temperature. There are others, but I speak of the principal and usual ones.

Shock and hemorrhage we shall not discuss, they being not included in the limited range of this paper, which deals with the inflammatory processes and their order of manifestation.

Each of the above conditions, except shock and hemorrhage, expresses itself by an elevation of temperature; but, as is known to all, the value or import of the same degree of elevation of temperature is quite different, according to whether it be due in the one case to a peritoneal or a cellular inflammation; hence the great importance of an early and correct diagnosis of the condition developing, as manifested by increase of temperature. In one case, the cellular, we may rest at ease, quite sure of the competency of nature to bear without risk a certain elevation, and equally sure of a limitation; while in another—the peritoneal—we have with no greater elevation, perhaps, a constant menace, if not from the violence or area of inflammation itself, from failure of a very impressionable ganglionic system induced by that inflammation.

In differential diagnosis we are greatly aided by the time which has elapsed since operation, when the elevation of temperature first manifested itself, as well as the character of the case. If simple, with no adhesions, and no accident has occurred, or unnecessary invasion of the peritoneal cavity by the operator's hands or instruments, we have ordinarily but one source of danger, that from peritonitis, and we know, as a matter of clinical experience, that such a peritonitis would necessarily manifest

itself within seventy-two hours, and usually within forty-eight. But suppose, in such a case, from the fourth to the sixth day, and even many days later, we have a beginning elevation attended by some pain, not colicky, and tenderness, with absence of tympanites, what are we to expect usually? Not a peritoneal inflammation, for that is prompt in declaring itself, as the peritoneum is quick to resent any injury. We must look for causes extra-peritoneal, inflammation in a less impressionable tissue, namely, the areolar tissue, and that, too, in the abdominal wall alongside of the incision. Now this is readily determined by gentle palpation and inspection. The abdomen will usually be found soft in the iliac region; but as the fingers approach the median line they will appreciate that there is more firmness, if not already induration, which might, from the fact of the line of incision running between the recti muscles, give rise to a longitudinal cellulitis, thus suggesting, perhaps, that it is one or the other recti which is felt. The error will at once be corrected when we remember that at such a time the recti are not as readily detected, owing to their laxness from long stretching by the tumor. We shall also be aided in our diagnosis by the expression elicited from the patient, who will complain of this or that point as being tender to the touch; these points will generally be at or about the sutures. Later on, one may see an asymmetrical elevation of the abdominal wall, caused by the cellulitis. Having discovered these indurations we may dismiss much of anxiety from our mind, as it is the areolar tissues above the dense transversalis fascia which are involved, and yield more readily than it to the pus which almost invariably seeks an outlet alongside one or more of the sutures.

In the treatment of such a condition as just related, we should seek, by prudently abundant diet, to sustain the patient, having no fear, as in peritonitis, of exciting peristalsis, to the great injury and suffering of the patient. Abscesses in such cases have usually but small influence on the general progress of the case, are usually limited in area and duration, being the result of a surgical injury, and not of pyæmia. As to temperature, it usually ranges from 100.5° to 102° . Local applications are rarely needed, though warmth is often agreeable, and may be applied by means of spongio-piline, wrung out of hot carbolized water, poultices, the hot water bag, or the hot water coil—quite the opposite in principle to the treatment of peritonitis, as will be seen. Resort to the bistoury in such cases is rarely necessary, as pus very rarely forms before time for removal of the sutures on the eighth or ninth day, and it is through the tract of the sutures that pus escapes.

Our study of the peritonitic inflammations will be aided later on by the march of symptoms, as portrayed in a simple uncomplicated recovery after ovariectomy. In such, during the first twelve or fifteen hours, the intoxication and vomiting occasioned by ether—the latter perhaps increased by the morphia given—are usually the only disagreeable symptoms. There is acceleration of pulse from ether stimulation, with a range of from one hundred to one hundred and thirty per minute, the skin remaining cool, temperature 99° to 100.5° . After lapse of the time mentioned the temperature varies but little, reaching perhaps as high as 100° during the first twenty-four hours, then dropping down to 100° or 99° , there to remain, or tending to approach more nearly still the normal as time advances. The dressings and sutures may be removed on the eighth day, when, if the abdominal walls are thin, we may expect to find a perfect line of union, and have now to wait but a few days before our patient is quite well, so far as the operation is concerned.

The two great sources of elevation of temperature in tumors of the second class are peritonitis and septicæmia. It is an interesting clinical fact, that many of the worst forms of tumors, whose attachments to the parietes, deep in the pelvis, and even omental and intestinal, are so firm and universal, seem to escape peritonitis.

Whether this is due to the fact, as I believe, that the peritoneum has not only lost its special intolerance of intrusion, but even its distinctive anatomical structure, I cannot here discuss. Be this as it may, there are many such cases where the violence done is so great as to make one say at once, this patient must certainly die of peritonitis, yet we often see such cases make rapid and perfect recovery with a thermometric range not having gone above 101° F., and where, as I believe, the repair of injury done is more like that following an injury to the areolar tissue, possessing clinically none of those evidences which we regard as characteristic of peritoneal inflammation. But in such cases where *peritonitis* does declare itself after operation, it is usually within the twelve or fifteen hours immediately after. There is no chill, but within that time the temperature has steadily risen to 101° : the stomach rejects the little fluid received; the pulse continues high, and must not be mistaken for that of ether stimulation. *Pain* may be complained of, but is not necessarily present, I suppose, from the fact that the abdominal walls are so lax, that the friction of peristalsis is reduced to a minimum, and that often the peritonitis begins as pelvic, affecting the parietal layer, the least impressionable by reason of its more passive state, so that the visceral, especially the intestinal, is not affected in this variety. Generally within ten or twelve hours more the temperature has risen to 102° to 103° ; some tympanites now shows itself, while the nausea is increased and the pulse continues its high range. In patients of apparently good constitution this condition may last three or four, or even five days, with progressive severity of symptoms. The facies then begin to express the serious impression made upon the system; dark rings encircle the eyes, which become sunken; the pulse becomes more and more rapid, while the increasing tympanites embarrasses the respiration, making it shallow and thoracic; the tongue is dry and parched, the mind wanders, and the final collapse occurs. Such is the usual march in pronounced cases; in others the patient will be seen to lose ground from day to day with little elevation of temperature, and yet on autopsy will present evidence of intense peritonitis. I mention this variety, as one inexperienced in the peritonitis following ovariectomy might be quite unaware of the peril of his patient.

You will notice that I spoke of peritonitis in this class of cases, as beginning promptly, though perhaps not announcing itself by violent pain or excessive temperature. It is in reference to the time in differential diagnosis that I would call your attention. It announces itself too early for mural cellulitis, and too early for septicæmia usually, and the time of announcement should be for us positive and pathognomonic of the condition, and should urge us to immediate efforts to control at its very inception a process so dangerous. Now the resources at our command are unfortunately mainly but two—morphia to control peristalsis and the pain induced by it as well as from the traumatism. This must be given to absolute relief from pain, not suffering the patient to be conscious of such for one moment, in order that that element may not be the one to destroy the repose of the patient. A more important matter of treatment is the application of cold to the abdomen, which is best made by the rubber tube coil laid upon the abdomen, through which a continuous current of ice-water flows, or by the use of the Kibbee cot, the latter a very disturbing and troublesome method, and one, as I have almost uniformly seen, provocative of diarrhœa. The application of the coil should be resorted to, where the character of the case is one to warrant the belief that peritonitis will be excited, just as soon as the temperature reaches 100° , and the effort made to keep it, the temperature, there. If peritonitis is to be controlled by this means it must be taken at its very inception, and before it has impressed the ganglionic system. We must protect the patient from the danger due to the high temperature, regardless that there comes a time when control of temperature is of no

avail, and that the patient sinks from peritoneal changes or failure of ganglionic system as before mentioned. In the early application of the coil we employ it as a true antiphlogistic. I do not say that cold will cure peritonitis or always prevent it. I believe, intelligently applied, it often does so modify its severity as to give the patient a chance for recovery when it might have gone beyond control.

I have thus far spoken of pure traumatic peritonitis, if you will let me for the time so call it, in contra-distinction from septicæmia with concomitant peritonitis.

Septicæmia, as a rule, appears later than uncomplicated peritonitis, beginning very like it, and usually more or less complicated by it. The temperature is usually *early* more uniform or expressive of a mild inflammatory process, for the reason that it takes some little time to establish the condition septicæmia, for nature is not overthrown at one blow in this more than in other diseases; but once let that condition be established, and then but a small septic absorption, be it continuous, is sufficient to maintain it. Its usual period of manifestation is from the third day on, and the usual picture is the following: A patient with a temperature which has not gone above 101° to 102° , whose stomach has not behaved badly begins to show an increase of temperature, irritability of the stomach, rapidity and feebleness of the pulse, developing tympanites, and then a peculiar hue spreads over the face, one hard to describe, something between a bronze or coppery hue, the result of a vaso-motor paralysis. This peculiar hue in such cases cannot be mistaken by one familiar with it. The eyes sink, the tongue becomes at times red and very dry, at others dry and brown, at times the eyes appear jaundiced, and such a tint sometimes overspreads the body; but *the* usual hue is the one mentioned, and called, for want of a better descriptive name, coppery. If we follow the stage out, diarrhœa—a most usual accompaniment of septicæmia—appears, and vesical irritation, when septic fluids bathe its inverting peritoneum, delirium of a very mild type (I am now speaking of ovariectomy cases), and lastly coma, blueness of skin, and death. I spoke of increased temperature manifesting itself usually about the third day; it may appear before. It usually announces *itself then* by a rapid elevation, followed at times by equally as rapid a decline. When abdominal drainage is practised by proper drainage-tubes in efficient hands, it is marvellous at times to see the effect of removal of septic fluids from the cavity through the tube, and the long continuance of moderate temperature when that well into which the tube enters is thoroughly washed out with either pure or carbolyzed water. The cases which recover from such abdominal drainage are septic cases, due to decomposing fluids which have oozed from disrupted vessels from various sources, or from ovarian fluids not of the dense colloid variety; in other words, fluids which will gravitate to the well which the drainage-tube occupies. Unfortunately where there has been an escape of dense colloid material, drainage accomplishes but little, and septicæmia once established, as it surely will be, is fatal.

In the curable forms of septicæmia our aim must be the removal of septic fluids, control of temperature by the coil, relief of pain by morphia, and cautious administration of nutriment either by stomach or bowel.

The limits of this paper will not allow of a full description of any of the inflammatory complications; its purpose is to show that there ought to be no uncertainty in the mind of the clinician as to the origin and time of manifestation of the *usual* manifestations after ovariectomy, and that certain definite resources are at his command.

Now there are other sources of elevation less important, but complicating the diagnosis. Among these are menstruation, cystitis, nephritis, and rarely subacute tetanus, to say nothing of intercurrent diseases, particularly malaria, pneumonia, and as the result of either and exposure, bronchitis. The possibility of the occurrence of

these should be borne in mind, and in doubtful cases carefully eliminated.

To sum up, simple cases, where the injury done is only the abdominal section and severance of pedicle, admit, usually, of but two manifestations—peritonitis and mural cellulitis.

The peritonitis will surely manifest itself before the expiration of forty-eight, or at most, seventy-two hours; after the expiration of that time any elevation due to operation will be due to mural cellulitis.

In cases of the second class, peritonitis may begin at once, and still recovery take place promptly; while an elevation which begins after the third day either announces *septicæmia* or septo-peritonitis, or the more harmless mural cellulitis, according to symptoms, the differential points of which have been alluded to.

As a matter of course, either of the above conditions may encroach somewhat upon the limits of the other, but the main fact, the time of manifestation of each, remains.

I have given no space in this short paper to the discussion of the merits of quinine as an antipyretic in septicæmia, for it avails very little and must not be relied on as such; the septic material must be removed, and cannot be counteracted or neutralized by this or other so-called antipyretics, though they may do something toward maintaining the system in a general way. A fuller consideration of matters germane will shortly be published.

THE ABSORPTION OF NUTRIENT ENEMATA.¹

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NEW YORK.

THE physiological process by which nutrient enemata are absorbed is still a matter of dispute. Three theories are offered: First, that the food is digested by ferments which have descended from the upper parts of the alimentary tract; second, that the food is carried back by "retrostalsis;" third, that it is digested by a local process.

First.—The theory of the descent of ferments is quite untenable, because the gastric and pancreatic ferments are secreted intermittently and only upon local stimulus; and further, because it is made quite probable by the experiments of Langley that these ferments are destroyed before they reach the colon.

Second.—Dr. Henry F. Campbell, of Georgia,² has advocated with much force the theory that there is a reversed peristaltic motion, or as he terms it, "retrostalsis," which carries the injected food into the small intestine, where it meets some of the digestive secretions.

Considerable plausibility was given to this theory by the interesting experiments of Professor Hal. C. Wyman, of Detroit.³ He injected two dogs, one living, the other dead, with a pint and a half of colored milk; and found that in each case the milk passed up the whole length of the small intestine. In two other living dogs he injected four ounces of colored milk, and found that the fluid passed up to the middle of the duodenum in one, and to the middle of the jejunum in the other. A fifth dog was injected in the same way. A portion of the milk was immediately rejected. The remainder passed no farther than the ileocaecal valve. In the case of a man with a fistula in the colon and another in the ileum, it was found that half a pint of milk injected into the rectum was carried to the ileocaecal valve, "and probably farther."

In further support of the theory of retrostalsis, are some clinical facts which show that, sometimes at least, enemata may pass back into the small intestines,⁴ or may even reach the stomach and be vomited.⁵

Before commenting upon these I will record my own experiments.

First.—Took a fifteen-pound living dog; injected one-

half ounce carmine-colored milk. Examined two and one-half hours later: Staining half way to ileocaecal valve.

Second.—Ten-pound dog, living (as were all those experimented upon). Injected as in first. Half hour later: Staining to ileocaecal valve.

Third.—Ten-pound dog. Injected as above. Bowel full of feces. Half hour later: Could not detect any passing back of the fluid.

Fourth.—Fifteen-pound dog; injected as above. Two and one-half hours later: Most of milk in last half of large intestine; slight staining *just above ileocaecal valve*.

Fifth.—Twelve-pound dog. Injected one ounce of carmine-colored milk. Two and one-half hours later: Bowel full of feces; nothing above the ileocaecal valve.

Sixth.—Fifteen-pound dog. Injected as in fifth. Two and one-half hours later: Some milk had passed *eight to ten inches above ileocaecal valve*.

Seventh.—Ten-pound dog. Injected one-half ounce carmine-colored milk. Two and one-half hours later: Milk had gone up only a little distance; large amount of feces in the bowel.

Eighth.—Ten-pound dog. Injected two ounces of colored milk with some force. Two and one-half hours later: *Injection had passed up into the stomach*.

Ninth.—Twelve-pound dog. Injected one-half ounce carmine-colored milk. Three hours later: It had passed half-way up large intestine.

Tenth.—Ten-pound dog. Same as ninth.

Eleventh.—Twelve-pound dog. Same as ninth.

Twelfth.—Ten-pound dog. As in ninth, but injection went to ileocaecal valve.

Thirteenth.—Fifteen-pound dog. Same as twelfth.

Fourteenth.—Ten-pound dog. Injected two ounces iodized starch and water. Two and one-half hours later: Injection went *a little way beyond ileocaecal valve*.

Fifteenth.—Twelve-pound dog. Injected one ounce colored milk. Three hours later: It had not gone beyond ileocaecal valve; bowel full of feces.

Sixteenth.—Fifteen-pound dog. Previously had given a cathartic which produced a passage. Injected one ounce colored milk. Three hours later: It had not gone above the ileocaecal valve; bowel not empty.

The injections were given with an ordinary hard rubber syringe, and no especial force was used.

There was a source of error in Dr. Wyman's experiments, in that he used very large injections. Even my own were proportionately very large, two or three drachms being as much for a dog weighing ten pounds as four or five ounces for a man.

My experiments therefore showed:

First.—That large injections, forced in, *may* cause a "retrostalsis" which will carry the mass by the ileocaecal valve and even into the stomach.

Second.—That ordinary nutrient injections of two, three, or four ounces, pass back some distance,⁶ and may even reach the ileocaecal valve, but do not go farther.

Third.—That the injection is carried back much better when the lower bowel is empty, or comparatively so.

The few clinical observations which show that retrostalsis can take place, show also that it takes place only under peculiar conditions, such as intestinal obstruction, the use of large, forced or very stimulating enemata, inverted posture, etc. The assertion of some patients that they taste the food given by enemata proves nothing.

Since we cannot explain the absorption of enemata by retro-peristalsis, it must be that the process is local.

It is an established clinical and physiological fact that nutrient enemata are absorbed. Bauer, for example, found that in dogs enemata of pure albumen and acidulated or saline meat were absorbed. In my cases about one-half of the milk injected was absorbed within three to four hours. The colon is quite vascular and has a large supply of lymphatics. It is not an excreting organ, as stated by Dr. D. W. Bliss, but its function is to absorb. In soli-

¹ Read at the meeting of the Practitioners' Society, December 1, 1882.

² Gynecolog. Transactions, vol. III., p. 268.

³ Fort Wayne Journal of the Medical Sciences, vol. I., No. 1, July, 1881, p. 4.

⁴ Med. and Surg. Hist. of the War, part II., p. 836.

⁵ R. Balty, Virg. Med. Monthly, 1878, p. 531.

⁶ Dr. A. H. Smith has shown this to take place in human beings.

peds it has a powerful digestive function. The secreted juice has in man a feeble proteolytic power (Eichorst).

Albuminous food, when injected, speedily undergoes chemical changes and decomposition. In some of the early stages of this process it is quite possible that the changed albumen passes into the surrounding vessels. Normal peptic digestion is only a decomposition with many stages in it, during some of which the albuminous matter is absorbed. It is not necessary that albumens be made perfect peptones before they can diffuse into the blood-vessels and lymphatics.

Fats cannot be absorbed to any great extent in the colon or rectum. It is not necessary to inquire whether starches can be changed to glucose, since it is always possible to add some form of animal sugar to the enema if that be thought necessary.

So far as my clinical experience goes, injections of milk and beef-tea, especially the former, are very nearly as effective as the peptonized preparations, especially those prepared with acid and pepsin. Dr. Bliss has published some cases which seem to show that mixtures of peptone and beef extracts are very effective. Such mixtures were recommended twelve years ago by Leube and M. Mackenzie, but they are costly. Doubtless solutions of the powdered meat or milk, as used by Debove and Dujardin-Beaumetz, would be useful. I have been unable to convince myself that there is any magic in peptone preparations or that they are absorbed much more rapidly than carefully prepared and finely divided meat preparations.

ON THE

DIAGNOSTIC VALUE IN PREGNANCY OF VARIATIONS IN THE FREQUENCY OF THE PULSE DUE TO CHANGES OF BODILY POSITION.

By H. D. FRY, M.D.,

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IN June last Jorissenne stated (*Archives de Tocologie*) that he had discovered a new sign of pregnancy, and claimed to have been able by its means to diagnosticate the presence of that condition when there existed no other corroborative evidence than the missing of a single catamenial period.

According to his observations, and contrary to the physiological law, the radial pulsations during pregnancy number the same irrespective of the woman's position at the time of examination. He directs that the pulse should be counted "for the space of fifteen seconds whilst the patient is standing, then sitting, and then reclining. The order may then be reversed, and uniformly the same number of beats will be recorded."¹

The publication of this observation has attracted the attention which the importance of such a statement is sure to demand. It is especially in the first months of gestation that the physician stands in need of reliable evidence to assist him in the recognition of its existence. At present he can, alas! in too many cases, only state the *probabilities* and await the sequence of an uncertain prediction which is to bring either happiness or sorrow to the unfruitful wife or sinning Eve. For this reason we should endeavor to add to the means already at our disposal any symptoms indicative of the presence or absence of a fecundated ovum within the uterine cavity; and, when such a one is found, to ascertain its comparative value and appreciate it accordingly. By doing this we may throw some light upon the subject of diagnosis and prevent ourselves from being led astray by the uncertain glimmer of an *ignis fatuus*.

Shortly after reading a notice of Jorissenne's experiments I had an opportunity to test the sign in a young woman who was fearing the consequences of having yielded to advances made soon after the cessation of her menstrual flux of the previous month. The next cata-

menial period had then arrived, and not venturing to express a negative opinion based merely upon the absence of this sign, I withheld the comfort which Nature brought four days tardily. The cases of pregnancy that came under observation at a sufficiently early period were then examined for this as well as other evidence indicative of such a condition, and I purpose to show the value of the sign in question as presented in the histories of the cases.

The report embraces the observations made in ten cases of pregnancy. Of these, seven had missed but one menstrual period; two had missed two; and one had missed three. It was in the first of these series of cases that I wished more particularly to ascertain the value of Jorissenne's sign. In order to attach any importance to the results obtained we must be satisfied that the women *were* pregnant. It is now ten weeks since these investigations were commenced, and the subsequent histories, which have been closely followed up, confirm the diagnoses of pregnancy made at that time. Eight of the ten women are married and have proved themselves "good breeders." Two cases afterward aborted.

The number of the radial pulsations in the minute in the different positions, for the first series, was as follows:

	Lying.	Sitting.	Standing.
Case I.....	80	80	84
Case IV.....	87	81	81
Case V.....	88	84	86
Case VI.....	60	66	70
Case VII.....	63	72	90
Case IX.....	88	94	108
Case X.....	94	76	92

In Cases IV., V., and X. the pulsations numbered less standing than in the recumbent position. In I., VI., VII., and IX. they were more standing than lying; in the first an increase of four beats, in the next of ten, in the next of seventeen, and in the next of twenty. The pulse was the same in Case IV. standing and sitting, and in Case I. sitting and lying. In Cases V. and X. it was less sitting than either lying or standing, and in Cases VI., VII., and IX. greater sitting than lying, and greater standing than sitting.

In the women who had missed two menstrual periods the records were:

	Lying.	Sitting.	Standing.
Case II.....	76	76	79
Case VIII.....	104	104	88

In one we see the pulsations were increased three beats by assuming the upright position, and in the other they were diminished sixteen by the same change. In both they numbered the same lying and sitting. The remaining Case (III.) in which pregnancy had advanced beyond the third month the pulse was 82, 84, and 86 for the corresponding positions.

Taking the ten cases we find that in five of them the pulse varied, in the different positions, from three to six beats, and in five cases from six to twenty.

These results certainly do not place Jorissenne's sign very high in our scale of valuation. The number of observations is too limited to show exactly what, if any, degree of confidence can be placed in this sign, but its fallibility is proved beyond a doubt. Moreover, the same examinations, repeated at subsequent times, gave different results. For instance, Case V. was, at the first examination, 88, 84, 86, and at another, 86, 94, 102.

These examinations were all carefully made and verified at the time by repetition. The pulse was counted by the minute, and not the fraction thereof, and in every instance sufficient time was allowed for the circulation to become settled after each change of position.

¹ American Journal of Obstetrics, p. 316, October Supplement, 1882.

A NOTE ON THE SULPHO-CARBOLATES,
AND ESPECIALLY ON THE WANT OF UNIFORMITY IN PREPARATIONS BEARING THE SAME NAME.¹

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It was my intention to write a general paper on the want of uniformity as to strength and quality in remedies bearing the same name; and the frequent injury to patient, and disappointment and annoyance to physician, arising therefrom. To this end I had made some notes, which in the turmoil occasioned by house alterations and repairs have been mislaid; and I shall be obliged to beg the Society to excuse a short and hurried paper. There are many articles of the *Materia Medica* which we should never prescribe without knowing where the patient will obtain the remedy, as we all know that many accidents occur from the fact that the different preparations vary so in virtue that one may prove quite inert, and another do serious injury from its unexpected strength.

My especial aim this evening will be to call your attention to the great difference in the compound salts known as the sulpho-carbolates of soda and of zinc; two remedies that some of you know I have advocated for several years as of great value in diphtheria, more especially in the earlier stages of the disease, always provided that the salts are properly prepared; and this is the essential point of this paper.

The history of the origin of these salts is well known. After the discovery of the anti-zymotic powers of the sulphites by Polli, in 1857, many experiments were made to improve upon them and unite with them the more powerful antiseptic carbolic acid, which was considered the most efficient agent known for local use, but not available for internal administration, as it was not tolerated by the stomach nor absorbed into the blood in sufficient quantity to serve any good purpose.

After many unsatisfactory trials, Dr. A. E. Sansom, of London, succeeded in producing the double salts of carbolic acid, and exhibited specimens of them before the Medical Society of London, reading a paper which was reported in *The Medical Times and Gazette*, February 22, 1868. In this paper he considered the sulphites as the most easily absorbed of our internal antiseptics, and carbolic acid the most powerful, and "that the great desideratum was a salt which should combine the two, and this desideratum he had succeeded in fulfilling in the sulpho-carbolates."

I was much interested in these contributions of Dr. Sansom and gave the new salts several thorough trials—at first always finding them disagreeable to my patient, and unsatisfactory in their results. At length considering it very probable that it might be owing to some fault in the drug itself I ordered the sulpho-carbolates from Morson's, of London, and for the past eight or ten years have prescribed no other.

Other chemists may prepare the salts as well, but these have always given me satisfaction, and I have never used any other that did not disappoint me.

In spite of the words *Morson's ONLY*, always underscored, my patients have several times been vomited and prostrated by a mixture utterly unlike that prescribed in smell, taste, and effects, and when I took the bottle on one occasion to the apothecary who had dispensed it, he excused himself by saying it was Merck's preparation, and that Merck was as good a chemist as there was in Europe.

I thought my little patient would certainly die from the prostrating effect of the nauseous dose, and sent immediately for the medicine I had ordered, which acted promptly and favorably, and would not have been recognized by any body as the same prescription.

When in London last year I called at Morson's establishment to make inquiries as to the cause of this great

difference, and was referred to the manager of their manufacturing house. I went there and was informed that their sulpho-carbolates were made precisely according to the published formula, and the only probable cause suggested for any superiority over some others was that they were always most careful to make use of the very purest carbolic acid.

Dr. Sansom gives the method of producing the sulpho-carbolates as follows:

"Sulpho-carbolic acid (*Syn.* Sulpho-phrenic acid, $C_6H_5SO_4$) is produced by the admixture in equivalent proportions of sulphuric and carbolic acids. I have obtained the pure double acid in the form of very long, colorless, finely acicular crystals, which are very deliquescent.

"The sulpho-carbolates are produced by neutralization with the various bases."

He goes on to say under the head of "*Preparation.*—I have found many specimens lacking the true characteristics of a sulpho-carbolic acid. The danger is contamination with: 1, the sulphate of the base employed; 2, the carbolic acid which evolves the odor of carbolic acid; 3, free sulphuric acid; 4, free carbolic acid. The best method is to produce, first, a definite sulpho carbolic acid by taking equivalent weights of its components, and to neutralize with the calculated weights of the oxides employed. Crystallization should take place slowly without heat.

"*Tests.*—Each sulpho-carbolic acid should possess a definite and decided crystalline form. They should give off scarcely any odor of carbolic acid; they should give no precipitate with barium chloride," etc.¹

The specimens I present differ so decidedly from each other that they can hardly be considered as belonging to the same family. Examine the *soda* salts particularly. That of Morson corresponds closely with the description quoted above from Dr. Sansom, while the other does not answer to it either in physical properties, taste, smell, chemical or remedial effects; and it seems to me that while it may be a mixture of the component parts of the double salt, it is not chemically a true sulpho-carbolic acid of soda.

To the eye Morson's salt is in the form of beautiful clear crystals; the other is an amorphous powder. The former makes a perfectly clear, the latter a muddy solution, in water. The former is a remedy that any one can take without repugnance, the latter causes disgust and sometimes terrible vomiting and prostration. In a word, one is a powerful antiseptic, that can be introduced into the economy without any disagreeable effects, while the other may have similar antiseptic properties, but with such drawbacks as render it entirely unavailable as a substitute for Morson's preparation.

STUDYING THE MUSCULAR SENSE OF DIFFERENT INDIVIDUALS.—Mr. Francis Galton has been investigating the muscular sense of various classes of individuals. He used weights, the object being to find what difference could be detected by the persons handling certain weights. These are his provisional results, subject, of course, to correction, but surprising enough for all that: 1. Intellectually able men had more discriminating power on the whole than women of a like cast of mind. 2. Men, as a rule, had a greater ability of estimating accurately than women. 3. What appears strange is that women of very sensitive natures did not seem to be more capable of distinguishing between different degrees than their more callous sisters. 4. What is stranger still is that the investigator says he found the blind, as a whole, were not peculiarly sensitive to the test, but rather the reverse. Some of the gentlemen in charge of our public institutions might profitably employ their leisure on such inquiries. The facts would be probably of unexpected importance.

¹ A paper read before the *Materia Medica* Society of New York.

¹ *Practitioner*, vol. iii., pp. 8 and 9.

Progress of Medical Science.

THE OPERATIVE TREATMENT OF PNEUMOTHORAX.—The following rules are laid down by Professor Weil, for the treatment of pneumothorax occurring in phthisical subjects: 1. Most cases of this kind offer but little encouragement for operative interference. Yet in some of even the most hopeless ones an operation may be the means of prolonging life. 2. In some cases with a relatively favorable prognosis, operative procedures may not only prolong life, but may even lead to a complete cure. 3. In the first five or six weeks after the development of pneumothorax, an operation should not be undertaken, unless the dyspnoea become so urgent as to threaten life. 4. If the dyspnoea become severe soon after the onset of the pneumothorax, and be not controllable by narcotics, then puncture of the chest-wall is necessary. If the dyspnoea speedily return, as it usually does, owing to non-closure of the opening into the lung, an incision must be made. 5. If several weeks later asphyxia threatens, it is due to an accumulation of fluid, which must be withdrawn by aspiration. Should this prove unsuccessful, then there is nothing to do but to make a free incision. 6. In cases with relatively favorable prognosis, it is advisable to operate, even though there be no danger of life. In such cases, however, it is better to wait from four to six weeks, as then the fistula in the lung will probably be closed, and the fever will also have subsided. Various procedures must be adopted, according to the character and amount of the exudation. 7. In cases where the fluid is in excess, and the air has nearly disappeared, the indication is to draw off the fluid in small quantities at a time. 8. In sero-fibrinous exudations we should draw off small quantities from time to time by simple puncture or by the aspirator. 9. If the exudation become purulent, Senator's method must be practised. 10. If a reaccumulation of pus soon take place—the conditions being otherwise favorable—incision must be practised at once. 11. If the fluid remain scanty and the air be unabsorbed at the end of five weeks or more, it would seem to be the most rational plan to let out the gas through the aspirator needle, and so bring the case under the seventh category, where the conditions for further treatment are more favorable. 12. If the case become stationary with a moderate amount of fluid and considerable gas, the withdrawal of both by the aspirator is indicated.—*Wiener Med. Wochenschr.*, No. 39, 1882.

CAFFEIN FOR HYPODERMIC USE.—The ordinary preparations of caffein are unsuitable for hypodermic use, because of their slight solubility in water. The so-called acetate and lactate of caffein are in reality not salts, but merely solutions of caffein in acetic and lactic acids. The salts formed with the inorganic acids are unstable, and not adapted for subcutaneous use. The fact that this substance exists in coffee in the form of a double salt of caffein and potassium, in combination with an acid resembling benzoic, cinnamomic, and salicylic acids, led Dr. Tanret to prepare similar combinations. He found that caffein united readily with benzoate, cinnamate, or salicylate of soda, forming a double salt readily soluble in water. The salicylate contains sixty-one per cent. of caffein, and has been injected subcutaneously without causing the slightest irritation.—*Schmidt's Jahrbücher*, No. 7, 1882.

PHENIC ACID AND IODINE IN THE TREATMENT OF TYPHOID FEVER.—Dr. Klamann (*Allgem. Med. Central-Zeitung*, No. 81, 1882) claims excellent results in the treatment of typhoid fever by carbolic acid and iodine. To avoid carbolic-acid poisoning he gives very small doses, as in the following formula: Tinct. iodi., gr. viiiss.; acid. carbol. c. glycerin, gtt. x.; alcohol, dilut., 3 iiss. From five to ten drops of this mixture are taken in coffee

or tea every hour or two. When diarrhoea is troublesome the remedy is administered in tincture of rhatany. The treatment should be begun early in the disease, in order to obtain the most favorable results.

A similar plan of treatment is recommended by Dr. Rothe (*Memorabilien*, vol. xxvii.), who reports a number of cases, in some of which the initial symptoms were very grave, but all of which resulted favorably. The formula employed by him is as follows: Acid. carbol. et alcohol., aa ℥viiss. to xv. (according to the age of the patient, the intensity of the fever, etc.); tinct. iodi., gtt. x. to xv.; aq. menth. pip., 3 iii; tinct. aconiti, ℥xv. to xxx.; syr. aurant. cort., 3 iv. Of this mixture the dose is a table-spoonful every hour; for children under ten years of age, a teaspoonful. Owing to the aconite in this mixture, however, it is difficult to determine how much of the good effect is to be attributed to the carbolic acid and iodine.

TOLERANCE BY THE UTERUS OF TRAUMATIC AND SEPTIC INFLUENCES.—Dr. Valenta relates a case in which the head of a full-term child, together with the placenta, was retained in the cavity of the uterus for six weeks. The child presented by the shoulder, and after version was delivered as far as the head. The latter resisting all efforts made to extract it, the medical attendant simply cut it off and went his way. After numerous attempts to remove it, the head was finally extracted piecemeal after remaining in the uterus for forty days. During this whole period there were no signs of reaction, the pulse and temperature remaining normal.—*Schmidt's Jahrbücher*, No. 7, 1882.

LEUCÆMIA AND PSEUDO-LEUCÆMIA.—Senator contends that the only difference between leucæmia and pseudo-leucæmia is one of degree, according to the greater or less proportion of white corpuscles in the blood. The change from one form to the other is not uncommon. In cases of chronic anæmia, with enlarged spleen, in which the number of white corpuscles is about normal, the diagnosis is pseudo-leucæmia (splenic anæmia). When, under the same conditions, the white corpuscles are increased in number, the disease is leucæmia. Senator states that leucæmia is as common in children as in adults. The question as to whether heredity or unfavorable surroundings can be regarded as etiological factors, the author is unable to decide. He denies any dependence of leucæmia upon rickets, otherwise, he says, since rachitis is so common a disease, leucæmia and pseudo-leucæmia should be met with much more frequently than is the case.—*Deutsche Medicinal-Zeitung*, No. 42, 1882.

THE PROGNOSTIC VALUE OF THE TUBERCLE BACILLUS.—Drs. Fraentzel and Balmer sum up the conclusions derived from their investigations as follows: 1. A definite prognosis in pulmonary tuberculosis may be made from the number and stage of development of the tubercle-bacilli found in the sputa. When they are numerous and well developed the prognosis is grave. 2. The number of bacilli in the sputum increases proportionately with the advance of the destructive process in the lung, and attains its maximum as the end approaches. 3. The distribution of bacilli is not the same in all cases. Sometimes they are evenly scattered about in the sputum, and sometimes are collected together in groups. 4. Their appearance is not constant. They are often small, ill-developed, and without spores. In such cases their number is always small. 5. Such bacilli are found in cases where the disease is progressing but slowly or has been checked. 6. In all rapidly advancing cases of pulmonary tuberculosis with high temperature, night-sweats, etc., the bacilli are large and rich in spores. 7. In every case in which the bacilli were plentiful there was high fever, and the converse was also true. 8. The difference in the quantity of bacilli in the fluid of a cavity and that in the lung-tissue surrounding the excavation was very

marked. In the former they were very numerous, in the latter scanty. 9. From this it appears that the sputum affords a more favorable place of growth than does the still living lung-tissue. 10. We may not ascribe the rich development of bacilli in the lung-cavity to the presence of oxygen, for they are equally abundant in the purulent secretion of a tuberculous joint.—*Berliner Klinische Wochenschrift*, November 6, 1882.

SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.—Dr. Krönlein relates several cases of obstruction of the bowels successfully relieved by operation. Where the occlusion is caused solely by obstinate constipation he recommends massage, cathartics, and enemata; but in acute obstruction he advises that no time be lost through trial of these measures, but that an operation be resorted to at once. Simple laparotomy and search for the point of obstruction is, according to Dr. Krönlein, usually unavailing, because of the marked meteorism. Lapar-enterotomy is the operation which he prefers. An incision is made in the right iliac region, and the portion of the gut which presents at the opening is seized and stitched to the abdominal wall. If the intestinal canal become permeable again the artificial anus may be closed; but, in any event, the author does not consider that life with an artificial anus is so unendurable as many are accustomed to suppose.—*Correspondenzblatt für Schweizer Aertze*, Nos. 15 and 16, 1882.

CRETEFACTION OF THE GANGLIONIC CELLS IN MYELITIS.—Dr. Friedlaender relates three cases of poliomyelitis in which a cretification of the cells of the anterior horns was observed. The author believes, on the strength of his own investigations and those of others, that calcification of the ganglionic cells is always present in acute myelitis. He thinks that the alteration of the cells in poliomyelitis is due to some infectious agent; and he is inclined to regard it as an infectious disease, a view of which many of the symptoms of the affection, he thinks, are confirmatory.—*Centralblatt für Klin. Med.*, No. 28, 1882.

PROPHYLAXIS OF TUBERCULOSIS.—Accepting the infectious nature of phthisis, Dr. Veraguth advises the following prophylactic measures: The sputa should always be disinfected. Those predisposed to tuberculosis should avoid health-resorts which are frequented by phthisical subjects. Great care should be taken to procure milk from perfectly healthy cows, both for infants and adults. Lastly, Dr. Veraguth thinks that the State should forbid the marriage of all persons suffering from phthisis or of those predisposed to the disease.—*Centralblatt für Klin. Med.*, No. 28, 1882.

INFLUENCE OF VARIOUS IRRITANTS UPON THE INTESTINAL MUSCULAR FIBRES.—From a large number of experiments undertaken to determine the influence exerted by various salts upon the smooth muscular fibres of the intestine, Dr. Nothnagel has formulated some important conclusions. He states that the effects of the potassium salts are very different from those of soda when applied locally to the wall of the intestine in living animals. After the application of a salt of potassium, a strictly local contraction ensues, while the irritation from sodium salts results in a contraction that is propagated along the intestine for some distance upward toward the pylorus. In the latter case it was often noticed that the contraction commenced several lines distant from the point of irritation, while the point itself was not affected. This never occurred when potassium was used. The contraction after sodium was slower, less marked, and of shorter duration than that from potassium. The only other salts, of a number tried, that caused a similar effect to the sodium salts, were those of ammonium. As to the question, whether these contractions arise from direct irritation of the muscles, or through some nervous influence, Nothnagel asserts that the potassium salts act directly through the muscles, but that the effect of the sodium

compounds is to be otherwise explained. In a living animal, after the mesentery has been stripped off, the reaction of the muscular coat of the intestine occurs as before. But in animals killed by breaking up the medulla, while the contraction after application of the potassium salts is unchanged, that from sodium is either entirely abolished or has lost its peculiar character. This fact, together with the peculiarities before mentioned, would seem, in the author's opinion, to point to a nervous interposition in the reaction following irritation from sodium compounds. Dr. Nothnagel is as yet unable to account for the curious fact of the ascending contractions. The experiments were made on rabbits and cats.—*Centralblatt für Klinische Medizin*, No. 29, 1882.

ACETONURIA.—Dr. Jaksch asserts that acetone is a normal constituent of the urine, and occurs as a constant product of tissue changes. In health it is found in very small amount (about one-sixth grain only, in the twenty-four hours), but in certain pathological conditions it may rise to an appreciable quantity. Acetonuria exists not only in diabetes, but is also almost constantly present in high continued fevers. The amount of acetone, usually several grains, bears a pretty constant proportion to the height of the fever. The author has never seen the excretion of acetone in appreciable amounts in apyretic conditions, except in certain cases of carcinoma, hydrophobia, and diabetes mellitus. Gerhard's chloride of iron test (a red color of the urine upon the addition of ferric chloride) does not, according to Jaksch, indicate the presence of acetone, but of acetic acid. The latter very readily, however, becomes converted into acetone under the condition of warmth and in the process of distillation. The author has occasionally observed the two substances together in the urine in diabetes, measles, scarlatina, and pneumonia. He recommends Lieben's iodoform test for the qualitative determination of the presence of acetone in the urine. From a half to one pint of urine is mixed with a moderate amount of hydrochloric acid and put into a retort. The first few drops that are distilled over are treated with caustic soda and biniodide of potassium, with the result, if acetone be present, of the formation of a cloud of iodoform. The substance is easily recognized by its odor, and further, if the fluid be made to boil, it rises with the steam and is condensed on the cool glass in crystals of six-sided plates, or six-pointed stars. When acetone is present in large amount, previous distillation is not always necessary. To estimate the quantity of acetone in a given specimen of urine, the author gives the following directions: The entire quantity of acetone in a measured amount of urine must be transformed into iodoform by the addition of sufficient caustic soda and biniodide of potassium. The resulting cloud is to be compared to that obtained in a proof solution containing a known amount of acetone, and the two deposits made of equal density by the addition of water to one or the other solution. The proportion of acetone can then be determined by the formula, $x = \frac{axv}{v'}$; x = the quantity of acetone to be determined, a = the amount of acetone in the proof solution, v = the entire volume of the fluid containing the distilled urine, v' = the entire volume of the proof solution.—*Centralblatt für Klinische Medizin*, No. 29, 1882.

INFLUENCE OF INTRABRONCHIAL PRESSURE UPON THE CIRCULATION.—Professor Sommerbrodt states, upon the strength of a number of experiments made by himself, that rapid respiratory movements, inhalation of compressed air, speaking in falsetto, or any other act which causes an increased pressure of air within the bronchi, will give rise to dilatation of the blood-vessels and acceleration of the heart's action. He explains this effect as due to a reflex loss of tone of the vasomotor system, consequent upon irritation of the pulmonary nerves. The purposes served by this arrangement are thus set forth by the author: 1. It contributes to the freer blood-

supply of the muscles. Muscular exertion causes deeper respiration, and this in turn increases the rapidity and volume of the circulation. 2. It promotes the rapid excretion of waste material through the kidneys. 3. It serves to regulate the temperature of the body by reason of the increased peripheral circulation. 4. It guards against the dangers of venous engorgement, which is the first result of intrabronchial pressure, by the compensatory arterial dilatation and increased cardiac action.—*Correspondenzblatt für Schweizer Aerzte*, No. 20, 1882.

REDUCTION OF STRANGULATED HERNIA WITHOUT OPERATION.—The following simple procedure is stated by Dr. Finkelnstein to have been successfully employed in the reduction of a large number of cases of strangulated hernia: The patient is placed in the ordinary position upon the back, and every fifteen minutes one or two tablespoonfuls of ether, mixed with a little oil, are poured upon the tightly stretched skin over the intestine. In the course of an hour the bowel usually slips back of its own accord into the abdominal cavity. This action is explained by the author in cases where the strangulation is caused by contraction at the orifice of the hernial sac, as due to relaxation of the inguinal ring from the ether. In other cases, where no contraction exists, Dr. Finkelnstein refers the favorable result to a double action of the cold in causing a diminution in size of the knuckle of intestine and in setting up forcible peristaltic movements. The oil is added to the ether, in the proportion of 20 parts to 100, simply to prevent local irritation of the skin.—*Allgem. Med. Central-Zeitung*, November 4, 1882.

CLINICAL SIGNIFICANCE OF PEPTONURIA.—Dr. Jaksch, Jr., records the results of a number of examinations made to determine the presence of peptone in the urine. In leucocythemia, although peptone was found in the blood, it was not in the urine. This fact, he thinks, to be confirmatory of Hofmeister's view, that peptone circulates in the blood in connection with the white corpuscles. The latter are not broken up, hence the peptone is not set free. Peptonuria existed in a number of cases of empyema, but as a rule only in those in which the conditions were favorable for the reabsorption of the pleural exudation. As regards the prognostic value of peptonuria, the author thinks that the excretion of peptone in the course of pneumonia, acute articular rheumatism, meningitis, etc., indicates that the inflammatory process is subsiding.—*Wiener Med. Wochenschr.*, No. 42, 1882.

INFLUENCE OF EXCISION OF THE PRIMARY INDURATION UPON THE SUBSEQUENT COURSE OF SYPHILIS.—In corroboration of the views expressed by Dr. Morrow, in a paper read recently before the New York Academy of Medicine, the following conclusions of Dr. Tomaschewski (*Wratsch*, Nos. 16 and 17, 1882), derived from observations upon upward of fifty cases, may be of interest: 1. The primary induration is to be regarded not as a local affection, but as the first objective symptom of syphilis. 2. The excision of the chancre, at whatever time it may be practised, does not protect the patients against subsequent manifestations of the disease. 3. The wound left after the removal of the induration heals usually by first intention. 4. In the majority of cases the induration does not return after excision. 5 and 6. Excision cuts short the duration of the local sore, but has no effect upon the general disease. 7. The period of incubation of the secondary symptoms is not sensibly modified. 8. The general character of the gland affections is unchanged. 9. The secondary affections of the skin and mucous membranes are influenced in no way by excision. 10. The influence of syphilis upon the general health is apparently the same. 11. The cure of the disease is not hastened. 12. Relapses, whether as regards their character, intensity, or time of occurrence are unaffected by excision of the primary indurated sore. As opposed to

these conclusions may be mentioned a communication of Dr. Saccharewitsch (*Ibid.*, No. 33, 1882). The writer states that he has performed excision of the indurated chancre in a small number of cases, with the effect of either preventing further manifestations of syphilis or materially shortening their duration. He therefore recommends the practice to be followed in all cases.

RELATION BETWEEN CERTAIN EYE DISEASES AND AFFECTIONS OF THE FEMALE GENERATIVE ORGANS.—The frequent occurrence of diseases of the eye during the progress of various disorders of the female generative apparatus has been noted by Dr. Rempoldi (*Journal de Médecine de Paris*, November 4, 1882). Among the menstrual disorders which may be accompanied by conjunctivitis, simple or phlyctenular keratitis and iritis, the author mentions especially amenorrhœa. But suppression of the menses from various causes may also be attended by affections of the choroid, by optic neuritis, retinitis, and glaucoma. In the course of inflammatory diseases of the sexual organs are frequently observed iritis and scleritis with trigeminal neuralgia. During pregnancy and lactation, Dr. Rempoldi has observed conjunctivitis and pannus. Among the diseases appearing toward the cessation of lactation, are noted corneal ulcerations, retinal hyperæsthesia, disturbances of accommodation, photophobia, and retinitis. The author includes hysteria in the list of sexual disorders, and mentions asthenopia with retinal hyperæsthesia, and ptosis with retinal anæsthesia, as having been observed at different times in hysterical subjects. Finally, he notices the ocular disturbances dependent upon the albuminuria of pregnancy, and amblyopia consecutive to uterine hemorrhages.

PATHOLOGY AND TREATMENT OF UTERINE DISPLACEMENTS.—The following practical points are set forth by Schultze, in a recent monograph upon uterine displacements: The normal condition of the uterus is one of very free movement, as can be readily demonstrated in the living subject. Changes of position that are permanent are pathological deviations. Restriction of normal movements is the characteristic sign of displacements. These consist in (1) fixation of the organ through inflammation, and (2) malposition resulting from relaxation of the ligaments. In the first class, treatment should be directed against the inflammation, in the second, the weakened ligaments should be assisted by mechanical means. Dysmenorrhœa and sterility in ante flexion and anteversion arise not from change of position, or supposed stenosis, but are due wholly to the coexisting metritis or parametritis. Treatment should be directed against the inflammation, and not against the assumed stenosis or the malposition. In retroflexion, on the contrary, mechanical treatment is indicated.—*Berliner Klin. Wochenschr.*, No. 32, 1882.

AVOIDANCE OF IODOFORM POISONING.—In a prolonged discussion on the utility and disadvantages of iodoform, at a recent meeting of the Berliner Medicinische Gesellschaft, Dr. Steinauer had occasion to make some practical suggestions. Iodoform, he stated, when applied locally was always absorbed, though very slowly, and its action was a cumulative one. Hence it was advisable to remove the dressings after five or six days, and substitute some other antiseptic agent—carbolic acid, thymol, salicylic acid, or the like. Iodoform appears in the urine in the form of iodine, in combination with an alkali. We can readily determine its presence by adding nitric acid and starch to the urine, and shaking the mixture, when the blue color appears. We have thus a simple means of estimating the amount of iodoform absorbed, and can judge whether danger of poisoning exist or not. The lethal dose in man is difficult to determine. In animals it is stated to be as follows: Guinea-pigs, thirty grains; rabbits, forty-five grains, and dogs, one drachm.—*Berliner Klin. Wochenschr.*, No. 42, 1882.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE NEW VOLUME OF THE RECORD.

WITH the present issue THE MEDICAL RECORD materially increases its size and correspondingly improves its general appearance. The adoption of a larger page and a longer column will enable us in future to devote more space to communications, while the change in the general arrangement of the journal will give us even better opportunities than formerly of publishing the latest important news up to the last moment of going to press. By all these means we hope to add to the general usefulness of THE RECORD as a medical newspaper, and make it, in this respect, more acceptable than ever to our readers. Our corps of special correspondents both at home and abroad has received such additions as will guarantee us, by letter and telegraph, the latest information concerning the matters of medical interest transpiring in the different medical centres of the world. The larger amount of space at our disposal will afford us extra facilities for the prompt insertion of a greater number of communications, better opportunities for the discussion of medical subjects while they are fresh and interesting. In these respects we shall be better able to meet the more urgent demands of the journalism of the day, and to minister to the pressing needs of the active, practical, and progressive workers in our ranks. With such aims in view the character and variety of material furnished will be such as shall be most useful and instructive to the larger number of professional readers.

In this connection we are pleased to state that extraordinary pains have been taken to secure for our readers during the year a largely increased variety of practical articles. We have conceived the idea of gathering anew some of the more recent views concerning the pathology and treatment of many of the commoner diseases which are met with in general practice. Papers on these different subjects will be prepared specially for THE RECORD by many distinguished gentlemen in this and other cities. In this way we hope to compass a good part of the field of practical medicine and give to the general reader a guide for his treatment of such diseases as he meets from day to day. These articles, taken collectively, may serve to furnish him with a text-book of more than ordinary value added to the other features of THE RECORD. Many of these communications are already in hand, while the remainder, the subjects of which have been selected with especial

care, are promised when the time for their publication arrives.

We believe this to be a departure in medical journalism which will be duly appreciated by every one who desires to hear the opinions of experts in these different branches of medicine. Even if there is nothing new to most of our readers in the treatment of this or that disease, it is a comfort to know the fact and to be assured that they are working side by side with men of larger experience whose general results tally with those of the average practitioner. In any case the reader can be assured that the subjects will be presented with the view of bringing out the new and practical points connected with them. In another place the list of these subjects and their authors is announced. It is perhaps unnecessary to say in addition that everything which can be, will be done to make THE RECORD attractive and maintain its previous character as a faithful and impartial exponent of the medical opinions of the day. We simply owe this to our subscribers and it shall be our constant aim to do what we consider a plain and pleasurable duty.

COLD IN THE TREATMENT OF FEVERS.

At the recent German Medical Congress (*Verhandlungen des Congresses für Innere Medizin*, 1882) a prolonged discussion was had upon the treatment of fevers, and especially of typhoid, by the antipyretic method. Liebermeister was quite naturally the first to be heard and he stated the following propositions: In many fevers there exists in the elevated temperature an immediate danger to the patient. In such cases the problem for the physician is to overcome by suitable means this menacing condition. The foundation of all antipyretic treatment consists in the withdrawal of heat from the body, by means of cold baths. In many cases the administration of antipyretic drugs, such as quinine or salicylic acid, is also judicious. The speaker unhesitatingly admitted that there might have been some patients injured by too energetic bathing, but he contended that their number was quite insignificant in comparison with the thousands whose lives had doubtless been lost through the neglect of this mode of treatment.

He was ready to welcome any method that would accomplish the desired result, *i.e.*, the reduction of a dangerously high temperature. But he considered the treatment by cold baths to be the simplest and most efficacious means to that end. The danger of an elevated temperature lay in its long continuance. So that, if we could induce a marked remission, even if it were only for a short time, the peril was thereby greatly lessened. His own habit was to have the baths given during the night, sometimes as often as once in every hour. But in the day time he usually let the fever take its course. The patient was placed in the bath whenever his temperature rose to 104°. The speaker in concluding said that he wished to correct an erroneous impression that seemed to have arisen, namely, that he treated everything antipyretically, and only antipyretically. If there were a specific remedy for typhoid fever he would gladly employ it, but until it was discovered he should treat the symptoms as they arose.

Riess, of Berlin, thought that we should try not only to obtain remissions of the fever, but to reduce the pyrexia to the lowest possible degree throughout the entire course of the disease. A large experience had led the speaker to prefer the cool bath to the internal administration of antipyretic remedies. He used water of a temperature of about 87° , and he kept the patient lying in a sort of hammock, suspended in the bath sometimes for an entire day. Such a long immersion was seldom necessary after the first day of treatment. Afterward the patient was placed in the bath whenever the rectal temperature rose to 101° , and removed again when it had fallen to 99° . The discussion was continued by Jürgensen, Gerhardt, and others, and of course the speakers differed somewhat as to the relative merits of cold water and internal antipyretics. The general consensus of opinion, however, seemed to be to the effect that, in certain cases, the employment of the cold bath was of the highest utility, not only in shortening the duration of fevers, but also in saving life, especially where there was danger from hyperpyrexia.

We can certainly not presume to question the accuracy of these German observers, nor yet doubt the honesty of their conviction. Nevertheless we should remember that, though faithfully tried in our country, the cold-bath treatment of typhoid fever has not yielded results that have popularized this therapeutic plan with us.

Thus it would seem that we are driven to conclude that climatic or constitutional influences of a peculiarly American character prevent us from reaping the benefits which the cold bath appears to yield in other countries.

Certainly a direct abstraction of heat from an overheated body appeals to the mind as a rational method of treatment. But in the human body we are at no time dealing with purely physical problems. There can be no doubt that the chilling effect of immersing the entire body in cold water must profoundly impress the nervous system. And often, no doubt, the shock thus experienced may prove potent for evil. The steady use of the wet sheet seems, after all, a more harmless, and so perhaps equally efficacious procedure.

In this connection we are also reminded of a suggestion recently made by Dr. J. W. Stickler, of Orange, N. J. He has described a bed (see MEDICAL RECORD, April 15, 1882) which allows the patient to be put under the cooling influence of cold air, continuously applied.

This method of reducing high temperatures seems, *a priori*, a convenient and rational one. We are not aware, however, that it has ever been extensively employed. But it would certainly seem to deserve a fair trial. And perhaps it may eventually prove a good and safe substitute for the cold bath with its inherent dangers and inconveniences.

THE PARIS EPIDEMIC AND ITS LESSONS.

THE epidemic of typhoid fever has subsided in Paris, although the disease is still present, and there were quite lately over one hundred deaths per week from it alone.

The doctors of Paris have been busy of late in discussing the subject and trying to draw some conclusions that will be profitable to themselves and the world.

The epidemic, it is said, was malignant in its "morbidity," but benign as regards mortality. The disease was characterized by some peculiar features, such as the frequent development of thrush and of bed-sores, and the tendency to relapse after convalescence had set in.

In the matter of treatment it seems to be confessed that no evidence had been found to prove peculiar efficacy for antiseptics, antipyretics, or any other special methods. The statistics offered by various persons are of little value. No better results were obtained by anyone than by Dujardin-Beaumetz, who reported 87 cases with 4 deaths, under the expectant plan. M. Lancereaux, who adopted the *traitement des indications*, reported 57 cases and only 5 deaths.

The conclusion to be drawn from the Paris epidemic, as regards the therapeutics of typhoid fever, is that the disease must be watched, not actively treated. "*L'expectation armée*" was the term happily chosen as their best therapeutic guide by several who discussed the matter. We believe that the sooner this view is taken, and typhoid fever is looked upon as a disease like small-pox or scarlet fever, whose course the physician cannot greatly modify, but whose dangers we can, in part, avert, the better it will be for our science and our credit.

The matter of etiology has received much discussion from our French brethren. There has not been, heretofore, entire unanimity among them, as to the contagiousness of typhoid fever in cities. The history of the recent epidemic showed, however, that such contagiousness existed in a very mild degree. Among attendants in the hospitals, 24 caught the disease; of these 8 were patients, 11 nurses, 4 nuns, and 1 a medical student.

The origin and rapid spread of the disease are ascribed to the overcrowding of human beings, filth, and bad drainage. Some were disposed to add another factor: a peculiar modifying influence of the atmosphere. It appears to have been quite impossible to trace the spread of the disease from house to house, or family to family, or to ascribe it to any specially infected drinking-water. The vague element of "epidemicity" has, therefore, to be called upon.

THE IMMIGRANT AND SMALL-POX.

DR. JOHN H. RAUCH, in his last monthly report as Superintendent of the Immigrant Inspection Service, lays down the following propositions upon which he bases arguments for the continuation of his service:

"*First*.—The immigrant is a prime factor in the origin and continuance of small-pox in the United States—on the one hand, even if protected himself, often being the bearer of the contagion in clothing and other effects; and, on the other, if unprotected, frequently becoming a victim to the disease and propagating it to others.

"*Second*.—Local effort and expenditure, either by States or municipalities, are inadequate to the control of small-pox in any given community or commonwealth, so long as the contagion and the material for the propagation of the contagion continue to be replenished by repeated accessions of unprotected or imperfectly protected immigrants.

"*Third*.—A continuous sanitary surveillance of immigrant travel, from the port of arrival to the point of ultimate destination—such surveillance to consist of re-

peated inspections, vaccination of all unprotected, systematic observation of suspicious sickness, prompt removal and isolation of discovered small-pox or other contagious cases, disinfection of baggage, clothing, cars, etc.—is essential to supplement whatever preventive measures can be secured before embarkation, during the voyage, or at the port of arrival."

Regarding the point that the immigrant is the chief source of small-pox in the United States, considerable evidence is adduced, yet hardly enough to establish the claim that is made. Dr. Elisha Harris writes that in New York State thirty per cent. of all the outbreaks have been traceable to immigrants. The evidence from Western health officers is not so comprehensive.

In discussing his second and third propositions, Dr. Rauch criticises unnecessarily the views we have taken regarding his service. We quite concede the importance of his work and should regret to see it stopped. It appears, however, to be irrational for the United States Government to establish inland quarantine for the protection of certain districts of the country, leaving other quarantines neglected. There should be, rather, international quarantine regulations and a uniform and maritime quarantine; then, if this does not suffice, let each State take care what diseases enter its boundary. The results of depending upon surveillance after arrival and distribution of immigrants begin is shown in Dr. Rauch's own figures. Among 130,000 persons who in the past six months were added to the population of the Northwest, 23,000, or nearly one-fifth, escaped inspection in the Western District.

It seems somewhat futile to inspect four-fifths of the immigrants and leave the rest to disseminate disease as they will. We trust, therefore, that our Government will attack the evil nearer its source. At the same time we can hardly blame Dr. Rauch for being optimistic, and perhaps a little egotistic, over his own very excellent work.

A RADICAL HEALTH ORDINANCE.

THE authorities of Paterson, N. J., have had a hard struggle with contagious diseases during the past year. With regard to small-pox, especially, the efforts made for its control have been so unsuccessful as to give rise to much criticism.

An ordinance has recently been passed, however, which is evidently expected to place health matters upon a very solid basis. These new regulations provide for a most stringent compulsory notification of infectious diseases. Section I. requires every physician to report to the Board, in writing, the particulars of each case of contagious disease upon which he is in attendance; if death occur, another notice must be given by the people's very good servants—their doctors.

Similar notification of the presence of contagious disease must be given by all hotel and boarding-house keepers. School-teachers are forbidden knowingly to permit the attendance of children suffering from any contagious disease. The same prohibition is put upon parents and guardians.

The most stringent regulation, however, relates to Section VII., which reads as follows:

"It shall be the duty of the Health Inspector, imme-

diately upon report being made to the Board that any person is sick with small-pox, or any other pestilential or contagious disease which may be considered by the Board to be dangerous to the public health, to affix or cause to be affixed to the front part of the house in which such sick person may be, a sign, upon which shall be painted or printed in large distinct letters the words 'small-pox,' or such other disease, as the case may be."

The "other contagious diseases" which are to be thus advertised are: scarlet fever, diphtheria, typhus, varioloid, cholera, yellow fever, or any other disease publicly declared by the Board of Health to be dangerous.

This plan of home-advertisement of contagious disease has been tried in Chicago, if we remember correctly. It there failed, because the people did not like it, and there were constant evasions of the law. It may do better in Patterson, although we confess to being skeptical. It is not wise for the sanitarian to invade the domestic hearth too aggressively.

A NEW CITY INSANE ASYLUM.

At last our city authorities are beginning to realize that some change must be made in the care of its insane. The Board of Estimate and Apportionment have received from the City Charity Commissioners a communication asking that provision be made for the purchase of a large farm near the city upon which a new asylum can be built.

It is proposed that plain, substantial buildings be put up here, and that the chronic, able-bodied insane be transferred to them. Such a place could be made to furnish occupation, care, and shelter for one-third or more of the inmates of the City Insane Asylum on Ward's Island. It is recommended that the site be upon the water front, so as to be more accessible.

There are now over twelve hundred occupants in the Ward's Island Asylum, a number which greatly over-crowds its capacity. The project of establishing a separate asylum for chronic cases has been several times urged by us. We are glad to learn that it now promises to be adopted.

Similar provision will soon have to be made also for the chronic female insane upon Blackwell's Island.

The asylum there contains a still larger number of patients than that on Ward's Island, and the necessity for separate care and treatment of the chronic cases is very great.

BROKEN THERMOMETERS.

THE misfortunes of our correspondent, Dr. A. A. Lyon, with his thermometers, have called forth much sympathy and advice. We are in receipt of numerous letters from various readers, describing their instructive experiences and the way in which they have finally succeeded in averting the catastrophes that have so overwhelmed Dr. Lyon.

We can hardly do justice to the suggestions of all of our correspondents. And we must be especially brief with some of our enterprising instrument-makers, whose concern over broken thermometers is not, we fear, entirely free from commercial calculation.

The following embody the chief points made on the subject in hand:

Dr. W. R. Fisher, of Hoboken, recommends the use of a German silver case, with a small wad of cotton placed in either end; as a further precaution, the thermometer should be carried in the pocket-case.

Dr. T. F. Houston, of Clarkesville, Ga., Dr. Foster, of Moosup, Conn., and others, recommend the same plan, which, we believe, is a common one, and as regards the pocket-case, it is not always practical or convenient. One correspondent carries his thermometer in the upper vest pocket, the edge of which is stitched, leaving just enough space for the instrument to slip in. A rubber strap twisted about the case helps to prevent it falling out.

Dr. Charles C. F. Gay, of Buffalo, calls attention to a specially devised case manufactured by Tiemann & Co., of this city. This case contains, among other things, a place for a clinical thermometer, in which that instrument can be carried with security. Any case can be lined with flannel, however, and made more secure. It is only necessary to cut a strip of the cloth wide enough to reach half around the interior. This is covered with mucilage on one side and the end carried to the bottom of the case by the aid of a tenaculum.

Dr. Wm. R. Leonard, of this city, describes a special thermometer case made of black walnut, steamed and fashioned on a mould. It is lined with velvet, and has a padded silk top. Shepard & Dudley are the makers. Dr. Leonard has used a case of this kind for four years, and it has answered its purpose well.

The foregoing suggestions cover the matter sufficiently, and will, we doubt not, be fruitful in saving many thermometers.

A NEW ANTISEPTIC.

THE importance of possessing a powerful antiseptic which is at the same time harmless to the general system is very great.

Indeed, the discovery of such an agent is the great aim of the modern bacterial pathology. That so potent, and yet accommodating a drug, should ever be found is improbable, yet we chronicle with interest the various new claimants for the important discovery.

Somewhat over ten years ago, Mr. C. T. Kingsett, of London, began to study the antiseptic properties of peroxide of hydrogen. He reported the result of a series of experiments, to the British Medical Association, in 1876. In 1878 the antiseptic properties of this substance were rediscovered by Guttman and Fraenkel, in Germany; and quite recently the same thing was done in France, by MM. Baldy, Bert, and Regnard. The practical uses of this agent have been most demonstrated in this latter country. Under the name of *eau oxygénée*, it has been widely used in surgery. M. Pean operates in an atmosphere of the oxygenated water, instead of carbolic acid. M. Baldy employs gauze and wool soaked in the peroxide. Many French surgeons have used it as an agent for washing and dressing ulcers and abscesses. It has been very successfully used by ophthalmologists. Its value internally has not yet been demonstrated. Dr. Day, of Geelong, has given it in diabetes, gout, and rheumatism, claiming that it increases oxygenation—a view which is wholly hypothetical. Mr. Lennox Browne has used the water in nasal, throat, and aural

troubles. It has been found superior to carbolic acid as a dressing for venereal ulcers.

On the whole, the peroxide of hydrogen has been shown, thus far, to be a harmless yet powerful antiseptic. It is hardly to be claimed for it that as yet any great superiority over other antiseptics has been proved.

In a recent communication to the *British Medical Journal*, however, Mr. Kingsett announces a new preparation which he calls, unfortunately, by the apparently proprietary name of "Sanitas" oil. It is, he says, an organic peroxide, which will continually yield peroxide of hydrogen to water on being placed in contact therewith. If placed upon moist surfaces, it keeps them in an atmosphere which is claimed to be of an extremely antiseptic character. Its slow and constant action, together with the great antiseptic intensity, which many times exceeds that of the aqueous peroxide, offer, the discoverer says, peculiar advantages. Much is hoped for it as an agent for inhalation in pulmonary troubles, as well as a local application for wounds, ulcers, and the like.

OLD DISEASES WITH NEW NAMES.

THE remarks contained in the recent address of Sir James Paget, as referred to by our London correspondent, are full of sound sense and must commend themselves to the medical thinkers of the day. In this age, when only novelties are sought after, it is somewhat comforting to hear from one of the masters in the profession that their importance is more relative than positive. The old-fashioned diseases still claim our attention; the old facts connected with them still remain, interpret them as we please. The novelty is simply in the different methods by which we may explain their phenomena. We are glad to hear the distinguished orator emphasize so strongly the necessity of collecting facts for their own sake, and we admire afresh the candid spirits of the old investigators who gave themselves so contentedly and so unostentatiously to such work. The lesson of their lives cannot be too strongly enforced in this day, when only such facts are collected as may serve to explain some pet theory or bolster some absurd notion. No more striking illustration of the opposite course could be offered than the preservation of John Hunter's gummy tumor, none that could more effectually prove the folly of throwing away what we may not at the time fully understand.

FILTHY CROTON WATER.

ACCORDING to recent reports, particularly in the *Herald*, there is constantly going on more or less pollution of our water supply—hardly enough, it is true, to affect the taste of the water itself, but sufficient at least to give considerable concern to New Yorkers, and to emphasize the necessity of exercising more than ordinary vigilance in correcting the evil. At Brewsters it is said that filth of a particularly offensive character is dumped into the east branch of the Croton River, which flows through that village. For instance, on Wednesday a colored man was seen cleansing cuspidors, taken from a hotel bar-room, in this stream. On another occasion a number of fish were being cleaned in the same stream. In fact, notwithstanding an inspector has been appointed to prevent such occurrences, little or nothing has been done in that line.

SHIP-SURGEONS AND VACCINATION OF IMMIGRANTS. THE *Nautical Gazette*, quoting our editorial upon the subject, criticises ship-surgeons rather too severely. It says :

"The average ship-surgeon is a species of medical fraud, so far as the practice of medicine is concerned. He goes to sea because he could not earn his salt on shore. There are some, however, who stand high in their profession, and take great pride in having a clean passenger list. We are quite prepared to believe that 'some steamship companies buy cheap virus in large quantities and keep it until it is all used up.' Some of them would be satisfied to vaccinate their passengers with mucilage or sour flour paste for that matter, so as to save a penny. There needs to be an inspection of ship-surgeons as well as of immigrants. This we know from experience."

ELECTRICITY AS A CARDIAC STIMULANT.

A FACT of the greatest importance, practically—especially with reference to the treatment of threatening death by chloroform—has just been determined by Professor von Ziemssen. In investigating the effect of electricity upon the heart, he has discovered that the induced current has no influence whatever upon the frequency or force of the cardiac contractions, whilst the continuous or battery current most distinctly affects them. Many tracings of the movements of the heart under different conditions were first made, and a careful record was obtained of the effect of physical disturbance of the various parts of the cardiac surface. The influence of the different forms of electricity was then thoroughly investigated, cardiographic tracings being taken simultaneously. The most interesting fact determined was the complete failure of the faradic current to alter the action of the heart, or to disturb in any way its sensibility, whilst the direct battery current produced a marked effect.

THE COST OF FUNERALS.

It is claimed by one writer that one and one-fourth more money is expended annually in funerals in the United States than the Government expends for public school purposes, and that funerals cost annually more money than the combined gold and silver yield of the country in the year 1880. This does not include the cost of cemetery lots and burial-fees. While it is quite natural to properly reverence the dead, it is certainly unnecessary to make extravagant expenditures in their behalf. Many poor families cripple themselves for months in order to make a last show of respect for the departed. The carriages, flowers, and music could be used to much better advantage when the poor body was animated and could really appreciate such luxuries.

TAPPING OF THE PERICARDIUM.

DR. H. RENDU, in *L'Union Médicale*, reports that "the doubtful position and value of this operation makes the case of interest. The patient suffered from a pericarditis with effusion, produced by exposure to cold. The symptoms of pressure were severe, a puncture was made and a litre of liquid removed. A month later the patient had a double pleurisy. He finally recovered with pericardiac adhesions."

News of the Week.

THE DEATH OF GAMBETTA.

So far as can be learned the death of Gambetta must have been anticipated by his medical attendants long before hope was publicly given up. The distinguished patient had suffered for some time from diabetes. He had not taken proper care of himself, and his constitution had been sapped of its vigor. The pistol-wound in his wrist precipitated an acute illness. The symptoms described, as proved by *post mortem* examination, were those of a perityphlitic inflammation, which was followed by pyæmia, the patient succumbing finally from cardiac thrombosis. It was not thought advisable to operate, on account of his exhausted condition, death being considered inevitable.

The names of Drs. Lannelongue, Paul Bert, Charcot, and Fienzal are mentioned as attending Gambetta. This is sufficient evidence that all which was possible was done for the lamented champion of French Republicanism.

ANOTHER PROTECTIVE VIRUS.

M. PASTEUR has read a paper on *rougè*, or *mal rouge*, of pigs before the French Academy of Sciences. The disease he treats of has been very destructive in France. In the Valley of the Rhone, this year, it destroyed not less than twenty thousand pigs. Dr. Klein, in 1879, gave an account of it, and designated it *pneumo-enteritis*. Pasteur takes exception to Klein's account of the nature and characteristics of the parasite which produces the illness, holding that it has a dumb-bell shape, and bears a close resemblance to that which produces the cholera of fowls, but is less easily detected. He claims inoculation by a diluted form of the virus affords a protection. If this is true, it is a matter of importance in this country, where thousands of pigs die yearly from the disease in question.

THE NEW PRESIDENT OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

ON Wednesday evening of this week (January 3d), Dr. Alfred Stillé was elected President, and Dr. J. M. Da Costa, Vice-President of the College of Physicians of Philadelphia. Professor Stillé will sit in a chair that has had but eight incumbents in ninety-five years. The College of Physicians was born in 1787, and became moribund about fifteen or twenty years ago. The fact is that this institution, with an invaluable library of over twenty-three thousand volumes and a fine museum, committed the error of re-electing one president over and over again, until he died, after serving thirty-one years. This distinguished man, Professor George B. Wood, was for many years an invalid who only left his home in a carriage at rare intervals. During a considerable period the duties of the office were of necessity performed by the vice-president, who was in a similar manner perpetually his own successor. The same suicidal policy was adopted in filling most of the offices and committees.

Hence the meetings were unattended by a sufficient number of Fellows to make a quorum, except on rare occasions; not enough new Fellows were added to fill the breaches made by death; few scientific papers were read; and the occasional gilt-edged volume of Transac-

tions became a collection of obituary memoirs. The last volume, which should have been bound in black, shows for two years seven papers (79 pages), seven obituary notices (132 pages), and two committee reports.

Within the past year additional nominations for officers and committees have been made, old traditions have been trampled under foot, the Constitution and By-laws have been recast, new Fellows have been added, so many papers have been presented that some could only be read by title, the papers are promptly published in the various medical journals, the building has been altered to provide for the long-needed and surprisingly successful Directory for Nurses, the telephone and telegraph have been admitted to Fellowship, the hours for opening the library have been extended so that now it can be used in the evening, and a social or smoking-room has been established. It is also probable that in a short time an additional story will be added to the building to better accommodate the Mütter Museum.

THE DOOM OF THE BACILLUS TUBERCULOSIS.

DR. H. D. SCHMIDT publishes in the December number of the *Chicago Medical Journal and Examiner* an elaborate account of his researches regarding the bacillus tuberculosis.

Dr. Schmidt's views, as has been already announced, are that the alkaline solutions and aniline oil used in preparing the tuberculous specimens, lead to the production of minute fatty crystals. These have naturally a faint bluish tinge, which has been mistaken for staining. That the so-called bacilli, however, are not really stained at all is thought to be proved by the fact, admitted by Koch, that they lose their apparent color and disappear from sight in a few weeks. By submitting the stained sections to boiling ether, the pseudo-bacilli disappear, being, as Dr. Schmidt claims dissolved. The case against the bacilli is a strong one, and will be alluded to again. Meanwhile, it is but fair to say that other observers, after causing the bacilli to disappear by means of ether, have reproduced them by staining the sections again, showing, presumably, that the ether only washes out the coloring matter.

A POLICLINIC IN PHILADELPHIA.

MEDICAL Philadelphia has been considerably stirred of late by rumors of a new college about to be established for the clinical instruction of graduates. The name is The Philadelphia Polyclinic and College for Graduates in Medicine. It looks as though the organizers had utilized the names of both of New York's recently founded institutions, and were afraid that the metropolis would be universally recognized as *the* medical centre. The faculty of the new college is said to be composed of those well known in medical and surgical specialties, but the details have been kept very quiet. It will be an unusual circumstance in collegiate history if all the professors are of the best material. Some weak link is pretty sure to be put into every chain. Success is assured for a Graduates' College in Philadelphia if it is started with enough money and brains. It cannot be successful unless the Faculty is composed of men who are known as scientific workers

in special lines and as experienced clinical teachers. Those favorably known to the Alumni of the University of Pennsylvania and Jefferson College will therefore undoubtedly be selected. Such men as Cohen, Burnett, Levis, Mills, Wilson, Van Harlingen, Thomson, Roberts, Morton, Smith, Leffmann, and Longstreth would make a strong organization, as they are all recognized as prominent in their particular branches.

THE GOVERNOR'S MESSAGE AND STATE CHARITIES.

THE discussion of our State Charities by Governor Cleveland, in his recent Message, and the recommendations there made are disappointing and unsatisfactory. The vital questions of the supervision of lunatic asylums and the change in the commitment laws are referred to in vague terms, and the recommendations made may be interpreted as meaning anything or nothing.

The number of the insane in the asylums and poor-houses is reported to be 10,443, an increase of 384 over the previous year. The Governor naïvely says that this indicates an increase in insanity, when it really indicates chiefly an increase in population.

The other State Charities are referred to with no especial comment.

THE NEW YORK MEDICAL JOURNAL.—The *New York Medical Journal* is transformed at the commencement of this year from a monthly into a weekly periodical. It comes to us in fine dress as a double-columned royal octavo of twenty-eight pages, and is filled with well-selected and interesting articles. It opens with a lecture by William B. Carpenter on "Human Automatism," which article is followed by a series of papers on "Antisepsis in the Treatment of Wounds," by Drs. Willard Parker, H. B. Sands, R. F. Weir, J. Willston Wright, and W. T. Bull. "A Rare Case of Osteoma of the Conjunctiva" is contributed by Dr. E. G. Loring. The editorial articles are exceedingly well written, and are models of their kind. The quarterly report on Ophthalmology is made by Dr. C. S. Bull, after the style of similar ones in the monthly. The report of the Medical and Surgical Society is, as usual, quite full and accurate. Altogether, the *Journal* is a credit to medical journalism, not only of this city, but of the country. The *Journal* continues under the control of its former editor, Dr. Frank P. Foster, who brings to the discharge of his new and responsible duties every requisite qualification.

IMPROVING THE LUNACY LAWS.—The permanent commission of the Medico-Legal Society on the lunacy laws recommended, at the meeting of the society on Wednesday evening, that certificates of insanity shall be given by Commissioners in Lunacy only; that asylum patients shall have the freest communication with their friends, and have the privilege of being examined by physicians outside of the asylum every six months. It is also urged that the intermittent cases be kept apart from the chronic insane.

INSANITY AND EXPERT TESTIMONY.—Although Henry Prouse Cooper, after a long contest, has been judged sane and is now at liberty, we are confident that his will prove another Gosling case, and that Mr. Cooper himself will be demented or dead within a few years. Every

medical man of prominence, so far as we can learn, testified to his insanity.

The case illustrates again the defects both in our method of getting expert testimony, and in the laws regarding commitment. Mr. Cooper, though not a felon, was confined for several weeks in jail, and his trial cost him \$8,000.

ST. LOUIS VITAL STATISTICS.—The total number of deaths in St. Louis for the year was 7,817. This makes the annual death-rate 19.5 per 1,000, estimating the population at 400,000. The number of births during the year was 8,441.

HOSPITAL FOR CONTAGIOUS DISEASES.—The Board of Estimate and Apportionment has appropriated \$50,000 for the erection of a hospital for children suffering from contagious diseases.

FARM FOR THE CITY'S CHRONIC INSANE.—The sum of \$25,000 has been appropriated for buying a farm on which buildings are to be erected for the chronic insane now in the city asylum.

NEW YORK'S CHARITIES.—The sum of \$1,029,953 has been appropriated for the public charities of this city during 1883.

ANOTHER MEDICO-LEGAL SOCIETY.—It is reported that another Medico-Legal Society is to be organized in this city, and is to be called the New York Society of Medical Jurisprudence. As there is already one large and well-sustained medico-legal society in this city, it is not easy to understand the need of a second.

The proposed society will make the third scientific medico-legal organization in the world.

SMALL-POX IN BALTIMORE.—Small-pox is quite prevalent in some parts of Baltimore. Seventy-one deaths occurred last week. The Health Board is blamed for negligence and incapacity in the matter.

PROFESSOR AUSTIN FLINT has been in Philadelphia delivering a course of lectures to the general profession, under the auspices of the Philadelphia County Medical Society, on the "Physical Exploration of the Lungs by means of Auscultation and Percussion." The first lecture drew such an unexpected crowd that there were not accommodations for one-half the audience, and about two hundred gentlemen were unable to get into the hall. Arrangements were accordingly made to have the other lectures delivered in the very large amphitheatre of the Jefferson College Hospital, and tickets of admission were issued. The scholarly and practical character of Professor Flint's lectures will be evident when they are published. A complimentary dinner will be given to him at the Social Art Club on January 12th, the evening previous to his last lecture. It will doubtless be worthy of the distinguished physician who has honored Philadelphians by his presence among them.

THE LATE DR. HENRY ASHLAND CLAY, who was shot by his partner, Dr. Etienne Evetzky, was born in Brooklyn, N. Y., in 1851, and graduated from the College of Physicians and Surgeons in New York City, in 1876. He served at the Roosevelt, and Nursery and Child's Hospitals, and was a pupil of Dr. Wm. H. Draper, of New York. In 1879 he went to Leadville, Col., and estab-

lished a practice there; during the following year and a half he was quite successful, and made many friends by his genial demeanor, and evident knowledge of his profession. From there he went to Durango, where he continued to follow his profession, and was the pioneer physician of the town. Not very long ago he formed a partnership with Dr. Evetzky.

DEATH OF SURGEON HENRY R. SILLIMAN.—Assistant-Surgeon Henry R. Silliman, United States Army, died in Philadelphia on January 1st, in his fifty-first year.

AN OBSTETRICAL AND GYNECOLOGICAL SOCIETY has been formed in Washington, D. C.

THE BOSTON WATER SUPPLY is reported bad, and a commission has been appointed to see what can be done to secure improvement.

THE FIRST AID TO THE INJURED.—The Committee of the State Charities Aid Association for "First Aid to the Injured" has made preparations to resume the classes as organized last year.

DEATH OF DR. CORVISART OF PARIS.—A cable despatch from Paris announces the death of Dr. R. F. E. Corvisart, of that city. He had been in delicate health for the last few years. He was the author of works on phthisis and dyspepsia.

THE NEW DEPUTY CORONERS.—The coroners-elect have named as deputy-coroners: Drs. M. J. B. Messemmer, Wm. T. Jenkins, Philip E. Donlin, and Wm. A. Conway.

A NEW HOSPITAL IN YONKERS.—There is to be established, under the medical directorship of Dr. S. Waterman, of this city, a hospital connected with the Hebrew Home under the auspices of the B'nai B'rith, a society comprising New York and New England States, and having a membership of ten thousand. The grounds at Yonkers comprise nearly ten acres, and command a fine view of the river. The building thus far erected is 200 x 80 feet. The hospital will be supplied with all the appliances necessary.

The following gentlemen have been appointed to the medical and surgical staffs: Dr. S. Waterman, Medical Director; Dr. A. Jacobi, New York, Dr. S. Swift, Yonkers, N. Y., Consulting Physicians; Dr. H. B. Sands, New York, Dr. G. F. Shrady, New York, Consulting Surgeons; Dr. Hockheimer, Dr. Wallach, Dr. Meyer, and Dr. Lœwingood, Visiting Staff.

LICENSES TO PRACTISE IN ILLINOIS.—The Illinois State Board of Health has just given notice that after the current scholastic year license to practise medicine in Illinois will be granted to graduates of those schools only whose requirements include a preliminary examination on the essentials of a common school education. As but one medical school in the State conforms to this requirement, even on paper, at present, there is some stir in the various faculties as to ways and means for complying with the letter of the law.

THE LOW PRICE OF QUININE at present prevailing should be known to physicians and their patients. Quinine is selling now, according to *New Remedies*, at the rate of \$1.65 per ounce. The decline in price is due largely to the importation of German quinine.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 13, 1882.

GEORGE L. PEABODY, M.D., VICE-PRESIDENT, IN THE CHAIR.

DR. PEABODY presented, in behalf of a candidate, a specimen illustrating

UTERINE FIBRO-MYOMATA, WITH A CYST OF THE LEFT BROAD LIGAMENT.

DR. P. F. CHAMBERS presented a

DERMOID CYST OF THE OVARY,

accompanied by the following history: The specimen was removed by Dr. T. G. Thomas at his private hospital. The patient was thirty-four years of age, married, and the mother of two children. Up to within one month of the birth of her first child she was apparently perfectly well. At that time she began to suffer pain in the left side, which passed off a few months after the birth of her child, and recurred at about the same time previous to the birth of her second child. The second child was two years and a half old. Since that time she had complained of constant pain in the back, especially upon the left side, and, for the last year, of difficulty in walking and standing. She had also become excessively nervous. On examination a tumor was found, about the size of a turkey's egg, in the left posterior cul-de-sac, tender upon pressure, and movable. An operation was advised for its removal, and three days afterward it was performed in the usual manner. The pedicle was ligated and dropped. Antiseptic precautions were observed. The patient made a rapid recovery. The tumor contained hair, no bone or teeth. It contained but a small quantity of fluid, the soft contents, measuring about an ounce, presenting the appearance of vaseline.

DR. H. MARION SIMS presented a

DERMOID CYST OF THE OVARY,

with the following history: On November 1, 1882, Dr. Vanderveer, of Somerville, N. J., brought the patient to his office. She was fifty-two years of age, and had been married sixteen years. Up to the time of marriage her menstrual periods had always been regular, and she had enjoyed the best of health. Two years after marriage she became pregnant, and all went well up to the seventh month, when a miscarriage took place, the child being removed with instruments. It had been dead in utero apparently for some little time. This miscarriage was followed by a violent attack of peritonitis, from which she did not fully recover for two years, and at times her life was despaired of. Her menstrual periods returned with her strength and were regular until she had change of life five years ago. From that time she was perfectly well until eight months ago, when she noticed a hard "lump" growing in the left iliac region. She did not have any severe pain in it, but complained of a great deal of backache. She noticed the lump to be growing rapidly.

When Dr. Sims first saw her, he diagnosed the tumor as a multilocular ovarian cyst and advised its removal, as it was then rapidly increasing in size. The operation was performed on Saturday, November 25th, and under the carbolic spray. He was assisted by Dr. Gill Wylie, Dr. Henneberger, of the United States Navy, Dr. Vanderveer, and Dr. Payton, of Oregon. Dr. Nash administered the ether. The usual abdominal incision being made, a firm, hard cyst was exposed to view. On introducing the hand he found there were adhesions in all directions. He plunged the large trocar into the cyst, and, much to his surprise, only brought away about three quarts of a milky colored thin fluid. He then en-

larged the opening into the cyst, and on introducing his hand was much surprised to feel a quantity of soft mortar-like material. This was all pulled out and found to contain a large quantity of silky, golden hair. When fresh, the color of this substance was exactly that of oleo-margarine, and its consistency about the same. It was odorless. It was very greasy to the touch, and burned like grease when thrown into the fire. Nine pounds of this material were removed, after which he felt something more solid attached inside, about midway between the top and bottom of the sac. When this was removed it proved to be a piece of skin, resembling a human scalp, and to which was growing a beautiful blonde curl about a foot in length. On the under side of it, and encased in fat and muscle, was a molar tooth, the only one found in the tumor. Efforts were then made to enucleate the sac, and he succeeded in doing so on the sides and in front, behind the bladder. The sac was so friable that it was feared it would be torn to shreds in trying to detach its posterior adhesions, and, at Dr. Wylie's suggestion, he determined to stitch the edges of the sac to the abdominal wound, and put a Thomas' drainage-tube inside the sac, and another into the pelvic cavity at the lower angle of the abdominal incision. The wound being closed in the usual way, the patient was put into bed, and he did not dare believe she would occupy that bed much more than thirty-six hours. Much to my delight, however, she rallied well, and her temperature has never risen above $102\frac{1}{2}^{\circ}$ F., nor her pulse above 103 since the fourth day. There was no drainage from the tube in the pelvis, and it was removed on the fifth day. From the one in the sac, there is now very little discharge, but he washed it out once a day with carbolyzed warm water. On this (the nineteenth) day she is taking plenty of nourishment, her bowels are moved daily, and she says she feels very well. Her pulse and temperature are normal. Dr. G. L. Peabody had examined the skin, and made the following report:

"The epidermis, the Malpighian layer, the derma, and the subcutaneous fat layer are all present. It differs, however, from normal skin in several important respects: (a) The derma has no papillæ; (b) there is a very unusually large number of sebaceous glands in it; (c) in numerous sections examined no sweat-glands have been present; (d) certain of the hairs and hair-follicles have undergone atrophic changes, by which the epithelium has disappeared and the hair become homogeneous and translucent; (e) the fat-cells are smaller than those of the normal adult tissue."

DR. WYLIE said the case illustrated beautifully what could be done where very strong adhesions were found. It had been his fortune to see four cases in which it was impossible to remove the posterior portion of the sac, and in all the sac was drawn up tightly and stitched into the lower angle of the wound without using any ligature whatever. Then a drainage-tube was introduced and the cavity was washed out three or four times a day according to the amount of discharge. The present case differed from those referred to in the fact that so many of the adhesions had already been torn away that it was deemed advisable to put in an extra drainage-tube. One end of it was in Douglas' cul-de-sac and the other passed out at the lower angle of the abdominal incision. The peritoneal tube had been removed, but the one within the sac still remained.

DR. R. E. VAN GIESON presented a

DERMOID CYST OF THE OVARY—CANCER OF THE STOMACH,

accompanied by the following history, furnished by Dr. E. H. Wilson, House Surgeon of St. Catharine's Hospital, Brooklyn:

C. F.—, native of Germany, fifty-three years of age, married, was admitted October 19, 1882, complaining chiefly of pain in the region of the caput coli, nausea without vomiting, and general debility. Examination revealed a tumor in the right iliac fossa, ovoid in shape,

nodular at one end, about as large, apparently, as a goose-egg, not readily movable, and painful on pressure. Morphine, one-sixth grain, was given every four hours and the diet restricted to fluids.

This was the only treatment for several days, after which she began to vomit both medicine and nourishment, and the bowels became obstinately constipated. The vomiting was partially controlled by lime-water, and soon a very large spontaneous passage from the bowels followed, nearly filling the vessel. The pain continued severe, and at times lancinating, and was usually referred to the situation of the tumor. Vomiting also continued at somewhat longer intervals. The ejected matter never contained blood. The stomach finally rejected the morphine altogether, and from this time it was given hypodermically until the pain was relieved. Finally, nourishment was also almost entirely rejected. She soon began to lose flesh and strength rapidly, and died of exhaustion November 22, 1882.

Necropsy, twenty hours after death: The tumor was found to occupy the anterior fold of the broad ligament. At the point where it leaves the pelvic wall the tissues were matted together and strongly adherent. The caput coli was also adherent to the growth by old and strong adhesions. It was in no way connected with the ovary, which was normal in size and shape. The Fallopian tube was also normal in size, but bound down by adhesions and not connected with the tumor, which seemed to be of independent origin.

Further examination revealed an unexpected and entirely different morbid growth in the stomach, occupying the pylorus, involving the greater and lesser curvature, and part of the posterior wall, undoubtedly, judging from simple inspection, carcinomatous. The mesenteric glands were enlarged, and the seat of cancerous infiltration. There were no secondary deposits found in the liver.

CROUP AND DIPHTHERIA.

Dr. Van Gieson also presented a specimen illustrating the difficulty in diagnosis between so-called membranous croup and diphtheria. It was accompanied by the following history, which had been furnished him by Dr. C. Fulda, the attending physician: George K—, six and a half years of age, had been troubled with a croupy cough for some time. Dr. F. was called to see the patient first on November 29th. On examination he found a small patch of membrane on each side of the pharynx behind the tonsils. The tonsils were not enlarged, nor were the fauces inflamed. Dyspnea was not very marked; still the parents were informed of the probable danger. For the next six days there was no noticeable change in the clinical history of the case, with the exception of the disappearance of the patch of membrane on one side. There was no fever nor acceleration of the pulse. The boy was lively and cheerful, and on the sixth day he seemed to be so well that he was allowed to leave the room. On December 7th, at 6 P.M., Dr. F. was summoned to see the patient, and found him suffering from extreme dyspnea. He called Dr. Van Gieson in consultation, who performed tracheotomy at 1 A.M. on December 8th. The temperature rose to 100° F., the pulse to 160, and the respiration to 60. Quantities of bronchial secretion and purulent-looking material were discharged through the tube. On the 9th the temperature rose to 102° F., the pulse 160 to 170, the respirations 60 to 70. The patient's strength was evidently failing. No more secretion was discharged through the tube, and at 7.30 P.M. he suddenly expired. Neither before nor after the operation were there noticed any symptoms of diphtheritic toxæmia. After the operation there were some symptoms of bronchial pneumonia. Dr. Van Gieson remarked that, in this instance, the laryngeal stenosis was almost entire, and the dyspnea when tracheotomy was performed was very marked. He performed the operation as low down as possible,

hoping to get below the exudation, but he met with some difficulty on account of the prominence of the thymus gland. He believed that any person examining this child's throat at this particular stage, unless exceedingly careful, would have failed to detect any appearance of membrane.

DR. J. LEWIS SMITH thought that the history pointed to diphtheritic exudation rather than membranous croup.

DR. VAN GIESON remarked that he had seen cases where no membrane could be discovered above the glottis, but by inspection of the larynx a membranous exudation could be detected, and by questioning the parents they had given a history of having seen a membranous exudation prior to the call of the physician.

DR. SMITH remarked that doubtless such cases did occur, although they were very rare. He had one in mind at the present time, and it was one in which he watched the patient from the very inception of the disease, and there was no membrane visible, but at the autopsy the membranous exudation was found in the larynx. He believed it to be a case of diphtheria, and one of the evidences in favor of that belief was the fact that the disease also extended to other members of the family.

DR. VAN GIESON further remarked that he had seen a single case in which there was no appearance of membrane in the throat, but he ventured the diagnosis of diphtheria, and it was only twenty-four hours before death that membrane could be seen, and then only one or two patches on the posterior border of the epiglottis.

DR. GARRISH asked in what percentage of cases of tracheotomy in croup or diphtheria recovery took place.

DR. VAN GIESON replied that Dr. Fulda, the attending physician in this case, had informed him that while studying in Vienna and Berlin he found the prevailing sentiment in favor of the early performance of tracheotomy, and that the percentage of recoveries there during the past eighteen months had been somewhat more favorable than in years gone by.

DR. J. LEWIS SMITH thought that the percentage of recoveries varied in different epidemics. If the disease was of a mild type it was much greater than when of a severe type. As an average probably not more than one in five or six recovered after tracheotomy.

DR. PEABODY remarked that when a student in Vienna it was the custom in the Children's Hospital to have present at the Christmas-tree the children upon whom tracheotomy had been performed. On the particular occasion when he was present, there were seventeen children who were either then wearing tracheotomy tubes or upon whom the operation had been performed. It was the rule in the institution under the direction of Wiederhofer to operate early in all cases in which the laryngeal dyspnea was at all marked.

DR. WYETH asked what percentage of the patients were unable to attend the Christmas-tree.

DR. F. V. WHITE asked Dr. Smith whether the secondary renal trouble was common or exceptional.

DR. SMITH replied that according to his observation in all severe cases albuminuria was present.

DR. WHITE remarked that out of a large number of cases which he had seen, in only two had evidence of nephritis existed.

OSTEO-SARCOMA OF THE FEMUR—AMPUTATION OF THIGH.

DR. GEORGE F. SHRADY presented a specimen obtained by amputation of the thigh. It was accompanied by the following history: The patient was twenty-two years of age, a native of New Jersey, and had been well up to one year ago, when he injured the right knee by jumping upon a snow-plow. From this injury he was laid up for two or three weeks, then appeared as well as usual, and suffered no inconvenience from the knee until August, 1882, when the pain returned, and upon examination there was found a small swelling upon the inside of the joint just above the condyle of the femur.

He consulted a physician in his locality, who told him that it was the commencement of white-swelling, and that he would be obliged to subject himself to a long course of treatment. At that time he felt very well and deferred treatment. In the meantime the swelling began to increase and continued to increase up to the time when he was admitted to the Presbyterian Hospital, about the middle of October, 1882. Dr. Shrady then found a swelling just above the horizontal plane of the left knee and over the internal condyle of the femur. It was globular in shape and about the size of a small orange. It was circumscribed, of elastic feel, was firm in consistence, and apparently homogeneous in structure. It was deeply attached, and the overlying skin was apparently perfectly healthy. There were no enlarged superficial veins in the neighborhood, neither was there any evidence of lymphatic involvement. From the history of the case and from the situation of the tumor and other characteristics which it presented, he diagnosed osteo-sarcoma and advised amputation of the thigh. The patient went away, but returned to the hospital at the end of two or three weeks, when Dr. Shrady again examined the limb and found that the tumor had increased in size, that the pain was more pronounced, necessitating the use of morphine. A consultation was held, the diagnosis was confirmed, and amputation was advised. With the hope of saving the limb, if possible, Dr. Shrady made an exploratory incision, when it was found that the tumor was firmly attached to the bone. Before the amputation was performed, however, Dr. W. H. Porter examined microscopically sections made from the growth, and decided that it was a case of spindle-celled sarcoma. Amputation was then performed at the middle of the thigh, and at the present time the patient was doing exceedingly well. The specimen exhibited the gross appearances of periosteal sarcoma of the femur, the periosteum was separated from the bone, and at one place the growth had evidently involved the medullary cavity. The epiphyseal cartilage and adjacent tissues were also invaded. The bone at the point where the amputation was made was apparently healthy. Dr. Shrady regarded the prognosis in these cases as exceedingly unfavorable.

DR. C. C. LEE asked Dr. Shrady with reference to the general prognosis in bony sarcoma.

DR. SHRADY remarked that sarcomas connected with bone were generally of a very malignant character, particularly was this the case with the spindle-celled periosteal variety. According to Dr. S. W. Gross that special form of osteosarcoma recurred in about six-tenths of all cases in which amputation was performed, while the giant-celled sarcoma returned in one out of every twelve cases.

In answer to a question by Dr. Ridlon, he stated that there was a partial arrest of development of the affected femur, in consequence of the involvement of the epiphyseal cartilage in the disease.

PERSISTENT FORAMEN OVALE.

DR. FERGUSON presented portions of two hearts which illustrated persistent foramen ovale. One opening admitted a tube half an inch in diameter.

He also presented a specimen which illustrated a method of preparing aneurisms for museum purposes.

URETHRAL STRICTURES—RETENTION OF URINE—ASPIRATION OF THE BLADDER—MUCOUS MEMBRANE STUDDED WITH SMALL CALCULI.

Dr. Ferguson also presented the bladder and penis removed from the body of a man, forty years of age, single, and a native of the United States, who was admitted to the New York Hospital, September 24, 1881, in a very bad general condition. He gave a history of having suffered from dribbling of urine for two weeks, with lack of projectile force, ability to pass his water in only a small stream, and with frequent desire to micturate. These symptoms became aggravated, and twenty-four hours before admission he was unable to void any

urine. When examined by the house surgeon on admission, the bladder was found distended so as to reach as high as the umbilicus. The bladder was aspirated, and a large quantity of bloody urine removed. On the following morning an attempt at catheterism failed. Aspiration was again performed and ten ounces of urine removed, and the operation was repeated in the evening, when twelve ounces were withdrawn. In the course of that night the patient voided his urine voluntarily, and on the following morning it was possible to introduce a small silver catheter, which was used during the remainder of the patient's life. At the autopsy the bladder contained ten ounces of urine, the mucous membrane was hypertrophied, presented a sloughy appearance in places, and all over the surface could be seen small calculi. There were two urethral strictures, one two and one-half inches from the meatus, but not very close, and the other at the bulbo-membranous junction. About one inch anterior to the deepest stricture were two false passages.

MR. ALLCHIN, of London, asked Dr. Ferguson why he supposed that the blood in one of his specimens passed from one auricle to the other. He had seen the lesion very frequently, and supposed that it had been generally accepted that pressure of the blood in both cavities was so nearly alike that it kept the opening sufficiently closed to prevent any evidence that the blood passed from one auricle to the other.

DR. FERGUSON replied that it seemed to him the arrangement of the tissues around the opening in this instance were such that, while pressure upon one side would close the opening, pressure upon the other would open it, and that unless the pressure was exceedingly nicely adjusted the blood would probably flow from the right into the left auricle. Whether from a physiological standpoint this view would be correct he was unable to say positively, but from the general arrangement of the tissues he thought that there was no impediment to the flow of blood from one cavity to the other.

DR. WYETH remarked, with reference to the specimen of urethral stricture presented by Dr. Ferguson, that a case came under his observation recently at the polyclinic in which a stricture had existed twenty years. At one time the patient had been catheterized with a certain degree of violence, but no urine was drawn. About a week afterward the urine escaped through a fistula in the perineum. When he first saw the patient it was with very great difficulty that even a filiform bougie could be introduced into the bladder, but starting from that point he practised continuous dilatation and the patient went on and made a rapid recovery. At the present time the calibre of the urethra had been so increased in size as to admit a No. 18 without difficulty. The opening in the urethra was just behind the triangular ligament. It was interesting to know that some of these cases, at least, could be relieved by continuous dilatation.

(To be continued.)

SMALL DOSES.—The following are recommended by Dr. A. A. Smith, of New York: Castor-oil, five drops, rubbed up with sugar and given every two hours in intestinal irritation of children. Tincture of hamamelis, one drop every fifteen minutes as a sedative in children. Tincture of pulsatilla, one drop in dysmenorrhœa every fifteen minutes, also in orchitis and epididymitis. Fowler's solution, one-half drop in nausea of pregnancy and after a drunken debauch. Tartar emetic, one grain in a quart of water. Dose, one teaspoonful every fifteen minutes in the bronchitis of children. Calomel, one-fiftieth of a grain in syphilitic headache, without gummata, every fifteen minutes. Also in children with vomiting, accompanied with mucous discharges, one-half grain bichloride of mercury in a pint of water, and administered in teaspoonful doses every fifteen minutes; good for the same affections. Fluid extract of ergot, one drop every fifteen minutes in menorrhagia.—*Medical News.*

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, December 1, 1882.

JAS. B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

A PAPER (see p. 3) was read by DR. CHARLES S. WARD, entitled

THE SIGNIFICANCE OF TEMPERATURE AFTER OVARIOTOMY, AND THE TREATMENT OF CONDITIONS, GIVING RISE TO THERMAL VARIATIONS.

The paper being open for discussion.

DR. WARD, in answer to inquiries, said that the amount of morphine used after operations varied greatly. He had had a case where eighteen minims of Magendie's solution were given at a dose and repeated within an hour. A dose of ten minims every four hours would represent about the average. The dose was regulated by the amount of pain, the number of pulsations and respirations.

DR. HUNTER said that in a case of his just recovering the respirations had fallen to five per minute.

Dr. Hunter said that he had seen the class of cases referred to by Dr. Ward, in which the fever was not at all high, and yet after death there was every evidence of peritonitis; and he could confirm Dr. Ward's statements regarding them.

DR. G. L. PEABODY suggested that these cases had their parallel in those forms of idiopathic peritonitis where there were no symptoms at all. Dr. Peabody described briefly some cases of this nature which he had seen.

DR. WARD, in response to an inquiry regarding the infrequency of shock, said that this depended upon the case and the operator. Where the operator was skilful, rapid, and unhesitating in his work, shock very rarely occurred, even if the case were a severe one. On the whole, he had not seen it very often.

DR. HUNTER had not often seen shock after ovariectomy. He referred to one class of symptoms which used to be seen, viz., those produced by carbolic acid poisoning. Now the spray is abandoned or is not brought so near the patient, and the solution is made weaker.

DR. BEVERLY ROBINSON showed a patient who was a

DEAF-MUTE WITH CONTRACTION OF UPPER AND LOWER PHARYNX, PROBABLY FOLLOWING CONGENITAL SYPHILIS.

The history of the case was as follows:

W. L. B.—came to my office on November 27, 1882, sent by Dr. E. Burke Haywood, of Raleigh, N. C., to be treated by me for chronic rhinitis.

The patient immediately informed me, by writing, that he was nineteen years old, resided in Mechanicsville, N. C., where he intended to become a farmer, and had been a deaf-mute from two years of age. He was a tall, vigorous-looking young man, and after careful outward examination presented no marks of antecedent disease, other than the scars of a glandular abscess on one side of the neck. Even in ordinary breathing, however, it was immediately noticed that inspiration and expiration through the nasal passages was noisy and obstructed, and the lips and teeth were separated most of the time. He complained not only of this obstruction in his nose, but also of water running from the eyes, of bad odor from his nose (told him by others, since he has lost his sense of smell), and of cough. He sniffled almost continually whilst writing these statements. He informed me that he had good hearing at the time of birth. When he was two years old he contracted a cold in the head, which was followed by loss of hearing. He has four brothers living, one sister, and his mother. His father died of congestive chills, and one of his brothers of inflammation of the bowels (?).

Four years ago he had a sore throat, which appeared serious for a time, but was ultimately cured by a local practitioner. He remembers having had his throat cau-

terized on several occasions during this attack with nitrate of silver. At that time and subsequently he took cold with great facility. Two years ago he began to suffer from a catarrhal affection of the nose, which had lasted without intermission ever since. Last year he noticed for the first time a fetid odor of the breath from his nose. A physician gave him a carbolic wash to correct this symptom, and he has made almost daily use of it since that time.

One day, some months ago, whilst at dinner, he felt a sharp pain in his throat, and upon examination found it was caused by a piece of bone, which was readily extracted by a physician. Later on he had a somewhat similar sensation, and was able himself to take from his mouth a piece of bone—thin, lamellar, and about half an inch square, which is, without doubt, a portion, or nearly the whole of the vomer. This piece of bone, moreover, according to the patient's statement, seemed to come down from the back of his nose. Frequently during the night, whilst lying down, yellow matter discharges from his nose. In the morning when he awakes he has a bad taste in the mouth. If he goes into the open air watery fluid runs over his cheeks from his eyes. Last summer he went to the mountains, and during his sojourn there his nose stopped discharging and his nasal affection was evidently improved. Last autumn, when he had been home a few weeks, yellow pus came again from his nose, and a red efflorescence appeared on the left outer surface of it. Upon firm pressure in this region he has an uneasy feeling, but not absolute pain. He has very considerable and constant difficulty of breathing through the nasal passages, which is increased markedly with every fresh cold. This difficulty of nasal respiration has now lasted two years, and seems almost stationary in its intensity during the past few months. Patient went to school at eight years of age, and was, at that time, quite a delicate boy. He does not remember to have suffered from "snuffles," but had a scrofulous abscess of the neck, and was occasionally unable to do much work on account of headache, dyspepsia, and colds on the chest. He never had sore eyes or any cutaneous eruption. He has had, however, at times, swelling of the bones of the lower extremities. His brothers and sister all suffer from repeated sore throats, as did his father previous to his death. One of his brothers is a mute, like himself, and possibly his condition of mutism was due originally to sore throat in early infancy.

Physical examination shows by inspection and palpation that the patient's nose is of good configuration and presents no appreciable enlargement or depression. The red blush still exists, and over this region there is decided pain on moderate pressure. Both the redness and the pain have increased somewhat within a few days. Anterior rhinoscopy shows a large, open perforation of the nasal septum, and far back in the nasal passages the probe detects a rough, unequal, resisting substance which has the aspect and quality of diseased bone, probably undergoing necrosis. Upon opening the mouth, with the light reflected into it from a laryngeal head mirror, the pharynx presents a remarkable scarred appearance, and a series of slightly elevated bands radiate as it were from the median line toward the lateral walls. The anterior pillars of the fauces are prominent; the posterior ones have disappeared, and the tonsils are so small as to be scarcely distinguishable. A small orifice is found between the free margin of the soft palate and the posterior pharyngeal wall, which makes the oral and naso-pharynx communicate with each other. This orifice is large enough to admit with slight pressure a steel sound, or guide, of about thirty-four French in calibre—on either side of this orifice, which is on the median line, the soft palate is intimately adherent to the walls of the pharynx by resisting cicatricial bands. By passing the distal extremity of the sound through this opening and carrying it to the left and right, in different directions, it was easily determined that the posterior septum of the nose had

disappeared. This manœuvre was only slightly painful. It was also noted, by forcibly depressing the back of the tongue and throwing the reflected light downward from a small laryngeal mirror, that the lower pharynx was somewhat contracted by cicatricial bands, although not to the same degree as it was in its superior portion.

An attempt was made upon the day following the first examination (November 28th) to gain a further insight into the posterior nasal passages by passing cords through the nose and exercising continuous traction upon the palate (method of Philip S. Wales). This proved ineffectual. A tupelo-tent of large diameter, but cut quite short, was then introduced into the contracted upper orifice of the pharynx, and held in place by means of twine, with a plug of lint occluding the anterior nares, in a similar manner to that followed for the arrest of profuse epistaxis. The tupelo-tent was allowed to remain *in situ* during the remainder of the day and following night.

November 29th.—It was found that the tent had not remained fixed in place, but had slipped above the contracted orifice, and found lodging in the naso-pharyngeal space. With considerable efforts of traction it was pulled through the orifice and drawn out through the mouth.

Since this date the following treatment has been adopted: Daily passage of steel sound as large as the contracted orifice would accommodate; applications of tincture of iodine and glycerine (two drachms to one ounce) to the entire interior surface of the nasal passages; the employment each morning of a carbolyzed douche of tepid water, and sniffing through the nose every night of an ointment thus composed:

R. Vaselinei.....	5 ss.
Glycerini.....	5 j.
Acid. carbolici liq.....	℥ij.

M.

Further, one granule of bichloride of mercury (one one-hundredth of a grain) has been taken four times daily, fifteen minutes after eating, together with five grains of iodide of potash, largely diluted in water.

December 12, 1882.—The patient now breathes with considerably more ease, and his nasal respiration is certainly less noisy. Crusts do not form so frequently as they did two weeks ago, and they are far less adherent. His general aspect is healthier, and the redness and soreness outside of the nose have almost disappeared. The contracted orifice, if let alone for a single day (as it was unavoidably one day), shows great tendency to contract. It is proposed in a few days to give the patient a properly adapted dilating instrument, or a series of graduated steel sounds, by means of which he shall be able himself daily to dilate the contracted pharyngeal orifice, or, at all events, to prevent it from growing smaller.

The feasibility of a surgical operation was suggested to the members of the society, and their opinion was requested in regard to it. It was looked upon by Dr. George F. Shradly and others present as *not* to be thought of for the time, or until the general constitutional condition was brought into subjection. Moreover, it was stated by some members that such operations had usually been followed by imperfect success, owing to the extreme difficulty of keeping the contracted orifice of the pharynx in a dilated condition. Sooner or later, if a wound were made, it would heal, and when it did, the likelihood was that even greater cicatricial contraction would ensue than what already existed.

The subject being open for discussion,

DR. G. F. SHRADLY said that in his opinion the patient was suffering from congenital syphilis, and was not at present in a condition for an operation, even were such advisable.

DR. SAMUEL SEXTON said that he had seen a number of cases similar to the one presented; they were, however, quite rare. They were all due to syphilis, but in all cases except one, the disease was acquired, not inherited. In this last gummata had developed in the pharynx and

produced lesions similar to those in Dr. Robinson's patient. He believed, however, that it might be found that Dr. Robinson's patient had acquired syphilis, and that the lesions had developed in the usual manner; that the deafness, if one were to be guided by the appearance of the drum-heads, had originated in otitis media catarrhalis early in life, for they were retracted and there was the usual arrest of development which arises from imperfect intra-tympanic aeration, together with the not infrequent trophic changes to be seen in such cases.

These cases had always consulted him on account of the existing deafness, and, indeed, in most of the instances the patients themselves had not been aware of the oro-pharyngeal occlusion. The deafness in these cases, which was usually very marked, occurred in two ways: one by extension of the catarrh from the pharynx, and the other by interference with the performance of the physiological functions concerned in the air-renewal of the tympanic cavity. Hence the tympanic membranes presented the appearances characteristic of chronic catarrhal inflammation of the middle ear, and were retracted by the unopposed pressure of air upon their outer surface. Then in most of these cases there is a damming-up of the nasopharyngeal secretions, giving rise to obstruction of the Eustachian tube.

As regards operations in these cases, he had made a good deal of inquiry, and had not been able to find that they did any good, the cicatricial contraction having been in all cases so great that no opening could be long maintained between the mouth and the pharynx. One of his patients had been slightly improved by the frequent use of a bougie passed from the mouth up through a minute opening (which is generally found to exist in these cases) into the vault of the pharynx, thus giving vent to secretions.

DR. C. S. WARD thought that, owing to the great tendency to contraction of all mucous surfaces, any operation in the present case for enlargement would be followed by a contraction that would eventually make the condition as bad as at first.

DR. SHRADLY said that, in suitable cases for operation, much benefit might result from small multiple incisions into the cicatricial bands, and the subsequent dilatation of the parts by bougies.

DR. C. L. DANA read a paper (see p. 6) entitled the

ABSORPTION OF NUTRIENT ENEMATA.

In the discussion DR. ROBINSON related the case of a small child suffering from intussusception, which he had seen with Dr. Cleveland. The patient was suspended head downward and water was injected into the rectum. Suddenly there was a gush of water from the child's mouth and the obstruction disappeared. The child died twenty-four hours later. He had wondered whether it was possible that the injection went the whole length of the canal. He had at first been incredulous, but subsequently was led to believe that it was possible.¹

THE RESULTS OF KOCH'S DISCOVERIES, writes Dr. Formad (*Phila. Med. Times*), are now a matter of important consideration. In Germany, by imperial order, in military hospitals phthisical patients are separated from other cases as carefully as small-pox patients; so a gentleman tells me who has just come from Germany. Even here the community begins to regard the disease as eminently contagious. I know of an instance of a young woman suffering from phthisis being locked up and avoided, perhaps neglected, by the members of her own family, for fear of the contagium. I have learned of several consumptives who have become worse from the mortification of having their friends avoid them, some even going so far as not to shake hands with them. The moral effects must certainly be most deleterious to these unfortunate creatures and to those who surround them.

¹ Vide case by Gillette: New York Medical Journal.

Correspondence.

LONDON LETTER.

(From our Special Correspondent.)

THE DEATH OF SIR THOMAS WATSON—SIR JAMES PAGET'S ORATION—OLD DISEASES AND NEW NAMES—FACTS AGAINST THEORIES.

LONDON, December 23, 1882.

THE Nestor of British Medicine, as he has often been termed, has passed from among us. As you already know, he died quietly on the evening of Monday, December 11, at his son's residence at Reigate. No other than a fatal termination to his illness could indeed have been expected from the first, considering his advanced age. He doubtless foresaw this clearly himself, as, when first attacked, his remark was that it was "the beginning of the end." His good constitution enabled him to struggle against his malady for some time, though suffering much pain. He was interred on the Friday following his death in the parish churchyard at Reigate. Numerous members of the profession attended his funeral, including the President of the College of Surgeons, Mr. Spencer Wells, and the Registrar of the College of Physicians, Dr. Pitman, and all the medical attendants of the deceased in his last illness, viz., Drs. Walters, George Johnson, Greenhow, and Holman, and Mr. Lister.

His son, who succeeds him in the baronetcy, is not a medical man.

Born in Devonshire, in 1792, and educated at Bury St. Edmund's Grammar School and St. John's College, Cambridge (whence he graduated as tenth wrangler), he only began the study of medicine at the age of twenty-seven. He entered St. Bartholomew's Hospital, where he studied under Abernethy, afterward studied at Edinburgh, and finally graduated at Cambridge (1825). He married and started in practice in Henrietta Street, in which street he lived till his death, though not in the same house. He was elected a Fellow of the College of Physicians in 1826, and Physician to the Middlesex Hospital. He was Professor of Clinical Medicine for two years at University College, and of Forensic Medicine for five years at King's College. He is, perhaps, best known to the world as the author of the classic "Lectures on the Principles and Practice of Medicine," which he delivered there, as Professor of Medicine, from 1836 to 1840.

He was made a baronet in 1866, and was president of the College of Physicians for five years, dating from 1862. He attended the late Prince Consort, was Physician Extraordinary to the Queen, and took charge of Sir Walter Scott on his last voyage from London to Edinburgh.

Sir Thomas, although unprepossessing in appearance, was genial in manner, upright in conduct, and a sound and skilful practitioner. He had at one time a large private practice. It is, however, nearly thirty years now since he began to retire. At that period he announced that he would not in future visit patients, but he continued to see patients at his house for several years, a privilege of which many availed themselves.

It is related of a Northampton physician—the late Dr. Robinson, I believe—that, wishful to retire, he removed to a house a mile from the town and charged two guineas instead of one, as before, a procedure which instead of lessening doubled his practice.

Sir Thomas' last public appearance was at the College of Physicians at the installation of Sir W. Jenner as president, when, as the senior Fellow present, he took part in the ceremony. He wrote at intervals in the medical periodicals till within a short time of his death. He admired Abernethy, whom he said he had heard Lawrence once term the only genius in surgery he had ever seen. Liston consulted him in his last illness. It is worth mentioning that in Sir Thomas' last illness, when suffering from bladder trouble, he specially requested that Mr. Lister might see him, and under Mr.

Lister's treatment the local trouble improved. His faith in the antiseptic treatment was thus evidently strong, and shows that though retired from active practice he interested himself in the literature of the profession to the last.

A recent event of interest has been the delivery of the first "Bradshawe Lecture" at the College of Surgeons, by Sir James Paget, Bart. The oratorical powers of "the golden-mouthed Chrysostom of the profession" (as he was recently termed by Sir W. Jenner at the banquet to the Army Medical Officers engaged in the Egyptian expedition) are well known, and a large audience assembled on the 13th. About four hundred members of the profession were present. Most of the leading men were in attendance, but Sir W. Jenner was conspicuous by his absence. Every seat was occupied, and several distinguished members of the profession had to stand. The lecture occupied an hour and concluded precisely at four.

An ex-president of the college, who sat near me, remarked: "There he is—exact to the minute—I can't think how he does it." Sir James, although not possessing by any means a powerful voice, speaks very distinctly, so that every word was easily heard, and he made few references to his notes. Taking for his subject "Some Rare and New Diseases," he remarked that some diseases were not really new but old, although only differentiated in modern times. As an instance he mentioned typhoid fever, the exact nature of which was only determined by Stewart and Jenner, both of whom are living, but John Hunter put up a specimen showing a typhoid ulcer of the intestine which is still in the College Museum. The disease was therefore existent though not recognized. A specimen of a syphilitic gumma in a muscle was also prepared and preserved by John Hunter, a lesson, Sir James Paget remarked, to all of us not to throw away what we do not understand. On the other hand, we had some almost certainly new diseases, viz., osteitis deformans and Charcot's disease of the joints. The lecturer remarked that these diseases might be produced by a process of development from other diseases—possibly by the blending of the characters of two or three diseases. He urged that we should study diseases as Darwin studied. Patient observation was necessary.

Unusual specimens of disease should not be neglected. It was erroneous to say "the exception proves the rule." It should be rather for surgeons to say "the exception proves the rule." As the Scripture says, "Prove all things."

Accuracy in diagnosis should be aimed at. Drugs were often blamed and thrown aside as untrustworthy when the fault really lay in ourselves—in our diagnosis. The value formerly ascribed to mercury in many internal affections was alluded to—the fact being, that since the visceral lesions of syphilis have been studied many of these affections have been shown to be syphilitic, and the action of mercury in many of these cases was thus explained.

ORIGIN OF CYSTS IN THE KIDNEY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: My attention has been drawn to a communication made by Dr. Heitzmann at the New York Pathological Society, of the researches of his pupil, Dr. Jeannette B. Green, on this subject, published in your journal for October 21, 1882, p. 470. To quote from your report, Dr. Green says, "The way in which cysts are formed is as follows: first, the interstitial as well as the epithelial tissue of the tubules breaks down with inflammatory or medullary corpuscles, and thus an embryonal tissue is produced, sometimes occupying large territories of both the cortical and pyramidal substance. Next a transformation of the medullary into myxomatous tissue takes place, marked by the presence of a light, nearly homogeneous basis substance, which is traversed by nucleated,

bioplasyon strings. In further growth these delicate strings perish, and a cavity is formed filled with an albuminous liquid."

In the "Transactions of the Pathological Society of London for 1880," you will find a paper by me on the "History of Granular Kidney," from which I quote the following: "Another mode in which the destruction of tubules is completed is shown in Fig. 8, which represents a comparatively early stage of the process. The drawing shows cross sections of several convoluted tubules filled with round cells, which are not so closely packed as in Fig. 6. The sections vary very much in diameter, some of the tubules being evidently dilated. In some there are very few cells, in others none, the whole lumen being filled with a hyaline material, staining very feebly with carmine. These appearances, which may be very readily seen, were first described by M. Simon more than thirty years ago, as 'cystic degeneration of the kidney,' but have not received due attention. *They are, in fact, due to the formation of a myxomatous or gelatinous tissue from the young cells filling the lumen, by which the basement membrane is distended, and a cyst is formed.*"

Again, under the changes in the Malpighian bodies, I say, "The cellular mass has become converted into a delicate gelatinous tissue containing stellate elements. Still later the contents may be quite hyaline and stain feebly with carmine, forming a little mucous or colloid cyst, the whole process being quite analogous to that which I have described in the tubules, with this exception, that these Malpighian bodies are not enlarged, or, at least, to any notable degree."

The same descriptions are to be found in my paper in the "Transactions of the International Medical Congress, for 1881," of which I enclose you a copy.

I am glad to find that my statements have received this valuable confirmation, and am much obliged to you for allowing this opportunity of directing attention to them, as, although published in widely circulated Transactions, they appear not to have been known to Dr. Heitzmann or his pupil.

I am, yours faithfully,

ROBERT SAUNDY, M.D.

47 NEW HALLS, BIRMINGHAM, ENGLAND, December 5, 1882.

HOOKS FOR THE

EXTRACTION OF FOREIGN BODIES FROM THE EYE, EAR, AND NOSE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: While reading Dr. A. H. Buck's instructive case of removal of a locust bean from the ear canal by partial detachment of the auricle, in THE MEDICAL RECORD of December 16, 1882 (p. 676), and Dr. S. Sexton's remarks on the same subject in THE MEDICAL RECORD of December 23, 1882 (p. 721), I thought I might say a few words on the usefulness of a small blunt hook, the concave side of which is roughened and hollowed out. This little instrument has rendered me good service on so many occasions that I always have it in my ordinary pocket-case. I demonstrated it to the American Ophthalmological Society in 1873 ("Transactions," 1873, p. 108), mentioning its advantages in extracting foreign bodies from the interior of the eye. It is of flexible silver, so as to be curved according to necessity, yet of sufficient strength to exert a greater traction than seems required for the extraction of any foreign body from the cavities mentioned above. Every one who has had some experience in the removal of foreign bodies from the interior of the eye knows how unavailable in general toothed forceps are; they almost invariably slip off, unless the foreign body be embedded in soft tissue, such as the iris, with which they can be extracted in common. The numerous ingenious kinds of canula forceps which were constructed twenty and thirty years ago, have, as far as I

am informed, almost completely got out of use. Better are the roughened anatomical forceps, which, offering a larger surface of contact, have a firmer grasp and hold on the foreign body. In most cases it is, however, still surer to pass a blunt hook behind the body and draw it toward the opening in the corneo-scleral capsule.

The same holds good for the ear and nose. Hooks have been employed in affections of these organs for many years, and are recommended in every text-book. They are easily introduced, as in almost all cases there is a chink somewhere between the foreign body and the walls of the canal. Malgaigne,¹ who considers them to be the most appropriate instruments for extracting foreign bodies from the ear, points out that in children the ear canal is broadest horizontally, in adults vertically. N. Rau² says that the best of the numerous instruments is a hair-needle curved at its closed end, as Deleau³ recommends.

This, as all kinds of curette or spoon-like instruments, will, I think, do very well when the foreign body is near the external orifice of the canal, so that the curved end can be passed around it. For those situated deeper, a hook which can be introduced on the flat, and during its advancement pressed against the canal, appears more serviceable. When behind the foreign body it is turned so that the curved portion grasps the body from behind. A blunt hook, such as is recommended by Lister and others, and with which also Dr. Buck succeeded in his above-mentioned case, is, however, more likely to slip off than one whose concave side is roughened and hollowed out. This condition I have found of advantage in seizing angular or smooth bodies which are quite likely to escape an instrument with rounded and even surfaces, but are firmly held by one which is provided with a roughened groove. Though the modification appears insignificant, it bears on a practical point which in certain cases may determine the success of the operation.

Experience makes us skilled in the use of different instruments, and I do not doubt that soft bodies may be extracted with Dr. Sexton's or other toothed forceps. In dealing with hard bodies I would never attempt the use of any kind of forceps, for the probability of pushing them deeper into the canal is almost a certainty. The verdict of the profession in this regard is nearly universal. The case of Dr. Joy, which Dr. Sexton quotes in support of the use of his forceps, is by no means a felicitous one, as I have convinced myself by reading the original publication in *The American Journal of Otolaryngology*, vol. iii., p. 144. The locust bean had lain in the ear canal surrounded by pus and granulation tissue for over two months—time enough to soften as much as possible. "The patient was etherized, and several small pieces of the shell and of the fruit were removed with Dr. Sexton's new forceps. The boy disappeared from observation for five months. There was a free discharge of pus, and several polypoid growths obstructed the canal. These were removed by the snare, and all but a small portion of the bean was removed by the forceps, the fragments coming away piecemeal in thin, rather tough sections. The case is still under observation, and the remaining portion will probably soon pass out of the canal without surgical interference." So far the report of this case, which produces an entirely different impression from what one receives by the woodcut in Dr. Sexton's letter, where the whole bean is beautifully in the grasp of the instrument.

As to the removal of foreign bodies from the ear in general, I do not remember a single case in which I failed by syringing or the hook. My experience, as that of any one man, is, of course, limited. I may fail in my endeavor to-morrow. If the grooved hook prove insuffi-

¹ Gazette des Hôpitaux, No. 58, 1841.

² Lehrbuch der Ohrenheilkunde, p. 374, 1856.

³ Mémoire sur les Corps étrangers dans le Conduit auditif. Gaz. Méd. de Paris, p. 161, 1823.

cient, I would not be in a hurry, but have a hook constructed that could be introduced straight, having an end-piece which, when beyond the foreign body, would by means of an articulation and a stem divide into two small prongs directed at right angles to the stem, and applying themselves firmly to the posterior surface of the foreign body, say a glass bead. I would make the end-piece of this instrument thin, so as to pass easily through a narrow fissure between the foreign body and the wall of the canal. The surfaces touching the foreign body may be slightly concave and roughened. Such an instrument with one blade has, however, been recommended by Leroy d'Etiolles.¹ A hook with two prongs, which are closed while being introduced but open by pressure when behind the foreign body, can be constructed in different ways—for instance, according to the pattern of Liebreich's or Matthieu's iris forceps.

Delay in removing a foreign body from the ear is only exceptionally connected with any danger. Certain substances which swell by imbibition may produce inflammation and prevent the secretion from escaping. Politzer says,² "the enlargement from syringing with water may be prevented by immediately pouring alcohol into the ear." Not only in that case, but in every other when a swelling foreign body produces inflammatory intumescence of the walls of the meatus, nay, even in perforations of the membrana tympani and in purulent otitis media, is alcohol an excellent remedy for relieving all those symptoms, as nobody knows better than Politzer himself. Absolute alcohol poured into the ear several times daily will absorb the water from the swollen foreign body as well as from the inflamed tissues around it, make both of them shrink, and thus create free space and facilitate the removal of the intruder.

H. KNAPP, M.D.

December 24, 1882.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In my article, "A Case of Foreign Body in the External Auditory Canal," published in THE MEDICAL RECORD of December 16th, I drew certain conclusions which, as will be seen by the subjoined extract of a letter, reflected unjustly upon the physician who first saw the case. I am now convinced that my remarks upon this physician's interference were not well founded, and in simple justice to a professional brother, may I ask you to publish this brief communication.

ALBERT H. BUCK, M.D.

(Extract from letter.)

"I may say that no effort was made by me to remove the bean, but instruments were used simply to dilate the opening in order to see the bean, if possible, and to get an idea of its position. The first instrument used by myself was an Anel's probe; with this I discovered that there certainly was something in the ear, about an inch from the external meatus, and got the impression that it was firmly lodged. I at no time saw the bean. The first instrument used was a hair-pin, in the hands of a nurse or one of the lady guests at the house, who thought to remove it without alarming the mother. The next instrument used was a crochet-needle, in the hands of one of the gentlemen guests. The only instrument used by me with the idea of getting the bean, or that touched it, besides the probe spoken of, was one borrowed from a dentist, and very similar to the one shown in your article; but as the boy cried the moment the bean was touched, and as some of the beans had been placed in water for some time and found not to swell, it was thought a few hours' delay would do no harm, and the mother was advised by me to go to the city. . . . I am positive that the bean was impacted when I first saw the boy, and that I did not move it in the slightest degree."

¹ Recueil de Lettres et de Mémoire. Paris, 1814.
² Text-book, English translation, p. 623, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 23, 1882, to December 30, 1882.

PERIN, GLOVER, Lieutenant-Colonel and Surgeon. Granted leave of absence for one month from December 19th. S. O. 217, Department of Dakota, December 20, 1882.

BILL, JOSEPH H., Major and Surgeon. Will report to the Commanding Officer Fort Omaha, Neb., for duty. S. O. 134, par. 4, Department of the Platte, December 21, 1882.

KILBOURNE, H. S., Captain and Assistant-Surgeon. Granted leave of absence for one month, with permission to apply through Headquarters Military Division of the Missouri for an extension of two months. S. O. 218, Department of Dakota, December 21, 1882.

REED, WALTER, Captain and Assistant-Surgeon. Relieved from duty as Attending Surgeon Headquarters Department of the Platte, and will report in person to the Commanding Officer Fort Omaha, Neb., for duty. S. O. 134, Department of the Platte, December 21, 1882.

TURRILL, H. S., Captain and Assistant-Surgeon. Upon being relieved from duty at Fort Omaha, Neb., will proceed to Fort Fred. Steele, Wyo., and report to the Commanding Officer of that post for duty thereat. S. O. 134, par. 5, Department of the Platte, December 21, 1882.

HOPKINS, WILLIAM E., Assistant-Surgeon. Granted leave of absence for two months, to commence January 1, 1883, with permission to apply for an extension of two months. S. O. 88, par. 1, Military Division of the Atlantic, December 28, 1882.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 30, 1882.

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
December 23, 1882	0	9	55	2	59	61	0	0
December 30, 1882	0	13	45	6	40	35	0	0

THE BACILLUS TUBERCULOSIS NOT A FAT CRYSTAL.—Dr. J. O. Hirschfelder, Professor of Clinical Medicine, Cooper Medical College, San Francisco, sends us the following very interesting letter: "In No. 23, Vol. xxii. of THE RECORD I find a statement of investigations of Dr. H. D. Schmidt, of New Orleans, proving the bacillus tuberculosis of Koch to be simply a fat-crystal. If this assertion were true it would cast a shadow of doubt upon all the bacteriological work done within the past few years. I have confirmed the investigations of Koch upon the sputa of a large number of cases under my charge, finding the bacillus in every case of phthisis in my wards during the last three months, besides many in private practice. I have employed Ehrlich's method, and have experienced no difficulty in demonstrating the organism. In order to test the statement of Dr. Schmidt, I

first prepared a specimen of sputum by Ehrlich's method, finding numerous bacilli; I then placed the preparation in ether and again examined it, no bacilli were visible. The natural inference was not that the bacilli were dissolved, but that the color was washed out by the ether. The preparation was therefore restained like a fresh specimen and the bacilli were found as before. I likewise prepared two covers by spreading sputum upon one of them, breaking it up as well as possible, placing a second thin cover upon the first, and drawing the two rapidly apart so that the covers should be as nearly alike as possible. One cover was then stained in the ordinary way, the other was placed in boiling ether, in which it remained for about twenty minutes, and was then washed thoroughly with fresh ether, so that no fat should remain. This specimen was then stained by Ehrlich's method, and the two covers were compared. I found and readily demonstrated to the medical gentlemen present not only that the bacilli were not dissolved by the ether, but that, on the contrary, they stood out more plainly in the specimens treated with ether on account of the washing out of the fat-granules which otherwise slightly obscure the field."

AN AGGRIEVED CORRESPONDENT, of Rochester, N. Y., writes us as follows: "In THE MEDICAL RECORD of the 16th inst., p. 690, you did an injustice in quoting the Physio-Medical College, of Cincinnati, O., as being an eclectic institution, which is false; it has never been recognized by the Eclectic Society."

THE WAYNEFLETE CHAIR OF PHYSIOLOGY AT OXFORD.—The Waynflete Chair of Physiology has been filled by the election of Dr. J. Burdon Sanderson, F.R.S., who will henceforth regularly deliver lectures on Animal Physiology and Histology to members of the University. The endowment of the Chair is mainly derived out of funds set apart for the purpose from the income of Magdalen College, the emoluments of two Fellowships forming the principal stipend.

DR. HERMAN BOSKOWITZ died December 26th, at his home, in Brooklyn, N. Y., after a long illness. Dr. Boskowitz was a remarkable looking man in appearance, being little more than a dwarf in stature. For forty years he enjoyed an extensive practice. Before the war he was an active abolitionist, enjoying the personal friendship of Horace Greeley and other distinguished republicans. Early in his career Dr. Boskowitz earned a great reputation by curing one of the Clydes, of the great ship building firm, of blindness. Dr. Boskowitz, who was seventy years of age, was a native of Vienna, but came to this country when very young.

THE SUBJECT OF WOUND-DRESSING, the old time-honored subject of debate among surgeons, still crops up from time to time. At one time water-dressings were in favor; then came carbolic oil, antiseptic gauze, tow, etc. The senior surgeon at one of the large London medical schools always applies a poultice to his stumps the day following amputation, and with very excellent results. The weathercock of professional favor is now veering round to infrequent dressing with some dry absorbent material, and absolute rest. Pressure is also steadily gaining ground. The two latest contributions on the subject of wound-dressing are those of Dr. Edward Thomson on puff ball, and Dr. Lockhart Gibson on salicylic silk. A surgeon of large hospital experience told me the other day, in the course of conversation, that recently he had, after amputation, always tightly bandaged over the stump a large sponge which had been dipped in carbolic oil and wrung out till nearly dry. This he left on for a fortnight or more, with very excellent results.—*Cor. of American Practitioner.*

OZONE AND THE BLOOD.—Professor Binz some time ago announced that ozone, when inhaled cautiously, had a hypnotic effect. He has recently made further re-

searches regarding the effect of ozone on the blood. It has usually been asserted that ozone introduced into the blood had a tendency to injure it by forming methaemoglobin. Binz finds that ozone passed through blood does not have very much effect any way.

THE ELECTRICAL SOCIETY is the name of a new organization recently started in Chicago.

"MINERAL" ORGANISMS.—During the past year, the French chemists, D. Monnier and C. Vogt, presented, through M. Robin, to the French Academy of Sciences the results of some experiments, showing that the forms peculiar to plants and animals also appear under certain circumstances in purely inorganic things. Dr. H. D. Valin has repeated these experiments (*Chicago Medical Journal and Examiner*) and made the following observations: In a flask full of soluble glass were placed fragments of sulphate of iron, ten grains in weight, which immediately began to assume a colloid condition on the outside, and shot tubular prolongations, colloidal and cellular, which grew at the rate of half an inch in twenty-four hours. Some attained to two inches in length, and were about one twelfth of an inch in diameter. All these prolongations shot a number of slender filaments from various points of their surface, and these attained a length of a few inches in a few hours. After some days or weeks, all these organisms assumed a crystalline condition, and become empty inside. Some of them rose to the surface of the liquid. They were insoluble in water; they remained intact when exposed to air, and when introduced in a newly prepared flask at the same time with fresh fragments, they hastened the metamorphosis of these. The addition of water to the soluble glass rendered the experiments more easy, and saved time.

SECONDARY HEMORRHAGES AND THEIR CAUSE.—Dr. Charles C. F. Gay communicates a valuable paper on this subject to the *Buffalo Medical and Surgical Journal*. Dr. Gay is inclined to doubt the accepted views regarding the cause of secondary hemorrhage. He says:

"The tendency of the blood-current is, I believe, at first to pass through arterial anastomoses rather than toward the capillaries. In 'St. Bartholomew's Hospital Reports' I find the following experiment, reported by William Harrison Cripps. He says: 'If water be injected into the common iliac artery of a rabbit it will circulate through the capillaries, returning by the vein. If the external iliac and the superficial femoral be now tied, the water will still return by the vein, only much more slowly. If the femoral artery be now divided below the ligature and water still injected by the common iliac, it will be found that a greater quantity of the water will return through the cut (lower) end of the femoral than by the iliac vein.' This experiment shows, at least in the case of the rabbit, that even with the iliac vein open, less resistance is afforded by the anastomoses of the arteries than is afforded by the capillaries. This writer has collected fifty-three cases from various sources and classified them according to the plan of treatment. The result of treatment is thus shown:

	Died.	Recovered.
Ligation of external iliac.....	12	2
Amputation.....	2	3
Re-opening wound.....	7	5
Pressure and bandaging.....	3	12
No treatment.....	4	0
Total.....		50

The percentage of recoveries, as here shown, is greatly in favor of suppressing hemorrhage by pressure and bandaging, the method recommended by Dr. Gay. Religation, being found unnecessary to control hemorrhage, constitutes in itself, I think, a partial concession to the theory that the hemorrhage is venous in these cases, and not arterial; or, if not venous, then arterial from rupture of a branch of the anastomotic system of vessels, from which the blood derives its scarlet hue."

A QUININE JOURNAL.—*The Monthly Review of Medicine and Pharmacy* will hereafter take the name of *The Quinologist*. The New York medical man is reputed to be a good deal that sort of thing.

PERI-UTERINE CELLULITIS WITH ABSCESS POINTING IN MIDDLE LINE.—Dr. Frank W. Thomas of Marion, O., sends us the history of a case of a woman aged thirty-seven, who at her sixth confinement was delivered of a dead foetus sixteen days after the first beginning of labor pains. Three weeks later the patient was attacked with phlegmasia alba dolens; this disappeared in about four weeks, and then there developed symptoms of a pelvic cellulitis, the whole abdominal surface becoming hardened. For three months the patient suffered greatly from pain in the lumbar region and pelvic organs; morphine was resorted to and used continuously for months. The patient suffered from the chronic cellulitis for over a year. In about the fifteenth month the abscess pointed at a place about midway between the pubes and umbilicus. It was opened and two quarts of pus escaped. The patient then rapidly recovered. Our correspondent, who treated the case in the last months, very pertinently asks whether pointing could have been brought about sooner.

POLICLINIC OR POLYCLINIC.—The word polyclinic is derived from *πολις*, a town, and *κλινη*, a bed. It means, therefore, and always has, since its introduction as a word, a city clinic or hospital. A frequent mode of spelling the word in American medical literature is polyclinic. This assumes, arbitrarily and incorrectly, that the word is composed of *πολυς*, many, and *κλινη*.

THE FREQUENCY OF AND DANGER FROM NARROW PELVES.—Dr. W. Fishel read a paper before the German Medical Society of Prague, in which he stated that the usual estimates of the frequency of narrow pelvis in Germany were too high. These estimates made the proportion vary between 14 and 20 per cent. Hecker, of Munich, found the per cent. to be only 1.5; Müller, in Berne, 16; Goenner, in Basel, 7; Winckel, in Dresden, 3; Fishel, in Prague, 15.6. In Breisky's clinic, at Prague, the mortality in these cases was only 1.5 per cent.

TINCTURA IODOFORMI COMPOSITA.—Under this title, Dr. G. Beck describes in his "Therapeutical Almanac, 1880-81," a very useful formula for a solution of iodoform and iodide of potassium, which can not only be taken internally (three times a day, fifteen drops in sugared water), but is in place in all cases where the iodine treatment seems to be adapted for external application, and is capable of causing a radical disappearance of tumors of various kinds, as also of inflamed glands, etc. The original formula—iodoform, 1 part; potassii iodid., 70 parts; glycerin, 70 parts; spir. vini rect., 100 parts—is pharmaceutically incorrect, because the iodoform is not completely dissolved in this solution. The following modification is recommended, which, while not lessening any of its effects, represents a complete solution, to which Balsam of Peru is added as a corrigens to the iodoform:

R. Iodoform	8 grms.
Balsam Peru	3 "
Solv. in spir. vin. rect.	20 "
Solutioni admisc.	
Kalii iodid.	70 "
Ft. solut. in aque dest.,	
Glycerin pur	āā 35 "
Filter.	

DOCTOR AND DRUGGIST—A SINGULAR LITIGATION.—Not long since, a physician in this city who had invested money in a retail drug store was obliged, by the failure of its proprietor, to take the stock as "collateral" for his investment and sell it to some one else. After the bargain had been completed, so we are informed, he said that he would be very glad to send the purchaser what

prescription business he could. Whether our information is correct or not as to the foregoing details we cannot say, but the purchaser of the store lately brought suit in the Court of Common Pleas, for the recovery of \$5,000, as damages for an alleged breach of contract. The complainant states that the doctor promised to send him all his prescriptions to be filled, but, in fact, he has never sent him any prescriptions at all. The doctor demurred to the complaint on the ground that the contract, if made, was void, as impossible of performance, and immoral. On November 20th, Judge J. F. Daly handed down a decision on the demurrer, in which he holds that the contract is such as may support an action, and that the demurrer must be overruled. Judge Daly says that there is nothing improper in a physician contracting to advise his patient to go with his prescriptions to a particular drug shop. In action for damages, for a breach of such a contract, there might be much difficulty in getting the necessary evidence, but that fact did not furnish any reason why the action could not be maintained.

THE PATHOGENESIS OF SECONDARY TUMORS.—We have received from Dr. Henry Wile a pamphlet upon the above subject and embodying the results of the author's elaborate researches. Dr. Wile furnishes strong evidence in favor of the view that secondary tumors are developed by metastasis and not by virtue of any dyscrasia. He states in a note that prior to Dr. M. T. Prudden he discovered that adult cartilage when transplanted may continue to grow.

PHTHISIS CONVEYED FROM DOGS TO MAN.—Dr. E. G. Janeway relates a number of cases of phthisis (*Archives of Medicine*) illustrating its possible contagiousness. Among others was the case of a phthisical young man who kept a pet dog. He was accustomed to sleep with the dog nestling in his arms. The animal became affected with a cough and subsequently died. Another dog shared the same fate: a third dog suffered from a cough, but its owner died of phthisis and the dog subsequently recovered.

DR. POLK'S REMARKS BEFORE THE ACADEMY OF MEDICINE.—Dr. W. M. Polk wishes to make the following corrections in the report of his remarks before the Academy of Medicine, December 21st:

In first paragraph, for "supposed difficulties in the performance of either the Cæsarean section or Porro-Müller's operation," read "Thomas's operation for Cæsarean section."

In the next paragraph, the last two sentences should read: "With regard to the difficulties in performing Thomas's operation, he referred to the remarks of Dr. Harris, of Philadelphia, one of the ablest advocates of Cæsarean section, who spoke of Thomas's operation as one that was difficult and scientific, requiring extraordinary anatomical skill. Dr. Polk, however, had reached the conclusion that it was a very easy operation to perform when placed in contrast with Cæsarean section, or any of its modifications."

THE THERAPEUTIC GAZETTE occupies a unique and useful place among medical journals. It deservedly congratulates itself upon the successful closing of its sixth year.

THE PACIFIC MEDICAL COLLEGE has recently been incorporated under the name of the "Cooper Medical College." This change is the result of a munificent gift by Dr. L. C. Lane to the college. This gift is a new building valued at \$100,000. The school was asked by Dr. Lane to be called the Cooper Medical College, after Dr. E. S. Cooper, one of the fathers of medical education on the Western Coast. Dr. Lane's action is a most generous one in every way.

We are glad to learn that the new school has adopted an obligatory three-years' course.

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GROWTHS IN THE NASAL PASSAGES.¹

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PROFESSOR OF DISEASES OF THE THROAT IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

It is not my intention this evening to go over the whole subject of neoplasms in the nasal passages, but simply to ask your attention to some of the commoner forms of growths, met with in every day practice, and to bring before you some suggestions in the way of treatment. By the nasal passages, it should be understood, is meant the whole of the nasal air-tract, extending from the nostrils in front to the border of the soft palate posteriorly. This tract being from a physiological point of view a single channel for the passage of the inspired air, whatever the anatomical boundaries may be. By far the most common of all growths occurring in this tract is the so-called

ADENOID OF THE VAULT OF THE PHARYNX.

I think it is a somewhat general impression that this affection is a rare and obscure one, and moreover, that it gives rise to a train of symptoms peculiar to itself. The point of view to which I ask your attention to-night is rather that the disease is an exceedingly common one, and that it is one of the various, and perhaps the most frequent of the morbid conditions which give rise to an abnormal discharge from the nose, and hence is obscured and lost sight of under that very vague and indefinite term "nasal catarrh." Nasal catarrh is an exceedingly meaningless term. In former years, when our means of diagnosis were imperfect, and our methods of exploring the nasal passages were very crude, it is not to be wondered at that all diseases which give rise to a discharge from the nasal cavities were grouped under this general designation. Of late years our means of diagnosis have been so far perfected that it is possible in every case, unless possibly in very young infants, to bring under ocular inspection the whole of the lining membrane of the upper air-passages from the nostril to the trachea. I say every case, and I think the assertion a perfectly safe one, for even the most irritable throat, by the exercise of a little patience and deftness, will easily be so far brought under control as to admit of a satisfactory rhinoscopic examination. This thorough examination, then, will reveal to us in a very large majority of cases, some definite morbid condition, to account for the "catarrh," the removal of which will be followed by a radical cure of the disease. Among the common conditions which may cause a catarrhal discharge may be mentioned rhinitis hypertrophica, rhinitis atrophica, nasal polypus, deviated septum, syphilitic ulceration or necrosis, strumous ulceration, the presence of foreign bodies, adenoid of the pharynx, etc.

Chronic catarrhal inflammation of the mucous membrane lining the nasal passages develops in two varieties, the hypertrophic and the atrophic form. Hypertrophy, involving the mucous membrane of the nasal cavities proper, has been well designated rhinitis hypertrophica. The same hypertrophic process developing in the vault of the pharynx has been called adenoid of the pharynx. Nature has been very lavish in her endowment of the upper air-passages with numerous glands and follicles,

whose function is to pour out upon the mucous membrane an abundant mucus, by which it is kept in a soft, moist, and pliable condition, otherwise, the constant passing to and fro of the inspired air, often dry and irritating, would tend to rob it of its moisture and cause a dryness by which its proper functions would be seriously impaired. These glands and follicles manifest a tendency to aggregate themselves together in various localities. The most notable instance of this is between the pillars of the fauces, constituting what is called the faucial tonsils. Quite a large group of glands is found at the pharyngeal vault. Wherever we find these masses of glands, we find them manifesting a tendency to become the seat of chronic inflammatory changes. These changes in the pharyngeal vault always result in hypertrophy. I have never met with a case of atrophy. A description of the normal glandular structures, which exist in this region need not be entered upon. They were first fully described by Luschka, and hence the mass is often spoken of as Luschka's tonsil. The condition to which I invite your attention consists in the development in this region of more or less well marked, distinctly outlined growths, which vary from the size of a coffee grain to that of a large chestnut, or even larger. Loewenberg and Meyer describe these as consisting of adenoid or true glandular tissue, while Woakes considers them to possess certain features of the papillomata, and gives them the name of *adeno-papilloma*. In this view I believe he is quite alone. Their true nature is, undoubtedly, adenoid. They consist in a true hypertrophy of the normal glandular structures which are found in this region.

The following description has been furnished me by Dr. Heitzmann, of this city, who has very kindly made microscopic examinations of a number of these tumors which I removed.

Microscopical examination of the pharyngeal tonsil.—Five growths of the pharyngeal tumor were handed to Dr. Heitzmann by myself. He examined them after they were hardened in chromic acid and embedded in a mixture of paraffin and wax.

On transverse section a number of features are observed, common to all the five growths. These are:

First, they are covered by a layer of columnar ciliated epithelia which exhibits the features of stratified columnar epithelium. The single columnar epithelia greatly vary in height, and exhibit sometimes long, sometimes short, bent cilia. Between the elongated feet of the epithelia irregular corpuscles of varying shape are visible, such as occur throughout the mucous layer of the aerial passages, the larynx, the trachea, and the bronchi. Only in one specimen was one side of the tumor covered by a narrow layer of stratified epithelia, probably corresponding to the medial aspect of the tumor, without cilia, with a gradual transition into columnar epithelia.

Second, all the tumors exhibit a lobate appearance, the fissure between the lobes being sometimes shallow and at other times very deep, dividing the whole mass into a number of longitudinal ridges. Each ridge may again exhibit a varying number of shallow papillary protrusions. Under the microscope correspondingly we observe large protrusions, which are caused by the follicular formation of the tissue, and small ridges of a papillary aspect caused by narrow protrusions of the subjacent tissue.

Third, the main mass of the tumors is composed of lymph tissue, formerly termed adenoid tissue, from the

¹Read before the New York Academy of Medicine, January 4, 1883.

mistaken idea that this tissue is glandular in nature. No epithelial formations enter, however, the structure of the tumor, save the depressions and furrows between the lobes, sometimes penetrating very deeply into the mass of the tissue, and there producing manifold secondary convolutions. Beneath the epithelial cover there is no fibrous connective tissue around the lobes, while the papillary elevations are produced by a delicate fibrous connective tissue freely supplied with lymph corpuscles.

According to the general structure of lymph follicles and lymph ganglia, we find in the tumors under consideration a varying number of lymph follicles, consisting of an accumulation of lymph corpuscles, and supplied with a comparatively small number of blood-vessels. The follicles are separated from each other and enclosed by what is known as interfollicular strings. In these both a myxomatous reticulum and the fibrous variety of the connective tissue is more developed than in the follicles, and the blood-vessels are somewhat more numerous. Only in one of the specimens was there a marked fibrous interfollicular tissue with comparatively few lymph corpuscles. In all others the fibrous connective-tissue was but little developed, which feature would account for the comparative softness of these new formations.

With high power of the microscope in all specimens the features common to lymph tissue are discernible. There is a myxomatous reticulum ill-defined and crowded with lymph corpuscles in the meshes within the follicles. There is a more developed myxomatous or fibrous reticulum with comparatively less lymph corpuscles in its meshes within the interfollicular strings.

In one case a cyst was observed in the tissue near the surface, just perceptible to the naked eye, the size of a small pin's head. This cyst is lined on one side by flattened epithelia, on which even ciliae are still recognizable, while the opposite side lacks an epithelial cover, but is composed of lymph corpuscles in connection with a delicate myxomatous tissue, filling in part the cyst. This latter feature indicates that the cyst has not arisen simply from an obstruction of an interlobular fissure, but is due to a transformation of the epithelial cover, at least on one side, into a medullary, and from this into a myxomatous tissue.

The examination proves the formations under consideration are no tumors, in the proper sense of the word, but a hyperplasia of the lymph tissue, which constitutes the so-called pharyngeal tonsil. A difference between hyperplastic faucial tonsils and pharyngeal tonsils is that in the former the fibrous connective tissue is, as a rule, far more developed than in the latter.

This explains the fact I have noticed in operating with the snare, that the faucial tonsil is cut with the extremest difficulty, while the latter are severed with the greatest ease, offering but trifling resistance to the wire.

As a matter of course, formations of a simple hyperplastic nature are benign. This is in accordance with the clinical fact that their extirpation, in the great majority of cases, is not followed by recurrence. The lymph tissue is, however, the sample of a malignant type of tumor proper, the so-called lympho-sarcoma, or lympho-myeloma. Should, by a continuous growth, the lymph tissue keep increasing, no doubt it will establish a malignant tumor, such as has been observed by several writers in this region.

During the past eighteen months I have met with 75 cases of adenoid disease of the pharyngeal vault. Of these there were:

Under the age of 10.....	5
Between the ages of 10 and 15.....	16
“ “ 15 “ 20.....	27
“ “ 20 “ 30.....	23
“ “ 30 “ 40.....	2
“ “ 40 “ 50.....	1
Above the age of 50.....	1

Of these 49 were females and 26 males. We thus see

that the larger number occur about the age of puberty, it being very rare in small children, and also in adults beyond the age of thirty. The deduction from this is quite obvious, viz.: that the growths gradually shrink and disappear with the development which sets in at puberty. We thus find a very striking analogy between this affection and hypertrophy of the faucial tonsil, not only as regards its normal histology and pathology, but also in its development and clinical aspects.

In a large proportion of the cases which I have seen it occurs as a separate and independent affection, less than one-half showing any morbid condition in other portions of the nasal passages. The most frequent condition with which it is associated is rhinitis hypertrophica or chronic inflammation of the mucous membrane lining the nasal cavities proper. In ten cases it was associated with enlargement of the faucial tonsils. In four cases it was met with in connection with rhinitis atrophica or dry catarrh, three of these having reached the stage of *ozæna*. The cause of these growths lies simply in the tendency toward hypertrophy as the result of inflammatory changes which characterizes the lining membrane of the upper air tract and its appendages, under the stimulus of repeated colds. I do not believe it ever to be a manifestation of a systemic dyscrasia, but rather that it is purely a local disorder. It occurs in children more frequently than in adults, for the same reason, that all glandular structures in childhood are more prone to take on morbid changes.

This *diagnosis* is usually quite easy. Meyer and Loewenberg both insist on a digital exploration in addition to the use of the rhinoscopic mirror. This I have often done, but have never found it absolutely essential. The introduction of a finger, forcibly as it needs must be, behind the palate of a child very naturally excites pain, often retching, and always terror and apprehension, and it seems to me much better to retain the confidence of the child by resorting to simpler measures when all that can be desired is accomplished by such. In all cases, even in children of seven or eight years of age, with the exercise of a little patience, I have succeeded in obtaining a thorough inspection of the pharyngeal vault, by this means gaining, I think, a fairer estimate of the size, shape, and location of the growth than can be gained by digital exploration. I should say, however, that as a rule, it is important to make use of sunlight or the calcium light in making the examination, as the ordinary gas-jet is not sufficient to thoroughly illuminate the cavity of the pharynx, especially if a small mirror is used.

Symptoms.—The prominent and most troublesome symptom to which the presence of these growths gives rise is an excessive discharge of mucus or muco-pus; indeed, nearly all the cases which have come under my care have come for nasal catarrh. The source of the discharge is, undoubtedly, in the hypertrophied glands themselves, their normal secretory function not being destroyed by the morbid process, which has given rise to the hypertrophy, but is, on the contrary, greatly increased. We find them, therefore, pouring out large quantities of mucus or muco-pus, which in the larger proportion of cases makes its way into the lower pharynx. In those cases in which the growth has attained a large size, the discharge makes its way through the nasal cavities proper, and is voided through the nostrils.

Voice.—Another symptom which may be traced directly to the existence of these growths, and perhaps the first to be noticed will be the altered character of the voice. This is changed into what Meyer calls the dead voice. It is the voice of one with a cold in the head, that is the nasal twang is more or less completely abolished. In this way “m” and “n” become “eb” and “ed.” In order to give rise to this, the growth need not be large. It may occlude but a small portion of the posterior nares. If you will glance at the diagram, you will see that in order that the voice shall have its full nasal resonance, the vault of the pharynx should be quite clear. If but a small growth projects from its wall it seriously interferes with the sound-

waves, which in nasal sounds should have a clear field from the vocal cord to the roof of the nares. If they impinge upon the slight projecting shoulder of a growth located in the pharyngeal vault they are to an extent smothered, and the whole tone of the voice deadened.

The manner in which the singing voice is affected by these growths in the pharyngeal vault offers many points of great interest. Nature is very lavish in her endowment of the various organs of the body by which their different functions are performed, and so supplies an organ capable of doing vastly more work than it is usually called upon to perform. The larynx when called upon for an ordinary voice responds readily, and will supply apparently a clear, healthy, conversational voice for years, even when there may exist very marked morbid change. Let the voice be taxed by a prolonged and labored effort, as in a sermon or address, and the weakness soon makes itself felt. I have little doubt that many in this room to-night, who are not called upon to make any especial use of the voice, and who are conscious of no noticeable weakness, were they called upon to take pastoral charge of one of our city pulpits, would at the end of the season find it necessary to seek a six months' vacation in Europe at the hands of their congregation for a clergyman's sore throat. The singing voice taxes the very highest powers and capabilities of the larynx, and demands not only a healthy larynx, but a healthy condition of the whole upper air-tract. The recognition of this latter truth I believe to be of the utmost importance. The vocal waves are set in motion by the vibration of the vocal cords, the pitch of the tone is regulated by the tension of the cords, and here in the main, the function of the larynx ceases, unless we add perhaps quantity or loudness of voice. These qualities of the voice which we call timbre, its character and resonance, are given it by the pharyngeal and nasal cavities. These should be entirely clear of any obstructing morbid condition or changes in their lining.

In the lower or chest register, so called, the nasal and pharyngeal cavities are of comparatively little importance. The voice depends largely on the larynx. In the middle register a healthy pharynx is of importance, but in the head register a healthy nasal and pharyngeal cavity are absolutely essential. The manner in which the singing voice soon breaks down under the action of a pharyngeal growth is quite simple. As soon as a note in the upper register is attempted, the singer is conscious of something wanting, the tone is muffled, from the fact that the vocal waves striking upon the mass are suppressed as it were, the sounding-board function of the pharynx is destroyed. The singer, therefore, in order to overcome this obstacle, attempts, though generally without success, to increase the power or volume of the voice. The larynx is taxed beyond its strength, and ruptured capillaries or ruptured muscular fibres result, and a chronic laryngitis is the consequence. It is much as if the rector of Grace Church should attempt to make himself heard by a church full of people with a feather mattress fastened into the sounding-board over his pulpit.

It is a very noticeable fact with singers that it is the head register which becomes first impaired in a failing voice, and in many cases it is the head register alone which is weak, the middle and chest notes being taken with ease and in clear voice. This illustrates the truth of what I have for a long time urged in my teaching. The nasal passages are the first to become the seat of catarrhal disease, and the tendency is very marked for this to extend downward, and furthermore, that in the very large majority of instances, so-called chronic laryngitis is but a secondary condition, resulting from disease in the nasal cavities, the laryngitis being a symptom, as it were, of the disease in the parts above.

The effect of the growths on the sense of hearing has been long recognized. In eight of the cases which I have seen, the impairment of hearing was quite marked. In a larger number of others the impaired hearing was

not complained of, but was determined by the ordinary watch test, twenty of the cases presenting ear symptoms. In two of the cases there had been severe attacks of otitis media, while in six there had been complaint of frequent attacks of earache.

I scarcely feel justified in saying much of this feature of the disease, from a lack of familiarity with ear diseases, yet in making a very large number of rhinoscopic examinations I have necessarily inspected the Eustachian orifices and observed the functions and muscular movements of that region.

Impaired hearing from the presence of adenoid growths in the pharyngeal vault has been attributed to pressure on the Eustachian orifice. These growths are of a soft, pulpy consistency, while the eminences which surround the Eustachian orifice are hard and dense; hence, any pressure exerted upon them by an adenoid growth would have but slight, if any effect. I think a far more plausible explanation of the symptoms is in the interference with renewal of air in the middle chamber caused by their presence in the pharynx. Any cause which interferes with free nasal respiration, if continued sufficiently long, is liable to cause impaired hearing, by its interference with this function. The method in which this occurs, I take it, is that nasal stenosis, arresting the to-and-fro current through the nasal passages, causes a stagnation in the pharyngeal vault, and necessarily a certain amount of rarefaction of air in that region. Moreover, the free action of the levator palati muscles is interfered with by the presence of these growths, and this movement is of the utmost importance in accomplishing this mechanism of air renewal. In studying these parts by the rhinoscope, the impression is gained that the tendency of muscular movement here is to force air into the middle ear. The constant and almost ceaseless impulse of sound-waves upon the tympanum must necessarily cause a rarefaction of air in the middle ear, and this loss is compensated for by the mechanism above alluded to.

That the ear symptoms are due to an extension of catarrhal inflammation to the Eustachian tube, I think is very questionable. I am disposed to think this is an extremely rare occurrence. Certainly it is very rare to find the lining membrane of the Eustachian orifice in a condition of catarrhal inflammation. In one case which has been under treatment, there was very distressing tinnitus aurium. In this case the adenoid pressed upon the Eustachian orifice; the symptom was very markedly relieved by the removal of the growth, though not entirely removed. In this case there was no impairment of hearing.

Nasal stenosis is quite a prominent symptom of this affection, and is present in cases where the growth has not attained an unusual size. This may not be so noticeable during waking hours, but during sleep, when the voluntary muscles of respiration are not brought into play, it is more prominent, and the patient sleeps with mouth open. The vicious effect of this I need not enter upon at full. Habitual mouth-breathing, especially during sleep, I believe to be a most prolific source of throat catarrh, and liability to bronchial disorders.

It is a very noticeable fact that these growths show noticeable change in size when examined at different periods, which would indicate simply that under the influence of damp weather or other causes, they are liable to become the seat of an active turgescence or distention of their blood-vessels, by which their size is temporarily increased.

This occurrence, especially in children, is attended with an increase of secretion, with obstruction to nasal breathing.

Cough is present in certain cases, especially if there is much secretion, which has made its way down the pharynx into the larynx, exciting a laryngitis. The cough, again, may be the result of the habitual mouth-breathing.

In one case which came under my care about a month

ago, a young lady of twenty, the only symptom was a persistent hoarse, dry, barky cough. The only morbid condition discoverable in lung- or air-passages was a small adenoid. This I removed with almost immediate relief, and since then the cough has gradually disappeared.

In this case the cough was undoubtedly of a reflex origin, something in the nature of the ear-cough which we occasionally meet with, due to an accumulation of cerumen in the outer ear, or some other aural irritation.

Treatment.—This consists in their total extirpation. The only question that arises is as to the best method of its accomplishment. Chemical agents, chromic acid especially, have been recommended by several writers on the subject. I have tried this method and find it to be utterly unsatisfactory. The cutting forceps, as recommended by Cohen, of Philadelphia, Woakes, of London, and others, I have never used, but it always seemed to me a somewhat formidable instrument, difficult of nice manipulation, and moreover harsh and painful. The curette recommended by Mackenzie I formerly used with considerable satisfaction, but it did not seem adapted for use with the larger growths.

Meyer, of Copenhagen, Michael and Hartmann, of Berlin, recommend the use of cutting instruments introduced through the nares and manipulated by means of the finger passed behind the palate. Meyer's instrument consists of a stout ring with an inner cutting edge, the whole mounted on a stout rod. The other instruments mentioned are of a similar construction. Meyer furthermore advises, after the removal of the growth, that the remaining fragments be separated by a curved instrument with a rasp surface, which is passed around the palate and the base of the growth rasped as it were. Finally he advises the cauterization of the denuded surface. These procedures I can only refer to without comment other than that they seem somewhat unnecessarily severe. I have never made use of them.

Voltolini, of Breslau, Michel, of Cologne, and Loewenberg, of Paris, give preference to the galvano-cautery. There are two methods in which this may be used—first, the removal by the burning through the base with a heated wire, and second, the destruction of the growth by means of an incandescent button-electrode.

The first method I do not regard as feasible, although Michel claims success in it.

As regards the absolute destruction of these growths, or in fact any morbid growths of any size by the galvano-cautery, I have only this to say. It is an immensely overestimated instrument, and, in my experience, has utterly failed to accomplish what we formerly anticipated from it.

If we apply a cold electrode to a tumor and then close the circuit, the loss of heat is so great that, as a rule, a more than very dull heat is not obtained, the result is but a very superficial charring of the mass. In the vault of the pharynx this procedure only is applicable, as a rule, for it would require very nice manipulation to pass a heated electrode to the point desired without touching healthy portions of the passages. Still, if this were done, and an electrode were used in which the heat were developed before entering, there is yet but a very superficial destruction accomplished, and the ablation of even a small tumor by this means becomes a tedious process, occupying weeks and months, requiring an interval between each application for the exfoliation of the slough, and this may be attended by the unpleasant accompaniment of an offensive discharge. Moreover, I believe we should always recognize the fact that the application of the galvano-cautery is attended oftentimes with a very severe reaction, setting up renewed inflammatory processes, by which the tumor may be stimulated to new development, and a part at least of what has been accomplished may be counterbalanced by the renewed process of growth.

There remains only to describe a very simple method,

which I have practised exclusively in the last year, and which, it seems to me, possesses marked advantages over any other device. This consists in the use of a modification of Jarvis' snare *écraseur*, which I show (Fig. 1). As will be

seen, I have had constructed an ordinary snare with a distal tube of six in-

ches length: the end of this is curved in a quadrant of a circle whose radius is one and one-fourth inch. This is now mounted with a No. 5 piano-wire, which I regard as by far the most useful number, as combining elasticity, strength, and resistance. Having observed the growth and carefully estimated its size, a loop is formed which will embrace it, and is then bent forward over the end of the instrument, in order to give it a decided kink. The wire is now played out of the snare about an eighth of an inch, and the whole loop is now thrown backward toward the handle of the instrument, giving it another bend. As will be seen, it is in a position for easy introduction behind the palate, without touching the part, and may be passed immediately to the base of the growth. The palate of course is now immediately retracted by reflex irritation, but only embraces the tube of the snare, without in any degree hampering the manipulation.

The instrument is now held firmly in place, while the loop is rapidly drawn in by turning the screw. The action of the bends in the wire loop is now perceived. As the wire is drawn in the loop is thrown backward with considerable vigor, and embraces and severs the growth. In this manner even a broadly sessile growth is easily seized and extirpated. There is but trivial hemorrhage, but little pain or retching, and the whole manipulation is accomplished very easily, simply, and speedily. After the withdrawal of the instrument, the tumor is expelled through the nose by blowing. Occasionally it drops into the pharynx below, but this is very rare. In no case has any patient experienced the slightest annoyance from the growth dropping too far down in the air-passage, nor do I regard this as an accident that is liable to happen. The operation by this method has never required an anæsthetic.

In three cases of children, in whom the control of the faucial movements prevented the manipulation, I was compelled to give an anæsthetic and resort to another method, which may be described in a few words. In these cases the growth was severed by passing an ordinary straight snare through the nose. Having mounted the snare with the wire, the loop was bent sharply down over the end of the instrument, giving it a kink, and then drawn within the tube until a loop only remained sufficiently small to pass through the nares; this was passed vertically until the loop was in the pharynx, when the instrument was turned, bringing the loop into a horizontal position, with the side undermost toward which the larger loop had been bent. The wire was now played into the pharynx, when the bend which had already been given it threw the loop downward, nearly to a right angle. The whole instrument was now pressed firmly against the pharynx, which, as will be seen, threw the loop over the growth. Holding the instrument firmly pressed against the pharynx, the screw was rapidly turned

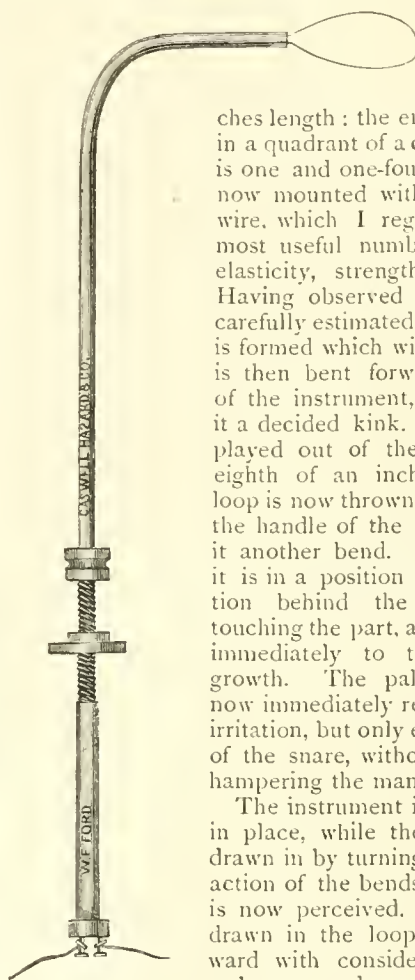


Fig. 1.

and the growth severed. As soon as the instrument was withdrawn the child's head was drawn over the table with the face downward, and the trifling hemorrhage allowed to go on until the child could be aroused, when the tumor was expelled by blowing the nose.

In this manner, as a rule, the whole growth may be removed, but in the first-described manipulation portions may be left. This is easily ascertained by examination as well as their location, and the manipulation repeated. This may be done a number of times at one sitting, entailing but little annoyance or weariness to the patient. As regards recurrence, I have never in any of my cases seen any such tendency. Perhaps it is too early to hazard an opinion, but certainly I think it safe to assume that the method of operating described, if thoroughly done, leaves a far less liability to recurrence than the use of forceps, caustics, or the galvano-cautery. The inflammatory reaction after these methods is certainly very notable. In the use of the snare, whether in adenoid or other growths, I have never in any single case noticed the slightest reaction occur, with the sole exception of some few cases where I removed tonsils by it.

This question of reaction after removal of growths I regard as one of exceeding importance, and desire to lay especial stress on the fact of its absence after operations by the snare.

The next variety of growth in the nasal passages to which I will call your attention is

NASAL POLYPI.

Nasal polypus means properly a tumor of the nasal cavity attached to the parts beneath by a narrow pedicle. As a matter of clinical observation, the only pedunculated tumor with which we meet in this region is the myxoma. A more exact classification would demand that to each variety of growth the name should be given which describes its pathological character. In this way we would do away with that very careless classification which describes nasal polypi as well as nasopharyngeal polypi. I have never met with a case of polypus in the naso-pharynx; the growth which is described under this heading being usually a fibroma, which is always a sessile tumor.

Nasal polypus has been recognized since the days of Hippocrates, and consists in the development in the nasal cavities of soft, rounded, jelly-like tumors, resembling as much as anything the pulp of a grape. They generally occur in both cavities, though occasionally are found in but one. When they are confined to one cavity, it is my observation that they have been present but a short time and are few in number. From this I would infer that they commence in one cavity, and that their presence there very soon leads to their development in the other.

A single polypus is a very great rarity, as they seem to develop in clusters.

During the past year there were treated at my clinic for diseases of the throat 1,641 cases, of which 19 were cases of nasal polypus. During the same time I saw and operated upon 16 cases in my private practice.

Of these 35 cases there were two under 20—11 and 15 years.

Between the ages of 20 and 30 . . .	9 cases.
" " 30 " 40 . . .	2 "
" " 40 " 50 . . .	12 "
" " 50 " 60 . . .	6 "
" " 60 " 70 . . .	4 "

Twenty were males and fifteen females.

It is essentially a disease of adult life, and occurs more frequently among males than females.

There were two cases under the age of 20, viz.: 11 and 15 years, respectively. These cases were of interest, as showing a somewhat immature development of the tumor. The individual tumor had not developed, but the growth shows, as it were, a cluster of seeds, a small central mass, about which are gathered a large number of small bead-like excrescences.

The peculiar shape of nasal polypi is probably due to their soft consistency. Under the influence of gravity, and perhaps the traction of the to-and-fro movement of the respired air, they are drawn out, as it were, from their attachment, and assume the pear shape which is peculiar to them. They rarely develop to a large size in the nasal cavity, simply because they have no room to grow. Occasionally they spring from the posterior portion of the cavity, and dropping into the pharynx, where they have abundant room for growth, they develop to a very large size, as is seen in the two specimens I show you, nearly the size of a hen's egg. These were operated upon through the nares, but of course removed through the mouth. Their source is usually the middle turbinated bones, but occasionally they are attached to the lower. In only two instances have I ever found a nasal polypus attached to the septum. The attachment is not on the convexity of the turbinated bones, but is in the recess between the under surface of the turbinates and the outer wall of the cavity.

As to the cause of nasal polypus, I know of none. It is a disease of the nasal mucous membrane peculiar to itself. There is certainly no relation between it and any of the constitutional dyscrasie. It is a purely local disease. It is very commonly taught that it is one of the results of chronic rhinitis. It very frequently occurs in connection with rhinitis, but quite as frequently, I think, independently of it. In three cases which I have seen it occurred in connection with atrophic rhinitis, which would certainly argue that it bore no especial relation to the commoner form of rhinitis, the hypertrophic variety.

In a number of instances I have removed single nasal polypi from the border of syphilitic ulcers in the nose, but the cause of the polypi here was not in the constitutional condition, but undoubtedly in the local morbid process.

Symptoms.—As regards the symptoms of nasal polypus, they are familiar to all, and demand no lengthy notice. The prominent symptom, of course, is the blocking up of the nasal passages, together with the profuse watery discharge. Their hygroscopic character, by which they swell up and pour out an increased quantity of watery serum under the influence of damp weather, is well known.

Prolonged, and oftentimes distressing attacks of sneezing is a symptom, the prominence of which is not generally recognized. The irritability of the nasal mucous membrane in chronic rhinitis is usually much diminished, I think, and sneezing does not occur in this affection. The presence of nasal polypi, however, gives rise to these attacks of sneezing in nearly all cases. This is especially prominent in the early stage of the development of these growths, and hence the occurrence of this should always excite suspicion as pointing to this affection.

The occurrence of spasmodic asthma as a reflex symptom due to the presence of polypi in the nose has been noticed only within the last ten years. I am disposed to think this is of more frequent occurrence than is generally supposed. Of the thirty-five cases which I have seen in the last year, four were attended by this symptom. The attacks were those of ordinary spasmodic asthma, giving rise to the same physical signs and attended with the usual nocturnal exacerbations. The asthma is generally cured by the removal of the polypi. In one of my cases, however, in which the disease had lasted two years, the asthmatic symptom was only relieved by the administration of iodide of potassium for about three months after the removal of the polypi. Voltolini first called attention to this reflex symptom of nasal polypus in 1881. Since that time similar observations have been made by Holden, Spencer, Porter, Todd, and others.

Diagnosis.—The diagnosis is usually quite simple. An inspection of the anterior nares with a good illumination revealing the characteristic grayish mass presenting

between the turbinated bones and the septum. In many cases, however, the mucous membrane covering the polypi is of a red congested color, almost identical with that of the mucous membrane over the turbinated bones. In this case a probe will clear up the diagnosis, for by touching the presenting mass it will be found to be freely movable if it be a polyp. This manipulation also reveals the point of attachment, and should always, I think, be resorted to for the purpose of revealing not only the point of attachment of the growth, but also its size.

Treatment.—It seems somewhat strange that the earliest method of removing nasal polypi, that suggested by Hippocrates, should be practised at this late day, but I believe it is a procedure not infrequently adopted. This consists in passing a cord through the nares into the pharynx and out at the mouth; to this is attached firmly a piece of sponge, which is then drawn from behind forward through the nasal passages. This results unquestionably in removing many of the growths, and to an extent in clearing the channel, but it is certainly a very rude and unsurgical method. I saw this operation done in my first year of attendance upon medical lectures, with, I confess, a feeling of admiration for the fortitude of the patient, but far more of dismay at the work for which I was preparing myself. Local applications of astringents, mainly in the form of powders, have been recommended by many writers, the claim being that under their influence these growths shrink up and drop off. The most efficacious of these, it is claimed, is tannin. I have never been able to satisfy myself that local astringents had any but a most temporary influence upon the disease.

Of late years we have seen frequent notices in the journals of the efficacy of injections into the body of a polypus, under the action of which they sloughed off. Acetic acid, tincture of iodine, persulphate of iron, a solution of corrosive sublimate, etc., have been recommended for this purpose. There is no question but a polyp can be destroyed by injecting it with acetic acid or probably many other drugs, but the process is a very tedious one. The injection creates a slough which remains in the passages for from three to five days, giving rise to an offensive odor and fetid discharge. This, of course, is a period of considerable discomfort to the patient. And, moreover, it is not possible to inject more than one or two polypi at a sitting, for it is not ordinarily possible to bring into view but one or two of them. It is then necessary to prolong the treatment over a considerable period of time.

By far the most common method of removing polypi from the nose is by the use of the forceps. They are recommended by the oldest writers on surgery, as well as by most modern text-books. The direction generally given is to pass the instrument up and seize the pedicle. I believe this to be an impossibility. The pedicle of a polyp is generally under the turbinated bone and not on its convexity, and there is very rarely sufficient room to pass the instrument. Moreover, it is not possible to see the pedicle of a polyp. I do not think I have ever seen one until after the growth was removed from the nares. The nasal passages are exceedingly sensitive, and the introduction of any instrument, even a probe, is very painful. The introduction of a pair of forceps, which are made to grope about blindly in the passages until they have seized something, which, as a rule, the operator cannot know whether it be a polyp, or a portion of the healthy tissues, and then their forcible withdrawal with whatever tissue they may happen to have grasped, it seems to me is a most harsh and unsurgical procedure.

I do not think this is an exaggeration. It may be possible to remove a polyp very near the nostril with a pair of forceps without much injury to healthy parts, but the first introduction of the instrument bruises the parts somewhat and excites hemorrhage, and the field then becomes so entirely obscured that any further operating

must necessarily be groping in the dark. Furthermore, I do not think it is feasible, as a rule, to remove all the growths with the forceps. The smaller ones are situated so deeply in the cavity, or are concealed so deeply beneath the turbinated bones, that they cannot be seized. For this reason it is often recommended that a portion of the turbinated bones be removed. I know of no justification for this procedure. The removal of bone involves the removal of healthy mucous membrane also. These tissues have an important function to perform in the nasal cavities and their removal is not justified unless they are diseased. In a majority of cases I believe them to be perfectly healthy in this disease. Even in very extensive removal and mutilation of the turbinated bones by the forceps operation, the polypi are liable to return. The most aggravated cases which come under my notice are those on which the forceps have been used.

As regards the use of the galvano-cautery, as recommended so strongly by Voholini and Middeldorp, it has always seemed to me a ponderous and elaborate method. The use of an instrument in the nasal cavity heated to a white heat, invariably excites great inflammatory reaction, which oftentimes does much mischief. The more I see of the use of this instrument, I am the more inclined to entirely reject it. It unquestionably oftentimes does great harm, and moreover the cases are exceedingly rare in which simpler methods cannot be adopted with far better results.

A very great advance in the treatment of nasal polypi was made when Hilton devised the snare, which has been so extensively used since his day. This was a thoroughly surgical procedure. There were two features of this instrument which impaired its efficiency. It was mounted with soft annealed wire, which was passed over the growth, and the loop being drawn tight the polyp was torn from the attachment. The wire was soft, flexible, and easily bent; it was not easy, therefore, to pass to the base of the tumor. The loop was not sufficiently rigid to manipulate. Moreover, when the polypus was torn away, the polyp tissue being soft and friable, it would give easily and a portion of it would be left, from which a new growth would be liable to develop. The Jarvis snare-écraseur furnishes us with an instrument possessing all the advantages of the Hilton snare, and none of its disadvantages. This is mounted with steel piano-wire which gives us a strong firm loop which can be easily manipulated, and, therefore, carried to any portion of the nasal cavity. A very important feature of this device I believe to be in the principle of the écraseur in contradistinction from that of the snare. The loop is carried over the polyp, and being pressed firmly against the mucous membrane from which the polyp springs the pedicle is slowly severed, and at the same time a small portion of the fibrous tissue of the membrane is torn out. This is very well seen in the specimens I show. I do not believe much in what is called the root of a tumor, but if there is such a thing it is shown here.

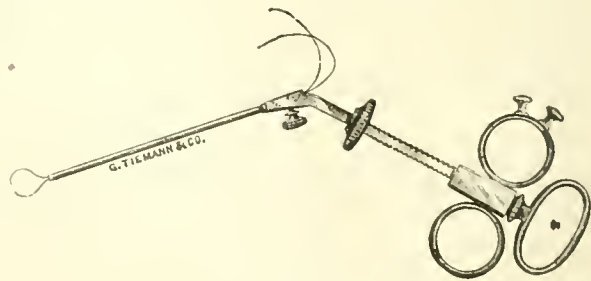


Fig. 2.

The only objection I find with the use of the Jarvis snare is that the hand is necessarily in the line of inspection, the instrument being straight. To obviate this I have had constructed the instrument shown (Fig. 2). The tube

is bent in such a manner that the loop can be kept in view during the manipulation. Moreover, it is arranged so that the loop can be drawn up by traction with the fingers until the pedicle is embraced, when the removal is completed by turning the screw. As will be perceived, the device is merely a combination of Jarvis' and Wild's snares.

A nasal polyp, if removed in this manner, does not recur at the point of removal; the whole growth is removed, and no tissue remains from which a new development may occur. Moreover, the operation is accomplished with but little pain or hemorrhage, and by slowly taking one growth after another the nasal passage can be cleared at the first sitting sufficiently to give the greatest relief to respiration. The cavities cannot, however, be cleared at a single sitting. My usual procedure is to continue the operation until the patient is tired, or the passages become too much irritated, and then dismiss my patient for a few days or a week. If hemorrhage occurs a pledget of cotton can be inserted, and the bleeding will be arrested in a few minutes. It is possible with good illumination to see every portion of the nasal cavities. And if a polyp can be seen, no matter how deeply it is attached it can be removed. In this manner, therefore, I believe the disease can be entirely eradicated in usually about six or eight sittings. The question of course arises, Do these growths recur? I do not think they do if they have been thoroughly extirpated. I generally request my cases to present for examination a month after the operations have been finished, when, if I find no growths, I feel quite safe in assuring them that the disease is radically removed.

The principle, therefore, on which this affection should be treated is that of weeding a garden. The whole ground is to be gone over until every vestige of the tumors has been removed.

As to any local application to prevent recurrence, or escharotics to destroy the so-called roots, I do not believe them necessary. I have occasionally used the galvanocautery or acetic acid after operating on cases which had previously been operated upon with forceps, but in other cases I have not found this necessary.

Of the thirty-five cases referred to there has been but one of recurrence. This was a patient whose turbinated bones had been much torn and mutilated by the forceps. It is too early, perhaps, to assert that the other cases are cured. Many of them I have examined since operating and find no evidence of disease. Others were patients at my clinic, of whom I have lost sight. I believe, however, I am perfectly justified in claiming a very large percentage of radical cures by the method described.

ASTHMA.—Dr. Wm. M. Welsh (*Medical Bulletin*) gives the following formula for the treatment of asthmatic attacks:

R	Stramonii foliarum	3 x.
	Potassæ nitratis.....	3 v.
	Seminis fœniculi	3 ss.
	Sacchari	3 ij.

M.

The stramonium leaves and the fennel seeds should be ground to a powder, not very fine, and passed through a sieve so as to get rid of the stems and coarser fragments. All the ingredients should then be rubbed together in a mortar, without producing a very fine powder. The mode of using the material is to place a small portion of the powder on a dish and ignite it with a match. It should burn slowly and somewhat irregularly, emitting fumes as it burns, which, of course, are to be inhaled. The fumes may be conducted to the mouth of the patient by means of a paper hood placed over his head. It combines, the author claims, the good effects of nitre and stramonium.

ŒSOPHAGITIS AS A DISEASE OF INFANCY.

By E. F. BRUSH, M.D.,

ATTENDING PHYSICIAN TO THE NEW YORK INFANT ASYLUM.

HAVING had a case in an infant where death was due to softening and rupture of the œsophagus, in which the ante-mortem symptoms were mistaken for those of another disease, and where the death certificate would have certified to such, had not a post-mortem examination revealed the lesion. I think it is very important that attention be called to the latter, which, taking the most recent books on children's diseases as indications, is hardly recognized. I may add that, having visited the New York Bureau of Vital Statistics with a view of ascertaining its comparative frequency, I found that in the experience of the present official, œsophagitis as a cause of death had never been reported during his connection with the bureau. This ignoring of a previously recognized disease in the ordinary text books is very remarkable when we go back to Billard "On Diseases of Infants," a work written in 1828. This close and accurate observer devotes twelve pages to the consideration of œsophagitis, citing five cases in infants where the autopsy revealed disease of the œsophagus as the cause of death. He says in introducing his remarks on this disease, "This is not a work of imagination—a record of abstract and preconceived ideas—but it is our wish to be a close and faithful interpreter of nature, and to speak only from facts before us. Let us begin, then, with the history, a dry one, it is true, but not the less indispensable, of the facts which we have collected in relation to the diseases of the œsophagus in new-born children." He goes on to say that it is rare in adults, but "is less rare in young infants: the reason of which is that this organ is almost always the seat of congestion to a greater or less extent. On this account it is more disposed to disorganization and inflammation. When inflammation exhibits no other sign than redness, it will be extremely difficult to distinguish it from the habitual congestion of the œsophagus, but when with this redness there are also present some lesions, or some of the products of phlegmasia, no doubt ought to exist that the membrane of the œsophagus is then inflamed. Thus the symptoms which during life accompany the development of these lesions ought to be considered as proper to œsophagitis, and serve to settle the diagnosis of this disease."

The first case he cites is that of a child six weeks old, who had suffered almost from birth from diarrhœa. He first saw her on July 11th, her condition was general paleness, tension of the abdomen, cry feeble but perfect, and constant vomiting without nausea. On the 15th the face became livid, the child refused to drink, and the effort to make her do so caused pain; the milk was vomited almost as soon as given. This condition continued till the 17th. On the 18th the face became pinched, the forehead wrinkled, the cry very feeble, skin cold, pulse scarcely perceptible. Death took place in the night. The autopsy revealed the pharynx injected, the œsophagus of a vivid red at the upper third, on a level with which the epithelium was entirely destroyed, the remainder of the canal presenting a number of red striæ. The mucous membrane of the stomach was of an ash color, and the mucus which covered it thick and very adherent. At the termination of the ilium there were eight slate-colored, tumefied follicular patches. "This child," he concludes, "succumbed to œsophagitis."

The next case is that of an infant six days old. It was first noticed on the 2d of May with an "abundant diarrhœa of green color, almost constant vomiting of glairy matter, frequent regurgitation after drinking." "The child rested in the cradle as if without life." On the 4th it vomited a green liquid in great abundance and died during the night. An autopsy revealed "a well-marked injection of the upper part of the œsophagus

with a longitudinal ulceration at its inferior extremity, six lines long and four broad, the bottom of which was yellow, the borders thick and red, as if bloody, and the mucous membrane was destroyed in the centre of this solution of continuity, the bottom of which was formed by the cellular membrane."

The third case was a child one month old, affected with ophthalmia. This child cried very little, did not appear to suffer much, but vomited almost everything which was given as drink. The constant vomiting continued, the marasmatic condition became profound, a change of position caused a regurgitation of milky fluid, sometimes mixed with white, pasty, grumous matter, and death took place in twenty-two days from the time he first noticed the case. At the autopsy the œsophagus exhibited here and there irregular patches of a bright red and in certain points a complete destruction of the epithelium; there was besides in almost the entire extent of this membranous canal a considerable number of points of *muguet*, the whiteness of which appeared in strong contrast with the intense redness of the œsophagus; this *muguet* ceased at the epithelium.

The fourth case was one of aphthous condition of the œsophagus; the fifth was gangrene of that organ.

All these cases occurred in artificially fed children, which during their sickness had been fed on sweetened gum-water and milk-and-water.

Condie, coming after Billard, the author above quoted, in his edition of 1847 (p. 175), says: "Billard was the first to point out the frequency and describe the diagnosis of œsophagitis occurring in the first periods of infancy." Condie had never been able to verify, by an autopsy, his diagnosis of the disease, but from Billard's description he thinks he has seen several cases. It is safe to infer from this statement that all Condie's cases recovered. This is valuable testimony, as he treated the disease in a manner than which thirty-five years have suggested none better, namely, by injections of milk and broth.

Dr. J. Lewis Smith says disease of the œsophagus in infancy and childhood is comparatively rare. It is most common in infants under three or four months, who are deprived of the breast milk and are given a diet which is with difficulty digested, and perhaps taken too hot or too cold. He has discovered it chiefly at the autopsies of young bottle-fed infants, whose symptoms indicated disease or derangement of the digestive functions. He also says, the symptoms are not well pronounced.

All this testimony is in strong conflict with Vogel, who says it scarcely ever occurs in children under one year of age, because they are too simply fed. Meadows, in his revised edition of Tanner, does not make mention of œsophagitis. West does not include it in his list of infantile diseases. Meigs and Pepper omit it. Steiner devotes three pages to diseases of the œsophagus, but he does not teach that œsophagitis occurs in infancy; he speaks of abscesses, strictures, and so forth occurring in children, but the instances he gives are all traumatic, and he says the diagnosis is easy when the disease is severe.

Since I have had my attention directed to this disease I have performed autopsies on the bodies of eighteen children, and have found lesions of the œsophagus only in the case of two.

In the first instance, that of a child eleven months old, exceedingly nervous and irritable, who had suffered somewhat, alternately from diarrhoea and constipation. It had on September 20th a temperature of 100½° F., four movements of the bowels during the preceding twenty-four hours, frequent moaning and occasionally vomiting. Was ordered half a grain of quinine every two hours. September 21st, temperature 104°, constant vomiting of everything given (foods—beef solution, cooked malt-water, whey, cream, kumyss); tongue seemed swollen and blue; child had only four teeth, which he struck together so violently that they were chipped. All food per mouth was stopped, and three ounces in equal por-

tions of beef-solution and milk injected *per rectum* every three hours. This treatment was began at 10 A.M. The efforts at vomiting continued till about 10 P.M., and the child died a little after midnight. The autopsy revealed both lungs considerably collapsed; the œsophagus dull vermilion color throughout its entire length, presenting the appearance of the fauces when the diphtheritic membrane is torn off; at the junction of its mucous membrane with that of the stomach, there was a white, irregular fringe which hung into the stomach, in appearance being exfoliating mucous membrane; the stomach was small and puckered up, forming deep rugæ, some of which on the top had long lines of recent inflammation. These inflammatory stripes were few in number, and not intense; no other lesions of this organ could be discovered. The duodenum was easily torn, the entire digestive tract below the stomach almost bloodless, consequently presenting a white appearance, except a few inches above the sigmoid flexure, where it was slightly inflamed, and containing the food which had been thrown there a few hours before death. No other prominent lesions were found.

This case I certified to as one of œsophagitis.

My second case was a child, seven months old, bottle-fed, not well nourished. He first came under my notice June 23d, with a mild conjunctivitis and frequent attacks of vomiting. He was undergoing no particular treatment, except that different foods were being tried at intervals, in hopes of finding something which his stomach would retain; he gave no evidence of pain at this time, neither were the bowels disturbed. On July 12th, when making my rounds, I noticed the child in a profound condition of collapse. My attention had not been called to him for a week. In the last few days he had had three or four alvine discharges, green mixed with yellow. Twenty-four hours previously the vomiting had become more violent, and every particle of food administered was rejected, unchanged, almost immediately. We made an effort to put him to the breast, but he would not nurse. July 13th, condition of collapse continues; respiration panting, revulsion to food continues; clonic movements of the entire trunk commenced this morning and continued without any interruption. July 14th, vomiting continues; five movements of the bowels in the last twenty-four hours, watery and mud color. There has been no abatement from the profound collapsed condition; the choreic movements continue, but intermittently; the head is rolling constantly; during the intermission of the movements the left hand is laid on the forehead. July 15th, died this P.M.

Autopsy, eight hours after death.—Pleural cavity on the right side containing about two ounces of food and blood mixed, the odor of the food being quite perceptible. The lung at its approximation to the posterior mediastina was the seat of recent ulceration; that is, there was a soft, ashy gray spot about half an inch in diameter, fading away into the bright-colored lung. The bronchi were plugged with food and mucus, which had found its way there through the trachea, as there were no lesions in the tubes. This lung was collapsed in large patches. Left lung also considerably collapsed, but pleural cavity clear and normal. Two inches above the diaphragm, opposite the lung ulcer, is a small opening through the mediastinal walls and into the œsophagus. Looking at it from this cavity, it looks like a cut across the tube. On removing the tube it was found lacerated about half way across its diameter just within the lower half of its length. Its internal surface was pale and covered with soft catarrhal-appearing mucus. The stomach was adherent to the spleen by strong fibrous bands, and contained some food. There were three invaginated portions of the intestines, none of which appeared to have existed many hours before death.

With regard to this case, I may say that some medical gentlemen who had seen it before death pronounced it a case of cholera infantum.

A case almost exactly parallel to this was reported to the London Pathological Society by Mr. Stanley Boyd. The rupture in his case took place in a child four months old, and he stated that there was no food in the pleural cavity.

It seems to have been a settled question some time ago that these ruptures of the œsophagus are due to post-mortem digestion. This seems untenable when we recollect that these children in whom the ruptures take place are in a feeble condition, and the evidence that the peptonic action of the stomach is suspended is proved by the unchanged condition of the food which is returned from the stomach. We can hardly suppose that a stomach that will not coagulate milk would have the power to digest an œsophagus.

There is no reason why the œsophageal tract should not be subject to special disease, as it is a distinct structure. Its development shows this, for in the sixth week of fetal life it is a tube closed at both ends, and only later joins the stomach and pharynx. Its mucous membrane is different from that of the stomach or pharynx by the fact that it is firmer in texture and paler in color. Its structure is more simple than that of either of the cavities with which it is connected, and therefore is at once less liable to be attacked by disease, and less able to resist disease when it is attacked. It has been compared to the urethra, and the simile is not altogether a bad one, so far as structure and sensation goes, for the pain, as described by those who have suffered from inflammation of either tract, is very similar. Now, as the urethra is subject to special forms of inflammatory action, so is the œsophagus.

But the diagnosis of œsophageal diseases presents far greater difficulties, especially in the infant. There are some classic descriptions of the excruciating pains caused by inflammation of this organ in the adult, which seem to be of such agonizing acuteness as to lead to the conclusion that if they occurred in infancy they would be sufficient to produce shock. I have no doubt that the state of profound collapse in which I found the infant in my second case was caused by the severity of the pain it was suffering, for the rupture in this instance could not have taken place more than a few hours before death, otherwise the pleura would have given evidence of irritation. The evidence of pain in my first case was strongly marked in the facial expression; but, as a diagnostic point of disease in infancy, this, of course, amounts to very little, as it is associated with so many other conditions. Thus far, with my limited knowledge, I would indicate the following points in the diagnosis of œsophagitis: First and foremost, an antipathy to food, and when food is taken lachrymation takes place. This is a point to which attention has not been previously drawn; but when we remember that the ingestion of irritating substances produces tears in the eyes of the adult, we can readily understand that any irritation in the œsophagus may produce them also in the case of an infant. On reference to Billard's first case I notice he says "the cry was feeble but perfect," and we must infer from this that the cry was accompanied by tears; and as in profound gastro-intestinal lesions the cry is unaccompanied by tears, and one of the favorable prognostic indications of recovery from these diseases is a reappearance of tears, a constant lachrymation accompanied by these profound symptoms may be a valuable diagnostic point. Referring to Billard's third case, we find the child affected with ophthalmia, and my second case also was suffering from ophthalmic irritation. There is no doubt that constant wetting of the eye with tears is sufficient to produce conjunctivitis. Even in Gregory's time this fact was recognized. He says "bile and sordes in the stomach have also occasioned ophthalmia. The purulent ophthalmia of infants has been attributed by some to this source;" doubtless by the lachrymation produced by the irritation in the œsophagus. All who have suffered from severe heartburn must remember the tears

that suffuse the eyes when the irritating fluid regurgitates into the œsophagus.

The second important diagnostic sign is the characteristic vomiting; that is, the food taken into the stomach is returned almost immediately and quite unchanged. This vomiting differs from that caused by gastro-intestinal irritation by being apparently unaccompanied with nausea, and it differs from the vomiting due to cerebral irritation by being not so powerfully ejaculated.

These are the two most characteristic diagnostic points. The other points it is hardly necessary, perhaps, to enumerate in this connection, as they simply consist in exclusion.

The question of treatment we need not enter into minutely; but as the disease almost invariably occurs in bottle-fed children, and one of the prime causes is the ingestion of food too hot, it is worth remarking that cold food can be administered to children without any bad effect. This plan of feeding children that require artificial feeding or cold food has been followed for some years by Surgeon King, U.S.A., and highly recommended by him. In my own practice, in cases where children have been entrusted to nurses of careless habits, I have directed the children to be fed with food not warmed, and I have perceived no effects forbidding me to continue to do so.

SOME INTERESTING CASES IN GYNÆCOLOGY.

By HORATIO R. BIGELOW, M.D.,

WASHINGTON, D. C.

CASE I.—On November 30th I was summoned to attend a patient in New Jersey. After arranging some necessary business I arrived on the evening of December 2d (Saturday).

History.—Patient single, thirty-four years of age. Had been treated some years previously for ulceration of cervix, and was operated upon in Philadelphia for stenosis of internal os and consequent dysmenorrhœa. Single and only coitus last May; missed her regular sickness in June. Quickening November 1st. Since November 23d has felt no fetal movement. Muco-purulent discharge, with bearing-down pains for three days prior to my arrival. On December 1st had a free discharge of water per vaginam. Conception took place at first connection, as previously to this, and subsequently, she had no intercourse with her lover.

On Sunday I called Dr. Johnson, of Ocean Grove, in consultation. Manipulation of abdomen defined head in first position, with enlargement equal to sixth month of gestation. There was no fetal heart-beat which we could distinguish. Digital examination disclosed a medium-sized fibrous polypus lying in the vagina, with long pedicle springing from cervical canal. The cervix was ulcerated, and although the external os was widely dilated, the free margin surrounding the pedicle was horny and not easily distensible. During the day the patient had two convulsions, with severe cutting and bearing-down pains, the head slipping down seemed to be pressing upon the internal os, which refused to dilate. Removed polypus on Sunday afternoon with spoon saw. Little or no bleeding. External os well dilated, but marked stenosis of internal os. Pains through the night severe, patient becoming exhausted. On Monday determined to dilate and deliver. Internal os rigid, contracted, and refusing to admit smallest size Peaslee dilator. Introduced smallest size Barnes dilator through external os, hoping to convey dilatation upward by the reciprocal influence of the contiguous structures. Monday night was able to get in the closed blades of Ellinger, and expanded gradually for several hours. Continued dilatation with Barnes' dilators and with two fingers of left hand until Wednesday, then used largest size Barnes, and gave ergot freely. Patient delivered Friday of a dead fetus, already undergoing decomposition. Discharge offensive. Placenta broken down and cord friable. Washed out vagina and

uterus with carbolized water twice a day for two days. Up to this time, one week after delivery, patient is doing well and suffers no inconvenience.

The interesting points of this case, are : 1. The conception following a single, and, as the patient told me, an unsatisfactory and painful coitus, conjoined to a remarkable stenosis of the internal os, complicated by a fairly large polypus. 2. The long duration of labor, and the difficulty experienced in dilating. 3. The subsequent favorable progress of the patient. That no metritis or septic absorption followed delivery may be attributed to good nursing and to the use of vaginal and uterine irrigation with carbolized water.

CASE 11.—*Fibro-cystic tumor*.—On November 15th was sent for by Mary B—, colored, widow, no children, thirty-eight years of age. Nine years ago noticed swelling in lower part of abdomen, which has regularly increased to its present bulk. Has had menorrhagia, hydrorrhœa, numbness of extremities, shortness of breath, and loss of constitutional tone.

Present condition.—The facies uterina described by Kœberlé is well marked. No very general emaciation. The abdominal walls are exceedingly tense, hard, and marked by glistening striæ. The swelling reaches from lower part of abdomen to ensiform appendage. It measures as follows : around umbilicus, 50 inches ; around upper border of tumor, beneath ensiform appendix, 36½ inches ; between ensiform appendix and umbilicus, 45 inches ; around hips and symphysis pubis, 46½ inches ; from symphysis pubis to ensiform appendix, 24 inches. The tumor has a variable consistency, and pressure upward gives the peculiar cystic sensation to the hand. The sound passes four inches into the uterine canal and moves in synchrony with the external abdominal manipulation. The uterus is fixed, prolapsed, and displaced backward ; the solid portion predominates over the cystic ; umbilicus very prominent, which is rare in fibro-cysts, but common to ovarian cysts. Diagnosis : Subperitoneal fibro-cyst ; estimated weight seventy-five pounds ; weight of patient, two hundred and ten pounds. At my request Dr. P. J. Murphy, surgeon in charge of the Columbia Hospital for Women, was kind enough to see the case with me upon the following day, and fully confirmed the diagnosis. Ordered five grains muriate of ammonia, three times a day, with five grains aq. ext. ergot, by suppository, every five hours. Restrict diet to stale bread and meat, with a goblet of hot water at each meal. Persistent friction over abdomen with an ointment of the biniodine of mercury and vaseline. This treatment has been persisted in up to the present time (December 18th), with occasional doses of iron when indicated, and more recently a pill of quinine, arsenious acid, strychnia, and iron to ward off a threatened attack of malaria, to which she is subject. The tumor now measures (five weeks from commencement of treatment), over umbilicus, 49 inches ; ensiform appendix, 36 inches ; between umbilicus and ensiform appendix, 44½ inches ; over symphysis pubis, 46½ inches ; from symphysis pubis to ensiform appendix, 23½ inches. The patient can sit on the chamber and urinate, which she had not been able to do for some weeks. The abdomen is softer and more pliable. The waist-line is more perfectly defined, and there is much less downward bagging. Patient still under observation. The suppositories will be replaced by hypodermic injections of ergotin.

CASE 111.—*Acute antelexion of the uterus*.—Mrs. S—, referred to me by Dr. Boislinière, of St. Louis, who furnished me with the following history : Widow ; thirty-two years of age ; two children, oldest four years ; labors normal ; weight, one hundred and ten pounds ; duration of present illness, eighteen months.

Present condition when examined by Dr. Boislinière.—Menstruation appeared at fifteen years of age, irregular at first ; missed catamenia for six months when sixteen years of age, at a boarding-school in Paris, and again for same period after crossing the ocean. Dura-

tion, about one day ; very scanty in amount ; character, pale ; used to pass clots. Has now grumous discharges ; has pain preceding the flow, which is insufficient and scalds vaginal walls.

Physical examination.—Right ovary prolapsed to side of uterus ; uterus antelexed ; cervix soft and normal in size and shape ; pain at fundus.

By speculum.—Cervical erosion ; white, albuminous discharge from vagina ; discharge from uterine cavity strongly alkaline, from vagina, less so ; marked antelexion ; moderate stenosis of os internum ; depth of cavity, 1¾ inch ; depth of cervix, 1 inch. Location of pain, at fundus.

General symptoms.—Good family history ; stomach, bowels, and lungs, healthy ; slight hypertrophy of heart ; dysuria, diurnal and nocturnal, aggravated by being on her feet.

Diagnosis.—Antelexion ; endometritis ; cervical erosion ; uterine catarrh ; chronic cystitis and vesical catarrh.

Chemical examination of the urine shows : specific gravity, 1.030 ; reaction, slightly acid ; contains mucus and phosphates.

This very full and satisfactory history was entirely confirmed by examination on September 10th, when the patient presented herself at my office. The cystitis was treated with iodoform application to urethra and with the following capsule ordered by Dr. Boislinière :

R. Potass. carb. 3 ij.
Pulv. camph. 3 j.
Allen's ext. bellad. gr. iij.

M. Fill thirty capsules, one to be taken four or five times a day.

I made one application of chromic acid (chromic acid and water, equal parts) and four of a mixture of carbolic acid, iodine, and chloral hyd. to the fundus, at varying intervals. Treated cervix with Churchill's iodine, a paste of subnit. of bismuth and glycerine, and applied tampons soaked in glycerine of tannic acid, and later the same saturated in a mixture of fl. ext. eucalyptus globulus, glycerine, and iodoform, for the purpose of healing the erosions, of depleting the cervix, of relieving pain, and of accustoming the vagina to the presence of a foreign body. The endometritis and cystitis were relieved in about six weeks, and the erosions disappeared under treatment and with the better position of the uterus by dilatation and support. The antelexion was a potent factor in the causation of the cervical erosion and turgidity, acting as a constricting band, while the dysuria was in great measure due to the pressure upon the bladder. I used Gehrung's pessary with much satisfaction, but as it did not accomplish all that I wished I used forcible dilatation with Wilson's instrument, and later made use of the Gehrung, which the patient still wears. The forcible dilatation was followed by no bad results. The patient remained in bed a week or more after the operation and had massage and general faradization. She gains in weight about one and one-half pound each month, has no dysuria or backache, menstruates normally, and is much improved in appearance. The flexion is not yet entirely cured, and probably never will be. Forcible dilatation, if stripped of any subsequent mischief, approaches nearer to a permanent cure than any other measure, but it is very apt to be followed by alarming inflammation. It is difficult beforehand to make out the exact sensibility of any uterus to operative interference. Gehrung's pessary is a most satisfying instrument and gives great relief. I do not believe, however, that under any plan of treatment these cases are ever thoroughly and permanently cured. The question of forcible dilatation is one which every gynecologist must settle for himself ; one man may have unvarying success in a series of cases, while another, equally scientific, will have reason to repent his first operation. This is, in a great measure, due to varying conditions of temperament, which render any operation serious in some people, while in others they are unattended with danger.

Progress of Medical Science.

INTESTINAL CYSTS.—Two theories have been advanced concerning the origin of cysts in the intestinal canal. The first is that they arise from degenerated Lieberkühn's glands through retention of the secretion, the second, that they are due to a process of softening of the solitary follicles. On the strength of careful observations made in a case of this rare affection, Dr. Fraenkel (*Centralblatt für Klinische Medizin*, No. 29, 1882), decides in favor of the former theory. The cysts were due to retention of the secretion in the glands of Lieberkühn, consecutive to a chronic catarrhal inflammation of the large intestine.

NAPHTHOL IN SKIN DISEASES.—Kaposi states that care should be observed in the use of naphthol in skin diseases to avoid surfaces denuded of epithelium, and never to apply it to the entire body. When these precautions are observed, the remedy is wholly without danger, and is of great value in many affections. In eczema it is indicated only in the squamous stage, when the diseased parts are but slightly hyperæmic or even pale. In scabies, one application of naphthol, combined with chalk, green soap, and lard, is usually sufficient for a cure. In the various forms of acne, good results follow the employment of naphthol. The remedy is of especial value in the parasitic affections of the skin, as herpes tonsurans and favus. Pediculi are quickly exterminated by a ten per cent. solution of naphthol in olive oil.—*Prager Med. Wochenschr.*, No. 33, 1882.

CARDIAC TUMOR.—Dr. Manero reports, in the *Gaceta de los Hospitales* of Valencia, an interesting case of malignant tumor springing from the cardiac substance, and protruding as a pulsating swelling through the walls of the chest. The patient was, at the time of his death, aged fifty-one. The first indications of disease appeared four years previously, in the form of constant lancinating pain in the precordial region, without obvious physical signs. In about a year a bulging of the precordial region was noticed, with increased pulsation, attributed to dilatation of the ventricle, and this steadily increased, with increasing pain and gradual emaciation. When seen by Dr. Manero, there was a firm pulsating tumor in the precordial region, about the size of a well-developed virgin breast. It was very painful to touch; the skin over it was healthy. On auscultation of the tumor the normal heart-sounds were heard exaggerated, but not otherwise altered. The pain suffered is described as intense. It seems to have been of the character of that of angina pectoris, and was attended by constant formication in the left shoulder and upper extremity. Death occurred after the patient had been under observation some months, during which time the tumor had steadily grown, without at all involving the skin. No diagnosis was made during life.

At the autopsy the pectoral muscles were found healthy. On removing the front of the thorax, the lower and front part of the pericardium was found to be the cause of the thoracic bulging, which is described as forming a hernia through the walls of the chest, an oval opening being caused by erosion of the third, fourth, and fifth costal cartilages, with portions of the corresponding ribs and sternum. Within this hernial sac of the pericardium, the greater portion of the heart was found enormously enlarged, apparently in all its cavities. It presented on section the appearance of a melanotic sarcoma, in consistence for the most part like that of a sebaceous tumor crossed by pigmented bars and lines, and having numerous large and small pigmented deposits. The growth appeared to be highly vascular. The valves, columnæ carneæ, openings, etc., are said to have been hardly distinguishable. It is not stated how much, if any, of the normal heart-structure was left; neither is mention made of any microscopic examination.

PECULIAR GUMMY TUMORS.—Dr. Lewin, of Berlin, relates (*Charité Annalen*, vol. vii., 1882), three cases in which syphilitic persons had tumors in the palms of the hands, which he considered to be gummata. In the first case, that of a man aged forty-five, who had previously been under Dr. Lewin's care for syphilitic affections of the pharynx and larynx, three swellings appeared several years after contagion, on the right palm, and at a later period a swelling on the second phalanx of the thumb. These swellings, as well as another near the internal condyle of the left humerus, were still present when the man was again seen in 1881, ten years after contagion. All of them were diagnosed by the author to be gummata. Subcutaneous injections of mercury, under which the earlier symptoms had subsided, were prescribed. But after a month there was little change in the tumors. After an interval, inunction of one drachm of mercurial ointment daily was tried, and this also failed to benefit. After a further interval, iodide of potassium was given in a daily dose of thirty grains, gradually increased to forty-five grains. Under this treatment the swellings began sensibly to diminish, some to one-half and others to a quarter of their original size. No further particulars are given.

In the second case, a man, aged thirty, noticed, five years after contagion, two swellings in his right palm, and soon afterward a tumor near the left olecranon. Later still, another swelling appeared near the last, and finally a fifth tumor appeared in the left palm. All these swellings were present when the patient, who also had been treated by the author for his earlier symptoms, returned to consult him. There was now, in addition, a swelling of the size of a hen's egg over the second cervical vertebra. Nothing is said about the treatment or termination of this case. In the last case, that of a man aged thirty, nine years after contracting syphilis, two tumors, about the size of a hazel-nut, appeared in the right palm, and one in the left palm. The swellings were almost as hard as cartilage. There was another swelling near the internal condyle of the left humerus. Under iodide of potassium the swellings became somewhat less hard, but did not diminish in size.

TRICHINOSIS NODULES.—M. Rathery, in *Le Journal de Méd.*, November 4, 1882, describes the case of a man who had numerous subcutaneous nodules of the size of peas, situated exclusively on the supradiaphragmatic parts of the body. On excising one of these tumors, it turned out to be a trichinosis cyst. The patient had never suffered from any general or local symptoms of trichinosis.

HOME-MADE KOUMISS.—The following directions are given for its manufacture: Fill a quart champagne bottle up to the neck with pure milk; add two tablespoonfuls of white sugar, after dissolving the same in a little water over a hot fire; add also a quarter of a two-cent cake of compressed yeast. Then tie the cork on the bottle securely, and shake the mixture well; place it in a room of the temperature of 50° to 95° Fahrenheit for six hours, and finally in the ice-box over night. Drink in such quantities as the stomach may require. It will be well to observe several important injunctions in preparing the koumiss, and they are: To be sure that the milk is pure; that the bottle is sound; that the yeast is fresh; to open the mixture in the morning with great care, on account of its effervescent properties; not to drink it at all if there is any curdle or thickening part resembling cheese, as this indicates that the fermentation has been prolonged beyond the proper time. Make it as you need to use it. The virtue of koumiss is that it refreshes and stimulates, with no after-reaction from its effects. It is often almost impossible to obtain good fresh koumiss, especially away from large towns. The above makes it possible for any physician to prescribe it. The cost is about fifteen cents per quart.—*Chicago Medical Review*.

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THE NEW PHARMACOPŒIA.

WE have already alluded to some of the characteristics of the Pharmacopœia of 1880. A work of so much importance and of so wide a circulation naturally receives much criticism, and we venture to offer here some of the conclusions that have been arrived at regarding it.

For the first time, says Dr. L. Genois, in the *College and Clinical Record*, there has been given a concise but explicit description of vegetable and animal drugs, previous Pharmacopœias having omitted this feature. The new work abandons the old division into primary and secondary drugs and preparations. Instead of this, the list is arranged in alphabetical order.

A large number of articles are dismissed, the total being about two hundred and thirty. Our esteemed contemporary, the *Philadelphia Medical Times*, mourns the loss of many of these in a manner most pathetic, and publishes the entire list, giving them in fact all the obituary ceremonies except a black border.

We hardly share in our contemporary's gloom. With hardly half-a-dozen exceptions, the drugs or preparations omitted we are well rid of. For the rest, there is nothing that will seriously embarrass druggist or physician. Perhaps the latter will most miss the liquor morphiæ sulphatis, and santonin—for which latter the santonate of sodium is substituted.

The number of new articles introduced is about two hundred and fifty. The additions are for the most part judiciously made. A new class of preparations has been introduced which are called "abstracts," a name which we regard as a most unfortunate one. The term "abstract" has become a part of medical periodical literature, and it at once suggests scissors and second-hand articles. To associate it with a powdered drug will require the beating out of new cerebral paths in medical minds.

A prominent feature in the Pharmacopœia consists in the adoption of parts by weight in the processes for pharmaceutical preparations. This change is of more interest to druggists than physicians, however; except as it perhaps foreshadows an adoption later of the metric system.

Valuable tables of the solubility of chemicals in water and alcohol, of saturation of alkalies by acids, and of acids by alkalies, are given.

Some alterations have been made in the relative proportions of active constituents to the finished preparations. The alterations affect chiefly the tinctures, Dr. Genois has drawn up a table showing the most important of

them. These changes will not affect the dosage very much, the actual change even in the opium preparations being less than has been somewhat sensationally announced.

There has been a change made in the terminal nomenclature of the organic alkaloids, the suffix "ina" being uniformly used instead of "ia," as in "quinina" for quinia. This will make little practical difference in prescription writing.

The diluted mineral acids are all to be prepared with a strength of ten per cent. This makes hydrochloric acid one-fourth stronger, and sulphuric acid one-sixth weaker. Spirits of camphor has been weakened one-third. The tincture of aconite root is reduced one-seventh, and its name has been changed to simple tincture of aconite. The extract of aconite is now to be made from the root instead of the leaves, and is said by Dr. Wood to be nearly one-half stronger than the old extract of the leaves.

The Pharmacopœia has been subjected to very searching criticisms, and has come out of the ordeal remarkably well. It is a work requiring a vast amount of technical knowledge, exact and careful statement, and good judgment. All these qualities have been shown by its authors, and it may be positively stated that on the whole, it is the best work of the kind in any language.

TREATMENT OF MALIGNANT LYMPHO-SARCOMA OF THE NECK BY MEANS OF KERN'S CATAPLASMATA.¹

THE very unfavorable results which were obtained in operations, as well as by electrolysis, and from injections of medicated substances (acetic acid, alcohol, solution of iodine, arsenic), caused Prof. Busch to try in some fresh cases of malignant lympho-sarcoma, also in some older ones, the application of Kern's cataplasma, under which he saw buboes reabsorbed while a military surgeon. The poultices of Kern are an admixture of powdered mustard and black soap (1 to 4 or 5), and cause at first a severe erysipelatous inflammation of the skin. They are applied for many hours (four, five, or twelve), enclosed in a small piece of gauze. The cauterized spot is then thoroughly covered with roseline and cotton. A diagnostic error is not to be feared, if one examines for the symptoms of malignant lympho-sarcoma. A person in the prime of life, formerly strong and in the best of health, presenting no previous disposition to glandular affection, is affected with a rapid, increasing swelling of the cervical glands, which coalesces with the surrounding tissues, and thus becomes more or less fixed. It develops through and encloses neighboring structures so as to cause their fusion into a hard, compact mass. Where these symptoms develop in a few weeks, it is sure that a malignant lympho-sarcoma is the explanation of it. In some cases softening, suppuration, and rupture may occur; in others the tumor becomes always softer and more doughy, without producing any fluctuation. It becomes movable, always smaller, and finally disappears through the absorption of its contents. Prof. Busch tries to explain this surprising effect of the irritating poultice on an organized neoplasm.

¹ Lecture of Prof. Busch, Session of the Niederrhein, Ges. für Vtr. d. Hlk., in Bonn, 1880.

Malignant lymphoma consists essentially of round cells, with individual cheesy foci.

A very strong man, aged fifty-three years, observed in the first days of July a hard swelling beneath the left angle of the lower jaw. Presuming it to be an inflammation of the tonsils, he used hydro-therapeutics. On August 13th Prof. Busch was consulted, and was startled at the patient's appearance, as two months previous he was the picture of health and strength. From the middle line of the neck to the spinal column, from the lower jaw to the internal half of clavicle, a hard, already immovable tumor extended. The pulsations of the carotid artery could not be felt, as it was included in its whole course. The larynx was pushed to one side of the middle line. The pains characteristic of these tumors predominated upon the occipital and frontal bones, caused evidently by the continued stretching of the posterior auricular and occipitalis magnus nerves. The voice had become hoarser, on account of pressure upon the pneumogastric or recurrent nerves. Busch states: "With all these symptoms and the extensive, rapid growth of the tumor, I could but express my opinion that in all possibility the patient's life would be terminated in a few weeks. If something had to be advised, I would try the poultices of Kern, which did me great service in light cases; perhaps in this instance they would have no action, and if such should be the case after a few days, there was no necessity to torment the patient." Busch commenced his vacation-trip the next day, turning the case over to Dr. Schaefer for further treatment. The poultice was so well endured by the afflicted man that it remained twelve hours, instead of four or five, upon the tumor. In the evening the burned spot was dressed with roseline and cotton, and morphine given internally. Already, on August 27th (fourteen days afterward), a decided decrease of the tumor and great movability was recognized. The cataplasmata was then continued for only four weeks, and the iodide of potassium was given. As soon as the tumor had nearly disappeared, some iodoform was applied with the brush. Prof. Busch saw the patient again, on October 3d, who was then cured, though he did not expect to find him still among the living.

OBSERVATIONS UPON DIPHTHERIA.

In a paper read before the Berlin Medicinische Gesellschaft, Professor Hensch remarked (*Berliner Klin. Wochenschr.*, No. 40, 1882) upon the innumerable methods of treatment of diphtheria that had been advanced by different writers since the time of Bretonneau. He thought this diversity arose in part from the hope, entertained by many, of discovering a specific remedy for the disease. This hope, the author believed, would never be realized, as it had never been in the case of scarlet fever or measles. Another difficulty in the way of a universal agreement upon the therapy of diphtheria, was the lack of unanimity among authors, as to what constituted the disease. In this connection, Professor Hensch expressed his decided conviction that diphtheria and membranous croup were two essentially distinct diseases. The relation between diphtheria and scarlatina was dwelt upon at length, and illustrated with the

reports of several cases. The speaker incidentally called the attention of his hearers to a point of some importance in the study of scarlet fever. He stated that he had occasionally observed the fever to persist for some days after the disappearance of the scarlatinal eruption. No cause for this continued high temperature could be discovered, and the subsequent course of the disease was without complications. Professor Hensch thought it might be analogous to the evening exacerbations in typhoid fever, after the morning temperature had become normal—the expiring effort, as it were, of the *materies morbi*.

ERGOT IN DELIRIUM TREMENS.

DR. ARNOLDOW (*Deutsche Medicinal-Zeitung*, No. 43, 1882) relates the case of a man suffering from hæmoptysis, who was also threatened with delirium tremens. Chloral had been given for the sleeplessness, but without effect. Upon the administration of ergotine, not only did the hemorrhage cease, but the symptoms of alcoholism also subsided. This happy result induced the author to give ergot in several other cases of mania-à-potu, in all of which the delirium was speedily controlled. Dr. Arnoldow explains this action by the contraction of the blood-vessels of the brain induced by ergot.

THE COLLECTIVE INVESTIGATION OF DISEASE.

We have occasionally referred to the work undertaken by the British Medical Association of collectively investigating various diseases. The method adopted is to draw up cards and explanatory memoranda regarding certain subjects, such as chorea, pneumonia, rheumatism, etc. These are sent to each member of the Association with the request that he answer the inquiries, and return the cards to the secretary. Reports on several diseases for the year 1882 will soon be made.

One cannot read of the work thus mapped out without wishing that a similar line of investigation could be started in America. For the present, however, it seems impracticable. We must wait for some genius to galvanize the American Medical Association into a united body of scientific workers.

DIAGNOSTIC USE OF THE STOMACH-PUMP IN SUSPECTED CANCER.

In the *Centralblatt für Klin. Medizin.*, November 27, 1882, Dr. Rosenbach states that in carcinoma of the stomach a diagnosis may be made by examination of the fluid removed by the stomach-pump or expelled in the act of vomiting. He says that this fluid always, or at least very frequently, contains small particles of the new growth. These pieces may readily be distinguished with the naked eye from other substances found in the matter removed. Their upper surface is dotted with red, reddish brown, or even black, points—the marks of former hemorrhages—the coloration sometimes extending deeply into the substance of the separated particles. This surface is smooth, thereby differing from that of any portion of the mucous membrane, which may have been torn off by unskilful employment of the stomach-pump.

TRANSPLANTATION OF THE CONJUNCTIVA OF A RABBIT.

AN interesting operation was recently performed by Dr. W. S. Little, at the Jefferson Medical College Hospital. It consisted in transplanting the conjunctiva of a rabbit into the eye of a man who was brought into the hospital a couple of months ago, suffering from a severe burn that had entirely destroyed his sight. He is a young Irishman, named Michael McMullin, twenty-eight years old, a strong, well-formed, healthy fellow, but as helpless as a child in his blindness. Shortly after arriving in this country he secured employment in a large laboratory, and while handling strong sulphuric acid the fluid splashed up over his face, head, and chest, burning him terribly, and suddenly and completely blinding him. The right eye was destroyed entirely, and the left one so injured that ankyloblepharon resulted, that is, the lids grew fast to the ball, the burn having destroyed most of the conjunctiva. It was decided to resort to this rare operation, with the hope of restoring the ball and lids to their normal condition, and afterward of securing sight to the injured left eye. Both patient and rabbit were etherized. The eyelid of the man was dissected up and a piece of the rabbit's conjunctiva stitched upon the raw place.

SUCCESSFUL RESECTION OF THE STERNUM.

DR. F. KÖNIG reports in the *Centralblatt für Chirurgie*, No. 42, 1882, a successful case of removal of the sternum, on account of a large osteochondroma. Both the pleural and pericardial sacs were opened during the course of the operation. They were, however, immediately closed with little wads of gauze. The cut edges of the integument were brought in apposition by sutures from below upward, and as the openings into the serous cavities were reached, the wads were withdrawn and compresses applied over the line of suture. The patient made an excellent recovery. The entire sternum, from the manubrium to the ensiform cartilage, was removed. The chief interest of this case lies in the demonstration of the fact that the serous cavities of the thorax may be opened, under proper precautions, without untoward result.

THE EFFECT OF ELECTRICAL LIGHTS ON THE HEALTH.

DR. KRÜSS, at the Hygienic Congress of Hamburg, recently discussed the above subject, and took views somewhat different from those heretofore expressed. He did not think that this light had any injurious effects upon the eyesight. There is doubtless a great difference according as the light is small and steady or large and flickering.

STAMPING OUT DISEASE ON AN EXPENSIVE SCALE.

THE report of the Treasury Cattle Commission, recently made to Congress, describes the sites selected for quarantine stations for imported cattle at Portland, Boston, New York, and Baltimore. The report says that "it is vain to hope that England will remove the restrictions imposed so long, as we fail to show that the last vestige of pleuro-pneumonia has been wiped out from our land," and, further, "that nothing short of the absolute and

undeniable extinction of this disease in the United States will reopen the British market to our live cattle, and save us those millions that we are now every year prodigally, and we might almost say insanely, throwing away." The commission estimates the sum required to stamp out the lung plague at \$2,000,000, and recommends the requisite legislation.

DEATH FROM DICHLORIDE OF ETHIDENE.

A WEAKLY looking man, aged twenty-six, came to the Liverpool Eye and Ear Infirmary for the purpose of having a piece of steel extracted from the lens. He was placed under dichloride of ethidene, and became entirely anæsthetized. Suddenly the pulse became very weak, respiration ceased, and the patient died. Post-mortem examination showed a flabby heart with thin walls, and granular degeneration of the substance.

Ethidene had become quite popular at the infirmary in question on account of its pleasant effects. It had been successfully used four or five hundred times.

DIRECTIONS REGARDING ADMINISTRATION OF MEDICINES.

DURING the past week a girl, fourteen years of age, met her death by poisoning, the result of a misunderstanding regarding the manner in which her medicine should have been administered. She had been suffering from follicular inflammation of the fauces, for which a mixture was prescribed, to be taken in teaspoonful doses three times daily. In addition, the physician, according to the report of the coroner's inquest, told her to get "five cents worth of chlorate of potash, and to dissolve two teaspoonfuls in a tumbler of water." With the latter she was to gargle her throat at intervals. The mother misinterpreting the directions, gave the potash internally in doses of two teaspoonfuls of the saturated solution four times daily, with an equal quantity of the mixture. The day following, symptoms of poisoning developed themselves and the child died in consequence. The coroner's jury exonerated the physician. The disastrous result was evidently due to the mistake on the part of the mother. Had the directions been properly followed, no accident would have occurred. But we cannot help thinking how even this mistake might have been prevented by a little extra pains on the part of the medical attendant in preventing any misunderstanding. This could have been done by giving the directions in writing, and not trusting to the memory of patients or friends. This is a rule with a great many practitioners, and an exceedingly good one. It reduces the chances of misinterpretation to a minimum, causes the medicine to be given properly, at regular intervals, checks haphazard prescribing, and on the whole, although such is the least important calculation, saves a great deal of time for all parties concerned. It is often difficult to remember all the details of treatment in each case. Especially is this so when a number of patients are suffering from the same disease, and the written direction of one may serve at once to refresh the memory for the next visit, and insure accuracy in prescribing which can scarcely be attained by any other means. The written directions should also include those for diet and other details which may be necessary.

A NEW METHOD OF ANTISEPTIC OPERATION.

EVER since the value of certain rigid precautions in surgical operations became fully known, surgeons have been seeking for the perfect antiseptic. This interesting search still continues. We may conclude, therefore, that the substance in question has not yet been found. That it will some day be discovered is a proper subject for devout hope. A completely satisfactory method of insuring antiseptics, or more correctly speaking, of maintaining it, must be conceded to be still forthcoming. Meanwhile, new agents and novel modes of applying old ones are constantly published on the daily bulletin board of medical discoveries. Our German confrères are especially active and proportionately prolific in this department of human enterprise. But, as already stated, the ideal antiseptic has yet to be found.

The most recent method of antiseptic procedure is that advocated by Kocher (*Volkmann's Klinische Vorträge*, No. 224, 1882). He claims that with his method primary union is always obtained, or at least obtainable. The drainage-tube is discarded, and the wound is closed by suture throughout its entire extent. The substance he employs after having made the usual experiments to determine its antiseptic properties is subnitrate of bismuth. The following is the mode of its employment, as described by Kocher:

During the operation the wound is from time to time sprinkled with water, holding the bismuth in suspension. The same is done in any subsequent dressings that may be required. When the operation is completed and all oozing from the cut surfaces has ceased, the wound is closed with sutures and the line of incision sealed with a bismuth paste. Then the usual dressings, wet with the bismuth mixture, are applied. In all large wounds, where there is much oozing of blood or serum, the sutures are inserted, but are not at once drawn tightly. Drainage-tubes are never used, but cavities are filled with wads of gauze. The parts are then covered with the bismuth dressing. After usually from twelve to twenty-four hours the dressings are removed and the surface once more sprinkled with bismuth. The sutures are then tightened and the antiseptic dressings reapplied. This step in the new method is designated as that of "secondary suture" (*Secundärnaht*).

Bismuth in powder is not used, as it was found in some instances to give rise to diarrhoea, nephritis, stomatitis, or other disturbances. It is simply held in suspension in water, in the proportion of ten per cent., and the mixture sprinkled upon the parts by means of a bottle such as is ordinarily used by barbers. In this way the surface of the wound is covered with a thin film of the drug, sufficient to insure antiseptics, without, it is asserted, in any degree interfering with primary union. One great advantage in the employment of bismuth, in addition to its antiseptic properties, lies, according to Kocher, in its astringency. Not only are all septic influences warded off, but the secretions of the wound are dried up, thus facilitating primary union and obviating the disadvantages of drainage. The paper concludes with the histories in brief of a rather large number of cases of severe operations, conducted according to this method. In nearly all rapid healing occurred without suppuration, and with scarcely any rise of temperature. Kocher's procedure certainly

has the great merits of simplicity and ease of application. But time and a more extended trial must determine whether we are to regard it as the long-desired means of securing perfect wound-healing, or whether it is only another of the many ephemeral methods that have proved nearly worthless in all hands save those of their original advocates.

ONE MORE BACILLUS.

At the instigation of Drs. Loeffler and Schütz, of the Berlin Imperial Sanitary Bureau, the etiology of farcy has been carefully investigated. As was anticipated, the specific micro-organism of this disease was soon discovered. Numerous "culture" experiments have already been made, and horses have been successfully inoculated with the isolated germs.

One by one the contagious diseases are wheeling into line. The time seems not far distant when they will have been all safely captured by the bold and ever active bacteriologists.

THE USELESSNESS OF HYPODERMICS OF ETHER IN IMMINENT DEATH FROM HEMORRHAGE.

At the last meeting of the Paris Académie de Médecine (*Bulletin de l'Académie*, December 24, 1882) Professor Hayem read a communication on the above subject. From a large number of carefully conducted experiments he had reached the conclusion that ether produced no appreciable effect upon animals artificially exsanguinated.

On the other hand, transfusion of unaltered blood, or even with blood diluted with serum, often resulted in the resuscitation of apparently dying animals. The practical inference to be drawn from his observations is that in cases of danger transfusion should be at once resorted to, and precious time should not be wasted by watching the effects of ether.

A NEW MERCURIAL FOR HYPODERMIC USE.

AFTER several years of experimental and practical trials, Professor O. Liebreich has at length devised a preparation of mercury, which is especially serviceable for hypodermic use. He announced his discovery at the recent meeting of the Berlin Medical Society. The name of the new compound is formamid of mercury, or *hydrargyrum formamidatum solutum*. Liebreich has found that about thirty injections of a one per cent. solution suffice for ordinary cases of syphilis. Given internally, the drug is inert.

THE STATE OF THE LUNGS IN PLEURISY.

IN an article on the state of the lungs in pleuritic attacks, Dr. Grancher (*L'Union Médicale*) expresses the opinion that the physical signs over the upper part of the chest are not given sufficient attention in this disease. Thus he states that if the lung be healthy, the subclavicular tympanic resonance will be found to correspond with an increase of the vocal fremitus and respiration. If, on the other hand, there is congestion, then respiration is generally weak; and this happens most frequently in tubercular cases. He points out also that both the vocal vibrations and the respiration may be diminished from various causes. Most prominent among these he finds is pulmonary oedema and compression of the bronchi.

News of the Week.

CONVICTION UNDER THE ADULTERATION ACT.

THE first conviction for selling adulterated food was obtained by the Health Board of this city, on Tuesday. The charge was made against Henry Fulle, a grocer, for selling adulterated cream of tartar to Dr. E. G. Love. It was proved that the particular article contained ninety-five per cent. of gypsum and five per cent. of tartaric acid. It was obtained by the retailer from a wholesale dealer, who had disposed of large quantities. One man present in the Court-room said that he alone sold every year \$180,000 worth of the alleged adulterated article to the trade. The case was a perfectly clear one for the prosecution, and the ruling was in strict accordance with the evidence offered. The defendant's counsel, who also represented the interests of the wholesale dealers, took some curious exceptions in the course of the trial. It was necessary for the prosecution to fix upon a standard of purity for the article alleged to be adulterated. Accordingly the United States Pharmacopœia was put in evidence as the authority. The defendant's counsel refused to admit such evidence, claiming that there was no direct proof that the volume in question was the one published by the authority of the pharmacopœial convention. They refused to be satisfied until the original minutes of the Convention authorizing the publication should be produced. Of course, this was a mere legal quibble in the face of the sworn testimony of experts, regarding the identity of the book, and the objection was overruled. It is understood, however, that the case will mainly be carried on this point upon appeal. A fine of ten dollars was imposed upon the vender of the article, who was paroled into the custody of his counsel. The Board of Health deserves great credit for the manner in which it has conducted the prosecution, and proves its eminent fitness for handling similar cases. So far a good precedent has been established.

PRACTISING WITH A DEAD MAN'S DIPLOMA.

THE act to regulate the practice of medicine in Illinois has, since its enforcement, exposed over thirty individuals who have been falsely swearing to be graduates of foreign universities. The most recent case of the sort was that of a barber who assumed a dead doctor's name (Henry A. Lüders), and who practised with the dead man's diploma. The latter was issued to Dr. Heinrich Andreas Lüders, May 15, 1866, by the University of Göttingen. The pretender presented the diploma for verification, but owing to some informalities in the affidavit, no certificate was issued at the time. The diploma was found to be a genuine document, and being finally accompanied with recommendations as to the professional character of the holder, a certificate was finally issued to him by the State Board two years after his first application was made. After a time suspicions were aroused concerning the medical qualifications of the man and his right to the diploma in his possession. Inquiry was made of the dean of the University of Göttingen, resulting in the answer that the real Lüders had graduated in 1866 and had died in November, 1878. These facts coming to

the knowledge of the State authorities, it was resolved to prosecute the quack for felony. Unfortunately, before this could be done the sham doctor escaped.

It has since been learned that the rascal's proper name is Lambrecht, and that he is a barber by trade; but how he became possessed of the real Dr. Lüders' diploma and other papers has not yet been ascertained. The letters of recommendation finally forwarded by the fellow are pronounced forgeries.

Some shocking instances of the miscreant's malpractice have come to light since his flight, among the most recent being the brutal butchery of a mother in labor and her unborn offspring. From the testimony of friends of the unfortunate woman, it appears that he used a stick and piece of string, in place of forceps, and, failing to effect delivery by this means, he eviscerated the infant with a common, rusty case-knife, finally hacking it to pieces with the same instrument and taking it away piecemeal. The wretched mother was terribly injured during this performance, and died shortly after.

The villain is now at large, and will doubtless settle in some adjoining State having no medical registration act.

ADULTERATED TEA.

A BILL has been introduced into Congress to prevent the importation of adulterated tea. This bill has been drawn up by a number of prominent importers who claim that some positive measures are needed to keep out of this country the vast amount of tea and rubbish now sent here. Of the total yearly importations of tea, which amount to about eighty million pounds, we are told that twenty per cent. is unfit for healthy consumption. The actual yearly consumption of tea in the United States is only 65,000,000 pounds, so that if rubbish were excluded there would still remain enough to supply our needs.

England has passed a law similar to the one now desired in this country. As a result, in 1881, 44,443 packages of tea were refused entrance, and no doubt a large part of this finally reached the United States, forced upon the country by cheap auction sales and palmed off as good to the poorer classes.

There is nothing in the real facts of tea adulteration to cause alarm or start a sensation. Tea is very rarely adulterated. Among sixty-one samples examined by Dr. S. A. Lattimore, for the New York State Board of Health, no foreign substances were found. Many of these were of the cheapest and most inferior quality, however; and there is no question that vast amounts of such tea-dregs and rubbish are foisted upon us. The country should be protected from such impositions, but whether the health is really injured by cheap tea may be questioned.

THE NEW YORK COUNTY SOCIETY AND THE PROSECUTION OF QUACKERY.

THE last fasciculus of the published minutes of the Society has been distributed to members. It includes the minutes of the September, October, November, and December meetings, and one of its most interesting features is the report of the Board of Censors, which includes the report of Mr. Ripley, the Counsel of the Society. In it we find that a score or more of illegal practitioners have been successfully prosecuted under

the Medical Act of 1880. Most of them were fined and compelled to seek other pastures. This was accomplished at an expense to the Society of less than eight hundred dollars, and yet we noted that at the annual meeting there were members who objected to the special assessment of two dollars which is requisite to the further prosecution of the good work. In other words, there are members of the society who appear to be unwilling to curtail quackery at an individual expense of about ten cents per quack.

In this connection we may note that the entire expense of the attempt to rid the city of illegal practitioners has been borne by the members of this Society.

We cannot too highly commend the energy and activity displayed by the officers of the New York County Society, and have every reason to believe that it will be maintained during the present year.

SUFFOCATED BY A SHIRT-STUD.

EDWARD OLIDER was suffocated last week by a shirt-stud which he was holding in his mouth and which accidentally found its way into the trachea. This is the old story with persons who persist in using the mouth as a convenient receptacle for all sorts of foreign articles. Of course immediate tracheotomy would have saved him, but unfortunately the means to the end were, as usual, not at hand.

ADULTERATED MILK.

SEVERAL wealthy farmers around Camden, N. J., are being prosecuted for selling adulterated milk. The chances are that the jury will find it hard to agree on a verdict, as the ordinary Jerseyman has had comparatively small experience in testing lacteal fluids in their purity. Even to settle on the average standard would require the consideration of very many qualifying conditions.

THE SANITARY CONDITION OF NEWPORT, R. I.

IT would appear from reports recently received that the sanitary condition of Newport is far from what it should be. The Newport Sanitary Protective Association, which has during the past year been so active in its efforts to remedy the sewerage of that city, has just published a document, in which it advises all persons who intend to hire houses or parts of houses in and around Newport, to ask for evidence that the premises have been pronounced safe by one of their inspecting engineers. It is understood that the recommendation is to be applied to all hotels and boarding-houses. The plan is certainly a good one if it can be consistently carried out, and under the latter conditions it commends itself to the attention of sanitary committees everywhere.

NOTIFICATION OF INFECTIOUS DISEASES IN LONDON.

WE learn from our London correspondent, in a letter, dated December 28th, that the question of notification of infectious diseases is being warmly agitated in the medical circles of that city. The opposition to the measure is evidently on the increase. The element of compulsion is the notable and objectionable one. Aside from this, it is claimed that it makes doctors spies on, and informers against, their patients. The latter, in the way of pre-

venting trouble, will be induced to conceal a case of infectious disease, and struggle through without a doctor, rather than be informed against. It is also urged that it increases the number of certificates medical men will have to write, either for nothing, or, at best, for a nominal fee; that, in some cases, medical officers of health have taken advantage of their position to interfere with the patients of another medical man; that questions may often arise as to accuracy of diagnosis, and discredit be thus cast upon the family attendant. For instance, the medical man may find himself in doubt as to whether a given case is, or is not, scarlet fever. "If I notify," he says, "and it turns out not to be scarlet fever, I shall have annoyed my patient for nothing, and the medical officer of health may call and have the opportunity of blaming me before my patient or his friends for an error in diagnosis. On the other hand, if it is the disease and I do not notify, I shall be fined." The objections are certainly well taken.

TRAIN-WRECKING AS A CAPITAL CRIME.

ASSUMING as correct the comprehensive and octopus-like character of certain recent descriptions of insanity, it is hard to see how a train-wrecker can ever be proved sane. With due respect to science, however, society is obliged to look at these men for the present as vicious and responsible; and Governor Butler, in his inaugural, urges that laws be enacted for their suitable punishment. "There is," he says, "one crime which indicates such depravity of heart, such disregard of life, such malice toward all mankind, that the doing of it should be visited with the swiftest and most condign punishment."

Every one will, we believe, approve of this sentiment, and heartily wish that the legislation asked for will be granted.

MEDICAL REFORM IN MASSACHUSETTS.

GOVERNOR BENJAMIN F. BUTLER, of Massachusetts, in his inaugural address discusses many vital questions of reform pertaining to State government. Altogether, he proves himself to be a man of large grasp, and one who thoroughly appreciates the necessity for radical reforms in the management of State charitable institutions. The abuses in regard to the latter to which he calls attention are those connected with the difficulty of fixing responsibility for mismanagement where it should properly belong. In this connection he takes occasion to protest against commissioners in general. His argument is that these commissions shift responsibility from one member to the other. In this way the whole Board allows acts and expenditures which no single responsible person would have dared to tolerate.

As to the mooted question whether the conjoint Board of Lunacy, Health, and Charity shall be divided into independent bodies, we gather that the Governor would dissolve the whole organization, and substitute single responsible individuals.

Governor Butler is certainly right in many of his charges against Boards, Commissions, and Committees. There are, however, a good many objects for which such bodies can work much better than single persons. And many of General Butler's objections could be met under

a system which made Boards more directly responsible than is usually the case.

We regret not to find any reference in the message to the subject of medical legislation and registration. Our Massachusetts brethren will be derelict if they allow the session to pass without an attempt to render impossible such institutions as the Bellevue Medical Hospital of Massachusetts.

DR. WILLIAM HUNT'S ADDRESS BEFORE THE PHILADELPHIA ACADEMY OF SURGERY.—On Monday evening of this week the annual address of the Philadelphia Academy of Surgery was delivered by Dr. William Hunt, Surgeon to the Pennsylvania Hospital. He discussed Es-march's criticism of American surgery, contained in the latter's recent lecture on President Garfield's wound. The assertions and strictures of the German Professor, after being translated by Dr. Hunt, were commented upon in a very witty manner, and rebutted by points from the well-worn pages of the history of the case. The hackneyed and unsavory subject was given renewed interest by Dr. Hunt's novel treatment of the theme; but the value of prolonging such discussions is questionable. The latter part of the address was devoted to Koch's bacillus tuberculosis. The lecturer expressed doubt as to its etiological relation to phthisis, though he did not deny its existence. In an adjoining room were exhibited a large number of microscopic preparations showing the bacilli of Koch, and the pseudo-bacilli of Schmidt, of New Orleans. Schmidt, as our readers know, affirms that the bacillus described by Koch is nothing but a fat-crystal. The pseudo-bacillus slides shown were prepared by Schmidt himself. Some of the others were prepared, we believe, by Koch, or those who had worked under his supervision; hence, an opportunity was given for those present to compare the objects seen and described by the two micrologists.

Even to untrained eyes it was apparent that Schmidt had never seen what Koch has described. In other words, the pseudo-bacilli of Schmidt, shown in his own preparations, are said not to resemble the bacilli of Koch, as shown in his preparations. Hence, Schmidt's deductions must be erroneous; for he evidently has not seen a true Koch bacillus to compare with his own so-called pseudo-bacilli which are doubtless nothing but fat-crystals.

NEW YORK ACADEMY OF MEDICINE—ELECTION OF OFFICERS.—At the annual meeting, held January 4, 1883, the following officers were elected: *President*, Fordyce Barker, M.D., LL.D.; *Vice-President*, H. P. Farnham, M.D.; *Recording Secretary*, W. H. Katzenbach, M.D.; *Corresponding Secretary*, J. G. Adams, M.D.; *Treasurer*, William F. Cushman, M.D.; *Trustee*, Gouverneur M. Smith, M.D.; *Treasurer of Board of Trustees*, Charles Wright, M.D.; *Member of Committee on Admissions*, E. L. Partridge, M.D.; *Member of Committee on Ethics*, H. E. Crampton, M.D.; *Member of Committee on Education*, J. C. Dalton, M.D.; *Member of Committee on Library*, A. McLane Hamilton, M.D.

AMENDING THE PENAL CODE.—Already two bills have been introduced into the Assembly amending the Penal Code. One of them, by Assemblyman Murphy, compromises the matter somewhat by striking out the flagrant

absurdities, and the other, by Assemblyman Campbell, advocates the freest possible license for trade. The latter measure is one which the Puritanical code makers have deliberately precipitated.

NEW YORK OPHTHALMOLOGICAL SOCIETY.—At the Annual Meeting, held January 8, 1883, the following officers were elected: *President*, George R. Cutter, M.D.; *Vice-President*, David Webster, M.D.; *Secretary and Treasurer*, Jas. L. Minor, M.D.

CHARITY HOSPITAL, NEW YORK.—At the annual meeting of the Medical Board of Charity Hospital, at the Academy of Medicine, the following officers were elected for the current year: *President*, Dr. John H. Ripley; *Vice-President*, Dr. T. F. Ferguson; *Secretary*, Dr. Edward S. Peck.

THE SPREAD OF SMALL-POX.—Small-pox has, during the last two or three days, spread from Baltimore to several small ports along the Chesapeake Bay. The disease has also broken out in the lumbering shanties in upper Ottawa, Canada, and the woodmen are dispersing to neighboring districts.

NEW YORK PATHOLOGICAL SOCIETY.—The following officers were elected at the annual meeting held on the evening of January 10th: Dr. George F. Shrady, President; Dr. R. E. Van Gieson, Vice-President; Dr. Wesley M. Carpenter, Secretary; Dr. John H. Hinton, Treasurer, and Dr. John C. Peters, Editor of Transactions. Drs. F. R. S. Drake, J. H. Ripley, J. H. Hinton, V. P. Gibney, and J. C. Peters, Committee on Admissions and Ethics; Drs. J. C. Peters (Editor of Transactions), W. M. Carpenter, J. H. Hinton, E. C. Wendt, Beverly Robinson, and the president, Committee on Publication.

NEW YORK'S WATER SUPPLY.—The Mayor of the city of New York is requested by the State Assembly to select and appoint immediately five citizens of this city, who, in conjunction with himself, shall without delay examine into a plan for increased water supply, and report to this body within twenty days as to the practicability of the proposed plan, the probable cost, the time required for its execution, and such other views and recommendations as they may deem proper.

PROFESSOR SCHROEDER OF BERLIN.—It is authoritatively denied that Professor Schroeder, of Berlin, has been summoned to London to attend the Princess of Wales.

TYPHOID EPIDEMIC IN LONDON.—London is suffering from the effects of a slight epidemic wave of typhoid fever, the weekly deaths varying from 31 to 42. The disease is said to be more malignant than is usually the case.

DR. WARREN STONE, a prominent physician of New Orleans, died suddenly on January 3d. The deceased was thirty-nine years of age.

SMALL-POX IN ATLANTA.—A telegram from Atlanta, Ga., states that small-pox which appeared in that city two weeks ago is spreading, and among the whites. No precautions are taken by the authorities to suppress the disease, the pest-house wagon being driven at all times of the day through the most crowded and unprotected thoroughfares.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 13, 1882.

GEORGE L. PEABODY, M.D., VICE-PRESIDENT, IN THE CHAIR.

(Continued from page 21.)

DR. W. GILL WYLIE presented a specimen of
CYSTIC FIBROMA OF THE OVARY.

"M. D.—, aged twenty-four, single. I first saw the patient in June, at the request of Dr. S. Baruch. At this time she was in good general health. On examination, a very firm abdominal tumor, about the size of a coconut, was readily made out. It was freely movable, and was not directly attached to the uterus, which was normal in size.

"On account of the season and the small size of the tumor, and absence of pain and other serious symptoms, she was advised to wait until the fall for its removal. During the summer, in August, she had a sharp attack of peritonitis, and was in bed several weeks.

"September 20th.—She was admitted to my ward at Bellevue Hospital. The tumor had increased to several times its former size, and was firmly fixed in place, and to some extent painful to touch.

"October 17th.—About six weeks after acute peritonitis had subsided the tumor was removed. The usual incision in the median line was made. The peritoneum was very much thickened, and the whole surface of the tumor was covered with adhesions. About a gallon of dark bloody fluid was evacuated by a trochar, and the tumor was then slowly pulled out of the incision. The adhesions were torn loose, and when thick or strong were put upon the stretch and divided by actual cautery. When the pedicle was reached it appeared to be attached to the right Fallopian tube; it was firm and much smaller than was expected in a tumor so vascular and with such thick walls. The pedicle and two ragged ends of the omentum were tied with silk ligatures and dropped back in the abdomen. The wound was kept open about an hour after this, in order to clear the cavity of all blood, and a glass drainage-tube was inserted and the wound closed with silk sutures.

"Patient was not allowed any food for forty-eight hours, and only small quantities of water in drachm doses were given for intense thirst. After this she was fed on koumiss, and after a few days other food.

"She recovered without a bad symptom, and in ten days was removed to the general ward from the rooms used for such cases.

"One point of practical importance was discussed before the operation, namely: In case of peritonitis complicating ovarian tumors, when one has the choice, at what time is it best to operate? Should the operation be done a short time after the peritonitis, or should it be longer delayed? In this case the adhesions were extensive, but were not tough, nor so difficult to separate or tear loose as in those cases which I have seen the operation done long after peritonitis. I have seen four cases where the adhesions were so strong, compared with the sack of the tumor, that most of the sack could not be removed, and after a part had been cut away the remainder was sewed to the edges of the abdominal wound and the cavity washed out once in eight hours with a drainage-tube. All of these cases gave a history of chronic peritonitis, and all recovered.

"In dealing with adhesions much depends upon the thickness and strength of the walls of the tumor; and the strength of the adhesions will depend upon the duration of the peritonitis."

Report of examination made by Dr. W. H. Welch.—"The tumor is a unilocular cyst measuring 18 ctm. in diameter. The wall of the cyst varies in thickness

from 2 to 10 mm. Its average thickness is about 3 mm. The external surface of the tumor presents nearly everywhere the remains of old adhesions in the form of membranous shreds. In other respects this surface is smooth and glistening. From a point corresponding to the attachment of the pedicle of the tumor proceeds a hard fibrous cord 3 mm. in diameter, which can be traced for a distance of 10 ctm. over the surface of the tumor, with which it is closely incorporated. This cord probably represents the remains of the Fallopian tube, but it is impervious. Near the same situation a sessile mass projects from the surface of the tumor. This measures 4 ctm. in length, 2 ctm. in breadth, and 2½ ctm. in height. It has much the shape and appearance of an ovary externally, but internally it consists of a soft reddish mass.

"The wall of the cystic tumor is not divisible into separate layers, but presents throughout its thickness the appearance of dense fibrous tissue. The inner portion of this wall, however, is in most places of a reddish-brown color, indicating old extravasation of blood in this situation; the outer portion of the wall is gray in color.

"The inner surface of the cyst is thickly set in most places with little fibrous elevations, often pedunculated, and looking like papillomatous growths. These little growths are firm in texture and of a reddish color, like the inner portion of the cyst wall from which they spring.

"There are no evidences of secondary cysts in the wall of the main cyst, so that the tumor is strictly unilocular.

Microscopical.—"The most careful examination of the inner surface of the cyst, both in the fresh state and upon section after hardening, fails to reveal any epithelial lining.

"The wall of the cyst is made up throughout of dense fibrous tissue. The connective-tissue fibres are coarse and interlace in all directions, but have a tendency to run parallel to the surface of the cyst. Between these fibres are fusiform and branched connective-tissue cells, with, in places, a considerable number of round cells. There are also blood-vessels to be observed in the wall. The inner reddish-brown portion of the cyst wall is composed of dense fibrous tissue, with few cells, but with an abundance of yellowish-brown pigment granules (hæmatoidin) between the fibres. The papillomatous excrescences are made up likewise of fibrous tissue with blood pigment. Further than the blood-pigment there is no especial difference in structure between the outer and the inner portion of the cyst wall.

"An interesting feature in the anatomy of the tumor is the presence of rows of cubical epithelial cells upon its external surface. These epithelial cells resemble those covering a normal ovary. They often lie imbedded in the tissue in consequence probably of the growth of adhesions over and around them, in this way they often appear to line spaces like glandular cavities. There is nothing resembling them in the inner portion of the cyst wall. Smooth muscular fibre is found only in the cord representing the Fallopian tube.

Diagnosis.—"The tumor is probably a cystic fibroma developing from the ovary. The ovarian origin is rendered probable (aside from the relations noted at the time of the operation) by the relations to the Fallopian tube, by the presence of cubical epithelium in the outer wall of the cyst, and perhaps by the existence of a portion of the ovary in the outer wall of the cyst. The last point, however, cannot be established positively in consequence of the destruction of the parenchyma by old hemorrhages.

"The fibromatous character is established by the structure of the cyst wall and the absence of any epithelial lining to the cyst. The tumor is certainly not an ordinary ovarian cystoma. The uniform character of the cyst wall, the absence of epithelium on the inner surface, and the unilocular structure, preclude this.

"The mode of development of the cyst cannot be determined. Extravasations of blood would seem to have played a rôle in this process, as evidenced by the abundant blood-pigment in the inner portion of the cyst wall.

The fluid contents of the cyst were not sent to me. They are said to have been thin, watery, solid, and of a reddish-brown color."

DR. J. LEWIS SMITH presented a larynx and trachea which illustrated

DIPHTHERIA COMPLICATING SCARLET FEVER.

One point of interest in the clinical history was the clearness of the voice; so much so that the existence of a pseudo-membrane in the larynx and trachea was not suspected. The membranous exudation was shown distinctly upon the inner surface of the trachea and larynx. The question arose, was it diphtheria complicating scarlet fever, or was there a scarlatinous pseudo-membranous laryngitis and tracheitis? Dr. Smith thought the nature of the condition was not yet fully understood, but inclined to the opinion that this was a case of diphtheria complicating scarlet fever.

CHRONIC BRIGHT'S DISEASE—DILATATION OF THE HEART—PERICARDITIS.

DR. BEVERLY ROBINSON presented the heart and kidneys taken from a woman who presented during life the physical evidence of enlargement of the heart without valvular lesion, double pleurisy with effusion, and chronic Bright's disease. They were accompanied by the following history, furnished by Dr. Charles Beach, junior assistant on the medical division of St. Luke's Hospital:

H. G.—had had numerous rheumatic attacks, involving one or both ankles. The last attack occurred eight months ago, when the knees were involved. It lasted six weeks. She had never had any cardiac symptoms. In July, 1882, she was exposed to cold and damp air, since which time she had been failing in strength. Micturition had been frequent, spots floated before her eyes, and she had suffered from nausea. Two months ago she began to have dyspnoea, somewhat paroxysmal in character, and oedema of the feet, legs, hands, and face appeared. At various times she had had moderate pain in the left side of the chest. On admission the patient had marked oedema of the face and extremities, was suffering from extreme dyspnoea, had a very weak pulse, no appetite, and her temperature was elevated. Digitalin and whiskey were administered hypodermically. The urine had a specific gravity of 1.010, acid reaction, contained fifteen per cent. of albumen, but the microscopical examination was negative. Both pleural cavities were about half filled with fluid. Examination of the heart was negative. Thirteen ounces of fluid were withdrawn from the right side of the chest. Immediate and marked relief followed. Examination by Dr. Robinson: Respiration 32, pulse 108 and tense, the apex beat could not be felt. Pericardial friction-sounds were heard midway between the apex and the left border of the sternum. The first sound of the heart was prolonged. There was evidence of pericardial effusion, and also of fluid in the left pleural cavity. The spleen was slightly enlarged. The dyspnoea was believed to be chiefly uræmic. A milk diet was ordered. Half an ounce of whiskey was administered every six hours. One minim of a one per cent. solution of nitroglycerin was ordered every four hours.

October 27th.—The patient had a chill this morning lasting fifteen minutes; also vomiting. During the last twenty-four hours she has passed sixteen ounces of urine. The nitroglycerin was reduced to one drop three times a day. The vomiting persists. The bowels were moved by enemata, cups were applied to the loins.

November 1st.—Physical examination revealed dulness up to the angle of the scapula. Nitroglycerin was discontinued. Over the apex of the heart there could be heard, on inspiration and expiration, a rubbing sound, not affected by the heart motion, but still believed to be probably pericardial. The urine had a specific gravity of 1.008, neutral reaction, and contained thirty per cent. of albumen. The patient had passed twenty-four ounces during the past twenty-four hours.

On November 2d the cardiac sounds were distant and indistinct, crumpling sounds were still heard. Cardiac dilatation, localized pericarditis. Whiskey was continued three times a day. The fluid extract of convallaria, ten minims, were administered every six hours. From November 4th to November 9th the patient received whiskey and the fluid extract of convallaria and the quantity of urine passed varied from twelve to twenty-two ounces in the twenty-four hours. On that date pericardial friction-sounds were noticed preceding the second sound of the heart. Pulse, 96.

On November 11th the right side of the chest was aspirated and thirty-five ounces of fluid were withdrawn. On November 12th the patient passed ten ounces of urine which had a specific gravity of 1.014, was alkaline, and contained sixty per cent. of albumen. On November 15th the oedema of the feet and legs had increased. On November 16th there was oedema of the vulva. Patient passed fourteen ounces of urine. A creaking sound was heard over the pericardium. November 18th the pericardial friction-sound had almost entirely disappeared. The patient's pulse was 72 and regular; she passed twelve ounces of urine. The convallaria and the iodide of ammonium which had been administered since November 8th, in doses of two grains, were then discontinued. On November 19th the hot-air bath was administered. On November 20th the patient passed only eight ounces of urine, and had pain in the back and lumbar region. From this date to November 22d there was no marked change in the condition of the patient, and on the 24th she died.

At the autopsy the abdominal walls were found infiltrated with serum, and the abdominal cavity contained about eight ounces of fluid. There were about ninety-eight ounces of serous fluid in the pleural cavities. There was about one ounce of serum in the pericardium, over the apex of the heart anteriorly. Just to the left of the septum was a small patch, about the size of a split pea, of thickened plastic exudation. On the posterior surface of the aorta, just above the reflexion of the pericardium, were seen patches presenting the same appearance. The right ventricle was distended and contained dark and white clots. The left ventricle was hypertrophied. The valves were apparently normal. The heart weighed fifteen and a half ounces. The lungs were more or less compressed and the pleura was thickened. The spleen was enlarged and the capsule thickened, weight nine ounces. The capsule of the liver was thickened, especially about the inferior ligament, and the surface showed white streaks with some increase of connective tissue. The kidneys were the seat of chronic diffuse nephritis. Both were reduced in size, the left weighing only an ounce and a half. There were cysts in both ovaries.

Dr. Robinson also presented the *heart and kidneys* from a patient who was admitted to St. Luke's Hospital, December 10, 1882. They were accompanied with the following history, furnished by R. J. Devlin, Senior Assistant on the Medical Division. The patient was forty-four years of age, and was able to give only an imperfect history. His first and only attack of rheumatism occurred seven years ago, which involved the ankles and hands, and lasted, including relapses, four months. He had never suffered any pain or distress in the region of the heart, nor palpitation. During the last two years he had been obliged to rise from four to six times during the night to pass water. No change had been noticed in the appearance of the urine. The patient thinks that the daily quantity has been excessive. During the last six months he has suffered considerable from sweating and diarrhoea. Last August he was seized with sudden failure of vision in the left eye, followed in about two months by similar changes in the right eye, and at the time of his admission his vision was not sufficiently good to enable him to read print. Oedema of the extremities appeared for the first time two months ago. On December 2d, the abdomen being very tense, he was tapped, and twenty ounces of fluid were removed.

From this date to December 8th there was a gradual decline of the patient, pericardial friction-sounds and valvular murmurs were distinctly heard, the œdema increased, there was no increase in the flow of urine, the patient became delirious, finally comatose, and died. At the autopsy there was found some thickenings of the cardiac valves, with atheromatous degeneration of the anterior coronary artery, and the kidneys were the seat of cystic degeneration.

Dr. Robinson directed attention, especially in connection with the first case, to the use of convallaria and nitroglycerin. Both these remedies were used, and there was no noticeable increase in the quantity of urine passed. Evidently under the influence of convallaria the cardiac action was increased in force and the heart was made to do its utmost, and apparently the woman would have been benefited except for the condition of the kidneys. While the patient was taking the iodide of ammonium a pericardial friction-sound disappeared, and at the autopsy it was believed that the evidence of disappearing pericarditis was found.

Dr. WYETH asked whether there was anything in the condition of the kidney which explained why the digitalis and the other remedies did not increase the secretion, but at the same time increased the force of cardiac action.

Dr. ROBINSON believed that in those cases where we find a low specific gravity of the urine, and its quantity cannot be increased by the best known cardiac stimulants, we have reason to believe that the atrophic kidney exists, and he should be prepared to assume that with a small quantity of urine with nothing specially abnormal about the specific gravity, and failure on the part of the kidneys to respond to cardiac stimulants, as in the case recited, we might reasonably expect to find that form of kidney degeneration, perhaps not so exaggerated as seen in the specimen presented.

CEREBRAL MENINGITIS.

Dr. PEABODY presented a brain with the following history: A. C—, forty-three years of age, a native of the United States, and a widow; no occupation. She had had alopecia, pharyngitis, iritis, and indefinite pains, but no rash or initial lesion, or glandular enlargements or scars. Her tibiae were nodular when she came under observation. She had rheumatism four years ago, and had since experienced vertigo and tinnitus aurium, but had had no œdema, no palpitation of the heart or other indication of involvement of that organ. On December 4th, at night, she had a severe chill, followed by high fever, headache, photophobia, and a feeling of general soreness all over the body. On the following day she began to suffer from nausea and vomiting, which have continued steadily up to the time of her admission to the New York Hospital on December 7th. At the same time with the development of these gastric symptoms her left wrist became very tender, swollen, hot, and stiff. No other joint was affected, but she had severe pain in the lumbar and inguinal regions, together with pain in the popliteal spaces, and in the calves of the legs. There was no special spinal or cervical tenderness, but there was some stiffness of the neck. On the day after the chill she became quite deaf, and continued so. On admission she was well-nourished, and presented a number of suggestive symptoms. Her left pupil was slightly larger than the right, and there was slight left exophthalmus. Her left wrist was swollen, stiff, hot, and painful. Its color was normal. No lesion of the thoracic or abdominal viscera was detected. Her temperature was 102° F.; her respirations were 20, and her pulse was 78. She was unable to pass water. She was then given ext. ergot, f 3 j. q. 3 hours, and also morphine per os to relieve her pain.

December 8th.—At 9 A.M.: Temperature, 102.5° F.; respiration, 26, and pulse, 80. 12 M.: Temperature, 102.6° F. 5 P.M.: Temperature, 101.6° F.; respiration, 28, and pulse, 70. Slight herpetic eruption on upper lip

Slight facial contortions noted. Patient has relapsed into a semi-comatose state and can hardly be made to take medicine.

December 9th.—No rash; herpes spreading; no joint symptoms; stupor deepening; cardiac action excellent. 9 A.M.: Temperature, 102.4° F.; respiration, 26, and pulse, 80.

December 10th.—Temperature yesterday in P.M. was not above 102.8° F. This A.M. temperature, 102.8° F.; respiration, 36, and pulse, 80. Respiration labored; stupor complete. Patient cannot be roused and medicine is given with difficulty. During the past three days a rapidly developing keratitis has invaded both eyes and has now become intense. It has been treated by atropia locally in solution. Was given whiskey ʒ ij. last night. Still no muscular twitchings or joint symptoms; no rash. 5.30 P.M.: Temperature, 102.9° F.

December 11th.—10 A.M.: Temperature, 102.9° F.; respiration, 36, and pulse, 90. She is now comatose. Pulse growing feeble. Ordered whiskey, ʒ iv. in the day and ʒ iij. in the night. No change in symptoms. Keratitis worse, inflammation intense. Herpetic eruption involves most of the upper lip. Still swallows.

December 12th.—Patient completely comatose. Heart's action growing more feeble. Pulmonary œdema developing. Ordered ether, ʒ ij. (hypodermically), q. three hours and enemata of whiskey, ʒ j. Ammon. carbonat, gr. x. (given twice). Intravenous injection of aq. ammon. and digitalin hypodermically. Heart's action fairly sustained, but temperature slowly rose. 11 A.M.: Temperature, 102.8° F. 2 P.M.: Temperature, 103.2° F. 6 P.M.: Temperature, 104.6° F. 10 P.M.: Temperature, 105° F. Pulmonary œdema increased. Heart finally failed, and at 3.15 A.M., December 13th, she died (temperature, 107.4° F.).

The autopsy was made a few hours after death. The only organ of interest was the brain. The pia was intensely congested and there was a large amount of pus in the cross meshes of the pia at the base, and extending thence into the fissures of Sylvius. The lateral ventricles contained also much thick pus, chiefly in the meshes of the choroid plexuses. Inasmuch as rheumatic symptoms occurred a few hours after the initial chill, in this case the question had arisen, Might this be considered a case of rheumatic meningitis?

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 4, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

Dr. F. H. BOSWORTH read a paper (see page 29) on

GROWTHS IN THE NASAL PASSAGES.

Being called upon by the President to open the discussion, Dr. LEFFERTS said that to a number, perhaps the majority, of points made by Dr. Bosworth in his paper, no exception could be taken. They were such as were well understood and adopted by all specialists. Others, however, were open to question. Some must be controverted. The latter two classes alone needed discussion. First, as to adenoid vegetations, the profession, the lecturer tells us, believes them to be rare. This can hardly apply to its reading members, for the subject has of late been treated of in journals and monographs *ad nauseam*. He believes them to be exceedingly common—the most frequent of the many conditions which give rise to an abnormal discharge from the nose—and his statistics and the wonderful array of specimens upon the desk seemed to prove his assertion; but the truth, according to Dr. Lefferts' experience, lay between the two extremes. We must be careful not to confound simple irregularities of the tissue at the pharyngeal vault, hardly to be called abnormalities, especially in the young subject, with true

hypertrophies deserving of the name. Excessive hypertrophy, giving rise to veritable tumor and to all the symptoms so graphically described by the author of the paper, are not very common. Moderate hypertrophy is frequently met with in the catarrhs seen in young children, but still in a large proportion of them it does not exist. He had not met with it in anything like the frequency indicated by Dr. Bosworth, even in children. In the adult he believed it to be a very rare manifestation; and here a practical point arose, bearing in mind the fact—one not always appreciated, even if recognized by specialists—that these growths disappear, as a rule, with the advent of puberty. Is it always necessary to interfere with them by operative, and, in children, often formidable means, simply because they do exist? He believed not, referring, of course, to cases where the grade of the hypertrophy was moderate. If excessive and giving rise to both local and general disturbances, operative measures were indicated, nay, demanded, beyond question. In these days he did not fear that not enough would be done. He deprecated the tendency to do too much, and to rather over- than under-estimate the significance of the disease.

As to the means of treatment, Dr. Bosworth was a warm advocate, as was shown in his recent writings, of the "Jarvis" snare, an excellent modification and adaptation of some pre-existing forms of apparatus. There was no question as to its value in many varieties of nasal disease, especially hypertrophies, but it demanded, notably in the naso-pharyngeal space, much manual dexterity, and hence was not of general applicability. Certainly it was not generally recommended nor used by the special operators of to-day. Perhaps it ought to be. A new model of a biting forceps lately introduced had in his hands answered an excellent purpose. It was warmly recommended by operators of large experience abroad. It could be used even by those without special training, and in cases in young children where the adjustment of the wire snare would be a matter of great difficulty, if not impossibility. As to the use of the galvano-cautery for destroying these growths, he would only ask his hearers to try it once in young children, and thus purchase their experience with discomfort, danger, and difficulty. In advising a method of treatment it was of great importance to select one both practical and practicable.

Time did not permit him, as he would like to do, to criticise some of Dr. Bosworth's statements in regard to nasal polypi-myxomatous growths. One point only: Did not the frequency with which he had met with these tumors depend partly upon the fact that he had diagnosed and removed some, in a state, if he had rightly understood his expression, of rudimentary development? The title of the paper, "Tumors of the Nasal Passages," permitted him to call attention to two forms of growths not mentioned by Dr. Bosworth, viz.: cystic growths, and papillomata. The former are rare, it is true, but possess a practical interest from an operative point of view; they resemble exactly the ordinary gelatinous polypus; but seized by forceps or otherwise burst, discharge their contents, and the sac alone is torn away; the operator believes this to be but a portion of the tumor, and renews his efforts now to remove the remainder of what does not exist. Laceration of normal structures is the result. He willingly, therefore, endorsed the practical suggestion of Dr. Bosworth, always to *look* and work carefully when removing a nasal growth; by not so doing he himself had made the mistake alluded to.

The second form of tumor, the papilloma, is not uncommon, and gives rise to persistent, often, apparently, unexplainable epistaxis. This fact alone shows the importance of its recognition; it is readily seen in its usual location upon the nasal septum, far down toward the orifice of the nostril, and is as readily removed by clipping with scissors and cauterization of its base.

Finally, notwithstanding Dr. Bosworth's poetical illus-

tration, used in support of his position, that nasal disease is the cause of the change in the upper register of the singer's voice, and that the latter is the first to become affected, as the voice shows signs of impairment, he must take exception to the statement. The middle register, experience shows, he thought, was the one to become first affected; if this were so, the theory built up by Dr. Bosworth was overthrown, it not wholly, at least in part. This subject was, however, a large one, and could not now be entered upon, especially as he had consumed already so much valuable time, for which trespass he apologized, and pleaded in excuse the interest of the subject, so well treated of by Dr. Bosworth.

DR. R. C. BRANDEIS thought that with either inflammation of the pharyngeal tonsil, or the existence of the adenoid growths, there must be some inflammation of the adjacent structure, and further, that the inflammation was as liable to extend upward into the Eustachian tube as downward into the pharynx. He, therefore, believed that impairment of hearing, in these cases, was due largely to obstruction of the Eustachian tube produced by the congested or swollen mucous membrane. In consequence of such obstruction the air was removed from the cavity of the middle ear, thus permitting pressure upon the external drumhead to produce distortion of that membrane. If the orifice of the Eustachian tube was only temporarily congested, its walls were brought into contact with each other, the air in the cavity was gradually absorbed, and impaired hearing was the result of malposition of the drum.

With regard to the use of the galvano-cautery in the naso-pharyngeal space, he had not met with any evil consequences in resorting to it. He had adopted it frequently for the removal of nasal polypi, and believed that in those cases it subserved a double purpose, namely, it acted as an *écraseur* and at the same time as a caustic. He regarded it as necessary to destroy the roots of nasal polypi entirely, if the liability to their return was to be entirely obviated.

DR. R. P. LINCOLN thought it was generally conceded that there were many tumors in the nasal passages which were dangerous to the patient, and that the harm which they produced was far-reaching. With regard to the necessity of operation for the removal of growths in the post-nasal region, particularly of adenoid tissue, it seemed to him that it depended entirely upon the fact as to whether they were the source of any impairment of health or produced any special discomfort. The necessity for the removal of these growths might be alone the discharge which they produced, because that discharge of itself caused harm, not only in the pharynx, but as he believed, also in the stomach, giving rise to indigestion. Besides, they might produce a reflex influence upon distant parts, as had already been mentioned by Dr. Bosworth, and might give rise to asthma. It was also astonishing how small a growth would produce asthmatic symptoms. Another evil effect due to obstruction of nasal breathing was a malformation produced in children while they were quite young; that is, previous to six, eight, or nine years of age. He had seen a number of cases in which it seemed to him that no other explanation could be given for the malformation of the chest, than that it was consequent upon the difficulty of breathing through the nose. He believed it was a practical point with which every medical man should be made familiar.

With reference to treatment, he took issue with Dr. Bosworth's statement that "all other methods than the use of the wire *écraseur* were inadequate." He had employed the galvano-cautery and also chromic acid with very satisfactory results, and had published quite a large series of such cases in which these methods of treatment had been adopted. He thought also there were other remedies which could be used advantageously for the same purpose. For example, the Vienna paste had been and could be used with success for the removal of enlarged tonsils and also for the removal of the growths

under consideration. Jarvis' snare-écraseur, however, was certainly a most valuable instrument. He himself used it more than any other instrument, both in the anterior and posterior nares. He did not believe that anything else could be devised which would replace it. There were, however, other remedies which would accomplish perfectly satisfactory results, especially when the fact was taken into consideration that most of the growths in the posterior cavity of the nares disappear after puberty. A remedy which he had recently used, and one to which he wished to direct special attention, was boracic acid, especially where the growth was small and yet gave rise to a profuse, annoying discharge. This remedy might be used, finely powdered, pure or diluted with subcarbonate of bismuth, and by the aid of one of the many powder-blowers.

DR. B. ROBINSON remarked that while it was true most were familiar with Jarvis' snare-écraseur, and perhaps we had been led chiefly to use it from the fact that it had been so strongly recommended by Dr. Bosworth, yet the fact remained that it was not the only instrument which could be made use of in destroying these growths. It was, however, probably the best. In cases in which the growth was of some size he thought it was decidedly the best instrument which could be employed. Where the growths were small, flat, and sessile, and did not cause any distressing symptoms, he thought the galvanocautery or some methods of removal by scraping could be used satisfactorily. But for removal of the growths of the size exhibited by Dr. Bosworth, certainly the Jarvis wire-écraseur was the best instrument which could be employed.

There was one point which he believed had not been sufficiently impressed, and that was the continued sucking out of the breast, so to speak, when the nasal passages were obstructed, and this was true without reference to what the cause of the obstruction was, provided the obstruction took place in the anterior part of the nasal passages.

Personally, he believed that there was such a thing as propagation of the catarrhal inflammatory condition directly from the affected parts to the Eustachian tubes, and in that way to the middle ear. To such an extension of the inflammatory process he attributed many of the cases of impaired hearing.

DR. BOSWORTH, in closing the discussion, said, with reference to the question as to whether or not we should operate when there was only a moderately large adenoid growth present, that doubtless many of the growths atrophied at about the age of puberty. But that period might be at some distance, and the child might be suffering from certain symptoms which should be relieved. The tendency in many of these cases was to produce sleepless nights, weak throats, impeded respiration, etc., and he believed it to be the duty of the surgeon to relieve the patient of such symptoms, even if he felt certain that the growth would atrophy within a few months or within a year. Furthermore, we were not absolutely certain that they would disappear.

With regard to the use of the forceps and the snare, he thought that the forceps could not be made to reach the entire growth on account of its peculiar anatomical situation. He had never seen a pair of forceps with which the entire growth could be reached.

With reference to the register of the singing voice first affected, his conclusion was that it was the upper register which was first involved had been based largely upon the statement made by singers themselves.

With regard to the extension of catarrhal disease through the Eustachian tube, he thought it was a good point, but, at the same time, in the examination of a very large number of cases he had rarely seen evidence of catarrhal inflammation at the trumpet-shaped extremity of the Eustachian tube; that is, there had been neither swelling nor redness, nor had there been evidence of pain or heat.

With reference to impairment of hearing, he believed that the levator palati muscles played an important part in the admission of air into the middle ear, and that the adenoid growths in the vault of the pharynx interfered with the proper performance of their function. The inference was that the growths should be removed.

The Academy then adjourned.

SECTION IN PRACTICE.

Stated Meeting, December 19, 1882.

ANDREW H. SMITH, M.D., CHAIRMAN.

THE COMPLICATIONS, SEQUELÆ, AND TREATMENT OF SCARLET FEVER.

DR. J. LEWIS SMITH read a paper on the above subject, in which he directed attention first to *the complications affecting the nervous system*. These were of two varieties: 1, those which developed during the early days of the disease, and 2, those which appeared in the declining stage, when they occurred from uræmia chiefly. The occurrence of delirium or convulsions during the first days generally indicated the presence of a sufficiently severe type of the disease to prove fatal speedily. The prognosis, however, in such cases was much more favorable than in former times, and the improvement was due to our better understanding of the application and the effects of agents employed for the relief of certain symptoms, such as high temperature, as well as for the control of the complication itself. The use of cold was recommended for the control of the temperature, applied in the form of sponging, or the pack, or the full bath, whenever the thermometer registered above 103° F. For the convulsions, bromide of potassium could be administered with impunity in large doses repeated frequently, and if it failed, the use of hydrate of chloral by the rectum would almost surely prove successful. Use a small glass syringe, and to children from one to three years of age five grains of chloral dissolved in two drachms of water could be given.

SEVERE PHARYNGITIS, CERVICAL CELLULITIS, AND ADENITIS.

Dr. Smith had never met with a case of scarlet fever in which there was not evidence of pharyngitis before the appearance of efflorescence upon the skin. Pharyngitis, therefore, was not regarded as a complication unless it attained that degree of severity in which the inflammation extended into the tissues of the neck and produced destructive tissue change. There were two forms which occurred as complications: 1, an aggravation and extension of the inflammatory process always present, and 2, true diphtheria. The first usually becomes considerable, if it is to exist as a complication, at about the close of the first week, sometimes within the first two days. In some cases the tumefaction is so great that the mouth can be opened only with very great difficulty. In mild cases resolution occurs; in the severer ones ulceration, possibly gangrene.

DIPHTHERIA

occurred frequently as a complication of scarlet fever. In localities where the former disease prevailed, from one-third to one-half of the cases of scarlet fever became complicated with diphtheria, without the probability of an exposure to the poison of the latter disease, or to the influence of sewer-gas. The complication had occurred so frequently in his practice that Dr. Smith had come to regard scarlet fever itself as a cause of diphtheria in a locality where diphtheria prevails. The reverse, however, he did not think was true. Usually, the complication did not appear until the third or fourth day, but sometimes it began almost simultaneously with the scarlet fever.

OTITIS MEDIA,

as a complication of scarlet fever, was attributable to extension of the inflammation along the Eustachian tube from the naso-pharyngeal surfaces.

SCARLATINOUS RHEUMATISM.

This usually commenced at the close of the first or the beginning of the second week, and commonly affected the wrists and ankles. It did not seem to retard convalescence, but its chief danger was the liability to cardiac complication.

PERICARDITIS

occurred as a complication more frequently, probably, than was generally supposed.

PLEURISY

was one of the most important complications. It developed usually in the desquamative stage and was apt to be suppurative.

DILATATION OF THE HEART,

coincident with quick feeble pulse. At autopsies firm whitish clots were found closely adherent to the columnæ carneæ, and extending into the large vessels.

NEPHRITIS.

In a mild form it occurred according to his observation much more frequently than had been formerly supposed. Renal catarrh might occur without urinary evidence. Special reference was made to Steiner's cases. The complication usually began in the desquamative stage, and Dr. Smith believed that exposure to cold was one of the causes. According to Klein a tubal or parenchymatous nephritis occurred early, and after about nine days interstitial nephritis existed. Reference was also made to the glomerulo-nephritis described by Klebs, and to the criticisms made by Klein, who did not accept Klebs' views upon this point. With reference to

PROPHYLACTIC TREATMENT,

he thought there was no remedy which could prevent the spread of the disease. Concerning the use of water, cold or lukewarm, with sponge, pack, or bath, Dr. Smith remarked that he regarded it as one of the most valuable agents that could be employed for reducing temperature and affording general relief to the patient. Inunction was serviceable, especially in the desquamative stage, and with such substances as vaseline or carbolized applications. On the use of water, Dr. Smith also read Hensch's views, recently published in German.

DR. L. WEBER thought, that the scarlet fever poison never produced true diphtheria, and that when the two affections existed in the same patient it was a coincidence. He believed that the condition of the mucous membrane of the throat in scarlet fever might be such as to induce the invasion of diphtheria. He was of the opinion that Hensch, just quoted by Dr. Smith, believed that these two diseases might co-exist in the same person, but that scarlet fever never caused diphtheria.

Dr. Weber had seen erosion of the jugular vein as the result of suppuration of cellular tissue and adenitis in scarlet fever.

DR. E. G. JANEWAY recalled a case which illustrated how mistakes were sometimes made. The child was said to have syphilis from vaccination because there was enlargement of the cervical glands. The complete history of the case proved it to be one of undoubted scarlet fever, and the practitioner who made the statement concerning syphilis had hit upon the time when there was enlargement of the cervical glands without efflorescence of the skin, and besides the child had been vaccinated. Again, when scarlet fever prevailed attacks of sore throat were frequent among children. Such cases, when observed independent of scarlet fever, would usually be called follicular faucitis. Yet it was probable that many of them

continued the spread of the disease. He had seen purulent inflammation of joints instead of the ordinary rheumatic inflammation in several cases.

ORIGIN OF HEART-CLOTS.

With reference to clots in the heart, spoken of by Dr. Smith in connection with dilatation of the heart, firm, whitish, usually entangled somewhat in the chordæ tendineæ, and often regarded as ante-mortem, he had doubts about their being of that character. The mechanical conditions were very much the same as that obtained when blood was placed in a vessel and allowed to coagulate; the buffy coat formed at the surface and the dark blood sank to the bottom; so when the circulatory organs were in position the buffy coat formed in the heart and the dark blood sank into the pulmonary artery. Still further, a man in his wards in Bellevue Hospital had symptoms which led him to suppose that the right heart was overloaded with blood. Feeling that benefit might follow the withdrawal of blood from the overloaded heart cavity he introduced a hypodermic syringe and removed a certain quantity. That which was drawn off was pure fluid black blood. The heart had ceased beating before the syringe was introduced, and the withdrawal of the blood was not followed by cardiac action. Dr. Janeway then injected a solution of carbonate of ammonia into the same cavity, but it also failed to excite the heart to action. At the autopsy there was found a firm white clot entangled in the chordæ tendineæ and the columnæ carneæ and *not any* dark fluid. Immediately after the heart ceased beating the right cavity contained fluid black blood; at the autopsy there was no fluid black blood in the same cavity, but a firm white clot, entangled in the muscular and tendinous structures. The case, therefore, seemed to prove conclusively that, in some cases at least, the white, and particularly the whitish, clots found in the heart at autopsies were not ante-mortem.

With reference to *prophylaxis*, Dr. Janeway believed that there were exceptions to the general belief that within the first few hours of scarlet fever no danger from contagion existed. Again, the latter part of the desquamative stage seemed not to be contagious in some cases. There was no definite rule that could be laid down. As a matter of safety advantage should be taken of all precautionary measures. Inunction during the desquamative stage was beneficial and should be adopted.

DR. C. E. BILLINGTON believed that the co-existence of scarlet fever and diphtheria was very common, but he thought that the condition of the throat in scarlet fever favored the accession of diphtheria. He had frequently seen cases, regarded as diphtheria, which had developed upon the sore throat accompanying scarlet fever. One evidence that the cases were primarily scarlet fever was the occurrence of otitis media, which rarely developed in connection with simple cases of diphtheria. He regarded inunction as very valuable in scarlet fever.

DR. J. C. PETERS always directed attention to the throat, the kidneys and the skin in all cases of scarlet fever. He believed that the so-called period of incubation was merely the working of the poison through the mucous membrane of the throat. When it had found its way through, and entered the blood, the symptoms at once began to develop. He believed that the blood was unaffected during the six or eight days of incubation, and therefore directed especial attention to the throat. Of course, he had not prevented the disease in that way, but he thought he had modified its course. With reference to the skin, inunction was very serviceable. The kidneys should receive early attention. He accepted the view that desquamation occurred in the uriniferous tubules, the same as upon the external surface of the body, and that it did not necessarily lead to nephritis. Sweet spirits of nitre and syrup of tolu was a favorite combination with him. Besides the inunction he used tepid baths, the temperature of the water never being less than 90° F. He had been afraid to use cold baths.

DR. BURRALL spoke of the use of antiseptic applications to the throat.

DR. A. S. HUNTER favored simply wetting the surface with warm water, and then exposing it to the air, as a means for reducing temperature.

DR. PUTZEL believed that the frequent co-existence of scarlet fever and diphtheria mentioned was an exception to the rule concerning infectious diseases, because it was exceedingly rare for two infectious diseases to run their course in the same person at the same time. He thought that the mistake had occurred, perhaps, in confounding anatomical diphtheria with clinical diphtheria. The occurrence of a diphtheritic exudation upon mucous surfaces did not necessarily indicate the presence of true diphtheria.

THE CHAIRMAN directed attention to marked dyspnoea as a complication, without apparent obstruction to either the respiration or the circulation. It seemed to be due to the effect which the poison produced upon the blood-corpuscles, rendering them unable to perform their function as oxygen-carriers.

DR. JANEWAY remarked that these cases of dyspnoea had been described under the head of uræmic dyspnoea. With reference to the co-existence of scarlet fever and diphtheria, the decision turned largely upon the answers to be given to the question. What is clinical and what is anatomical diphtheria? That anatomical diphtheria—that is, a false membrane upon the surface and invading the substance of mucous membranes—could occur without true diphtheria, he believed to be well established.

DR. J. LEWIS SMITH, in closing the discussion, referred to the difficulty in making a differential diagnosis, especially in cases of scarlatina anginosa, where there was destructive inflammation of the mucous membrane in the throat. Still he believed that the two diseases did occur undoubtedly in the same patient at the same time. Of course, such cases were somewhat rare, but of their existence he had become fully convinced. At the same time, he did not suppose the co-existence would be seen where diphtheria did not exist. He would be pleased to receive information upon this point from rural practitioners who had had to deal with the two diseases. He thought that one of the avenues by which the poison of scarlet fever gained admittance to the system was through the lungs; that the access was by no means confined to the throat.

The Section then adjourned.

THE PROGNOSIS OF IDIOCY.—The late Dr. E. Seguin, who was the highest authority, although somewhat over-sanguine, said regarding the results of attempting to train idiots: Not one in a thousand has been entirely refractory to treatment; not one in a hundred who has not been made happy and healthy; more than thirty per cent. have been taught to conform to social and moral law, and rendered capable of order, of good feeling, and of working like the third of a man; more than forty per cent. have been capable of the ordinary transactions of life under friendly control, of understanding moral and social abstractions, of working like two-thirds of a man; and twenty-five per cent. come nearer and nearer to the standard of manhood, till some of them will defy the scrutiny of good judges when compared with ordinary young women and men.

THE GOSPEL OF FATNESS.—Dr. Clouston, of Edinburgh, says: "All acute mental diseases, like most nervous diseases, tend to thinness of body, and therefore all foods and all medicines and all treatments that fatten are good. To my assistants and nurses and patients I preach the gospel of fatness as the great antidote to the exhausting tendencies of the disease we have to treat, and it would be well if all people of nervous constitution would obey this gospel."

Correspondence.

ON THE STRENGTH OF OPIUM.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In your valued journal of December 9th, reference is made to an article contained in Dr. Squibbs' *Ephemeris*, of November, 1882, and some remarks are appended in regard to the "inexcusable oversight in the Pharmacopœia Committee," which call for an answer, as both the *Ephemeris* article and your comments are at fault.

Dr. Squibbs compares the *lowest* percentage of morphine strength of opium permitted by the last Pharmacopœia with the *average* percentage allowed by the new, an evidently unfair comparison. It would have been fairer to compare the *lowest* percentage allowed by both Pharmacopœias. The assay process of opium of 1870, in average hands, gave poor results, so that an opium which assayed ten per cent. was more nearly twelve per cent. in actual strength, and, therefore, nearly identical with twelve per cent. opium as assayed by the present superior processes. But the Pharmacopœia of 1870 did not require opium to be of ten per cent. strength, but "*not less than ten per cent.*," clearly making opium of sixteen per cent. or more come within its provisions. There simply was no upper limit to the strength. Little of the opium in the market contains only ten per cent. of morphine without being of so poor a quality as to be rejected for pharmaceutical uses on account of its appearance alone, and such an opium is but just strong enough to pass the inspection of the United States Customs Drug Examiners.

The *average* strength of fair specimens of opium to be obtained in the market has always been far above the lowest grade permitted by the old Pharmacopœia, and it is safe to say that this *average* strength has been about thirteen or fourteen per cent. for many years past. Dr. Squibbs himself has all along aimed to furnish an opium of thirteen and one-half per cent. strength, and has stated that he would not sell any of less than twelve and one-half per cent. strength, which would be from twenty-five to thirty-three per cent. higher than the grade with which he now compares the standard of the new Pharmacopœia. If, therefore, a physician prescribed opium, and Dr. Squibbs' opium was dispensed, the patient received a twenty-five to thirty-three per cent. stronger article than designed, thus exposing the patient to the dangers now pointed out in the article in *Ephemeris*, or rather, he would have been so exposed, if the *average* grade of all opium had not been fully up to Dr. Squibbs' opium.

The statement that "of course, a pound bottle of the new preparations will be equal to a pound and a half of the old" is wrong. The market is a sensitive thermometer of the actual value of opium preparations, and while a rise in cost may occur, due to fluctuations in opium value, we dare predict that no marked rise will occur on the ground of variation in the pharmacopœial standard. In other words, the strength of opium is not changed by the present Pharmacopœia, but the *description* of opium has been simply made to correspond to the actual trade conditions.

The opium the physician will hereafter use will be practically the same as that which he has heretofore employed, while a few of the preparations have been slightly raised in strength, but not sufficiently so to affect the doses.

Besides, as a matter of fact, and regardless of the question of propriety or impropriety, it may be stated that physicians do not prescribe opium, grading their dose with reference to any particular opium strength, and least of all do they base their dose upon a uniform strength of ten per cent. Nor is it necessary that they should so calculate, because they know that the average

opium that is apt to be dispensed on their prescriptions will have an average effect to which they are accustomed. It is therefore probable that the change to which attention has been called is altogether confined to the pages of the *Pharmacopœia*, and that physicians will go on prescribing opium just as heretofore, and will obtain the same effects.

Very truly yours,

O. A. WALL, M.D.

St. Louis, Mo.

TRACHEOTOMY IN YOUNG CHILDREN.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: Your report of a successful tracheotomy in a child only eleven months old stimulates me to furnish you, for the benefit of those who may be interested in gathering statistics in the future, the histories of two little patients, each twenty-two months old, who developed laryngeal complications during diphtheria. That the affection was genuine diphtheria was proven by the sequel to each, namely, paralysis of several muscles, such as the eye and also of the throat and pharynx. These two cases were in the practice of my associate, Dr. A. J. Dower. I assisted at the second operation, and also saw patient during his subsequent treatment.

CASE I.—Charles F——, aged twenty-two months. He had been sick about four or five days before Dr. Dower saw him.

On his first visit he found marked diphtheritic infiltration of pharynx, tonsils, etc. In addition he had infiltrated cervical glands. In two days from when first seen laryngeal obstruction began. This was doubtless due to the usual manner, of extension of inflammation to larynx.

After this condition of things had lasted for forty-eight hours nearly, and was increasing, Dr. Wallace was called in consultation. It was decided, after examination, that it would be well to still wait and continue same treatment. As there was no improvement, tracheotomy was performed. The asphyxiated state, as manifested by generally engorged condition of veins and contraction of inferior portions of chest with supra-clavicular depressions, was immediately relieved thereby.

Assisting the doctor at this operation were Drs. Jarvis, Wright, and McCorkle.

With the exception of three days, convalescence was immediately established. Only moderate amount of bronchitis ensued from operation. Paralytic manifestations occurred as sequelæ to this disease as usual. Unilateral strabismus as well as paralysis of soft palate and epiglottis. It was attempted to remove tube on the seventh day, but dyspnoea ensued as soon as it was removed and so it was left to the tenth day. Wound gradually closed in and was healed soon.

CASE II.—Andrew J. F——, aged twenty-two months. He was sick six days before the tracheotomy was performed with marked infiltration of tonsils and pharynx. Gradually laryngeal inflammation and stridor set in.

Preceding the laryngeal stricture he had had the usual anti-diphtheritic treatments. The laryngeal obstruction increased, as manifested by the rarefaction of air in the chest, by supra-clavicular depressions during inspiration, as well as the same condition over the inferior portion of the chest, and a general venous obstruction, as manifested by blue prolabia, etc. Coma increased. Operation of tracheotomy done with immediate relief to asphyxia. Subsequently the progress of case was not interfered with and good recovery ensued. Had paralysis after operation of the soft palate and uvula, allowing milk and medicine to enter the larynx and emerge by tracheal tube. This lasted a few days, and later in convalescence he had facial paralysis. Only moderate amount of bronchitis followed tracheotomy.

W. J. BRANDT, M.D.

Late House Surgeon Charity Hospital,
Blackwell's Island.

ON THE REMOVAL OF FOREIGN BODIES FROM THE EAR.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: When recommending my aural foreign-body forceps in a communication published in *THE MEDICAL RECORD* of December 23, 1882, I certainly did not expect its employment would meet with the vehement opposition which is shown in Dr. Knapp's letter in *THE MEDICAL RECORD* of January 6, 1883, especially as the writer thereof seems never to have given it a trial. It was scarcely necessary for Dr. Knapp to draw our attention to the French and German devices of the past fifty years, for the removal of foreign bodies, inasmuch as the extensive circulation given by Wood's Library of Standard Authors to Poulet's "Foreign Bodies in Surgery" places a very exhaustive list before the profession. The real question is, not the removal of foreign bodies as found by the expert just as introduced by the child, but it is, how shall they be treated when deeply impacted? It is in such cases that one often finds the parts lacerated by previous efforts at removal, the swollen walls of the external auditory canal so closely embracing the foreign body that neither hooks or spoons can be easily or safely passed; a state of things, in fact, which a careful perusal of Dr. Knapp's letter does not convey the idea that he has as yet encountered. When the deeply impacted foreign body completely obstructs the canal, as is often the case, the operator, after forcing his instrument beyond it, finds himself working in the dark and unable to operate skilfully; he cannot determine how near the foreign body lies to the drum-membrane, and when it is situated very near to that delicate structure no one possesses the requisite delicacy of touch to always avoid its laceration—an injury the consequences of which are inflammation of the middle ear and its attendant evils. And it should be borne in mind just here that no serious result need be usually apprehended from the presence of a foreign body in the canal of the ear unless it be pushed down upon the drum-membrane, or into the middle ear, thus injuring these parts, or unless the middle ear be injured by poking instruments behind the object. Should the instrument which Dr. Knapp, in his letter, proposes to have made so as to open its prongs when thrust back behind a foreign body, ever be made and brought into use in these difficult cases, one can scarcely foretell the destruction such a device would be capable of doing, even in his skilful hands. In regard to the seemingly disparaging quotation made by Dr. Knapp from *The American Journal of Otology*, it may appear to be an ingenuous argument to those who have not access to the files of that journal against the efficiency of my forceps; but the extract is garbled and disingenuous, for Dr. Joy expressly states, in referring to the first attempt to remove the locust-bean before it became disintegrated by maceration in the secretions surrounding it in the canal: "I am positive that if we could have used these forceps (referring to Dr. Sexton's) in the first operation, the bean would have been removed in its entirety." And Dr. Joy reports, in the same article, another case where an impacted brass mounted glass-stud was removed with these forceps after other kinds had been unsuccessfully tried.

The former case was referred to as the one which suggested the construction of the forceps which has been subsequently used so successfully in a large number of similar cases.

In conclusion, it may be stated that the forceps here alluded to by me will not only grasp such beans as shown in the cut which accompanied my letter in *THE MEDICAL RECORD* of December 23, 1882, without necessarily pushing it farther in, but it will also retain its hold while very great traction is made.

With means of this kind at hand—which are also ap-

plicable to the extraction of foreign bodies from the nose—I shall, until something better is found, prefer to operate in these cases by seizing the presenting portion of the object, and thus exert tractive force, to adopting the plan offered by Dr. Knapp, which consists in applying a pushing power from behind. Yours sincerely,
SAMUEL SEXTON, M.D.

New York, January 6, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 30, 1882, to January 6, 1883.

McKEE, J. C., Surgeon. To report on or before January 1, 1883, to the Commanding Officer, Fort Winfield Scott, California, for assignment to duty as Post Surgeon. S. O. 197, par. 1, Department of California, December 28, 1882.

GORGAS, W. C., Assistant Surgeon. Relieved from the temporary duty to which assigned under S. O. 137, par. 4, Department of Texas, and will report to the commanding officer, Fort Brown, Texas. S. O. 140, par. 2, Department of Texas, December 26, 1882.

Official List of Changes in the Medical Corps of the Navy for the week ending January 6, 1883.

TIBBS, HENRY B., Assistant-Surgeon. Ordered to the U. S. S. Jamestown.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 6, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
December 30, 1882	0	13	45	6	40	35	0	0
January 6, 1883	0	6	64	10	46	52	0	0

THE MANAGEMENT OF THE TEXAS EPIDEMIC.—Dr. J. B. Hamilton, Surgeon-General U. S. Marine Hospital Service, writes, regarding the Texas yellow-fever epidemic: "You were mistaken about the United States not quarantining the Rio Grande between Laredo and Brownsville, though it did not quarantine in Mexico, as has been charged. Please correct this point, as the safety of Texas is due, we think, to that *cordon*. The Mexicans, after they saw the good effects of quarantine in Texas, adopted similar means of arresting the disease on their side and with success."

A NEW USE FOR THE CONDOM.—Dr. J. Newell Robertson of Walcott, N. Y., writes: "F. A. came to my office on the evening of December 6th with a piece of bone in the lower fourth of the œsophagus which lodged there the evening before while eating a 'boiled dinner.' I introduced several sizes of flexible catheters, could feel the substance distinctly, and succeeded in pushing it down about one inch. I then fastened a piece of tissue rubber to the end of a catheter, passed it below the sub-

stance, inflated it, then withdrew it, doing it several times. I then, at the suggestion of Dr. Wilson, employed a condom in the same way. Failing as with the first, I inflated it *above* the substance, pushing it gently down, and found to my satisfaction that the 'bone of contention' passed easily before it."

SHAKESPEARE ON DEATH.—Of the deaths by poisoning two are minutely described. One takes place off the stage, and is only named to us; two are sudden—the Queen in "Hamlet," and Romeo. In these last cases the agent was clearly hydrocyanic acid in some form, a vegetable extract, such as laurel-water, killing almost at once, and painlessly, leaving no time for thought, but only for the certainty of quick-coming death. King John, on the other hand, is poisoned by a corrosive irritant, probably mineral, comparatively slow in its action, of which burning heat is the chief symptom:

"There is so hot a Summer in my bosom,
That all my bowels crumble up to dust.
Against this fire
Do I shrink up?
None of you will bid the Winter come,
To thrust his icy fingers in my maw,
Nor let my kingdom's rivers take their course
Through my burned bosom, nor entreat the North
To make his bleak winds kiss my parched lips?"

The elder Hamlet, again, dies by vegetable poisoning. There is a strong reason for thinking that the true reading of the drug is not the usual "hebenon," but "hebona," or yew juice, for the symptoms are precisely those caused by this, and by no other. Whether, in the then state of anatomy, Shakespeare really believed, contrary to the truth, that such a juice poured into the ear would so course through the body, is not clear. It is probable that he took the old story, so far as he needed to do so, but having made it responsible for the mode in which the foreign element was introduced into Hamlet's frame, used then his own observation and curious plant-lore for the efforts which the body made to cast it out. The many cases of death by steel are very closely studied from nature. Those who have carefully examined the dead on a battle-field, or in the streets after an émeute, are struck with the fact that while the expression on the faces of those who have died by gunshot wounds is one of agony and distress, the dead by sword have a calmer expression, though their wounds often seem more painful to the eye. A very careful observer, who was through the Indian mutiny, entirely confirms this. After giving several instances, he says: "A rapid death by steel is almost painless. Sabre edge or point divides the nerves so quickly as to give little pain. A bullet lacerates." This is in entire accordance with Shakespeare's diagnosis. York, in "Henry IV.," dies "smiling"; so young Talbot, in 1 "Henry VI.," "Poor boy! he smiles." In the great majority of cases there appears to have been no acute pain; and such distressful sensations as were felt, when there was time to feel anything, were those of cold. Death, therefore, resulted from hemorrhage, of which an exceeding chilliness, without pain, is always the consequence. Hotspur and Warwick both speak of this chill, "the earthly and cold hand of death," the "cold, congealed blood." The only instances in which acute pain wrung "groans" from the sufferer were those in which death was long delayed, when, as with Clifford, "the air has got into my deadly wounds," and Montague also groans from the delay. There is a most striking passage in Jeremy Taylor's sermons in which he speaks of wounds to the same effect, but attributes the painlessness of a wound at first, wrongly as it would seem, only to the heat and rage of the fighter, who has no time to feel. "I have known a bold trooper fight in the confusion of a battle, and, being warm with heat and rage, received from the swords of his enemy wounds open as a grave; but he felt them not, and when, by the streams of blood, he found himself marked for pain, he refused to consider then what he was to feel to-morrow; but when his rage had cooled into the temper of a man,

and clammy moisture had checked the fiery emission of spirits. he wonders at his own boldness, and blames his fate, and needs a mighty patience to bear his great calamity." Shakespeare carefully discriminates between the wounds which pierce the heart and are at once fatal, and those which allow a few minutes, or even moments, of life. A stab which causes instant death wrings from the dying person one sharp cry of momentary agony, or sometimes purely spasmodic and mechanical, and then all is silent; and with the cry there is a sharp, convulsive movement of the limbs. So, Polonius utters one loud "Oh! I am slain!" Aaron imitates the squeal of the dying nurse, "Weke, weke!" Prince Edward, in "Richard III.," "sprawls," after his first stab. Those who do not die at once, but bleed to death, or are choked in blood, speak a little, know they are dying, but are not in pain, and have no convulsive movements.—*The Spectator*.

THE PROPER WAY TO GIVE ACONITE.—Dr. William Murrell makes some judicious observations on the correct plan for administering aconite so as to secure its most advantageous action. He observes that aconite acts best in small doses frequently repeated. Many practitioners get no good from aconite because they do not know how to use it. The dose of the tincture recommended in the British Pharmacopœia—from five to fifteen minims—is absurdly large, and no one with any regard for his patient's safety or his own reputation would ever think of giving it. The best way is to put half a drachm of the tincture in a four-ounce bottle of water, and to tell the patient to take a teaspoonful of this every ten minutes for the first hour, and after this hourly for some hours. Even smaller doses may be given in the case of children. The great indication for the use of aconite is elevation of temperature; the clinical thermometer and aconite bottle should go hand in hand.

CRYING OF THE FŒTUS IN UTERO.—Dr. A. Harlow, a well-known and highly esteemed physician of Detroit, Mich., reports a case (*Michigan Medical News*) in which he positively avers that the child while yet unborn uttered several distinct cries—at the time the membranes were ruptured and the child's head was in the superior strait. It was subsequently safely delivered by the forceps.

SMALL-POX IN HAYTI AND THE PROTECTIVE POWER OF VACCINATION.—A private letter from Dr. J. B. Terres, of Port-au-Prince, Hayti, gives some interesting facts regarding the prevalence of small-pox in that island. Dr. Terres says that the first case of small-pox was brought to the city of Cape Hayti from Port Plate, a city in the Spanish province, in the latter part of October, 1881, and from that point it spread rapidly over the entire island, not a city or even a plantation escaping the dreadful visitation. The first case appeared in Port-au-Prince on November 15, 1881, and the disease soon spread throughout the entire city. The largest proportion of the cases was of the confluent form, and the mortality was very great. From the best information Dr. Terres is able to obtain he estimates that the number of deaths on the island from small-pox has reached fully fifty thousand, and the disease is still doing its deadly work. No active means were taken to check its spread until about January 23, 1882, and even when the necessary measures were adopted by the Medical Jury there formed, it was found impossible to carry them out satisfactorily. The great trouble experienced was to make the masses understand that the spread of the disease was chiefly owing to the free intercourse of well persons with their sick friends.

Regarding the effect of vaccination Dr. Terres says: In Hayti vaccination has proved to be an almost absolute protection from the disease. A few exceptions have been noted, but these he attributes to the fact that the vaccine did not take properly. There were but few phy-

sicians at the time who could obtain vaccine matter, the supply furnished to those few was limited, and as the greater part of the matter was worthless the natural consequence was that with a majority of the people vaccinated it did not take. Dr. Terres used the bovine virus in tubes, quills, and on ivory points. He was most successful with the tubes, owing to the fact that the virus was better protected from the air, and was therefore less susceptible to atmospheric changes. The other forms, not being so well protected, lost their virtue soon after being imported to this warm climate. "I can say," he writes, "that I did not find one death occurring in cases that had been properly vaccinated, and from all the information that I have been able to gather from other physicians they uphold my statements."

OPHTHALMOLOGICAL STATISTICS IN THE UNITED STATES.—The following interesting statistics are given by Dr. W. S. Little in a recent article: The statistics of ophthalmic hospitals and ophthalmic work in general hospitals in the leading cities of the United States afford the following: Of 107,383 eye cases, 19,037 required surgical procedures, of which 862 were enucleation of the eye for some of the many forms of objective traumatism; principally on account of the dread of, or presence of, sympathetic irritation or sympathetic ophthalmia of the other eye; some for intraocular conditions, and a few for cosmetic purposes.

Thus 17.7 per cent. of ophthalmic work is operative, and 4.5 per cent. is enucleation of the eyeball. This percentage for the operation of removal of the eyeball should be higher than the statistics derived from the public clinics indicate, as this class of cases is more apt to seek private advice.

The importation of artificial eyes is about ten thousand annually, and recently the manufacturing of them has become a home industry.—*Philadelphia Reporter*.

CEREBRAL HEMORRHAGE AND FRACTURE.—An interesting medico-legal case was brought to the Pennsylvania Hospital recently. A man of intemperate habits was found drunk on the streets, and soon became comatose. He was brought to the hospital with symptoms of compression of the brain without evident hemiplegia, but with irregular pupils (right strongly contracted), and stertorous respiration, followed by death. There was no discernible wound of the scalp. A hemorrhagic effusion under the membranes, coinciding with a fracture of the right parietal bone, was found in the interior of the left hemisphere, and also a recent clot. It was believed that the small clot first caused apoplexy, and in falling the fracture of the skull was produced. It is further interesting as showing the relation between alcoholic poisoning and cerebral hemorrhage.

ESERINE AND BELLADONNA IN TETANUS.—Dr. Layton reports in the *New Orleans Medical Journal* a case of tetanus cured with the following prescription: Sulphate of eserine, one-half grain; pure glycerine, two fluidrachms; syrup of orange flowers, fourteen fluidrachms; water, two ounces. M. S. Teaspoonful, which contained one sixty-fourth grain or one milligramme of eserine, every hour. The glycerine was added to prevent the decomposition of the eserine, because this drug is affected even by exposure to the atmosphere. From January 10th, in the evening, the doses of eserine were given at intervals of an hour and a half; later, the time was increased to two hours, the remedy was continued until January 17th, when the child had taken, in all, three grains of eserine; the prescription was then discontinued, the only remaining trace of the attack being some rigidity of the jaws, which had entirely disappeared by January 30th.

Dr. Whiteley reports two cases of tetanus in the *British Medical Journal*, which he claims to have cured by belladonna in large doses. From twenty to thirty minims of the tincture were given every two hours.

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Original Lectures.

ON RESPIRATORY MEDICAMENTS.¹

By PROFESSOR GERMAIN SEE,

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PART I.

GENTLEMEN: Among the cardiac medicaments there are few that may not modify the respiratory function in diseases of the heart. Digitalis, convallaria maialis, chloral, bromide of potassium, have this power in a marked degree, but their influence is indirect, being exercised through the medium of the circulation, or rather by their action on the heart, whose energy the most of them, and especially digitalis and convallaria, augment, causing the disappearance of general stasis, as well as passive congestions of the lungs.

By the side of these cardiac respiratory medicaments (or rather at their head) certain medicaments properly called *respiratory* deserve to be placed, and to which I directed attention three years ago when discoursing of the treatment of asthma by iodine. Thus far they have never been grouped or studied from the point of view of their common property, which consists in facilitating the respiratory function.

Foremost in this list ought to be mentioned:

I. Iodine, and its derivatives, iodide of potassium, and iodide of ethyl.

II. Arsenic, to which has been attributed from all time a favorable effect on the respiration.

III. Injections of morphine, which I have employed for ten years, and which were introduced into therapeutics by Huchard.²

IV. Erythrophleum, of which the physiological study, made with M. Rochefontaine, was published in 1880, in the "Mémoires de l'Institut." The active principle, erythrophleine, extracted three years before from this plant by Gallois and Hardy, has been made the object of new researches in my laboratory. The plant and its alkaloid have been for two years the subject of clinical studies which have not yet received publicity, but which show clearly the action of this medicament on respiration, as moreover in animals it possesses a manifest action on the circulation.

V. Pneumotherapeutics, by the aid of portable apparatuses.

VI. Quebracho. This is the bark of a member of the Apocynaceæ family, which grows in South America. Penzold has employed it in the form of an alcoholic extract (10 grammes of the bark, 100 grammes of alcohol); this extract is diluted with twenty parts water and given in teaspoonful doses. In emphysema he has had marked success; in other dyspnoeas the effect is less pronounced. Furthermore, the active principle is not yet known; aspidospermine (obtained from the bark) being a product not well defined. Having been unable to procure the plant in order to verify the somewhat contradictory assertions of divers experimenters, I cannot speak from experience of the effects of this respiratory medicament.³

I.—PREPARATIONS OF IODINE.

1. IODIDE OF POTASSIUM.—Iodide of potassium acts in an evident manner on the respiratory mucous membrane, and on the nervous mechanism of respiration. It is the remedy *par excellence* for asthma, and it constitutes the most useful medicament to combat dyspnoea of cardiac origin. If the lesion be a valvular one, its effects are less marked than if the lesion be one of the cardiac tissue itself; nevertheless, in both cases it generally suffices to banish, at least for a time, the element of dyspnoea. But before pronouncing on the existence of an asthma or of a cardiac dyspnoea, it is important to take into account a fact which I have often observed, and which has aforesaid led me into error. In a great number of asthmatics you observe at the apex of the heart, more rarely at the base, a very soft but distinct systolic murmur, which may cause you to apprehend a lesion of the valves; now this murmur, which seems to be located in the valves of the right heart, disappears altogether, and in a few days' time, by the sole fact of the disappearance of the asthma under the iodine treatment.

The other mistake, which consists in taking a case of simple cardiac dyspnoea for one of true asthma, is frequently made, as I had occasion to remark at the beginning of this course, when treating of the diagnosis of the pulmonary forms of heart disease.¹ This confusion, so prejudicial from the double point of view of diagnosis and prognosis, has not, practically, grave consequences, as far as therapeutics are concerned, for the same agent renders good service in both cases.

Formulae and doses.—One gramme and a quarter [about nineteen grains] per day; the dose to be gradually increased to two or three grammes. Prescribe the iodide in aqueous solution (1-20) or with syrup of bitter orange (10 parts of the salt to 200 of syrup or water); dose two to four teaspoonfuls every day, each teaspoonful to be diluted in a glass of water.²

If, by reason of the bad taste of the salt, some patients prefer to take it in wafers or capsules, they ought immediately afterward to drink freely of some diluent to prevent the irritant effect of the salt on the gastric mucous membrane.

Iodism.—The following are some of the inconveniences attending the prolonged use of the iodide: 1. A sanguinolent oozing from the buccal, and even from the bronchial mucous membrane, never amounting to an hæmoptysis, unless it be in the case of a tuberculous patient (beware how you prescribe iodine preparations to such patients). 2. Loss of flesh. This, instead of being a disadvantage, is often an advantage, especially when your patient is too stout; the excess of adipose being made to disappear, one obstacle to the free circulation of blood in the peripheral regions is removed. Other inconveniences are: 3. Loss of strength, which contraindicates a further use of the remedy. 4. Loss of appe-

cal Society of New York, in June, 1881, gave a favorable report on Quebracho. It was tried in thirty-two cases, embracing spasmodic asthma, with or without emphysema, cardiac dyspnoea, the dyspnoea of Bright's disease, aneurism, pneumonia, etc., and of these relief to a greater or less extent was afforded in twenty-one, no relief in ten, and in one the dyspnoea was increased. The respiratory centre was believed to be the seat of its action. *Ibid* New York Medical Journal, September, 1881 (Dr. A. H. Smith's report). Also THE MEDICAL RECORD, vol. XX., pp. 304 and 559.—TRANS.]

¹ *Ibid* my work on cardiac diseases (Diagnostic et traitement des Maladies du Cœur), p. 24 et seq. O. Doisy, Paris, 1883.

² [This formula may be expressed in terms of the old system as follows:

R. Potassii iodidi ʒ ijss.

Syrup auranti corticis ʒ iij.

M. Signa.—A teaspoonful three times a day in a glass of water. Dose to be gradually increased to two and even three teaspoonfuls.—TRANS.]

¹ Delivered in the Hôpital La Charité, and translated, with permission of the Professor, from advance sheets, by E. P. Hurd, M.D., Newburyport, Mass.

² Journal de Thérapeutique, 1877.

³ [This new remedy is now largely prescribed in the United States for dyspnoea of all kinds. It is given in teaspoonful doses of the tincture of the bark; is very disagreeable to the taste, and almost always produces nausea. The Therapeuti-

tite, which indicates a provisional suspension of the treatment. 5. Eruptions of various kinds.

2. **TINCTURE OF IODINE.**—It is without doubt the iodine which is remedial when we give iodide of potassium. To assure myself of this I have often prescribed (and with benefit) iodine alone, according to the following formula :

R. Tincture of iodine..... 5 grm. (gr. lxxv.)
Syrup of horseradish..... 150 grm. ($\frac{3}{4}$ v.)
Syrup of poppies..... 150 grm. ($\frac{3}{4}$ v.)

M. Signa.—Three teaspoonfuls a day; dose to be doubled as required.

The syrup of horseradish masks the taste of the iodine.¹

3. **IODIDE OF ETHYL.**—This compound, discovered in 1825 by Gay Lussac, is a mixture of two parts by volume of alcohol and one of hydriodic acid. This ether, which is without acid reaction, has an odor of chloroform, a piquant savor; it is volatile, boils at 64° centigrade, without being inflammable; exposed to the air, it turns a light brown color, from the setting free of a little iodine. Its chemical formula is C_2H_5I . For twenty years it was forgotten, till Huette experimented with it on himself and on one of his friends, with the object of replacing iodine in the treatment of phthisis, a disease which rarely calls for the employ of the iodine preparations. Since 1850, however, nothing more was heard of this substance till I conceived the idea of applying it to the treatment of dyspnoea from asthma or from other causes.

Physiological effects of iodide of ethyl.—In healthy individuals, and patients affected with dyspnoea, who have been made to breathe six to ten drops of iodide of ethyl six or eight times a day, the following results have been observed: After a few seconds the individual breathes with greater facility, and continues to do so for several hours. This effect, more marked when the person is laboring under dyspnoea, is quite perceptible in a perfectly healthy person. There is no anaesthetic or soporific action. The heart and circulation undergo no modification, and yet absorption of the medicament takes place immediately, for at the end of ten minutes iodine may be found in the urine. Sometimes an attack of coughing comes on at the commencement of the inhalation.

Modus operandi.—Iodide of ethyl, as well as iodide of potassium, has an incontestable action on the bronchial secretion, which it augments, at the same time that it increases its fluidity, thus facilitating the entrance of air into the pulmonary alveoli. Under its influence the respiratory murmur (before absent) returns, the tympanic resonance of emphysema disappears, the dry feeble râles of bronchial asthma give place to mucous râles.

This is the first effect of the iodide; its next action is on the respiratory centre by the medium of the circulation, which is now rendered more active. The respiratory centre, in the presence of an increased supply of blood, is re-enforced in function, and this explains the greater ease of respiration. In the third place, the ether in combination with the iodine, by its stimulus, enhances respiration, which becomes deeper and more energetic. These, then, are the indisputable advantages which this remedy possesses, not only in attacks of asthma, but in cardiac dyspnoea as well, and I have thought it deserving a very foremost rank among the medicaments of this group.²

¹ [A very good preparation containing iodine, much employed in this country, and especially commended for its palatableness, is the syrup of hydriodic acid. It is not mentioned in our text-books on therapeutics and materia medica, but it is sold all through the United States, and is in much repute as a remedy for asthma and for chronic bronchitis. The preparation which is most frequently prescribed in this region is Gardner's Syrup (manufactured at 170 William Street, New York), which is certainly an elegant preparation, and has been given both in spasmodic and in bronchial asthma with very satisfactory results. The syrup contains 40 minims of the dilute acid to the ounce, representing 6.66 grains of iodine. Two teaspoonfuls is an average dose. Many of our apothecaries make a syrup of hydriodic acid, which keeps well and can hardly be distinguished from Gardner's. Children take this syrup readily. It never irritates the stomach. See Wyllie's article on Hydriodic Acid a Substitute for Iodide of Potassium, in this journal, vol. xv., p. 454.—FRANS.]

² [Dr William Squire, of London, uses bromide of ethyl in similar cases. He drops on a square piece of lint twenty to thirty drops, which he requires to be inhaled. In renal dyspnoea, laryngeal spasm, some kinds of vertigo, and all diseases where there is vaso motor spasm, he finds it useful.—TRANS.]

II.—ARSENIC.

Arsenic has a very certain action on the respiratory muscles and on the bronchi, but it is slower in producing its effects than is iodine. Its effects on the heart, are, moreover, uncertain; it is not known just how the circulation is affected by it, or how it influences the oxidations of the economy. In general terms it is a medicament which spares the forces in staying the processes of denutrition, as is proved by the diminution in the production of urea and carbonic acid which attends its use. This property, however, does not attend the administration of the medicament in large doses, and ceases to manifest itself when the arsenical treatment is long continued. Gæthgens has, in fact, sometimes found an augmentation of urea eliminated in the urine; this is in accordance with what I have taught these twelve years. It cannot be depended upon, then, for any certain and constant effect in retarding oxidation, and thus lessening denutrition in the economy.

Lucien Papillaud has advised, as regular and systematic treatment of the cardiopathies, arsenic in combination with antimony, prescribing for each day two pills, each containing one milligramme of arsenious acid. It seems probable that the antimony affects more directly the central organ of the circulation than the arsenic, but the curative results of this treatment have never been proved, nor has it been shown to have been beneficial against the dyspnoea.

III.—HYPODERMIC INJECTIONS OF MORPHIA.

Morphia, used subcutaneously, is a powerful respiratory stimulant, but its action in facilitating respiration is not lasting, and grave inconveniences follow its persistent use: 1. It is sure to impair the appetite, digestion, and nutrition. 2. That morbid habit of the system, rightly called morphinism, with all its evils, will certainly be engendered. 3. The urinary secretion will be lessened; this is a great disadvantage in heart-maladies. 4. That dangerous form of respiration called Cheyne-Stokes respiration has been known (according to Filehne) to manifest itself in certain cases. Subcutaneous injections of morphia, then should only be resorted to during and for a paroxysm of dyspnoea.¹

IV.—ERYTHROPHLEUM AND ERYTHROPHLEINE.

Physiological experimentation.—Erythrophleine, discovered by Gallois and Hardy in 1876, is the active principle of the bark of *Erythrophleum guineense*, of the family of Leguminosæ. It is an alkaloid which has been experimentally shown to possess considerable toxic power and a remarkable action on the heart.

This action on the heart, as determined by experiments on animals, suggested to me the idea of introducing erythrophleine into the therapeutics of cardiac affections, but it was necessary as a preliminary undertaking to test by new experiments the toxic power of this alkaloid, and especially to study its principal physiological effects, notably those which are capable of registration by means of the hæmodynamometer, the sphygmograph, and the pneumograph.

This is the result of this investigation (I reproduce the summary report lately made by me to the Academy):

"Researches, commenced with frogs, have been continued with hares and dogs.² We mention only experi-

¹ [Some of the most formidable attacks of cardiac dyspnoea which have ever occurred in my practice have been associated with aortic insufficiency, with dilated left heart, and frequently with dilated atheromatous aorta. In these cases hypodermic morphia is the remedy *par excellence*—generally every other measure is impotent. I have been in the habit of using for an adult a saturated solution of sulphate of morphia in cherry-laurel water, commencing with five drops and increasing to twenty or even thirty. The larger dose is frequently required. Magendie's solution (sixteen grains to the ounce), is a very convenient preparation, of this, ten drops is an ordinary dose for hypodermic use. I have sometimes added, and with benefit, one one-hundredth grain of atropine to the injection, not believing in the therapeutical antagonism of the two drugs. Morphia subcutaneously is the most efficacious remedy against the cerebral anæmia as well as the dyspnoea of Corrigan's disease. I have, however, observed all the evils which Professor Sée above describes follow this treatment, to which I was compelled to resort to mitigate the violence of the attacks.—FRANS.]

² [These experiments were made with M. Rochefontaine.—FRANS.]

ments performed on the latter animals by the aid of hypodermic injections of a determinate solution of erythrophleine, since the limits of this article do not permit us to report experiments made on other animals by the same method or by other means of introducing the toxic agent into the organism. One centigramme of erythrophleine introduced under the skin of a dog weighing nine kilogrammes had no appreciable effect. Two centigrammes killed in two hours another dog weighing fourteen kilogrammes. In other words, in the dog the hypodermic injection of a solution of erythrophleine the strength of one milligramme per kilogramme of the animal did not produce evident toxic effects; one milligramme and a half, however, was fatal in two hours. Many experiments on different animals have proved that the toxic power of erythrophleine is about the same as that of the amorphous digitaline of Homolle and Quevenne.

"The first signs of intoxication consist in a slight degree of agitation and restlessness, followed by a period of prostration, which is succeeded by efforts of vomiting. The latter constitute the real initial symptoms of the poisoning. If the dose of the toxic agent be not too large, the vomiting ceases, and the animal rapidly recovers his normal condition. The circulatory apparatus is disturbed in its function as well as the digestive apparatus. We observe augmentation of the intra-arterial blood-pressure, irregularity, then slowing of the pulse, results which we find already recorded in the memoir of Gallois and Hardy. The period of retardation of the pulse is remarkable by reason of the regularity of the heart's action, the energy of each pulsation, and the uniformity of the intra-arterial blood-pressure. This pressure, in fact, is not modified by the respiratory movements, as it is ordinarily in the normal state, for the tracings of the hæmadynamometer and sphygmograph show that the undulations which, in an animal not subjected to the action of the poison, result from the influence of respiration on the blood-pressure, are not observed in the animal to which the erythrophleine has been administered. This period is followed by another, during which the pulse is extremely weak and rapid; the oscillations of the pressure under the influence of respiration reappear; this pressure diminishes gradually; the beatings of the heart, becoming more and more feeble, cease by moments, then are arrested definitely, and the blood-pressure becomes nil.

"The respiratory movements seem influenced directly by erythrophleine, although they are influenced *secondarily* by cardiac affections. In a general way they are at first somewhat retarded and of greater amplitude. When the cardiac pulsations are accelerated in the terminal period of the intoxication, the respiratory movements are extremely energetic and more frequent. In almost all the experiments, if not in all, the respiratory movements ceased at the moment of arrest of the heart. Several times at this moment the animal gave a loud cry. One, two, and even three minutes after the heart ceased to beat the respiratory movements reappeared, still energetic, lasting two or three minutes, then were arrested permanently.

"The functions of different parts of the nervous system seem disturbed by erythrophleine. Thus the faradic excitation of the thoracic ends of the pneumogastric nerves in the cervical region did not determine arrest of the heart in an animal poisoned by erythrophleine as it does in a well animal. The sudden fall of blood-pressure which accompanies the faradization is, however, manifested equally in both cases. The inhibitory or moderating action of the pneumogastric nerve on the heart is then modified by erythrophleine, and one can with this substance dissociate, as it were, physiologically the two circulatory phenomena which result from excitation of the cardiac filaments of the vago-sympathetics.

"The faradic excitation of the cephalic ends of the pneumogastrics, in an advanced stage of the intoxication, does not provoke that acceleration of pulse which it de-

termines (from the very first) in the animal that is in sound condition, but it acts on the arterial tension as it acts ordinarily, that is to say, by augmenting it; here we see a disjunction of physiological effects, under the influence of the poison.

"Faradization of the cardiac ends or of the cephalic ends of the vago-sympathetic nerves induces, then, in an animal in the normal state, the same modifications of pressure which it induces in an animal that has been poisoned by erythrophleine. The rhythm of the heart, on the contrary, is *respected* by these faradic excitations in the animal intoxicated by this alkaloid.

"In an animal killed by erythrophleine, the necropsy shows the heart in diastole, flaccid, and yet full of blood. Sometimes the ventricles are animated by a tremulous movement like that which succeeds to faradization of these ventricles. Generally the heart has not lost its electric contractility. The pneumogastric nerve has retained its action on the stomach. The excitomotricity of the phrenic nerves is ordinarily diminished, or even sometimes abolished, while that of the sciatic or of the cervical sympathetic is not lessened.

"To sum up, physiology demonstrates that erythrophleine acts not only on the heart but also on the respiratory apparatus, and this double action on functions so important incites us to make application of it to clinical medicine, and more particularly to the treatment of cardiac and respiratory affections."

Clinical applications.—All the facts which I have collected for the past three years enable me to affirm augmentation of the respiratory function in dyspnoic patients under the influence of one gramme (or thereabouts) of the alcoholic tincture of erythrophleine—I give this preparation in preference to the alkaloid, which is harder to obtain and to manage. In simple or cardiac asthma the movements become slower and of greater amplitude. The effects on the heart are less marked than in the case of animals; the arrhythmia does not disappear as it does under the influence of digitalis and convallaria; the pulse is not slowed; the valvular murmurs do not undergo modification; the diuresis is wanting. As a cardiac remedy, then, it presents no advantage; as a respiratory medicament it may to a certain extent supply the place of iodine and the iodine preparations.

A MEDICAL CONFIDENCE MAN IN NEW YORK.—The House Physician of Roosevelt Hospital, Dr. Van Vredenburg, writes: "A young man of about twenty-five years, low-sized, thick-necked, and rather common-looking, with a very confidential manner of speaking, has visited this hospital twice in the last few months, and is, I learn, canvassing the different physicians' offices of this part of the city. He described himself at his first visit here as surgeon to one of the Inman Line steamers, and at the second visit as assistant-purser to the City of Chester, Inman Line. He always purports being sent by some prominent physician, or else by a personal friend of the person to whom he applies. The first time he came here he offered to purchase surgical instruments and bring them in free of duty, claiming that as surgeon to the ship he could do so readily. The second time he had some "very good brandy" to sell, some that he claimed to have bought abroad, and more than sufficed for his own use. He desired the money with which to make his purchases advanced to him, but on neither occasion did he receive any commission. I wrote to Mr. J. G. Dale, agent of the Inman Line, and in his answer he disclaimed any knowledge of the man other than that he had heard of him and his doings. Said that there was no man by the name of 'Morton' (the name he gave here) attached to any ship of the line in any such capacity—I believe he said in any capacity."

A LARGE COLLECTION.—Professor Virchow has in his museum, at Berlin, a collection of six thousand skulls. It will be difficult for any one to get ahead of him.

Original Articles.

REPORT OF A CASE IN WHICH A MYXOLIPOMA WEIGHING EIGHTY POUNDS WAS REMOVED FROM THE ABDOMINAL WALL.

By N. P. DANDRIDGE, M.D.,

CINCINNATI, O.

EARLY in September, Sarah H—, colored, was brought to Cincinnati and placed under my care by Dr. H. T. Bell, of Bethel, Kentucky. She was suffering from a tumor hanging from the left side of the abdomen, which had reached such an enormous size that it was necessary to suspend it in a strong sack, which was secured around her waist when she assumed the erect position. Most of her time was spent in bed, the tumor lying beside her. By my advice she entered the Cincinnati Hospital, and the following history is taken from the record of the case made by Mr. Lewis and Mr. Christopher, resident physicians, who at different times had charge of her:

S. H—, colored, aged forty. Moderately well nourished and developed, married, and mother of nine children, one of whom died when one week old, one at two weeks, and one at six months. When the tumor was not larger than an egg she aborted at one month. Eight years ago she states that she first noticed a small elastic tumor, the size of a goose-egg, in her side. It was located, according to her statement, to the left of the median line, and midway between the umbilicus and symphysis. It was freely movable beneath the integument, and was quite painless. At the end of two months the tumor was fully nine inches in diameter, and at this time she noticed a swelling to the left of the symphysis, which soon attained the size of a hen's egg, and remained that size until about two months ago. The exact relation of this second growth to the first she cannot clearly give. During all this time she has been able to make it disappear by pressure, when it appeared to enter the larger growth. During the menstrual period it would at times seem to increase in size. For the last two months it has been rapidly increasing in size, and now she is no longer able to reduce it. At present it measures 11 inches in circumference, and 7 inches from its apex to the spine of the pubis, and forms a mass, which presents to the left of the vulva.

During the last two years the larger tumor has also rapidly increased. Before that time she was able to do general field and house work, and the tumor, according to the statement of her physician, was about the size of a "ten or fifteen pound water-melon." About this time an incision was made into it, for the purpose of exploration, with however, only negative results, the incision healed readily. Menstruation has always been normal, and her bowels quite regular. She has never suffered any pain, and her general health has been good. She lies most of the time in bed, and only occasionally attempts to get up, and then always has to suspend the tumor in a large sack, which is fastened around her waist. In the recumbent position, the tumor lies beside her on the bed, and by its weight has drawn the umbilicus and linea alba considerably to the left. The line of attachment extends from above the anterior superior spine of the ilium to the symphysis, and the tumor as it lies on the bed seems a semi-fluctuating mass, which readily changes its shape on being moved. The integument over it is freely movable, and the growth appears to be encapsulated and lobulated.

September 22d.—Dr. J. C. Mackenzie, at my request, dictated the following as the result of his examination: "Liver dulness normal, and liver appears to occupy its normal position. Splenic dulness normal in extent and position. The umbilicus is drawn to the left of the median line 2½ inches. Above the umbilicus the linea alba is found in the median line, below it curves to the

left. The point of greatest divergence is about four inches below the umbilicus, where it is 4 inches from the median line; opposite the symphysis it is displaced 3½ inches. The line limiting the area of abdominal tympanites corresponds with the arc of a circle whose centre is 6½ inches below the ensiform cartilage, and whose radius is 6 inches. The line limiting the tympanites intersects the true linea alba 5 inches below, and a little to the left of the umbilicus. The above measurements were taken with the woman lying on her back, but slightly inclined to the left side, her shoulders supported, and the tumor on the bed beside her."

The following measurements were taken at this time: Long axis of tumor (nearly parallel with the axis of the body), 35 inches; circumference around the long axis, 56 inches; greatest circumference, 67½ inches; circumference of pedicle, 32 inches; short axis from line of tympanites, 16 inches. To the inner side of the large mass is a smaller one, apparently occupying the labia majora of left side, pear-shaped, 6½ inches in length, 4 inches in breadth, and 12½ inches in circumference at its broadest part. The consistency of the main tumor is different in different parts. In places there seems quite a distinct sense of fluctuation. The aspirator needle, however, introduced brought away only a small amount of clear lymph-like fluid, a similar clear fluid escaped drop by drop from some punctures made by a hypodermic needle.

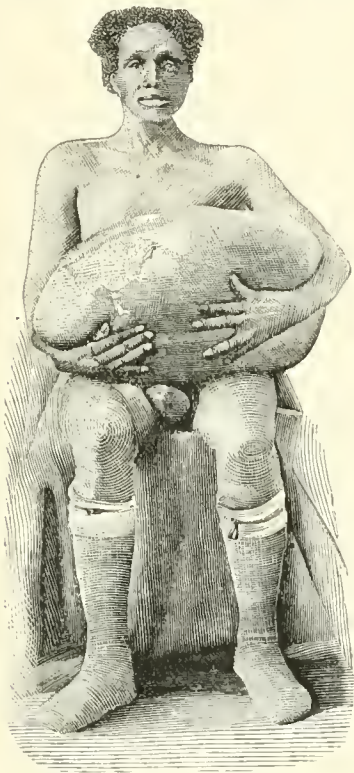
The surface of the tumor is uneven, indicating a division into lobules. Between two of these, in a slight depression across the growth, a cord-like body can be traced from a point two inches below, and to the right of the umbilicus, for a distance of fourteen inches, until it is lost in the thickened integument. Sixteen inches from the umbilicus is a shallow circular ulcer about one and a half inch in diameter, which is covered with a dry scab. This ulcer is said to have existed unchanged for two years. The integument over the tumor presents different degrees of thickening in different parts. Near to the abdomen, on the anterior surface, it presents a natural appearance. Toward the periphery of the mass it becomes thickened and indurated, and its surface presents small depressions. Even in its thickest portions the integument can be made to move readily upon the underlying growth, showing that the tumor is surrounded by a loose connective-tissue capsule. Within the line limiting the area of tympanites coughing gives an impulse to the hand on the abdominal wall from the underlying intestines. This cannot be felt outside this line. From the under surface of the tumor there escapes at times a lymph-like fluid.

The tumor was seen by my colleagues of the hospital staff and a large number of other physicians, and the diagnosis of a subcutaneous fatty tumor generally concurred in, although a subperitoneal origin was regarded as more probable by some. Various views were expressed as to the exact relation with the abdominal cavity, and whether or no some of the abdominal organs might not be found in the mass. Diametrically opposite views were entertained in regard to the propriety of attempting its removal. After careful observation my own conclusion was that the abdominal wall had been simply dragged down by the weight of the tumor, and that the line of tympanites marked the limits of the abdominal cavity. This reached some distance over the front of the tumor.

The smaller tumor was supposed to be a hernial protrusion, though the possibility of its being simply a lobule of the general growth was kept in view. The woman was exceedingly importunate that an attempt should be made for its removal, and was not the less determined when the great dangers were explained to her. So with the consent of my surgical colleagues I determined upon operating.

The mass was so heavy and so unwieldy that it was difficult to determine how best to handle it during the operation. A number of experiments were made by

strapping it securely to a board, but all proved unsatisfactory, so finally it was decided to place it upon a small stand beside the operating table and allow the tumor to overhang each end; in this way it was found the pedicle could best be exposed without the necessity of moving the entire mass. It was decided to make an incision over the anterior surface, separate the tumor from the abdominal wall, and complete the operation by cutting through the integument covering the under surface from within outward. The especial dangers which were foreseen and had to be provided for were, in the first place, the possibility (or probability) of opening the abdominal cavity and the escape of intestines. In case this accident occurred large flat sponges were provided, by which the opening could be closed and the bowel prevented from escaping, or if that was not possible, at least protected until the removal of the tumor was completed. The danger to be feared was the extreme loss of blood. To provide for this, a large number of hæmostatic forceps



were to be provided, and all bleeding points at once secured, and, where it was possible, it was determined to ligate all large vessels before cutting them. Pressure by means of broad sponges was expected to control capillary hemorrhage; and finally, as an extra precaution, the rubber tourniquet of the Esmarch bandage was to be thrown loosely round the pedicle to be tightened if necessary.

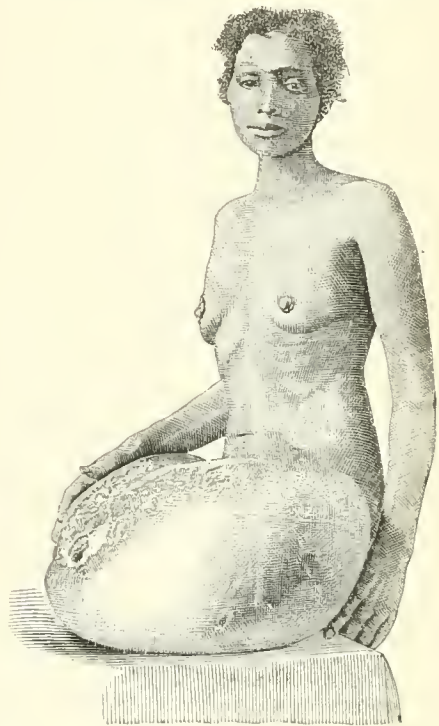
In case of collapse from hemorrhage or shock, two of the assistants were at once to apply Esmarch bandages from the toes to the hips, while stimulants were to be given, if necessary, hypodermically and by the rectum, and if these means failed a battery was ready to be used, if needed.

October 8th.—The tumor was compressed by a number of Esmarch bandages, but no information of importance was gained by this.

October 12th was appointed for the operation. The day previous the patient developed a malarial attack, followed by some dysenteric symptoms and the appearance of the menstrual flow. This, of course, necessitated the postponement of the operation. The unfavorable symptoms soon subsided, and the 19th was determined on for the removal of the tumor. On the 18th there was a renewal

of the malarial attack, though in a milder form. Quinine was now freely given, and as the outbreak had occurred after an interval of exactly seven days, it was thought best to let that period pass over before deciding upon a date for the operation. October 25th she was quite well, so Monday, October 30th was fixed. These delays in no wise affected her spirits, or her determination to have the operation at least attempted. About this time she succeeded one day in reducing the smaller tumor. Examination showed that the mass had not been fully reduced, but the hand could enter what seemed to be a large hernial opening. This opinion was afterward shown to be an entire mistake.

October 29th.—Dr. Mackenzie examined her heart and found an indistinct systolic bruit at apex, transmitted to the left, and some occasional irregularity in the heart's action. The apex beat was heard outside of the nipple line. The general plan of operation was fully discussed with my colleague, Dr. Walker. The arrangements were



all entrusted to Mr. Christopher, who, as interne, had charge of the case, and proved to be most satisfactory, every emergency being readily met without involving any delay whatever in the operation. The tumor was removed October 30th, at 11 A.M., in the amphitheatre of the hospital in the presence of the medical class and a large number of the physicians of the city. A hypodermic of morphine one-fourth grain, and atropine one ninety-sixth grain, was given about fifteen minutes before the administration of ether was commenced. Dr. E. W. Walker and the entire resident staff acted as assistants.

As decided beforehand, the tumor was allowed to lie upon a small stand by the side of the operating table. A sheet, rolled up, was placed beneath the pedicle, so as to raise it somewhat from the body, and the rubber tourniquet of the Esmarch bandage was thrown loosely around it, to be tightened in case of necessity. The main body of the tumor was removed in fifteen minutes and the entire dressing completed in forty-two minutes.

The tumor weighed seventy-one pounds immediately after removal, and as a considerable quantity of mucoid substance escaped and was lost its actual weight must have been, at least, eighty pounds.

The incision was commenced on the anterior surface, well to the outside of the left anterior spine of the ilium, and carried at once down to the surface of the tumor.

It was extended for ten or twelve inches, and the portion of the tumor thus exposed was found to be surrounded by loose connective-tissue, which was readily broken down with the hand, and the separation of the growth from the abdominal wall easily effected. All bleeding points were at once secured. The incision was carried rapidly across the whole anterior surface, following a line about three inches outside of the line of tympanites, all bleeding being controlled as we proceeded. The separation of the tumor was now continued, and effected principally by the hand, though at times the knife was necessary. The separation was readily effected; before, however, we had proceeded very far I suddenly found a considerable mass of intestines at the bottom of the wound, which had escaped from a large hernial opening. Without waiting to reduce them Dr. Walker at once covered the mass with a large flat sponge, and so protected them during the remainder of the operation, which was proceeded with without delay. Indeed, so successful was he in this that only very few persons knew that this complication had arisen. The circulation now began to flag, and soon the pulse at the wrist entirely disappeared. Esmarch bandages were at once applied from the toes to the hips by assistants who were ready for this emergency, if it occurred, and two ounces of whiskey thrown into the rectum. While these measures were being carried out, the work of separating the mass continued without interruption. As we approached the smaller tumor great circumspection became necessary, until it could be definitely determined whether we should encounter a hernial sac or only an independent lobule of the general mass. Before proceeding to a minute examination on this point, the main growth was separated partly by cutting, but principally by tearing through the portion connecting it with the smaller growth, and then the separation was completed by rapidly cutting through the integument and tissues which remained on the under surface, and as the attachments were severed, two assistants grasped the mass with large butchers' meat-hooks, and swung it free from the body. Large sponges were at once crowded against the exposed surface, while the smaller tumor was explored and found to be only a lobule of the general growth and easily removed. The protruding intestines were now returned. They were found to have escaped from what was evidently an old hernial opening an inch and a half in diameter. This was securely sewed up by a continuous suture of catgut. The bleeding points were now rapidly secured, and the surface of the wound washed off with a weak solution of carbolic acid, and the edges of the integument accurately adjusted by sutures, after a large-sized drainage-tube had been secured in place, and the whole covered with a thick mass of absorbent cotton. Hot bottles were at once applied, and the patient was covered with blankets. The Esmarch bandages were allowed to remain in place, and the foot of the bed elevated, and a rectal injection of two ounces of whiskey given. The shock of the operation was very profound, and she rallied slowly.

By 1 P.M. she was fully conscious; pulse weak and 108. She complained so much of the pain given by the rubber bandages, which had been allowed to remain in place, that they were removed. 2 P.M.—Pulse, 92, weak and intermittent; temperature, 98. Complaints of some pain in the wound, for which a hypodermic of one-fourth grain of morphia was given.

During the afternoon she passed several ounces of blood from her bowels. No blood in urine, which was freely passed. This hemorrhage from the bowels was, I think, very possibly due to the rupture of some of the hemorrhoidal veins, caused by the increased blood pressure produced by the compression of the lower extremities by the rubber bandage.

October 31st, A.M.—Temperature, 98; pulse, 108. Slept well. Pulse stronger. Dressing unchanged. About noon she became restless, and was given morphia one-fourth grain, champagne and ammonia carbonate every

hour. 4 P.M.—The dressing was removed, and the wound covered with large, flat sponges, soaked in a saturated solution of boro-glyceride, and held in place by bandages. The wound was free from odor; there was no pus, and the edges were in close apposition. A warm one-half per cent. solution of carbolic acid was syringed through the drainage-tube, washing out some clots of blood. Temperature, 99.2; pulse, 108. This washing out was ordered repeated every two or three hours.

At 6 P.M. the tube was found impervious, and no fluid could be forced through; at 7 P.M. a long cylindrical clot was washed out, and at 11.30 the tube was found quite free. The circulation continued feeble, the pulse ranging at a little more than a hundred. There was at no time any elevation of temperature. The surface of the wound looked well. The edges were well apposed, though slight traction easily separated them, showing that repair was not going on. Only once was there any odor. Champagne and carbonate of ammonia, and milk, were alternated every hour. At times there was some tympanites. The slight pain which was complained of was easily controlled by morphia.

November 3d.—Has had a natural stool, and passed a considerable quantity of flatus.

On the morning of the 4th I found her abdomen greatly distended, her countenance pinched, and respiration rapid and shallow. An injection was ordered, which brought away a good deal of flatus, which was followed by some relief.

During the night she became restless, complained of pain in the abdomen, which could not be controlled by morphia. She died Sunday morning, six days after the operation.

The autopsy was made by Dr. Joseph Eichberg, pathologist of the hospital.

"Body that of a colored woman, somewhat emaciated, and above medium size. Rigor mortis marked. Autopsy twelve hours after death. In the external abdominal wall, on the left side, beginning above and behind the crest of the ilium, and extending downward almost to the symphysis, was an incised wound fourteen inches long, the edges of which had been united by sutures almost the entire length. From the ends of this cut extended the extremities of a large-sized drainage-tube. Hanging down over the pubes was a pouch covered with integument, $5\frac{1}{2}$ inches long, 3 inches in breadth. Taking out the stitches, the edges of the wound were found to be in a sloughing condition, and the wound itself filled with a broken-down, decomposing tissue. No union had at any point taken place. The pouch was filled with a very offensive fluid, composed of broken-down tissue. At one point the floor of the wound was constituted of peritoneum, the edges of which had been stitched together by a continuous suture. This point was found to correspond to the internal inguinal ring. On opening the abdominal cavity the intestines were found enormously distended with gas, and the diaphragm was pushed up to the third intercostal space. The intestines were glued together by recent lymph, present in a very slight amount. In the internal inguinal ring of the left side, which had not been completely closed by the suture, was found a hernial protrusion of the intestinal wall involving only the unattached border, and forming a protrusion like a glove finger; length, three-fourths of an inch.

"This part of the intestine was situated twelve inches above the ileocecal valve. There was no interruption in the intestinal canal at the seat of hernia. The mesentery did not project through the opening, and was not connected with the tumor. The edges of the opening in the peritoneum had not become adherent, as shown by removing the suture.

"Lungs were congested and slightly emphysematous.

"Heart was soft and flabby, and the right ventricle filled with a large and partially decolorized clot.

"Kidney congested and slightly fatty; liver, normal.

"Both large and small intestines contained yellowish fluid feces; mucous membrane normal; stomach distended with gas; spleen small and firm; brain not examined. Cause of death peritonitis and failure of heart."

The immediate cause of death was undoubtedly the interference with the action of the heart and lungs, due to the great distention of the small intestine. The hernial protrusion did not involve the whole calibre of the bowel, and did not offer a mechanical obstruction to the passage of the intestinal contents. It probably, however, produced a paralysis of the peristaltic action, and thus allowed the over-distention, which was probably the immediate cause of the peritonitis. From this examination it is apparent that there was no depurative action in the wound itself, even the surfaces of the peritoneum, when they were brought together at the hernial opening, did not adhere, but fell apart as soon as the suture was removed. After the operation the circulation was always feeble. Her moral condition throughout was excellent, and one morning she expressed herself as feeling "splendidly." She did not, however, possess vitality enough to repair the immense wound left by the operation. The magnitude of the operation will be appreciated from the fact that the cut edge of the integument, measured on the tumor after removal, was sixty-two inches.

Dr. Eichberg further reports: "The tumor presents, on microscopical examination, the appearance of a growth made up of several kinds of tissue, small lobules of adipose tissue are intersected and separated from each other by tracts of a pearly opaque color, and in the central part of many of these tracts a soft, gelatinous, transparent, semifluid substance is found. The skin is freely movable over the tumor, with which it is connected by loose cellular tissue. Immediately after removal a large quantity of this gelatinous fluid escaped. There is not any distinct investing capsule, though the outer portion of the growth is made up of a tolerably thick band of this pearly substance. The circumference of the skin flap is sixty-two and one-half inches, the largest diameter twenty-eight inches, the transverse nineteen, and the thickness of the growth is nine inches. Judged by the microscopical appearances only, the tumor appears to be a compound of myxoma and lipoma, an association not infrequently met with in subcutaneous growths examined under the microscope. The compound nature of the growth is very evident. A very large part of the growth is lipomatous structure. The mass of fat-tissue is intersected by bands made up of longitudinal fibres and spindle-shaped cells with long oval nuclei. In places these bands acquire a very considerable size, so that they fill almost the whole field of the microscope, and remind one strongly of a spindle-celled sarcoma. In other places, small groups of what appear as round cells may be seen—these groups are possibly only the above bands of tissue cut across. The greater part of the pearly opaque bands is made up of a very fine, wavy connective tissue, which in parts has evidently undergone mucoid softening, all trace of fibres here being lost, and the specimen presenting the characteristic stellate cells in a large mass of homogeneous intercellular substance. The vessels ramify in the bands of connective tissue, and their walls are thickened. From its macroscopic and microscopic appearances, then, we may classify the tumor as a myxolipoma, the mucoid change being evidently a secondary degeneration.

"The only doubtful point would be in reference to the nature of the bands of spindle cells, which are probably connective-tissue cells in process of fibrillation, the connective tissue being, like the other parts of the tumor, in a condition of active growth."

The tumor which has thus been described is the largest lipoma of which I have been able to find a record. Ashhurst speaks of one referred to by Gross, which weighed seventy pounds. The largest mentioned by Bocca weighed twenty-three kilogrammes (about forty-

six pounds). In the majority of cases where fatty tumors have reached such an enormous size, they have been situated upon the back. The question of operation in the above case involved peculiar responsibility. The opinions expressed by those who saw the case presented very diverse views on this point. While the nature of the tumor was generally agreed on, its relation to the abdominal cavity was a question upon which there was decided difference, and whether or not the mass contained intestines, or even some of the other abdominal organs. Whether the growth could be removed without fatally compromising the abdominal cavity, and whether the woman could support so violent a shock as the operation would necessarily involve, were points upon which I had to encounter a variety of expression. The decision to operate was only arrived at after six weeks of careful daily observation, and the result, I feel, fully justified the attempt.

The illustrations, taken from photographs, give a very exact idea of the size and attachment of the tumor.

EPIDEMIC OF IMPETIGO CONTAGIOSA.

By WOOSTER BEACH, M.D.,

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ABOUT a month ago a child was brought to the dispensary with two or three peculiar spots on the calf of the leg that appeared to be the remains of rather superficial pustules. They appeared to result from ecthyma, and I entered them on the record as that disease, but with an interrogation mark after the name.

About two weeks afterward two more cases presented themselves, in which the appearances observed in the first case were seen, but besides there were numerous other lesions sufficiently well marked for me to be able to render a diagnosis of impetigo contagiosa with certainty.

Soon after this three more patients, attacked in the same way, coming to the dispensary, it struck me as probable that the origin of the trouble might be traced to a single source. Instituting inquiries I found that the last three patients had recently removed from Steinway's settlement, near Astoria, where, I was informed, there had been an outbreak of the disorder, affecting some forty or fifty persons.

Proceeding to this place with my friend Dr. Carter, we were somewhat disappointed to find our anticipated field of study narrowed down to about half a dozen cases. Some forty to fifty families had left the place within the preceding two months, in consequence of a labor strike, carrying with them a number of the objects of our search. However, a description of some of the examples that were left will probably prove as instructive as if a larger number had been reported, as the lesions mentioned in those examined would simply have to be repeated in a more extended number of observations.

CASE I.—Willie B——, aged three years, a healthy-looking, well-nourished child of German parentage, has had the disease a little over a month. His mother states that about a week before its first appearance he was seen to kiss a little companion whose face was broken out.

On Willie's chin are two patches, of rather irregular outline, but inclining to an oval shape, having their centres beneath each angle of the mouth and nearly meeting, so as almost to cover the front part of the chin. They have a moist appearance, and are partly covered with a soft, yellowish crust, broken irregularly, and streaked with blood; evidently changed by scratching. On the upper lip are three, and on the other parts of the face five pustules, varying in size and development, none of them very recent. Also on the face were eight dark red, non-elevated spots, with edges fading off into sound skin, evidently the vestiges of pustules. On the head were ten patches, distributed irregularly over the

scalp. They were all of nearly equal size, about half an inch in diameter, covered with a thick, dirty-yellowish crust, in which the hair was matted. Detaching these crusts, which were slightly adherent, a dry, faintly reddish base was exposed. On the extensor surface of the right forearm and wrist were five, and on same aspect of left corresponding parts were six, pustules of quite recent origin. They were from split-pea to finger-nail in size, roundish, flat, covered with crusts looking like soaked thick brown paper. Their circumference occasionally showed a line of redness. The crusts did not fully extend over the pustules in some instances, pus showing at its edges—so to say, it was not quite large enough to fit. There was no well-marked umbilication observed, except in one pustule on the left arm.

With this patient, as in all the other cases, there was a good deal of itching, especially on the chin, after the disease had existed some three or four weeks.

CASE II.—Henry B—, four years old, apparently in good health. Eruption confined to chin, beneath the right angle of the mouth, and presents same appearances as the similarly located lesion in Case I. Said to have been communicated by kissing.

CASE III.—Sarah S—, four years old. Reported to have caught the disease from Willie B—. It commenced two months ago on the cheek, once extended to the chin, beneath the angle of the mouth, the only location it occupies now. There are five other children in the family to which this patient belongs, one an infant. No means to prevent contagion has been taken. They frequently kiss each other, sleep together, and come in close contact in other ways, yet but the one member of the family is affected.

CASE IV.—Miss R—, ten years old. Had the disease for about three weeks; at present it has almost entirely disappeared. She is attending school.

CASE V.—William Y—, healthy-looking, very well nourished child, three years old. His mother states that four weeks ago a breaking-out appeared on the chin, then crept along as far as the ear, by a succession of sores, in about two weeks. Now, December 8th, the broken pustules have much the same appearance as those already described.

CASE VI.—Ann Y—, sister of the above. Apparently healthy. The first lesion made its appearance over the eyebrow, from which place it has extended by successive crops to the cheek. The disease has also appeared on her arm.

CASE VII.—Mrs. Y—, the mother of Cases V. and VI. The disease appeared about a month ago on the chin and has not extended. It resembles an eczematous patch that has been scratched and torn by the finger-nails, and this description will apply to most of the older patches in the cases related.

In Cases V., VI., and VII. an ointment of oxide of zinc was ordered to be applied freely to all the diseased surfaces. A week later the old lesions had nearly disappeared, but one new pustule on the leg of each of the children had made its appearance: about two weeks later quite a plentiful crop appeared on the forehead of pea-sized pustules, most of them umbilicated. New pustules also broke out on the body.

There seemed to be no evidence to support the claim that this disease depends on vaccination as a cause. Some of those affected had been vaccinated at various periods preceding the time that they were attacked, while others had not been vaccinated at all.

The site of this epidemic is a recently built-up district on the south shore of Long Island Sound. Malaria, as usual in so many suburban places, is the bane of the inhabitants. All the cases that I saw and could learn of were located on a single avenue of two blocks, directly exposed to the winds blowing from the water and over salt meadows and sunken lands.

Impetigo contagiosa is seldom confined to single cases in its attacks, two or more happening together; but it is

rather unusual for it to assume proportions that are extensive enough to be called epidemic.

Most writers on the skin represent the affection as self-limited; lasting about ten days. But one of my cases recovered in less than three weeks, and most of them have been afflicted more than two months. Further, the lesions are said not to give rise to itching, but this symptom has been prominent in most of the patients after the eruption is about two weeks old.

The disease has been described by so many able and distinguished dermatologists, since 1864, when Tilbury Fox first called attention to it in the *British Medical Journal*, that the present article may be regarded as a superfluity. To redeem it from a charge of this kind, I may say that some phases of the disease in the cases presented are either novel or are not noticed by writers. A further necessity of drawing attention to the disorder at this time is, that it is contagious. The families with their children still suffering from it are distributed through the city, and some of them will pretty certainly fall under the notice of physicians who, in all probability, will be quite unprepared to make a diagnosis. The breaking out of a "catching" disease with which the public are not acquainted occasions alarm and consternation, and a rush is made to the physician generally with greater anxiety to ascertain if it is dangerous than to ask for treatment.

To those moderately informed on skin diseases the diagnosis is not difficult. It may be mistaken for ecthyma, pustular eczema, impetigo (same name, but quite distinct disorder), varicella, and in its later stages possibly for herpes febrilis (fever cases). If the contagious element is discovered a mistake can scarcely happen.

In the following table I have endeavored to present the differential diagnosis, so that the lesions and symptoms of impetigo contagiosa may contrast directly with those resembling it of the diseases named:

<i>Impetigo contagiosa.</i>	<i>Pustular (impetiginous) eczema.</i>
Small, roundish, flat, discrete, variously sized pustules.	Minute pustules agglomerating, very itchy.
On head, isolated and few in number.	On head, usually numerous, inclined to coalesce and cover large surface.
	<i>Ecchyma.</i>
Favorite location on face, then on arms, superficial; slightly inflamed base; may occur in the robust.	Lower extremities usually attacked; somewhat deep; firm, sensitive, inflamed base; mostly affects the debilitated.
	<i>Impetigo.</i>
Pustules flat, inclined to spread at periphery, to unite when close together.	Pustules full and rounded; do not increase in size, nor rupture nor coalesce.
	<i>Varicella.</i>
	Usually small vesicles on face and body.

RECOVERY AFTER A LOW TEMPERATURE.—Dr. F. A. Hubbard, of Taunton, Mass., sends us the following interesting case: "An intoxicated man spent the night of December 18th in an open coal-shed. He had the protection only of ordinary clothing, and when found, late the next forenoon, was apparently dead. Closer inspection revealed signs of life, and after about six hours our efforts to restore him were successful. His temperature was taken about four hours after he was found. The thermometer was a verified, self-registering one, graduated from 90° upward. The register could, however, be shaken down for a space equal to 5° more. It was so fixed and placed in the rectum, where it remained for seven minutes. The register was not lifted at all. The patient's temperature, therefore, did not exceed 85°. We cannot say how much lower it was. Shortly after consciousness was regained the axillary temperature was 100.2°. The patient was attended by Dr. F. D. Tripp and myself. The means used were flagellation, external heat, hypodermic administration of digitalis, atropia, and strychnia, with aromatic ammonia by the mouth."

TISSUE METAMORPHOSIS AND SLEEP.

By GEORGE W. RACHEL, M.D.,

NEW YORK.

THE excellent article in a recent issue of THE MEDICAL RECORD by Dr. J. Leonard Corning, on "Sleep," I have read with great interest. Since I have given the subject some thought and attention, I may be permitted to say something about it.

In order to approach the matter from the right direction, it will be best to refer to "exhaustion" of the tissues in general. The word in use with German physiologists, *Ermüdung* (= fatigue), is probably more correct, because it implies only the *inability of the tissue to perform its function* (secretion, contraction, cerebration, etc.), but does not imply that the cause of this inability is exhaustion of material available for such functional activity. For example, we know that, in experimenting on muscles, such a state of "fatigue" is induced by prolonged artificial tetanus. A muscle thus treated will at last no longer respond to the application of the electrodes, and no contraction will ensue. If the muscle is still part of the living body, a short rest will cause a restitution of functional activity, and a contraction will be produced by a renewed application of the electrodes. Now, it might be surmised that this "fatigue" is due to actual exhaustion of the muscular tissue, and that the period of rest had served to cause a restitution of the wasted material. That such is not the case is shown by experimenting on a muscle which is cut out of the body. If such muscle is reduced to the state of "fatigue" by tetanizing, it may be regenerated, made contractile again by washing it out, either with blood or with a 0.7 per cent. solution of sodium chloride, which is rendered feebly alkaline by a little sodium carbonate or kreatinine. By slowly injecting this alkaline fluid, the products of tissue-waste are taken up and removed, and the acid condition of the "fatigued" muscle changed into one that is alkaline. Now the muscle will again respond to an electric discharge.

Professor Johannes Ranke, of Munich, has made, among others, these relations a special study, and has shown that the "fatiguing" substances are principally carbonic acid, lactic acid, potassium biphosphate, and other acids and acid salts, *i.e.*, the products of the tissue-metamorphosis which sustains the functional activity of the muscle. Ranke was enabled to show by direct experiment that the action of these substances is that which causes "fatigue." For this purpose he impregnated a fresh muscle with beef-broth, which contains them, and thereby reduced it instantly to an extreme state of "fatigue," exactly equal to that produced by prolonged functional activity.

It is not necessary to go into detail with regard to these processes; suffice it to remind the reader once more that it has thus been demonstrated that the "fatigue" produced in the muscle is not "exhaustion." From these experiments it follows, furthermore, that the material utilized during functional activity is not derived from the blood supplied to the muscle, but is present in its tissue. Otherwise it would be impossible for an isolated muscle to contract after the "fatiguing" substances have been removed by injecting the alkaline fluid. *The oxygen, as well as the oxidizing material, are contained in the substance of the muscle, independent of the blood-supply, and only after these give out (more especially the former, the oxygen) can there be actual "exhaustion."*

Fortunately, we have a series of valuable experiments bearing on this matter, recorded by Pettenkofer & Voit, which confirm Ranke's views in this respect. In these it was shown that the amount of oxygen inhaled has not a direct influence on the amount of carbonic acid exhaled during a given time. The subjoined figures will speak for themselves:

DAY OF REST.

	Oxygen inhaled.	Carbonic acid exhaled.
6 A.M. to 6 P.M.	234.6 grms.	532.9 grms.
6 P.M. to 6 A.M.	474.3 "	378.6 "

WORK-DAY.

6 A.M. to 6 P.M.	294.8 grms.	884.6 grms.
6 P.M. to 6 A.M.	659.7 "	399.6 "

Thus it is seen that the oxygen used in the course of the day has for the greater part been "stored up," as it were, during the preceding night. For this purpose it must become an integral part of the tissue, must be a component element of the chemical combinations constituting such tissue.¹ The importance of this fact will be perceived at once.

In the first place, the part played by the blood must materially differ from what it is usually conceived to be. Its importance as a purveyor of oxygen during activity is greatly reduced, while its purifying function, by which the "fatigue-producing" substances are removed, can hardly be over-estimated.

On the other hand, oxygenation by the blood during rest must appear in a very different light, since we know that it is greater at this period than during activity. For, while during the latter state all the oxygen of the blood is consumed, in addition to that present in the tissues, this is not the case during rest. Here all the oxygen supplied is not applied to tissue metamorphosis, a comparatively small part only being thus employed; the balance goes to the tissues and becomes an integral part of the various substances composing it, a most important process, which has hitherto, at least to my knowledge, not been duly recognized, more especially in its bearings on the subject of sleep.

This cannot be said of the other task performed by the blood; it has always been known that the purifying action of the latter partly consists in its absorbing the products of tissue waste. But we shall understand it more fully in the light of the experiments above alluded to. This action goes on incessantly during rest, as well as during activity; but it is essentially different in the two states. During functional activity of the organ, it is of great importance by preventing too great an accumulation of the waste products then constantly forming at a rapid pace, which would otherwise lead to such an increase of their "fatiguing" action as might entirely prohibit activity. During rest, on the other hand, it is evident that the waste products then carried away by the blood are of an entirely different character; they constitute all the fixed acids and acid salts which, although being oxidized, are still held by the tissues, and may be considered the surplus which cannot be eliminated by the blood during activity, its capacity in this respect being limited.

This surplus is of the utmost importance for our consideration, since it is the *direct cause of sleep*. For this slow accumulation of "fatigue-producing" material must take place in every organ of the body, especially in those which are incessantly active, until its amount is so great as to render further activity impossible. This may possibly occur at the time when the amount of disposable oxygen in the tissue is nearly exhausted, although we have as yet no means to know that. (Ranke² contends that: "Fatigue due to want of decomposable material has as yet not been observed; although many physiologists assume that such a state does exist, its existence is more than improbable.")

Of all the tissues of the human body, the brain is certainly an incessantly active one. While we are awake,

¹ That such is actually the case, is best illustrated by Valentin's observations on hibernating animals. He found that during hibernation marmots would at certain times show a slight gain in their weight, although they had been giving off small amounts of carbonic acid and water. Our readers will perhaps recall the experience of Dr. Tanner, who was also reported to have gained in weight slightly, a paradox easily explained by an accumulation of intra-molecular oxygen.

² Grundzüge der Physiologie des Menschen. Second edition, p. 107.

our brain is constantly occupied, either with receiving external impressions, or with calling up from our vast store of former impressions those that suggest themselves by the association of ideas. This incessant mental activity is the psychical equivalent of a multitude of chemical processes in the ganglionic cells and nerve fibres, which, to the number of many millions, constitute the cerebral tissue. The general tendency of these chemical processes is the same as in all other tissues, viz: oxidation. The waste products, therefore, are similar: Carbonic acid, potassium, biphosphate, and other acid salts are also formed here, only the *fixed acid* differing from that found in the muscles (lactic acid).¹ Thus the brain, as well as the muscles, shows an acid reaction after a long period of activity, while both when at rest have a slightly alkaline reaction. They differ, however, in this: The brain normally contains a greater proportion of water than blood, while with muscular tissue the reverse obtains; and further, the brain is drained of its water during activity, while the muscles are rendered richer in water by continued exercise. The important influence of this on endosmosis and exosmosis will be readily perceived.

After having thus roughly sketched the various conditions found in certain tissues before, during, and after tissue metamorphosis, we may now refer to the part which tissue metamorphosis plays in the production of sleep.

We have had occasion to point out one of its chief causes, if not the chief cause, viz.: The gradual accumulation of certain products of tissue waste, which, as a rule, are not wholly removed by the blood during activity. These we have found to be such as have the physiological property of inducing "fatigue," if a certain amount of them be present. This explanation has been anticipated by Durham, whom Dr. Hammond cites as saying: "A probable explanation of the reason why quiescence of the brain follows normally its activity, is suggested by the analogical fact that the products of chemical action interfere with the continuance of the action by which they are produced."

It, however, is not absolutely necessary that the substances which exert a "fatiguing" influence on the brain must have been produced in the brain itself. We have seen that the waste products are very similar all over the body, *i.e.*, results of oxidation. Therefore a person may have done very little real brain-work during the day, and yet he or she will be just as sleepy, or even more so, than another who has done a certain amount of literary or other mental labor only. The explanation of this apparent paradox is, that the "fatiguing" products accumulating in the muscular system are partially taken up by the blood and carried to all other organs. Now, the brain normally contains more water than the blood, and although this condition is somewhat modified through the daily brain-action even of a person occupied with muscular work, the result still will be a slow imbibition of this "fatiguing" substance. But the latter also acts on the heart and on the vascular system generally. The heart's action is thus retarded, not only by their direct action when they pass through it in the blood, but also by a partial paralysis of the vaso-motor system of nerves. This lowers the "tonus" of the vascular system, the arteries principally, and thereby diminishes intra-arterial pressure, a condition which is always speedily responded to by a reduction in the force and number of the heart's contractions.

A similar effect is produced on the medulla, and its reflex action retarded, so that the number of respirations is diminished, while their volume is generally increased in compensation of such diminution.

Thus we see that the fatigue-producing material, de-

rived from tissue metamorphosis during activity, is the one cause underlying all the various changes in the system observed during natural sleep. It is not so much the want of oxygenation of the brain by the blood, as the want of intra-molecular oxygen, combined with the fatiguing action of the tissue waste accumulated during activity.

The view, also cited by Dr. Hammond, as expressed by Barthez, that: "During sleep there is a *general plethora of the smaller blood-vessels* of the whole body," is probably near the truth. This would apply especially to those organs in which a restitution of the material consumed during activity can only take place during sleep, *i.e.*, brain and muscles in particular. We know that the deposition of the intra-molecular oxygen to be consumed the following day does take place during sleep principally, and it is imperative, therefore, that a fair supply of blood should circulate in these organs. This condition of passive hyperæmia is also one, the production of which is certainly favored by the decrease of intra-vascular pressure. And this gives the key to the apparently anæmic condition of the brain. The cerebro-spinal fluid which pervades the subarachnoidean space and the lymph which fills the perivascular spaces create conditions which must make us careful in diagnosing cerebral anæmia from outward appearances. The production of both is certainly dependent on the intra-vascular pressure to which they simply furnish a passive compensation, and since this pressure is diminished during sleep, the amount of both must also diminish. Although the larger vessels may therefore seem only moderately filled and the bulk of the cerebral mass may apparently be unchanged or even reduced, the small vessels and capillaries must not necessarily be as anæmic as we may be led to conclude from those appearances.

As to the experiment of producing sleep by compression of the carotid, which is held to be corroborating evidence to the theory of cerebral anæmia as the principal cause of sleep, this must be viewed differently in the light of our previous reasoning.

It is not the want of oxygenation to which the causation of sleep thus induced must be ascribed, but to the imperfect removal of the "fatigue-producing" products on the one hand and the additional decrease of intra-vascular pressure, with all its above-described concomitant effects, on the other. The former action is accepted by Dr. Corning himself to a certain extent, since he found "that a *certain degree* of compression of the carotids is much more fruitful in the production of soporific effects toward evening than in the early hours of the morning." He very correctly ascribes it to "an exhausted condition of the ganglia"—although he is not sure whether it is "a cessation of interplasmatic activity due to the collection of debris within the ganglia," or "molecular inertia," or something else; and, furthermore, to a *certain* amount of available explosive energy, hoarded up, which renders the ganglia in a measure independent of the necessity of extensive assimilation from the plastic materials of the blood-stream—at least, *for a time*.

Ranke has acquainted us with the real facts as far as the former—the "fatigue-producers"—are concerned, while Pettenkofer and Voit's experiment teach us that the latter—the "explosive energy"—is due to the intra-molecular oxygen, stored up in the brain tissue during the previous night's rest.

As to the action of a full meal producing drowsiness and sleep, it is evident that this is due to the over-supply of nourishing material to the blood during digestion. The albuminous material being first and quickly attacked in the stomach, its inorganic and extractive matters—the very same "fatigue-producing" substances—first enter the circulation and display their action on the tissues, the brain tissue more particularly, for reasons stated above. The "fatigue" produced induces sleep, in spite of a condition of the vascular system different from that during sleep, following tissue waste by activity, viz.: partial con-

¹The nitrogenous principles, resulting from the decomposition of albuminous matters, have been omitted because they are pretty constant and do not have important physiological effects.

gestion. The latter is due to the increase of intra-vascular pressure caused by the greater amount of blood, and also by the irritation of the sympathetic system, the great splanchnic in particular.

This would show that anæmia is not a necessary requirement for the initiation of sleep, and, therefore, would tend to support the view detailed in the foregoing remarks, viz.: That certain chemical processes are the actual cause of sleep in the manner indicated above. The peculiar action of certain drugs and chemicals to produce fatigue and sleep would add to the evidence adduced in favor of our view.

Progress of Medical Science.

THE ALBUMINURIA OF EPILEPSY.—Dr. Saundby (*London Medical Record*, December 15, 1882), after referring to the contradictory statements of previous observers, says that out of twenty-seven observations of the urine of twenty chronic epileptics, albumen was found on twenty-two occasions. The test employed was simply boiling and acidulating with acetic acid. The quantity varied from a copious precipitate to a faint trace, but as a general rule was small. Five examinations were made directly after a fit; of these albumen was absent in two. He does not regard the albuminuria as having any distinct relation to the fits, but connects it with the age of his patients (the average age being eighteen), the dyspepsia and anæmia which were so common among them, and the fact that the urine was examined after they had been walking. Pulse-tracings were taken in ten cases, but in two only was the tension high.

THE TREATMENT OF DROPSY.—Dr. Leech, in a paper read at the last annual meeting of the British Medical Association (*London Medical Record*, December 15, 1882), discusses the treatment of cardiac, hepatic, and renal dropsy. Firstly, as to the advisability of removing the fluid either by mechanical means or by the eliminants of water, such as diaphoretics, diuretics, and purgatives: every case has to be considered as to the real cause of the dropsy, the stage it has reached, and the condition of the patient and his tissues. For without this the mere routine treatment by eliminants of water may not only not do any good, but actual harm may result. Thus, in the earlier stages of heart-disease with anasarca, diuretics may succeed admirably. Later on, as the general health fails, they lose their power, even though there be no evidence of increasing obstruction of the circulation. And at last it may happen that we cannot drain the water from the oedematous tissues, even when they are pricked or tapped. Secondly, as to the modes of elimination: of these, speaking of paracentesis, Dr. Leech believes that, when dropsy is due to a block in the portal vein, tapping is almost necessarily followed by a recurrence; in acute cirrhosis, when the distention causes great discomfort to the patient, this operation does not give even temporary relief, nor has he seen any good result from it in advanced cases of ascites due to cirrhosis, where symptoms of coma had developed. Diuretics rank next to paracentesis, but they can only act when the kidney is functionally competent, and when the tissues are in such a condition as to be able to give up their water. In hepatic dropsy, copaiba, which can be given for a long time with advantage, and caffeine are most useful. Digitalis and saline diuretics in cardiac, and diaphoretics are of most value in renal, dropsy.

SYPHILIS IN CHILDREN.—In some clinical remarks published in the *Allgem. Wiener Med. Zeitung*, No. 29, 1882, Dr. Widerhofer points out that a child may be (1) born with signs of syphilis, or (2) born dead, or (3) may only show signs of disease during the second or third month after birth. Children born with syphilides show

only the papular or pustular forms. Those in whom signs do not appear for several weeks, usually have the macular form, and this usually develops during the second month. In most cases swelling of the nasal mucous membrane is the first sign of inherited syphilis; the child becomes pale and sleeps badly, and then, some days later, the macular syphilide appears. The spots are most numerous on the face, forehead, outer aspects of the extremities, and on the buttocks. Papules often appear among the maculæ. The pustular is the gravest form of syphilide; it is usually present at birth. When it is limited to the palms and soles, it is called syphilitic pemphigus.

In the diagnosis of a syphilitic rash, polymorphism is the most valuable sign. The swelling of the nasal mucous membrane is also a sign of great diagnostic value. As regards the sequelæ of syphilis, a syphilitic child, as a rule, becomes rickety, and hydrocephalus often follows. The child's nutrition, also, is affected generally; hence the tendency to rickets. Paralysis and lesions of the cellular tissue may also occur, and, after the first year, scrofulous affections. The glandular system is but slightly affected during the early months, and changes in the glands do not occur until the child is a year old. Abscess of the thymus is very rare. The author himself has seen only one case; the child in that instance lived thirty-six hours; but, in five other cases within his knowledge, the children were all born dead. The prognosis of inherited syphilis is favorable as regards life when no signs are present at birth; but much depends on proper management of the diet.

A COMMON MISTAKE CONCERNING CHLORIDE OF POTASSIUM.—It is well known that chlorate of potassium is a very good remedy to gargle the throat, but comparatively few physicians are aware of the fact that it is not this remedy which is so successful in mercurial stomatitis, but chloride of potassium.

Dr. Wertheim draws the attention of physicians especially to this fact. He reminds them that the formula of the first is $KClO_3$, but that of the second KCl . He says that the chlorate should never be used, as in concentrated solution it may even prove very harmful, while the chloride is very innocent; a specific in sore throat, and especially in mercurial sore mouth, and very analogous to common salt, which is simply a chloride of sodium, instead of potassium. In America the chlorate is commonly used; no wonder, therefore, that it is not found here as efficient as in France and Germany, where they use the chloride.—*Medical and Surgical Reporter*.

THE ORGANISMS OF TYPHOID.—Maragliano, of Genoa, has published in the *Centralblatt für die Med. Wissenschaften*, an important note on the uniform occurrence of organisms in the blood of patients suffering from typhoid. He has found them in the blood of the spleen as well as in that of the general circulation. The blood was obtained by means of a hypodermic syringe, the middle of which was passed through the abdominal wall into the substance of the spleen. Dr. Sciamano, of Rome, first showed that blood may be thus obtained from the substance of the spleen during life without any injurious consequences. The blood of the general circulation was taken from the tip of the finger. In each method every precaution was taken to avoid the accidental introduction of organisms. The examination, in this way, of fifteen patients gave the following result: At the height of the disease the blood of the general circulation contains micro-organisms both isolated and grouped. These consist, almost exclusively, of spherical bodies, which have a delicate contour, appear to be homogeneous, and are analogous to micrococci. Some of them are mobile. Similar organisms, again, were seen in the blood of the spleen, and in it, too, were others, rod-shaped, also with delicate outlines, perfectly corresponding to those described by Eberth and Klebs. During convalescence these micro-organisms lessen in number in both the

splenic and systemic blood. When quinine was given to the patient in large doses, the organisms either disappeared from the blood, or were present in it only in small number. The blood from both the finger and the spleen was treated by the method of fractional culture, and a large number of rods were then obtained, similar to those seen in the fresh blood, except that some of them were of greater length. The presence of such organisms in the blood of the spleen after death had been previously established by Sokoloff and Fishel, but Maragliano is the first who has demonstrated their presence in the splenic blood during life. He avoids the expression of any opinion as to their relation to the disease.—*London Lancet*, October 28, 1882.

HEMORRHAGE INTO THE CAVITY OF THE ARACHNOID.

—The subject of hemorrhage into the inter-arachnoid space has been a sorely puzzling one to pathologists. A variety of explanations, more or less plausible, have been put forward to account for its occurrence. But apart from its pathological interest there is also a decidedly practical aspect of the matter. And from a medico-legal point of view the subject may at any time claim our attention. Dr. Morris, in the *Lancet*, November 11, 1882, presents a fair statement of our knowledge on this condition, and his conclusions are to the following effect: 1. That spontaneous effusions into the cavity of the arachnoid—*i.e.*, effusions of blood from disease or excitement—are very often not distinguishable from traumatic effusions. 2. That post-mortem examination does not always explain the cause or the source of the effusion, and that the state of the blood-clot is only a very rough test as to the age of the effusion. 3. Extravasation of blood between the dura mater and bone, as also extravasations beneath the visceral arachnoid, accompanied by brain bruising, are almost certainly traumatic, whether fracture co-exists or not. Extravasations into the substance of the brain and into the ventricles are almost certainly spontaneous when no fracture and no brain bruising co-exists, and are probably so even when fracture without bruising of the cerebral surface is found. 4. Spontaneous effusions may occur without there being any naked eye evidence of disease of the cerebral or meningeal vessels. 5. Spontaneous effusions into the arachnoid cavity from disease or excitement have occurred as early as the twelfth year of life, and at all ages subsequent to puberty. Inter-arachnoid hemorrhage occurs at any age from violence. 6. In slight injuries to the head, such as small scalp wounds without fracture of the skull, or bruising of the surface of the brain, the surgeon should be extremely cautious in attributing inter-arachnoid extravasation to a blow, and more especially when the injured person is of intemperate habits.

THE HOT PACK IN PUERPERAL ECLAMPSIA.—Dr. Brens (*Archiv für Gynäkologie*, vol. xix., 1882) believes that for the cure of puerperal eclampsia either in the puerperium or the last months of pregnancy, active diaphoresis alone, induced by a hot bath, 40° to 45° C., followed by the pack, is all sufficient. The bath must not be prolonged over half an hour, and two to three hours suffices for the envelopment in the pack. This method properly carried out will, according to Brens, also cause oedema and albuminuria to disappear without interruption of pregnancy.

CARDIAC TYPHOID.—M. Bernheim recently read a communication before the French Association for the Advancement of Science upon the cardiac form of typhoid fever (*Progrès Médical*). The author intends to designate by this term cases, in which, without notable organic alteration of the heart, without pulmonary complications, or others capable of explaining the phenomenon, the pulse becomes small, frequent, and depressible. The patient succumbs to this paralytic acceleration of the heart, which may be produced either at the beginning of the fever, with or without concomitant

nervous adynamia, or at a more or less advanced period of its evolution. The axillary temperature may be moderately febrile, normal, or even subnormal. M. Bernheim considers this nervous asystole in typhoid fever to be due to a direct action of the poison or typhoid microbe on the centre of cardiac innervation. In typhoid fever the pulse is usually slower than in other pyrexias, as though the specific poison, like digitalis, had a slowing action on the pulse. It may be conceived that this virus, acting with great energy on the cardiac nervous centre, can produce paralytic acceleration. This theory would also explain the fact noted by the author, that digitalis in these cases is not only inefficacious but dangerous, and that even given as a prophylactic it does not prevent the manifestation of the cardiac phenomena. The author bases his conclusions on the observation of six cases with autopsies. Sudden death in certain cases of typhoid fever where we find no appreciable alteration of the heart, may thus be due to the concentration of the poison upon the cardiac centre. This is the *foudroyante* variety of the cardiac form.

TRICUSPID STENOSIS.—At a recent meeting of the London Pathological Society (*Lancet*, October 21, 1882), Dr. Bedford Fenwick showed a specimen of tricuspid stenosis from a woman aged thirty, who had rheumatic fever at fifteen, and afterward suffered from winter cough and dyspnoea; she went on from bad to worse until admitted into the London Hospital under Dr. S. Fenwick. There was marked distention of jugular veins, but no cyanosis, cardiac dulness very wide to the right, a well-marked presystolic apex thrill and presystolic and systolic apex murmurs; proceeding to the right another presystolic and systolic murmur was detected. At the post-mortem both auricles, but especially the right, were found very much dilated, the ventricles small. The tricuspid and mitral valves were greatly thickened, shortened, and agglutinated together, causing marked stenosis. All the organs were congested. The spleen was during life tender to pressure and pulsated. Cases of this kind were now known not to be very rare. Since his table of forty-six cases he had been able to collect twenty-three more cases, twenty of whom were females, averaging in age 31.7 years. In every case the mitral valve had been more changed than the tricuspid, and in all cases the general health had been good; the great dilatation of the right auricle caused increase of cardiac dulness to the right, and afforded a means of diagnosis.

IODIDE OF LITHIA.—For a long time, the salts of lithia have been considered efficacious in cases of gout. Dr. Kendall has found the iodide by far the most useful of them all. It is most efficacious in cases of actual gout, and may be used with benefit in other cases of a gouty nature. He has known small doses of the iodide to act with benefit in cases of gouty eczema, and in those cases of dyspepsia which may be due to a gouty diathesis the use of this salt is followed by excellent results.—*British Medical Journal*, October 21, 1882.

PAROXYSMAL STERCORACEOUS VOMITING.—Dr. Rosenstein relates the case of a nine year old boy who suffered from peculiar tetanoid seizures, accompanied by unconsciousness, during which the bowels were moved and vomiting of firm brown-colored fecal masses occurred. The attacks came on suddenly during play or in sleep. There was marked opisthotonos with occasional tetanic movements of the arms and legs. After the vomiting the patient complained chiefly of abdominal pains. A cure was obtained by means of injections and the exhibition of large doses of bromide of potassium. The reporter thinks that the condition present was that of a spasmodic stricture of the intestine, from which proceeded strong contractions of the bowel upward and downward, setting up both peristaltic and antiperistaltic movements.—*Centralblatt für Chirurgie*, No. 43, 1882.

COAGULATION OF THE BLOOD.—Dr. Hayem, already well known for his numerous contributions to the physiology and pathology of the blood, has recently published a series of articles in *L'Union Médicale* on the process of coagulation of this fluid. He opposes the theory of A. Schmidt and declares that an increase in the number of white corpuscles stands in no relation to a greater coagulability of the blood. He further states that an anatomical element, the hæmatoblast, is constantly present in the blood and plays the most important rôle in coagulation, the rapidity and degree of this process being in proportion to the number of hæmatoblasts circulating in the fluid. Upon the strength of his last series of experiments Dr. Hayem formulates the following conclusions: 1st, when the blood in fresh sections of vessels retains its fluidity, it is because the hæmatoblasts remain unchanged; 2d, when these bodies become broken up in the plasma, the stagnant blood in the vein coagulates as readily as it would in an open vessel, in spite of the integrity of the walls of the blood-vessel.

ETIOLOGY OF CONGENITAL TALIPES EQUINO-VARUS.—Dr. H. W. Berg advances the following theory of the origin of congenital talipes equino-varus: "In early fetal life the lower extremities look directly backward, and are brought into their normal position by a process of gradual rotation of the thighs. During this process the thighs are flexed strongly upon the trunk, but owing to the extreme outward rotation the legs are retained from full flexion by contact with the abdomen. They cross each other, and the feet lie in the position of marked equino-varus with their soles in contact with the belly of the child. In the process of normal development the rotation inward of the thighs continues, the legs become fully flexed, and the feet turn into a position of strong flexion, their plantar surfaces looking forward and a little outward. But if this process be arrested through any cause, full rotation does not occur and the child is born with talipes."—*Archives of Medicine*, December, 1882.

CARDIAC COMPLICATIONS IN ACUTE ARTICULAR RHEUMATISM IN CHILDREN.—From observations made in a series of cases of acute articular rheumatism in children. Dr. Vohsen (*Wiener Med. Wochenschrift*, November 11, 1882) formulates the following conclusions: 1. In nearly one-half of the cases observed endocarditis occurred and resulted in marked valvular insufficiency. 2. The mitral valve was the one most frequently affected. The endocarditis appeared usually in the first and second weeks of the disease. Pericarditis was also a frequent complication. 3. Salicylate of soda, while it exerted a favorable influence upon the joint affection, seemed not to prevent the cardiac complications. 4. The mild forms of articular rheumatism are especially liable to be followed by cardiac disease, hence a very careful examination of the heart would seem to be necessary in the light cases.

SECRETION OF MUCUS IN THE TRACHEA.—Dr. M. J. Rossbach, upon the occasion of the recent jubilee of the Würzburg University, presented a paper containing the results of his investigations undertaken to determine the physiological laws governing the secretion of mucus in the air-passages. The trachea was opened by a longitudinal incision, and the edges of the wound retracted so as to present an unobstructed view of the mucous membrane. He stated that the secretion of mucus occurred only when the thin film of fluid lining the trachea was so far removed as to permit of irritating influences acting upon the mucous membrane. The mucus itself also protects the underlying membrane by holding the foreign bodies entering with the inspired air. Dr. Rossbach was enabled to obtain the mucus pure and unmixed with pus or saliva. He stated that it was of alkaline reaction, free from albumen, glycogenic ferments, and corpuscular bodies, but containing a large amount of mucine. The secretion of mucus was asserted by him to be indepen-

dent of central nerve-irritation, and to occur when all connection with the central nervous system was severed. The mucous glands either possessed peripheral nerve-centres situated in the membrane itself, or else their action was independent of nervous influences. He also determined in these investigations that vaso-motor fibres pass to the tracheal mucous membrane through the superior and inferior laryngeal nerves, and that the secretion of mucus stands in close relation to local hyperæmia. As to the influence of cold, he found that upon the abstraction of heat from the skin a reflex influence was exerted upon the mucous membrane, finding expression in intense venous congestion. This condition excited a profuse mucous secretion. From this the author concluded that laryngeal and bronchial diseases, occurring after taking cold, might be regarded as due to reflex influences. The occurrence of the death-rattle he attributed to the venous engorgement preceding dissolution. Dr. Rossbach experimented further with a view to ascertain the influence of various therapeutical agents upon the tracheal secretion. He found that alkalies injected into the veins caused anæmia of the mucous membrane and diminished the secretion. Hence they were not to be regarded as expectorants, but as remedies which reduce hyperæmia and thus lead to a cure by overcoming the morbid process. Locally applied, their influence was *nil*. The only exception was in the case of ammonia preparations, which exhibited a local irritant effect. Nitrate of silver diminished the secretion—an effect precisely the opposite of that exerted upon the other mucous membranes. Oil of turpentine, in aqueous solution, increased the amount of secretion, but lessened the hyperæmia. Apomorphia, rue, and pilocarpine excited a profuse mucous secretion, especially the last-named drug, which the author regards as a typical expectorant and prefers to all others. Atropine caused a dryness of the mucous membrane, as also, though in a less degree, did morphine. Combinations of apomorphia and morphia, or of atropia and morphia, according to the indications, the author recommended most strongly. Experiments conducted with the electric current were without result.

TRICHLOROPHENOL.—Dr. Dianin obtains chlorophenysic acid by treating carbolic acid with chloride of lime. This substance is a phenol in which three atoms of hydrogen have been replaced by three atoms of chlorine ($C_6H_2Cl_3OH$). The writer claims the following advantages for it as a disinfectant: 1. The disinfecting properties of trichlorophenol are twenty-five times more powerful than those of carbolic acid. 2. A minute quantity will arrest the most active fermentative processes. 3. It is a powerful antiseptic, far exceeding others in ordinary use—salicylic acid, thymol, carbolic acid, etc. 4. It is a deodorizer as well as a disinfectant. Its own odor may be disguised by oil of lavender (five drops to the ounce). 5. Even when applied in substance it has but slightly irritant properties, and when in solution does not irritate the tissues in the least. 6. The good effects of chlorophenysic acid in soft chancre, diphtheria, etc., the author claims, are indubitable. 7. Every physician can prepare this substance for his own use. 8. The salts possess the same disinfecting properties as trichlorophenol itself. The soda salt is odorless. 9. The lime salt is cheaper than carbolic acid.—*Centralblatt für Klin. Med.*, No. 27, 1882.

A PALATABLE COUGH MIXTURE.—The most elegant and palatable cough mixture ever prescribed by that accomplished therapist, Dr. J. Milner Fothergill, is, he says, the following:

R. Syr. Scillæ.....	3 j.
Acid. hydrobromic. dil.....	3 ss.
Spirits chloroform.....	3 ss.
Aquæ.....	3 j.

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WATER SUPPLY OF NEW YORK CITY.

THE Legislature of the State of New York will probably take immediate action in regard to the various schemes for increasing the water supply of New York City. There are no less than eight plans for effecting this object, and when we state that one suggests bringing water from Paterson, N. J., with an aqueduct to the Palisades, which would have to be tunnelled, and also a tunnel under the North River, some estimate of the many millions of dollars which will be recklessly spent can be made.

One of the most remarkable features of the case appears to be the fact that such an outlay is advised in the face of authentic reports from the public departments that the present supply of water to New York City already exceeds the rational needs of the population, and is even sufficient to meet the demands of increased population for many years to come.

The fault, therefore, appears to lie, not with the quantity of water, but with the methods of distribution, which permit a constant and extravagant waste of probably one-fourth of the whole supply. In view of this circumstance it may well be questioned whether increasing the supply of water would mitigate the evil at present complained of, for if the increase of the waste was to keep pace with increased supply, nothing would be gained.

The practical man, therefore, naturally asks: Is there any method of distributing the water supply of New York City which will give every house all the water it can use, and at the same time cut off the unlimited waste which now exists? We answer that such a method of distribution is in practical use in one of the largest cities in the world, and that the three millions of people in London find it answers all their purposes and satisfies all their wants.

The English plan is to cause every house to provide cisterns to contain the supply of water for their daily use, which are neither limited in number or capacity. Thus every house under this system commands all the water which is required. Water is turned on to these cisterns twice daily in summer, and once daily in winter, when a less supply is necessary; and it is the practice to allow the water to run for some time after the cisterns are filled, which daily flushes out the waste-pipes of every house and the drains in every street.

Londoners pay water-rates according to the number

of cisterns erected in each house, which is an equitable arrangement, and if one tenant wastes all the water in his house, he does not rob his neighbor. Those using large quantities of water *can* also pay water-rate, calculated by a metre, if preferred.

Such a system is connected with pumping the water to create a high pressure throughout the city. This fills the cisterns on the upper floors of every house. No pumping or carrying of water is necessary—an almost unknown comfort and convenience in New York City under the present system.

It may be claimed that the London system involves the placing of cisterns in every house in the city. In reply, it may be said, that the New York system appears also to require the use of cisterns. There is, however, one difference which appears important. The Londoner has his cisterns filled twice daily, without any effort on his part, whereas, except in favored districts, the New Yorker has to perform the agreeable (?) duty of himself pumping the water from the basement to his upper floors.

There may be objections to this plan which we have not presented, and we do not suggest that it is better than to have an unlimited supply from the water mains in the streets; but it appears to meet the requirements of a city having abundance of water for all purposes, which is run to waste in such quantities as to cause inconvenience, and at times a water famine.

We have no desire to discuss the engineering details of the various plans for increasing the water supply, but will offer a few suggestions on the sanitary and hygienic points involved. We trust that any increased supply of water may be drawn from a river source; in such a case the quantity would be without limit, and delivered fresh to the city. It is unnecessary to add that in such a case the water should be drawn at a point beyond the pollution of any city or town.

The analysis of Croton water shows its perfect adaptability for a city supply, and, if sufficiently abundant at all seasons to be delivered direct, it would be the best supply of water supplied to any city in the Union. But the method of storing water in shallow lakes for long periods is an abomination, especially in districts in which fever and malaria are prevalent. Its effect on our Croton water is too often manifest to our sight, taste, and smell, and possibly is often the cause of both fever and malaria in this city.

EPIDERMIC MEDICATION WITH THE OLEATES.

THE "medicinal oleates" and their use in epidermic medication is the subject of a series of articles in the *Ephemeris*.

By epidermic medication is meant the application of remedies to the unbroken skin for the purpose of obtaining local or constitutional effects. "Dermic" medication is a term appropriated by specialists in skin diseases, and "endermic" is to be applied to medication when the cuticle is removed.

The use of various oils and ointments for the introduction of medicines into the system is not a new thing; but we are told that it is only since 1872, when Mr. John Marshall called attention to the value of the oleates of mercury and morphia, that epidermic medication has been systematically attempted. Even now, the observa-

tions that have been made are neither numerous nor scientifically accurate. There are, however, certain striking advantages in the epidermic use of oleates, so that, according to the writer, they deserve a wide trial.

Epidermic medication is based upon the peculiar facility with which the skin absorbs oleic acid and alkaloid salts dissolved in it. This oleic acid is obtained from the "red oil" of the makers of stearin candles. It is an oily liquid of the color of pale sherry, having a peculiar odor and taste, free from acidity. It is thinner than the oils, and has a specific gravity of about .900. Applied to wood, porcelain, or cloth, a greasy spot is made, which lasts as long as a similar spot made with oils or glycerin; but, curiously, when applied to the skin, oleic acid wets it almost like water, and disappears so rapidly that it seems as if it had evaporated.

Oleic acid combines with the various medicinal alkaloids in very large proportions, taking up from 50 to 69.6 per cent. The ordinary oleates, therefore, are weak solutions of oleates of atropia, aconitia, etc., in an excess of oleic acid. In some rare cases where this excess of acid is irritating, a bland oil may be added.

Oleic acid may be made to combine with various metals, such as iron, copper, zinc, lead, mercury, etc. With the exception of the last-named substance, such combinations are not likely to be of much use.

The activity of these oleic acid solutions is best illustrated by the oleate of aconitia. This is a two-per-cent. solution of that alkaloid. Each minim of it weighs eight-tenths of a grain, and contains about one-sixtieth of a grain of aconitia. A drop from the thin lip of a vial is equal to about half a minim (gr. $\frac{1}{120}$) of aconitia. Now, if twice the quantity which the end of the vial's cork will carry be rubbed over half a square inch of skin, a glow of warmth is almost instantly felt. This will disappear in about half an hour. If twice this quantity be applied, there will be prompt tingling in the nerves of the part followed by a sense of heat and prickling and then numbness. The symptoms last for an hour. Such experiments illustrate the potency of the preparation and its mode of use in cases of neuralgia.

Most of the other oleates of the alkaloids are made in the strength of two per cent., *e.g.*, strychnia, veratria, and atropia. They all act with rapidity, though hardly so promptly as the aconitia solution. Five minims of the oleate of atropia applied to the knee-joint produces dilatation of the pupil in a short time. This oleate rubbed upon the skin and covered with oiled silk or gutta-percha tissue acts very much like a good belladonna plaster.

The oleate of morphia is made with a strength of five per cent. Five to ten minims applied to the abdomen and covered with oiled silk is the usual dose for children of one to four years. There is considerable evidence that opium acts very well administered in this way, producing very little constipation or gastric disturbance.

The oleate of quinia contains, or should contain, about twenty-five per cent. of quinia in solution. A fluidrachm would contain about seventeen grains (gr. xvij.) of the salt. The preparation may be used hypodermically or epidermically. In the latter case as much as two drachms must be rubbed in at a time, and it should be covered with oiled silk. A person can get the tonic ef-

fects of the quinine by rubbing the oleate upon himself morning and night.

The epidermic medication by the use of oleates evidently deserves attention, if only to determine the limits of its usefulness. The skin is normally a protective, not an absorbing organ, and it can never be depended upon as a medium of medication like the *primæ viæ*; but it can, no doubt, be utilized more often than is now done, and to the saving of more delicate tissues.

WOUNDS IN THE COURSE OF DIABETES.

THE recent death of Gambetta, who was reported to have been a sufferer from glycosuria, revives the interest in the question of operations in diabetes. That wounds occurring in diabetic patients are prone to resist treatment, and to be followed by phlegmonous inflammation, has long been known. The frequent occurrence of gangrene and unhealthy inflammatory processes in such cases was first observed by a French military surgeon, Marchal de Calvi, in 1853. Ten years later, he had already collected a series of one hundred and thirty-three illustrative cases. He made the observation that it was generally the otherwise healthy and robust-looking patients, and especially those of middle age, who were most frequently affected in this way.

Nélaton and Verneuil, and, later, Peyrot, have also recorded corroborative cases. In Germany, Wagner and Griesinger, have in turn discussed the subject. More recently, a work by Dr. Roser has appeared, in which he states his conviction that the development of inflammatory processes, in the course of diabetes, is due wholly and solely to the altered condition of the blood. He believes the gangrenous and phlegmonous processes to be entirely different from those of the non-diabetic, being altogether independent of the possible entry of septic germs from without. Hence antiseptic treatment is not sufficient alone to ward off septic inflammation. Only when coupled with strict antidiabetic diet is it of any real value.

Other German writers, as Kraske and König, believe, however, that the infection takes place from without. But they affirm that the condition of the blood in diabetes is especially favorable to the further development of the morbid processes. Indeed, it is often favorable to such an extent that antiseptic treatment is of no avail.

Still more recently, Dr. Müller has given his attention to this subject (*Aerztliches Intelligenzblatt*, No. 41, 1882). From the consideration of a large number of cases, collected from various sources, he finds that strict antidiabetic rules of diet are of the utmost importance. Indeed, the antidiabetic treatment is far more conducive to the healing of the wound than the antiseptic treatment of the wound itself.

The author's paper suggests once more the question, whether operations ought to be undertaken upon diabetic patients or not. The opinions of Marchal, Verneuil, and Roser may be accepted in answer. They all agree that operations should never be performed in such cases unless they are absolutely necessary; and only then if some improvement has been found to follow upon a course of dietetic treatment, and if the patient be otherwise in fair health. Careful dieting, therefore, should

invariably be enforced both before and after the operation.

In view of such unequivocal testimony we may well question the propriety of recent German strictures upon the treatment which Gambetta received at the hands of his attending physicians and surgeons. The spirit that prompts such utterances as those of Dr. P. Niemeyer (who, it will be remembered, directly accused Gambetta's physicians of indirectly causing his death by unduly postponing an operation) cannot be too severely censured.

THE KINGSTON MEDICAL SCHOOL AND MEDICAL CO-EDUCATION.

An event occurred at the Kingston Medical School, not long ago, which furnishes an unpleasant picture of medical students and medical education in Canada. The Kingston Medical College some time ago organized a course of lectures for female students. Matters went on smoothly enough until December last, when the lecturer on physiology touched upon the subject of castration. His remarks were received with cheers and stamping, all eyes being turned on the seven female students present. The latter finally left the room in a body and complained to the Faculty. The male students held an indignation meeting and sent a memorial to the Faculty, which was offensive in tone, and which ended with the declaration that, unless the female students left, the male students would go themselves. The Faculty, very properly, refused to be dictated to. But while a discussion was going on, the Trinity Medical School, at Toronto, made an offer to take the Kingston students who had already paid their dues for nothing, and the rest for half-price! This forced the Kingston Faculty to yield to the demands of the students.

If the above account of the affair, which we take from the *Canadian Practitioner*, be true, and there is no reason to doubt it, invective is hardly strong enough to fitly characterize the action of the Trinity School. To take advantage of another's distress, to strike a man when he is fallen, is considered by honest men as the last excess of infamy. Unless this Trinity College can explain itself, it will always have the flavor of carrion about it in American nostrils.

The dean of this school, to be sure, says that the Faculty thought that the Kingston medical students had entirely withdrawn from their school. But it is not explained why credit was offered for lectures of which certificates were refused by the professors, or why their offer was made with such haste and such absence of consideration for a sister Faculty.

The affair is a serious drawback to medical co-education in Canada.

THE HOSPITAL SATURDAY AND SUNDAY COLLECTION.

It is very evident that the Hospital Saturday and Sunday movement is not responded to by the public in a degree that corresponds with its merits. The sum collected this year, up to January 15th, was only \$26,354.92, out of which about \$1,200 is to be taken for expenses. Further sums are expected, but it does not seem possible to reach even the sum contributed last year, which was about \$40,000.

This is in marked contrast to the collections made in London, which amounted in 1881 to \$170,730, this sum being contributed by 1,338 congregations.

There is in London a much more hearty co-operation of the churches than in New York. The Catholics unite in the work there, but do not do so here. A very extraordinary indifference was shown by Protestant churches also. Thus, of 38 Baptist churches only 1 responded; of 21 Lutheran churches none; of 55 Methodist, only 4; of 50 Presbyterian, only 5; of 71 Protestant Episcopal, only 43; and of 20 Reformed Dutch churches, only 5.

News of the Week.

KINGS COUNTY MEDICAL SOCIETY ON THE INSTRUCTION TO DELEGATES.—At the meeting of the Kings County (N. Y.) Medical Society held on Tuesday evening, January 16th, the resolution instructing the delegates to the State Medical Society to vote for the old Code was rescinded by 49 to 26. Dr. Lewis S. Pilcher, an avowed opponent of the old Code, was elected as one of the delegates to fill a vacancy.

TARIFF ON QUININE AND CINCHONIDIA.—It is reported that the Committee on Ways and Means have stricken quinine and cinchonidia off the free list.

THE PENSION BILL was passed by Congress January 13th. The following are some of the items: For army pensions, \$80,000,000; for navy pensions, \$1,000,000. Fees and expenses for examining surgeons, \$275,000. The allowance of from \$12 to \$35 per month is made for the loss of an eye, and \$50 per month for both eyes, while the loss of hearing is estimated at \$25 per month.

MORE BODY-SNATCHING IN MONTREAL, CANADA.—Four bodies stolen from the cemetery at St. Martine, have been discovered, packed in boxes, in St. Jean Baptiste village. They were duly returned to their vaults. No arrest has yet been made.

CEREBRO-SPINAL MENINGITIS IN INDIANA.—Spotted fever prevails in Rush County, Ind.

CARE OF THE INSANE IN WISCONSIN.—Governor Jeremiah M. Rusk, of Wisconsin, in his annual message, January 11th, calls attention to the necessity of caring for the insane in properly equipped State hospitals, and strenuously advises against the employment of jails and almshouses as asylums.

COW-POX IN BALTIMORE COUNTY.—Spontaneous cow-pox is said to have broken out in a herd of Alderney cattle in Baltimore County, Md.

DR. D. W. BUTLER, of Connerville, Md., injured by the cars on Saturday last, is reported in a critical condition from supposed internal injuries.

SCARLET FEVER prevails as an epidemic in Walla Walla, I. T.

BURNING OF A SMALL-POX HOSPITAL.—The Sailors' Small-pox Hospital, near Crisfield, Md., was destroyed January 13th, by fire, caused by the upsetting of a kerosene lamp by a delirious patient. The latter subsequently died from exposure. No other lives were lost.

THE DISPENSARY FOR NERVOUS DISEASES in Baltimore, under the charge of Dr. John Van Bibber, is reported to be a thousand dollars ahead of its expenses during the past year. The small fee system appears to explain the result.

STEAM-HEATING AND FOUL ODORS.—Some of the business men in the lower part of the city have complained of foul odors which arise from the steam-heating pipes. The Health authorities have found that in laying the pipes gas has been liberated from the saturated ground, and that the composition of tar and other materials with which the pipes have been covered also give out a sickening smell when heated.

A BABY-SHOW IN HAMBURG, on the American plan, is about to be inaugurated under very promising auspices.

MUTUAL AID SOCIETIES IN VIENNA AND ST. PETERSBURG.—At Vienna and St. Petersburg Physicians' Mutual Aid Societies have at length been organized.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.—The Philadelphia County Medical Society has elected its officers for 1883. They are: *President*, Dr. William M. Welch; *Vice-Presidents*, Dr. W. R. D. Blackwood and Dr. A. Hewson; *Secretary*, Dr. Henry Leffmann; *Treasurer*, Dr. Louis K. Baldwin. This society has about four hundred members, and with three meetings every month accomplishes a great deal of work. As it is the only body competent to send delegates to the Medical Society of the State of Pennsylvania and to the American Medical Association, it includes in its membership nearly all the active medical men of the city.

POLICLINIC IN BALTIMORE.—Following the example of New York and Philadelphia, a Policlinic is to be established in Baltimore.

FIRST AID SOCIETY.—The Police and Fire Commissioners respectively recommend the members of their forces to attend the lectures given by the First Aid Society.

A LIBERAL DONATION TO THE GERMAN DISPENSARY.—It is rumored that Mrs. Oswald Ottendorfer, a wealthy German lady of New York, has donated one hundred thousand dollars to the German Dispensary of this city. This will materially increase the usefulness of this thriving institution, by enabling its managers to obtain a larger building, which is much needed.

FEES FOR LEGAL SERVICES TO GOVERNMENT.—Over seventy thousand dollars have already been paid for extra legal services in the Star Route case, and the end is not yet. How does this sum compare with the beggarly amount that was paid the physicians who so faithfully attended the late President Garfield. Is there no committee sufficiently competent, before whom these legal claims can be brought for proper adjustment regarding true value received?

THE ASSEMBLY STANDING COMMITTEES.—The appointments to the following committees will be of more or less interest to members of the medical profession throughout the State:

Public Health.—Messrs. Nelson of Cortland, Delehanty of Albany, Craig of Steuben, Sheridan of Kings, Murray of Fulton and Hamilton, Roesch of New York, Mullaly of New York, Derrick of Rensselaer, Benjamin of Steuben, Wertelman of New York, and Mulholland of Kings.

State Charitable Institutions.—Messrs. Bartlett of Broome, Odell of Orange, Roesch of New York, Burns of Kings, Emans of Dutchess, Nelson of Cortland, Benedict of Ulster, Page of Wyoming, and Geddes of Onondaga.

General Laws.—Messrs. Townsend of Oneida, Searl of Steuben, Burns of Kings, Higgins of Niagara, Snyder of Schoharie, Wilcox of Erie, Quinn of New York, Armstrong of Washington, Boynton of Essex, Cleveland of Yates, and Brooks of Putnam.

THE NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE AND THE PREVENTION OF INSANITY holds its annual meeting in Philadelphia, on January 25th, at the College of Physicians. There will be an afternoon and evening session. The Address of Welcome will be delivered by Samuel D. Gross, M.D. The following papers will be read: "Functions of the Medical Staff of an Insane Hospital," by Prof. Traill Green, M.D., of Easton, Pa.; "Preventable Causes of Insanity," by Dr. J. S. Jewell, of Chicago; "How to Protect the Insane," by Dr. Joseph Parrish, of Burlington, N. J.; "The Duty of Medical Colleges and the General Practitioner toward Mental and Nervous Diseases," by Dr. C. K. Mills, of Philadelphia; "Obligations of the Sane toward the Insane," by Rev. R. Heber Newton; "The Prevention of Insanity in Certain Cases of Nervous and Hysterical Women," by Dr. H. Marion Sims; "The Legal Rights of the Insane," by Clark Bell, Esq., of New York; "The Prevention of Insanity by the Rational Treatment of Inebriety," by Dr. T. D. Crothers, of Hartford, Ct. Remarks will be made by Hon. H. M. Hoyt, ex-Governor of Pennsylvania.

A NEW ANATOMY ACT FOR PENNSYLVANIA.—The Anatomists' Association of Philadelphia expects to have a new Anatomy bill introduced during the present session of the Pennsylvania Legislature. This bill will give the unclaimed bodies of all counties to the profession for scientific investigation and for educational purposes. At present the Philadelphia colleges, with their hundreds of students, have no legal supply except from the city of Philadelphia; yet the colleges advertise for students, claiming to have an abundant supply of material. The inertia of these institutions, since the imperfect Anatomy Act of 1867 was passed, is remarkable. The Philadelphia County Medical Society has opened a correspondence with all other county societies in the State, requesting co-operation in an endeavor to have the new bill passed. Unless petty jealousies weaken the force of the movement, the united force of the profession will be able to accomplish much good at Harrisburg.

A BILL TO PROVIDE FOR THE PROPER INCARCERATION OF LUNATICS has been presented in Assembly by Mr. Hodges, of Brooklyn. It provides that no person shall be confined as a lunatic without first having been tried by a jury before a Court of Record.

PASTEUR announced at the meeting of the Academy des Sciences that 85,000 sheep had been inoculated for anthrax. The mortality from this disease had fallen from 9 per cent. to 0.75 in consequence.

JOURNALISTIC CHANGES FOR THE YEAR.—There are few new medical journals this year, but a good many changes in the old ones. Our wide-awake and interesting contemporary, *The Michigan Medical News*, has consolidated with *The Detroit Clinic*. The combination is to be called *The Medical Age*, and is to be published by Mr. G. S. Davis. We are glad to learn that Dr. Mulheron is to continue as managing editor. *The Rocky Mountain Medical Times* has chosen a less rugged title, and appears as *The Denver Medical Times*, Dr. F. Marquand Trask being added to the editorial staff. *The Canadian Journal of Medical Science* has become *The Canadian Practitioner*. *The Sanitarian* has become a weekly. It is published in quarto form, double column, sixteen pages. Dr. S. N. Bell continues as editor, and Dr. T. P. Corbally as associate. The journal has secured a large list of collaborators, including many of the prominent sanitarians of the country. *The Sanitary News* is a new weekly recently started in Chicago. *The Independent Practitioner* starts out with a new editorial staff consisting of Dr. Leigh H. Hunt and W. C. Barrett, D.D.S., M.D. *The Planet* is the title of a new monthly medical journal published in New York, and edited by Dr. C. E. Nelson. Contrary to what its title indicates, it will not shine by reflected light, but will contain only original articles. *The American Medical Bi-Weekly* has become *The American Medical Weekly*, and under its experienced editor will doubtless continue to take a front rank in medical journals.

ALUMINIUM.—The recent discovery of a process by which aluminium can be manufactured cheaply in large quantities has created much excitement. It will be well for ingenious members of the medical profession to remember the properties of this metal. Aluminium is a white metal having a somewhat bluish lustre when polished. It is very malleable and ductile, yet very tough, and is about as light as glass or porcelain. It is very sonorous, and an excellent conductor of heat and electricity. It is unaltered by exposure to air—even moist air. It is not attacked by nitric or sulphuric acids, but hydrochloric acid rapidly dissolves it. It has been chiefly used in the arts as an alloy for making bronzes, etc.

THE BELLEVUE TRAINING-SCHOOL FOR NURSES held its tenth annual meeting last week, and gave diplomas to twenty nurses. There have now been graduated one hundred and sixty-eight in all. Three of these have recently gone to Italy to establish a training-school in Rome.

A STATE BOARD OF PHARMACY.—At the meeting of the Erie County Medical Society, T. M. Johnson, the President, delivered an address in which he urged the necessity for the creation of a State Board of Pharmacy. The Counties of New York and Kings now have laws regulating pharmacy, but in the other counties almost any one may sell drugs and poisons. A bill will be sent to the Legislature for the correction of this state of things.

SMALL-POX.—Small-pox is on the increase in Baltimore, Montreal, Atlanta, Roanoke County, Va., and in different parts of Kentucky.

REGULATING PHARMACY IN PENNSYLVANIA.—A bill has been introduced in the Pennsylvania Legislature for the purpose of regulating the practice of pharmacy, the sale of poisons, and preventing adulterations.

SURGEON-GENERAL OF MASSACHUSETTS.—Dr. O. G. Cilley, of Boston, has been appointed Surgeon-General on General Butler's staff.

DR. EBENEZER DEARBORN, of Nashua, New Hampshire, one of the oldest physicians in the State, died on Monday, aged ninety years.

DEATH OF SAMUEL A. MUDD.—Dr. Samuel A. Mudd, the physician who set the leg of Wilkes Booth, the assassin of President Lincoln, died on Wednesday, at Bryantown, Charles County, Maryland. He was fifty years old, a member of an old Maryland family.

DR. E. MUSSEY HARTWELL has been selected instructor of the proposed gymnasium for the muscular development of the students at the Johns Hopkins University. On January 10th he introduced his course of lectures by one on "The Development of the Human Body." A large audience was present.

THE FLORIDA MEDICAL ASSOCIATION held its annual session at Jacksonville, on the 16th.

BITTEN BY A SQUIRREL.—Dr. W. G. Stedman, of Southington, Conn., was bitten last week in the hand by a pet squirrel; severe lymphangitis ensued, and it was feared he would lose his arm.

BAD WATER IN PHILADELPHIA.—The drinking-water of Philadelphia is reported to be unwholesome.

SUIT FOR LIBEL BY A PHYSICIAN.—Dr. William A. McDonald, of Lynn, Mass., has sued a Roman Catholic priest of that place for libel. It is claimed that the latter charged the physician with being unskilful and advised persons not to employ him.

STRICKEN WITH HEMIPLEGIA.—Dr. Samuel R. Rixey, a prominent physician of Culpepper Court House, Va., has been stricken with hemiplegia.

PROSECUTION OF DRUGGISTS FOR PRACTISING MEDICINE.—Several druggists in Quebec are to be prosecuted for practising medicine without licenses.

EAST RIVER MEDICAL ASSOCIATION.—An interesting paper was read before the East River Medical Association last evening, at the house of Professor J. D. Bryant, by James R. Taylor, M.D. Subject, "The Fractures of the Long Bones." The doctor had quite a number of well-executed engravings prepared expressly to illustrate his views, which were distributed during the reading. He also exhibited several entirely original mechanico-surgical appliances, which he uses in his practice. The paper was well received by those present, and generally endorsed as a valuable contribution to the literature of the subject.

AMERICAN PORK.—The authorities at Berlin are discussing the propriety of prohibiting the importation of American pork, which is said to be largely infected with trichinae.

Reviews and Notices.

MICROSCOPICAL MORPHOLOGY OF THE ANIMAL BODY IN HEALTH AND DISEASE. By C. HEITZMANN, M.D., late Lecturer on Morbid Anatomy at the University in Vienna, Austria. With 380 original engravings. 8vo, pp. 849. New York: J. H. Vail & Co. 1883.

UNDER the above title Dr. Heitzmann has collected and published some twenty-two chapters of varied matter, intended to be illustrative of the experience acquired by "ten years' intense labor." A more curious medley of strange assertions, premature conclusions, and extravagant theories it has rarely been our lot to peruse. At times we feel constrained to believe that the author is merely an artful satirist, so keen and rich is the quality of his humor. But there are other passages in the book that present the stolid front of undisputed and indisputable fact, where real science is not made to blush in the presence of pseudo-scientific posing.

Dr. Heitzmann evidently felt unequal to the task of writing single-handed so great a work on microscopy. He has accordingly secured the invaluable collaboration of such well-known histologists as Schöney, Hassloch, Hoeber, Elsberg, Tauszky, Frankl, Müller, Johnstone, and other eminent scientists. It is perhaps not surprising, therefore, that the result achieved by the combined efforts of so many able and competent observers should be in many respects a truly brilliant one.

The preface is a masterpiece in its way. It must be read and studied from beginning to end, in order to be fully appreciated. Dr. Heitzmann, it should be remembered, scored a brilliant fiasco in Europe as regards the recognition of his flights of fancy. But then he informs us that "European microscopists are, to a great extent, prejudiced by the teachings of the older masters." The new master has "received in New York much encouragement from students and co-workers." He has also "been magnanimously supported by a friend, who is not a medical man, but a prince in character and wealth, and who surpasses most European princes in that he will not allow me (Heitzmann) to inscribe his name upon the dedicatory page." But in addition to this interesting, important, and withal graceful personal explanation, "The United States," we are told, "are ahead whenever new ideas of practical importance are to be acknowledged." Now, as regards histology, America is ever ready to concede to Europe a well-earned pre-eminence. Moreover, even America is by no means prepared to accept Heitzmann's morphological vagaries as the gospel of scientific truth in microscopy.

Most of the articles in this volume have already appeared elsewhere, and not a few are translations of papers published in German years ago. In all essential features, the author still adheres to his former peculiar views on protoplasm, or, as he now prefers to call it, "bioplasson." But the network of living matter, which he holds to be the morphological foundation of all animal life, is by the vast majority of competent microscopists accepted only as the reticulum of cellular death.

It may not be amiss to illustrate by a few quotations the author's style and some of his hasty assertions. Tearing and teasing of tissues he utterly condemns as a most objectionable method of preparation. All working histologists know, however, that it is an indispensable procedure for many examinations, and that perhaps no other single method has yielded so many and such practical results as this one. Glycerine is the only liquid which he fully recommends for permanent mounting. This again runs counter to universal experience, which has found in the various balsams the best means for permanent mounting. Glycerine is of special value for hasty and temporary mountings. In this connection Heitzmann also writes (p. 81) as follows: "The process of mounting in glycerine is simpler and easier than any

other method, and, if all precautions mentioned are carried out with care, no change," etc. "True glycerine specimens need more careful handling than balsam specimens." The contradiction contained in these statements is apparent at once. "Ammoniacal carmine solution is the most satisfactory for staining specimens obtained after hardening in chromic acid." Most histologists have found hæmatoxylin, eosine, and other dyes far superior to carmine for chromic acid specimens. "After Elsberg's at present almost generally adopted designation, we shall term the molecules of the living matter 'plastidules'" (p. 13). So far from being generally adopted, Elsberg's designation is as little known as his competency as a histologist is widely recognized. On page 17 this well-known laryngologist is also preferred to Darwin and Hæckel as a successful theorist on protoplasm. And here we may mention that although Heitzmann repeatedly asserts that he has discarded the term protoplasm altogether, he almost constantly employs it throughout the volume.

By looking at a pus-corpuscle Heitzmann is able to tell "whether the person from whom the pus comes is healthy and strong, or weakened by chronic disease, as tuberculosis" (p. 32). We doubt whether any conscientious histologist would dare to imitate this wild feat. But in hundreds of such examinations (p. 59) Heitzmann has diagnosed constitutional conditions from the appearance of the network in leucocytes. And as he modestly adds, "I was right in every instance; not one mistake has occurred." And again, "To-day my hopes have turned into accomplished facts," meaning his pus-corpuscular hopes, expressed some three years ago. "Thus I have arrived at a point of perfection which allows me to tell the constitution of a person without knowing anything of his former life" (p. 60). "The bioplasson is one uninterrupted mass throughout the body, and is connected from the top of the head to the heels, in what we call tissues" (p. 61). "The animal body, as a whole, is one protoplasmic mass, in which are imbedded a relatively small number of isolated protoplasmic corpuscles, and various other non-living substances" (p. 131). Now all this uninterrupted mass strikes us rather as an uninterrupted and unmitigated mess. Moreover, it is the veriest physiological heresy to assert that the healthy normal body contains dead ingredients in a morphological sense. All non-living particles would necessarily act as foreign bodies in healthy tissues or organs. On page 135 we learn that the "cell-theory had to be abandoned in the light of my investigations." As a matter of fact this theory is still largely dominant, and certainly no more acceptable explanation of various histological and pathological phenomena has yet been advanced. Biologists will doubtless be pleased to know that "on cartilage-tissue have mainly rested, for the last forty years, our biological views" (p. 141).

It is clearly impossible, within the limits of the present notice, to particularize more fully the numerous extravagant notions and eccentricities contained in the pages of the work before us. One is surprised also at the spirit in which it is conceived and written. For nobody can fail to read between the lines the bid for laboratory students, and the too evident desire at self-advertisement. Witness only the following selections: "A few months'—nay, a few weeks'—thorough study under the direction of a reliable teacher will suffice to enable every one to see what really can be seen in the plastids," etc. (p. 60); "Life insurance should be based upon microscopical examination" (p. 61); "Marriages should be allowed in doubtful (?) cases only upon the permit of a reliable microscopist" (p. 61); "Many examinations, etc., have enabled me to reach a certain degree of positiveness in the diagnosis of the diseases of the genito-urinary tract. The microscopic analysis of the urine also requires a thorough study, which, however, is greatly facilitated by the guidance of a reliable and experienced teacher."

In justice to the author it must be said that his work

is not without redeeming features. Many of the drawings are beautifully executed, and cannot fail to be admired. Practical suggestions as to methods of preparation are found among others which are the reverse of this. Although no attempt at a systematic presentation of the facts of normal and pathological histology has been made, nevertheless scarcely a living issue in these branches is left untouched. Here and there some really valuable expression of opinion may be found—valuable rather in its stimulating further thought and study than in direct worth. In their present status Heitzmann's notions may be likened to some turbid solution, in which time and calm repose may yet allow the formation of clear crystals representing scientific thought and truth. It is to be hoped that this much-needed time and repose may be given before a second edition of Heitzmann's book appears.

THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA. Sixth Decennial Revision, by Authority of the National Convention for Revising the Pharmacopœia held at Washington, A.D. 1880. New York: Wm. Wood & Co. 1882.

IN most civilized countries, the necessity for some standard as to the quality and preparation of drugs that are in use by the profession, has led to the publication of some work that may be regarded as the authoritative exposition of this standard. In most European countries the government gives the necessary authority for the preparation of the work, which, when published, receives the name of *The Pharmacopœia*. In America, however, the Federal Government does not itself possess the power to authorize the publication of such a work, this power pertaining to the respective States. If, however, each State should establish its own Pharmacopœia, inevitable confusion would result. To obviate this, a plan was devised fifty years ago, and has been in successful operation ever since. Every ten years a convention is held in Washington, which convention is composed of representatives appointed by the several State societies, medical colleges, and pharmaceutical associations. The last convention was held in May, 1880, at which time a general plan for revising the pharmacopœia was agreed on, and a committee, consisting of twenty-five physicians and pharmacists was appointed to carry it out. This committee were well known in their respective professions, and well qualified for the special task before them. On examining the list we find all sections of the country represented, Massachusetts and New York at the East and North, North Carolina and Missouri at the South and West. The committee devoted a little more than two years to the work of revision, and the result of their labors is now before us. On examining the work we are at once struck with the important differences that exist between it and its predecessors.

The previous Pharmacopœias were mere skeleton works, of comparatively little use to pharmacists, and of still less utility to physicians. As a consequence, it was rarely met with in the libraries of the latter. The new Pharmacopœia, on the other hand, is indispensable to druggists, and is at the same time one of the most practically useful books of reference with which we are acquainted. The arrangement of its contents is alphabetical, and under the name of each crude drug we find a list of its official preparations. Under each drug we also find a very complete description of its physical appearances, so that it may be readily recognized and distinguished from spurious and adulterated articles, chemical tests being given where necessary. A large number of obsolete drugs and preparations have been dropped, and about an equal number of new ones have been added, as well as several entirely new processes for their preparation. Among these latter we notice abstracts, triturations, tinctures of fresh plants, etc. Abstracts are milk sugar preparations, each grain of which represents two grains of the crude drug. Triturations, on the other hand, possess one-tenth the strength of the original. The former

are well adapted to the dispensing of belladonna, digitalis, etc., while the latter render the dispensing of the stronger alkaloids, etc., more safe and accurate, and will prove useful in prescribing some of the metallic salts. In many cases patients find it more convenient to have their medicine in a dry or solid form, that can readily be carried about the person. Especially when travelling is the ordinary bottle medicine a nuisance, and many are averse to the old-fashioned pill. These two preparations in powder form are likely to become popular with patients, even if they are slow of adoption by physicians. We note that the strength of some of the preparations varies a little from the former Pharmacopœia—notably in the case of the fluid extracts, which are about five per cent. weaker, a difference of three or four drops to the teaspoonful. The opium preparations will be somewhat stronger, but at the same time more uniform.

The arsenical solutions have a uniform strength of one per cent.

As a rule the formulæ are indicated in parts by weight, as in most of the Continental Pharmacopœias; in the case of pills, however, absolute weights are used, and a *double* formula—troy and metric—is given, the result in either case being the same.

There are a few changes in the nomenclature that it would be well for the careful prescriber to familiarize himself with.

Many useful tables will be found at the end of the volume—such as a table of elementary substances, with their symbols, atomic weight, and equivalents; a table of thermometric equivalents according to the Centigrade and Fahrenheit scales; tables of percentage and specific gravity, including alcohol, acetic acid, hydrobromic acid, hydrochloric acid, nitric acid, sulphuric acid, phosphoric acid, etc.; a table of the solubility of chemicals in water and in alcohol, and saturation tables. There is a list of articles added to the pharmacopœia and one of those dismissed from it; lists of changes of official Latin and of official English titles; a table exhibiting differences of strength of the preparations, as made according to the last and the present pharmacopœia; and, finally, tables of weights and measures.

If once on the physician's table, this work will probably be more frequently consulted as an aid to prescribing than any other book in his library, for it represents the results of the latest scientific researches. The committee who had this work in hand deserve great credit for bringing the work up to the present needs of the profession.

Owing to the alphabetical arrangement of the articles, described the work will be found to be exceedingly convenient for reference, and in addition there is a very complete index appended to the volume. It is issued in capital style.

BARBERS' BASINS AND SEWER-GAS.—A new danger has been discovered by the *Lancet*, a danger of breathing sewer-gas from the waste-pipes of barbers' basins, when being shampooed. The danger is the more serious because the whiff of germ-laden gas would pass unnoticed among the scents and sweet odors of the barber shop, and the unconscious victim while breathing rose and jasmine, would also be absorbing the bacteria of various diseases. Probably the basins of the average barber shop are no better plumbed than other fixtures are, untrapped wastes and syphoned traps may make as many open connections with the drain as are found in the average of other buildings, but, on the whole, we regret that the *Lancet* has directed attention to this subject, because it gives opportunity to the barber to ask the man in the chair to take one more article than is on the list now. When the present category of oils and scents, bay rum and hair reviver is gone through there will hereafter remain the inquiry, whether the m. c. will not take a little disinfectant through an atomizer? On behalf of the shaved community we protest.—*Sanitary Engineer*, November 23, 1882.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 27, 1882.

GEORGE L. PEABODY, M.D., VICE-PRESIDENT, IN THE CHAIR.

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. W. R. BIRDSALL, of the Committee on Microscopy, reported that they had examined the microscopic sections of the tumor presented by Dr. Ferguson, and sustained his report, which is herewith submitted:

"CARCINOMA OF THE FUNDUS UTERI.

"Almost the entire fundus of the uterus is occupied by a soft tumor, nearly pear-shaped, the antero-posterior diameter of which is one and three-fourths, and the vertical diameter three and one-fourth inches. From its base of attachment at the fundus it extends downward, polypoid in form, distending the body and neck of the uterus, and presenting by a blunt terminus at the external os. This projecting portion of the tumor is constricted circularly, the constriction corresponding to the internal os. The consistency of the tumor is uniform throughout, and both its consistency and appearance are characteristic of a medullary carcinoma.

"The examination of sections made from different parts of the tumor, especially regions of most recent origin, shows it to be composed of epithelial cells and a connective tissue stroma.

"The alveolar arrangement of this stroma is characteristic of carcinoma, the alveoli differing in size and shape.

"The alveolar walls vary much in thickness, and contain numerous young cells and few connective tissue nuclei.

"Certain areas in the interior of the tumor have undergone retrograde changes.

"In places throughout the tumor are seen limited areas of uterine tissue, in which the morbid growth was developed.

"The cells which fill the alveoli differ in different places; they are large cuboidal or low cylindrical cells, where they line the walls which limit the alveoli. They are smaller in the centres of the alveoli, where they are irregular in shape. Each cell is furnished with a distinct large nucleus.

"The tissue of the tumor is not very vascular, but it is worthy of note that the tissue of the uterus in the neighborhood of the growth is much more bountifully supplied with blood-vessels than the uterus elsewhere, or than the normal non-pregnant uterus.

"(Signed) F. FERGUSON."

DR. W. H. PORTER suggested that this growth, which now presents the characteristics of a carcinoma, probably originated in a papilloma, the alveolar appearance representing the remains of the former interpapillary spaces.

The vaginal tumor presented by Dr. Tauszky at the stated meeting, November 22, 1882, showed, on section, an abundant development of apparently new epithelial corpuscles, with many bundles of fibrillated connective tissue. At one point there were large cells, with smaller ones arranged in a concentric manner around the large central cells, but no well-developed epithelial nests were seen. The growth, however, presented a suspicious appearance, although there was no positive evidence that it was an epithelioma.

CANCER OF THE OMENTUM, MESENTERY, PANCREAS, AND STOMACH.

DR. VANGIESON presented the liver, the kidneys, the spleen, the pancreas, a portion of the small intestines, with the mesentery, and the right lung removed from the

body of a man who, when he first saw him, was sitting in a chair and had evidently been a great sufferer for a long time. He was sitting with his head leaning forward and occupying the position usually assumed when suffering from great dyspnoea. His dyspnoea was extreme, but it was somewhat relieved by inhalations of nitrite of amyl. The patient died on December 19th and the autopsy was made on the 21st. Dr. VanGieson learned that the man had, for three years, been more or less an invalid. For a long time he was treated for dyspepsia without relief, and for the last year he had been compelled to remain at home at least three or four days each week from his work. His occupation was that of a turner, and during his business he was accustomed to press his abdomen against the material on which he was at work. The entire history of the case was that of one in which the patient had suffered from some form of malignant disease of the abdominal organs. Dr. Joseph Hilton, of New York, was the last of many physicians who saw him, and was the one who first made a correct diagnosis. A somewhat remarkable feature of the clinical history was oedema of the right arm and left leg, while the left arm and right leg were unaffected. At the autopsy the omentum was found filled with carcinomatous growth, also the intestine and mesentery was studded with numerous cancerous nodules, and the head of the spleen was infiltrated with cancerous deposits. There was also cancer of the stomach, but there were no secondary deposits of the liver. The kidneys were apparently healthy. In the right pleural cavity there were about three pints of clear serous fluid. The right lung was compressed and was adherent at the upper portion of the chest wall. The bronchial tubes were thickened. The single symptom which led Dr. VanGieson to make the diagnosis of mesenteric cancer was the fact of oedema of one limb, without disease of the heart or kidneys. In a similar case, the specimens from which he presented to the Society seven or eight years ago, oedema was quite characteristic, whereas he believed in simple cancer of the stomach, oedema was very rare unless some other organs were involved, as the kidneys or the heart. There was no ascites.

DR. VAN SANTVOORD said that Trouseau had directed attention to oedema of one of the lower extremities as a symptom of malignant disease within the abdominal cavity, and regarded it as a valuable aid in making a diagnosis in case of obscure abdominal affections.

FIBRO-MYOMATA OF THE UTERUS OF THE SEA-LION.

DR. LIAUTARD presented the uterus and its appendages removed from a sea-lion belonging to Barnum's collection of animals. The animal had exhibited no special symptoms of disease, and had a good appetite up to twenty-four or thirty-six hours before death. At the autopsy there were found double pneumonia and parasites in the small intestine, and at the junction of the left horn with the body of the uterus there was found a large tumor which presented the gross appearances of fibromyoma as it occurs in the human subject.

CYST CONTAINING HAIR.

Dr. Liautard also presented a cyst containing hair which he had removed from the side of a saddle-horse, a little posterior to the left shoulder. At that point there was a movable elongated tumor, about the size of an English walnut. After making an incision through the skin the tumor was easily enucleated, and when opened it was found to contain a large amount of curly hair, mixed with sebaceous material. Another tumor, similar in feel, and about three inches in length, was removed from another part, and on opening it, it was found to contain material which presented the appearance of pus. He had been unable to find the record of any case of cyst containing hair occurring in the horse.

CARCINOMA OF THE RECTUM.

DR. JANEWAY presented a specimen with the following history: It was removed from the body of a man

twenty-eight years of age. Last June he suffered from dysentery, which continued up to the time of his death. Upon closer examination it was found that he had suffered from constipation for two years, and that from January to June, 1882, the constipation was such as to oblige him to strain severely before he could have a passage from the bowels. Nothing more definite could be obtained with reference to the character of the discharges than that they were rather small. When Dr. Janeway first saw the patient he was very much emaciated, his abdomen was swollen and contained fluid. There was also a certain amount of tympanites, and there was pain upon pressure. There was no doubt concerning the existence of chronic peritonitis. On making rectal examination he found, four inches from the anus, a stricture into which he could just introduce the end of his finger. The condition of the abdomen was such as to prevent a bimanual examination with one finger in the rectum. Near the umbilicus a tumor was found which was firm, hard, and situated in the deeper tissues. The skin was movable over it; it was of a flat, oval form, apparently about two inches in diameter and about one inch in thickness. The examination provoked a desire to have an evacuation from the bowels, and it was then seen that the size of the discharge was about that of an ordinary lead pencil. Dr. Janeway diagnosed malignant disease. The patient lived two years from the time of the first development of notable constipation, and died of heart failure.

At the autopsy there was found chronic peritonitis, and the peritoneum was also studded with nodular growths, which presented somewhat the appearance of miliary tubercle. There was new growth in the rectum, beginning about four inches above the anus and extending upward, so that the stricture measured four inches in length. The sigmoid flexure was likewise involved in the thickening and was also narrowed, so that the entire narrowed portion of the intestine, from the anus upward, was about six or seven inches in length. Another point of interest was a fistulous communication between the small intestine and the rectum. Another point of interest was that the cæcum and the ascending, the transverse, and the descending colon, were impacted with exceedingly hard masses of feces. Another point of interest was the fact that there was only slight ulceration of the mucous membrane of the intestines, the chief lesion being simple catarrh. There were one or two spots of ulceration in the rectum below the stricture. The mucous membrane was markedly thickened. The omentum was transformed into a cancerous mass, and could be felt as a tumor through the abdominal wall. The lungs were normal. There was no change in the pleura. One interesting and important clinical feature of the case was the fact that the patient came for treatment supposing that he was suffering from diarrhoea or dysentery. Dr. Janeway thought that every case of cancerous stricture of the rectum he had seen had given the history of treatment for chronic and sometimes for acute dysentery.

Another point of interest with reference to the specimen was the reaction given by the material of which the omental mass was composed. It had the glistening gross appearances of colloid material, but when acetic acid was used the reaction was that of mucous rather than of colloid substance.

DR. BRIDGON remarked that he had seen many cases of cancer of the rectum, but he had not seen one occurring in a patient under forty-five or fifty years of age.

DR. JANEWAY remarked that he had seen one case occurring in a man twenty-five years of age.

DR. BOZEMAN referred to a case at present under his care in which the patient was seventy years of age. The disease occupied the anterior wall of the rectum, about two inches above the anus. In that instance the patient had been told that she had, and had been treated for, hemorrhoids. Hemorrhoids existed, but the cancer was the essential disease.

DR. PEABODY then presented a specimen of

CHRONIC HYDROCEPHALUS, WITHOUT SYMPTOMS.

The brain was removed from the body of a man who died as the result of injuries caused by his being crushed between railroad cars. He was a vigorous man, about thirty years of age, in good health at the time of the accident. His pelvis was crushed and his urethra was lacerated. Following this came infiltration of urine. He died forty-eight hours after the accident.

The only organ of interest at the autopsy was the brain. After removal of the dura mater the convolutions presented a normal appearance. During the process of removing the brain from the skull there was an escape of fluid from the ventricles through the rent in the base which occurred just in front of the optic commissure. Immediately thereafter a large depression was found in the convolutions of each hemisphere, anterior to the fissure of Rolando. Upon opening the lateral ventricles the cause of this depression became apparent. Their cubic contents must have been fully as great as usual, their walls being much thinner than normal—nowhere more than an inch in thickness. The third ventricle was also dilated. The fourth ventricle appeared normal. The ependyma of the lateral ventricles was normal. The brain tissue itself was normal in consistency and color.

There was no abnormality in the shape or appearance of the skull.

The case was of interest in showing the extent to which chronic hydrocephalus could exist without symptoms which would lead to a suspicion of its presence. Unfortunately, of the man's mental capacity no history had been obtained.

DR. F. W. JACKSON referred to a case which came under his observation while an interne at the Roosevelt Hospital. A man, twenty-two years of age, gave the history of having been perfectly well up to eight years before admission, when he fell forty or fifty feet, as he stated, and struck upon his head. Beyond a certain amount of concussion he suffered but little from the fall, and remained as well as usual up to six months before seeking admission to the hospital, when he began to have attacks of severe headache, which increased in severity and frequency. On examination no apparent cause could be found for the headache. The attacks had become so frequent that they recurred nearly every half hour, and the pain was extremely severe. The man died suddenly. At the autopsy, made by Dr. Delafield, dilatation of the ventricles of the brain, nearly as marked as in the specimen presented by Dr. Peabody, was the only abnormal condition.

DR. GIBNEY had noticed spastic contractions in cases of chronic enlargement of the head, the majority of cases, however, in which such contractions occurred being in microcephalic children. He asked if the comparative frequency had been noted.

DR. JANEWAY remarked that his attention had not been especially directed to such cases associated with enlarged heads.

DR. VAN SANTVOORD said that a few years ago, while looking up the literature of spastic contractions, he read the history of a case of dilatation of the lateral ventricles in a man, forty years of age, which apparently dated from an injury received at twenty years of age. There was some feebleness of mind, and, besides, spastic paralysis without any lesion of the spinal cord. The writer referred to the spastic condition and the internal hydrocephalus as having the relation of cause and effect.

DR. JANEWAY thought it difficult to prove that the spastic condition depended upon the dilatation of the ventricles unless there existed descending degeneration of the lateral tract. He had seen quite a number of cases of chronic hydrocephalus in adults without any such lesion, nor was there spastic contraction. He also referred to the case of a boy with an exceedingly large head, and at the autopsy the thickness of brain substance

between the ventricles and the external surface was not more than one-eighth of an inch. There was also pachymeningitis of recent date with the hydrocephalus, but there had not been spastic contraction.

DR. BIRDSALL had seen a number of spastic cases, and scarcely any of the patients had heads larger than normal, while one or two were decidedly microcephalic. He had noticed the existence of spastic condition in children which were born at eight months, or less than full term.

The Society then went into executive session.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE EPIDEMIC OF TYPHOID FEVER IN PARIS, AND ITS LESSONS—THE CONTRACTILITY OF THE UTERUS UNDER ELECTRICAL CURRENTS—CHARCOT ON THE SITUATION OF OVARIAN PAIN AND THE ORIGIN OF HYSTERICAL ATTACKS—CREMATION IN FRANCE—DEATH OF CORVISART—PRESENTATION TO MONSIEUR DUMAS.

PARIS, December 29, 1882.

THE epidemic of typhoid fever which has been raging in Paris for some months past is, I am glad to say, steadily on the decline, and, if it has had no other result, it is worth noting that it has aroused the attention of the municipal and medical authorities to the sanitary condition of this great city, which is, in many respects, so notoriously defective and far behind that of many other cities of less importance. The etiology of the disease has been fully discussed at the Academy of Medicine and the different medical societies here, and, judging from the various opinions expressed, it is evident that the French medical men are becoming converted to the theory of the fecal origin of typhoid fever, though at the same time they do not lose sight of the other possible causes, such as foul air and water, overcrowding, and everything that would tend to debilitate the constitution. From the discussion on therapeutics it may be gathered that among medicinal agents quinine takes the lead, and it is considered by some almost as much a specific for the disease in question as it is for intermittent fever.

Other defects have come to light during the discussions, and the authorities are quite puzzled as to the carrying out of the sanitary measures proposed. The want of a more competent authority than the Municipal Council is also greatly felt—that is to say, a sort of State Board of Health, which, for some unaccountable reason, does not exist in Paris. This desideratum has been brought to the notice of superior authority, and it is hoped that ere long the "centre of civilization" will be endowed with a regularly organized body of medical men who will have proper control over all matters concerning the public health, instead of leaving them, as at present, in the hands of laymen.

At the last meeting of the Academy of Medicine, Dr. Onimus communicated the results of some experiments that he had made on the contractility of the uterus under the influence of electric currents, which may be summarized as follows: In the ordinary state it is difficult to determine uterine contractions by electric currents or by other excitants. In the gravid uterus, on the contrary, it is easier to do so; but even then it is necessary that, from whatever cause, physiological contractions must have already begun in it. This difference in the results produced is of the highest importance in a medico-legal point of view, as well as in their therapeutic applications.

Professor Charcot has been trying some experiments at the Salpêtrière Asylum in order to prove that ovarian pain in hysterical subjects is really situated in the ovary itself, and that the various phenomena, such as the arrest

of hysterical fits, the rousing of hypnotized subjects, etc., which are determined by pressure over the iliac regions, are really due to the ovary itself. In confirmation of his statement he read a paper before the Société de Biologie in which he gives the cases of two hysterical women who were in the family-way, and in whom the painful spots were rather higher than in women in the unimpregnated state. They rose according to the development of the uterus, and descended to their usual position after parturition.

Cremation does not seem to make much progress in France, notwithstanding the strenuous efforts made by some of its partisans in support of it. An attempt is being made to make it a matter for legislation by having the subject laid before Parliament, with the view of rendering this mode of sepulture legal. The proposition is to be submitted by M. Casimir Périer, and in the name of other distinguished men who are in favor of cremation.

Baron Corvisart, late physician to Napoleon III., died suddenly on December 26th, at his residence at the Champs Elysées, in Paris. He was the son of the celebrated Baron Corvisart, who was physician to Napoleon I. He had not done much in the way of practice, and lived quite retired since the fall of the Empire.

The Minister of Public Instruction has ordered a bust of the late Professor Bouillaud to be placed in the hall of the Institute.

The President of the Academy of Sciences has had the satisfaction of presenting to Monsieur J. B. Dumas a casket containing three medals—of gold, silver, and bronze, respectively—and each bearing an effigy of the illustrious chemist, to celebrate the fiftieth anniversary of his membership of the institute. Monsieur Dumas has been Permanent Secretary of the Academy of Sciences for several years.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE QUESTION OF LONDON DOCTORS SUPPLYING THEIR OWN MEDICINES—THE PROPRIETORSHIP OF PHYSICIANS' PRESCRIPTIONS.

LONDON, January 4, 1883.

THE question of doctors supplying their patients with medicine as well as with advice is a vexed one, and one about which there has lately been renewed discussion. In this country it is almost universally done—that is, by general practitioners. Consultants, of course—whether physicians, physician-accoucheurs, surgeons, or specialists—invariably write prescriptions, which their patients take to a druggist to have dispensed. The patient, therefore, first pays his doctor's fee, and then purchases his medicine at a druggist's. The general practitioner, on the other hand, usually runs bills, and when he makes out his account makes an inclusive charge for advice and medicine. Formerly—*i. e.*, thirty years ago—the custom was to charge for the medicine only, and not charge for advice. The usual thing now is to charge so much for each consultation or visit, varying the charge somewhat according to the position of the patient, and not make any charge for the medicine. The result is much the same in either case. A practitioner who refuses to supply medicine and writes prescriptions, soon finds that it does not pay. A patient consults his family doctor, say for bronchitis, and is charged from half-a-crown to seven shillings. If he receives a prescription, he takes it to a druggist's, who charges him, say, two shillings. In three or four days he wants another bottle, and pays a second visit and second fee—not to his doctor—but to his druggist. If the case is not serious the patient may continue his visits to the druggist until cured. The latter then may receive from a patient during a bronchitic attack fifteen shillings or a pound, three-fourths of which will be profit, while, the medical attendant may only receive his fee for a single consulta

tion. When the latter is only five shillings (and it is only in very good class general practice that more can be charged), it will readily be imagined that his practice will not prove very profitable. Some medical men send their prescriptions themselves to a druggist to be dispensed. They make their own arrangement with the druggist, paying him so much a bottle all round. Their patients pay them as in other cases, so the only difference between this and the ordinary method is that they are saved the trouble of doing their own dispensing, although in the eyes of their patients they still supply medicines. This plan has had to be abandoned by almost every medical man who has tried it, on account of the rates druggists usually charge them in such cases.

Another objection is, that the druggist may supply the medicine on his own account; and lastly, and this is perhaps the greatest objection of all, he may actually undertake to prescribe for the patient, and the medical man may thus lose his patient altogether. Where the patient receives a prescription and is free to go where he likes to get his medicine, these objections are still stronger. The patient will get it repeated time after time without further advice, and this kind of practice, on small fees, does not pay. A patient who pays his physician a guinea and receives a prescription, regards that prescription as his property. If he derives benefit from it he will continue to use it, and that, not only himself, but may copy it for, or lend it to his friends afflicted with a similar, or, it may be, dissimilar complaint. The consequences in some cases may be imagined. Unless seriously ill, or unusually fidgetty about himself, he will not pay his physician a second visit at all. Of course, a medical man who receives a guinea for every prescription is better off than a general practitioner, who attempts to do a prescribing practice, and charges only a fourth of that sum. Still it is a difficulty, and an increasing one, in consulting practice. Those who write prescriptions so as to be understood by one druggist alone, to whom they recommend, or rather send, all their patients, are tabooed by their medical brethren. In this case, it is, of course, understood between the doctor and the druggist that the latter is not to repeat without orders from the former, and rumor has it, that in some cases the medical man has actually condescended to receive a percentage of the druggist's profits. Still, even here, the druggist is master of the situation if he choose to be dishonest and break his agreement. The system of writing for one particular druggist alone cannot be commended. What is a desideratum, however, is that no druggist should repeat any medical man's prescription, either at his own or the patient's suggestion. The prescription should be retained by the druggist, and afterwards returned to the practitioner. Even here, the patient could not be prevented from copying it. Moreover, the public will not agree to it. A patient says: "I have paid Dr. So-and-so a guinea for this prescription, and it is mine—my property to employ as I please either on myself or on any one else."

The subject is certainly one on which improvement is possible. I do not see how much can be expected, however, when our leading journal takes the following position: "A medical man either dispenses or prescribes. If he prescribes, the prescription ought to be the property of the patient, *to be used when and how he pleases*, and ought to be written so that it may be compounded by any legally qualified chemist." The italics are my own.

ABSTRACTION OF BLOOD FROM RIGHT HEART.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have been greatly interested in Dr. Westbrook's article "On Abstraction of Blood from the Right Heart as a Means of Relieving Intense Pulmonary Congestion," which appeared in your valuable journal of December 23, 1882. I regret the unfortunate termination of the

case upon which he operated, but believe, that so far as that particular case was concerned, the ordinary, time-honored method of performing vivisection, would have given greater promise of successful issue.

Dr. Westbrook deserves great credit for boldly demonstrating "that the right auricle may be readily aspirated, and that the introduction of a canula into its interior is not accompanied by alarming symptoms, or followed by unhappy results." The nearest approach to priority in this discovery, I believe to be in the somewhat vague reports concerning the temerity with which the Chinese practise acupuncture of thoracic and abdominal viscera; but I am not aware that they have deliberately marked out the boundaries of the right auricle with the avowed purpose of puncturing it. Now, I desire to use your instructive columns for the purpose of making a few suggestions, which are not inconsistent with the points established by Dr. Westbrook's operation, and which he may feel constrained to carry out. I want to ask him to abandon the idea of abstracting blood from the right heart for the purpose of relieving the intense pulmonary congestion incident to pneumonia, retain the important point that the introduction of a canula into the cavity of the heart is not attended by unhappy results, and use it in the treatment of valvular disease of the heart. I need not remind him that the famous "Dublin Committee," when studying the causes of the heart-sounds, thrust needles and hooks through the cardiac walls, and pushed aside and held back the several valves of the hearts of living dogs and sheep and bullocks. It would revolutionize the treatment of mitral regurgitation and aortic insufficiency. In a little while the average professor of surgery would divulge the insufficient aortic opening, and stitch up the delinquent mitral valves with the same audacity that he now cripples the urethra or closes a lacerated cervix.

HAL. C. WYMAN, M.D.

DETROIT, MICH., January 5, 1883.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I cannot refrain from asking through you one or two questions suggested by the article in your issue of December 23, 1882, entitled "On Abstraction of Blood from the Right Heart as a Means of Relieving Intense Pulmonary Congestion."

The writer describes a severe case of croupous pneumonia of the right upper lobe, which had lasted five days when he first saw the patient, a vigorous German. The next evening (of the sixth day) pulmonary oedema threatened, and to relieve the heart of a portion of its burden, aspiration of the right auricle was attempted—an operation, we are told, which had suggested itself to the author about a year previously. It met with poor success, but later in the evening the needle was re-introduced, and a little over three ounces of blood were withdrawn from the auricle. Relief seemed to follow, but the patient died suddenly next morning. At the autopsy, in addition to the pulmonary lesions, the courses of the two punctures into the heart were made out, and claret-colored serum and pink coagula were found in the pericardial sack. These were in part referred by the writer to leakage—hæmo-pericardium. Two facts are claimed as hereby established: first, that it is easy to needle the right auricle; second, that no unhappy results, immediate or remote, ensue.

I should like to ask how this latter conclusion can be justly drawn from the experiment. Was the hæmo-pericardium, however slight, not an "unhappy result?" And is there no risk in an operation involving such a contingency? Bearing in mind the tenuity of the auricular wall, and the danger that it shall tear itself by motion against the needle (not a fanciful danger by any means), can we consider its puncture other than a most hazardous expedient?

It has, I believe, been usually so regarded. With a

patient in the very act and article of death by pulmonary cedema, with no time to spare for phlebotomy, but when instant relief must be given to the very heart itself, it is conceivable that pneumatic aspiration of the right auricle may be justified; and I have known of its being resorted to in such an extremity. But in the case described, the patient was not *in articulo mortis*—he survived the second needling some twelve hours. If blood-letting, therefore, were indicated, there was plenty of time to take it from a vein in the ordinary way. What was here to be hoped from aspiration of the heart which could not be accomplished by bleeding from its feeders? Why bleed from the heart rather than from the arm? Was it easier, safer, more efficient?

WM. T. CHEESMAN, M.D.

AUBURN, N. Y.

THE CARE OF THE CHRONIC INSANE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: An article appeared in THE MEDICAL RECORD of December 23d inst., on "The Care of the Chronic Insane," which I would not have felt called upon to notice, except in commendation of its general objects, if the writer had not gone so far as to make statements calculated to arouse distrust, ill-founded and unwarranted apprehensions, in regard to existing institutions of the State. When it was proposed, for good and sufficient reasons, to create an asylum for the chronic insane in this State, fifteen years ago, it was quite the fashion to make predictions similar to those contained in this article. It is true that at that time there had been no experience on which to base any intelligent opinion, but since the results, direct and indirect, of the operation of the Willard Asylum have been before the public, it may be a fair question whether Dr. Agnew is justified in taking counsel wholly from his apprehensions or the fears of others. Certainly, no one of the prophets of evil consequences to result from the establishment of this asylum, or any of the watchers, have so far felt called upon to remind the public or the profession of his prescience. Dr. Agnew may be assured his fears are groundless, so long as the public asylums of the State are surrounded by proper safeguards. Neither do I agree with the statement that it has been demonstrated that it is "unscientific," "inhumane," or "bad as it can be in an economic point of view" (strong expressions), to place the acute insane in one institution, and the chronic in another. If any result has been clearly demonstrated in this State, it has been quite the other way.

The article seems to have been suggested by resolutions of the Supervisors of Dutchess County, "pointing out the necessity of caring for the chronic insane nearer their homes," and urging the necessity of creating a department for them in connection with the Hudson River Hospital at Poughkeepsie. It is, however, suggested that one thousand to one thousand five hundred patients be transferred from the New York Asylums to the Hudson River Hospital, which would be practically a removal from the vicinity of their homes, and a conversion of one or the other asylum into a chronic asylum, which Dr. Agnew sees no objection to in this particular case.

One word upon the general question of the care of the chronic insane. Those of your readers who recall the history of lunacy legislation in this State (and others should be reminded of the fact), will remember that it was the original design of the managers of the Hudson River Hospital, publicly announced, that it should be a *hospital* for the treatment of recent cases, and not an *asylum* for the chronic insane. It was adherence to this policy, and the exclusion of the chronic class by this and other hospitals, and their return to county poor-houses, that led to the creation and enlargement from time to time of the Willard Asylum, in order that some system of care might be provided other than that shown by official reports to exist in those receptacles.

About the time the Hudson River Hospital (of which Dr. Agnew was then, as now, a manager) was ready to receive patients, application was made by the Superintendent of the poor of Dutchess County for the admission of certain patients into the Willard Asylum. He was, in reply, requested to apply for the reception of these cases into the Hudson River Hospital, as they were almost beneath its shadow. A second letter of application was received, to state that the coming winter and insufficient heating apparatus in the County House would expose these persons to suffering, and that, having applied at the Hudson River Hospital, admission was denied on the ground that the hospital was intended for recent cases. Among the transfers made from that county was the case of a man who had worn shackles and a chain attached to the floor for a period of fifteen years.

The following case illustrates another phase of this question: On December 20th, inst., a man was admitted into the Willard Asylum, who had been a patient in the Hudson River Hospital, and afterwards removed to a county poor-house, perhaps, for the reason that he could be maintained there cheaper than at the hospital. In the County House this man wore iron handcuffs, shackles of iron about his legs, and a chain connecting the shackles with the floor. All this, too, in the State of New York!

The experience of these two counties in which proceedings were taken as prescribed by law, presents the practical suggestions: first, that the work of caring for the insane must not proceed on a scheme which is purely "scientific;" and, second, when plans of construction are devised that will not be too expensive to execute; not involve too much expense to administer when completed; and a standard of care and maintenance adopted more in accordance with the reasonable views of the taxpaying portion of the community, it is quite safe to predict every incomplete asylum in the State will be speedily finished, and county care of the insane abandoned, but not before.

Respectfully yours,

JOHN B. CHAPIN.

WILLARD, N. Y., December 30, 1882.

THE QUESTION OF RETROSTALSIS AND THE ABSORPTION OF ENEMATA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I enclose a few notes upon a peculiar case of seeming retrostalsis, after rectal injections, which came under my observation in the medical ward of St. Luke's Hospital last winter. It seemed to be of interest in connection with Dr. C. L. Dana's paper upon that subject in THE MEDICAL RECORD of January 6th.

The case, briefly stated, was as follows: Sarah B., aged twenty-three, single, house-work, admitted February 6, 1882. Dr. Wm. C. Campbell, house physician. Besides a slight pleuritis, she was suffering from well-marked symptoms of peri-uterine cellulitis, going on to the formation of abscess, which opened into the rectum March 1st. By March 6th the purulent discharge had ceased, and examination showed the uterus and vagina to be still held firmly bound by inflammatory material, but no localized collections of pus. No opening into the rectum could be discovered. Bowels became very constipated, and the previous flatulence and vomiting became more severe. Nothing could be retained upon the stomach. After consultation with several members of the visiting staff of the hospital, it was deemed advisable to open the bowels thoroughly; so, on March 13th, at 10 A.M., a stimulating enema was given (ol. ricini, ʒj.; spt. terebinth., ʒss.; ol. olivæ, ʒij.; aquæ, Oj.). No result. Two hours later another enema was given, with an increased amount of turpentine and castor-oil. Result, a free movement, followed in a short time by vomiting and symptoms of a collapse. The vomiting soon became stercoraceous, and the vomited material smelt strongly of turpentine, and

was somewhat of the consistency of paint. Upon the surface free oil was floating. In about two hours this disappeared, and collapse gradually became more profound. March 14th, 3 30 P.M., patient died.

At the autopsy the large intestine was distended with fœces, and at the lower border of the transverse colon, near the hepatic flexure, a perforation had taken place with extravasation into the peritoneal cavity. Stomach normal in appearance and empty.

HENRY MOFFAT, M.D.,
House Physician, St. Luke's Hospital.

NEW YORK CITY, January 7, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 6, 1883, to January 13, 1883.

SKINNER, JOHN O., Captain and Assistant-Surgeon. Granted leave of absence for one month. S. O. 5, par. 2, A. G. O., January 6, 1883.

WOOD, MARSHALL W., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 4, par. 3, Department of the East, January 8, 1883.

JOHNSON, R. W., First Lieutenant and Assistant-Surgeon. Granted leave of absence for one month. S. O. 4, par. 2, Department of Dakota, January 5, 1883.

MUNDAY, BENJAMIN, First Lieutenant and Assistant-Surgeon. Assigned to duty at Fort Klamath, Oregon. S. O. 195, par. 3, Department of the Columbia, December 29, 1882.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 13, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
January 6, 1883	0	6	64	10	46	52	0	0
January 13, 1883	5	9	75	1	64	54	0	0

THE NEW YORK MEDICO-LEGAL SOCIETY.—In his inaugural address, recently delivered, Mr. Clark Bell said that the society's membership had increased during the past year from 177 to 267: that 367 volumes and 564 pamphlets had been added to the library, and that four members, Drs. J. R. Wood and Hagan, ex-Minister E. M. Stoughton, and Assistant United States District Attorney Herrick, had died during the year. He recommended that legislation be secured through the action of the society to amend the lunacy laws and the law relative to coroners, to decide who are experts and what is proper expert testimony, and looking toward improving the sanitary condition of school buildings. He also advised the publication of a medico-legal quarterly under the auspices of the society, and the establishment of the office of a State Chemist, at a salary not to exceed \$10,000 a year, and the establishment of a State chemical laboratory under his charge, where all analyses needed in criminal cases shall be made for either the State or the defence.

SUICIDE OF A MEDICAL STUDENT.—A young medical student, Mr. Norman W. Smith, who was studying at the Medical College in Atlanta, Ga., committed suicide on January 7th. He was a young man of excellent character and habits, and was in apparent good health at the time. He left no explanation of the act; but the scrupulous care and unusual attention to all the possible post-mortem contingencies betrayed a morbid mind, however.

CONSUMPTION OF TOBACCO.—According to *Les Mondes*, it appears that in Russia, France, and England, the consumption amounts to 1 lb. per inhabitant. In Italy it is rather higher, 1½ lb. Austria comes next with 2-2½ lbs. In the United States and Germany the consumption amounts to 3 lbs., in Belgium to 4-4½ lbs., while Holland has the privilege of heading the list with a consumption per inhabitant of more than 5½ lbs.

CARDIAC NEURASTHENIA.—In some cases of exhaustion from continuous overwork, the symptoms centre chiefly about the heart. The symptoms are feeble cardiac action, giddiness, weakness, intermittent beat. Palpitations, dyspnoea, and even syncope, may be present. A physician who suffered in this way for some time writes to the *British Medical Journal* that he was relieved entirely by the following prescription: R. Quinin. sulph., gr. xxiv.; mist. camph., ad ʒvj.; acid. hydrobromic. dil., ʒiij.; tinct. digital., ʒss.; liq. aurant., ʒj.; tinct. nuc. vom., ʒij. M. Sig., ʒss. three times a day.

RECTAL EXAMINATION IN VESICAL CALCULUS.—The *Edinburgh Medical Journal* calls attention to R. Volkmann's article in *Centrab. für Chirurg.* In children suffering from vesical calculus a bimanual method of examination through the rectum and above the symphysis is of great value. Anæsthesia is necessary, and the abdominal walls should be thoroughly relaxed. The fingers of the left hand in the rectum raise the stone, the bladder being empty, and the right hand guides it to the symphysis pubis. If the stone is not too large, it may be so far raised that a string could actually be passed around it. In adults the operation of course would not be so successful. —*Chicago Medical Review.*

THE NEW YORK SKIN AND CANCER HOSPITAL.—An hospital under the above name was incorporated in this city last month. Among the trustees are Dr. James Knight, Dr. C. R. Agnew, Edward Winslow, G. H. Scribner, and others. The hospital physician is Dr. Bulkley, and Drs. Robert F. Weir and Edward L. Keyes are operating surgeons. In a circular asking for money the trustees say that they do not ask merely enough for the current expenses of their present small building, but they desire to purchase immediately real estate, already selected, upon which to erect a structure suitable for the purpose for which the hospital was incorporated. An idea of the proposed building is given in the statement that "a capacity equal to that of the New York or Roosevelt Hospital could be utilized at once."

THE RESULTS OF IMPROVING THE MILK.—As a result of the improved quality of milk now brought to this city, the mortality among children under five years of age has decreased from 52 per 1,000 to 46 per 1,000.

SEVERE POISONING BY BELLADONNA PLASTER—RELIEF BY MORPHINE.—Dr. W. H. Mather, of Suffield, Conn., sends us the history of a very interesting and somewhat unique case. Last March Mrs. W. had a severe attack of bronchitis with much coughing and expectoration. One of the remedies used was a belladonna plaster about seven by seven, which was placed over the left lung. It remained on for six weeks, when it began to annoy her, and she occasionally raised part of it and rubbed the surface of the skin beneath. Dr. Mather writes: "I removed the plaster entire one evening and rubbed the surface freely with my dry hand. The plaster was then replaced. On the morning following my patient could not see clearly. At 9 A.M., she went to bed and ordered the

servant to look in upon her now and then lest she might not be in her right mind when she should awake (she never went to bed in the forenoon before). After one hour she awoke in a terrible dread—suffered a sense of suffocation—of impending danger—of imminent death. Sensation was nearly gone from the extremities; the throat was dry, the pupils dilated, the pulse could not be found. The heart had almost stopped, and was feeble beyond experience. Had it not been for whiskey, vigorously applied externally with friction, and internally she would probably have died before help could be had. She felt impending suffocation, as if she were fighting for dear life every breath she could get. This fear and prostration lasted four hours. Then quiet continued until forty-eight hours after, when, on making exertion to dress and walk down stairs, the same symptoms recurred. Three physicians attended her during the half-day. One believed that morphine would be fatal. I said I would risk it. No sooner had the morphine been absorbed than a calm quiet supervened. The feelings of dread, fear, and terror were banished. The whole system was severely shaken for two weeks. Digestion was impaired and constipation was complete; the mind was weak. She complained constantly of being 'so tired, so tired.' Large quantities of urine were passed during the stage of greatest prostration." The patient had been asking for glasses for a week, but the plaster was not thought of. Dr. Mather thinks that he broke off many little papules when the skin was rubbed.

DR. ROSEBRUGH'S NEW MEDICAL BATTERY.—Dr. Almon Clark, of Sheboygan, Wis., sends us a letter criticizing Dr. Rosebrugh's new medical battery, as described on page 641, MEDICAL RECORD of December 2, 1882. He claims,

First.—That by using bearings attached to the cover of the battery case, instead of the spring posts and clamping nuts, Dr. Rosebrugh only adapts a plan carried out in Dr. McIntosh's cheap domestic machine, but not in his larger batteries, because for the latter it is an inefficient arrangement.

Second.—That Dr. Rosebrugh's method of immersing the elements is of such little advantage that it does not counterbalance the inconvenience of the increased length of the box.

Third.—That when Dr. Rosebrugh says: "Some batteries are provided with an extra acid-cell and an extra pair of elements for the faradic coil, the extra cell being placed to the right of the coil. When this is the case, a space for the overlapping of the hydrostat plate is afforded by simply uncovering this extra acid-cell," he simply suggests a new method of using the battery, but does not, according to Dr. Clark, the writer of the letter, improve the said battery.

SUICIDE IN DENVER, COLORADO.—At a meeting of the Denver Medical Association on December 12, 1882, Dr. Steele read a paper on the "Prevention of Suicide." Seventeen cases had occurred in Denver alone during the past year, which makes an enormous ratio. A committee on Medical Legislation was appointed, to whom the paper was reported. The object is, if possible, to secure certain medical legislation in regard to the sale of poisons by druggists; to punish those who attempt suicide and fail, also those who in any way aid or assist those contemplating self-destruction.

ANointing WITH OIL.—There are several well-established faith-cures in this city, and they are doing, we are told, very effective work. To the list is now added the anointing with oil process introduced by the Mountain Evangelist Barnes, who is now preaching here. This gentleman, after the anointing ceremony, lets a little light upon the *rationale* of his success by laying the following injunction upon his patients. He says: "Distrust symptoms, they are tests of your faith. Whether you feel better or worse, say 'I am healed by faith,' and it will be so."

GRAND RIVER MEDICAL ETHICS.—At a meeting of the Grand River Medical Society, December 5th, charges were preferred against Dr. Hanna, for consulting with an irregular practitioner. The charges were found to be sustained. On motion, Dr. Hanna was enjoined not to repeat the offence. Dr. Hanna acknowledged his error, thanked the Society for letting him off so easily, and said he would not do it again.

POLICLINIC OR POLYCLINIC.—Dr. John A. Wyeth writes: On page 28 of THE RECORD for January 6, 1883, occurs the following:

"*Policlinic* or *Polyclinic*.—The word *policlinic* is derived from *πολις*, a town, and *κλινη*, a bed. It means therefore and always has, since its introduction as a word, a city clinic or hospital. A frequent mode of spelling the word in American medical literature is *polyclinic*. This assumes arbitrarily, and incorrectly, that the word is composed of *πολυς*, many, and *κλινη*."

Your assertion that the word "*policlinic*" means a city clinic, no one will contradict, but the other assertion that it is "arbitrary and incorrect" to assume that the word *polyclinic* may be a compound of *πολυς*, many, and *κλινη*, is not correct.

When the New York Polyclinic was being organized, the construction of this word was discussed carefully and at length by the faculty. The conclusion arrived at was that the name of the "School of Practical Medicine and Surgery" should convey the idea that its plan of study consisted of *many clinics*. As for the construction of the word there are many precedents. For instance, the noun *polypharmacy*, from *πολυς*, many, *φάρμακον*, medicine; or the adjective *polyphonic*, from *πολυς*, many, and *φωνη*, sound, *χολυφωνος*, "consisting of many sounds." I hold that it is just as correct to name a school of medicine the *polyclinic* school, as to name a dictionary a *polyglot* lexicon.

[We publish Dr. Wyeth's letter with pleasure, but find nothing in it that would lead us to modify our first opinion, which is simply this: The word "*policlinic*," derived as we stated, is a part of the medical language of Germany, France, England, and America. Its etymology is authoritatively given in Dunglison's Dictionary as we gave it.

Our correspondent, like all free-born citizens, has the inalienable right of coining a new word if he chooses, but we believe it will be admitted that it is arbitrary and incorrect, as regards taste at least, to take a word whose spelling and usage have been established, and, by changing a single letter, make a new thing out of it. It leads to confusion, and the necessity of the change is not apparent. The Vienna Poliklinik has always gotten along well enough with the old-fashioned word.—ED.]

INEBRIETY AND DR. CROTHERS.—Dr. J. B. Stair, of Spring Green, Wis., writes: "A few weeks ago I had the honor to publish in this journal a short article in opposition to an idea of which Dr. Crothers, of Hartford, seems to be the chief exponent, in regard to the causation of inebriety. In the last number of THE RECORD I see a note from the doctor, presumably in answer to what I had written. It is scarcely necessary to say that it is a direct evasion of the points suggested in my letter; in fact, the doctor says the 'doubts' I raise 'cannot be answered by argument,' but that it is simply a question of fact, daily demonstrable, clinically. Dr. Crothers has probably spent as much time as any other man in trying to show, by argument, that his view of the question is the correct one; but when arguments are offered upon the other side of the question, he suddenly finds that it is not a debatable subject, nor a matter of opinion, but one of fact. His opponents will doubtless claim that their position, as a matter of fact, is the right one, but think it is a fit subject for discussion. Dr. C. should not forget that his theory is an innovation, and though it be a fact, it will have to stand the test of thorough discussion and sharp criticism before finding a place in the favor of the

profession. I am not a caviller, neither do I seek to call in question theories simply because they are new, but I can but regard the objections which I urged in opposition to Dr. Crothers's position as pertinent ones, and humbly submit that they, with many others, must be refuted—or must stand. The points raised in my letter are no more matters of opinion than are those urged by Dr. Crothers, and if facts alone are to be considered, we must be permitted to examine *all* the facts, *pro* and *con*. There are some questions which, in their nature, cannot be entirely taken out of the field of moral discussion. This is one of them."

SIR JAMES PAGET, in proposing the toast, "Prosperity of the British Medical Association," at the recent jubilee, uttered the following beautiful sentiment: "Do not let our disputes be very noisy on the scientific side. Remember always that it is only through clear and undisturbed water that you can see what lies at the bottom. In storms of controversy there is nothing to be found but the billow that moves to mischief and the foam that disappears."

AN APPEAL FOR THE VENTILATION OF CHURCHES.—Our contemporary, *The Christian Weekly*, publishes a very effective, though not strictly grammatical or scientific, appeal to the sexton for a better ventilation of the churches. We quote some of the lines:

"O Sexton!
You shet see men women and children
Speshly the latter, up in a tite place,
Sum has bad brethrs, none of em aint too sweet,
Sum is fevery, sum is scrofuls, sum has bad teeth
And sum haint none, and sum aint over clean;
But evry one of em brethes in and out and out and in
Say 50 times a minnet, or 1 million and a half breths an hour;
Now how long will a cherk full of are last at that rate?
I ask you? say fifteen minnets, and then what's to be did?"

"I put it to your konshens,
Are is the same to us as milk to babies,
Or water is to fish, or pendlums to cloz,
Or roots and airis unto an Injun doctor,
Or little pills unto an onepath,
Or Boize to gurls. Are is for us to brethe.
What signifies who preaches of I cant brethe?
Whats Pol? What Pollus to sinners who are ded?
Ded for want of breth?"

PHARMACEUTICAL CHEMISTS.—A wealthy New York importer of drugs characterizes the pharmaceutical chemists of Europe and America as follows: "The German chemists are the most thorough in the world, but they always deal in an inferior original article, their meanness being equal to their science. America excels in her experimentalism. The French administer nothing but simples, especially affecting ptisans."

THE PAY OF SHIP SURGEONS.—The pay of the medical officer on the steamship lines between England and America is grossly inadequate to the service and responsibility of the position. It is said that, on the line which carries more passengers than any other, he is paid less than the chief steward, and the same as the steerage steward and the *fifth* engineer. In this connection it is interesting to note that the proportion of deaths to those embarked by each steamship line in 1881 was:

On the Barrow Line	1	died in every 509 embarked.
" Monarch Line	1	" 751 "
" American Line ¹	1	" 867 "
" Anchor Line	1	" 1,346 "
" Guion Line	1	" 1,362 "
" Dominion Line	1	" 1,435 "
" State Line	1	" 1,461 "
" National Line	1	" 1,659 "
" Allan Line	1	" 2,575 "
" White Star Line	1	" 2,754 "
" Cunard Line	1	" 2,990 "
" Inman Line	1	" 3,313 "

Not included in this rate are the deaths of ten infants born during the voyage, and of fourteen members of the crews, besides seventeen others, composed of passengers and crew, who were drowned or committed suicide.

¹ British ships.

KOLA NUTS AND INEBRIETY.—The temporary popularity of coca as a remedy for the opium habit, seems likely to find a parallel in the use of the kola nut for inebriety. Some enterprising temperance people of London have imported a large amount of these nuts from Africa, and are proposing to use them in the cause of temperance. The kola nut (*sterculia acuminata*) contains a considerable amount of a volatile oil, and about two or three per cent. of *thein*. It is therefore allied in properties to coffee, tea, guarana and coca. It is much used by the natives of Africa for its agreeable stimulating effects.

THE GERMAN MEDICAL MIND.—Dr. J. F. Jenkins, of Tecumseh, Mich., writes: "Dr. Beard stated at a recent meeting of the American Academy of Medicine that 'the German physicians are the best educated physicians in the world, both in general and special training.' He also stated that 'the Germans are non-therapeutists.' The assertion that a class of physicians are the best in the world, notwithstanding they are non-therapeutists, is not the prevailing opinion relative to the qualities that make an educated physician. It is difficult to conceive how a man can be a first-class physician and a non-therapeutist, unless he is a homœopathist. Dr. Beard claims for Germany that nothing counts but originality. If he means the crude hypotheses that are found so thickly scattered through the volumes of 'Ziemssen's Cyclopædia' to pass for original thought, then we must confess that Germany is the country *par excellence*. 'This work has been sold by thousands in this country, while only a few hundred have been sold in England.' This statement does not by any means prove that the English physician is not up to the times, for very few busy practitioners have leisure to wade through these seventeen volumes for what little original thought he will find to benefit his patients. The following quotation is, we think, not quite correct; 'Outside of a small circle of German-taught experts, the medical literature and the medical practice of England is from five to fifteen years behind Germany and America.'

"If the above is a fair statement of facts, it would be difficult to account for the large percentage of English medical works that are used in our colleges. If I mistake not, the busy physician of the day, when surrounded by difficulties in diagnosis and therapeutical indications, almost invariably consults his American and English authors. The learned specialist may find in German pathology and medical philosophy (where no two of them agree) 'original thought' that the common medical mind cannot grasp."

THE SILICA SPINAL JACKET is recommended by Dr. George R. Fowler (*Annals of Anatomy and Surgery*) as a substitute for the plaster-of-Paris. It is applied just as silica bandages usually are, but over this jacket temporary plaster-of-Paris bandages are wound and left on for four or five days until the silica is dry. The silica jacket is light and strong. It is cut open in front and then laced. Dr. Fowler does not find it necessary to suspend the patients entirely, but lets the toes touch on the floor.

THE DANGER OF THE OLEANDER.—Dr. J. A. Wesinger calls attention (*Detroit Clinic*) to the poisonous properties of the Nerium Oleander, a plant so much cultivated in this country for ornamental purposes. Contact of the face with the leaves or chewing the leaves may cause fever, anorexia, and an eruption with papules and blebs which are very irritating.

The poisonous principle of the oleander exists in the leaves, bark, and flowers, but most largely in the bark. This principle is of a resinous nature, and not volatile, and is found more largely in the wild than in the cultivated plant.

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Original Articles.

THE TREATMENT OF ACUTE RHEUMATISM— THE COMPLICATIONS.

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MEDICAL COLLEGE OF PHILADELPHIA, ETC.

NOTWITHSTANDING the apparent severity of acute rheumatism, because of the pain, and the extent of the joint mischief, the mortality—as all the world knows—is very small. The circumstances inducing a fatal result are immediate and remote; complications which are at once incompatible with life form one group; those inducing changes, which ultimately prove fatal, constitute the other group. Excluding the latter, which cannot be numerically estimated, the proportion of cases fatal to the whole number is about three per cent. The remote causes of mortality are, nevertheless, the more important.

In considering the treatment of the complications it is, of course, understood that reference is had to those arising during the acute symptoms; for example, the condition of hyperpyrexia, endo- and exo-carditis, myocarditis, embolism, embolic pneumonia, cerebral embolism, etc. I purpose, then, to consider these in turn, from the therapeutical standpoint; but as no proper therapeutical diagnosis is possible without a true conception of the pathological state, it is necessary to express my view of this state in order to establish a groundwork on which the therapy may be properly projected.

Irritation of a hypothetical heat-centre is surely too entirely theoretical to justify us regarding it as an adequate explanation of the *hyperpyrexia* of some rare cases of acute rheumatism. The extraordinary rise of temperature, the circulatory disturbances, and the cerebral oppression rather signify the onset of some inflammatory complication, as meningitis or pneumonia. That they may not be recognized, is true enough, but that they exist is equally certain. The therapeutical problem is how to diminish the extraordinary body-heat, rising, as it does in extreme cases, to 108°, 109° Fahr., even higher. Until the influence of excessive heat in the production of "parenchymatous degeneration" had been recognized, these cases of hyperpyrexia were looked upon as hopeless. Now, it is known that the timely use of antipyretics may obviate the tendency to death. The chief antipyretic is the cold bath, and next quinine and digitalis. The mode of employing these, their limitation and effects, are now so well known that it is not necessary to enter into details on these points. The bath cools the superficial layer of blood, quinine and digitalis depress the temperature—the result being the lessening of the body-heat sufficiently to prevent the disastrous parenchymatous degenerations. At the same time the inflammatory complications—the meningitis, the pneumonia, etc.—are improved. These therapeutical results are due, not to an action on a supposititious heat-centre, but to the impression made on the course of the complicating malady.

Much more frequent, and therefore more important from the point of view of practical therapeutics, are the cardiac complications, the endo- and exo-carditis—endocarditis and pericarditis. The relative proportion of cardiac complications cannot be exactly stated; but here we are

concerned with the management of these complications. Our object is to determine the plan of treatment which will yield the best results. We must, therefore, seek to obviate the ill effects of a condition in which the blood is changed in its constitution; in which the pericardium and the endocardium are thickened and roughened, and in which the propelling power of the heart is impaired. Good results are attributed to various plans of treatment, because of the disappearance of a murmur, almost constantly present during the maximum of any case of rheumatism. This murmur may be of little consequence. The damaged membrane and valves, and the excess of fibrin and leucocytes in the blood, are the important points, and the questions for the therapist to consider are, how change the constitution of the blood, how modify the morbid process going on in the inflamed membrane, and how prevent the damage in distant parts, whether it be exo- or endo-cardial inflammation, with which we have to deal.

In endocardial inflammation it is most necessary to render the blood as alkaline with ammonia as can be effected. The potash salts are too depressing to the heart to be employed for this purpose, and ammonia is a necessary constituent of the blood, serving in part to maintain its fluidity. The more promptly the ammonia is introduced, the less the damage to the valves, and the less the danger of embolisms. In pericarditis the same plan is useful in a somewhat less degree. In both endo- and exo-cardial inflammation the muscular structure is involved to some extent, and the power of the heart weakened, hence remedies such as digitalis which raise the peripheral tension of the vascular system, are not desirable, may be, indeed, dangerous. *Veratrum viride*, on the other hand, by lessening the amount of work required of the heart, serves a useful end; but, it seems to me clear, that aconite, judiciously used, is, on the whole, the most effective remedy for the inflammatory process. Quinine, in antipyretic doses, with morphia, if rightly timed, may do great good at the initiation of the endo- or exo-cardial inflammation, but the period passed, small doses only are indicated to sustain the waning power of the heart. Coincidentally with the administration of these remedies, a succession of small blisters, at or about the præcordia, will do good. The proper way to conduct the blistering is to apply a blister about two inches square; allow it to *vesicate slightly*, and then put another on in the neighborhood; thus a succession can be kept up, and a continuous influence maintained. The curative effect consists in the irritation of the cutaneous nerves, and not in the withdrawal of serum. The influence of blisters in causing an alkaline state of the urine has been mentioned; but this is only a part of the effect produced: the trophic centres are stimulated or depressed according to the extent or persistence of the vesication—stimulated by mild and transient irritation, depressed by deep and protracted irritation. Meanwhile a proper alimentation and the sustained support which a suitable food supply only can accomplish are most necessary to the successful issue of the case.

Endo- and exo-carditis are to be considered not only in respect to their immediate, but also to their ulterior effects. It would lead me far from my present purpose to consider these ulterior effects; but it would be taking a very narrow view of the pathogenetic relations of the subject to exclude the immediate results. I have merely

referred to the myocarditis, whereby the muscular substance of the heart is damaged, so that its propulsive power is diminished. When endocarditis coexists with pericarditis, inflammation extends by contiguity of tissue to the muscular substance, it undergoes granular degeneration to a less or greater extent, and its contractile elements are consequently weakened. Hence it is in some—fortunately, rather infrequent—cases that the work of the heart is done very imperfectly; the action is rapid but wanting in power. Under these circumstances some alcoholic food is highly useful—wines of good body and rich in ethers, old brandy or whiskey—and those muscular stimulants which increase at the same time the power and the nutritive energies of muscular tissue—especially *nux vomica* or its alkaloid, strychnine, the tincture of iron, quinine, and in some instances atropine.

When the valves of the heart are fringed with fibrinous vegetations, embolism of various organs must result. It is now perfectly well known that an embolus detached from the left valves, will usually lodge in the left middle cerebral artery, or some of its branches; and from the right valves, in some part of the parenchyma of the lungs. This accident will be the less likely to occur, if the treatment above indicated is faithfully carried out. Nevertheless, during the course of the cardiac complications of acute rheumatism, hemiplegia, with aphasia, embolic pneumonia, or embolic obstruction of some peripheral vessel may occur as a complication. The treatment of such a complication consists first, in efforts to restore the continuity of the obstructed vessel, and second, to obviate the local, vascular disturbances and consequent nutritional disorders. The only measure which promises even an approximation to success consists in the use of solvents of the fibrinous plugs or emboli, of which ammonia must be regarded as the chief. I know of no clinical experience in support of the practice of the intravenous injection of ammonia for the solution of fibrinous emboli, but as this method has been repeatedly resorted to with entire safety under other circumstances, it is in a high degree probable that it would be very beneficial in this case. One part of *aqua ammonia*, diluted with two parts of water, is an ammoniacal solution which has been injected into the blood repeatedly without any ill effects of any kind. If the intravenous injection may not be desirable, the usual means for securing the admission of ammonia to the blood—by the stomach—may be resorted to. Although the point of contact is minute, the impact of the alkalized blood may gradually bring about the solution of the embolus. In considering the treatment of the embolic processes, besides the obstruction at the point of lodgment of the embolus, our attention must be directed to the results. So much depends on the position of the embolus, as respects the office of the "terminal arteries," that no adequate conception of embolic obstruction of vessels can be had, which does not include in its purview the conditions known as "collateral hyperæmia and œdema." When, therefore, in consequence of endocarditis, embolic obstruction occurs, it is very important from the prognostic point of view, to know whether or not a "terminal artery" has been blocked. If a terminal artery, it is certain that the considerable area of devastation produced by the collateral changes must be added to those due to the mere obstruction. When, therefore, in the course of acute rheumatism with endocarditis, right hemiplegia with aphasia occurs, we may have to deal with a transient impairment of motility, or a more lasting hemiplegia, with accompanying disorders of motility, sensibility and speech. In the former we have a right to assume that the obstruction has occurred in an artery having numerous anastomoses, some of which have assumed the duty of supplying the obstructed area with its proper complement of blood. In the latter, we must conclude that the obstructed vessel is a terminal artery, and that to the localized anemia thus induced is super-

added the phenomena of collateral hyperæmia and œdema. In the former the powers of nature may be adequate to the restoration of function; in the latter, art must interpose. Any remedy administered in the former condition, at the right time, may seem to have accomplished marvels.

In cases of cerebral embolism the chief point is to prevent the mischief produced by the collateral hyperæmia and œdema. The best results are obtained from a combination of quinine, ergot, and digitalis, for the collateral mischief, and ammonia to effect the solution of the obstructing plug. The latter should be used in accordance with the principles already laid down, and the former should be kept up until some evidence of a satisfactory change in the local hyperæmia and œdema is manifest. It need hardly be observed that the caustic alkali, ammonia, should not be given at the same time with the ergot and digitalis. These principles are equally applicable to the treatment of embolic pneumonia.

In cases of acute rheumatism, complicated with endocarditis, one of the modes of dying is by embolic pneumonia. In this condition we have an adequate explanation of the hyperpyrexia in some cases. The peculiar shape and appearance of the inflamed area, are not without importance from the therapeutical standpoint, for here, it is obvious, there are conditions present which clearly separate embolic from the form of pneumonia called fibrinous or croupous. The latter, indeed, seems to be a specific disease—a self-limited malady—whilst the former belongs to the general class of inflammatory reactions due to non-specific, non-infective emboli. Embolic pneumonia should therefore be managed with strict reference to the nature of the local morbid process. Ergot, quinine, digitalis, morphia, are the remedies to check or prevent the change in the circulation of the part affected so long as such an action is possible; afterward, to favor the retrograde changes, attention must be given to the support of the natural powers.

During the course of the various secondary changes due to endo- and exo-carditis, an important element is the condition of the heart-muscle. I have already referred to this as a part of the morbid affection of the organ which must be considered in dealing with endocarditis and pericarditis. This condition has, however, wider applications. Myocarditis enters into the question of treatment, as of prognosis, in all the complications of acute rheumatism secondary to endocarditis and pericarditis, but, besides, in embolic pneumonia, the element of obstruction in the pulmonary circuit must be regarded.

CASE OF SUBPERICRANIAL CEPHALHÆMATOMA.—Dr. M. H. Battershall, of Attleboro, Mass., sends us the history of a case of the above nature. Dr. B. attended a primipara in labor, the pains having begun about two hours previously. Examination showed a slightly contracted pelvis, os dilated half an inch, child's head in second position. Pains continued four hours more, when the child was delivered. A caput succedaneum was present but disappeared within twenty-four hours. There was then seen on the site of the left parietal bone a fluctuating tumor covering its whole extent. The skin presented its natural appearance. Cold lotions and spiritous washes were applied but to no avail in diminishing the size of the tumor. Compression also failed. He next aspirated the tumor and drew off two ounces of very dark sanguineous fluid, then applied a compress, which was removed at the end of three days, revealing a healthy normal condition. The cephalhæmatoma was attended with pain, as the child cried almost continuously.

PARALYSIS AGITANS.—Professor Brandes, of the General Hospital at Copenhagen, writes to the *Gazette Médicale de Paris* that he has cured two recent cases of paralysis agitans by the continuous application of cold to the back of the neck. In older cases the method failed.

CONVALLARIA MAIALIS.

THE RESULTS OF CLINICAL EXPERIMENTS AT THE ROOSEVELT HOSPITAL, NEW YORK.

BY HENRY LING TAYLOR, M.D.,
LATE HOUSE PHYSICIAN, ROOSEVELT HOSPITAL.

My attention was first called to the drug, convallaria maialis, by an article by Dr. E. P. Hurd, of Newburyport, Mass., which appeared in THE MEDICAL RECORD of September 9, 1882. Soon after I was requested by Dr. Francis Delafield, then attending physician to Roosevelt Hospital, to give the convallaria a trial in cases which should seem appropriate. Convallaria was accordingly employed, under Dr. Delafield's direction, in the medical service of the hospital, almost to the exclusion of digitalis, in cases needing a heart tonic, from the middle of September, 1882, to the end of November. The cases in which the convallaria was employed were :

First.—Cases of Bright's disease, where the circulation seemed at fault. Six cases.

Second.—Cases of deficient circulation from organic cardiac disease. Five cases.

Third.—Cases of heart failure from pneumonia in old people. Two cases.

Fourth.—Cases of heart failure in typhoid fever. Five cases.

Fifth.—Two cases of emphysema and bronchitis (one of them with asthma) where the pulmonary condition offered an obstruction to the circulation.

These are all the cases in which convallaria was tried during the period mentioned, with the exception of five, where, for various reasons, only a very few doses were given.

The preparation used was the fluid extract of the flowers, furnished by Messrs. Parke & Davis, except from the period from October 5th to October 7th, when a specimen procured from Eimer & Amend was employed. It may be proper to state here that, so far as I know, Parke & Davis's preparation is as yet the only reliable one furnished in this country, and I am informed that their material is nearly or quite exhausted, and cannot be replenished until a new stock is collected next season.¹

The dose employed in these experiments varied from $\mathfrak{v}$ v. t.i.d. to $\mathfrak{v}$ xx. q. 4 h., and in two cases (IV. and XI.) $\mathfrak{z}$ j. t.i.d., was given with good results, where smaller dosage failed. I think I would have had better success in several instances if I had run the dose up higher than I did. In no case were any toxic symptoms observed. Vomiting was much less frequent than in patients under fairly large doses of digitalis, and could hardly be traced to the convallaria in a single instance, as it only occurred where symptoms of chronic gastric congestion or inflammation were marked (Cases I., V., and VIII.). As before mentioned, two patients were kept on $\mathfrak{z}$ j. of the convallaria t.i.d. for several weeks with much benefit and without the slightest toxic symptom.

I will now give a synopsis of the histories of the patients treated with convallaria, leaving for the conclusion a discussion of the results. Temperatures are axillary unless otherwise stated.

CASE I.—*Chronic Bright's disease.*—Cecilia J—, aged fifty-three ; Ireland ; widow ; domestic. Admitted September 19, 1882. Dyspnoea, palpitation, cough, headache, vomiting, and œdema of legs at times for the last four months. Urgent dyspnoea, last night or two.

Present Condition.—Orthopnoea ; pulse weak and irregular ; œdema of legs. Physical examination : hypertrophy of heart ; no murmurs. Subcrepitant râles bases of both lungs.

Treatment.—Rest in bed. Infusion of digitalis, $\mathfrak{z}$ j., and acetate of potash, gr. xxx., q. 4 h.

September 20th.—Temperature 103.7° F. Urine, 1,012, alkaline, albumen forty per cent. Feels better. Digitalis and acetate of potash stopped ; given convallaria, $\mathfrak{v}$ ij. q. h.

September 22d.—Temperature normal since the morn-

ing of the 20th. Pulse slower and stronger ; breathes easily.

September 24th.—Patient entirely comfortable and able to sit up. Convallaria stopped last evening.

October 17th.—Patient has been getting along very comfortably, except for headache, which is worse to-day, and patient vomits. Ordered convallaria q. 2 h.

October 21st.—Convallaria discontinued on account of nausea.

October 25th.—Patient went out on pass and did not get fatigued.

November 5th.—Patient very short of breath and nauseated.

November 6th, P.M.—Commencing œdema of lungs. Cupped over chest.

November 7th.—Put on convallaria, $\mathfrak{v}$ x. q. 4 h. Patient is passing sixty ounces of urine a day, or more.

November 13th.—Amount of urine not increased since the 4th. Patient much more comfortable ; convallaria stopped.

November 28th.—Urine, 1,008, alkaline ; albumen, trace.

December 12th.—Patient under treatment for prolapsus uteri, no uræmic symptoms. She is very comfortable.

DATE.	Pul-c.	Respi-rations.	Urin ^e , ounces.
September 20th, A.M. (Convallaria, $\mathfrak{v}$ ij. q. h.)	104	30	..
September 20th, P.M.	104	38	8*
September 21st, A.M.	92	30	..
September 21st, P.M.	84	24	30
September 22d, A.M.	76	26	..
September 22d, P.M.	80	24	18
September 23d, A.M. (Convallaria stopped.)	72	26	..
September 23d, P.M.	80	30	44
September 24th, A.M.	72	26	..
September 24th, P.M.	72	27	34*

* The urine is measured from 6 A.M. to 6 A.M. The asterisk, in this and the following tables, denotes that some of the urine of the previous twenty-four hours was lost.

Pulse and respirations kept on this way. Urine increased to sixty or seventy ounces by October 1st.

DATE.	Pulse.	Respi-rations.	Urine, ounces.
October 18th, A.M. (Convallaria, $\mathfrak{v}$ x. q. 4 h.)	84	22	..
October 18th, P.M.	76	24	42
October 19th, A.M.	84	24	..
October 19th, P.M.	72	18	58
October 20th, A.M.	80	22	..
October 20th, P.M.	72	18	50
October 21st, A.M. (Convallaria stopped.)	72	20	..
October 21st, P.M. .	76	26	45
October 22d, A.M.	84	28	..
October 22d, P.M.	96	26	38
October 23d, A.M.	80	20	..
October 23d, P.M.	76	24	45
October 24th, A.M.	92	28	..
October 24th, P.M.	72	22	46

CASE II.—*Chronic Bright's disease.*—Mary A—, aged thirty-two ; Ireland ; married ; house-work. Admitted September 12, 1882. Has complained of dyspnoea and palpitation for seven years. Slight dry cough last six months. Two weeks ago had a creeping chill and cold sweat, followed by constant vomiting and great pain in epigastrium.

Present Condition.—Pain and tenderness over lower half of sternum. Catching dyspnoea. Poor circulation in extremities. Pulse very small and thready ; regular. Pupils not responsive. Pulse, 84 ; respiration, 26 ; temperature, 97.5, A.M. Urine, 1,016 ; acid ; albumen, 5 per cent. ; no casts found. Physical examination : Prolonged respiration at both apices ; some sonorous breathing over right lung. Heart-sounds very weak ; no murmur.

September 13th.—Put on milk diet ; bicarbonate of soda, gr. x. t.i.d., and tincture of digitalis, $\mathfrak{v}$ x. t.i.d.

¹ Vide note by Dr. Hurd in THE MEDICAL RECORD, November 11, 1882.

September 14th.—Ordered a pearl of amyl nitrite daily.

September 15th.—Tincture of digitalis increased to ℥ xv. t.i.d.

September 16th.—Condition about the same as on entrance.

Present medicine stopped; ordered convallaria, ℥ xx. q. 4 h.

September 19th.—Convallaria ℥ xv. q. 4 h. No albumen in urine.

September 22d.—Pulse about the same, though patient feels much better and breathes more easily.

September 23d.—Convallaria stopped.

September 25th.—Patient much better than on entrance. Discharged improved.

DATE.	Pulse.	Respirations.	Urine, ounces.
September 12th, A.M.	84	26	..
September 12th, P.M.	56	42	..
September 14th	..	..	12*
September 15th	..	..	11
September 16th, A.M. (Convallaria, ℥ xx. q. 4 hr.)	..	..	..
September 16th, P.M.	80	26	22
September 17th, A.M.	76	18	..
September 17th, P.M.	80	18	10*
September 18th, A.M.	72	22	..
September 18th, P.M.	84	20	20
September 19th, A.M. (Convallaria, ℥ xv. q. 4 hr.)	104	22	..
September 19th, P.M.	112	22	Lost.
September 20th, A.M.	104	26	..
September 20th, P.M.	88	22	28
September 21st, A.M.	84	21	..
September 21st, P.M.	80	18	28
September 22d, A.M.	88	20	..
September 22d, P.M.	64	23	40
September 23d, A.M. (Conval. stopped).	100	20	..
September 23d, P.M.	64	20	42
September 24th, A.M.	104	16	..
September 24th, P.M.	76	18	34
September 25th, A.M.	108	18	28

CASE III.—*Chronic Bright's disease*.—Francis W.—, aged thirty-three; Ireland; married; compositor. Admitted September 25, 1882. Feet and face began to swell four months ago. Eyesight has failed for three months. Occasional attacks of occipital headache. No nausea; no change in quantity of urine.

Present Condition.—Face pale; tongue lightly coated; appetite good; bowels regular; pulse full and regular; face, legs, and genitals oedematous. Pulse, 80; respiration, 18; temperature, 98°, P.M. Urine, 1,015; neutral; albumen, 30 per cent.; casts. Physical examination: Double cardiac impact and double first sound. Lungs normal.

Treatment.—Milk diet; convallaria, ℥ v. four times a day.

September 26th, A.M.—Urine for previous twenty-four hours, sixty-three ounces. Pulse, 80; respiration, 20. P.M.: Pulse, 80; respiration, 18.

September 27th.—Five general clonic convulsions last evening, between 7 and 11 o'clock. Morphia, chloral and bromide of potassium, p. r. n. Urine, sixteen ounces. A.M.: Pulse, 80; respiration, 18. P.M.: Pulse, 72; respiration, 20.

September 28th.—Patient maniacal; nearly blind; general pruritus.

September 29th.—U. S. solution of morphia, ʒ j., night and morning.

October 1st.—Patient doing well.

October 4th.—Oxygen, gal. v., night and morning.

October 7th.—Patient is up. Pulse goes up to 100 occasionally. Urine has averaged thirty to forty ounces since September 28th; to-day sixty ounces.

October 10th.—Pulse, 84. Convallaria stopped. Put on the syrup of the iodide of iron.

October 16th.—Patient very nervous. Pulse, 120 to-

day; it has increased in rapidity since the convallaria was discontinued.

October 17th.—Still very nervous. Ordered ℥ j. of a one per cent. alcoholic solution of nitro-glycerine, given in ʒ ij. water, t.i.d. Urine, 1,010; acid; albumen, 30 per cent.; casts.

October 18th.—Nitro-glycerine made patient dizzy; felt like falling after each dose; had a feeling of a band around the head. Nervousness has disappeared. A.M.: Pulse, 112; respiration, 24. Urine forty-four ounces. P.M.: Pulse, 108; respiration, 22.

October 20th.—At own request discharged improved.

CASE IV.—*Chronic Bright's disease—Cirrhosis of liver*.—Isabella McG—, aged forty; Ireland; married. Admitted October 27, 1882. Well up to December, 1881; after that had nausea and vomiting for two months. Swelling of feet and legs since May, and of abdomen since June. Since then urine has been diminished. No headache.

Present Condition.—Very pale; face puffy; bowels regular; appetite poor; pulse weak; cedema of legs and ascites. Pulse, 116; respiration, 24; temperature, 98.5°. Urine, 1,012; acid; albumen, 60 per cent.; granular, fatty, and hyaline casts; pus and blood. Physical examination: heart and lungs negative; liver dulness diminished; fluctuation over abdomen.

Treatment.—Pot. acetat., ʒ ss.; inf. tritic. repent. O. j. Sig., ʒ ij q. 2 h. Rest in bed; bowels kept open.

October 30th.—Abdomen measures forty-one inches.

November 1st.—Acetate and triticum stopped.

November 6th.—Patient about the same. Put on fluid extract convallaria, ℥ x. q. 4 h.

November 9th.—Nausea and sleeplessness.

November 13th.—Abdomen forty-one inches. Convallaria, ℥ xx. q. 4 h.

November 17th.—Convallaria, ʒ j. t.i.d.

November 20th.—Abdomen forty inches. Feels better and passes more urine. Has a uterine fibroid size of child's head, or larger.

December 12th.—Still on convallaria, ʒ j. t.i.d. Averages about thirty ounces of urine daily. Urine to-day, 1,016; acid; albumen, 60 per cent.; casts as before. Up and about and comfortable. Urine was measured daily since entrance. Up to November 15th, the daily average was about fifteen ounces, never over twenty; after this as follows:

DATE.	Urine, ounces.
November 15th	22
November 16th	24*
November 17th	30
November 18th	18
November 19th	17
November 20th	32
November 21st	34
November 22d	17
November 23d	32
November 24th	36
November 25th	34
November 26th	30

CASE V.—*Phthisis—Chronic Bright's disease*.—Ella W—, aged forty; United States; widow; dressmaker. Admitted July 10, 1882. Hæmoptysis two years ago. Cough for a year. Cedema of feet and legs and dyspnoea off and on for seven months. Now has anasarca below waist and cedema of right arm, dyspnoea and cough. Pulse feeble, 112; respirations, 22; temperature, 97°; urine, 1,020; neutral; albumen, 60 per cent.; granular casts.

Physical examination showed dulness over whole right lung and at left apex. Subcrepitant and coarser râles over both lungs in front and behind. Cavernous breathing at extreme left apex.

This patient went along with periods of comparative comfort, alternating with attacks of increased cedema, partial suppression of urine, dyspnoea, etc. Convallaria, ℥ ij. —iv. q. h., afterward ℥ x. q. 4 h. was tried for these attacks after September, but they seemed to run about the same course as before. The pulse and urine did not seem to be affected.

Patient died November 14th, in an uræmic attack with suppression of urine; convallaria was given up to ℥ v. q. h. in ʒ ss. of whiskey. Autopsy showed large white kidneys (the two weighed twenty-one ounces) and chronic miliary tuberculosis of lungs.

CASE VI.—Chronic Bright's disease and mitral regurgitation.—John P., aged fifty-five; Ireland; widower; longshoreman. Admitted September 20, 1882. Edema of legs for two and a half months. Worked up to a month ago, when began to have dyspnœa and feet swelled very much. At times has passed very much at other times very little urine for past two months. Constant drinker, never to intoxication.

Present Condition.—Very pale; lower limbs and genitals very œdematous; tongue clean, appetite poor. Pupils contracted and unresponsive. Breathing labored. Facial muscles twitching. Pulse feeble and irregular. Pulse, 100; respiration, 32; temperature, 100, P.M. Urine, 1,002; acid; albumen, 17 per cent. Physical examination: Mitral systolic murmur; coarse friction râles left side behind; rough breathing on right side.

Treatment.—Milk diet. Rest in bed. Fluid extract convallaria, ℥ xv., four times a day.

September 21st, A.M.—Temperature, 98.5°.

September 24th.—Pulse and urine not affected by the drug. Edema of lower limbs and dyspnœa marked.

September 25th.—Convallaria stopped; put on pot. iod., gr. x. t.i.d.

September 27th.—Iodide reduced to gr. v. t.i.d.

September 28th.—Patient very stupid. Pulse, 100–108 since entrance. Urine passed mostly in bed; about fifteen ounces daily measured.

October 2d.—Patient unconscious.

October 4th.—Died 2.30 A.M.

Autopsy by Dr. Delafield.—Large white kidneys. The two weigh sixteen ounces. Mitral insufficiency; small vegetations on aortic valve; cardiac muscle yellow, as if fatty.

CASE VII.—Mitral regurgitation.—Mary McG., aged fifty; Ireland; single; domestic. Admitted September 19, 1882, for the third time. Patient has had symptoms of cardiac disease for over three years. For a year has had dyspnœa and for eight months œdema of legs, off and on. Urine diminished at times. Present attack of œdema, dyspnœa, etc., has lasted several weeks. Is already getting better of it.

Present Condition.—Tongue clean, appetite good, bowels regular. Urine passed in fair amount. Pulse feeble, irregular, and intermittent. Pupils normal, moderate dyspnœa. Pulse, 116; respiration, 38; temperature, 98.2°, P.M. Urine, 1,018; acid; no albumen; urine contained albumen last May. Physical examination: Mitral systolic murmur. Some cardiac enlargement.

Treatment.—Convallaria, ℥ x. t.i.d. Rest in bed.

September 23d.—Patient's feet less swollen; sat up to-day.

September 24th.—Patient now has no dyspnœa and sleeps well.

September 25th.—Patient feels fairly well. Discharged improved.

This attack rather milder than previous ones, when patient recovered on digitalis.

RUPTURE OF ABDOMINAL WALLS—PROTRUSION OF STOMACH AND INTESTINES—OPERATION—RECOVERY.¹

By P. J. HIGGINS, M.D.,

WILKESBARRE, PA.

J. V., male, aged forty, Irish-American, was thrown from a locomotive over an embankment about twenty feet in height, August 21, 1879. The engine was a small narrow-gauge, working around the rolling mills of the L. I. & C. Company, at Scranton. There were seven men aboard at the time it left the rails, all of whom were more or less injured. The track ran along the edge of a bank, at the foot of which was a level space some ten feet in width. Along the level ran a second track, and some eight feet below flowed a broad and shallow stream. Of the men injured, two jumped off when the engine became derailed, and escaped with a few bruises; one went over with it and was thrown into the creek, while the others were thrown off only when it capsized upon the level. One of these latter had his foot so badly injured that amputation had to be performed; another walked home, but was injured internally and died that night; a third had serious scalp wounds, while the fourth was found lying insensible beside the wreck. To this patient, Dr. L. Wehlan was called, who requested my assistance.

When the clergyman had administered the last rites of the Church, we examined the patient's injuries and found a transverse rupture of several inches in the epigastrium, through which a large portion of the inflated stomach was protruding. Orders were given to take the injured man to his home, a distance of more than half a mile. As there was no conveyance at hand (the Act of Assembly requiring the maintenance of ambulances at mines, etc., was not passed till the following session) a broad board was picked out of the mud by the roadside, the patient was placed thereon, and carried by loving hands as tenderly as possible. We went on ahead to make some simple, hasty preparations.

The patient was placed upon a high table in a good light, his clothing cut away, and his injuries more thoroughly examined. The rent in the epigastrium measured about four inches. There was another rent, of over six inches, stretching in an irregular line from the descending arch of the colon nearly to the crest of the ilium, through which a knot of about twenty inches of intestine was protruding. There was also a scalp wound of the vertex, severe, but not considered serious.

The injuries were desperate—besides, others were, as a matter of course, suspected to exist internally, and no hopes of recovery were held out. The indications were to wash clean both stomach and intestines, carefully return them to the abdominal cavity by gentle manipulation, sew up the rents, and combat the liability to peritonitis by full doses of opiates. As the patient was unconscious, no anæsthetic was administered. A solution of chloride of sodium in tepid water—temperature, about 100° Fahr., was prepared, the stomach washed clean by squeezing the solution upon it from a sponge, and then reduced by the gentle yet firm pressure of palms and fingers over its whole extent. The pressure of gas within the organ was quite strong, and great care was necessary to maintain the reduction and prevent wounding the viscus when introducing the sutures. This was done by constant pressure of the open hand, and the insertion of the finger between it and the parietal layer of the peritoneum, when taking the stitches. Commencing at both ends of the rent at the same time, to insure an exact coaptation of the lips of the wound, four interrupted sutures of stout silk, doubled to prevent cutting through, were inserted and drawn tightly. The edges were torn, but not ragged, and were readily brought together. It was promptly decided to include the parietal layer of the peritoneum in inserting the

DATE.	Pulse.	Respirations.	Urine, ounces.
September 19th, P.M.	116	38	..
September 20th, A.M.	104	36	10
September 21st	..	..	29
September 22d, A.M.	112	52	..
September 22d, P.M.	84	30	18
September 23d, A.M.	96	36	..
September 23d, P.M.	92	28	20
September 24th, A.M.	84	30	..
September 24th, P.M.	88	32	16*
September 25th, A.M.	88	20	20

(To be continued.)

¹ Reported to the Luzerne County Medical Society, January 10, 1883.

sutures, so as to have two serous surfaces in contact, in order that adhesive inflammation might, in a few hours, be set up and the cavity of the abdomen again securely sealed. This was considered the cardinal and all-important point in closing the wound.

It is a serious matter to drive a needle and pull a suture through the peritoneum, usually so exceedingly sensitive to injury, especially to puncture. But experience has shown that when two injured serous surfaces are closely and firmly applied, an abundance of lymph is quickly exuded, and adhesions are rapidly formed. Much trepidation is usually experienced by the young surgeon—the old surgeon occasionally ditto—in operations involving the peritoneum, lest he should not promptly recognize this membrane when he reaches it. But in its natural condition it is very difficult to mistake the smooth, glistening tissue of slightly bluish satiny sheen for any other.

By gentle and steady manipulation for several minutes, the protruded intestines—in which the well-filled lacteals showed beautifully—were reduced, inch by inch, and the edges of the rent approximated. Commencing at both ends at the same time as before, eight interrupted sutures were inserted with the same precautions. One good feature, so far, was the absence of bleeding, or oozing from the wounds, even from the insertion of the needles. Altogether, as far as could be observed, scarcely two grammes of blood had been lost during the operation. In order to prevent the intra-abdominal pressure from tearing the stitches, two large strips of clean linen were folded into pads, or compresses, and placed over the lines of union, while, to keep them in place and supply counter-pressure, a broad piece of sheeting was doubled and applied round the trunk, from the hips to the armpits, drawn tightly and firmly secured by safety-pins. The bandage over the pads was saturated with carbolized oil. One stitch secured the scalp-wound.

In less than five minutes afterward the patient became conscious, and realized his condition and surroundings. The pulse was ninety, soft and full; the temperature normal. A quarter-grain of morphia was given, and he soon after sunk into a quiet slumber. During the operation he vomited several times, but afterward his stomach soon quieted.* Nothing was given to get rid of the intestinal gases, as the pressure and counter-pressure maintained upon the line of the wounds was considered of great service in preventing hemorrhage and hastening adhesions.

Late that night, no bad symptoms had made their appearance. Next morning the temperature was found to be 99° F., and the pulse 100. An enema of brandy and beef-tea was given, and repeated every four or five hours during the day. Majendie's solution was substituted for the morphia, and enough given to control pain, but not to maintain narcosis. The second and the third days went by without any symptoms of peritonitis appearing. The temperature at no time rose above 99° F., and the case progressed without a single untoward symptom. Three weeks after the accident the patient was able to sit up, and soon after was considered convalescent.

Here were two extensive rents made in the parietal layer of the peritoneum, while at least sixty square inches of the visceral layer were exposed to the atmosphere for over half an hour, and freely manipulated for more than five minutes. In addition to this, twenty-four punctures were made along the lines of injury. There was no spray, and no antiseptics save the carbolized oil over the dry dressings. To what is the favorable result after such fearful injuries to be attributed? And how could such injuries be produced without serious or fatal damage to internal organs? Except the wounds already noted, there was not a single scratch upon the body.

The abdominal walls were not cut, but torn clear through, as if burst, not from without, but from within. The patient was a vigorous, healthy, temperate man,

which certainly contributed materially to his recovery; but the method of inserting the sutures was undoubtedly the main factor in the case.

These were inserted in such a manner, and drawn sufficiently tight to produce a slight pouting of the lips of the wound, thus shutting off the silk from the cavity of the abdomen, which the exuded lymph, aided by the double pressure, soon sealed air-tight once more, thus preventing the entrance of pus, blood, or other irritating or foreign matters.

[In the discussion which followed, Dr. R. Davis spoke of one of his cases of ovariectomy in which the peritoneum was found united, though the patient never rallied from the shock of the operation, and died in ten hours afterward.]

A STUDY OF HERPES ZOSTER. WITH SPECIAL REGARD TO ITS ETIOLOGY.

By GEORGE THOMAS JACKSON, M.D.,

NEW YORK.

ZOSTER is a form of herpes specially distinguished by the severe neuralgic pain that usually accompanies it; by its lesions occurring in well-marked groups along the course of nerves; by being in the vast majority of cases unilateral; in rarely attacking the same individual a second time; and in often leaving scars as a sequel. It differs from the other forms of herpes in the above points, and in commonly avoiding those situations usually affected by them, viz.: the lips, nose, and genitals.

Zoster, from the Greek word meaning a belt, was so named on account of the tendency it manifests to form a belt about the body, generally a one-sided belt.

Etiology.—By the ancients, herpes was regarded as due to "yellow bile becoming fixed unmixed with other humors in a part." They taught that if the bile were thick and acrid, it would ulcerate the whole skin down to the flesh, forming what they named "*Herpes Exedens*"; but if it was thin, less acrid and hot, it would merely raise small blisters on the surface like millet seeds, and this form they named "*Herpes Miliaris*." This opinion may be found in the writings of Galen, *Ætius*, Paulus *Ægineta*, and others.

Quite early in the era of modern medicine the fact that the zoster groups were located along the course of certain nerves, and these mostly of the spinal system, led observers to surmise that there was some disease of the cerebro-spinal, or at least, the spinal nervous system at the bottom of the trouble. At last, Bärensprung, about the year 1861, originated the theory that zoster was due to disease of the ganglia on the posterior roots of the spinal nerves, or of the Gasserian ganglion of the trigeminal nerve, and since then this theory has been substantiated by himself and others. It is now held that the ganglia become inflamed, and the irritation thus set up is carried along the nerves with secondary results on the skin. In some cases hemorrhage takes place into the ganglia. The ganglia being on the posterior or sensitive roots of the nerves, their inflammation would account for the severe pain experienced in zoster. But disease of the nerve-ganglia is not sufficient to account for all the cases of zoster. This may also be caused by disease of the central nervous system, and thus can be explained the occurrence of rare cases of bilateral zoster. It may also be caused by injury or disease of a branch from the main nerve, and be limited to its distribution, or by cancerous or other deposits in the bones of the spinal column. Finally, it may result from atmospheric changes, damp wet weather, sudden arrest of profuse perspiration, poisoning by arsenic, etc.

In studying a number of consecutive cases that have been under my care, I have found in the majority of them so marked a history of mental anxiety, nervous strain or worry, as to lead me to ask myself the question: "Is not mental anxiety a too much neglected factor in the etiology of zoster?" Of course it would, no doubt, be easy

by inquiry to find anxiety and worry in a vast number of ailments, and in many cases they would be but manifestations of the physical state of the patient. But in zoster, some of my patients have given me the history of anxiety without my asking, and the anxious appearance of others has led me to the inquiry. A state of mental unrest will be found noted in four of the cases reported below. Besides these, I have recently seen two other cases having the same factor; one a married lady, enjoying usually the best of health, who was attacked suddenly with a very painful zoster after great anxiety in caring for the sick child of a friend; and the other a young man much depressed mentally while passing through the secondary stage of acquired syphilis.

Pathology.—In *Virchow's Archives*, vol. 86, part iii., 1881, Lesser ("Beitrag zur Lehre von Herpes Zoster") publishes an account of several autopsies upon the bodies of patients dying of zoster, and by microscopical examination of the affected spinal ganglia substantiates the statements made by other pathologists, a summary of which has just been given under the head of *Etiology* in this article. In regard to the secondary changes taking place in the skin, he makes the following (condensed) statement: "The principal changes are in the epidermis, first an increase in the size of the epithelial cells, each one swelling up, in some cases to even five times its usual size, and also an increase in the number of cells; probably by division (*Theilung*). Then little cavities form, containing the altered epithelium, the partition walls being composed of flattened cells; these walls at last break down and disappear, and thus the vesicles are formed. In the corium under the vesicle there is an infiltration of cells, most marked at the periphery of the vesicle. The blood-vessels are engorged, and in some places he found hemorrhages. All these changes are due to an increased nerve-supply, an increased activity in the nutrition of the cells, followed by degenerative changes, and finally, a giving way of the cells under an increase of exudation from the vessels of the corium.

The *locality* of the eruption will depend upon the nerve affected, and may be anywhere on the body, face, trunk or extremities. From the localization of the groups the varieties of zoster derive their names, which sufficiently explain themselves, as: *Zoster frontalis*; *Z. pectoralis*; *Z. dorso-lumbalis*, etc.

The *eruption* consists of groups of vesicles upon red bases, the vesicles varying in size from that of a pin-head to that of a pea, or larger, with clear, watery contents at first, becoming in the course of a few days opaque, then purulent, and at last drying into brownish yellow scabs. Each group remains intact eight to ten days, but as new groups are apt to start up, the disease may last several weeks. The vesicles in themselves do not tend to rupture, but are often broken by the rubbing of the clothing. The number of the groups is very variable. In very intense outbreaks some of the vesicles or groups may be hemorrhagic, and cicatrices are apt to remain on healing.

The *course of the disease* is acute, rarely lasting in all more than one month. The eruption is often preceded, accompanied, or followed by severe neuralgic pain, referred at times to the seat of the eruption, at times to the back, etc., as in *Z. pectoralis* we often find one painful point in the neighborhood of the spinal column, another in the axillary line where the ribs bend forward at their sharpest angle, the place of bifurcation of the anterior branch of the spinal nerve into its superficial and deep branches, and less frequently a third point near the anterior median line of the chest, where the final spreading out of the terminal branches of the nerve takes place. The pain at these points is aggravated by breathing, thus simulating the pain of acute pleuritis, the diagnosis being at times rendered still more uncertain on account of the pyrexia which may accompany the disease, but, of course, all doubt will fade away on the appearance of the eruption. If the vesicles should break, raw surfaces will be left, which by their attending pain will greatly ag-

gravate the suffering of the patient. The disease is not contagious.

Sequelæ.—In some bad cases, after the lesions proper to the disease have entirely healed, the neuralgic pain will continue for an indefinite period, or there will be lamina of certain muscles, falling out of the hair, or of the teeth. Happily such cases are rare, and the rule is that there will be no sequelæ.

Treatment.—If the patient suffers much pain, especially if his rest is disturbed by it, he must be kept quiet by the use of opium. Tonics, as iron, strychnia, quinia, etc., are to be used according to the indications present. Phosphide of zinc in doses of one-third of a grain every three hours has recently been recommended. For the neuralgic pains, especially those remaining after the local lesion has healed, Fowler's solution in fine drop doses is, perhaps, the best remedy. The constant electric current applied to the seat of the eruption and along the course of the nerves is well spoken of by Dühring, who uses five or ten cells for fifteen or thirty minutes every day, or twice a day, to the relief of the pain, both during and after the eruption, the positive pole being placed over the point of emergence of the nerve, and the negative brushed over the terminal filaments. Locally our object is to protect the delicate walls of the vesicles from rupture, and to this end it is well to use some dusting powder, such as starch, lycopodium, oxide of zinc and lycopodium; one containing morphia and camphor, etc., applied liberally, and then covered with a bandage to prevent the rubbing of the clothing. If the vesicles have burst, leaving a raw surface, powders are still useful, or some simple ointment or unguent zinc oxid, or some anodyne lotion containing opium, belladonna, and camphor, or ac. carbol, gr. 13 or 15 to the ounce of water. Morphia, gr. 10, to flexible collodion, 3 j., is also good, being painted over the part.

Below I have added the histories of five cases, illustrative of mental worry as an etiological factor in zoster, and of the disease in general.

CASE I.—*Herpes Zoster Dorso-Pectoralis*.—E. F.—, aged eight; United States. September, 1882. On the evening of September 5th the child complained of a burning pain in left side, and on the next morning the mother noticed the eruption of vesicles.

General health good. Child well nourished. No history of strain, rheumatism, or injury. Appetite good; bowels regular. Up to one year ago child had fits frequently, but none now.

The eruption is located on left side, following the course of the eighth intercostal nerve from spine to sternum. It still burns and keeps child awake. It forms an almost unbroken line of large and small vesicles, with serous contents on a red base. All the vesicles unbroken.

Was ordered a dusting-powder of lycopodium and zinc oxid, and a sleeping draught containing opium and pot. bromid.

CASE II.—*Herpes Zoster Femoralis*.—Bridget H.—, aged forty-six; Irish. October, 1881. For three or four years past she has had dyspepsia and patches of acne rosacea on nose and both cheeks. She is frequently troubled with rheumatism, but says her appetite is good, and bowels regular. She works very hard in her household cares, and for the past year she has slept badly. No history of any injury or strain.

Patient appears careworn and anxious. Acne rosacea upon end of nose and both cheeks, the patches being small. Upon the anterior and inner surface of left thigh are two groups of herpetic vesicles, the vesicles being not very closely pressed together. In the groin of same side an enlarged inguinal gland is seated. Upon touching the groups the patient complains of pain, otherwise they give her so little trouble that she came to the clinic solely on account of the enlarged gland.

A dusting powder of starch was ordered.

CASE III.—*Herpes Zoster Inguinalis*.—October, 1881.

H. C. M.—, aged thirty-three; American; no business. General history good, bowels regular, no trouble with his digestion, and no account of any injury or strain. Patient said that he knew he was "going to the devil" through his bad habits, and is very nervous and worried.

Five days ago, while in his usual health, he was attacked with a sharp pain in his left leg, and noticed a couple of patches of vesicles in his groin, since which time he has slept very poorly and the pain in leg has continued.

Patient of nervous temperament, and has a wild, worried look. Upon examination two groups of herpes vesicles are found, one immediately over inguinal glands, and the other below and to the inner side. The groups, oval in shape, upon a slightly inflamed base, are of nearly equal size, and about two and one-half inches in their longest diameter: composed of pin-head size vesicles closely pressed together, of turbid contents, and on each group one large bulla rising up prominently from about the centre.

Treatment consisted of a protecting ointment and a tonic.

CASE IV.—*Herpes Zoster Femoralis*.—October, 1881. Wm. C.—, aged sixty; Irish; no business. Patient has been dyspeptic for some time, being troubled with pyrosis, etc. Bowels regular. General health otherwise good, though he suffers from sleeplessness. No history of bruise or strain. Says he is a good deal worried by a son who leads a wild life.

Two days ago, while in his usual health, he had a severe sharp pain in the small of his back and right leg, and noticed that a number of little vesicles appeared suddenly upon his right leg. Pain in back still continues.

Patient a well-nourished man for his time of life. On examination there is found on the anterior surface of right thigh, principally in the area of distribution of the middle and internal cutaneous branches of the anterior crural nerve, six groups of herpes vesicles, varying in size, some having no more than three or four vesicles in them. Vesicles are pin-head size, with clear serous contents, the groups being seated upon reddened bases.

Treatment merely palliative.

CASE V.—*Herpes Zoster Brachialis*.¹—Mr. C.—, aged 64; butcher. August 9, 1882. His general health has always been good. About four days ago the present eruption suddenly appeared. Had been feeling unwell for a few days before, and had consulted a physician, who gave him "blue" pills, which he took on the third day preceding the eruption. The next day he had a pain on the top of his right shoulder, and felt lame there, and for this he was rubbed by his son. The next day he felt pain shooting down his arm towards the ulnar aspect, and an intense stinging in the little finger, upon which there is a scar from an old cut. On the morning of the next day noticed red spots "under the skin" on ulnar side of palm, then a group of vesicles on ball of thumb, soon followed by others on palm, and middle, ring, and little fingers. During the first twenty-four hours the eruption was confined to hand, then began to spread on wrist, and has steadily advanced up the arm, continuing most marked on its first seat. Has had no neuralgic pain since beginning, but a good deal of burning, principally in palm, and arm has felt uncomfortable when hanging at the side. Sleep undisturbed. Has never had any eruption like this before; has taken no arsenic nor other medicine of late. A son of his has recently caused him a great deal of trouble and anxiety.

Present condition.—The right hand is considerably swollen. Upon the palm are large vesico-papules mostly isolated, looking like variola eruption. Upon ulnar side of wrist the vesicles are various sized, confluent, and of light pink color. On back of wrist, hand, and ring and

small fingers eruption very well marked, consisting of vesicles, and small bullæ upon a reddened swollen base. Upon middle finger the eruption is slight, there being only one or two groups of vesicles and a few isolated ones. Thumb and forefinger perfectly free from eruption and feel natural. The eruption upon forearm and arm is more easily recognized as that of zoster, consisting as it does of numerous groups of vesicles, most of which seem at their height, seated upon red patches along the course of the internal cutaneous and musculo-spiral nerves.

He was given a placebo and cautioned against rupturing the vesicles.

September 7th.—Up to date patient has called several times, and made steady progress toward recovery, till now there are but few traces of the eruption remaining, these principally on the palm in the form of fresh skin under the ragged remains of old vesicles. The patient complains of numbness and slight loss of power in the little and ring fingers of the affected hand, an actual paralysis due probably to a neuritis. The patient now passed under the care of Dr. V. P. Gibney, surgeon to the "Hospital for Ruptured and Crippled," by whom he was originally sent to Dr. Fox, and at last report he was doing well under electrical therapeutics.

Conclusion.—It will be noticed that in four out of these five cases there was a marked element of anxiety or nervous strain, one on account of a dissipated life, two on account of a wayward son, and one from the hard struggle for existence.

These cases will also serve to illustrate the diversity in the symptom of pain. In Nos. 1 and 3, the pain preceded the eruption, was continuous for some days, and was located in the seat of the eruption; in No. 2, it was complained of only upon contact; in No. 4, it was located principally in the small of the back; while in No. 5, it was felt only just before and during the appearance of the eruption.

In all the cases there was a marked absence of any history of injury or strain of the nerve, and in but one was there any evidence of the rheumatic diathesis.

14 EAST THIRTY-FIRST STREET.

EXPERT TESTIMONY IN LUNACY CASES.—The recent trial in Chicago of a prostitute for the murder of her "lover" has forced upon public attention some serious defects in our present medical expert system. The defence took refuge in the well-tryed and old reliable plea of insanity—probably with some justice, since two most eminent and experienced neurologists affirmed its truth. "Sane," "legally sane and medically insane," "legally and medically insane," were some of the opinions offered by various experts. In a recent paper, before the Chicago Medical Society, Dr. D. R. Brower presented a caustic criticism of the judicial proceedings whereby Mark Gray was recently released from an insane hospital. Gray acquired considerable notoriety some years ago by firing several shots at Edwin Booth during a performance at McVicker's Theatre. Gray was adjudged insane by the court, and after two years' confinement in a State hospital was released, in spite of the opposition of the medical officers of the hospital, by a judge in a distant part of the State. Since his release, Gray has manifested the same delusions as before and during his confinement; in fact, he was released merely because he affirmed his own sanity.

GUAIAC IN ACUTE TONSILLITIS.—Dr. W. E. Totten, of Springfield, O., writes us that an item giving Dr. Morell Mackenzie credit for the introduction of the guaiac treatment of tonsillitis is incorrect. Dr. Totten refers to Dr. A. Patton as the original discoverer of its application in tonsillitis. He has used it many times himself with great satisfaction.

In our item we gave Dr. Mackenzie credit for recommending, not originating, the use of guaiacum in tonsillitis.

¹ I am indebted for this case to the courtesy of Prof. G. H. Fox, M.D.

Progress of Medical Science.

INTERMITTENT MANIA.—Dr. Ribas relates the case of a man who suffered from maniacal attacks occurring with great regularity every second day. The delirium was sometimes quiet, at other times violent. In the lucid intervals, beyond a slight confusion of ideas in the morning, which disappeared in a few hours, the patient was apparently rational. On his sane days he was accustomed to go about without any restraint, and no one seeing him at such times would imagine that he had been a raving maniac the day before, and would become one again the following day. Quinine in every form was employed, with no effect beyond modifying slightly the intensity of the paroxysms.—*Revista de Medicina y Cirugía Prácticas*, No. 152, 1882.

ABNORMAL PRESENCE OF URIC ACID IN VARIOUS SECRETIONS.—An excessive elimination of uric acid through various organs has been supposed to occasion a number of morbid conditions, the most generally recognized of which is gout. In many of these, however, though their dependence upon uricæmia has been strongly suspected, it has never been actually demonstrated. Dr. Boucheron now claims to have determined the presence of uric acid in the secretions of numerous patients supposed to be suffering from uricæmia, and thus to have established the relation, hitherto only conjectural, between these morbid conditions and uric acid poisoning. He has found this substance in the nasal and pharyngeal secretions, in the uterine discharges, in the sweat, in the matters vomited during morning sickness, in the menstrual blood of women suffering from uterine disorders, and in the saliva. In the last named secretion especially, he found uric acid in abundance in the various forms of uricæmia, by whatever cause excited.—*Journal de Médecine de Bruxelles*, Vol. 75, 1882.

SIGNIFICANCE OF ALBUMEN IN ASCITIC FLUID.—Professor A. Hoffman states that the amount of albumen in the fluid of ascites is of diagnostic import. He divides cases of this condition into three groups, as follows: 1. So-called cachectic ascites (especially that occurring in chronic nephritis). In this form the fluid contains over 2.5 per cent. of albumen, and has a specific gravity of less than 1010. 2. That which is known as inflammatory ascites, in which there is over 2.5 per cent. of albumen and a specific gravity exceeding 1014. 3. Ascites from obstructed circulation, which occupies a position between the first and second groups. He relates a case of ascites occurring with albuminuria, which, from the amount of albumen in the exudation and the specific gravity, seemed to conflict with this classification. But after death, it was discovered that the patient had cancer of the liver and stomach, so that the ascites really belonged to the form from obstruction, to which the amount of albumen and specific gravity would consign it.—*Allgem. Med. Central-Zeitung*, December 16, 1882.

DIPHTHERIA OF THE BLADDER WITHOUT INFECTION IN A RABBIT.—In order to determine the time within which fibrinous casts appear in the urine in retention of this fluid, Dr. Aufrecht instituted some experiments in a rabbit. The prepuce was closed with adhesive plaster, so as to cause absolute retention. This was removed after twenty-four hours and the urine analyzed. The process was repeated four times, each time retention being continued for twenty-four hours. Shortly after the rabbit died. Upon the mucous membrane of the bladder were found several patches of a dirty gray color, resembling exactly diphtheritic false membrane. Under the microscope was seen a large number of micro-organisms, some round and some rod-shaped. The rods were either single or in pairs, and often were united in a long chain. The urethra presented a normal appearance. From this experiment Aufrecht concludes that bacteria of disease

may be developed in the bladder without, as has been hitherto supposed, gaining entrance through the urethra. The condition of the canal in this case, he states, precluded any such source of infection. He thinks that this lends weight to the theory of Billroth and others, that the bacteria existing normally in the tissues may, under proper conditions, develop into noxious organisms. But, especially, he thinks that it confirms his previously expressed opinion, that it is not the mere presence of bacteria, but their retention and development in the organs, that give rise to infectious diseases.—*Allgem. Med. Central-Zeitung*, December 13, 1882.

HÆMOPTYSIS DEPENDENT UPON HÆMORRHOIDS.—Dr. Lewin recalls the views of the older writers as to the relationship existing between hemorrhoids and attacks of bleeding from the lungs. He relates two cases occurring in his practice in which hæmoptysis took place. There was no cough, and physical examination by himself and others gave absolutely no signs of bronchial or pulmonary disease. In both cases the hemorrhage was considerable, yet both recovered without any subsequent lung affection. Both patients suffered from hæmorrhoids. Lewin thinks that many cases of hæmoptysis, without apparent cause, may be thus explained. He argues that in a hyperæmic condition, such as hæmorrhoids, if local bleeding do not occur, the distended circulatory apparatus must be relieved by vicarious action. He instances some observations of Rühle, in which hæmoptysis in hæmorrhoidal subjects was arrested by leeches applied to the anus.—*Berliner Klin. Wochenschrift*, December 18, 1882.

PERFORATING ULCER OF THE STOMACH IN A CHILD.—Only five cases of perforating gastric ulcer have hitherto been published as having occurred in children. Dr. Julius Eröss, of Buda-Pesth, publishes a sixth. It was observed in a twelve year-old girl, who was suffering from miliary tuberculosis. At the post-mortem three circular ulcers were found occupying the posterior wall of the stomach. The largest, having a diameter of one inch, had perforated into the omentum. The presence of these ulcers had not been suspected during life, but inquiries instituted after the death of the patient elicited the fact that she had been suffering for a year from pain in the region of the stomach, which occurred at irregular intervals and lasted for hours at a time. Her appetite had steadily decreased, but at no time had there been either nausea or vomiting.—*Orcosi Hetilap*, December 24, 1882.

TREATMENT OF WHOOPING COUGH WITH EUCALYPTUS.—Dr. Witthauer reports four cases of pertussis, treated with tincture of eucalyptus globulus, which recovered in a little over three weeks. The dose for children from two to four years of age was 5-8 drops. One of the patients, eighteen months old, suffered from well-marked rickets. After taking the eucalyptus for four weeks, not only was the whooping cough cured, but the enlarged epiphyses were reduced, and the child, who had never before attempted to stand on its feet, learned to walk.—*Memorabilien*, November 15, 1882.

VERTIGO AS A REFLEX SYMPTOM IN HYPERTROPHY OF THE TONSILS.—Dr. Weiss relates the case of a boy, twelve years of age, who had suffered from vertigo for three years. The attacks were induced by stooping, and were sometimes accompanied with vomiting. Nothing abnormal could be discovered in any of the organs, except an enlargement of both tonsils. As pressure upon the carotids and vagi might account for the vertigo, in the absence of any other apparent cause, Dr. Weiss amputated the tonsils. The attacks at once ceased.—*Memorabilien*, November 15, 1882.

TRANSFUSION OF AN ALKALINE SOLUTION.—Dr. Bischoff has injected a six per cent. solution of chloride of sodium, a little potassa being added, into the radial artery of a woman sinking from post-partum hemorrhage.

The operation lasted an hour, during which forty ounces of the solution were injected. The woman recovered. The following are the conclusions of the author regarding this operation: 1. As compared with transfusion of blood, it is more simple, less dangerous and of more easy application, because of the difficulty of finding a donor of blood in every case. 2. The quantity of solution injected should be not less than a pint. 3. The fluid should be injected into the arteries rather than the veins, as thus it is made to traverse the capillary system before reaching the heart. It acquires a proper temperature, and the danger of sudden cardiac distention is averted.—*Journal de Médecine de Paris*, December 2, 1882.

EFFECT OF STRYCHNINE UPON DILATATION OF THE HEART.—Professor Maragliano formulates the results of the exhibition of strychnine in cardiac dilatation, as follows: 1. In one or two days the size of the heart was reduced, and in five or six days very considerable dilatations were caused to disappear. 2. If, immediately upon a reduction in size of the heart, the strychnine were withheld, the dilatation was frequently reproduced. 3. The daily dose of sulphate of strychnine required was from $\frac{1}{32}$ to $\frac{1}{20}$ grain.—*Memorabilien*, November 15, 1882.

SALICYLIC ACID IN NIGHT-SWEATS.—The following powder is recommended by Dr. Köhnorn in the night-sweats of phthisis: Acid. salicyl. gr. 45, starch, 52½, chalk, 52½. The entire body of the patient is dusted with this powder at bedtime. The author claims to have obtained great success by this treatment. The same powder is employed in the Austrian army in sweatings of the feet.—*Memorabilien*, November 15, 1882.

TINCTURE OF COBWEB IN INTERMITTENT FEVER.—In an analysis of a large number of cases of intermittent fever treated with the tincture of cobweb, Dr. Oliva formulates the following conclusions: 1. This agent is capable of curing malarial fevers of quotidian or tertian type. It was of no value in several cases of quartan fever. 2. In doses of 30 minims for adults and 15 minims for children, it usually arrests the fever at the second paroxysm. 3. Its action being less prompt than that of quinine, it should never be used in pernicious fevers. 4. Being tasteless, it is easily administered to children.—*Journal de Méd. et Chir. Pratiques*, December, 1882.

CAFFEINE IN HEART DISEASE.—Dr. Huchard claims excellent results in the treatment of cardiac dropsy by caffeine. He begins with a dose of 7 grains, gradually increasing to 15, 30, or even 45 grains per diem. He says, however, that such large doses often cause severe pains in the stomach.—*Archives Générales de Médecine*, December, 1882.

THE PATHOLOGY OF DEATH FROM BURNING.—Zillner has published more extended reports of the examinations made by him of the corpses of those who perished in the burning of the Ring Theatre, in 1881. All the bodies, even those which exhibited no external marks of injury, were more or less covered with a thick layer of soot. The upper extremities were strongly abducted from the shoulder, the elbows were bent, and the forearms pronated, so that the backs of the hands lay near the face. A fighting attitude was thus simulated in some cases. This was due to shrivelling, and consequent shortening of the muscular fibres, by the action of heat. The large cavities, and more especially that of the abdomen, were often burst, even in bodies not otherwise much injured, and the bowels protruded. In females, the tympanic state of the abdomen frequently simulated a state of pregnancy.

The blood showed every grade of consistency, from the normal, through the viscid state, up to a completely friable dry mass, in which last condition the blood-pigment was found to be in an insoluble state. Occasionally, the blood formed a dull lustrous mass in the uninjured

heart and blood-vessels. Examined spectroscopically, the blood always showed the bands of carbonic-oxide-hæmoglobin, even in the case of bodies which had remained buried beneath rubbish for a month. In all the bodies which were incinerated, the heart was found in diastole, and rigidly distended with clotted blood. This sometimes gave rise to a suspicion of concentric hypertrophy; but the thin walls of the organ at once revealed the nature of the appearance.

The bones exhibited every stage of burning, from a simple combustion up to complete calcination. The jaw was mostly firmly closed. The muscles, where the skin was unbroken, had a boiled appearance; but, where they were charred, the odor was that of smoked meat. The drying up of the flesh, and its permeation by pyrogenous products, obviously retarded the advent of putrefaction. In the eye, the application of lower grades of temperature manifested itself as a turbidity of the cornea, and complete opacity of the lens, giving the appearance of cataract. The larynx, trachea, and nostrils, were often filled with foreign material from the stomach, perhaps due to the vomiting excited by carbonic oxide. The urinary bladder was often full of urine, even when the abdomen had burst. Occasionally, where the bladder was empty of urine, it contained a gelatinous substance with embedded blood-corpuscles. This was found by E. Ludwig to consist of gelatin, probably derived from the connective tissue by the action of heat. Similar gelatinous masses were found in the uterus in some cases; and this organ was found to be very resistant to the action of heat.—*London Medical Record*, December 15, 1882.

EPILEPTIC PHENOMENA IN ATAXIA.—Vulpian (*Revue de Médecine*, No. 2, 1882) relates the case of a man, aged twenty-eight, who, in the course of a few months, had repeated attacks of loss of consciousness, with, on one occasion, right-sided facial paralysis with aphasia, and, a month later, right-sided hemiplegia and aphasia, with feeling of laryngeal constriction. All these symptoms disappeared later on, and decided tabes made its appearance. He had marked gastric and laryngeal crises, also contraction of the lower extremities, and tremulous movements, as if the lateral columns were involved. There were no knee or foot phenomena. Later, special groups of muscles, especially the abductors of the thighs, became weak, but were improved by faradization. Then the knee-joint swelled and filled with fluid; later on, the affected joints crepitated. The question of the rheumatic or specific nature of this joint-affection is discussed. The patient benefited greatly by bromide of uranium in doses of one-sixtieth to one-fifteenth grain daily, especially in respect to pain.

CEREBRAL SYMPTOMS PRODUCED BY ASCARIS LUMBRICOIDES.—Dr. Samada reports (*El Sentido Católico en las Ciencias Médicas*) a case in which severe symptoms were produced by the presence of a large number of ascarides lumbricoides. The patient was a lad about eight years old. His attack commenced with severe headache, attributed to a fall sustained a few days before. This was followed by photophobia, conjunctival injection, and later by profound coma. Constipation was present, and, as a saline purgative did not produce an evacuation, calomel and aloes were administered. This produced several evacuations, each containing about thirty ascarides. The head-symptoms ceased from the moment the bowels were purged, "as if by magic."

PATHOLOGICAL ANATOMY OF GENERAL PARALYSIS.—Dr. Rey has found (*Ann. Méd.-Psychol.*), in fifteen brains of general paralytics, separation of the cortex from the underlying white matter, as described by M. Baillarger. Dr. Rey relates six of his observations in detail. It is remarkable that he should have found this lesion existing only in the frontal lobes, whereas the former writer described it as most common on the posterior lobes of the cerebrum.

ACTION OF IODOFORM ON LEUCOCYTES.—Dr. Binz (*Virchow's Archiv*, vol. lxxxix., 1882) has performed some experiments which would seem to show that iodoform checks suppuration by paralyzing the white blood-corpuscles, and so preventing their wandering through the walls of the vessels. He maintains that quinine, and carbolic and salicylic acids, have a similar effect.

DISGUISED SYPHILIS.—In an article on this subject (*Medical and Surgical Reporter*, September 30, 1882), the importance of remembering that syphilis is not of necessity a venereal disease is insisted on. In illustration, a case is related of a lady who, when two months pregnant, received into her family a young female relation who had been brought up in Germany. This relation was suffering from an eruption on the scalp, which was dressed by the lady, who subsequently noticed that a pin-scratch on her finger became inflamed and angry-looking, and in a short time a nut-like swelling appeared on the inner aspect of the elbow. Afterward she began to lose flesh; her appetite failed; the throat became sore; she suffered from headache and debility, and albumen appeared in the urine. The patient quickly recovered under bino-dide of mercury and iodide of potassium.

CONGENITAL ABSENCE OF THE SPLEEN.—At the City Hospital of Buda-Pesth a woman, aged seventy, recently died. At the post-mortem examination it was ascertained that the spleen was entirely absent. Since the complete destruction of a previously existing spleen could be excluded, it was concluded that her case was an instance of congenital absence of this organ.

SUGAR OF MILK AS A LAXATIVE.—Traube recommends sugar of milk as a mild and trustworthy laxative in doses of two or three drachms, dissolved in half a tumbler of warm milk, taken before breakfast.

THE ALBUMINURIA OF FEVERS.—Dr. Eckstein distinguishes three varieties of albuminuria accompanying the febrile state (*Deutsche Medizinische Wochenschrift*): First, albuminuria caused by acute nephritis; second, the so-called febrile albuminuria; and third, albuminuria caused by venous hyperæmia. The last form, in which the urine is small in quantity and of high specific gravity, occasionally containing casts and renal epithelium, is diagnosed mainly by the presence of other symptoms pointing to venous hyperæmia, such as cyanosis, enlargement of the liver, and dyspnoea. The author opposes the belief that venous hyperæmia is the sole cause of albuminuria in febrile disease. He believes that it is responsible for the albuminuria occurring in acute croupous pneumonia, and in rapidly formed pleuritic effusion, the local affection acting mechanically, first on the right side of the heart, then on the venous system generally. Acute nephritis Dr. Eckstein believes to be a metastatic inflammation, an infective process, in which the micro-organism, although it has not yet been demonstrated, as in kidney affection from diphtheria or pyæmia, will at no distant date be isolated. The result of acute nephritis is either complete recovery or death, very rarely chronic nephritis.

In the so-called febrile albuminuria, which Dr. Eckstein mainly considers, the amount of urine is but slightly diminished, according to the severity of the fever itself; the amount of albumen is moderate, and the normal excretory constituents of the urine are not diminished. That the albuminuria in such cases is caused by hyperæmia of the kidney, either active or passive, seems to Dr. Eckstein improbable. For the first result of a congestive hyperæmia would be an increased amount of urine which is not present; and on the other hand, there is no reason to suppose a passive hyperæmia, except in such cases as have already been classed under albuminuria from direct venous congestion. Runeberg has lately explained the diminished secretion and albuminuria in febrile diseases by the degeneration of the heart-muscle

and consequent fall of arterial tension. But, as Dr. Eckstein points out, in many diseases where the arterial tension is reduced to a very low point, there may be absolutely no albumen in the urine. That the albuminuria is caused simply by the abnormal temperature, or by an alteration of the albumen of the blood, is not, Dr. Eckstein believes, supported by fact. For the albuminuria is frequently in no relation whatever to the temperature, and the albumen in the great majority of instances in no way differs from the serum albumen of the blood.

Dr. Eckstein sums up his views as follows: Febrile albuminuria depends on a local process in the kidneys of an inflammatory nature, or at least closely related to inflammation, and having its site mainly in the epithelium of the kidney, cloudy swelling, albuminous infiltration, or parenchymatous inflammation. This process is probably caused by an infection of the kidneys, either from the passage through them of low parasitic organisms, or from the inflammatory action of soluble toxic substances passing through them. The same infection acting in a stronger degree can produce acute nephritis. Acute infective nephritis, therefore, and febrile renal affection, are only different degrees of the same process, or, in other words, the febrile renal affection is an aborted acute infective nephritis.

HÆMOPHILIA.—Dr. Thos. D. Dunn reports a number of cases of this disease in the *American Journal of the Medical Sciences* for January, 1883, from which he draws some interesting conclusions. Thus, he shows that sex is an important predisposing cause in hæmophilia, females being much less prone to the disease than males, and in women, also, the danger to life is much less marked; the females, however, of bleeder families, even though themselves exempt from the disease, are much more apt to transmit the tendency to hemorrhage to their children than are the males, even when themselves bleeders. Dr. Dunn also points out that there are three forms of the disease: 1. The aggravated form, in which there is a tendency to severe spontaneous, traumatic, and interstitial hemorrhages, associated with swelling of the joints. This form, seldom seen in females, generally lasts throughout life, and usually is the cause of death. 2. The intermediate form has no tendency to the joint affection or traumatic hemorrhages, but frequent spontaneous ones from mucous surfaces and subcutaneous ecchymoses. This form frequently disappears at puberty. 3. The third form is lowest in degree, and seen only in females; it manifests itself in ecchymoses, and in early and prolonged menstruation.

MALARIA OR SEPSIS.—Dr. W. B. Welch, of Fayetteville, Ark., writes us as follows: In vol. xxii., No. 22, p. 608, of THE MEDICAL RECORD, a case, entitled "Per-nicious Remittent Fever after Parturition," is detailed by Dr. J. Lewis Smith before the New York Academy of Medicine (Obs. Sec.). I have read with pleasure Dr. Smith's report of the case, and must say that I, and I believe many others, will differ with him as to his diagnosis of the case. A case of malarial fever, where the patient survived eighteen days, and in which from thirty to sixty grains of quinine were given *per orem*, and ten grains of quiniæ et urææ muriatis given hypodermically every twenty-four hours! All this time the temperature rising higher and higher with each daily paroxysm, and the *sweatings* becoming more and more copious and exhausting. Those of us who have much to do with malarial fevers may be pardoned for being slow to believe that quinia would be so very little efficacious in so *prolonged an opportunity* in any case of malarial toxæmia. More especially are we led to so conclude from reading Dr. Smith's case, as we think there can be no doubt that his was a case of very malignant puerperal sepsis or pyæmia—in fact, *classical* in its distinctness of detail and marked symptomatology.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CHARCOT'S CRYSTALS AND THE ASTHMATIC PAROXYSM.

It will be remembered that, in 1872, Leyden announced his discovery in the sputa of asthmatic patients of peculiar crystals, first described by Charcot and Robin. The bodies seen by Leyden were colorless, rather long, octahedra, of varying size. They were found mixed in little plug-shaped masses with brownish granular cells. He thereupon advanced the theory that asthma arose from an irritation of the terminal filaments of the vagus in the alveoli and bronchioles. This irritation, he claimed, was directly attributable to the presence of the fine sharp crystals in question. Leyden's theory met with little favor at the time, and few subsequent writers have made mention of his discovery.

The subject was revived, however, at the first Congress of German Physicians, held in the spring of 1882. Dr. Ungar, of Bonn, there read a paper embodying his views of the causal relation of those crystals to the asthmatic paroxysm. He found the crystals present in the sputa in every one of thirty-nine cases of spasmodic asthma examined by him. And he determined further that they were not always present in fresh sputum, but were formed after keeping the expectorated matter for two or three days in a moist atmosphere. The longer the sputa were preserved, the more numerous and the larger were the crystals. In the course of his investigations the author also discovered other objects in the expectorated matter. These were long thread-like masses, sometimes stretched out like strings, and at others matted and twisted up into little balls. They were composed, like the plugs described by Leyden, of granular cells, and in fact the plugs were but detached fragments of these slender cylinders. The corpuscles in the centre of the cylinders were more granular and less distinctly outlined than those at the surface. Moreover, it was precisely in the centre, where the disintegration of the cells was most advanced, that Charcot's crystals were found in greatest abundance. Hence Ungar concludes that these bodies occurring in the sputa of asthmatic patients are the product of cell-degeneration, just as those found in leucæmic blood were proved to be by Zenker.

But, though rejecting Leyden's theory, Ungar does not admit the generally accepted neurotic nature of the asthmatic seizure. He explains the paroxysms of dyspnoea in this wise. The larger bronchi, as is well known, are firm unyielding tubes. But as we pass down to the

smaller branches, the cartilages gradually disappear and we find only a thin wall of fibrous tissue mixed with slender muscular elements, and lined by a mucous membrane. Now, the lumen of the bronchioles is constantly varying in size with the movements of respiration. Expansion is due to the suction action of the thorax in inspiration, and the subsequent contraction to the inherent elasticity of the walls of the bronchioles. The muscular fibres serve merely as stays to prevent overstretching of the elastic tissues. They can never act with force sufficient to produce a spasmodic constriction of the tubes. Now, when a plug of this exudation completely occludes a bronchiole at rest, during inspiration the calibre of the tube is increased and air may pass the obstruction. But as soon as the suction force of the chest-walls is relaxed, the bronchiole returns to its former size and the air is imprisoned.

This valvular action may also be called into play in the following manner: The exudation at times consists of a number of fine filaments composed of agglutinated cells and crystals too small to block up the bronchiole. These threads are attached to the wall of the tube by one extremity only. Now, during inspiration they float freely in the entering air-current, offering no serious obstacle to its passage. But, during expiration, when the current is reversed, these strings are pushed back and twisted up into little balls, thus thoroughly obstructing the return of air. In this way an acute emphysema, as it were, is produced by a sort of reversed air-pump action. And now the asthmatic paroxysm is ushered in. The depression of the diaphragm is merely a result of the expansion of the lungs and plays no part whatever in the causation of the dyspnoea. Dr. Ungar's theory is, to say the least, a novel and ingenious one. But, like many other well-reasoned hypotheses, it needs some substantial confirmation before it can hope to meet with any general acceptance.

THE MICROSCOPICAL APPEARANCES OF GUITEAU'S BRAIN.

THE editor of the *Journal of Mental Science*, Dr. Geo. H. Savage, makes the following comment upon the microscopical appearances observed in a section from the frontal convex of Guiteau's brain: "I should say there is nothing that I have seen which is not compatible with mental health. It is true there are changes about the vessels and their walls, but these and similar changes are commonly found in the bodies of persons dying or being killed when past middle age. There are no marked general changes in the nerve-cells, and I can only repeat that the specimen examined would not have any weight with me, in causing me to reconsider my judgment on the sanity of the assassin."

The facts seem to be, that while there was some chronic disease in and about the blood-vessels, there was nothing indicative of any form of insanity; while, on the other hand, much more serious changes are not infrequently found in the brains of persons who had been perfectly sane. Account must be made also of the fact that Guiteau had been suffering from malarial poisoning, and that he suffered death from strangulation. Guiteau's insanity, if it existed, was confessedly chronic; therefore

all acute changes found, would have no weight in estimating their etiological bearings on the alleged mental disease. The severest form of the vascular disease was apparently the corpora striata, a place where physical troubles would not be excited, while it is well known that the disease did not disturb any function known to pertain to those ganglia.

The view that the changes found were at all significant or characteristic of commencing general paresis is unfounded, and quite unworthy of serious discussion. The same remark must be made regarding Dr. Godding's surprising statement that the arachnoid's opacity was indicative of mental disease.

There have been some rather labored attempts to prove the brain atypical. The convolitional development, however, as we are told, though deficient in some parts, was compensated for by fuller adjacent gyri. So far as the eye and some rough measurements could tell, the two hemispheres showed no asymmetry. The fundamental fact in the present case for the determination of atypy, viz., the comparative weight of the two hemispheres being absent, it would not be allowable nor in accordance with scientific honesty to make positive statements regarding the matter.

The futile and decidedly *ex-parte* attempt to show pathological cranial asymmetry hardly needs comment. In fact, Guiteau's mental condition must be decided by a study of his words and actions when alive. If these did not prove him a lunatic and irresponsible, the post-mortem findings will not help the case.

THE QUESTION OF WOMAN'S DRESS.

WOMAN'S dress furnishes periodically a valuable topic for the preacher, the satirist, and the physician. Just at present it is medical opinion which in particular is being luminously offered upon the matter. The *Lancet* speaks paternally to British women, and tells them not to hang so much on their hips during the present cold weather. The *New York Times*, taking up the subject, has sent a reporter to various large retail stores where ladies' dress and undergarments are sold. Samples of these were carefully weighed, and their modes of attachment to the female anatomy studied. The reporter subsequently interviewed a number of physicians upon the important and obscure matter of how woman should best wear her clothes.

From all this we learn that woman's winter clothes weigh from six to ten pounds, and that she carries a heavier weight than man by one-fourth or one-third. It is noted also that this weight when hanging from the hips, constricting the waist and confining the legs, does harm.

We are inclined to believe that the constant reiteration of the charges against woman's dress, together with the wider diffusion of physiological knowledge, is having some slight effect upon woman's dress. It is all the more important that medical opinions given regarding it should not be sensational or incorrect. Little good is done, for example, by wholesale denunciations of the corset *per se*, when they should be directed rather against those which are tight and ill-fitting. So as regards the wearing of clothes upon the hips. The hips of women most naturally and easily support the greater part of the weight

of skirts. Care need only be taken that there be no constriction or binding. The shoulders should be allowed to do a minor part of the work. Woman's dress is, as a rule, unnecessarily heavy, but it will not be in our generation that fashion bows to sanitary rules.

OVER-WORK AGAIN AMONG AMERICANS.

THE views expressed by Mr. Herbert Spencer upon the high-pressure mode of life followed by Americans have been widely criticised. To be sure, no American medical authorities have ventured to dispute his conclusions. For Mr. Spencer has, in fact, only said again, and even unconsciously plagiarized, what American doctors have long ago noticed and publicly discussed.

Mr. Seymour Haden, however, an English surgeon and artist now visiting America, has flatly contradicted the statement that Americans work too fiercely, or live too little in the present, and too much in the future. Dr. Batty Tulse, also, in a recent public address, announced the not very original view that it is not over-work but worry which kills.

Now, the daily newspapers and English tourists may discuss glibly the *pros* and *cons* of this question, but, with practical physicians, who every day meet the business men of our cities, there is no question to discuss. Every one has seen the victims of over-work, and knows that the persistent, untiring application to business, wears men out. It may not be the work alone; there is technical truth in saying that worry, not work, is the most serious danger; or that dry air or physical neglect help on the trouble. But this is mere quibbling, for there are few who can work actively and continuously without some worry or neglect of sanitary rules.

The conditions of our life require that Americans should be more than ordinarily active and industrious, but all the same we should be a happier and healthier people for a little more of the gospel of recreations.

The lazy may seize this as an excuse, but our sanitary evangelists must say that their gospel does not apply to the lazy, who in America are greatly in the minority.

THE CARE OF PROSTITUTES IN CLEVELAND.

MUCH excitement has recently been created in Cleveland, O., by the action of the Board of Health upon the matter of the sanitary care of prostitutes. An ordinance was passed favoring the establishment of a hospital where diseased women found in houses of ill-fame should be taken and cared for, at the expense of the owner of the property. It was also voted that physicians should make weekly examinations of the women in the brothels.

This new move has been condemned by many of the citizens of Cleveland. The women especially have banded themselves together to fight against it. They insist that men, as well as women, who visit brothels while diseased, should be sent to the hospitals for treatment.

The results, so far, of attempts to regulate prostitution in American cities are well known. It must be admitted that the plan is utterly opposed to the judgment of the better and more respectable part of society. The methods adopted in Cleveland have failed elsewhere, and

will, we presume, fail here, because it is based upon a one-sided policy. It officially cares for the women after they have become diseased, but takes no notice of the men who infect them.

Many sanitarians seem incapable of understanding that the question of prostitution is not a purely sanitary one, but is a sociological problem, involving many factors. The prevention of disease is not the only element in human progress.

The establishment of lock hospitals for women is in many cases advisable and useful; but we doubt if in this country the forcible sending of women to these places will be tolerated.

Many sanitarians, although they aim to be "advanced," fail to see that as intelligence increases a private regulation and examination of brothels will largely become adopted. Adultery will follow the law of supply and demand everywhere.

We suspect that the Cleveland Board of Health has tried to be "progressive," without knowing very much about the project it has undertaken.

MICROSCOPES ON THE TARIFF FREE LIST.

THE Committee of Ways and Means at Washington are now considering the provisions of the new tariff bill, and some of their conclusions have been made public. We notice that philosophical instruments will in future pay a duty of forty per cent., an exception being made in the case of those imported for the use of institutions and societies incorporated for educational or religious purposes.

The duty on scientific instruments must yield a very small return, and be imposed only as a protective measure, to aid the home industry of such manufactures.

Desiring, as we do, that every medical practitioner should possess a microscope, not as a mere adjunct to his office, but as a necessity in making a diagnosis of many complicated diseases, we would offer a few suggestions to those revising the tariff laws, with the hope that such instruments may be in future imported free.

There is little merit in the making of the stands of microscopes, a good design being furnished, an ordinary brass-worker can carry out the mechanical part. The case is different in regard to the manufacture of microscope objections, as we find in this department that scientific knowledge and great technical skill is requisite. Spencer being dead, we have, therefore, but three really original workers, having an American reputation for making objectives, viz., Grunow of New York, Tolles of Boston, and Gundlach of Rochester. The question may be asked, would they suffer by such a reduction of the tariff as we propose? We believe not. As a matter of fact, those who require to possess an objective constructed by Tolles, have to wait from six to twelve months before receiving it. The free list will surely have no effect upon such men who are capable of incorporating their individuality in their work, and with three original manufacturers of microscope objectives and two or three of indifferent merit, ample work must be in store for them under any circumstances.

We believe that not only the medical profession, but the microscope trade itself, would be benefited by the change we propose. All purchasers would be placed on

the same footing, and colleges, with other institutions now making their selection abroad, would probably in the future give their patronage to the home manufacturers.

The discrimination proposed in favor of certain wealthy institutions is both unnecessary and unjust, for it affords relief in a direction where it is neither required nor appreciated, and doubles the cost of the instruments in the case of the poor student, or the young physician who is starting on a career calling for constant outlay and yielding small returns during its earlier stages. We understand that the proposition to place microscopes on the free list, without discriminations in favor of any class, was brought to the notice of the Tariff Commission by Mr. John Michels, and that a prominent member of the House of Representatives has promised to introduce such a resolution when the measure is discussed. There appears, therefore, some prospect that practical results may be accomplished in this direction.

TENEMENT HOUSE CIGARS.

It is not an agreeable thought for smokers of domestic brands of cigars, that the specimen they hold between their lips was perhaps manufactured in some fever den, amidst the filth and stench of an Italian tenement house. Could the purchaser of the five-cent "*regalia*" view the home of its birth, with all the surroundings of vice, dirt, and misery, he would possibly decline to kick with his foot the cigar he places in his mouth.

We notice that a Society of Progressive Cigar Makers met last Monday at the Cooper Union, to protest against the system of manufacturing cigars in tenement houses, making their appeal in the name of "health, science, and humanity." We do not pretend to explain, or even to know, the exact motives which have inspired the "Progressive" cigar makers to this crusade on their more humble fellow workmen. The proceedings, however, indicated that the reformers were "aggressive" as well as "progressive," and the taint of a trade union spite was apparent, rather than the true "Havana" odor of sincere sanitary reform.

This is clearly a case for the control of the Board of Health, and we are not surprised that the Legislature "laughed at the efforts" of the Progressive Cigar Makers. Although smoked, a part of every cigar is necessarily chewed, and the pressure of the teeth on the moistened tip must extract a certain amount of tobacco juice. Cigars, therefore, may in one sense be classed with articles of food, and a law should be passed enabling the Board of Health to prohibit their manufacture in sleeping-rooms. Such an arrangement would, perhaps, satisfy the Progressive and Aggressive Cigar Makers' Union.

PUDDINGS AND PIES.

The *Lancet* struck a most responsive chord in the British bosom recently when it announced that plum-pudding was a wholesome and nutritious article of diet. It contains, says this authority, force equivalent to two hundred and fifty foot-tons; and the opposition to utilizing such an appetizing form of energy is characterized as "middle-age prejudice."

Now what the plum-pudding is to English hearts of

oak and stomachs of similar robustness, the pie is to the American. We should, perhaps, say to the American Yankee; but this individual has distributed himself and his pies so universally that a distinction is now hardly needed. And the American pie deserves a word of encomium quite as much as the English pudding.

There is a "middle-age prejudice" also among us against pies; but it is, we are sure, quite as irrational as that against puddings. There is not quite so much potential energy in the former as in its equivalent weight of the latter. But man does not eat for the sake alone of storing up solid "chunks" of force. And certainly, there is much about the pie to make it more digestible than the pudding, if it is not quite so compactly nutritious. Out of the records of a very large clinical experience we have been able to collect no facts which prove that pie properly made ever caused dyspepsia. It is a general custom, and a wise one, to prohibit pastry and cakes and puddings when dyspeptic symptoms appear; but we should be inclined to hold on to the pie longer than to the other forms of sweetness. Dyspepsia is confessedly very common among Americans, and the ubiquitous pie has been sometimes charged with being a potent factor in these gastric ills. But only superficial philosophers will thus malign an article of diet which has brought so much real sweetness and comfort into the life of the hard-worked Yankee. Dyspepsia prevails as much among the rural populations of some Southern districts, where life is pieless, and (to Yankee apprehension) meaningless, as in the North.

In fine, pie, well-made pie, is digestible, and may be taken with impunity by those to whom plum-pudding is, peptically, a terror. If made with fruit, it is antiscorbutic; if with other materials, decidedly nutritious. Under any conditions it is more wholesome than that leviathan of culinary art the plum-pudding. Nor do we feel confident that *The Lancet's* recommendation of this latter article should be taken by Americans without great caution.

A REMEDY FOR ASTHMA.—The leaves of *euphorbia pilulifera*, L., a plant growing in Queensland, are reported to be a sure remedy for asthma and other affections of the chest.

COOK COUNTY HOSPITAL.—The capacity of Cook County Hospital, Chicago, will shortly be increased from three hundred and fifty to five hundred beds by the completion of two additional pavilions and the executive building, now in process of construction.

TROPIC FRUIT LAXATIVE is the name of a proprietary article having about the following composition:

R. Jalap tubers, powdered	5 parts.
Senna leaves	5 "
Sugar	5 "
Pulp of E. I. tamarinds	30 "

The preparation is said to be liable to get worm-eaten.

PROF. VIRCHOW is reported to be seriously ill.

TWELVE CASES OF SCURVY were recently brought to San Francisco, Cal., on the ship *Anna Camp* of New York. Investigation having disclosed the fact that the sickness had resulted from a violation of law in regard to this disease on the part of the captain of the vessel, the District Attorney of San Francisco has been instructed to proceed against him.

THE PRICE OF BOOKS.—Publishers will hereafter please state the price of books sent for review.

News of the Week.

SMALL-POX IN NEW YORK.—Two cases of small-pox were reported to the City Health Office on January 20th. These are the first cases of small-pox in the city since November 6th. The patients were living on Second Avenue, near One Hundred and Fourteenth Street.

MONEY FOR ST. VINCENT'S HOSPITAL.—The Sisters of Charity in charge of St. Vincent's Hospital report that the Fair, recently held, netted \$22,407.17.

PROFESSOR TYNDALL is lecturing at the Royal Institution, London, on "Light and the Eye."

EXPLOSIVE HYPOPHOSPHITES.—As Dr. H. Gifford, of Syracuse, was engaged recently in triturating a mixture of hypophosphite of lime, three parts, and hypophosphite of soda, one part, the compound exploded like gunpowder, the fine particles flying into his face and eyes and severely burning his eyelids and eyeballs. His injuries are likely to result in the loss of his left eye.

THE AUTOPSY ON GAMBETTA.—Further details of the autopsy on Gambetta confirm the view of the nature of his troubles which we based on the earlier and somewhat incoherent descriptions. The physicians in charge report "he succumbed to a perityphlitis, complicated by a pericolicitis, to which was added a slight peritonitis manifested during his last moments. Any surgical intervention would have been useless. It could have had no other effect than to abridge his life." The autopsy was conducted by Drs. Brouardel and Cornil, and in the presence of Drs. Charcot, Lannelongue, Gille, Fienzal, Sirédey, Trélat, Verneuil, Liouville, Mathias Duval, Laborde, Guerlat, and Gibier, who signed the report, as did also Paul Bert, who fainted during the operation.

ONE HUNDRED AND EIGHTY LUNACY COMMISSIONERS.—The spirit of lunacy reform has rather run away with itself. Gen. Spinola has presented a bill, in the State Assembly, authorizing the creation as Commissioners in Lunacy, in every county of the State, of only reputable physicians of at least twelve years' standing. For New York three commissioners are to be appointed by the Mayor, who are to receive \$5,000 salary apiece. No provision is made for the salaries of commissioners in any of the other counties. This would create one hundred and eighty lunacy commissioners. While we should be pleased to know that so large a number of our noble profession were occupying valuable sinecures, in the interests of the State we can by no means advise such a measure. It is cumbersome, expensive, and unnecessary.

SHORT-WEIGHT QUININE PILLS.—A "Commission" recently published in the *Medical News* of Philadelphia the results of examinations and analyses of quinine pills, and announced that there was very generally a short weight. Messrs. W. H. Schieffelin & Co., of New York, now state in a card that the charge is not true so far as their pills are concerned. The "Commission" in question is accused of having used a faulty method of analysis, of being guilty of mathematical mistakes and misleading comparisons. McKesson & Robbins make similar statements.

SEATS FOR FEMALE EMPLOYÉS.—A sensible bill has been introduced in the Minnesota Senate, providing for seats for all female employés in factories or stores.

A SCHOOL OF PHARMACY FOR WOMEN has been opened in Louisville, Ky.

PAY FOR THE EXPERTS IN THE GUTEAU TRIAL.—The four medical experts summoned by the Government in the Guiteau trial—Dr. Gray, of Utica; Drs. Macdonald and Allan McLane Hamilton, of New York; and Dr. Kempster, of Kenosha, Wis.—are to be paid each at the rate of \$25 per day. The total amount will reach \$13,000.

SMALL-POX IN BALTIMORE.—Small-pox, which has prevailed so extensively in Baltimore, is now said by the authorities to be under control. Vaccination is carried on by wholesale, and the new cases of variola are promptly and efficiently quarantined.

SENT TO A SMALL-POX HOSPITAL WITH MEASLES.—Dr. M. M. Walker, of Germantown, Pa., has been sued for damages by a female patient, who, having measles, was sent by him to the small-pox hospital as a case of small-pox. The diagnosis was made in the early period of the eruption. The patient recovered from the measles, suffered an attack of varioloid, the result, as is alleged, of the exposure to the disease in the hospital, and finally left the hospital cured. It was properly claimed that the mistake in diagnosis was not, under the circumstances, absolutely avoidable. Five similar instances are said to have occurred in Baltimore during the past week.

BAD DRINKING-WATER IN PHILADELPHIA.—Communications have been received by the Philadelphia authorities from the commissioners of Fairmount Park touching the impurity of the Schuylkill water. These have been referred to the Finance Committee, in order that a request for an appropriation of \$200 to make chemical tests may be properly considered.

ANTI-DISESECTION BILL.—A bill has been introduced in the Michigan legislature, providing that the bodies of unclaimed paupers shall not hereafter be sent to the Medical College at Ann Harbor for dissection. It is supposed to be inspired by some sentimental buncombe in the Governor's message. As might have been expected, the measure meets with much opposition from sensible citizens.

STATE BOARD OF HEALTH FOR PENNSYLVANIA.—A movement has been made for the establishment of a State Board of Health for Pennsylvania. A bill introduced into the legislature of that State provides that the Governor appoint six persons (a majority physicians) to inspect sanitary and public institutions and suggest amendments to the sanitary laws, and supervise the registration of births, marriages, deaths, and prevalent diseases.

A POST MORTEM ON DR. GEORGE M. BEARD was held Wednesday afternoon. It was conducted by Dr. T. E. Satterthwaite, assisted by Dr. W. H. Porter. It was found that the disease causing death was an embolic pneumonia, originating in an abscess of the upper maxilla. The right lung was, in large part, consolidated. The left lung was dark, very soft, and would soon have become gangrenous. The funeral takes place to-day (Saturday) at 11 A.M.

INSTRUCTION TO DELEGATES AND THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At a meeting of the Medical Society of the County of New York, held January 22d, a motion to instruct the delegates to the State Society was defeated by a vote of 31 to 9.

DR. OLIVER WENDELL HOLMES, of Boston, is about to visit England. The distinguished author will be sure of a hearty welcome.

WANTED—A NEW HEALTH RESORT.—Commenting on the fact that the West Indies has been forbidden Mr. Vanderbilt, as being too warm, the "Broadway Lounger" says: "We much need a Northern watering-place in the South less flabby than Florida, with better hotels than San Antonio, with less visible disease than Hot Springs, with more security than New Orleans, and more outlet than Fortress Monroe." Plainly, the writer can never have seen the Atlantic City newspapers, in which two or three hundred Philadelphia physicians, in good ethical standing, have endorsed that resort.

Reviews and Notices.

A TREATISE ON FRACTURES. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgical Pathology, Medical Faculty, University of the City of New York; Surgeon to Bellevue and Presbyterian Hospitals. With 350 illustrations. 8vo, pp. 598. Philadelphia: Henry C. Lea's Son & Co.

THE work comes to us without a preface, and with none of the usual apologies for its publication. In most cases such apologies are needed more than in the present instance. It claims for itself nothing more nor less than can be learned from it by careful reading. The author has a thorough conception of what should constitute a practical treatise on fractures, and carries it out in a manner that must prove satisfactory to the student and practitioner. His subjects are arranged in a systematic manner, and the different mooted points in the pathology and treatment are on the whole very well discussed. In the laudable effort to be concise, he shows a tendency to drift into forms of expression which are somewhat dogmatic. Especially does this appear to be the case when the conclusions arrived at are seemingly based rather on theoretical grounds than on the results of actual personal experience. But the reader is quite ready to overlook this disposition on the part of the author, in view of the admirably exhaustive *résumé* which he gives of the experience of others. It must not be inferred, however, that our author has not improved his own opportunities for observation to the utmost. The results of these are presented here and there throughout the work in a becomingly modest manner, and independently positive form. Some of his special studies into the causes of deformities, notably those about the wrist and elbow, are of much value, showing ingenious reasoning, which has a desirably practical turn.

The subjects of repair in fractures, and the complications and remote consequences of fracture are very clearly presented, as are also the general considerations of the treatment of these lesions by various apparatus. The fractures of special bones are systematically considered in turn, and their causes, symptoms, diagnosis and treatment fully described. The illustrations, which are numerous and for the most part original, are exceedingly good. They represent all the leading features of general and special fractures, as well as most of the recognized methods of treatment for the same. Altogether it is a work which will be read with interest and profit by the student and general practitioner.

QUAIN'S ELEMENTS OF ANATOMY. Edited by ALLEN THOMSON, M.D., D.C.L., LL.D., F.R.S., EDWARD A. SCHÄFER, F.R.S., and GEORGE D. KANE. In two volumes. Ninth Edition. New York: Wm. Wood & Co. 1882.

A WORK on anatomy which has, within a comparatively short period, reached its ninth edition, scarcely needs the commendation of the reviewer. Before the fact of well-earned success, praise seems but a task of supererogation. We may briefly note, however, in what respects the present edition differs from previous issues, and whether the new Quain has taken due cognizance of the advances made in the various branches of anatomy. A critical analysis at once reveals the thoroughness with which the work has been revised. Some obsolete opinions have been entirely discarded, and wherever necessary, new matter has been introduced. Nevertheless, while material alterations were thus made, the original form of the book has been retained.

One of the best features of the new edition is the excellency of those portions which relate to embryology, histology, and the cerebro-spinal system. These branches are, as a rule, so inadequately treated, even in standard text-books, that it is a pleasant surprise to find them fully up to date in the work before us.

The illustrations are satisfactory throughout the volume, and the edition contains many new ones. All in all, the new Quain can be cheerfully recommended to student and practitioner as a complete, practical and readable treatise on anatomy, better than which none exists in the English language.

DES INOCULATIONS PRÉVENTIVES dans les Maladies Virulentes. Par le DR. E. MASSE, avec une planche hors texte. Paris: G. Masson. 1883.

IN this work of ninety-five pages, Dr. Masse gives a history of what has been so far done in attenuating virus and studying its effects. The book is a useful and timely one, although Dr. Masse presents the Pasteur side alone of the subject.

Obituary.

GEORGE MILLER BEARD, A.M., M.D.,

NEW YORK.

THE death of Dr. Geo. M. Beard, which occurred at his home in this city on Tuesday morning, as the result of pleuro-pneumonia, takes from the ranks of the medical profession a bright and shining light. The news of his sudden taking off startled his friends, very few of whom knew that he was even ill. It was only as yesterday that his voice was heard in discussion, that he was met in apparent good health, and was filled with his usual enthusiasm for his life-work. It seems hardly possible that the end should have been so near. Death was, however, not unexpected to him, and toward the last he philosophized upon the rapidly progressive changes of his dying condition, expressing the wish to record the thoughts of a dying man. During his illness he was in his usual cheerfulness, although most of the time suffering great pain. His main concern referred to what he considered his unfinished work, and almost his last words expressed the hope that others might continue it.

Dr. Beard was born at Montville, Conn., and was the youngest of four children. His father, the Rev. S. F. Beard, was a Congregational clergyman. His grandfather was a physician. Dr. Beard prepared for college at Phillips Academy, Andover, Mass. Before entering Yale College in 1858 he spent two years in teaching. He was graduated from college in 1862. He then studied for one year in the Medical Department of Yale College, and in 1866 was graduated from the College of Physicians and Surgeons in this city. Dr. Beard at once settled down in this city, and, with Dr. A. D. Rockwell,

made electro-therapeutics and nervous diseases his specialty. Dr. Beard was a voluminous writer, his first literary attempt being a paper on "Electricity as a Tonic," written in 1866. From that time to the day of his death he wrote constantly, adding many works of singular merit to medical literature. Among his most important works were "Our Home Physician," published in 1869; two popular treatises entitled respectively "Eating and Drinking," and "Stimulants and Narcotics," 1871; "Medical and Surgical Electricity," 1875, with Dr. A. D. Rockwell; "Hay Fever; or, Summer Catarrh," 1876; in 1877, a monograph on "The Scientific Bases of Delusions, Being a New Theory of Trance and Its Bearing on Human Testimony;" in 1880, a practical treatise on "Nervous Exhaustion;" in 1881, a work on sea-sickness, and in the same year "American Nervousness, with Its Causes and Consequences;" in 1882, "Psychology of the Salem Witchcraft Excitement and Its Practical Application to Events of Our Times." Among his later writings were a work on "Sexual Neurasthenia," "The Physiology of Mind-reading," and a host of pamphlets relating to electrology, neurology, and psychology. He also made constant contributions to the *North American Review*, the *Popular Science Monthly*, and *THE MEDICAL RECORD*.

In 1863 and 1864, during a period of eighteen months, Dr. Beard was Acting Assistant Surgeon in the West Gulf squadron of the United States Navy, and in 1868 became a lecturer on nervous diseases in the University of New York. From 1873 to 1876 he was physician to the Demilt Dispensary in the department of electro-therapeutics and nervous diseases. Dr. Beard was also one of the originators of the National Association for the Protection of the Insane, and was a founder of the New York Neurological Society. He was a Fellow of the New York Academy of Medicine, a member of the County Medical Society, the New York Medico-Legal Society, the American Neurological Association, the American Academy of Medicine, and of the American Association for the Cure of Inebriates.

He paid several visits to Europe and made there the acquaintance of many European authorities in science. He was several times a delegate to foreign scientific associations, presented papers to the British Medical Association, and in 1881, was a delegate to the International Medical Congress in London. He was connected professionally, as an expert, with the trials of Guiteau and Cadet Whittaker.

In the Whittaker case he testified for the defence, taking the position that Whittaker, when found with his ears cut, was really unconscious, and that the unconsciousness was the result of fright which came from the attack during the night. Dr. Beard's position in the Guiteau case was that the assassin was insane; that the insanity was of a hopeless and incurable character—religious monomania—and that Guiteau was irresponsible absolutely for the deed. This ground he took in an article in the *North American Review*, but when he was going on the stand to testify to that effect his testimony was ruled out on a legal technicality. He was also instrumental in preparing the petition for a stay of proceedings just before the hanging of the assassin.

Dr. Beard's writings have been especially influential in Germany, and his most important works have been translated into the German language. All his works have been original contributions upon the subjects of which they treat.

No man made for himself so enviable a reputation in his profession by more honest work than did the subject of our sketch. Few who did not know his habits could understand how he accomplished so much. But he was constantly and contentedly busy wherever he might be. He never allowed himself, however, to feel the strain of work. His elastic spirit and calm philosophy always served him in good stead, even upon his death-bed.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 18, 1883.

R. F. WEIR, M.D., VICE-PRESIDENT, IN THE CHAIR.

DR. CHARLES MILNE presented to the Academy a beautiful engraving of John Hunter, a copy of the original portrait painted by Sir Joshua Reynolds. On motion of Dr. John G. Adams, the thanks of the Academy were extended to the donor.

DR. PAUL F. MUNDÉ then read a paper on

SECONDARY PUERPERAL HEMORRHAGE.

The majority of obstetric authorities scarcely referred to the possibility that alarming uterine hemorrhage might occur as late as several weeks after confinement, and only the standard works of Barker, Winckel, Playfair, Spiegelberg, and Barnes devoted a fair amount of space to this accident. In September, 1880, at the annual meeting of the American Gynecological Society, Dr. Theophilus Parvin read an elaborate essay on this subject. The fact that so little had been written concerning it, and also the fact that the accident was comparatively rare and grave, were sufficient reasons for reporting the following case, which presented certain peculiarities not referred to by Dr. Parvin.

On August 2, 1882, he saw, in consultation with Dr. S. Kohn, a patient who was in great danger from uterine hemorrhage. She was twenty-five years of age, the mother of three children, and had always been healthy. She was taken in labor on July 16th, with her fourth child. Labor progressed slowly, and after it had lasted twenty-one hours, the head almost resting upon the perineum, and no advance being made, an attempt made to deliver with the forceps failed. The cranium was then opened and the forceps again used, but they refused to hold. The head was then delivered with the cephalotribe. The cause of the difficulty was hydrocephalus. Hemorrhage was quite profuse, but soon ceased. The placenta was adherent to the right side of the fundus and required complete separation by the hand, special care being taken not to leave any fragments behind. Two fluid drachms of ergot were administered by the mouth and all hemorrhage ceased. On examination it was found that the anterior lip of the cervix was quite badly torn. The patient appeared to be doing well for the next six days, although the temperature varied from 101° to 102° F., and the pulse averaged 120. The lochia were fetid from the third day on. Uterine injections washed away numerous small shreds and coaguli until the lochia lost their offensive odor. On July 28th, the lochia again became offensive, the discharge diminished in quantity, was serous, and contained a reddish-black fluid. On the sixteenth day after labor, a profuse hemorrhage began, and when Dr. K— saw the patient, four hours and a half afterward, she was almost exsanguinated. The bleeding was arrested for a moment by intra-uterine injections of hot water, but it soon recommenced. It was again checked by injections of hot water and tamponading the vagina. When Dr. Mundé saw the patient he found her with low head, perfectly pallid face, hands, and feet cold and clammy, pulse 120, very weak, and consciousness unimpaired. The fundus of the uterus was on a level with the umbilicus, irregular in outline, the right horn extending several inches above the navel, and there was moderate tenderness. After preparing fresh carbolized tampons, procuring a few ounces of the pure tincture of iodine, and a fountain syringe filled with hot carbolized water, he rapidly removed the tampons, and at once passed his hand into the dilated vagina and through it into the distended uterine cavity, which he found filled with soft coaguli, exceedingly offensive, dark colored, and largely mixed with shreds of decidua. The

internal surface of the uterus was soft, pulpy, and the mucous membrane apparently very much thickened. Great caution was necessary, in order to avoid injuring, perhaps perforating, the pulpy wall of the organ. After emptying the uterine cavity, he introduced a long metallic tube, and washed it out with carbolized water from the fountain syringe, the water being as hot as the hand could bear. The patient did not complain of the heat. He then introduced a large cylindrical speculum, through the tube of a long cervical syringe, and then injected half an ounce of pure tincture of iodine into the uterine cavity, using some force in order to insure the thorough distribution of the iodine. Cotton tampons joined with a cord were again applied, merely as a safeguard against further hemorrhage, in case the iodine failed to check it, and he directed that they be removed in six hours. The injection of iodine gave no pain whatever, nor was it followed by shock. Six hypodermics of brandy were given, and ten drops of aromatic spirits of ammonia, five drops of spirits of camphor, and a teaspoonful of brandy were ordered in ice water every half hour. A hypodermic syringe full of Squibb's fluid extract of ergot was injected into the subcutaneous cellular tissue of the abdomen, and an ice-bag was placed over the uterus. A bottle of hot water was placed at the feet. Directions were left to inject the uterine cavity very gently with tepid carbolized water after removing the tampons, for the purpose of preventing the decomposition of the coaguli produced by the iodine.

On visiting her twenty-four hours later he learned that no further hemorrhage had occurred, and that the uterus had been washed out several times. There was hectic flush and a peculiar sweetish odor about the patient, which sustained the conviction already expressed, that the patient was suffering from septic endometritis. Tepid injections of a one-sixth per cent. solution of permanganate of potash were made into the uterus every three hours, more or less, according to the offensiveness of the discharge. Ten grains of salicylate of soda were to be administered every two hours, in case the temperature should rise above 102° F., and the stomach did not reject it. Stimulants as might be required. Nutritious enemata. Prognosis unfavorable. In the course of the subsequent treatment, intra-uterine injections of the sulphate of quinine [sulphate of quinine, one drachm to the quart of water] were used at the suggestion of Dr. Kohn, and apparently with marked benefit. The offensive lochia continued several weeks after the hemorrhage. The patient recovered slowly, and at the end of five weeks convalescence was complete.

Dr. Mundé then reviewed several points of interest in the case reported.

First.—The causes of secondary puerperal hemorrhage. Constitutional: hemophilia, mental emotion, functional disease of the liver, incautious use of stimulants, sudden assumption of the erect position. Local: irregular and inefficient contraction of the uterus, clots in the uterine cavity, portions of retained placenta or membranes, retroflexion of the uterus, laceration of the vagina or vulva, laceration or erosion of the cervix, inflammatory ulceration of the cervix, malignant disease of the cervix, pelvic cellulitis, inversion of the uterus, premature sexual intercourse, loaded rectum. To these he added distended urinary bladder. Besides these malarial poisoning was a well-recognized cause of secondary puerperal hemorrhage. General febrile disturbances were also causes of secondary metrorrhagia. Another cause, so far as he had been able to learn spoken of by Winckel only, was disease of the inner surface of the uterus, chiefly endometritis. Dr. Mundé believed that his case belonged to this class.

Second.—The date of hemorrhage after delivery. The time at which secondary hemorrhage is liable to occur varies greatly, according to the character of the labor, the care taken in the third stage, precautions employed during childbed, and accidental circumstances. Barker

refers to instances as late as the fifth or sixth week after delivery, and Helfer speaks of one during the fourth week.

Third.—The significance of secondary hemorrhage depends partly on the amount of blood lost and escaping, and partly on the origin of the blood. Hemorrhage depending on mere temporary atony of the uterus is less serious than if due to sloughing off of the placenta, uterine thrombi, or the bursting of a dilated vein. The occurrence of serious or fatal hemorrhage at a later date than the fourteenth day after delivery was certainly very rare. The evil consequences of protracted secondary hemorrhage were the debilitating effect upon the woman, and subsequent uterine disease of some form or other.

Fourth.—The means employed to check hemorrhage. He recommends the method of injecting iodine through a cylindrical speculum, as a means of saving the vagina and vulva from inevitable contact with the fluid if the latter is simply injected into the uterus under the guidance of the finger. With reference to the application of the tampon after labor, it need scarcely be said that it should never be done unless the uterus was so contracted and constantly watched that no internal hemorrhage could take place. He applied the tampon temporarily as a possible safeguard against external hemorrhage until the patient had had time to rally a little, and with the positive understanding that the fundus uteri should be carefully watched until the tampon was removed. As a rule, it might be assumed that the same remedies and measures which are used to check primary uterine hemorrhage will be effectual in the secondary variety. For a protracted bloody lochial discharge, or a constant sanguineous oozing due to subinvolution, he had, in a number of instances, used successfully the pure tincture of iodine applied to the uterine cavity, about twice a week, on cotton-wrapped applicators.

DR. MUNDÉ concluded his paper by making reference to the means of preventing these hemorrhages, primary and secondary. The following rules were given for the management of the third stage of labor and the early puerperal state:

1. Always keep the hand on the fundus uteri from the moment the head appears at the vulva until the placenta is expelled.

2. Do not hasten the expulsion of the placenta too much.

3. Always watch the uterus with the hand, using gentle friction occasionally, for at least one hour.

4. Always give ergot by the mouth immediately after the birth of the child. If chloroform has been given, or if the labor has been unusually tedious, give ergot hypodermically, injecting a syringe full of the fluid extract to the depth of one inch near the umbilicus.

5. If the uterus shows a reluctance to remain contracted, rub the fundus gently with a piece of ice, or insert a cone-shaped piece into the cavity.

6. Always make sure by palpation and percussion that the uterus contains no coaguli.

7. Apply the child to the breast early.

8. Apply an equably tight binder, and, if there be tendency to hemorrhage, a pad should be placed over the fundus to secure its steady compression.

9. If there be laceration of the cervix or vagina, future oozing may be checked by mild astringent injections, or, if need be, by applications through the speculum. Immediate suture for laceration of the cervix appeared to him to be rarely feasible.

10. Do not allow the lying-in woman to leave her bed before the tenth day.

11. See that the bladder is empty, and is not interfering with uterine contraction.

12. See that the nozzle of the syringe is not introduced too far, and that too much force is not used in giving the customary cleansing injection.

DR. W. M. POLK, on invitation, opened the discussion, and said that he had seen but one case of secondary

puerperal hemorrhage, meaning thereby hemorrhage sufficiently profuse to produce marked exhaustion in the course of twenty-four hours, and in that instance it occurred fifteen days after confinement. He applied a tampon because the uterus was firmly contracted, not large, and besides he watched the organ very closely. He had a misfortune with it, which he believed was worthy of being borne in mind. The tampon was wet with a solution of persulphate of iron in water, three parts of water and one of the liquid preparation of the iron. It remained in position about twelve hours, and after its removal he instructed the nurse to thoroughly syringe the vagina, but she neglected to do so, and the consequence was complete atresia of the vagina, which required a secondary operation for its relief. Dr. Polk also referred to a second case which occurred in the practice of one of his friends, in which the hemorrhage occurred on the fifth day after confinement, and followed an intra-uterine antiseptic injection given through an ordinary catheter. In that case hemorrhage was so profuse that death took place almost immediately. He thought that the possibility of the occurrence of this accident should always be borne in mind in the usual habit of washing out the uterus with antiseptic solutions after confinement. Dr. Polk believed that the causes of this form of hemorrhage could be arranged under two heads: first, local; second, constitutional. His rule has been, whenever he had to deal even with milder degrees of septic inflammation of the endometrium, to be closely upon his guard against the occurrence of this accident. The tendency to improper contractions of the uterus in consequence of septic disease, and a failure to establish proper organization of the clot for the complete closure of the vessels, renders very trivial causes sufficient to produce hemorrhage. The conditions likely to interfere with the proper organization of the coaguli in the ends of the uterine sinuses are, unfortunately, very numerous. In the first place, all septic inflammations belonging to the uterus in the parturient state exert a marked influence in this direction. The other causes were chiefly constitutional, and were summed up under the head of cachectic states, such as malarial poisoning, or poisoning from any of the minerals, as mercury, lead, etc. He did not approve of the practice which formerly prevailed, of forcing the uterus back into the hollow of the sacrum by means of heavy compresses and bandages, for the reason that such mechanical pressure gave rise to congestion of the organ, and was liable, sooner or later, to be followed by hemorrhage. Dr. Polk also preferred hot water to cold. He had seen a good deal of prostration produced after prolonged use of cold, and he had not seen any ill effects follow the use of hot water. Water into which the hand could be placed and retained was not too hot for the uterus, and he thought this was a sufficient test for the temperature of the water. So far as immediate operations upon the cervix were concerned, he agreed with the author of the paper, that they were out of place. He thought the observations made by Dr. C. C. Lee had proved conclusively the correctness of this conclusion.

DR. E. L. PARTRIDGE directed attention to some of the less severe cases than those which had been mentioned by Dr. Mundé and Dr. Polk. He thought that only one-half of the question had been stated when it was said that secondary hemorrhage was due to retention of clots and portions of the secundines, etc., and that the real question was, What is the condition that allows this improper uterine contraction? He then proceeded to speak of the predisposing causes, both local and constitutional, which might give rise to secondary uterine hemorrhage. For example, a woman who suffered from such symptoms as would naturally be attributed to disorders of the circulation, such as headaches due to anemia, attacks of syncope, etc., would be liable to the occurrence of hemorrhage after labor. With regard to local predisposing causes, he mentioned chronic uterine diseases of various kinds, chronic cellulitis which led to an increase in the

size of the organ due to the preponderance of fibrous structure which was liable to interfere with perfect contraction of the organ at the termination of labor. The only alarming case of secondary puerperal hemorrhage which he had seen occurred on the ninth day after labor. It occurred suddenly, and was found to be the result of an annular slough which involved the entire vaginal end of the cervix. The loss of blood was sufficiently profuse to seriously jeopardize the patient's life. The history of the labor was that of early rupture of the membranes. And with regard to early rupture of the membranes, he had found that the persistence of the hemorrhagic element in the lochial discharge was very likely to exist, and it might be sufficient afterward to produce what might be called hemorrhage. In such a case as that reported by Dr. Mundé he would not hesitate to use a tampon, but, generally speaking, he would not hasten to apply a tampon until he was convinced that all other methods for controlling the hemorrhage were futile, because he thought there was a liability to the absorption of septic material. Dr. Partridge then made special reference to the importance of compressing the uterus for some time after the completion of labor, and for the purpose of preventing the occurrence of secondary hemorrhage.

DR. H. T. HANKS concurred in nearly all the statements made by Dr. Mundé, and made reference to cases of undoubted malarial origin which had come under his observation. In one the hemorrhage occurred fourteen days after delivery. It was controlled by the use of a battery and injections of hot water. He agreed with Dr. Polk that hot water was the more easily obtained, and more agreeable to the patient, and more effectual than cold. It could be easily injected through Chamberlain's long glass tube, or a small gum elastic catheter. He did not approve of the use of the tampon. He also thought it unnecessary to give a drachm of ergot in all cases of labor. If there was any evidence of impending danger, certainly the ergot should be used, but if the patient was all right, why give something which produced uterine colic?

DR. MUNDE, in closing the discussion, said he did not concur with Dr. Polk with regard to the effect produced by the binder and pad. He thought their use was simply the application of the same principle which was so frequently applied for the arrest of hemorrhage in any other part of the body. With regard to the use of heat or ice, he did not wish to be understood that he would use ice-water, but he would simply take a piece of ice and rub it over the fundus, or introduce a piece into the cavity of the uterus. It had been his experience that the patient complained more with regard to the use of hot water than the use of cold. Dr. Partridge's remarks were exceedingly proper with regard to the etiology of hemorrhage in certain cases, but it had not been his purpose to enter upon the subject of the etiology of uterine hemorrhages, which were of a more chronic character. He wished to speak chiefly of the acute cases. The subject of protracted lochial oozing he thought had not been sufficiently elaborated. He believed that the condition was exceedingly common, and that a great deal could be done in the way of its prevention and cure. With regard to the use of the tampon, he did not wish to be understood as recommending its introduction after delivery of a full-grown child. It certainly was a risky practice, but in his case he preferred to take the risk rather than to allow the patient to lose another drop of blood. But it should be insisted upon that it be very carefully watched. He did not believe that it was always necessary to use ergot after delivery, but at the same time he thought the woman was a little more safe with than without it, and he did not believe that it did any harm.

DR. POLK remarked that he did not mean to criticize the application of the binder and compress, but simply wished to speak of the custom of continuing it for a week or ten days after labor.

DR. E. B. BRONSON then read a paper on

ECZEMA: THE PATHOLOGY AND THE PRINCIPLES OF ITS TREATMENT.

He believed that the epidermis played a part in the pathology no less essential than the vascular stratum beneath it, and that it was primarily involved. He also maintained that there was an independent action on the part of the epidermal cells in the inflammatory condition of eczema. The adjacent vascular tissues, however, soon sympathized. Dr. Bronson then spoke of the conditions which favored the view advanced, and mentioned the fact, recently demonstrated, that the epidermis as well as the papillary layer is supplied with nerves. Eczema manifests itself in sensory disturbances and in trophic changes in the epidermis. The trophic change is under the influence of the epidermic nerves, and the itching was probably due to their disorder. Of the pathological anatomy of the epidermic nerves in eczema, but little was known. Dr. Bronson then presented at some length the reasons which had led him to the adoption of this new theory concerning the pathology and etiology of eczema.

The therapeutic indications were, to allay irritation and assist repair. Measures of rest and measures of stimulation comprised the whole method of treatment of eczema. The local agents were embraced under mechanical, chemical, and dynamical. The highest grades of eczema were usually treated best by wet applications. Lotions might hold in suspension powders or certain chemical materials, such as moderate astringents or alkalies. Sometimes it was of advantage to use a certain proportion of glycerine in the lotion. Undiluted glycerine acted as an irritant. Wet applications to be most effectual must be continuous and copious. A little later emulsions might be used, and a little later still the period for the use of ointments had arrived. Of the ointments the zinc was the best that could be employed where a protective ointment was indicated. The use of ointments was contra-indicated in the early stages, and there were other circumstances under which they were contra-indicated, such, for example, as the existence of more or less erosion with copious discharge, when the use of absorbent cotton or an absorbent lotion was more serviceable.

The next class of agents considered was those which modified vital action, and chief among these were the alkalies, which produced a sedative influence over the sensory nerves. They were most effective when the nervous layer of the epidermis was exposed. In old cases of eczema the stronger potash soaps were indicated, but in the milder cases the milder soaps acted most favorably. In squamous eczema the soap treatment was the most effectual which could be employed. It was seldom that a stronger alkali than soft soap was required. Hot water for the relief of the pruritus of eczema was very serviceable. It should be used to the extent of substituting a sense of smarting for that of itching which would be succeeded by a sedative effect. To insure a continuous effect of hot water, it should not be stopped too soon. Dr. Bronson then spoke of the indications for the use of carbolic acid, preparations of tar, etc. In the stage of active exudation the use of tar was contra-indicated. Among the remedies belonging to this class was the benzoated oxide of zinc ointment. Mercurials were indicated chiefly in the later stage, when the skin was no longer in a state of active inflammation, but was suffering in nutrition from the accumulation of the products of inflammation. In these cases mercury was most efficient.

When is it necessary to resort to internal medication? Dr. Bronson considered this question at some length, and believed that internal medication might be of some service in diminishing reflex irritation, in restoring the general tone of the system, and in aiding local remedies. He thought it quite possible that eczema resulted most frequently from the combined effects of an irritation

from within and another from without. After presenting the views entertained by the French School of Dermatologists, Dr. Bronson reached the conclusion that whatever the predisposing causes might be, eczema in the main was essentially a local disease, and the most rational treatment that could be adopted was directed to the skin itself. Internal remedies were subordinate to local measures. The use of narcotics should be mentioned only to be condemned. In the majority of cases the local treatment was able to cope with the disease.

DR. R. W. TAYLOR, being invited to open the discussion, said that he had listened with great interest to the paper read by Dr. Bronson, although it had a theoretical flavor which perhaps was not so sound as its practical character. With reference to the pathology of the affection, he thought Dr. Bronson had been rather too superficial, believing that the disease has its beginning above the rete mucosum. Eczema being a chronic disease, and involving the entire skin, Dr. Taylor thought that if Dr. Bronson had included the deeper invasion of the disease in his description, it would have added much to the completeness of his paper. That the disease commenced in the vascular layer of the skin and extended above and below, he thought would be conceded by all those who saw much of eczema.

With reference to treatment, it could be formulated something as follows: In the erythematous stages soothing applications, either in the form of powders or lotions, such as lead and opium, were most serviceable. As the disease increased in age, stimulation should be added. He believed that stimulation was one of the cardinal points in the treatment of eczema, keeping the surface well protected, and then going on gradually with the use of stimulating applications. The application of the zinc ointment alone would not effect a cure, unless something was added, and then the use of tar came in most admirably. Dr. Taylor believed that in most cases, treatment with the use of alkalies could be extended further than had been mentioned by Dr. Bronson, and that strong solutions of potash might be used with advantage. Soaps would fail in some cases where solutions of potash would relieve, even of the strength of a drachm of the caustic potash to the ounce of water. The action of this strong solution must be controlled so as to get the effect of strong stimulation and at the same time prevent it from producing inflammation. With regard to the nature of the disease, he was glad to hear that Dr. Bronson discarded the rheumatic and dartrous diatheses which were so completely visionary. There was one fact to which he wished to direct especial attention, and which had not been dwelt upon by the author of the paper. A patient has eczema, and has had it for a long time. If you go back into the history of the case, you generally find that he has had a local eczema more or less severe; in other words, while young he suffered from attacks of inflammation of the skin, which has rendered it more vulnerable all through life than it otherwise would have been. The more frequent the occurrence of these attacks of inflammation of the skin in early life, the more the patient is predisposed in later life to eczema, simply from the bad habit which the skin has taken on in former days. Dr. Taylor also thought that arsenic had not been sufficiently recommended. He believed that it would assist the external treatment very much. The golden rule in the treatment of eczema was to use local measures, but in many cases the internal use of arsenic would be found very beneficial.

DR. BULKLEY regarded Dr. Bronson's paper as one of the best expositions of the idea of eczema which had ever been presented. With regard to the conditions, the stages and the treatment for each, if what had been said could be properly studied, it would help all in the management of the affection. The subject of the alterations in the cellular layers of the skin were necessarily important, and had not received the attention which they should have done in years gone by. That the skin

should take on this particular action, and the patient become the subject of such a tendency which might last through a life-time, was undoubted. The bearing of the nervous system in the disease he thought was important to be borne in mind, and was an important factor in studying the etiology of the affection. Dr. Bulkley, however, held that in the vast majority of instances the skin would not take on the eczematous action when the individual was in perfect health. A person who suffered from eczema in any degree, and in whom the process has lasted for any considerable time, was not in perfect health. There was no specific for eczema, and yet he had reported several cases in which he had given nothing except Fowler's solution internally, and the cases were relieved at once. He believed that in nine out of ten cases of eczema arsenic should be administered internally at some time in the course of the disease.

DR. TAYLOR asked Dr. Bulkley what he meant by the term, "is not in perfect health;" in other words, whether or not he believed there was a herpetic or dartrous, or some other diathesis which produced the disease?

DR. BULKLEY replied that he did not believe in a herpetic or dartrous diathesis, nor did he believe in an eczematous diathesis, but referred to the debilitated condition of the patients, and to the fact that some other organ besides the skin is in an abnormal condition.

DR. TAYLOR asked, how explain the cases of eczema which occur in patients in whom there cannot be found any deviation from health?

The Academy then adjourned.

SECTION IN PRACTICE.

Stated Meeting, January 16, 1883.

E. G. JANEWAY, M.D., CHAIRMAN.

ABSCESS OF THE LIVER—ABSENCE OF HYPOCHONDRIASIS.

THE CHAIRMAN reported a case of abscess of the liver in which there was no evidence of hypochondriasis. In a number of cases of hepatic abscess he had noticed the absence of hypochondriasis, and had come to regard its presence as exceptional instead of the rule.

EYE TROUBLES ERRONEOUSLY ATTRIBUTED TO LESION OF THE BRAIN AND NERVOUS SYSTEM.

DR. H. D. NOYES read a paper on the above subject in which he directed attention first to a class of cases in which the *objective* observations might be faulty; and second, to a considerable class of cases in which functional disturbances were sometimes regarded as significant of trouble in the nervous system, whereas in truth they originated in the eye.

What he had to say was not by any means to be interpreted as disparaging to the ophthalmoscope, but rather to encourage a more general use of the instrument than had heretofore obtained in both hospital and private practice.

The connection between diseases of the eye and the nervous system especially had come to be very thoroughly appreciated, and the more so since the ophthalmoscope had proved itself an instrument capable of giving so much valuable information bearing upon the latter class of affections.

There were, however, certain objective facts observed in the eye by the aid of the ophthalmoscope that were capable of misinterpretation. First, the optic nerve varied, to a degree not properly appreciated, in the color which it presented on ophthalmoscopic examination. It varied so much that an inference drawn from its undue vascularity with reference to the possibility of trouble with the circulation in the brain was liable to lead to erroneous conclusions. Acute affections of the brain rarely exhibited themselves in hyperemia of the optic nerve. When they did the disease was at the base of the brain, and was meningitis, disturbances associated with fracture, abscess, etc. Acute inflammation of cere-

bral tissue rarely exhibited itself in lesions which could be seen in the optic nerve. Most of the brain affections, evidences of which manifest themselves in the optic nerve, were chronic in character, such as interstitial changes, new growths, etc.

An intensely reddened optic nerve must be accompanied by other symptoms before assuming that it was associated with lesion of the brain. It was more frequently the result of strain or irritation of the eye or of congenital defect than of disease of remote tissues.

Choked disk had an important bearing upon the diagnosis of tumor of the brain, and yet there might exist swelling and infiltration of the optic nerve without any evidence whatever of brain lesion, nor could it be assumed that the case was one of latent tumor of the brain. These cases were not of common occurrence, but had occasionally been observed. The appearance of the retina varied considerably in different persons. In young subjects it was frequently seen as a glistening somewhat opaque reflection and especially noticeable were long blood-vessels. This condition, due to the brilliant reflection of the light, in no respect indicated that the retina was the seat of inflammatory infiltration, and should not be mistaken for evidence of an inflammatory process.

The general illumination of the fundus of the eye varied greatly in different subjects, according to the size and complexion of the person, etc. Besides, there was frequently seen along the edge of the optic nerve a bright, opaque, striated surface, running out from the nerve itself and swelling its edge, that might be mistaken for exudation. It was a bundle of imperfectly developed nerve fibres; was a congenital condition, and had no influence, either local or general. On the other hand, the optic nerve was sometimes very pale, and the blood-vessels small; but pallor and reduction in size of the blood-vessels did not necessarily indicate atrophy. It was sometimes evidence of general poverty of the circulation, but existed entirely distinct from any alteration of the nerve fibres proper.

Dr. Noyes then referred to a case in which an experienced foreign oculist saw an appearance in the eye which he regarded as evidence of inflammation, and from this and other symptoms he was led to the conclusion that there was intra-cranial disease. The real condition, as subsequently proved beyond doubt, was a notable error of refraction in one eye, which had not been used until disease in the opposite eye rendered its use necessary. The subjective phenomena liable to be mistaken for evidence of disease of the brain were chiefly due to errors of refraction, as hypermetropia, astigmatism, spasm of accommodation, and trouble with the extrinsic muscles of the eye. This was by no means a new subject. It was Weir Mitchell, of Philadelphia, who, perhaps, had attached most importance to it as a field in which causes of peculiar nervous symptoms could be found. The class of cases which Dr. Noyes mentioned were those in which the patients made comparatively little or no complaint whatever with reference to the eye.

The first and chief symptom which develops in these cases was *headache*; and it could be of any possible variety, as frontal, occipital, pain in the temples, vertex, etc. It might occur upon one side only, although such cases were comparatively rare.

This headache might or might not be associated with special use of the eyes. Sometimes it appeared on first waking in the morning. It might be increased by any mental labor. It was not infrequently attended by nausea. The headache was liable to be exceedingly persistent. In a case, in which headache is the chief symptom complained of, an examination of the eye might reveal deep congestion of one optic nerve, a degree of congestion, associated with marked opacity, in the other; and the observer might be easily led, perhaps, to think that it was a case of some chronic meningeal trouble. Yet all this might be due to hypermetropia, and the same

symptoms might also make their appearance without refractive error.

Dr. Noyes then referred to a case in which a large part of apparent mental and cerebral disturbances was due to intense spasm of accommodation. The patient appeared to be near-sighted and required concave glasses, No. 12; but examination determined entire absence of refractive error, and that the condition was apparent and not real. Atropia was freely and vigorously used, and although marked relief had been obtained the spasm had not entirely relaxed. The cause of the spasm was probably in concussion of the spine, but the principal symptom had taken possession of the patient, and the conclusion had been reached that the trouble was in the eye alone.

The speaker then gave the history of a case of disordered condition of the muscular apparatus of the eye. A young woman was near-sighted and also had divergent strabismus. A great variety of nervous phenomena attended the case. She had been advised not to have an operation performed for the squint. From repeated examinations, Dr. Noyes became convinced that the symptoms were due to the condition of the eye, and recommended an operation for the relief of the divergent strabismus, and the result was extremely satisfactory; not only was the pain relieved, but the general health of the patient materially improved.

The subject of irritation produced by disturbances of the ocular muscles was one which had been agitated considerably among ophthalmic surgeons, and concerning it there was not an unanimity of opinion. There was a variety of opinions with regard to the possibility of nervous disturbances being developed by disorders of the ocular muscles, but the differences were rather based upon the degree of influence which these disorders exert; and while there were exaggerated views which altogether failed of being confirmed by experience, he was persuaded that these ocular disturbances exerted a far greater influence, not only upon the functions of the eye, but upon the general health of the patient, than was, for the most part, allowed to them.

As an illustration of how certain symptoms, dependent upon this condition, were expressed by patients, he gave the history of a case in which the patient, a girl fourteen years of age, described the symptoms from which she suffered. In this case there was only extreme debility of the internal recti muscles. The patient had suffered from headache for three years, worse latterly, people seemed to be moving away from her when she looked at them, she was unable to look fixedly upon objects, inability to ride in the cars, etc.

How are the cases to be differentiated and some of the errors avoided? To properly study the objective phenomena requires sufficient knowledge to enable the observer to say what was normal and what abnormal. In using the ophthalmoscope, the *direct* method was the most valuable, that mode in which the instrument was supplied with glasses to correct optical errors, as by it the observer was able to determine whether he was dealing with a normal or abnormal eye, so far as refraction was concerned. In addition, the quality of vision must be examined with test-types and correcting glasses. Finally, under suitable circumstances, resort might be had to atropia. If this drug was used, it was well to notify the patient that no ultimate detrimental influence would follow. It was not necessary to use atropia where there was reason to believe that serious brain trouble existed, but where the nervous manifestations were subjective in character, such as headache, nausea, inability to fix the eyes upon any object, and no well-defined evidence of brain trouble, atropia might not only clear up the diagnosis, but might relieve the symptoms. It frequently removed headache, although temporarily, permanent relief coming from wearing glasses. The difficult refractive cases were those in which there was also astigmatism.

The severity of the symptoms in these cases depended very much upon the temperament of the patient; some suffering severely, others only slightly, from the same condition of the eyes. Those who suffered from uterine troubles were especially liable to suffer from various reflex irritations, and disturbances of the eyes were not exceptional.

For muscular errors the *treatment* consists in rest, the use of suitable prismatic glasses, sometimes tenotomy, and proper attention to all general causes and remote lesions which might have an influence in producing such disorders. Muscular and refractive errors were sometimes combined, and sometimes so combined as to make the prescribing for glasses exceedingly complicated.

DR. WEBSTER thought that Dr. Noyes had not made a single statement to which any member of the New York Ophthalmological Society would take any particular exception, thus presenting a striking contrast with the neurologists.

DR. PUTNAM-JACOBI referred to certain anatomical considerations which might aid in explaining functional disturbances of the eye from preripheral irritations; and also to the influence in producing muscular troubles exerted by the lack of stability, uncertainty, and impaired equilibrium both on the part of the patients and of anything by which they are surrounded.

DR. BEARD asked Dr. Noyes, first, if he had watched the cases described sufficiently long to enable him to determine whether or not *permanent* relief had been afforded by the means mentioned, not only for the ocular trouble, but for the general nervous system; and, second, how he could tell whether these conditions of the eye were mainly the result or the cause of the disease.

These were suggestions which he had been trying to answer for several years, but had found it impossible to answer them completely in any case. He believed that the subject was a general one; that the whole body was a bundle of reflexes; that the same principles applied just as well to the stomach, the uterus, the prostatic urethra, etc., as to the eyes, and the same problems came up in each instance.

In some cases disease of the womb, the prostatic urethra, the stomach, or of the eye was the very exciting cause of the disturbances of the nervous system, but so far as he had observed the number of cases was very limited. However, if one out of a thousand could be cured by proper attention to the eyes it was a fact of importance, and was sufficient to make us study all our cases in this special direction.

He had not seen cases of nervous disease, functional or organic, where important and permanent results had been obtained by circumcision or operations for stricture. Yet he believed upon authority that such cases existed.

His conclusions were that it was well, in all cases, to find out all we can about the eyes, even if they have already been studied by oculists, perhaps carefully; that the condition of the eyes was simply a help, an occasion in treatment and not the main thing; that, upon authority purely, he believed there are cases where all that is necessary is to treat the eyes, but he had not seen them; that the condition of the eyes was an important one, and he had been interested in determining which was result and which was cause.

There was one important point brought out by Dr. Noyes, and it was that there is a great difference in the capacity of different persons with reference to tolerating hyperæmias and irritations.

DR. LEALE referred to a case in which the patient, fourteen years ago, suffered from nearly all the symptoms mentioned by Dr. Noyes. They were believed to be produced by the condition of the eyes, and glasses eighteen and fourteen were prescribed. Since that time the patient had not suffered from any cerebral disturbances.

DR. PUTZEL thought that, in these cases of muscular troubles referred to, there was a continuous outflow of

nerve-force which must act as a constant strain upon the nervous system, and finally resolve the difficulty into neurasthenia.

DR. BIRDSALL referred to a case in which there was intense headache shortly after reading, and finally maniacal attacks developed. A hypermetropic condition of the eyes was discovered, and for it glasses were worn. The result was marked improvement for a time, but then the headache returned and the maniacal attacks subsequently. The glasses were changed and with partial relief, but recovery did not take place until the boy was removed from school and put upon a farm. The error of refraction was probably the immediate exciting cause of the headache and mania, but it seemed to him that in all such cases a multiplicity of influences were at work, and that the ultimate reference must be to the nervous system. He had seen several cases in which headache had been relieved by correction of errors of refraction with glasses, but believed that the headache and other symptoms would not develop in such cases were the nervous system in a normal condition.

THE CHAIRMAN said that Dr. Beard had alluded to some cases which all would recognize as those in which probably all methods of treatment were hopeless, because of the presence of errors of development of the nervous system beyond the reach of medicine or other curative means.

DR. PUTNAM-JACOBI said that in addition to imperfect development of the nervous system we had to consider that the length of time the nervous centres have suffered from peripheral irritation has permitted considerable change to take place in them, and also that the periodical pain and other disturbances is apt to remain after the peripheral source of irritation has been removed.

DR. WEBSTER had seen many cases of headache in which the patients had been permanently relieved by the use of glasses.

DR. NOYES, in closing the discussion, said that he had endeavored not to attach undue importance to the ocular side of the question, and was able to state that he had a very long list of cases in which the patients had been permanently, positively, and absolutely cured of all their troubles by properly treating the eyes. He could also bring another class of cases in which only partial relief had been obtained. Again, he had another class of cases in which he had been unable to afford the patients any relief whatever by such measures. That the constant pain produced nerve exhaustion he regarded as an important consideration. The habit of pain, also, in some people, seemed to be unconquerable. A good general condition acted favorably upon local conditions, but there were local conditions from which, if not corrected, the patient would always suffer, and, if corrected, the patient would be comfortable.

The Section then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 22, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

DR. A. D. ROCKWELL read a paper on

THE DIFFERENTIAL INDICATIONS FOR THE USE OF DYNAMIC AND FRANKLINIC OR STATIC ELECTRICITY.

When a distinguished professor can say to a large class of students that a simple Faradic apparatus will practically answer every purpose in medical electricity, it is in order to discuss this subject. To state that electricity has been used conveys but little meaning unless the *kind* of electricity is mentioned, and, still further, the method of its application. It is not, however, to be supposed that one form of electricity is adapted to one line of disease, a second to another, and a third to still another. But

there are certain pathological conditions which always call for a certain kind of electricity, and if benefit is to follow it must be through this special form, all others being useless, or worse than useless. For example, in hemiplegia, where there exists, as is often the case, an exalted electro-muscular contractility, electricity, if used at all, should be in the form of Faradization, and with an exceedingly mild, rapidly interrupted current. Even when muscular contractions are somewhat less readily called out than in the normal condition, the same current is, as a rule, preferable. On the contrary, when there is very great diminution of electro-muscular contractility, the galvanic current is always indicated, the Faradic coming into play only when the muscles give evidence of positive reaction to its influence.

In most cases of paraplegia, complete or proximate loss of Farado-muscular contractility exists, at least for a short time. The galvanic current alone is applicable in these cases, and for the purpose of restoring nerve-excitability. The Faradic current may be useful in attempting to improve the impaired nutrition of the paralyzed members. When we wish to directly affect the central nervous system, the constant current alone is applicable. In the majority of diseases where electricity is indicated, each one of its forms, Galvanism, Faradism, or Franklinism, may at one time or another possess a positive value over the others. This is illustrated in the treatment of neuralgia. The well-known power of the galvanic current to relieve many forms of pain has been repeatedly emphasized, and the inference has been that Faradism is of but little value for this purpose. The truth is that Faradism is not only invaluable in many forms of pains, but in certain conditions relieves, where Galvanism is not only useless, but may even aggravate the symptoms. The effects of pressure in the various forms of neuralgia, are exceedingly useful, as giving symptoms indicating the proper current. In the great majority of cases of neuralgia, where firm pressure over the affected nerves aggravates the pain, the galvanic current is indicated, whereas, where pressure does not cause an increase of pain, the Faradic current has the greater power of relieving pain. For hysterical hyperæsthesia, the Faradic current is infinitely superior to the Galvanic. Special characteristics of the cases regulate the measure of benefit to be derived from one form or another of electricity, and yet it is impossible to point to many diseases where one current is to be used to the absolute exclusion of the other; but it is possible to name a variety of conditions where, as a rule, one method of treatment and one form of current is superior to another. In the class of cases commonly spoken of as general debility the Faradic current is indicated. It is selected for its tonic effects. Very much, however, depends upon the method of its use. General Faradization is of the first importance. With regard to individual conditions that seem to demand the Faradic current alone there is not much to be said. There are but few distinct organic or functional diseases that in every phase of their manifestation demand alone and always a special form of electricity. Asthenopia, accompanied by hyperæsthesia of the retina and ciliary nerves, is one of the few distinct conditions which seems to demand the Faradic current alone. According to his experience, Galvanism is practically excluded in these cases. The paralysis following diphtheria is another condition for which Galvanism is of but little service.

The author then related the history of several cases. For special irritation or special neuralgia so-called, Galvanism is almost exclusively indicated. Galvanism is specially serviceable in certain sequelæ of cerebro-spinal meningitis, such as severe pain, sometimes beginning in the eyes and extending over the head to the neck and lower cervical vertebrae, associated with a stiffness of the muscles of the neck, etc. Exophthalmic goitre requires Galvanism. For the restoration of the senses of taste and smell, Galvanism succeeds where Faradism fails. Galvanism is superior to Faradism in the treatment of skin affec-

tions. For the relief of the pain of herpes zoster Galvanism is eminently efficacious. Galvanism, according to his experience, was preferable in the treatment of extra-uterine pregnancy. For chorea, if the appetite is good and nutrition unimpaired, and the strength vigorous, central Galvanism was almost invariably indicated; on the contrary, if the patient is weak, anæmic, and nutrition impaired, general Faradization is indicated.

In amenorrhœa the same principle holds good. In dysmenorrhœa both currents, either alone or in alternation, have proven efficacious, although the Galvanic is most frequently indicated. With regard to Franklinic electricity, he should say that while its constitutional tonic effects are unequal to those which follow general Faradization, where this method is carried out properly and with due attention to details, yet as an adjuvant or supplement it was invaluable. Occasional cases of nervous exhaustion, as well as other forms of disease, after improving to a certain point under the influence of Galvanism or Faradism, cease to improve, but a new start can frequently be given by then resorting to Franklinism. Pain is sometimes relieved by Franklinism after both Galvanism and Faradism have failed, but it is not the rule. The pain of muscular rheumatism, however, is relieved by this method sooner and more effectually than by the others. For this purpose the treatment by the roller is superior to treatment by sparks. In the various forms of true neuralgia Franklinism is not comparable in power to Galvanism. The pain so successively relieved by Galvanism is generally of a chronic character confined to no special nerve-trunks, dull aching, and with no tenderness on pressure. In these instances Faradism is superior to galvanism, and recent experience had convinced him that Franklinism was superior to either. In the enlarged joints of sub-acute and chronic rheumatism, and to facilitate absorption in chronic synovitis, Franklinism (sparks) is frequently more efficacious than either Faradism or Galvanism. In old contractures and in cutaneous anæsthesia Franklinism is frequently superior to either of the other forms of electricity. In electro-diagnosis, Franklinism is of but limited value.

Valuable as is Franklinic electricity it has a more limited range of usefulness than dynamic, and the more strongly this fact is impressed on the professional mind the better. He who begins with Franklinism to study and practise medical electricity begins at the wrong end.

The paper being before the Society, Dr. Jacobi was invited to open the discussion, and he remarked that he could add little or nothing to Dr. Rockwell's concise paper, but he would mention one class of cases which would terminate fatally unless the patients were treated energetically and promptly—namely, that in which the patients suffered from paralysis of the respiring muscles in diphtheria. Sometimes this occurs in the course of other paralyzes. But unless it was treated successfully the patients died of apnœa, and a strong Faradic current should be applied and frequently repeated. Electricity used in the usual manner in such cases was of no avail.

DR. L. A. SAYRE said that his daily experience corroborated all that Dr. Rockwell had said.

DR. J. P. GARRISH thought that electricity should not be used in the acute stage of any disease.

DR. ROCKWELL remarked that it should not be used in the acute diseases as a rule.

DR. JACOBI made the broad statement that Galvanism mainly, perhaps exclusively, is used in all affections of the vaso-motor and trophic nerves, and asked Dr. Rockwell if such statement was in accord with his views.

DR. ROCKWELL replied that as a general law it was true, but he doubted the propriety of making it absolute. For instance, facial paralysis due to cold, rheumatismal in character, could hardly be called an affection of the vaso-motor nerves, and yet the Galvanic current was the one best adapted to its treatment. He thought, however, that the law was almost complete.

DR. JACOBI thought that perhaps the exception made by Dr. Rockwell might come under the general law, inasmuch as the rheumatismal character, so-called, of the paralysis might also be the result of disturbances of the circulation.

DR. ROCKWELL thought that to some extent, probably, the paralysis was due to disorder of the circulation; yet his view was that in these cases of facial paralysis the inter-muscular nerves are affected. The Galvanic current acts upon the inter-muscular fibres altogether. The Faradic current produces contractions through these nerves, and these being affected by the rheumatic poison it has no further effect.

DR. JACOBI remarked that these are mild cases; that is, get well speedily, and that that could not be the fact if the nerve substance itself was affected, but it was consistent with the existence of disorder of the circulation.

DR. LEWIS had never seen electricity applied during the acute stage of diphtheria, and thought that more specific directions concerning its application would be beneficial.

DR. MITTENDORF remarked that, according to his experience, paralysis of accommodation following diphtheria had been benefited much more by the use of the Faradic current than by the Galvanic. He had also observed that the pain so frequently suffered from with weak internal recti muscles had been greatly relieved by the use of the Faradic current. He had found, on the other hand, that for amblyopia, due to tobacco or loss of blood, most benefit had been derived from the use of the Galvanic current, probably from the beneficial effect produced upon the blood-vessels, and consequently upon nutrition.

THE PRESIDENT had nothing very favorable to report concerning the use of electricity in ophthalmic practice.

DR. W. M. CHAMBERLAIN had used Faradism in the treatment of facial paralysis with the idea that it was a paralysis which was due to peripheral causes, and that a corresponding action was a legitimate method of retracing the line of causation.

DR. G. W. JACOBY had been governed by the state of nerve degeneration in the use of Galvanism and Faradism. If there was nerve degeneration, according to Erb's rules he used Galvanism; if none, he employed Faradism.

The Society then adjourned.

DR. TANNER'S VAGARIES.—Dr. Tanner, who has been several times reported dead or missing, now turns up again, this time as a victim of connubial revolt. Dr. Tanner has always been addicted to peculiar fancies. Some time since, says the *British Medical Journal*, he thought that he had found out that the human character becomes modified according to the food taken by the individual, and especially in relation to the vegetables consumed. Carrots, he avers, make people fidgety and sly; turnips produce extreme amiability, while a prolonged diet of French beans induces great irritability of temper. The carrying out of this theory has brought great trouble into Dr. Tanner's home. He made a heavy wager on the question with some friends, and experimented on Mrs. Tanner with French beans, giving her to eat about three pounds of this vegetable daily. It is not altogether to be wondered at if, after such a regimen, Mrs. Tanner became rather more irritable than was perhaps contemplated, and threw a jug at Dr. Tanner's head. The doctor, however, gained his bet; and, more thoroughly convinced than ever of the truth of his theory, put his wife on the turnip diet, so as to make her as amiable as she was before the French bean regimen. This time, however, the result was not so strictly in accordance with the theory. Mrs. Tanner objected to be any longer a subject for these vegetarian experiments; sued for a divorce and, what is more singular, obtained it.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

FACTS CONCERNING THE LAST ILLNESS OF GAMBETTA—THE NATURE OF THE INJURY TO THE HAND—PERITYPHLITIS WITH DEEP SUPPURATION EVENTUATING IN SEPTICÆMIA—AN ACCOUNT OF THE AUTOPSY.

PARIS, January 5, 1883.

M. GAMBETTA, the news of whose premature death has already spread far and wide, was, about six weeks ago, at his country house, a little out of Paris, wounded in the right hand by a pistol shot, whether accidentally or not, does not concern us as medical men. The bullet entered the palm of the hand, passed along under the skin, and made its exit above the middle of the forearm. There was scarcely any hemorrhage, and the patient did not complain much of pain in the wounded limb. Dr. Lannelongue, as surgeon, and Dr. Sirédey, as physician, who were personal friends of the deceased statesman, were summoned from Paris, and were in immediate attendance. The wounds in the limb healed kindly, and no untoward symptom manifested itself until about a fortnight later, when the illustrious patient was seized with intestinal pains, which did not seem to cause much anxiety in the minds of his medical attendants, as it was considered merely a passing or accidental indisposition. The pains, however, which were at first more general, became concentrated and limited to the right iliac region, and there were other evident symptoms of the commencement of perityphlitis, whereupon Drs. Lannelongue and Sirédey desired a consultation, and Drs. Verneuil and Trélat (surgeons), and Drs. Charcot and Fienzal (physicians), were called to give their opinion on the case. These gentlemen confirmed the diagnosis of the medical attendants, but no active measures seem to have been taken to subdue the progress of the disease. Symptoms of suppuration soon set in, and then it became a question whether an opening should be made to give vent to the matter; but, for some reason or other, operative measures were considered inexpedient, and even dangerous, owing to the obese, and otherwise unhealthy, condition of the patient, who had been for some time suffering from diabetes. The patient gradually grew worse; but whether the medical attendants formed a correct prognosis or not, the bulletins issued were thoroughly misleading; for, within only a few hours of the fatal termination, the public were led to infer that hopes were entertained of his recovery.

The illustrious patient himself was fed with hopes that he would soon recover. Symptoms, however, of a grave nature having set in, he began to feel alarmed, and finding indecision and hesitation written on the faces of his medical attendants, courageously suggested that if an operation were considered advisable, he was ready to submit to it, or to anything that may be necessary for his recovery. This conversation took place on Sunday morning (the day of his death). He was seen again in the afternoon, when his medical attendants still seemed to be ignorant of his real condition. At ten o'clock, however, of the same night, symptoms of the approach of the fatal end became evident, and he expired within five minutes of midnight, from, as was afterward stated, purulent infection.

In this, as in similar cases, the public must conclude, either that the medical men were mistaken or were ignorant of the prognosis, or that they were guilty of wilful deceit. Such a proceeding is inexplicable, and should be altogether condemned. The announcement of M. Gambetta's death, which took place on the night of New Year's eve, was as unexpected as it was appalling, and there was but one sentiment felt, that of universal grief—a sentiment expressed even by his greatest political enemies.

Owing to the unsatisfactory demeanor of the medical attendants in this melancholy affair, and owing also to the sinister reports that were in circulation as to the real cause of death of this eminent statesman, the public demanded that an autopsy should be made and published officially. Accordingly, under the orders of the judicial authorities, the following gentlemen proceeded to the country residence of M. Gambetta: Drs. Charcot, Lannelongue, Cornil, Fienzal, Sirédey, Trélat, Brouardel, and Mathias Duval. The necropsy was undertaken by Professor Brouardel, medical legist, who was assisted by Professor Cornil, and Dr. Lannelongue drew up the report according as it was dictated by Professor Brouardel, and in presence of the medical men named, and other political and personal friends of the deceased. The following is an extract copy of the report:

"VILLE D'AVRAY, January 2, 1883. (11 A.M.)

"1. Traces of old inflammation, causing stricture of the junction of the small intestines and the ileo-cæcal valve.

"2. Extensive and deep extravasation of pus behind the colon and in the abdominal parietes.

"3. A slight degree of peritonitis generalized, which was produced only a very short time before death. The other organs presented no lesion whatever. The wound in the hand was completely healed."

The report concludes with the assertion that death was caused by perityphlitis and suppurative pericolicitis, and that surgical interference was not only inadvisable but dangerous. The latter could have had no other result than shorten the life of the patient. This report was signed by Professors Paul Bert, Brouardel, Charcot, Cornil, Trélat, Verneuil. Drs. Lannelongue, Sirédey, Fienzal, Liouville, Mathias Duval, Laborde, Guerdat, Gille, and M. Paul Gibier, Interne in attendance. It should be mentioned that to Professor Mathias Duval, so well known for his researches on the anatomy of the brain, was confided the examination of that important organ. The brain in this case weighed 1,100 grammes.¹ Nothing else was particularly noticed in that organ. In fact, a more detailed report will be ultimately published. The next day the body of the illustrious defunct statesman was removed to the Bourbon Palace in Paris (the official residence of the Minister of Foreign Affairs), where it now lies in state until to-morrow, when the funeral will take place, with all the honors paid to the Chief of the State, which, had his life been spared, he would sooner or later have become.

COURTESY IN MEDICAL DISCUSSIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The object of this letter is peace. The results of partisanship in this country are sometimes of a character not to be desired. This we all know. The medical profession in the State of New York at the present time cannot be regarded as "a house divided against itself." We are only sharply at variance on one minor and almost incidental point. In everything that appertains to the main work—the grand aim of the profession—we are united by bonds that cannot be broken.

But this minor question is bringing us into a disturbed and unpleasant condition, and, without a change in tactics, it is difficult to see an immediate good result in the near future. I do not propose in this paper to go over the whole ground of our ethical differences, but only to touch upon a few salient points.

THE MEDICAL RECORD, in its editorial for December 9, 1882, seems to imply that the medical profession in the County of Kings has lately been engaged in unworthy methods, and that a prominent and honored ex-president of the Medical Society of the State of New York has, in some way, transcended his proper sphere

or influence. Still, these facts seem to remain. A majority of the members in attendance at the said meeting of the Kings County Medical Society, with deliberation, expressed themselves against the new Code, and the man alluded to is the one who, heretofore, has done more, and is now doing more, than any fellow-worker in the United States, to maintain a distinct line between those medicines which have good and genuine merits, and those which are spurious and unreliable. These facts are significant, and they must have weight with all thinking and upright medical men.

The question of instructions to delegates comes conspicuously to the surface. Does a delegate, indeed, lose his manhood if he, in a measure, forgets his own opinions in honoring the opinions of those who send him as their representative? I think not.

It has been said, and, in substance, repeated, in THE MEDICAL RECORD during the past year, that the opponents of the new Code have not offered a single sensible argument against it. This may be, in part, true, for it must be confessed that irony and sarcasm, instead of argument, on both sides, have been the main weapons in this warfare. But, if THE RECORD will allow, I will now undertake to offer what appears to me to be a sensible argument, and it is to place the two codes side by side, in their prominent features, believing that the contrast will be in favor of the old rule.

AMERICAN CODE.	CODE OF 1882.
1. Medical education essential in a physician.	1. Silence.
2. Moral character essential.	2. Silence.
3. Irregulars not to be received in consultation.	3. Legally qualified the only requirement.
4. Consultant not to impair confidence in attending physician.	4. Silence.
5. Should guard against all future unsolicited attendance.	5. Should continue his visits as long as he deems necessary.
6. Where two disagree, an umpire to be called.	6. Where two disagree, the case to be argued before the patient or family.
7. Should not take charge of another physician's patient.	7. Silence.
8. The relations of physician to patient confidential.	8. Silence.

A word of comment on each of these points. The whole medical profession believes in medical education, the more extensive the better. Our Code, which is our platform, ought to express this fact. The same may be said of all those traits which, combined, constitute moral character. Practitioners without these two qualifications ought to be classed as irregulars and unfit persons to be taken into partnership in assuming the weighty responsibility of treating human sickness. The American Code so expresses it. The new Code does not. Legal qualifications are only an outward badge. They may or they may not be genuine. Taken alone they are not a sufficient test. The experience of the medical profession, under the American Code, tends to confirm our belief that an observance of the injunction specified in my fourth point leads to the best interests of the sick, and also of the profession. As to the fifth point, there may be some good arguments on both sides. I think the position of the American Code the safer. I have no doubt of the superior wisdom of the American Code in respect to the sixth and the seventh points. If there are any differences of opinion in respect to the doctrine expressed in the eighth and last point, they must be very few and unimportant. Incidentally, in the discussions upon this subject, considerable has been said about "the leaders," the "legitimate leaders," "the would-be leaders" in the profession. It seems to me we ought to keep silent in this respect. Every man in the medical profession is expected to be governed by his own opinions on these questions, and every man has a right to make his opinions known, and to comment upon the opinions of his neighbor.

¹ This report, it is to be hoped, will put an end to the idle reports in circulation.

always, of course, in accordance with the dictates of courtesy and the rules of debate.

Having now reviewed the matter as it appears from my standpoint, I will express my thanks to you for your kindness in giving me this audience, and will refrain from taking any more of the space of your valuable journal.

T. H. SQUIRE.

ELMIRA, N. Y.

[We take great pleasure in giving place to the foregoing, inasmuch as it is a well-written and courteous exposition of one side of the controversy, which is interesting to many in this and other States, and we avail ourselves of the opportunity to more fully explain some of the points at issue. As regards the course of the "prominent and honored ex-president" referred to, we unhesitatingly believe that he "transcended his proper sphere" when he undertook to dictate to *practising* physicians the manner in which they should conduct their own affairs.

As regards the general question as to the propriety and desirability of instructing delegates, we have already given a decided opinion. It places the delegate himself in the possible position of committing an act which neither his judgment nor conscience approves. The safer and better plan is for societies to elect as delegates men whose sentiments are known to be in harmony with the prevalent opinion of their section, and then trust to their honesty and judgment to vote or act for the best. If they have delegates whose honesty and judgment they cannot trust, they have no one to blame but themselves.

In reference to Dr. Squire's interesting comparison of some of the points in the old and new Codes, we can make the general statement that we believe it was the intention of the framers of the new Code to omit matters that were already provided for by the laws of the land and by the general moral laws that all persons are supposed to be amenable to. The points numbered by Dr. Squire are all of minor importance except the one referring to the non-restrictive clause in the new Code. This clause confers upon every medical man the right to think for himself and to govern his actions strictly in accordance with the dictates of his own conscience. It is this feature alone of the new Code which is the main issue, and which we have tried to defend. Regarding all the other points, we believe that concessions can easily be obtained.—ED.]

THE NEW YORK CODE OF MEDICAL ETHICS AND FREEDOM IN CONSULTATION.

A PRESENTMENT OF THE CASE FOR THE NON-RESTRICTIVE CLAUSE IN THE NEW CODE, BY ONE OF ITS ADVOCATES.

RULES GOVERNING CONSULTATIONS.

"MEMBERS of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity" (Code of Ethics of New York State Medical Society).

The section in question simply *permits* consultation with legally qualified practitioners, whatever their therapeutic methods.

"But no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession and of the aids actually furnished by physiology, pathology, and organic chemistry" (Code of Ethics of American Association).

The restrictive Section in the old Code forbade consultation with any but regular physicians, defining "regular" as above.

The question at issue is not primarily the utility, or

otherwise, of consulting with any but those who call themselves "regular," but concerning the advisability and justice of the individual being allowed to do so if the welfare of the patient or of the community seems to demand it; but concerning the advisability and justice of allowing every physician to decide for himself whether he will or will not do so.

REASONS FOR THE CHANGE—OBJECTIONS TO THE OLD RESTRICTION.

1. *It was inoperative.* For many years the number of cases of discipline for violation of this restriction has been extremely few. Although we have positive knowledge that consultations with so-called "irregular practitioners" quite often occur, we have been able to find no instance, occurring within recent years, when such cases have been subjected in New York State to investigation and discipline.

2. *It failed to lessen quackery.* We can find no evidence that the old restriction, while placing a formal barrier about regular medicine, has lessened the number of quacks, or injured their prosperity.

3. *It was opposed to the general judgment of the public,* who never have understood, and never can be made to understand, the technicality on which the old restriction was based. It therefore injured the standing of the profession before the world.

The people and lay press throughout the country unanimously approve the action of the State Society in removing the restriction. Such a complete unanimity of opinion among all classes upon a question of morals should not be disregarded.

4. *It affronted and made enemies of all medical men declared to be irregular.* It was a form of persecution which was just weak enough to act as a stimulus and help to the persecuted.

5. *It infringed on individual rights.* Our chartered medical societies have a right to say what shall be the moral qualifications of their members, judging them by the ordinary moral standards; but they have no right (morally) to impose a special line of conduct upon individuals and say arbitrarily that such rule of action alone is right. This establishes a technical morality which is not only unjust, but is unphilosophical and at variance with the principles of modern ethics. *Good* and *bad* are only relative terms. A certain line of conduct pursued by a hundred persons may be good in ninety cases, bad in ten. The motive is the main issue. A consultation with a "regular" physician *may* be dishonest and mercenary. Medical societies and codes may urge honesty of action and right conduct generally, but to prescribe specific things and say that they alone are always right is unwise and unjust.

6. *The definition of an irregular physician* given by the old Code does not describe all in this State who are classed as irregular. If literally interpreted it would really permit consultation with many of this class. Whatever may have been the condition of medical education and morals at the time when the "American Code" was adopted, the number of those styled "regular" does not now embrace all who are educated, honest, and trustworthy practitioners. This is demonstrable in the experience of nearly every physician who has been for even a few years in practice in this State. The attitude of the defendants of the old Code is therefore inconsistent.

7. *A legal wrong was done by the old Code,* in the opinion of eminent lawyers. The State Medical Society is a chartered institution with certain powers by which it profits. Yet it used these powers to exclude from professional recognition and to injure persons whose legal status was exactly like that of its own members.

8. *It was a hindrance* to securing medical legislation for the general elevation of the profession. This has been illustrated in Massachusetts and other States, as well as in New York.

ADVANTAGES OF THE NEW SECTION.

Its advantages are summed up in this: that it does away with the objections, just enumerated, to the old, restrictive Code.

It is in harmony with general ethical principles which urge the discharge of our duty toward ourselves and our brother rather than the assumption of a special attitude toward a class prejudged and condemned.

It places the profession beside that of France and Germany, where the policy of ignoring rather than of actively opposing homœopathy and other dogmas is successfully pursued.

It gives opportunities for showing that the surest way to vindicate the superiority of scientific medicine is to let it come in contact and comparison with charlatany.

SPECIAL CHARGES AND OBJECTIONS MADE TO THE NEW SECTION.

1. *That it was the work of specialists who wished to increase their consultation practice.*—This charge has been laboriously, persistently, and insultingly made. While it has nothing to do with the absolute merits of the question, it is, we believe, entirely false.

The Code was drawn up by a committee of five, three of whom were general practitioners; and three, also, were ex-presidents of the Society, widely known and entirely trusted.

2. *That the Code was rushed through the Society hastily, by a small vote.*—The new Code was fully discussed, at great length, in two meetings, and was adopted by a vote of fifty-two to eighteen. Some who voted against it voted for the Roosa resolution, so that the majority for a merely non-restrictive clause would really have been larger. The meeting itself was one of the largest that the Society ever held.

3. *That the new section is an entire surrender to dogmatic medicine, i.e., an acknowledgment of the truth of homœopathy, Thomsonianism, etc., and that it implies the confession of having previously held a false position.*—The new clause simply means that we believe it unwise and unjust to forbid consultations with legally qualified practitioners. It advises nothing and admits nothing beyond the principle that there may be occasions when the rights of humanity should be considered paramount to the demands of trade-unionism.

The questions of "surrendering" or "admitting," however, we repeat, have no bearing upon the absolute right or wrong of the thing done. If the previous position was really wrong, it should be only fair to admit it. It should be remembered, moreover, that society progresses and requires new adjustments.

4. *That the homœopathist or other medical dogmatist can have nothing in common with the scientific practitioner, and that consultation between the two must, a priori, be absurd, futile, or even injurious.*—The Code admits, does not advise, such consultations. It urges honesty, and if a doctor be honest and believe the above, he need not consult with dogmatic or dishonest physicians. But even admitting the above proposition so far as relates to therapeutics, it does not necessarily cover matters of diagnosis or general management. Furthermore, in this State, many so-called irregulars are not followers of dogmatic medicine.

5. *That it will lower the tone of the profession.*—It is claimed that the removal of the restriction will lower the tone of the profession and lead to moral decline and decay.

It is impossible to prove such a charge, and only declamatory statements have so far been brought forward in evidence. Experience so far shows that individual morals are not appreciably affected by Society codes. Doctors become good or bad as other persons do. The superiority of scientific medicine must be proved by its works. Societies can elevate medicine most by scientific work and criticism—which is their legitimate function. As regards ethics they can only urge general right con-

duct. The present Code continues to urge and demand this of its members; if they obey it they cannot be made worse by having the privilege of consulting as conscience dictates. On the other hand, submission to a code of ethics, which is believed to be unjust, oppressive, and opposed to the demands of conscience and the sense of humanity, is certainly not calculated to elevate the moral tone or inculcate honesty of principles.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 20, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
January 13, 1883	5	9	75	1	64	54	0	0
January 20, 1883	0	10	62	9	55	43	2	0

A PROSPEROUS CHARITY.—The New York Society for Relief of Widows and Orphans of Medical Men (organized 1842), held its annual meeting in December. Whole number of members, 142; benefactors, 22. During 1882 the society has extended aid to thirteen widows and four children of deceased members. Total disbursements 1882, \$4,372.68; total assets, \$141,243.49. Jared Linsly, M.D., President, 1882; Isaac P. Taylor, M.D., 1883. We very much question whether any charitable organization in this or any other country, with so comparatively few members, can show a better record.

A PLACE IN WANT OF A DOCTOR.—From a tabular list of practitioners of the different counties in Nebraska we learn the astonishing fact that there are two entire counties in which, notwithstanding a thorough search, not a single medical practitioner, be he quack or regular, could be discovered.

AN ABORTIONIST'S ESTABLISHMENT BROKEN UP.—A remarkably prosperous abortionist establishment in Chicago, to which one Dr. George Kellogg was medical adviser, was recently broken up by the police. Such institutions are numerous in this city, but it is found extremely difficult to secure evidence enough to convict in any special cases.

CHOLERA AT PANAMA.—For several weeks cholera has prevailed at Salina Cruz, and Tehuantepec. Late reports state that the deaths at the latter place number twenty-five daily. The railway laborers have deserted and the work is at a standstill. A cordon has been established between the two towns and Oaxaca. The disease has been caused probably by the scarcity and impurity of the water.

PROPAGATION OF SMALL-POX BY THE SPARROW.—Dr. Hewson, of London, says that the sparrow may have small-pox and propagate the disease.

A PROLIFIC PARENT.—A well-to-do farmer, of seventy years of age, in Delaware, who has just married his third wife, has twenty-eight children, six by the first wife, and twenty-two by the second. For economical reasons he established a school for his children and his new bride is the teacher. Further improvements upon his scheme are possible.

A NEW HOSPITAL is to be erected in Liverpool in place of the Royal Infirmary. It is to cost \$500,000.

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Original Articles.

BISMUTH AS A SPECIFIC FOR CANCRUM ORIS.¹

By CONSTANTINE J. MACGUIRE, M.D., L.R.C.S.I.,
NEW YORK.

THE medical profession, very wisely and with good judgment, receives with caution claims to the discovery of new drugs possessing marvellous properties; and the profession is very slow to accept the statements of successful results in the treatment of diseases hitherto uncontrollable.

This is well, and as it should be. Within the memory of the present medical generation a cure for diphtheria has been found by men eminent in the profession, that is, the eminent men reported one or two cases of malignant diphtheria as recovering under their special line of treatment; but, when the same line of treatment was applied in two or three other cases of like malignancy, the same happy results were not obtained. Naturally the body of sceptics in anything new or true in medicine increased.

Again, men of repute came out in learned articles on prophylactics to scarlatina and small-pox, and, whether they themselves believed or not, the lay public had faith till they found the undertaker and his ice-box at the door. Every day we either hear or read of the discovery of a specific; but the claims of the author are found to be based on the cure of one, or perhaps two cases which might have recovered without any treatment at all; and, when the specific is applied by other hands to other cases, its vaunted efficacy is found wanting.

In presenting the histories of the following cases of cancrum oris, I should have some diffidence—considering the simplicity of the treatment, and my not giving any line of argument or reasoning in support of that treatment—had I not the good fortune to have invited a very considerable number of my medical brethren to see the cases during every stage of their progress.

If I be allowed to make an "Irish bull," curing a disease that does not exist, is not a matter of much difficulty; thus, the cure of a common tonsillitis or aphthous ulceration is often, through a mistake of diagnosis, called a cure of diphtheria. The description and history of each of the twenty-four cases I am about to relate, will unmistakably stamp them as being true cases of cancrum oris, or stomatite gangreneuse. The fatality of the first four cases, the fetor, the destruction of hard and soft tissues, the peculiar appearances of the children, starved and scrofulous, and the affection in most part following measles, complete the picture of the disease as described by the writers on the subject in this and the last centuries.

The epidemic, if I may so call it, came under my notice in the Institution of the Sisters of St. Dominick, situated at Sixty-third Street and Second Avenue, and the disease appeared first among nineteen children that had been admitted from a kind of "Shepherd's Fold," which had been condemned by the city health authorities. These children were represented, on admission, as being some weeks convalescent from measles, and when first seen by me at the institution, presented a

most pitiable and wretched condition. They were markedly attenuated, bloated, pale and sallow, and suffering from diarrhoea and cough. The unfortunate creatures, it seems, became, from the neglect and starvation they had suffered in the "Fold," so debased and degraded that they ate their own excretions. I had them placed in a ward of the institution isolated from the other inmates, and ordered them a generous diet.

January 21, 1882.—Measles showed itself; four or five children were affected, and at the same time the Sisters reported that three of the most starved and debilitated, viz., Joseph M—, Mary F—, and Annie S—, had "sore mouths." Joseph M—, the first child examined, I found to have a grayish black ulcer, about the size of a silver dime, on the oral mucous membrane, three-quarters of an inch from the angle of the mouth, on the right side of the face. The upper lip was swollen, the teeth decayed, the gums red, spongy, and covered at the edges, with a dirty, grayish, pulaceous deposit. The gums in the rear of the teeth were not then affected. Pulse, 110; temperature, 101° F.; fetor from mouth very offensive; child suffered intense thirst and drank any fluid with avidity; saliva flowing constantly.

Treatment.—Mouth washed out every two hours with solution of carbolic acid, ulcerated surface touched with nitrate of silver, four grains of chlorate of potash with cinchona every three hours; beef-tea, milk punch, and milk *ad libitum*.

January 22d.—Passed restless night; thirst insatiable; the child, if left a moment alone, gets out of bed and roams over the ward in quest of drink; upper lip much more swollen, and two incisor teeth loose, which were removed. Ulceration has already eaten from anterior to posterior aspect of gums; and ulcer on inside of cheek increased to the size of a twenty-five cent piece without any defined edge, but filled up with a disintegrated, grayish-black, broken-down tissue. Fetor very much increased, in fact, so bad that, notwithstanding the use of Condy's solution and Platt's chlorides, the ward is insufferable. Patient takes nourishment freely. Treatment continued.

January 23d.—Gangrene increased; the sore on buccal surface and that on upper lip now continuous, and presenting a most foul and loathsome appearance; fetor simply intolerable. Clipped off with scissors the broken-down, pulpy mass over the sore, and cauterized with nitric acid. Otherwise continued treatment as before.

January 24th.—Small dark spot showed itself at right ala nasi, and half an inch directly outward on cheek another. Fetor unbearable. Ordered a solution of permanganate of potash for cleaning mouth; removed three more teeth.

January 25th.—Gangrene increasing rapidly. Quinine substituted for chlorate of potash.

January 26th.—Whole upper lip one dark mass of gangrene; tongue black; cheek much more swollen; fetor, if possible, much more abominable; temperature, 101° F.; pulse, 116. Still takes nourishment with avidity.

January 27th.—Gangrenous erosion spreading; right ala nasi and adjacent parts of cheek one black slough; thirst seemingly the only cause of suffering. Except in the matter of increase in the extent of gangrenous ulceration and gradual exhaustion, there was no alteration in patient's condition up to February 1st, when he died.

Annie S— (aged two years and six months) on

¹ Read before the Yorkville Medical Association.

January 19th had, on left side of mouth, an ulcer about the size of a ten cent silver piece. Flow of saliva copious; fetor of breath offensive, general appearance wretched; skin loose, flaccid, and giving one the impression of its being the only covering of the bones. Debility and wasting so marked that there seemed to be a complete absence of muscular tissue. Tongue moist; temperature, 99° F.; pulse, 104. Coughs considerable; soft bronchial râles over chest.

Treatment.—Sedative expectorant mixture; ulcer touched with solid stick of nitrate of silver; lotion of chlorate of potash [fifteen grains to ounce], to be used as mouth-wash every three hours; syrup. ferri iodidi, internally; full diet, milk punch, and milk *ad libitum*.

January 20th.—Sloughing very much extended; cheek swollen and glassy; eye nearly closed; bright red spot in the centre of swollen cheek; and, though slough on inside of cheek would give the idea of abscess, no fluctuation could be found. Mouth thoroughly washed out with solution of carbolic acid, and gangrenous ulcerated surface, which now extended over half the oral surface of cheek, well covered with iodoform. No dressing could be well applied to the ulcerated surface, as the broken-down, disintegrated tissue stood boldly out.

January 21st.—Swelling of cheek much increased, appearance glazed or oily; lower eyelid puffed and œdematous; gum on upper jaw of affected side red, soft, and pulpy; teeth somewhat loose; fetor horribly offensive. Removed broken-down tissue and loose teeth, and covered ulcerated surface with iodoform. Otherwise treatment as before.

January 22d.—Bright red spot on centre of cheek has become darkish green and is about the size of a bean; gangrene occupies whole of inside of cheek; three teeth so loose that I removed them with my fingers; shreds of broken-down tissue hanging in strings from side of cheek. Child tears and actually swallows them. Thirst insatiable; raves and is very restless. Ordered a little morphia; treatment otherwise as before.

January 23d.—Black spot on cheek now the size of a quarter of a dollar; surrounding tissue from its edge to the angle of mouth showing unmistakable signs of becoming one gangrenous mass; temperature, 101° F.; pulse, 106. Tongue dark brown, mouth constantly open; cough not increased, soft mucous râles over chest, no pneumonia; bowels tending to diarrhoea, and abdomen somewhat tympanitic. Except in cleansing the mouth with disinfectants to lessen the horrible fetor, and giving stimulants, all treatment was abandoned.

January 24th.—Lower eyelid and cheek to angle of mouth, one black, rotten, loathsome, gangrenous mass. Child still takes drink. Pulse very feeble, 114; temperature, 101½° F. Stench in the ward, notwithstanding the use of carbolic acid and Condy's solution, simply intolerable; nurse in charge of ward sick and vomiting.

January 25th.—Child died; bronchial effusion taking place six hours before death.

February 20th.—Mary F., aged two and a half years; a wasted, shrivelled little child, with shrill voice and precocious manner, was examined. Gum on outer aspect of molar teeth found to be soft, pulpy and detached, grayish in color, smelling foully, in fact gangrenous. Touching parts with probe and making examination did not seem to give pain. At the angle of mouth, small grayish ulcer; tongue on same side ulcerated; fetor of breath; discharge of saliva very copious, and most offensive; ulcers at angle of mouth and side of tongue are indurated; no perceptible swelling of cheek. Temp., 99° F.; pulse, 100.

Treatment.—Mouth well cleansed with carbolic acid; ulcers touched with nitrate of silver; pulv. cret. c. opii and bismuth subnitrate internally, arrowroot and milk-punch.

February 21st.—Ulcer on tongue looks better; those on gum and inside of cheek larger, and seem to be digging into the tissues; teeth are becoming loose; diar-

rhœa checked; pulse fuller, temperature normal. Removed three diseased and loose teeth. Syrup. ferri iodidi internally, otherwise treatment as before.

February 22d.—Gum, whence teeth were removed, one dark grayish mass of gangrenous tissue, which stands out loose and free from the alveolar process; pieces come away easily with dressing-forceps without giving any pain; ulcer on side of tongue healing; that on cheek enlarged and extending well under upper lip. Treatment: dead tissue cut away, parts touched with hydrochloric acid, and application of chloride of lime made.

February 23d.—Ulcers increasing rapidly; cheek and upper lip on affected side much more swollen. Mouth well cleaned out; broken down tissue removed with scissors; child chloroformed, and nitric acid applied; otherwise treatment as before.

February 24th.—Sloughing of cheek seems checked, though parts are very much swollen; sides and base of ulcer have taken on a somewhat healthy look; alveolar process bare. Temperature, 100° F.; pulse, 100. Treatment continued.

February 25th.—Cheek quite hard and tense; no new grayish pulpy matter in sore; but on the outside, at a point corresponding to middle of ulcer on inside, a small grayish black spot appeared. Eye on affected side closed; tongue has again become affected, and evidently exfoliation of alveolar process is taking place. Application of sulphate of copper with cinchona; otherwise treatment as before.

February 26th.—Black spot on cheek as large as a twenty-five cent piece; inside of mouth seems one loathsome mass of gangrene, emitting such a foul, sickening odor, that no disinfectant seems capable of lessening it. From this date to February 1st, when the child died, gangrene simply ate its way, increasing steadily, till the whole side of the face looked as though it had been cut out and the part filled up with lamp-black.

Before proceeding to the relation of the fourth and last fatal case, I wish to give a very short and succinct epitome of the views of the authors I consulted on the disease and the treatment recommended and followed by them. As a rule, I found that most of the writers on diseases incidental to childhood, even those held highest in professional esteem, either partially ignored, slurred over, or devoted a quarter of a column to the disease, or boldly stated that therapeutics could not control, check, or cure it.

Dr. Elliotson, in the "London Hospital Reports for 1833-34," gives the history of a case, the exact counterpart of those related by me, traced from day to day, recording the same ruthless destruction of tissue, and the same impotency of medicine to stay its course. Dr. Elliotson in his lecture introduces the disease "*Cancrum Oris*," or, "*Stomatite Gangreneuse*" to his hearers as one fortunately seldom met with. He says: "It is a disease, I am sorry to say, which I have never seen cured, though cases are related where patients have recovered from it." He goes on then to relate the case of a child seventeen months old, recovering from scarlet fever, attacked with a small ulcer on the oral mucous membrane, and ulceration extending along the alveolar process of upper jaw, teeth falling out, exfoliation taking place, gangrenous erosion extending over the whole cheek and lower eyelid, death ensuing thirteen days from inception of disease, notwithstanding that what is designated as active and heroic treatment was promptly and persistently brought into requisition. Elliotson refers to Dr. Cummings, of Dublin, as being then the most correct and lucid writer on the disease. Dr. Cummings holds that the disease is only met with in children between twenty months and seven years of age, who have lived in an impure and polluted atmosphere, and on poor and insufficient diet, and even then it is only met with as a sequence to measles or scarlatina. Dr. Cummings seems to have been anticipated by Huxham, who, in a report made in 1745, observed: "I have more than once during

this month witnessed a mortification of the mouth and fauces, besides caries of the cheek and os vomeris, which occasioned a very painful death, and that, too, after measles.

Dr. Willan, who writes about the same period, says: "In one infant, about the eleventh month, a considerable erysipelatous swelling affected the left cheek, and within three days produced a deep gangrenous eschar and death."

Dr. Cummings describes three varieties of the disease; one in which the gums are first affected and become purplish and spongy, and, with proper treatment, a fair percentage of such cases recover. What the proper treatment is he does not state. The second variety corresponds to the cases I have been describing, and the third is where the pudendum is involved. Just here I wish to have this last point borne in mind, because, in one of the cases I will present, such a complication ensued. All the writers who mention the disease concur in stating that an active local treatment has proved the most efficacious, together with the administering of tonics, pushing them, as Elliotson says, to their fullest extent, and placing the patient on generous, strengthening diet—beef-tea, port wine, etc. Taupin claims good results from a very heroic treatment of caustic applications; but Tourdes, writing after him, having met with a great many cases, says, that notwithstanding Taupin the ravages of the disease have not been one whit less. Tourdes himself recommends simply mouth washes, caustic applications, tonics, and strengthening diet. Niemeyer, West, Tanner, and Bohn, all give a similar line of treatment. Statistics of the results obtained by some of the best known authors I will give later on.

Dennis G—, aged three, was admitted to the infirmary April 12th, suffering from measles. Child was fat, stout, and in general good condition. Rubeola was mild and ran its usual course, the child being up and around the ward on the 18th, eating well, and, to all appearances, convalescent.

April 20th.—Refused food; skin hot; temperature, 101° F.; pulse, 108; tongue moist; right cheek swollen, inflamed, and small ulcer on inside showing a grayish white deposit. Ulcer touched with solution of nitrate of silver (40 grs. to 1 oz.); chlorate of potash wash; quinine and iron, internally. Temperature, 100° F.; pulse, 104; slight diarrhoea.

April 21st.—Ulcer on inside of cheek about the size of a dime. Takes nourishment freely—beef-tea, wine, etc. Gums of superior maxilla in region of molar teeth, soft, pulpy, swollen, and grayish in color; fetor most offensive. Mouth well washed out with tepid water, and afterward with weak solution of permanganate of potash.

April 22d.—Cheek not so hard; swelling somewhat less; ulcer on inside of cheek not increased; gums soft, free of hard parts, and bleed on pressure. Treatment as before.

April 23d.—Condition of cheek unchanged; gums of superior maxilla gangrenous; molar teeth loose; loose teeth extracted; gangrenous tissue clipped off with scissors and touched with chloride of zinc. Otherwise treatment as before.

April 24th.—No particular change, except that ulcer on inside of cheek has a healthier appearance; grayish slough cleared away, and induration not so marked. Sleeps better.

April 27th.—Necrosis of superior maxilla; a piece, an inch and one-half, removed; more dead tissue cut away; parts touched with nitrate of silver. Otherwise no change in treatment.

April 29th.—Swelling and induration of cheek much less; ulcer on buccal surface healing; gangrenous ulceration of gums looking much better; temperature, 99° F.; pulse, 100; taking food well. Treatment continued.

April 30th.—Patient doing well, and continued so to May 7th, when he contracted a slight bronchitis.

May 8th.—Cheek again swollen and hard; eye partly closed; loathsome, offensive odor returned in greater intensity; on inside of cheek a grayish, black spot, size of a twenty-five-cent piece; gums, that before seemed healing, rapidly taking on gangrenous look. Treatment as in the early stage, except a solution of copper with cinchona substituted for the nitrate of silver application.

May 10th.—Gangrene rapidly spreading; child restless and suffering from great thirst. At the suggestion of my colleague, Dr. Ripley, put on five minims of phenic acid every two hours. Otherwise no change in treatment. From this date to May 16th, when the child died, the gangrene continued to spread till the whole side of the cheek, lower eyelid, right side of the nose, and upper lip were one black mass. On the 15th a black spot, not larger than a dime, appeared on the chin, and, on the following day, when the child died, it was fully as large as a fifty-cent piece.

During the progress of the last case, I had two others equally unpromising, whose histories from April 17th to May 10th were identical with those of Dennis G— and the other fatal cases I had in January. There was the same grayish slough on the inside of the cheek, the same gangrenous condition of the gums, the same hard glassy swelling of the cheek, and the insatiable thirst, the same fact of its being the sequence of measles, and the children presenting, if possible, a more wretched, scrofulous, and miserable physique. These two were Arthur W—, aged four years, and Nellie H—, aged three years and four months. They occupied beds in the same ward with Dennis G—, and were subjected to nearly the same treatment as he was. The general treatment of support, tonics, and stimulants was exactly the same; while the local applications—disinfecting washes and escharotics—varied somewhat, without producing any appreciable difference, better or worse. Indeed, so disastrous had been our results in the face of our having zealously carried out the system of treatment recommended by standard authors, and of my having availed myself of the kind and able counsel of my medical brethren who saw the cases that I commenced to look upon any child attacked as an inevitable victim.

On May 11th I was informed upon my entrance to the ward that still another child was, in the words of the sister, "getting the frightful disease in the mouth." This child, Katie H—, aged seven years, I examined and found she had a small ulcer on the inside of the left cheek, with all the characteristics described in the early stages of the other cases. I confess I was in despair. On consideration, I came to the conclusion that following in the old rut of treatment was almost useless, if not quite so. By a process of reasoning, or by accident if you will, I conceived the idea of applying locally the subnitrate of bismuth. After thoroughly cleansing the mouth with a disinfectant lotion, I covered the ulcerated surface with this drug, and the next day, May 12th, the grayish slough had partly cleared away, and the fetor, which had been most disagreeable, was sensibly lessened. The hardness of the cheek, if not less, had not increased, and the child was not so thirsty. Temperature, 99° F.; pulse, 90. Gum on upper jaw reddish purple, soft and tender. Mouth washed out with solution of carbolic acid; bismuth applied every three hours, syr. ferri iodid., cod-liver oil, and generous diet.

May 13th.—Fetor markedly less.

May 14th.—Much better, sleeps well, ulcerated parts getting a healthy appearance. From this date to the 1st of June, when she was discharged, thoroughly cured, the patient did well.

On May 12th, after witnessing the happy change effected by the bismuth in the case of Katie H—, I determined to try its efficacy on Arthur W— and Nellie H—, both of whose cases we looked upon as hopeless.

On May 10th I had removed some teeth together with a large piece of the superior maxilla from Arthur W—.

His cheek was then swollen tense, a large black gangrenous ulcer was on its inside surface, and his eye was nearly closed. The stench from him was intolerable. Usual disinfecting and supporting treatment continued.

May 11th.—No change.

May 12th.—Filled up cavity in cheek with bismuth, first cleansing it out well with disinfectant wash, and repeated every three hours.

May 13th.—No marked change, except odor a little lessened.

May 14th.—No increase of gangrenous erosion! Treatment continued. Separation of a large mass of grayish black slough from ulcer on cheek and cavity whence exfoliated bone was removed. Parts looking healthier, fetor less.

May 18th.—Fetor nearly disappeared in toto! Takes food freely; sleeps better; ulcer assuming a very healthy appearance; swelling and hardness of the tissues of the cheek rapidly subsiding.

May 25th.—Ulcer on inside of cheek quite filled out and granulating kindly. Removed small piece of dead bone from superior maxilla. Otherwise doing well. Treatment continued. From this date to July 1st, when discharged cured, the patient did excellently well. Since then he has been taking cod-liver oil, and is now in perfect health.

Nellie H.—ran the same course up to May 12th, as the two preceding. Her condition at that time was identically the same—black gangrenous slough on buccal mucous membrane, swelled cheek, etc. Applied treatment as in the last case.

May 13th.—Clipped away with scissors a considerable amount of disintegrated tissue, then packed parts with bismuth. Continued treatment to 17th, when I removed a large piece of exfoliated bone and several teeth from inferior maxilla. From this date to June 15th, she slowly but steadily improved, the bismuth being regularly applied, and the mouth thoroughly syringed. Iron, cod-liver oil, and generous stimulating diet administered. She is now one of the healthiest children in the institution, though showing the loss of hard and soft tissue, but *not* showing the horrible deformity which formerly cases that had advanced to this stage and recovered presented.

The next case is of interest, because it goes a long way to prove that the disease is contagious, and that it does occur in children beyond the age of seven years. Mamie C.—, aged thirteen, a strong healthy girl, who assisted in taking charge of the children suffering from gangrenous sore mouth, was reported sick, June 5th. She stated she had been feeling unwell for a few days, that her mouth was sore and constantly running water, that she felt constant thirst, and could not sleep. On examination found inside of cheek ulcerated; tongue brownish, ulcerated and indurated; gums soft, swollen, and pulpy. Fetor excessively offensive, could hardly open mouth, cheek swollen. Temperature, 103° F.; pulse, 120; slight diarrhoea. Bismuth packed into ulcerated surfaces, mouth washed out with solution of permanganate of potash. Pulv. cretæ aromat. cum opii, internally.

June 6th.—Spent very bad night, restless and raving; so painful to open mouth that she has to be forced to allow it dressed. Ulceration of tongue and cheek spreading; mouth forcibly opened and syringed out; ulcers dressed with bismuth.

June 7th.—Fetor less. Can open mouth with less pain. Still raves at night. Has an immense flow of saliva. Cheeks and tongue on both sides indurated and trenched by a long serpiginous ulcer. Dressing of ulcers forcibly made every three hours.

June 8th.—Fetor in great part disappeared, general condition much better. The tongue and cheek on right side pretty well one mass of ulceration; but losing the appearance of a gangrene, and taking on a healthy look. Pulse weak, 120; temperature, 102° F. Takes nourishment with great difficulty, sleeps without sedative. Bismuth continued. Bark and ammonia in effervescence

every three hours. From this date she slowly improved; the ulcers healing kindly, leaving very little trace. The teeth remained intact, though the gums were badly affected. While suffering in her worst stage, I had her examined by several of my medical friends, who all agreed in the diagnosis of genuine cancrum oris. She is now in perfect health.

Josephine C.—, aged eleven, in June had a very mild attack of measles, and after the usual course was discharged cured to the body of the house July 3d, she was sent to the infirmary, complaining of sore mouth. On examination, lower lip was found indurated and swollen, with a blackish ulcer, the size of a dime, on its inside surface. Specks of red granulation stood up at points, and a thin sero-sanguineous discharge flowed down the chin. The gum, in front of the two incisor teeth, was slightly broken down and pulpy; teeth were not loose. Tongue coated; slight diarrhoea; pulse and temperature normal; fetor very offensive. Mouth well washed out with solution of permanganate of potash, and gangrenous ulcer dressed with bismuth every three hours. Syrup. ferri iodidi and cod-liver oil, internally.

July 4th.—Except that fetor was markedly less, there was no alteration.

July 5th.—Very feverish; temperature, 102° F.; pulse, 120. Tongue coated and badly ulcerated on right side; bases of ulcers hard; under lip looks exactly like epithelioma. In trying to find cause for heightened pulse and temperature, discovered that the child was concealing a phlegmonoid inflammation of pudendum. Labia swollen to size of an orange on either side, and the contiguous surfaces covered with what looked like a diphtheritic membrane. Parts felt elastic, but no fluctuation could be discovered. Lint smeared with vaseline introduced between labia, and hot poultices applied.

July 6th.—Condition unchanged.

July 7th.—Consultation with my colleague, Dr. Ripley, as to lancing labia. Determined on expectant treatment, continuing poultices and dusting labia with bismuth.

July 8th.—Swelling and tenderness of labia perceptibly lessened, ulcer on lip unchanged.

July 12th.—Inflammation of vulva nearly well; ulcer on lower lip increased; small sore about the middle of buccal mucous membrane; no fetor. Treatment continued.

July 15th.—Child allowed out with parents for twenty-four hours.

July 16th.—Ulcer on lower lip extended to that on cheek and now reaching angle of jaw; gums on same side a whitish-gray ulcerous mass. Parts well washed with permanganate of potash, and then dressed with bismuth; which treatment was continued up to

August 4th.—A large sore appeared on hard palate filled with grayish pulpy disintegrated tissue. Clipped away broken-down tissue and dressed with bismuth; continued application every three hours. The parts are now healed, showing, on hard palate, a loss of soft tissue about the size of a dime, and, on cheek and lip, cicatrices. There is no deformity, the disease being absolutely controlled before osseous tissues were affected. This is a case that, I believe, demonstrates beyond cavil, that *bismuth* is a disinfectant, a deodorizer, and, unquestionably, an agent that cannot only check, but absolutely annihilate the progress of a rodent ulcer. The child now shows the cicatrices on lip and cheek, and a healed cavity on the hard palate.

That this paper may not, by repetition, be prolonged to a tediousness beyond toleration, I am compelled now to give simply names, ages, location of disease, and results. Most of the cases thus summarily disposed of, have been seen by a large number of practitioners and were under the joint care of Dr. Ripley, Dr. Gleises, and myself.

Katie L.—, aged seven years, was admitted to the infirmary June 20th with the same small sore on buccal

surface common to the other cases; the gums were badly affected. Treatment: Generous diet, cod-liver oil, syrup, ferri iodidi internally, and application of *bismuth*, the mouth being washed with solution of carbolic acid. Discharged July 11th, cured. There was *no* loss of hard, and very little of soft tissue; simply the bluish cicatrix showing along the inside of cheek. Her gums were badly affected, yet she lost no teeth!

Mary M—, aged six years, admitted June 29th. Vicious-looking ulcer on, inside and about the centre of cheek; inferior maxilla in the region of the molars also affected. All the characteristics of the disease were present. Treatment same as above, and the patient was discharged thoroughly cured July 7th, just eight days from the commencement of the attack.

Mary R—, aged four years, admitted June 20th. Small sore on inside of left cheek; gums to some extent affected; fetor very offensive. Treatment same as above. On the third day the fetor was almost imperceptible; the parts had assumed a healthy appearance, and she continued to improve gradually up to about July 3d, when she was discharged cured.

Gertrude F—, aged two years and six months, admitted June 29th. All symptoms of the disease present. Gums of inferior maxilla, in the region of the incisors, badly affected. Continued the treatment we had adopted. Mouth well washed with solution of permanganate of potash. Bismuth applied to ulcerated parts every three hours. Cod-liver oil and syrup, ferri iodidi internally. Cured in three weeks. No loss of hard or soft tissue.

Maggie W—, aged about three years, admitted July 2d, suffering from sore on buccal surface. Cheek swollen; fetor as usual. Treatment as above. Discharged cured about July 22d.

Sarah K—, Robert B—, Lillie E—, and Edward D— were all admitted about the same period. Examinations showed the same grayish slough on inside of cheek, the gums in gangrenous condition, the patients exhibiting all the characteristics I have before fully described. The disease yielded promptly to the "*bismuth* treatment" and the ulcers were all thoroughly healed in from two to four weeks. Concerning the remaining six cases, it is only necessary to say that they all occurred during the month of July and August, and that the bismuth treatment effectually controlled the disease. In all the foregoing, I have confined myself to bare facts, daily notes, simple and uncolored, of successful and unsuccessful cases. I do not claim to be able to submit a theory which can scientifically account for the marvellously fortunate results of the line of treatment I adopted; nor do I know to which of the component parts of the drug, used with such happy effect, is due the credit.

My colleague, Dr. Ripley, in the experiments made by him on different solutions containing bacteria, found that bismuth did not exhibit the properties of a germicide, but rather exercised a temporary inhibitory action.

But I do maintain that, on comparing the results obtained in the large number of cases treated by me with those recorded by the principal writers on the subject in this and the past medical generation, a percentage of recoveries is found hitherto not met with. The statistics of the disease are necessarily meagre. In private practice *cancrum oris* is rare, and it seldom happens that even those having large hospital experience meet with more than two or three isolated cases in a long career. The only authority whom I found to claim any measure of success was Dr. Hunt, mentioned in Vallex's "*Guide du Médecin Practicien*," who states that twenty to sixty grains of chlorate of potash given in the twenty-four hours controls the disease. In the early cases under my care I so administered chlorate of potash, but the result was fatal. West records ten cases, with eight deaths. Squares, out of three cases lost two. Ripley reported a successful case in *THE RECORD* of 1875, p. 266. Elliotson unreservedly states that he never saw a true case of *cancrum oris* cured; but that he heard of cases being

cured. Vallex sums up the prognosis of stomatite gangreneuse as follows: "Un résultat numérique qui peut donner une juste idée de la gravité de la maladie, est celui qu'a obtenu M. J. Tourdes, en rassemblant des observations empruntées à un grand nombre d'auteurs. Sur 239 cas, la mort a eu lieu 176 fois, et la guérison seulement 63 fois."

I have had under my personal care twenty-four cases, and of those lost four; lost those four previous to the bismuth treatment. How those four fatal cases were treated I have already related fully. Of the twenty successful cases, those showing most clearly the traces and characteristics of true *cancrum oris*, are still in the institution.

The appended microscopic report of examination of the gangrenous tissue taken from one of the fatal cases was made by my colleague, Dr. J. H. Ripley.

The specimens examined were transverse sections from the central portion of the diseased part, and included the entire thickness of the cheek. All the tissues were seen to be infiltrated with bacteria, the infiltration becoming more dense towards the internal surface. In the deeper tissues large colonies of these organisms were observed, occupying nearly circular or irregular angular spaces. Here, too, the tissues began to show evidences of inflammatory and ulcerative processes; they were partly broken down, and filled with granular debris, inflammatory corpuscles, and fat globules. In the deepest parts there was complete disintegration of the muscular structures, large detached masses lying floating in a pul-taceous fluid.

CONVALLARIA MAIALIS.

THE RESULTS OF CLINICAL EXPERIMENTS AT THE ROOSEVELT HOSPITAL, NEW YORK.

By HENRY LING TAYLOR, M.D.,

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(Continued from p. 89.)

CASE VIII.—*Mitral regurgitation*.—Sarah G—, fifty years of age; Ireland; widow; laundress. Admitted September 29, 1882. Palpitation last five months. Expectoration of frothy material, cedema of feet and legs, and diminution in amount of urine for last three months. Shortness of breath and orthopnoea for a month past. Has also had attacks of dizziness and vomiting. Had rheumatism thirty years ago, and many times since.

Present condition.—Orthopnoea; lower limbs very cedematous; pulse very weak and irregular, 84 to the minute; respiration, 24; temperature, 97.9°, A.M. Urine, 1,010; neutral; trace of albumen. Physical examination: Heart action rapid, diffuse, very irregular. One radial pulse-beat to two or three heart-beats. Systolic murmur at apex. A few fine râles at bases of both lungs.

Treatment.—Rest in bed. Convallaria, ℥ xv. q. 4 h. October 2d.—Heart much quieter and cedema less. October 5th.—Much better; can sleep lying down. October 7th.—Convallaria stopped. October 11th.—Patient up and about, feeling pretty well. Pulse bad. Convallaria, ℥ x. q. 4 h., ordered. October 13th.—Patient not feeling so well; not affected by the convallaria; ordered it stopped for twenty-four hours.

October 14th, P.M.—Convallaria, ℥ x. q. 4 h. October 15th.—Patient has great trouble with breathing; cannot lie down. Ordered convallaria, ℥ xx. q. 4 h. October 17th.—Patient in great distress; vomits. October 18th.—Sits up all night; sleeps only by snatches. Feet and legs very cedematous. October 19th.—Put on nitro-glycerine ℥ j. of the one per cent. alcoholic solution (diluted with water), t.i.d. Convallaria stopped.

October 23d.—Nitro-glycerine increased to ℥ j. four times a day.

October 25th.—No effect. Nitro-glycerine stopped. Ordered tincture of digitalis, ℥ x. t.i.d.

October 27th.—Patient has been in a fearful condition for the last ten days. General anasarca below waist. Skin of legs tense and shiny from pressure. Has not left her chair. Pulse and breathing very bad. Her death has been expected from hour to hour. Ordered tincture of digitalis increased to ℥xx. q. 4 h.

October 28th.—Legs punctured with needle.

October 30th.—Much serum has drained away. Pulse very much better.

November 3d.—Able to lie down yesterday, and slept last night. Feels entirely comfortable. Pulse good.

November 11th.—Pulse regular and slow. No œdema of legs.

December 4th.—Urine, 1,022; acid; albumen, trace. Up and about for some time past.

December 7th.—Remains perfectly comfortable. Discharged improved.

Patient passed a fair amount of urine up to October 8th; after that seldom over twenty ounces, often less, till November 4th; since then forty to fifty ounces daily. Pulse record of little interest, as the pulse was so weak and irregular, until the patient came under the influence of the digitalis, that it could not be accurately counted.

This was a most extraordinary case. I have seen very few patients so sick as this one recover. Convallaria seemed to do good at first; it afterwards failed in the doses given; while digitalis (and puncturing the legs) succeeded brilliantly. For the converse, see Case XI., which was equally desperate.

CASE IX.—*Mitral obstruction*.—James W.—, aged twenty-nine; United States; single; block-cutter. Admitted October 28, 1882. Rheumatism in right ankle, lasting two or three days, one year ago; since then palpitation. Fair health till three weeks ago; since then cough, frothy expectoration, œdema of legs, nausea, etc. No change in amount of urine noticed.

Present condition.—Face and hands dusky. Great dyspnoea. Pulse weak. (Edema of legs. Pulse, 112; respiration, 30; temperature, 98.4°, P.M. Urine, 1,022; alkaline; albumen trace; a few granular casts. Physical examination: Heart enlarged and beating too rapidly. Systolic murmur between apex and sternum (tricuspid regurgitation). Force of heart-action very great compared with strength of pulse. Subcrepitant râles bases of both lungs.

Treatment.—Rest in bed. Milk diet. Convallaria, ℥v. q. 4 h.

October 30th.—No improvement in pulse or breathing. Orthopnoea. Sputa bloody. Convallaria, ℥ x. q. 4 h.

October 31st.—Convallaria, ℥ xx. q. 4 h.

November 1st.—Continuous cough; bloody expectoration. Orthopnoea. No sleep for two nights. Pulse stronger. Dr. Delafield diagnoses nearly complete mitral stenosis. Convallaria stopped; put on iodide of potassium, gr. v. t.i.d.

November 5th.—Patient became more and more œdematous; dyspnoea and pulse grew worse till death, at 8 P.M.

Pulse ran from 104 to 136, respirations from 20 to 40. Urine was to a considerable extent passed in bed; ten to twenty ounces daily were measured.

Autopsy by Dr. Delafield.—Right ventricle dilated and hypertrophied; tricuspid opening very large; left ventricle small. Mitral valve thickened and stenosed, nearly closed. Double hydrothorax. Chronic congestion of kidneys. General anasarca.

CASE X.—*Aortic stenosis (?)—Pregnancy*.—Anna R.—, aged forty-one, admitted October 2, 1882. Said to be six months pregnant. Well up to four months ago, when she had a sharp pain in left hip, which kept her from walking and confined her to her chair or bed. Joint was not hot, red, or swollen. This pain left her after

two months. Three months ago patient's feet began to swell, the left preceding the right by three weeks. Denies dyspnoea and palpitation. Has not left her chair for three months. For a time passed less urine than normal; now passes more than she did.

Present condition.—Great œdema of lower extremities. Pressure sore on left heel of nearly three months' standing. Pulse, regular. Temperature, 99.3°, A.M. Urine, 1,011; neutral; no albumen. Physical examination: Systolic murmur at base and down left side of sternum.

Treatment.—Rest in bed. Convallaria, ℥ x. q. 4 h.

October 6th.—Convallaria stopped. (Edema very much less.

October 15th.—(Edema almost entirely gone.

November 23d.—No œdema for over a month. Patient entirely comfortable. Discharged cured (?).

DATE.	Pulse.	Respirations.	Urine, ounces.
October 2d, A.M.	120	20	..
October 2d, P.M.	120	16	..
October 3d, A.M.	100	28	..
October 3d, P.M.	108	22	52*
October 4th, A.M.	108	22	..
October 4th, P.M.	116	18	52*
October 5th, A.M.	96	32	..
October 5th, P.M.	96	26	64
October 6th, A.M.	92	28	..
October 6th, P.M.	100	26	62
October 7th, A.M.	100	22	..
October 7th, P.M.	96	22	46
October 8th, A.M.	100	24	..
October 8th, P.M.	96	28	54
October 9th, A.M.	100	22	..
October 9th, P.M.	96	28	30
October 10th, A.M.	80	25	..
October 10th, P.M.	96	28	..

CASE XI.—*Aortic stenosis*.—John S.—, aged fifty-two; United States; married; watchman. Admitted September 5, 1882. Never had rheumatism. Has had palpitation and dyspnoea off and on for many years. Feet swelled last spring.

Present condition.—Short of breath. Radial pulse very small and irregular. Pulse, 56; respiration, 28; temperature, 96.9°, P.M.: Urine, 1,029; acid; albumen, 8 per cent.; no casts found. Physical examination: Heart apex in fifth space five inches from median line; heart beats violently and irregularly. Radial pulse less frequent than heart-beats. No murmurs.

Treatment.—Rest in bed. Whiskey, ̄ ss. q. 2 h. and

R. Morph. sulph. gr. ̄
Pot. citrat. ̄ ij.
Am. carb. gr. xl.
Aquæ ad ̄ ij.
Sig.— ̄ ij. t.i.d.

September 10th.—Heart very weak. Urgent dyspnoea; cannot lie down.

September 11th.—Infusion of digitalis, ̄ ij. q. 3 h.

September 12th.—Constant hiccupping last two days.

September 14th.—Pulse a little better.

September 15th.—Patient has not been expected to live more than a few hours for several days past. Radial pulse could not be counted most of the time. Medicine, except whiskey, stopped; put on convallaria, ℥ x. q. 4 h.

September 16th.—Pulse already much better. Whiskey, ̄ ss. q. 3 h.

September 18th.—Pulse very slow and regular. Convallaria reduced to ℥ x. t.i.d. Hiccupping stopped today.

September 21st.—Convallaria, ℥ x. night and morning.

September 22d.—Pulse good; patient feels quite comfortable.

October 5th.—Patient has continued to do well. Convallaria stopped.

October 8th.—Patient up and about; whiskey stopped.

October 16th.—Heart again beats rapidly and irregularly. Pulse much slower than heart.

October 20th.—Feels some palpitation. Feet swell during the day. Patient put to bed.

October 22d.—Very short of breath; pulse weak and irregular. Ordered convallaria, $\mathfrak{M}$ x. t.i.d.

October 24th.—Breathes more easily and feels a little better to-day.

November 7th.—Convallaria, $\mathfrak{M}$ x. four times a day.

November 8th.—Convallaria, $\mathfrak{M}$ x. q. 4 h.

November 13th.—Pulse very poor; dyspnoea. Convallaria, $\mathfrak{M}$ xx. t.i.d.

November 14th.—Pulse poor; orthopnoea. Convallaria, $\mathfrak{M}$ x. q. h. at 10, 11 and 12 P.M., then q. 2 h.

November 15th.—Vomiting.

November 18th.—General condition about the same. Convallaria, $\mathfrak{J}$ j. t.i.d.

November 22d.—Now quite comfortable. Pulse and breathing better.

December 12th.—Up and about; very comfortable. Pulse slow and tolerably regular. Breathing easy. Wants to go home. Still gets convallaria, $\mathfrak{J}$ j. t.i.d.

December 14th.—Discharged improved.

The urine was measured from September 21st to October 13th. It was always passed in fair amount, usually thirty to forty ounces a day.

DATE.	Pulse.	Respirations.
September 5th, P.M.	56	28
September 6th, A.M.	68	26
September 15th, A.M. (Convallaria, $\mathfrak{M}$ x. q. 4 hrs.)	88	18
September 15th, P.M.	88	18
September 16th, A.M.	52	18
September 16th, P.M.	48	18
September 17th, A.M.	40	28
September 17th, P.M.	44	30
September 18th, A.M. (Convallaria, $\mathfrak{M}$ x. t.i.d.)	48	24
September 18th, P.M.	56	24
September 19th, A.M.	40	22
September 19th, P.M.	48	22
September 20th, A.M.	40	20
September 20th, P.M.	36	18
September 21st, A.M.	44	20
September 21st, P.M.	40	24

The pulse continued at this rate till the 27th; from then till October 9th it was 50-60; and from October 9th to 14th it was 56-68 usually. After that it was not taken.

CASE XII.—*Lobar pneumonia*.—Ellen O'D.—, aged fifty-five; Ireland; widow; domestic. Admitted September 24, 1882. Exposed to wet September 23d. Had not felt well for two days previously. Diarrhoea and pain in back and in right iliac region for last day or two.

Present condition.—Tongue coated and slightly dry. Pulse cannot be counted at wrist; weak and irregular. Appetite poor. Pulse, —; respiration, 32; temperature, 102.5°, A.M. Urine, 1,015; acid; trace of albumen. Physical examination: Dulness, absent breathing, friction râles below inferior angle of scapula right side; exaggerated breathing left lung. Sibillant breathing upper part of both lungs.

Treatment.—Milk diet. Rest in bed. Whiskey, $\mathfrak{J}$ ss. q. 4 hours.

September 25th.—Convallaria, $\mathfrak{M}$ xv. four times a day. Bronchial breathing and voice now heard over region of dulness.

September 26th.—Patient very sick; cheeks dusky red; eyes bright, though sunken; chest full of coarse rattles; does not raise much: sputa yellowish. Whiskey, $\mathfrak{J}$ ss. q. 2 hours.

September 27th.—Pulse rapid and weak; at 4 A.M. flickering. Sputa rusty.

September 28th.—Convallaria, $\mathfrak{M}$ xv. q. 4 hours.

September 29th.—Delirious last night, got out of bed.

September 30th.—Again delirious during the night. Tongue pasty. Quiet this morning. Pulse a little stronger.

October 1st.—Pulse slower and stronger.

October 5th.—Temperature normal since September 29th. Convallaria stopped.

September 6th.—Whiskey, $\mathfrak{J}$ ss. four times a day.

September 22d.—Patient allowed to sit up. Crepitant friction râles over right base, found by Dr. Delafield yesterday. Physical signs otherwise normal.

November 2d.—Discharged cured.

Urine could be only imperfectly determined, as patient passed much of it involuntarily, but the convallaria did not seem to increase the amount.

DATE.	Pulse.	Respirations.	Temperature.
September 24th, A.M.	—	32	102.5°
September 24th, P.M.	148	32	101.8°
September 25th, A.M. (Convallaria, $\mathfrak{M}$ xv. four times daily)	120	28	102.5°
September 25th, P.M.	136	28	101.5°
September 26th, A.M.	132	30	102.9°
September 26th, P.M.	152	29	102.5°
September 27th, A.M.	148	32	102.3°
September 27th, P.M.	148	30	100.3°
September 28th, A.M.	140	30	101.8°
September 28th, P.M.	116	31	102.2°
September 29th, A.M. (Convallaria, $\mathfrak{M}$ xv. q. 4 hrs.)	132	26	101.2°
September 29th, P.M.	118	22	97.5°
September 30th, A.M.	132	30	99.1°
September 30th, P.M.	136	28	99.6°

After this temperature never reached 100°. Pulse remains over 100° as long as taken, *i.e.*, till October 13th.

CASE XIII.—*Lobar pneumonia*.—A woman, aged sixty-five, was brought into the hospital November 13th, having been sick two days. Patient hardly able to speak; rattles in throat. There was dulness and bronchial breathing at right apex; back of chest not examined on account of weakness of patient. Put on whiskey, $\mathfrak{J}$ ss. q. h.; convallaria, $\mathfrak{M}$ iij. q. h. Pulse was stronger November 13th P.M. but weaker again the next morning. Patient died November 14th, 3.20 P.M.

Autopsy, November 15th, showed complete consolidation of right lung in gray stage.

DATE.	Pulse.	Respirations.	Temperature.
November 13th, A.M.	144	34	101.6°
November 13th, P.M.	120	38	102.8°
November 14th, A.M.	144 (?)	40	101.8°

CASES XIV.—XVIII.—*Typhoid fever*.—In five cases of heart failure from typhoid fever, convallaria (with whiskey) was tried. It was usually run up to $\mathfrak{M}$ iv. q. h. or $\mathfrak{M}$ ij. q. $\frac{1}{2}$ h. It was sometimes thought that the pulse improved somewhat after the administration of the drug. The patients all died in one to three days, except the first, where the heart failure was due to intestinal hemorrhage. She recovered.

CASE XIX.—*Emphysema and chronic bronchitis*.—Convallaria ($\mathfrak{M}$ x. q. 4 h.) was given to a man with emphysema and bronchitis, increased in a week to $\mathfrak{M}$ xx. q. 4 h. Urine was quite constantly about thirty ounces daily, and was not increased by the convallaria. The pulse was not slowed. General condition rather improved.

CASE XX.—*Emphysema, chronic bronchitis, asthma*.—In a case of spasmodic asthma with emphysema, where nearly everything had been tried without avail to diminish the frequency of the attacks, convallaria, $\mathfrak{M}$ x. q. 4 h. and afterward the one per cent. solution of nitro-glycerine, $\mathfrak{M}$ j. t.i.d., if anything, aggravated the attacks.

Giving a short summary of the foregoing results I

should say that of the six cases of renal disease treated with convallaria, three (I., II., IV.) improved decidedly while taking the drug, and in three (III., V., VI.) little benefit could be observed. Case III. developed uræmic convulsions while on the drug. Case V., complicated with phthisis, was not affected, and Case VI. was very desperate from the start.

Of the five cases of cardiac disease four improved, one (XI.) very markedly (after digitalis had failed). Case VIII. improved at first but afterward got very much worse and recovered on digitalis. Case IX. was hopeless.

Case XII., of lobar pneumonia in an old woman, where the prognosis seemed very bad, did well. Case XIII. was nearly moribund on entrance and died.

Of the five cases of typhoid fever four died, and it is hard to say whether the convallaria had any good effect or not on them or in the one (XIV.) that recovered.

In the two cases of bronchitis and emphysema the results were doubtful.

If it be urged that this showing is not very favorable numerically, let it be remembered that the tests were very severe ones and in not a few of the cases convallaria was tried only as a last resort in cases hopeless from the start. Nearly all the cases were very serious, much more so than private practice would afford in such proportion. I feel certain that the results were at least as good as they are with digitalis in similar cases. Case XI. was as brilliant an example of the benefit to be derived from drugs in certain instances as I saw during my hospital experience. Cases I., II., IV., and XII. were very satisfactory, though it is very hard to distinguish the post from the propter. I feel sure that the rest in bed and proper diet afforded by the hospital will slow the pulse, increase the urine, and effect a remarkable change for the better in the patient's general condition in certain cases of cardiac and renal trouble, especially with dropsy, without the use of any drug whatever. I have seen such cases. I think the benefit in Case X., and perhaps in others, may be mainly attributed to rest and diet.

The pulse was markedly slowed in Cases I., VII., X. (?), and XI.; in the latter it could scarcely have been due to any cause other than the influence of the drug. The urine was markedly increased in Cases I., II., and IV., and in the last case we may fairly, I think, give the drug the credit.

The discovery of another heart tonic, which shall be on the whole as satisfactory as digitalis, and shall succeed in some instances, where digitalis fails, would be a great boon to the profession and to a most distressing class of sufferers. I think I have shown that we possess in convallaria such a drug. At least it merits further trial.

GERMAN MEDICAL STATISTICS.—The recent issue of the German *Reichs Medicinal Kalender*, contains some interesting statistical data. In the whole German Empire there are 17,623 regular practising physicians. Of this number Prussia has 8,634; Saxony, 1,017; Bavaria, 3,860; Wurtemberg, 1,053; Baden, 576; the remainder being distributed among the smaller provinces. The city of Berlin has but 1,048 physicians, which figures represent a proportion of 9.33 to 10,000 inhabitants. For the whole empire this proportion amounts to only 3.87, showing a tendency of the profession to flock to the centres of civilization.

Germany has 4,030 licensed pharmacies, of which number, 2,396 belong to Prussia. There are 238 county societies, and 68 purely scientific associations. 153 medical publications are issued from German presses, in addition to which there are 95 periodicals published by various medical societies.

PREVENTION OF HYDROPHOBIA.—Pasteur claims to have four dogs which cannot be inoculated with rabies by any method. These dogs have been protected by previous mild attacks of rabies, from which they recovered.

EXPERIMENTS IN PERITONEAL TRANSFUSION.¹

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THE injection of blood into the peritoneal cavity was first recommended by Ponfick as a substitute for intravenous transfusion. He advised it in all cases of impending death from hemorrhage, or disease. Subsequently Bezzozero, Kachozorowski, and Golgi a Raggi published the results of their experiments. These were confirmatory of the success of the operation, and it was again recommended in cases of "pernicious anæmia, and to stimulate or encourage blood-making in all low states of the system." A brief *résumé* of these cases, in addition to my own experiments on dogs, will be of assistance in determining the status of peritoneal transfusion as compared with the injection of blood into its natural channels, the blood-vessels.

In making his experiments on animals Ponfick injected from one to two hundred grammes of blood, defibrinated and undefibrinated. At the end of twenty-four hours he found that the injected blood had been absorbed, and only a reddish film remained on the peritoneal covering of the intestines to show that peritoneal transfusion had been performed.

His first operation on the human adult was performed on a woman, thirty-one years of age, with phlegmonous inflammation of the upper extremity, accompanied with great anæmia. A slight rise in the temperature followed the operation, but no signs of peritoneal inflammation were discernible. She recovered in a short period after the injection. There seems to be nothing in the history of this case to show that transfusion of blood was indicated, or that ordinary means of medication, with nutritious diet, would not have accomplished the desired result.

The second case was one of chronic anæmia with paralysis. The patient survived the operation eighteen months. A post-mortem examination showed nothing abnormal in the abdominal cavity.

Kachozorowski reported five successful cases. His first case was one denominated "Puerperal-Venous Septicæmia." The patient had a miscarriage at the end of three months, followed by albuminuria, pleuro-pneumonia, and septic poisoning. From the combined effect of these diseases she became excessively exhausted, and her temperature went up to 103° F. (not much of a temperature for such a combination of serious disorders). Four weeks subsequently five hundred grammes of defibrinated blood were injected into the peritoneal cavity. The temperature went down one degree after the operation, and the general condition was improved. The injection was repeated in a few days, and was followed by much pain and redness at the seat of puncture. No other unpleasant symptoms followed the operation. The patient was discharged cured ten weeks from the day of her delivery.

The second case was one of chronic anæmia and hysteria, from masturbation. Four hundred and fifty grammes of defibrinated blood were injected. No inflammatory symptoms followed. Tonics were administered after the transfusion. Five weeks afterward the patient was discharged cured. This also seems to have been a case in which no operation was necessary.

The third case, a female patient in the third stage of phthisis, suffering from night-sweats and distressing cough, was treated by an injection of two hundred grammes of blood. On the third day following the operation the cough diminished, the appetite improved, and she became much stronger. Death took place at the end of three months.

The fourth case a sufferer from fungous degeneration of the cervix, capillary bronchitis, and exhaustion.

¹ Abstract of paper read before the New York Surgical Society.

He received an injection of six hundred grammes of blood. Nausea, vomiting, and local pain and tenderness followed the operation. At the end of the week the patient was able to leave her bed, and in three months was entirely cured.

The fifth case, a female suffering from typhus fever, had five hundred grammes of blood injected. A rapid amelioration of all the symptoms followed, and she was discharged cured soon after.

Golgi a Raggi also reports a successful case of peritoneal transfusion. The patient was an anæmic lunatic. He injected three hundred and ten cubic centimetres of blood defibrinated. The insanity and anæmia both disappeared, and a complete cure resulted. An examination of the blood of the patient by means of the "citometer," fourteen days after the operation, showed that the hemaglobine had increased from 35.8 to 57.9.

My experiments upon dogs were made with the purpose of ascertaining: 1, whether the peritoneum was capable of absorbing sufficient blood, in a period of time, that would benefit a patient at the point of death from great loss of blood or chronic anæmia, without exciting peritonitis. The question of time involved in absorption is of the utmost importance in determining the utility of the operation. Ponfick did not settle that question by his experiments, because he allowed the animals to live twenty-four hours before ascertaining what had become of the injected blood. If the animals had been killed within three or four hours after the operation, that point might have been settled; 2, I wished to determine whether other restorative liquids, such as milk, beef-tea, etc., would be tolerated and absorbed by the peritoneum as well as blood.

No. 1.—A dog weighing thirty-five pounds, well nourished and active, was etherized until all active movements had ceased. The cylinder of Dieulafoy's aspirator was charged with eight ounces of warm milk at 96° F. The hollow needle attached to the tube of exit was passed through the abdominal walls below and to the left of the umbilicus, then by turning the handle of the aspirator slowly the milk was injected. The operation was succeeded by a series of clonic spasms, very violent in character, which lasted about half a minute. Six hours later the dog was killed, and a post-mortem examination made by Dr. Collyer, house-surgeon of Charity Hospital. The abdominal cavity contained ten ounces of liquid, consisting of the milk previously injected, and a bloody serum, which gave the whole liquid a reddish tinge. The peritoneum was injected in patches near the seat of puncture. The other organs were normal.

No. 2.—A larger dog than the preceding, but not so well nourished, was etherized, and five ounces of warm milk were injected into the peritoneal cavity, by means of the aspirator. No unfavorable symptoms developed during or after the operation. The animal was kept under observation for four weeks, without exhibiting any signs of inflammation. So far as I know, the animal may yet be alive.

No. 3.—A large powerful slut in an advanced state of pregnancy was anesthetized, and eight ounces of nutritious liquid, consisting of equal parts of warm milk and bouillon, were injected in the same manner as before. At the end of five hours the dog was killed. Sixteen ounces of liquid, containing milk, beef-tea, and bloody serum, were found in the abdomen. The peritoneum was congested throughout.

No. 4.—This animal was operated upon at the same time. Seven ounces of warm water were injected into the peritoneum. Six hours afterward the animal was killed, and six ounces of a reddish brown liquid found in the cavity. The peritoneum was much more congested than in any of the preceding cases. The kidneys were congested, and a few ecchymotic spots were found underneath the capsule.

No. 5.—A large muscular dog was etherized, and two loose ligatures placed around the femoral artery. The

vessel was then cut between the ligatures, and allowed to bleed freely. When thirty ounces of blood had been collected, the ligatures were tightened, and the artery closed. A two-ounce solution of carbonate of ammonia, containing ten grains to the ounce, was added to seven ounces of the blood, and eight ounces of the mixture injected into as before. Two hours subsequently, the ligature slipped from the artery, and the dog bled to death. Eighteen hours afterward, a post-mortem examination was made by Dr. Collyer. Three ounces of bloody serum were found in the cavity. A thin reddish film covered a portion of the peritoneum. No lesions except those due to decomposition were found in other organs.

No. 6.—The femoral vein of this animal was ligated, and opened. Eight ounces of blood were collected and mixed as before with a solution of carbonate of ammonia. Seven ounces of the mixture were injected. Eight hours afterward, the dog was killed. Two ounces of liquid blood were found in the cavity. A reddish film covered the intestines as in the previous case.

No. 7.—Eight ounces of warm water were injected into the peritoneal cavity of this animal. When she had recovered from the ether, she gave evidences of pain by rolling around the floor and whining. In half an hour these symptoms subsided, and the dog remained comparatively quiet. Twenty hours after the operation a post-mortem was made. Fourteen ounces of a dusky colored liquid were found in the abdominal cavity. The peritoneum was injected throughout its whole extent. Small patches of lymph were also found, studding the membrane. There was no difference between the peritoneum at the point of injection and other parts.

No. 8.—Twelve ounces of blood were taken from the femoral vein, and the fibrin removed by whipping the blood with a glass rod, and afterward straining it through a piece of muslin. Five ounces were injected into the peritoneal cavity. Twenty-two hours later the dog was killed. No liquid was found, but the peritoneum was covered with a thick reddish coating, consisting probably of globular elements and coloring matter of the blood.

No. 9.—Eight ounces of defibrinated bullock's blood were injected into the abdomen of a very large and powerful dog. The animal seemed to be in great pain after the operation, and it did not seem to rally from the effects of the injection, as the other animals did. Eight hours subsequently a post-mortem was made, and four ounces of blood collected from the cavity. The same reddish coating of the intestines as in the preceding cases.

The foregoing experiments prove that the peritoneum will absorb blood, and consequently must assist in sustaining the functions of life; that the operation of peritoneal transfusion is liable to excite a limited amount of peritoneal inflammation; and if the blood of an animal of a different species from the one operated upon be used, there will be a likelihood of establishing general peritonitis. Even in intra-venous transfusion, much harm is likely to result from its use.

The injection of milk into the peritoneal cavity is of about as little benefit as when employed in intra-venous transfusion. A good result can rarely result from it. Whenever I have employed it in the human adult alarming symptoms were invariably produced by it, without any compensating improvement afterward, in the condition of the patient. The injection of the milk and bouillon, as well of milk alone, excited more or less peritonitis. The injection of plain water seems to have been followed by more irritation than any of the other liquids used. The explanation of this, I am unable to give. The fact, however, may throw some light on fatal cases of peritonitis, following operations in the abdomen where water was used freely for cleansing.

Granting the advocates of peritoneal transfusion that the peritoneum will absorb blood, and that the vital forces of the patient are sustained by it, I yet cannot see the utility of the operation. It is reasonable to suppose that organs such as the stomach and intestines,

specially designed by nature for purposes of absorption and nutrition, would take up nutritious liquid as fast, if not faster than the peritoneum, which, so far as we know, was not designed for such a use. It seems to me also, that any condition of the system which would prevent absorption by the stomach and intestines, would also prevent absorption by the peritoneum, or any other organ capable of performing that function. Indeed, there appears to be no valid reason for ignoring the stomach and intestines, unless these organs are the seat of serious disease. In such cases as those reported by Ponfick, Bezzozero, Kachzorowski, and others, the blood might as well have been injected into some portion of the intestinal tract as into the cavity of the peritoneum. In only one of these cases was any kind of transfusion indicated.

Whenever a patient is in danger of sudden death from great loss of blood, every moment lost diminishes the chances of recovery. Hence, it is not advisable to wait for either peritoneal or intestinal absorption. An immediate stimulation is necessary, and that can only be obtained by the injection into the veins of fresh blood from a healthy adult. Intra-venous transfusion is as easily performed as any other operation in surgery that I know of, and with a proper apparatus, and attention to the rules that I have frequently spoken of, there is little or no danger attending its performance.

TWO CASES OF ACUTE DIFFUSE MYELITIS, WITH AUTOPSIES.¹

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THE cases whose symptoms and lesions I am about to describe occurred under my care in the New York Hospital during the summer of 1881. I offer them, as being of interest by reason of the acuteness of the disease—one of the patients having lived seven days, the other only four, from the beginning of the attack—and because one of them presented certain unusual symptoms, which it is difficult to account for in view of the lesions in the cord, as I shall demonstrate them to you under the microscope.

Both of the patients were young, healthy, well-developed men, in whom no cause could be assigned for the disease, and in both it originated in the mid-dorsal region. In one of them it spread upward, involving all the elements of the cord as high as the third cervical nerve, where, by interference with the function of the phrenic nerve, it caused death from apnoea. In the other the tracheal plexus was very markedly interfered with, as well as the hypoglossal nerve, its nucleus in the medulla being, however, intact.

CASE I.—Albert Kummer, twenty-one years of age, from Germany, single, musician; admitted to the New York Hospital September 5, 1881, at 10 P.M. His family history is negative. He is a moderate drinker, chiefly of beer. Gives no traumatic history, and denies all venereal history, as well as all exposure to cold and wet. On getting up, three days and a half ago, at his usual hour in the morning, he first noticed a peculiar weakness in the legs, so pronounced that he could scarcely stand; also, that he could not fully extend the legs. His knees were tremulous, knocking together when he endeavored to stand, and he had severe frontal and occipital headache, and some vomiting. There was no chill and no vertigo, but he felt very feverish. The weakness in his legs grew steadily worse, and at night he was unable to stand at all. This was accompanied by a slight numbness, but no pain or formication was present either in his trunk or extremities. His appetite left him and his bowels became constipated, his sphincters remaining normal, and his bladder being under the control of his

will. A day or two later he began to experience similar weakness in his hands, especially the right, but had no dysaesthesia or paræsthesia in them.

On admission, at 10 P.M., his pulse was 108, his respiration 32, and his temperature 101.6°. He is large and well nourished, though slightly obese. There is no œdema. He is utterly unable to stand. He was given on the night of his admission ten grains of quinine and some citrate of magnesia.

That night he slept fairly. The next morning, September 6th, he was unable for the first time to pass water, and he was relieved by a catheter. There was no variation of importance in his pulse, respiration, or temperature. I first saw him at noon on this day. He was then perfectly intelligent, and complained only of headache and weakness in his legs. He lay upon his back, and was wholly unable to turn himself to his side or to sit up. He held his head somewhat drawn back, but said he was able to flex it without pain. There was no conjunctival injection; his pupils were equal and normal in all respects. His tongue was moist, flabby, and slightly coated. He was able to protrude it in the median line without difficulty. He lay with his legs partially flexed; and, on being asked to raise his feet from the bed, he made strong but ineffectual efforts to do so, partly flexing his thighs, and thus dragging his heels along the bed, but not raising them. He was able to move his toes freely and to rotate his legs, also very feebly to abduct and adduct them. He was then entirely unable to raise either hand to his head, but he was able feebly to flex his forearms and throw them over his chest by a motion from his shoulder. His fingers were flexed, and he was unable to extend them. The dynamometer showed great loss of power in both hands, as follows: Right hand, first trial, 15; second trial, 12. Left hand, first trial, 20; second trial, 30.

These measurements were on the large scale of the instrument. Tactile sensation was everywhere normal as tested by touching with hand, pin points, etc., and rubbing with hand, cloth, etc. The electro-muscular contractility remained good in the muscles of all his extremities in response both to the continuous and interrupted currents.

Direct palpation over the spinal column developed a point of tenderness between the scapulæ in the upper dorsal region. He also complained of a slight sense of pain in this situation when hot sponges were passed along the spinal column, but not upon similar application of cold sponges. I examined his abdominal and thoracic viscera with negative results. He was then put upon biniodide of mercury, gr. $\frac{1}{2}$, with potass. iodid., gr. x., t.i.d., and wet cups were applied along his spine sufficient to withdraw blood to the extent of ten ounces. His temperature rose steadily during the day, being at 6 P.M. 103.4°. No further symptoms developed on this the fifth day of his illness.

September 7th, 9.25 A.M.—Pulse, 104; respiration, 30; temperature, 102.2°. He slept poorly last night until midnight, at which time he received a dose of hydrate of chloral and bromide of potassium. A stimulating enema was followed by a free movement from the bowels, during which, as always before, the patient had no difficulty in controlling his sphincter. Urine is still drawn by catheter, and is normal in amount and in all other respects. His general condition, objective and subjective, has not materially changed. His loss of power is just as marked as yesterday, but apparently not more so. He still complains of severe frontal headache. There are no ocular symptoms. There is noticed, however, a slight difficulty in speech (which he is sure he never had before), consisting in a hesitation in pronouncing certain words, and an inability to pronounce them *distinctly* until he has repeated them *indistinctly* several times. His voice at times failing him and sinking to a whisper. Movements of the lips are unimpaired. During the day he had a normal, voluntary movement of the bowels, with

¹ Read before the New York Practitioners' Society, January 5, 1883.

normal control of his sphincter. His urine still has to be drawn. Various tests of sensation, power, etc., show the same results as yesterday, power being very defective, and sensory and tactile sensations being everywhere perfect. The point of tenderness over the spine is less distinct than it was. His temperature varied between 102.2° and 103.1° during the day. His pulse and respiration were a little quickened.

September 8th.—This morning there were no important changes in pulse, temperature, or respiration. Notwithstanding the administration of chloral again, with bromide of potassium, last evening, he passed a poor night. He is now able to pass water without the assistance of the catheter, and he controls his sphincters normally. This morning mercury and iodide of potassium are stopped, and he is given drachm doses of fluid extract of ergot. Muscular power in his extremities is unchanged since yesterday. Sensory and tactile perceptions are still normal. There are no ocular symptoms. Difficulty of speech has plainly increased. Enunciation is very labored and speech is thick. This is especially evident when he attempts to pronounce the linguals, he being unable to pronounce the letter "l" after many trials. Motion of his lips is perfect. He can whistle, etc. His mental condition is apparently good. Passed his urine voluntarily throughout the day, and retained control over his sphincters. His pulse, respiration, and temperature did not vary from their condition of yesterday. Early in the evening he fell asleep and slept quietly all night. At 5.25 A.M., on September 9th he was found dead.

Time from commencement of attack until death, exactly seven days.

As might be expected from this history, the lesions were localized chiefly in the anterior horns of the spinal cord. The autopsy was made six hours after death. All the organs except the cord were substantially normal. To the naked eye the only change noticeable in this was that the line of division between the white and gray matter was not as sharply drawn as it usually is in normal cords. I hardened it in Müller's fluid, and subsequently in alcohol, and have since examined sections from various parts of it. Throughout the entire cord there is a change in the blood-vessels which is very marked. They are everywhere full of blood, and surrounded by a coating of young cells, as by a sheath, these cells being disposed in several layers. This change is most marked in the gray matter of the dorsal and lumbar regions; but exists, also, as I have said above, in a modified way throughout the cord, except in the smallest vessels. The ganglion cells of the anterior horns are destroyed throughout the entire cord, and their places occupied by dense aggregations of young cells. Besides this, throughout the anterior horns there is a marked increase in the number of connective-tissue cells and free nuclei.

In the posterior horns the ganglion cells are well preserved; notably so in Clarke's columns. There is a slight increase in the number of connective-tissue cells and free nuclei in these horns, and the perivascularitis, as above described, is distinct in them. The white matter throughout is substantially normal, excepting the lesion of the blood-vessels.

In the medulla oblongata there are a few aggregations of young cells, but no such dense masses of them as were seen elsewhere. The olivary nucleus is normal in appearance, as is also the nucleus of the hypoglossus. The lesion of the blood-vessels is present, but is less well marked than it is below.

It is interesting, though not obscure, that there should have been interference with the function of the hypoglossal nerve so well marked, without any lesion of its nucleus, for here not even the lesion of the blood-vessels is present, though the capillaries are unduly filled with blood. It is somewhat surprising that the patient retained control of his sphincter ani. In concluding this case I beg to ask your attention to these diagrams illus-

trating the appearance of the gray matter of the anterior horns as compared with that of a normal cord, and also to the sections of the cord in various places, which are stained with carmine, and which I will place under the microscope for your inspection. I think you will agree with me that this case is one in which the chief lesions and symptoms are those of acute poliomyelitis anterior, notwithstanding the fact that death from that disease is said not to occur.

The second case was more acute, and the lesions more diffused. It is as follows:

CASE II.—J. W.—, aged twenty; United States; single; clerk. Admitted to the New York Hospital July 31, 1881. Family history is negative. He is a moderate drinker, and gives no specific history. He has had gonorrhœa once, but denies sexual excesses. One year ago he contracted malaria in New Jersey. He had measles last spring. He was in good health up to the beginning of this illness, which occurred two days ago. He has received no injury, and has not strained himself, or in any way exposed himself to cold or dampness. Two days ago he awoke with intense frontal headache. Soon after his left knee felt weak, and by night the entire lower limb on that side was powerless. He had no chill or pain. There were no other subjective symptoms at first. He had no paræsthesia or dysæsthesia, excepting a feeling of numbness over the left buttock and outer side of the left thigh. There was no girdle sensation or formication. On the following day the patient rapidly lost all power in the right leg, and was entirely unable to move either lower limb or his toes. He retained, however, perfect sensation in thighs, legs, and feet. Yesterday, the second day of illness, he vomited for the first time. His bowels were constipated from the beginning of the attack, and yesterday he was unable to void his urine. His sphincter ani has acted without impairment. On admission, 4.30 P.M., his temperature was 103.2° . The patient is intelligent, and gives a clear account of himself. He is well nourished, and complains chiefly of intense frontal headache, which has prevented him from sleeping ever since the attack began.

Heart and lungs are normal. Spleen and liver are normal in size. By percussion a distended bladder is detected, and thirty-five and a half ounces of urine are drawn by catheter. Both lower extremities are entirely paralyzed. The patient is utterly unable to move them. Sensation seems perfectly normal over both lower limbs, but all reflex action is gone. No tendon reflex at the knee. Patient readily distinguishes hot and cold objects applied to his lower extremities. There is no dysæsthesia or paræsthesia. There is no point of tenderness in the spine, either to pressure or to the application of hot and cold sponges alternately. Pupils are normal. There is no paralysis of tongue; no impediment of speech; no sense of constriction; no priapism.

Both legs are cool below the knee. Femoral and dorsalis pedis arteries on both sides can be felt.

The conjunctivæ are suffused. Respiration is quiet and natural.

August 1st.—Sixty-two ounces of urine were drawn by catheter at intervals during the night. Two enemata were given during the night without effect.

Yesterday, at 9.15 P.M., his temperature was 104.4° . This morning it is 103° ; respiration being 35, and pulse 84. His breath is foul. He has aphthous stomatitis. The cervical glands on the left side are somewhat enlarged. Pupils are normal, and there is slight internal strabismus of both eyes. The paralytic symptoms described yesterday are still present in the lower extremities, and are now rapidly appearing in the upper extremities. The patient has no motion in either arm, and very little in the fingers—the left side retaining more power than the right. Four hours after the above note (1.30 P.M.), the fingers were found to be completely paralyzed. The patient's sensorium is becoming dull; he gives contradictory answers to questions. His sen-

sation is still perfect, apparently; always (with closed eyes) he describes accurately any cutaneous irritation applied to arms, legs, or spine, such as heat, cold, pulling out hairs, inching and pricking—all which are carefully and repeatedly tried. On placing the poles of the galvanic battery (thirty-four cells) along the spine, and over the flexors and extensors of his arms and legs, no muscular contraction was obtained at any point (excepting over the flexors of the right hand) with either the continuous or the interrupted current. The application gave the patient the sensation as of a brush being passed over the skin, together with the sensation caused by the wet sponges.

At midnight the paralysis of all his limbs was complete, and his hands and feet were cold.

August 2d.—At 5.45 A.M. thoracic respiration ceased; the patient lies with his head thrown back, eyes staring and blood-shot, face extremely cyanotic, fingers cold and blue. There is internal strabismus of both eyes; the alæ nasi work forcibly; the tongue moves up and down with respiration, which is wholly diaphragmatic.

At 6.10 A.M. respiration ceased altogether, the heart beating several seconds longer.

His treatment was much the same as in the other case.

Time from commencement of attack until death, exactly four days.

I place under the microscope sections from the cord of this subject, taken at various heights. His other organs were substantially normal.

In this case the same vascular lesions exist as in the other, and are quite as general. The inflammatory lesions, including the destruction of ganglion cells, exist in the anterior horns, as in the other case throughout the cord, but are not confined to this situation. There is, moreover, a similar inflammatory destruction of the elements of the cord in the posterior horns. The ganglion cells of Clarke's columns are everywhere destroyed, and the posterior nerve-roots, as well as the rest of the gray matter, contain an increased number of young cells and free nuclei. Besides these changes there are lesions in the white matter in this case. Very generally the medullary sheaths and axis cylinders are broken down, forming together in some places granular, in others homogeneous masses. Near the periphery of the cord, especially in the posterior columns, but also elsewhere, may be seen many intact axis cylinders and nerve-fibres.

It is certainly worthy of note in this case that the sphincter ani was controlled, and that sensation was not abolished throughout his illness. I am aware that such cases are recorded, but I have not seen satisfactory explanation of them.

AN IMPROVEMENT IN THE ARRANGEMENT OF SNELLEN'S TEST-TYPES.

By A. SCHAPRINGER, M.D.,

ASSISTANT TO THE CHAIR OF OPHTHALMOLOGY AT THE NEW YORK POLYCLINIC.

In order to save time in the examination of eye-patients with Snellen's test-types, I have devised the following simple and inexpensive arrangement, which several of my colleagues have found to be serviceable. It consists of a screen made of a stout piece of paper or cardboard, a few inches wider than the sheet on which the test-types are printed, and twice as long, having an aperture in the middle just large enough to permit a single row of the types to be perceived through it. A cord is fastened to the upper and another to the lower end of the type-sheet. This is easily and effectually done by means of staples and suspension hooks, which can be had at any stationer's. The screen is tacked to the wall and the sheet placed behind it. Screw-eyes are introduced at suitable intervals into the wall, and the cords carried

through them to the place opposite the test-types, where the examining physician and the patient are placed. Two wooden handles attached to the ends of the cords afford a convenient means of grasping. When one handle is pulled down the other goes up, and one row of test-types after the other will appear in the aperture of the screen. The last screw-eyes through which the cords pass are arranged so that the handles will strike against them when the highest and lowest rows of type appear in the aperture, thus preventing the sheet from being pulled too far either way.

The height of the aperture in the screen is about three inches, and its width corresponds to that of the type-sheet. The type marked CC has been cut off and pasted in front of the screen, as it is too large to be seen entire through the opening. This, of course, need not be done when we have a sheet on which there is sufficient space between the rows so that the opening in the screen can be made larger.

Instead of cutting a piece from the middle of the paper screen, it will be found a little more practicable to make only two horizontal slits, about three inches apart and long enough to allow the type-sheet to be passed through them in such a way that the strip between the slits will, as it were, ride on the back of the sheet.

A screen like the one described can be seen in working order at the New York Polyclinic, where I put it up myself at the expense of a few cents only.

248 EAST SIXTY-FIRST STREET, January 10, 1883.

Progress of Medical Science.

PUNCTURE OF THE GRAVID UTERUS DURING OVARIOTOMY.—At a recent meeting of the New York Obstetrical Society, Dr. C. C. Lee related the following case. (*New York Medical Journal*, January 27, 1883). A patient, twenty-eight years of age, was sent to the Woman's Hospital by Dr. Hanks, for the removal of an ovarian cyst situated on the right side. The presence of the cyst was supposed to have been the cause of several miscarriages, and, as the patient was then three months pregnant, it was thought likely to prove so again. After making the usual incision for ovariectomy, the exact relation of the tumor to the uterus was ascertained. In turning the patient on her side, preparatory to puncturing the cyst, the latter was let go, and, unknown to Dr. Lee, the uterus took its place, rolling up into the abdominal incision, and was punctured instead. A large trocar penetrated the body of the womb to a depth of about two inches, entering at a point about two inches below the fundus. No fluid escaped when the trocar was withdrawn. The uterine wound was sewed up with carbolized silk, the long pedicle of the ovarian cyst was then ligated, the cyst was removed, and the abdominal wound was closed. Abortion had not occurred, and the patient was doing well. There had been vomiting, which was probably due to the influence of the anæsthetic. It was a noteworthy fact that the pedicle in this case was so long that the tumor, which was developed from the left ovary, lay upon the opposite side, in the region of the right ovary. Dr. Lee thought the silk-worm suture which was used to close the abdominal wound possessed no advantages over the carbolized-silk ligature. It was much more liable to break, and was less easy to handle.

FISTULA OF THE PANCREAS.—The following case is reported by Dr. D. Kulenkampf, in the *Berliner Klin. Wochenschrift*, No. 7, 1882, as an instance of pancreatic fistula. A laborer, thirty-nine years of age, received a severe injury, being hit on the abdomen. After the grave inflammatory symptoms had apparently subsided, he felt comparatively well, but still complained of gastric distress. Gradually a tumor developed in the epigastric region, and grew to about the size of a

child's head. As he was uncertain in regard to the diagnosis, Dr. Kulenkampff cut carefully through the abdominal wall, in the linea alba. Then he punctured the swelling and drew off about a wine-bottleful of clear fluid containing a large quantity of albumen. Later the peritoneum was attached to the abdominal walls, the tumor opened, and a quart of the same fluid taken out. He then established drainage, and daily several pints of this fluid were discharged. The wound closed, but a small fistula remained, and notwithstanding all endeavors, the skin surrounding it continued sore. This fact caused the suspicion that he had to do here with a pancreatic fistula, and the chemical analysis, which was made by the chemist, Dr. Hausmann, confirmed this. Nevertheless the fistula at length became permanently closed.

THE ADVANTAGES OF A DRY LOCAL TREATMENT IN OTORRHOEAL DISEASES.—One of the greatest hindrances to cure in an ear disease accompanied by otorrhœa, whether the disease be due to inflammation in the auditory canal or middle ear, is the presence of granulations and polypoid growths. Yet one of the oldest forms of treatment of otorrhœal disease has been by copious syringing and instillation of various fluid medicines. Hence, in such treatment of this class of aural diseases, moisture has been repeatedly applied to, and kept in the ear, a naturally heated locality. Now, as heat and moisture tend to promote granulations and keep up a discharge, it is very apparent that a moist treatment of otorrhœa in many instances has a tendency to keep up rather than to check the morbid discharge from the ear.

On these grounds, therefore, Dr. Chas. H. Burnett, in a paper with the above title, in the *American Journal of the Medical Sciences* for January, 1883, holds that the syringe and all forms of drops should be omitted from the home treatment by the patient in cases of otorrhœa. The most the patient should be directed to do is to dry his ear according to its need, by running into the canal and down to the fundus a twisted pencil of absorbent cotton. The surgeon is to use the syringe only when it is absolutely necessary to remove by it the matter from the ear, and thus prepare the organ for the application of medication by his hand. This latter part of the treatment should consist in the blowing of powders into the ear. Of these, Dr. Burnett recommends one prepared by triturating equal parts of tincture of *Calendula officinalis* with boracic acid (gr. to minim), allowing evaporation, then rubbing one part of the thus calendulated boracic acid with one or two parts of pure boracic acid. Alum should not be used, on account of its tendency to produce furuncles. Comparative tables are given, which show that by the dry method of treatment the average duration of treatment may be shortened from 212 days under the old plan, to 34 days by the dry method.

THE ANTISEPTIC AND PHYSIOLOGICAL ACTION OF RESORCIN.—From some experiments made by Dr. W. B. Platt (*American Journal of the Medical Sciences*, January, 1883), it appears, taking the minimum time in each series, that bacteria developed in 20 c.c. of urine exposed to favorable conditions, and that 0.050 gm. of resorcin has no appreciable influence, bacteria developing within eighteen hours.

Twice that quantity (0.103) kept urine free from bacteria twenty-four hours, six hours longer; while 0.150 deterred their development to four days, urine without any addition showing bacteria within eighteen hours.

If urine be boiled, organisms are found usually considerably later, forty-six to sixty-five hours.

0.050 gramme of carbolic acid hinders development of other living organisms (large enough to be detected by a power of 550 diameters) in boiled urine at least twelve days, bacteria eighteen days, the usual bacillus not developing at all. While 0.150 of resorcin (about two and a half grains) hinders development of bacteria four days, one-third that amount of carbolic acid pre-

serves a similar amount of urine free from organic life, under similar conditions, three times as long.

Experiments made to determine the physiological action of resorcin, showed that in several warm-blooded animals it caused—1. Restlessness and trembling. 2. Rapid respiration very early in rabbits. Early and very marked after a lethal dose in one dog, later after a lesser, but fatal dose, in another. Not marked after non-lethal doses. 3. Staggering, unsteady gait, loss of co-ordination, especially in hind limbs, present early in all the animals excepting one rabbit where a small dose was exhibited. 4. Twitching of muscles, especially of hind limbs, constant in all. 5. Clonic contraction of nearly all flexors and extensors of body, more especially of those attached to the pelvis and shoulder. 6. In the animals that died, the imitation of the natural running or hopping movements before death, as the animal lay upon its side, was striking.

BLENORRHOIC PLEURISY.—Several years ago Dr. Sée observed a case of gonorrhœal rheumatism, complicated by pleurisy. To his mind the pleurisy was evidently due to the venereal disease, since the two inflammations, arthritic and pleuritic, commenced at the same time and without any previous exposure on the part of the patient. Quite recently he saw another instance of this rare complication of gonorrhœa (*Journal de Médecine*, December, 1882). This was the case of a young man twenty-five years of age, who had contracted a gonorrhœa some three months previously. He was suddenly taken with chills, followed by pains in his side, fever and dyspnoea. Pressure upon the sides of the thorax induced the most acute pain. Upon his admission into the hospital, he showed evident signs of pleuritic effusion with extreme dyspnoea. He was not benefited by hypodermics of morphia. A hypodermic of nitrate of pilocarpine, however, gave an excellent result. Dr. Sée insists that the thoracic pain and the general instead of the local disorder is sufficient to establish a diagnosis of true gonorrhœal pleurisy.

STATISTICS OF SYMPHYSIOTOMY.—Dr. Robert P. Harris publishes in the *American Journal of the Medical Sciences* for January, 1883, a careful analysis of the statistics of symphysiotomy, with comparative tables of the early and later cases, showing that the operation has been more frequently performed in Italy in the last seventeen years than in the previous eighty. In his first table, extending up to 1858, out of 70 cases there was a maternal mortality of 70 per cent., and a fetal mortality of 67 per cent. The second table begins with the resuscitation of this operation in Naples, in 1866, and as far as he has been able to learn, there have been 53 operations in that city, saving 43 women and 42 children. From a report of Prof. Morisani, by whom most of these operations were performed, we learn that—1. All of the fifty operations (in table 2) were performed upon rachitic subjects, whose pelves were generally flattened antero-posteriorly. In four or five instances the pelves were simply dwarfed in dimensions. There was no case of rostrate pelvis, as malacosteon is very rarely met with in Naples. 2. Version was not resorted to except in the transverse positions. The forceps were applied in about one-fourth of the cases. 3. The separation at the pubes amounted to about 2 inches (50 mm.), which was obtained without any effort, and without producing any lesion of the sacro-iliac synchondroses. 4. The immovable dressing secured the firm union of the symphysis pubis in all the cases that recovered. 5. The women had good health after the operation. 6. There were no malformed infants. Nearly all of the children were sent to the Foundling Hospital to be taken care of. 7. Phlegmasia alba dolens did not occur in any of the women. 8. There were no pelvic lesions left, as a sequel of the operation, with the exception of one case of iliac phlegmon. 9. Vesico-vaginal fistula occurred in but one case, and this was easily cured by an operation.

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WATER-SUPPLY OF NEW YORK CITY.

OUR editorial suggestions of the 20th ultimo, tending to arouse the citizens of New York City to make a searching inquiry into the true cause of the insufficiency of the water-supply, appears to have had the effect we aimed at. We pointed out that the trouble was not due to a defect in the quantity of water, but, on the contrary, to primitive and bad methods of distribution, which resulted in a waste of a large portion of the daily supply.

It is gratifying that our suggestions have been so ably handled by those who have interested themselves in this subject, and we find that the strongest evidence has been placed before the mayor's committee in support of our views. We stated that probably one-fourth of the water-supply of our city was wasted, but one witness observed that on some occasions fully half the supply of water to New York City was diverted from its legitimate use. Indeed, Mr. Henry J. Newton, of the Taxpayers' Central Committee, who has made a critical examination of the water-course, asserted that he found evidence that the water was run to waste systematically by the authorities in charge, who even retarded the flow in the aqueduct by artificial means, for the purpose of creating a pretended scarcity, and thus demonstrating an apparent necessity for another reservoir.

Commissioner Thompson denies this imputation, but appears to leave unanswered the facts produced by Mr. Newton, who states that he found a difference of depth of water between One Hundred and Thirty-fourth Street and Ninety-second Street, which could be explained only on the supposition that a waste of water existed between these points. We do not for a moment suppose that the escape-valves are fraudulently opened, but probably extensive leakages are permitted to exist, which have the same effect. Those who have allowed this systematic waste are the adherents of the political party which demands at this moment an expenditure of over fourteen million dollars for a new aqueduct. We apprehend that the most innocent of taxpayers will not fail to perceive the *raison d'être* of such behavior.

In regard to the individual waste of water by consumers, to which we directed special attention and suggested a remedy, Commissioner Thompson states that the introduction of meters into private houses would meet with "widespread opposition." In reply, we would observe that among a certain class the same "opposition," if likely to be successful, would be raised against

gas-meters, and possibly the inventor has too often received the anathema of the consumer when the monthly account was rendered.

The wasteful and prodigal consumers object to all methods of reckoning which fastens upon them the just payment for their extravagance; but the system of charging *pro rata* according to the amount used of anything, must certainly be based on a just and equitable principle, and be acceptable to all who have honest intentions.

The London system, however, to which we directed attention, does not provide for the use of meters in all private houses, but is merely optional to large consumers, such as hotels, manufactories, etc. We quite agree with Mr. Thompson that the universal use of meters would entail a troublesome and expensive system of inspection. The English plan of charging according to the number and size of cisterns in a house, has no such objection, as one assessment only is required, all future payments being the same, until additional cisterns are added.

As we stated, such a system appears to give satisfaction in England to consumers, and when combined with high pressure, insures a limitless supply to every part of the house.

It is admitted on all hands that the present amount of water at the command of New York City is sufficient for all purposes, provided the distribution is made by a system which insures against waste and extravagance. We have shown that the problem is not a difficult one, and have suggested a solution, which has at least the merit of being no novelty, as it is in practical operation in the largest city in the world. There it works with success, and meets the requirements of over three millions of people.

RESTORING THE POWERS OF THE NATIONAL BOARD OF HEALTH.

THE Senate "Select Committee to Investigate and Report the Best Means of Preventing the Introduction and Spread of Epidemic Diseases," to which was referred Senate Bill No. 2259, made its report on January 26, 1883, and the report has been ordered to be printed.

This bill (S. 2259) repeals the limiting clause of the act of June 2, 1879, entitled "An Act to Prevent the Introduction of Contagious or Infectious Diseases into the United States," better known as the "Quarantine Act," which expires by limitation on the 2d of June next. It also makes available the unexpended balance, previously appropriated, "of \$124,000, or so much thereof as may be necessary for carrying out the provisions of the several acts creating the board and defining its powers." It also makes available the appropriations heretofore made to enable the board "to aid State and local boards of health and local quarantine stations, to be used only in case of epidemic, the sum of \$100,000."

The report of the committee, recommending the passage of the bill, enters largely into the merits of the board, and claims that under its rules and regulations the yellow fever epidemic of 1879 "was actually stamped out in New Orleans and confined to the limits of Memphis."

The politico-legal aspect of the subject, "the power of Congress to regulate commerce in respect to the importation of contagion," is summed up in these words: "The powers of a State in respect to this question are based upon and limited by the law of self-preservation, and can go no farther than the protection of the people within its boundaries, while the power of Congress to regulate commerce is absolute, supreme, and exclusive." The report also says, "Our statute-books furnish a large number of precedents wherein Congress has, within the last fifty years, regulated commerce with no other object or purpose than to give greater security to the health and lives of that portion of our people who chance to be afloat upon our waters."

The report concludes with an appeal, a portion of which is here given: "When the memories of the fearful ravages of the epidemic of 1878 were fresh, both houses of Congress were ready to appropriate, and did appropriate all that the Committee asked for the purpose of endeavoring to find, if possible, a means of preventing the recurrence of this terrible scourge; but as the memories of the one hundred thousand sufferers, and the twenty thousand new-made graves of that period are fading from our minds, the Committee has experienced more or less difficulty in obtaining the appropriations necessary to enable the Board to perform the important duties which devolve upon it," etc.

Without entering upon the subject of the merits of the bill, we find that the report of the committee, where it treats of the politico-legal aspect of the subject of national quarantine is curiously at variance with the published opinion of the President of the National Board of Health. Thus the President in an exhaustive review of this whole subject, says: "To recapitulate, I hold that any attempt to supersede State authority in matters of quarantine, or for the general Government to exercise concurrent jurisdiction with the States in regard to quarantine, would be inexpedient for the following among other reasons:

"1. The decisions of the Supreme Court make it doubtful, to say the least, whether such powers are within the competence of the general Government.

"2. If the power be admitted, the exercise of it would be impolitic in view of the embittered opposition of the great commercial emporiums of the country.

"3. Such a system would almost necessarily lead to the establishment of an enormously expensive bureau, with no better means, probably, in respect to the protection of the public health, than can be realized, as experience has shown, by the system of co-operation with State and local boards."

In speaking of the Quarantine Act of 1878 (the Marine Hospital Service Act), the President of the National Board of Health says, in the review above spoken of: "The passage of the Quarantine Act in question was the single exception in the entire history of the Government to its otherwise consistent traditional policy, and this single exception seems to have been immediately repented of, for the very body in which the bill originated failed to make any provision for its execution."

From this it seems that there is a considerable difference of opinion as to the constitutionality of national quarantine even among its friends.

PERILS OF MEDICAL PRACTICE.

THE life of a physician is one of peril, as he encounters danger at every step of his existence. The portals of the contagious chamber which none dare enter are passed by him without a moment's hesitation; and fortunate is he who goes through life without disease directly incurred in his line of duty.

What is the reward? It is true that in some cases a well-earned competence is secured, but too often there is a weary struggle to secure the bare means of existence. There is, however, one danger which is ever present in the life of a physician which scarcely any prudence on his part can absolutely avert, bringing with it a train of horrors, to escape which death itself may be welcomed by a man of honor.

This peril is the accusation of female patients that attempts have been made on their chastity, when no cause for such a charge exists. The tragic conclusion to the most recent case of this description may well be remembered when future charges of this character are made against physicians bearing a spotless reputation.

Dr. William Whitfield Edwardes, of Hounslow, England, was the last victim to this system of blackmail. The unfortunate man naturally consulted his partner, a Dr. Whitmarsh, who, instead of trying to defend him as a friend, took the opportunity which offered of dissolving their business relations.

Finding himself assailed both from within and without, and possibly believing that he could not convince others of his innocence, when his own partner was ready to brand him as guilty, the wretched man "broke down," and by the aid of a bottle of prussic acid put an impassable barrier between himself and his persecutors.

Before death, poor Dr. Edwardes, so soon to stand before his Maker, solemnly and emphatically denied the charge brought against him, which he attributed to the "morbid imagination of a licentious-minded, hysterical woman," and "with a prayer for a blessing on his wife, his little boys, and his mother," concluded the document.

It is but little satisfaction for the loss of such a man to learn that the woman, struck with remorse, made a written retraction of the charge, with every expression of regret. All, however, that could be done for the bereaved relatives was performed, and a general expression of sympathy was displayed; the deceased was buried with military honors, the stores in the line of route to the tomb were closed, and crowds of sympathizing spectators lined the way.

It is said by our London correspondent that Dr. Whitmarsh's house was stoned by the mob, and the man would probably have been lynched if a body of forty mounted and other constables had not kept watch over the house for three days.

Dr. Edwardes is described as having been a hard-working physician, and distinguished in his profession; and although only resident in the district for twelve months, he had gained the esteem of all with whom he was brought in contact, by his devotion to his professional duties and attention to the poor.

Thus a valued life has been forfeited to the caprice of a woman, and we would ask how many more martyrs must be sacrificed before the medical man is protected in the discharge of his duties. The remedy is easily sug-

gested. Physicians should in all cases decline to make physical examinations of women except in the presence of a witness. This is not only a safe rule, but one easy to carry out even among the poorer classes. Any female who pretends to have too much modesty to allow the presence of a friendly attendant, should be looked upon with becoming suspicion.

CARDIAC SURGERY.

ONE of the latest developments of surgery relates to an organ which has for a long time been regarded as a *noli me tangere* by the operating surgeon. But now, a new era is beginning to dawn upon us, and the heart is to be duly admitted to the fraternity of organs that may be cut, sliced, and stitched with more or less impunity—more to the surgeon and generally somewhat less to the patient.

Punctures of the heart when conceived in moments of calmness, and executed with care and precision, are comparatively harmless. For, in 1872, Roger thrust a needle into the right ventricle of a child, and withdrew about six ounces of blood. There was no permanent mischief, and the patient died five months later from chronic heart disease. So also in Hulke's case ("Trans. Clin. Soc.," London, vol. viii.), a drachm of venous blood was taken from the heart, and the patient survived the withdrawal four weeks. Dr. John B. Roberts, of Philadelphia, is the fearless American apostle of the innocuousness of cardiac punctures. He also believes that cardiotomy, or at least cardicentesis, is preferable to phlebotomy in many threatening cases of distention of the heart.

Dr. C. L. Dana, however, in a letter printed in the present issue of THE MEDICAL RECORD, comes to a directly opposite conclusion.

Cloquet, Bouchut, Legros, and Onimus have also observed the apparent innocuousness of wounds of the heart made by capillary trocars. Steiner found, ten years or more ago, that electro-puncture needles could be quite safely introduced into either ventricle, provided they were at once withdrawn (*Med. Times and Gazette*, May, 1873).

It has been considered less safe to puncture the auricles; but the interesting paper of Dr. Benj. F. Westbrook, published in THE MEDICAL RECORD for December 23, 1882, would seem to show that our fears are as unfounded as were those of our predecessors in regard to ventricular puncture.

Dr. Westbrook's narrative has stimulated Dr. Roberts to further thought regarding cardiac surgery. He points out that if a few drachms of blood drawn directly from the heart give the relief that could only be afforded by taking a similar number of ounces from the veins of the arm, it seems proper to adopt the former measure. The subsequent circulatory depression from anæmia would undoubtedly be less than after the latter operation.

It is manifestly necessary, however, to determine that cardicentesis is innocuous before it can take the place of venesection. In Dr. Roberts' opinion the above-mentioned cases and Dr. Westbrook's experience tend to show that such is the fact.

Further experimentation in heart-puncture for the relief of cardiac distention and pulmonary engorgement seems, however, requisite. But Dr. Roberts thinks that

it will soon become a well-recognized surgical procedure in selected cases. He asserts that pericardicentesis has already taken that position, and there is no reason to believe that cardiac surgery will stop its march with the demonstration that the pericardium can be treated as the pleura.

Closely scrutinized, the results of cardiac operations have not hitherto been the most encouraging. There has been too much unanimity as regards the final fate of these cases. True, a similar unanimity of death has also been manifested by patients with excised or resected stomachs. But in extenuation it might be said that cancer kills painfully, often slowly, always surely. On the other hand, the gravest cardiac lesions may occasionally become fully compensated, and lead to comparatively comfortable existence. And again, death from heart disease is often quick and painless.

Far be it from us to deprecate the boldly progressive spirit of modern surgery. We owe too much to that tendency. But it does seem as if there were a limit somewhere, to proceed beyond which would be reckless and unjustifiable. Man is as yet incompletely evolved. Perfection still awaits him. In his present development the heart is emphatically a vital organ. And too much chiralurgical handling of that viscus seems as yet tolerably sure to be resented by the system.

QUAIL-EATING.

SOME men are born great and some attain greatness. Among these latter is the gentleman who is at date of writing attempting the interesting feat of eating sixty quails in thirty days. No doubt many medical men have been called upon to express professional opinion on the matter, and have properly beclouded the understandings of their listeners with glittering physiological generalities.

It is needless to moralize upon the foolishness of the performance or the silliness of the public in becoming excited over it. New York expends its brain-force in making money, and wants for its amusement things which make the slightest possible drain on mental tissues.

Quail-eating has become one of the excitements of the day, and it is proper enough for the doctor to say a word, since the matter involves a question of physiology. A brace of quails weighs, when dressed, rarely over three-fourths of a pound. In a normal diet it is permissible to eat even more than this amount of nitrogenous food. It is not a question of overfeeding, therefore, in the present instance, but of lack of variety in diet. The flesh of the quail is composed of solid muscular tissue, having no fat between the fibres as in the case of mammals. It is delicate and tender, and easily digestible, the process not taking over three hours. It is not strong-flavored, a quality which makes one soon tire of particular foods. There is no reason, therefore, why two quails a day cannot be eaten for a long time.

The highly scientific experiment now going on illustrates one interesting physiological fact. It is that after the system has assimilated a certain kind of food continuously for some time, the power of building tissue from it becomes weakened or lost. There is an analogy to this in other functions of the body. Thus in the case of the eye, particular rays of light, after continuously beat-

ing against the retinal expansion of the optic nerve, blunt the sensibility of the part which they excite. So the gustatory and olfactory senses soon fail to be consciously excited after uninterrupted irritations of the same kind. We have heard even that some of our city specialists can no longer smell iodoform.

MICROCOCCLUS PUERPERALIS.

RECENTLY pathological investigation has pointed very strongly toward the conclusion that a micro-organism is the cause of puerperal septicæmia. We are quite prepared, therefore, for the announcement that M. Chauveau has isolated this organism, cultivated it, attenuated it, and used the attenuation as a vaccine.

M. Chauveau experimented with rabbits, and states that he produced in them the lesions and symptoms of puerperal fever. His experiments as to the protective power of attenuated virus are not yet completed. But he states that those rabbits which survive the first inoculations are not susceptible to any subsequent attacks, even when virulent virus is injected.

The profession will wait with much interest for the conclusion of Chauveau's experiments.

SCHOOL HYGIENE IN OHIO.

A BILL has been introduced into the Legislature of the State of Ohio containing the following very excellent provision :

"The Board of Health [of corporate cities and towns] may take measures and supply agents, and afford inducements and facilities for gratuitous vaccination and disinfection, may afford medical relief to and among the poor of the corporation as, in its opinion, the protection of the public health may require ; and during the prevalence of any epidemic may provide temporary hospitals for such purposes (and the said board is hereby required to inspect semi-annually, and oftener if in the judgment of the board it shall be deemed necessary, the sanitary condition of all schools and school buildings within the limits of the corporation)."

The section goes as nearly as possible to compulsory vaccination without absolutely adopting it. It seems to us eminently wise and in accordance with what modern sanitary science demands. Such a provision, or a similar one, ought certainly to be adopted not only in Ohio but in other States.

PSYCHIATRICAL REFORM AND PSYCHIATRICAL TEACHING.

WE have regarded the agitation which has been made during the past few years over lunacy matters as one of the most important of recent scientific and humanitarian movements. This has been our excuse for so frequently urging the subject upon our readers. We take pleasure now in recording the marked success of the last meeting of the National Association for the Protection of the Insane, since this Society represents the movement in question. There seems little doubt now that the Association is placed upon a secure basis. Its membership has become large, the interest taken in its doings is widely extended, while the number and character of the men associated with it insures continued stability and

usefulness. It only remains for it to use wisely the position it has obtained. If this is done, continued improvement in lunacy matters in this country may fairly be expected.

Among the matters discussed at the recent annual meeting, the one of most immediate and general interest was that of teaching clinical psychiatry in our medical colleges. Without doubt this matter has been greatly neglected. Surely no one will deny that a medical student ought to see, at least, a few insane men, and know something about insanity before he graduates. Yet practically this subject is almost entirely ignored, and the young physician may be called upon to treat or commit the first lunatic he has ever professionally seen. We submit that such a state of affairs deserves some attention from our medical colleges.

News of the Week.

REGISTRATION OF PLUMBERS.—A bill providing for the registration of plumbers and supervision of plumbing work in Cincinnati has been introduced in the Ohio Legislature, at the instance of the Master Plumber Association of that city.

HOSPITAL SUNDAY IN BALTIMORE.—The collections of the Hospital Sunday, at Baltimore, amounted to about \$2,000.

DR. JOSEPH T. SMITH has resigned the Chair of Anatomy in the Baltimore Medical College. Dr. Thomas Dougherty has been appointed Lecturer on Physiology in the same institution, *vice* Dr. B. F. Leonard, resigned.

THE BALTIMORE MEDICAL STUDENTS number in the aggregate five hundred and ninety.

THE HEALTH OFFICER OF PHILADELPHIA, recently appointed, is Gen. James L. Selfridge. His chief qualification seems to be that he has been clerk in the State Assembly.

THE BALTIMORE MEDICAL ASSOCIATION, the oldest medical society of that city, recently held its seventeenth annual meeting, and elected Dr. J. S. Conrad, President.

RIOTOUS MEDICAL STUDENTS IN MONTREAL.—About three hundred medical students from the various universities in Montreal created considerable disturbance in that city, on the occasion of the recent trial of one of their number for body-snatching. Several of the rioters were arrested and bound over to keep the peace.

SMALL-POX IN BALTIMORE is decreasing. At last accounts only twenty new cases were reported as occurring in a day.

DUTY ON QUININE.—The Philadelphia Drug Exchange recommends the restoration of sulphate of quinine to the dutiable list.

THE DEATH OF MRS. BEARD.—Mrs. Elizabeth A. Beard, wife of the late Dr. George M. Beard, died of pneumonia at the Grand Hotel, New York, January 31st. Only last week her husband died of the same disease.

THE LETTSOMIAN LECTURES are being delivered this year by Dr. A. Ernest Sansom. The subject is "Endocarditis."

NAVY NEWS.—Surgeon J. R. Tryon and Surgeon Robert Whiting, detained from the Alaska and ordered home. Assistant-Surgeon C. W. Rush, ordered to the Naval Hospital, New York, *vice* P. A. Surgeon A. C. H. Russell, detached and ordered to the Navy Yard, Washington, D. C.

PLUMBING LAW FOR BOSTON.—The bill now before the Massachusetts Legislature in regard to the regulation and inspection of plumbing in the city of Boston, is a most excellent measure. Its provisions are very similar to those in force in this city. The supervision is to be in the hands of the Inspector of Buildings, and all work must be approved by him under penalty of heavy fines.

GOVERNOR BUTLER'S PROMISES.—The recent action of Governor Butler, of Massachusetts, in omitting Dr. Folsom's name from the list of those reappointed to the State Board of Health, Lunacy, and Charity, of which he has been a most useful member, and the only expert on insanity in the board, is not all that might be desired. No action has yet been taken on the matter by the Governor's Council. Several other appointments directly affecting the medical profession are to be made by Governor Butler. Among these are four State Trustees of the Massachusetts General Hospital.

HOW GAMBETTA LOST HIS EYE.—The following is the true history of the case, as given by our correspondent: When about eight years of age, he met with an accident in the right eye which wounded the cornea and which was followed by glaucomatous irido-choroiditis with protrusion of the eye. The eye remained for some time in this state, but the patient having been seized with intense pains in that organ, Dr. Fiensal, his personal friend and physician, fearing that the left eye would become affected by sympathy, consulted Dr. de Wecker, the well-known oculist, who removed the diseased eye in order to save the other. This happened in 1867, and the operation succeeded so well that none but those who were acquainted with the circumstance could imagine that the great French republican leader had lost an eye, as the false one he wore looked so natural in color, size, etc., and even the very movements in it were so normal that it was almost impossible to distinguish it from the healthy one.

THE AUTHORITIES OF TRINITY COLLEGE, ONTARIO, state that no offer was made to the seceding students of the Kingston Medical School, to take without extra fees such as had paid their dues; nor was any promise made to the remainder of said students to receive them for half-price. A statement to this effect is published in the last number of the *Canada Lancet*.

SURGEON-GENERAL OF MAINE.—Dr. Augustus C. Hamlin, of Bangor, who has lately been appointed Surgeon-General of Maine, on the Staff of Governor Robie, is one of the most distinguished medical officers in New England. He served in the army during the entire war. He was entrusted with important commands in the Army

of the Potomac, as Medical Director, and in the Army of West Virginia. He was afterward promoted to one of the highest positions, that of Medical Inspector, in the Staff of the Regular Army; and served with distinction in the Army of the South, during the famous siege of Fort Wagner, and was afterward assigned to the Armies of the Southwest, under the command of Major-General Thomas. Dr. Hamlin is a man of high scientific attainments, and is a member of numerous scientific societies, both at home and abroad. The militia of Maine are to be congratulated upon having so eminent an officer at the head of their Medical Staff.

SMALL-POX IN ATLANTA.—Dr. James B. Baird, Secretary of the Board of Health, of Atlanta, states that every possible care is taken to discover and quarantine cases of small-pox in that city. Vaccination is largely practised, and the transfer of small-pox cases to the pest-house is made with the utmost precautions against the spread of the disease.

INSTRUCTION TO DELEGATES.—At the last meeting of the Putnam County Medical Society, a resolution to instruct the delegates to the State Society was lost by a tie vote.

PROFESSOR HERMANN HELMHOLTZ.—The Emperor of Germany has raised Dr. Hermann Helmholtz, the eminent German physiologist, to the rank of a noble.

NO NEW CASES OF TYPHUS occurred in the city during the past week.

NEW YORK ACADEMY OF MEDICINE.—Dr. Fordyce Barker, the president of the Academy, after the transaction of the routine business of the meeting of February 1st, delivered an eloquent inaugural address. It contained fitting references to the past, and was ripe with suggestions concerning the future work of the Academy, over whose deliberations he has presided with such unanimous acceptance during the last two terms. At the close of the address, which was listened to with marked attention by a large and appreciative audience, the Fellows and guests were invited to attend a reception given by the president and vice-president, to Mr. F. Seymour Haden, of London, and to join in "the Loving Cup."

PROGRESS OF DIPLOMA MANUFACTURE IN MASSACHUSETTS.—Since the Bellevue Medical College of Massachusetts was exposed—and proved to be legal—the "American University of Boston," president Dr. Buchanan (familiar name in this connection), and the "First Medical College of the American Health Society," located at Boston, have been incorporated, and Dr. Alfred Booth, the first president and one of the incorporators of the "Boston Bellevue," has given notice of his intention to start the "Excelsior Medical College."

DOCTORS CHARGED WITH CONSPIRACY.—Dr. S. B. McDowell and Dr. Henry Beates, of Philadelphia, have been sued on a charge of conspiracy, to obtain from an aged and helpless invalid a conveyance or assignment of all her possessions, without any other consideration than the possible claim that McDowell might have set up for medical services rendered on two occasions. The physicians were held for trial at court.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Anniversary Meeting, January 10, 1883.

GEORGE L. PEABODY, M.D., VICE-PRESIDENT, IN THE CHAIR.

LIGATURE OF THE COMMON CAROTID ARTERY, AND REMOVAL OF A SARCOMA OF THE LOWER JAW.

DR. JOSEPH W. HOWE presented a specimen with the following history: "Fanny S—, forty-nine years of age, and a domestic, stated that she had enjoyed excellent health up to within two years ago. She then noticed a small tumor on the gum of the left side lower jaw. It was firm and inelastic, and for some time gave her little or no pain. Dr. Howe saw her first in May, 1882, when the tumor was about the size of a hen's egg, and occupied a portion of the ramus as well as the body of the jaw. The larger part of the mass was external and below the jaw. A portion of the floor of the mouth was also involved. She was advised to have it removed without delay, but she refused and returned to her home in the country. She returned during the latter part of September last, and was admitted to St. Francis' Hospital. The tumor had increased very much in every direction. It extended up to the roof of the pharynx, and laterally and posteriorly as far as the mastoid process of the temporal bone. It also involved the salivary glands in the floor of the mouth, and some of the muscles of the tongue. She was in constant pain, and could only obtain sleep by the use of large doses of morphia. After consultation with his colleagues, Drs. George F. Shrady and Joseph D. Bryant, it was determined to attempt the removal of the tumor.

On October 7th, assisted by Drs. Shrady and Bryant, the operation was performed. As a preliminary step in the procedure, the common carotid artery was ligated. This was done for two reasons, viz.: to diminish the growth of the tumor in case it was found impossible to remove the mass, and also to prevent severe hemorrhage during the dissection of the tumor. As the growth extended beyond the median line, the jaw was cut through about half an inch to the right of the symphysis, and severed from its attachments at the floor of the mouth. The tumor was then dissected from its attachments as far back as the pillars of the fauces, and removed, leaving a piece, including the condyle of the lower jaw, attached above. This was also removed. It was then seen that there were prolongations of the growth along the base of the skull, at the roof of the pharynx, and under the tongue as far as the opposite side of that organ, which it would not be advisable to remove. The patient rallied well from the operation. She was given fifteen minims of Magendie's solution of morphia, and passed a comparatively comfortable night. She partook of liquid food on Sunday, with little difficulty; her temperature was only 101° F., and her pulse 110. There was no sign of distress or special weakness. She wrote upon a slate for all she wanted. Shortly after dinner on Sunday she suddenly became hemiplegic on the right side. The pulse ran up to 135, but her temperature remained about as it was before the attack. The day following, the paralysis became more marked and the coma complete. The breathing was markedly stertorous, and her bowels were moved involuntarily. On October 11th these symptoms were intensified, without any increase in the temperature. She died comatose on the evening of the 11th. Her death was evidently due to the ligature of the carotid, and consequent anæmia of the brain."

REMOVAL OF RIGHT HALF OF INFERIOR MAXILLA THROUGH THE MOUTH—FORMATION OF NEW JAW IN TWO PIECES.

Dr. Howe also presented a lower jawbone, accompanied by the following history: "August B—, thirty-eight years of age; occupation, tailor; was admitted to

St. Francis' Hospital, August 5, 1882. Family history good. He never had syphilis or any other form of venereal disease. Twelve months ago he had diphtheria, which left him rather weak. Ten weeks previous to admission he was upset from a row-boat, and afterward suffered from severe pain in the jaw on the left side. This was accompanied by swelling all along the whole body of the jaw. On admission, extensive necrosis was found to exist as far back as the ramus. On September 10th, Dr. J. D. Bryant, who was on duty at the time, separated a large portion of the periosteum from the necrosed bone. The mouth was washed daily afterward with carbolyzed water, until October 11th, when Dr. Howe completed the separation of the periosteum, and removed the bone through the mouth, while the patient was under ether. A new ramus and a new body had by this time formed, but the two were not joined. This division of the new jaw caused the patient considerable trouble on account of the anterior fragment overlapping the posterior, and preventing the teeth of the lower jaw from approximating with the others during mastication. An external splint was applied to remedy this defect. It did little good, however, and he sent the patient to Dr. Goodwillie, who made an intra-oral splint, which he thought would remove the difficulty. I have not seen the patient since."

DR. GOODWILLIE, on invitation, remarked that three things were necessary to the proper reproduction of bone in the lower jaw: first, perfect rest, and in order to secure that it was necessary to apply an intra-oral splint which would hold the lower jaw in contact with the upper one. Second, there should be an extra-oral splint to support the new jaw in its place. Third, there should be careful dressing, and it was well to make a drainage opening through the extra-oral splint, so that all the secretions, even the mucus, could be thoroughly washed out. Thorough cleansing, rest, and support, both external and internal, were essential in the treatment of these cases. He thought the non-union in the specimen presented by Dr. Howe was explained by the fact that the muscles of the left side pulled the jaw around and allowed the periosteum to contract and heal without keeping the form of the jaw. It also seemed to him that the pterygoid muscles became contracted, as did all muscles when they were not in use, and in that way non-union was favored.

DR. HOWE remarked that in the specimen presented the fragments of bone were in contact, that the periosteum was stripped up to a distance for three or four inches before he operated; that he then stripped off the remaining portion of the periosteum, and he could not understand why the two pieces should not have united.

DR. GOODWILLIE thought the non-union was due in this instance to movement, and that if there had been perfect immobility union probably would have taken place.

DR. HOWE suggested that the destruction of periosteum upon the outside and inside perhaps prevented union.

DR. GOODWILLIE was of opinion that sufficient periosteum existed to permit union, but that movements of the fragments prevented it from taking place.

NEURO-FIBROMA.

DR. RIPLEY presented a specimen accompanied by the following history:

"Last July he saw, with Dr. George Schlereth, Mrs. B—, a vigorous woman, twenty-nine years old, who had been married eleven years. She was the mother of three children, the eldest of whom was ten years of age, and she was then in the third month of pregnancy with her fourth child. Nine years ago she began to suffer from intermittent pains, which radiated from the internal portion of her left leg just below the knee. On examination, she discovered a small, painful nodule at the point from which the pain proceeded. These pains, often excruciating, were much increased in severity by mental excitement at her

menstrual periods and during pregnancy. They were also worse at night. From year to year, too, they had been gradually becoming more continuous. During the three weeks preceding the time that Dr. Ripley saw her she had had little relief, night or day, and said the affected part felt as though it were being pierced with a hot iron. This was the history of her case, and on examination he found a hard, painful subcutaneous tumor, apparently about the size of a peanut kernel, situated three inches below the head of the left tibia, on the inner aspect of the leg. It was surrounded by a small area of thickened integument, to which it was attached, and the whole mass was slightly movable.

Dr. Schlereth had already expressed the opinion that the growth was what is generally known as a neurofibroma and that it should be removed; an opinion in which Dr. Ripley fully concurred. A few days later, at the doctor's request and with his assistance, he extirpated the tumor, removing also the thickened integument with it. The wound healed rapidly and without suppuration, and from that time to the present there has been no return of the pain. On section, in gross appearance, the tumor was found to be a solid, nearly globular body, about the size of a large pea, of a yellowish color in its periphery, but nearly white in the centre. Under the microscope, after hardening in alcohol and staining with osmic acid, it appeared to be made up for the most part of bundles of fibrous tissues crossing one another in different directions. A few non-medullated nerves were seen, and here and there, a blood-vessel with thickened wall. Drs. Heitzman and Wendt have both examined specimens from the tumor, and the former thinks that they contain a few smooth muscle fibres.

Remarks.—The clinical history of this case seemed to me to be of interest in showing how a small and structurally unimportant morbid growth, encroaching upon no vital or sensitive organ, may give rise to years of the most intense suffering. The marked effect which deviations from a normal condition of mind or body had in increasing the severity of the pain, was also an instructive feature in the case. In 1812 William Wood published in the *Edinburgh Medical and Surgical Journal* two articles on these little tumors, in which he gave a detailed history of a number of cases, several of them occurring in his own practice. The symptomatology of one of them, quoted from Pearson, is quite like mine. He states that they occur more frequently in females, and also are more common in the extremities. Of the five cases seen by me, three were in the female breast, one in the male breast, and the other in the extremity. In the male referred to, the tumor was situated in the left breast, and the disease simulated angina pectoris, for which it was for a long time mistaken. The paroxysms of pain were very severe, resulting during one seizure in syncope and complete loss of consciousness.

In neither of those seen by him was the skin affected, differing in that respect from mine. Although these tumors have been so long recognized, authors differ as to their structure. Lockhart Clarke says they have a fibrous or fibro-cartilaginous structure. Paget thinks the pain depends on neither their locality nor their structure, for in some situations he has found fibro-cartilaginous and fatty tumors similarly painful, also mammary glandular tumors, but we believe they are most frequently subcutaneous and fibrous, or fibro-cellular. Cornil and Ranvier class them with neuromata, and say that they probably contain nerves which are compressed by the new connective tissue."

URETHRAL CALCULI.

DR. WYETH presented several specimens of urethral calculi, which he had removed from a man forty-five years of age, who came under his observation at the polyclinic. The man had one stricture five inches from the meatus, and one below this, through which a small French bougie—eight or ten—passed quite readily and

struck the calculi. After some ineffectual efforts to remove them by means of forceps, he introduced Bank's instrument and performed internal urethrotomy, dividing both strictures, after which he was able to remove the four small calculi. Behind all of them was a fifth one, for the removal of which he performed urethral lithotomy by means of strong forceps.

Dr. Wyeth also presented a microscopical section, which illustrated the lesions of

SYPHILITIC ENDARTERITIS.

The proliferation had taken place between the different layers of normal intima. The specimen was removed from the body of a patient who had had tertiary symptoms for many years. She had been hemiplegic for fifteen years, and died two or three weeks ago suddenly. At the autopsy this condition of the walls of the basilar artery was found near its bifurcation. There was also a gummatous tumor in the medulla oblongata. The chief point of interest in the specimen was that, six or seven years ago, he attended, with Dr. Weber, a patient who had tertiary syphilis, and who died quite suddenly, the manner of death being about the same as in the case from which the specimen presented was taken. In Dr. Weber's case there was also complete occlusion of the basilar artery, and the conclusion was reached that the patient died in consequence of anæmia of the medulla, induced by the obstructed condition of the blood-vessel. In the present case he predicted that obliterating endarteritis of the basilar artery would be found, and the microscopical specimen showed the pathological condition.

Dr. Wyeth also presented a microscopical section which illustrated

TRAUMATIC ENDARTERITIS.

It was taken from the carotid of a horse which he had tied with the sciatic nerve of the calf. On examining the artery he found a slight bulging inward of the intima, but there was no true proliferation of the internal coat, and no other change had taken place in the arterial walls. The morbid changes present were those which indicated the existence of endarteritis, and in this case it was of traumatic origin.

DR. PEABODY remarked that it had occurred to him in quite a number of instances to find this form of arteritis obliterans, but he had in the majority of instances found it in subjects who were not syphilitic. The lesion had always been attended by the same microscopical appearances which had been described by Dr. Wyeth. It had first been described by Heubner as syphilitic arteritis of the brain, but it had been found to exist in other parts of the body. Dr. Peabody had found it in the kidneys, with chronic Bright's disease, and in chronic disease of the lungs. In two cases he had found it with malignant tumor of the tongue and antrum.

DR. RIPLEY said that at the Medical and Surgical Society Dr. Delafield recently reported a case and made the positive statement that the lesion was not necessarily of syphilitic origin.

DR. WYETH further remarked that the condition had been described at length by Greenfield, Gowers, Buzzard, and many other London pathologists, in volume twenty-eight of the "Transactions of the London Pathological Society," and in all those cases the syphilitic lesions had figured more or less completely.

Dr. Wyeth, however, was of the opinion that any disease which involved the peri-vascular space might give rise to a condition which would cause endarteritis, no matter whether it was syphilitic or tuberculous in character.

DR. BIRDSALL had become convinced that the view expressed by the Vice-President, that it was not always easy to distinguish between the syphilitic and other cases, was gradually gaining ground.

DR. WYETH believed the second microscopical section which he presented proved that an endarteritis sufficient

to occlude the vessel could be caused by simply bringing the surface of the intima closely in contact.

DR. HOWE remarked that he had already presented a patient to the Society upon whom he had operated for popliteal aneurism, who illustrated the point referred to by Dr. Wyeth. Only sufficient pressure was made with the ligature to bring the inner walls of the artery into close coaptation and the operation was successful.

The Society then went into executive session.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, January 5, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

THE paper of the evening was read by DR. GEORGE L. PEABODY, and was entitled,

CASES OF ACUTE DIFFUSE MYELITIS.

[The paper is printed in full on page 122.]

DR. BEVERLEY ROBINSON presented a case of

ASTHMA DEPENDENT UPON VESICULAR EMPHYSEMA, RELIEVED IN A REMARKABLE DEGREE BY THE INTERNAL USE OF THE FLUID EXTRACT OF THE ROOT OF CONVALLARIA MAIALIS.

The history was as follows: J. H.—, aged sixty three, German, came to the Out-Door Department of the New York Hospital, October 4, 1882. He complained of constant dyspnoea and sleepless nights. He was poorly nourished, and his nose and lips were cyanosed. His health was tolerably good until eleven years ago, when he began to suffer from shortness of breath on exertion. At present, even the slight effort of putting on his shirt exhausts him.

His mother and two of his brothers were affected in the same manner. His voice is short and jerky, and he occasionally spits a small quantity of thick, gluey sputum, preceded by a cough of moderate intensity.

The expectoration of this substance relieves his dyspnoea somewhat, for a time. His appetite is poor, his bowels obstinately constipated. He is compelled at night to assume a semi-recumbent posture in order to obtain any sleep at all.

Physical examination of the lungs reveals great emaciation of the chest-walls; shoulders high; back much bent over; thorax dilated at the base; sterno-mastoid, scaleni, and trapezius muscles are prominent during inspiration; chest moves as a whole in a vertical direction during the respiratory acts; third and lower intercostal spaces are sucked in visibly with each effort to breathe. Alæ of nose are markedly distended; expiration is stertorous. Superficial veins of arms and forearms are much dilated. There is considerable pulsation of the brachial arteries at the elbows. On percussion hyper-resonance covering a wide area is discovered, which is especially pronounced on the left side of the thorax. Auscultation anteriorly gives rough inspiration with numerous sonorous rhonchi on both sides; expiratory sounds are feeble. Posteriorly, inspiratory vesicular murmur is very feeble; expiratory sounds are loud, and accompanied with disseminated dry râles.

Physical examination of heart shows apex-beat in fifth intercostal space to left of nipple; epigastric pulsation diffused; cardiac beats are but feebly felt; arteromatous changes in arteries are at an advanced stage. There is a faint blowing murmur synchronous with the systole, and heard with greatest intensity outside and somewhat below the left nipple.

Patient's symptoms always become more accentuated toward evening. Atmospheric changes have no obvious influence upon their character or degree. Country air in past time has apparently given him relief from his continued oppression. Several years ago, while in Rock-

land County, he felt much better than usual. At present he is prevented from leaving the city on account of his narrow means. Latterly he has taken medicine sparingly; in former years he took large quantities of different kinds of medicine. Spirit of camphor, in 20 gtt. doses, formerly gave him great temporary relief. He is now very much annoyed by a condition of cutaneous irritation, which has occasioned prurigo to an excessive degree.

October 4, 1882.—At 3.50 P.M. fl. extr. convallaria $\mathfrak{M}$ xv. were given by the mouth. Twenty minutes later patient states that he breathes with much greater ease, notwithstanding a rapid walk of several minutes' duration through the waiting-room of the hospital.

R. Fl. extr. convallariæ $\mathfrak{M}$ iv.

Syrupi tolutani $\mathfrak{M}$ viij.

Aquam q. s. ad. $\mathfrak{z}$ j.

M.—S. To be taken by the mouth every three hours. October.—Fl. extr. convallariæ gtt. v.

S. Take every three hours.

October 16th.—Medicine seems to benefit him, inasmuch as he continues to breathe with greater comfort to himself.

October 20th.—*Statu quo*—continue treatment.

October 27th.—Repeat treatment

November 8th.—Repeat treatment.

Patient states when dyspnoea becomes more intense, as it sometimes does, in a paroxysmal manner, he increases the usual dose by several drops.

November 20th.—Repeat recipe.

December 1st.—Increase dose of convallaria to gtt. x. every three hours.

When patient is at home and in repose his breathing is much freer than formerly. While taking moderate exercise it is still very short and shallow, but if he rests for a short time afterward, his respiration again becomes relatively quiet, and is decidedly improved over what it was under like circumstances, before he began to take convallaria.

December 22d.—Patient rests quietly at night. He can sleep now lying down, but is as yet unable to work on account of debility. His appetite is poor.

During the past seventeen years he has taken a great many drugs, prescribed by various physicians, but affirms positively that he never got much relief from any medicine until the present time. Since convallaria was first taken his breathing has continued steadily to improve. The quantity of urine passed has always been abundant, and has not appreciably increased under the new treatment. Repeat medicine.

December 29th.—Feels about the same. Amount of urine passed in twenty-four hours measures one quart. Estimation was made on two occasions. Recipe as above.

Formerly, when able to work, the man had been employed in a sugar factory, and afterward in a tobacco factory.

DR. WM. M. POLK reported a case of

VAGUS NEUROSIS—EXTREMELY RAPID ACTION OF THE HEART RELIEVED BY CONVALLARIA MAIALIS.

The patient was a young man, aged twenty. Upon examining the heart to find some cause for the trouble, nothing whatever could be discovered. His other organs were normal, and their functions naturally performed. The family history was good, except that the mother had asthma, which was probably reflex from the stomach. The patient himself was a ruddy, stout boy.

He went about a year with no trouble; then, in consequence of dancing one evening, another attack was brought on which was worse than the former. He recovered from it, the heart continuing in rapid action for several hours.

He then went for a period of about two and one-half years with no trouble, and was in excellent health.

Last summer, during one of the heated terms, he was exposed a little more than usual. In consequence an

attack of rapid heart-action came on. It lasted for three days. During the first twenty hours the heart beat at the rate of 240 a minute for most of the time. He was seen during this attack by Dr. Peabody.

He got over this and was in good health until about a month ago.

On Friday evening he had a headache when he came up from his work down down. He was subject to these, however. He took some cathartic pills. Next morning he eat a light breakfast and went down to his work. In the middle of the day he walked some distance to Delmonico's and eat his lunch. He came up at six o'clock, making no extra exertion. He was then seized with one of his attacks. His heart went at the rate of 240 beats per minute. When seen half an hour later his extremities were cold; moist râles were present in the lungs, and he had the appearance of a person with acute general pulmonary congestion. He had already taken ten drops of digitalis.

I gave him ten minims of fluid extract of convallaria maialis hypodermically, and one-half hour later repeated the dose. Five or ten minutes after this the pulse dropped to 120. It did not come down gradually, but at once. The bad symptoms all disappeared in two hours. This was about half-past eight in the evening. At 4 P.M. in the morning the symptoms began to return. The dose of convallaria was repeated, and directions were left to have the drug taken every two hours in fifteen-drop doses until seen again. This dose was kept up until 5.30 P.M. It was then decreased to ten drops every three hours. During the ensuing night he had no return of the cardiac difficulty. Next morning the heart beat at the rate of about 90 per minute. The interval of dosage was increased to four hours. Next day it was discontinued, and the patient has since then been very well.

The man's habits were very good. He does not indulge in tea, coffee, tobacco, or alcohol.

The patient had been examined by Drs. Austin Flint, Metcalfe, and Leaming, and nothing wrong was found in the action of the heart in the intervals. Dr. Flint had seen a few such cases, and one of these had proved fatal.

During the attack in question there seemed to be a suspension of urine. For twenty-four hours no urine was passed, and, so far as could be told by percussion, there was little in the bladder.

Dr. A. A. SMITH said that he had been very much interested in the action of convallaria. He had used it in larger doses than had been suggested, beginning with fifteen minims and increasing up to thirty, and getting some effects if possible.

He had never used it in any case like that of Dr. Polk's.

In the case of a physician who used tobacco to excess, and who had occasionally a pulse of 190, it had occurred to Dr. Smith, while Dr. Polk had been relating the history of his case, it might be of service.

Dr. Smith was inclined to think that it produced its effect on the heart by acting on the nervous system. In that case it might have a wider use than had heretofore been supposed possible. It seemed to act upon the pneumogastric nerve. It was also, possibly, a respiratory stimulant. He had used it in two cases of sympathetic palpitation, both cases of gastric or intestinal disturbance. In one there was marked benefit; in the other, very little or no result.

In one patient, upon whom he tried it with success, there were no signs of heart disease, but

GREAT IRREGULARITY OF HEART-ACTION

as well as abnormal rapidity. The patient could feel his heart beating irregularly, and had a sense of suffocation. The convallaria was given in doses of fifteen drops every three hours, and then thirty drops every six hours, because it was thought that it was not rapidly eliminated.

Dr. Polk asked if he thought that convallaria was contra-indicated in fatty heart, as digitalis is thought to be.

Dr. SMITH did not think it contra-indicated in that condition.

Dr. GIBNEY presented a patient upon whom he had performed

ADAMS' OPERATION FOR DUPUYTREN'S FINGER CONTRACTION

six days before, with an excellent result. The deformity, as described by Dr. Gibney, and as shown by photographs, had been as follows:

Contraction of the middle finger, right hand, at the metacarpo-phalangeal articulation to an angle of 135° , and of the ring finger, same hand, to an angle of 160° ; a hard ridge of indurated palmar aponeurosis extending from the proximal end of the first phalanx to the middle of the palm, covered by the thickened skin, thrown into small rugæ; a smaller ridge for the aponeurosis connecting the ring finger with the palm. This disease had begun eight years ago; the patient, a porter in a liquor store, first observing a small nodule in the line of the transverse palmar fissure; a few years later a second one appeared, and during the past three years the deformity of the finger had been progressing. He was fifty-five years of age, a large, well-built man, and referred to Dr. Gibney by Dr. Charles W. Packard. He called attention himself, on presenting for treatment, to the extreme degree of nervousness into which he had fallen within the past year or two; had pains up the arm and in the back, and was easily frightened. This was very similar to the condition of a patient operated on by Dr. Abbe, recently reported to the Clinical Society, and also to one reported by him in the second number of *Fox's Illustrated Quarterly*. Whether the nervous symptoms in this case were reflex, or due to a central nerve-lesion, as suggested by Dr. Abbe in his own two cases, was an open question.

There was no rheumatism or gout in the man's history, and no cause could be found other than the traumatism continuously acting.

The details of the operation were described, viz.: Five small punctures with the Adams' fascia knife, and division of the bow-like chords of the fascia from without inwards, the assistant making traction on the finger meanwhile. The blade being so small, was easily introduced between the skin and bands, and the cutting was discontinued as soon as the yielding came on. Posterior splints were applied, and the deformity immediately overcome. The adhesive straps were removed four days later, and a simple steel splint, well padded, applied along palm and palmar aspect of finger. There was no inflammatory reaction whatever, and the nodular bodies disappeared immediately after the sections. Interesting, too, to relate, all his nervous symptoms had disappeared.

In the left hand the same disease existed, involving the fascia in connection with the ring finger. There was very little deformity as yet, but another operation was soon to be performed.

In the discussion on Dr. Gibney's case,

Dr. HUNTER asked if the present result was not much more favorable than is usually the case. He had had to do with several such cases, and treatment had been much more prolonged and unsatisfactory.

Dr. GIBNEY thought the result was not much more favorable than those usually reported.

In response to an inquiry, he said that he considered the nervous disturbances reflex.

The Society then adjourned.

TETANUS IN TYPHOID FEVER.—Dr. Morris Fussell, writing in *The Philadelphia Medical Times*, refers to Dr. Simoneau's case of tetanus in typhoid fever reported in *THE RECORD*. Dr. Fussell reports two cases of a similar nature. One was that of a young woman in the third week of typhoid fever, and convalescing. The patient died. In the second case, that of a farmer, aged twenty-two, recovery took place.

NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE AND PREVENTION OF INSANITY.

Third Annual Meeting, held at Philadelphia, Pa., January 25 and 26, 1883.

JOSEPH PARRISH, M.D., BURLINGTON, N. J., IN THE CHAIR.

[Special report for THE MEDICAL RECORD.]

THE Third Annual Meeting of this Association was more largely attended than any preceding. The papers read in full and in part were numerous and covered a wide range of topics. There were present many prominent Philadelphians, and representatives from New York and Boston. A number of asylum superintendents were also in attendance.

At the afternoon session an

ADDRESS OF WELCOME

was delivered by DR. SAMUEL D. GROSS. He said:

"The object for which we are assembled here to-day involves some of the highest principles of philanthropy, and is, therefore, well calculated to arouse and enlist the sympathies of every intelligent human being. The interest which this meeting has evoked throughout the country can only be appreciated when it is remembered that the call for it was signed by the Governor of the State, and by nearly one hundred and fifty of its most prominent and distinguished citizens, embracing two venerable bishops, learned divines, judges of our Supreme and local Courts, eminent lawyers, physicians, and laymen, all anxious to lend their influence in order to insure its success."

Letters were read from President Arthur, Governor Pattison, of Pennsylvania, ex-Governors Claflin and Rice, and Senator Hoar, of Massachusetts, and others, expressive of sympathy with the object of the meeting.

The first of the regular papers was read by PROFESSOR TRAILL GREEN, of Easton, Pa., and was entitled

THE FUNCTIONS OF A MEDICAL STAFF OF AN INSANE HOSPITAL.

He referred to the need of more skilled medical attendants in insane hospitals.

In the discussion, DR. M. PUTNAM-JACOBI, of New York, said that on one occasion the Superintendent and assistants of the Insane Asylum at Poughkeepsie, N. Y., were all away, and the whole institution was left in charge, temporarily, of an ex-assistant.

DR. SAMUEL D. GROSS offered the following resolution:

Whereas, Numerous facts have recently been brought to light tending to show that insanity in women, in many of its worst and most embarrassing forms, is caused by several diseases often of a curable nature; therefore,

Resolved, That it is the deliberate opinion of this Association that there should be upon the professional staff of every insane asylum, a thoroughly trained gynecologist, one competent to make all necessary examinations of, and to perform all necessary operations upon, women laboring under sexual maladies.

After some opposition, the resolution was amended by inserting "female practitioners preferred," before the word gynecologist.

DR. JOSEPH PARRISH read a short paper entitled

HOW TO PROTECT THE INSANE.

Some of his final conclusions were as follows:

First.—We want in every State of this Union an intelligent and faithful lunacy commission, that shall have power, under the seal of the Commonwealth, to open every door behind which a lunatic sits, examine every case, hear every complaint, and act in harmony with medical superintendents and officers of such asylums, so far as it may be possible, to secure the largest freedom

compatible with safety, and the highest intelligence in the management of the insane.

Second.—We want intermediate homes, where nervous and disordered persons, who are drifting toward insanity, may place themselves, and thus many be saved the alternative of a life in an asylum, and where convalescents who are inmates of asylums may go before resuming the duties of life and home, thus gradually entering again upon their normal life, without the shock that so frequently is a factor of relapse.

Third.—We want the people to comprehend the fact that, if they would escape insanity for themselves, they should be familiar with its causes and the manner of its approach, and, therefore need a popular journal devoted to the subject of lunacy reform and the discussion of preventive measures.

DR. CHARLES K. MILLS, of Philadelphia, read a very interesting and important paper entitled:

THE DUTY OF MEDICAL COLLEGES AND THE GENERAL PRACTITIONERS TOWARD MENTAL AND NERVOUS DISEASES.

He stated that psychological medicine stood to-day in this country where many now prominent specialties stood ten or fifteen years ago. He referred to the need of a more general knowledge and study of it. The lack of clinical lectures on mental diseases in our different colleges was especially deplored. With the exception of the University of Pennsylvania, there was no medical college in the United States where systematic clinical instruction in insanity was carried on to any extent.

At the close of the paper a resolution was adopted, requesting medical colleges to attempt the instruction of medical students in psychiatry as much as possible.

Resolutions were adopted expressing regret and sorrow at the

DEATH OF DR. GEORGE M. BEARD,

who had been one of the founders and officers of the Association, and whose talents and scientific attainments had done much toward securing its success.

At the evening session a paper was read by REV. HERBER NEWTON, of New York, entitled:

THE OBLIGATIONS OF THE SANE TOWARD THE INSANE.

It was an eloquent but somewhat sentimental plea for greater care and watchfulness toward the insane. He also urged the special training of nurses destined to have charge of insane cases.

DR. C. K. MILLS criticised the paper severely, saying that it gave an entirely wrong impression of the present condition of the insane, at least in Pennsylvania. In that State there was no danger of the wrongful incarceration of insane persons, nor were the insane brutally treated.

He was followed in the same strain by MR. FRANK WELLS, formerly of the State Board of Charities.

DR. H. MARION SIMS, of New York, read a paper entitled:

PREVENTION OF INSANITY IN CERTAIN CASES OF NERVOUS AND HYSTERICAL WOMEN.

He thought that a careful diagnosis and treatment of any diseases of sexual organs in these cases would often prevent insanity. He also asserted that there was entirely insufficient arrangements for the gynecological treatment in most insane asylums.

MR. CLARK BELL, of New York, read a paper containing much valuable matter, entitled:

THE LEGAL RIGHTS OF THE INSANE, AND THEIR ENFORCEMENT.

MR. BELL went over the whole range of English law upon the subject, and stated the ameliorative results obtained by the Parliamentary commission to inquire into the condition of the insane. He urged that there was room for improvement in the laws of his own State, and

that a general law should be passed giving Commissioners of Lunacy the right to visit and examine patients quarterly, or at least twice a year; to effect the discharge of any one who may be improperly detained; to punish for cruel treatment of patients; to extirpate mechanical restraints and seclusion, and, most important of all, to provide for the supervision of superintendents.

By unanimous vote

STANDING COMMITTEES.

were appointed on the following subjects:

To prepare a proper system of laws for the commitment and general supervision of the insane.

To collate statistics regarding insanity in the United States.

To urge a more general teaching of psychiatry in medical colleges.

Communications were received during the session from P. Piper, Prussia; Drs. Richardson, H. B. Lomas, Halthouse, D. H. Tuke, Peddie, Cloaston, J. Critchlow, Bowie, and Maudsley, of Great Britain, and Dr. Maynon, of Paris.

ELECTION OF OFFICERS.

The following officers were elected:

President, Dr. Joseph Parrish, of Burlington, N. J.

Vice-Presidents, J. S. Jewell, M.D., Chicago; C. C. Yeaman, M.D., Detroit; E. C. Seguin, M.D., New York; Mary Putnam-Jacobi, M.D., New York; C. L. Dana, M.D., New York; J. C. Shaw, M.D., Brooklyn; Hon. M. D. Follitt, Marietta, O.; Hiram Corson, M.D., Conshohocken, Pa.; Hon. R. A. Lamberton, Bethlehem, Pa.; Dr. J. P. Barcroft, Concord, N. H.; J. C. Hall, M.D., Monroe, Wis.; Hon. Joseph Perkins, Cleveland, O.; Dr. W. J. Morton, New York; Dr. Walter Channing, Boston; Garrett S. Cannon, New Jersey.

Secretary and Treasurer, Miss A. A. Chevallier, Boston.

Executive Committee, Dr. Parrish, Dr. W. B. Atkinson, Clark Bell, Esq., New York, and Dr. C. K. Mills, Philadelphia.

DR. WM. HUNT, of Philadelphia, showed to the Association a number of beautiful macroscopic sections of the brain, prepared by Dr. H. D. Schmidt, of New Orleans.

Owing to the large number of papers remaining unread, it was voted to have an extra session Friday, at 3 P.M.

SECOND DAY—FRIDAY, JANUARY 26TH.

An adjourned session was held on Friday afternoon, in order to allow the reading of papers.

DR. T. D. CROTHERS, of Hartford, Conn., read an able and original paper entitled

THE PREVENTION OF INSANITY BY THE RATIONAL TREATMENT OF INEBRIETY.

The speaker estimated that from twenty to fifty per cent. of insanity was caused by inebriety. Inebriety was a physical disease, but one that should be placed near the border-land between sanity and insanity. There were about three hundred thousand inebriates in the United States, with a yearly mortality of fifty thousand.

From inebriety come from sixty to eighty per cent. of all paupers, and from seventy to ninety per cent. of criminals.

Dr. Crothers argued that the inebriate should be recognized legally as diseased, and should be cared for by the State. Workhouse hospitals might be built from the tax on liquor traffic.

The rational treatment of inebriates is to isolate them in hospitals.

DR. CARL SEILER, of Philadelphia, read a paper on "The Connection Between Alcoholism and Insanity, or, the Relation of Inebriety as a Cause of Insanity," prepared by Dr. A. Baer, of Berlin. A paper on "Intem-

perance and Insanity," prepared by Dr. Norman Kerr, of London, was read by Mr. E. P. Allison, of Philadelphia. Dr. Charles H. Thomas read a paper prepared by Dr. J. Milner Fothergill, of London, on "Do Perversions of Assimilation Play any Part in the Introduction of Insanity?" A paper on the "Systematic Education of the Insane as a Means of Cure," prepared by Dr. James Lalor, Superintendent of the District Asylum, Dublin, was read by Dr. Ulrich, of Chester, Pa. A paper on "Some of the Conditions of Life which Influence the Production of Insanity," written by Dr. Charles Mercier, London, Assistant Superintendent of the Lunatic Asylum of London, was read by the Hon. Richard Vaux, of Philadelphia. The following, offered by Judge Peirce, of Philadelphia, was adopted:

Resolved, That the Association recommends to the careful consideration of physicians and superintendents connected with the institutions for the treatment of mental diseases, the value of regular and pleasant employment of their patients as a remedial agency in the treatment of mental disorders.

The following was also adopted:

Resolved, That the Association recommend to the Legislatures of the several States the adoption of a similar law as one passed in this State imposing penalties for issuing false certificates of insanity.

A Committee to consult about changing the name of the Association was appointed, to report March 1, 1883.

The Society then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, January 29, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

THE NEW YORK CODE OF ETHICS—ITS ENDORSEMENT BY THE SOCIETY.

THE meeting was called to order by the President, Dr. Webster, after which the Secretary, Dr. W. M. Carpenter, read the special call for the meeting signed by Drs. N. Bozeman, L. A. Sayre, T. G. Thomas, F. N. Otis, W. M. Polk, and others.

DR. D. B. ST. JOHN ROOSA offered the following:

Resolved, That the Medical Society of the County of New York approves of the amendment of the by-laws of the Medical Society of the State of New York, adopted at the annual meeting of February, 1882, and that we endorse the system of medical ethics therein substituted for the former one, especially because it leaves the matter of consultations to the discretion, the honesty, and the humanity of the individual practitioner; and although we decline to instruct our delegates to the State Society, we respectfully recommend to our representatives that they labor for the simplification of the system of medical ethics until it shall not contain specific rules for the regulation of professional etiquette, but only authorize procedure against conduct plainly unworthy a physician and a gentleman.

Dr. H. G. Piffard offered the following as a substitute:

Resolved, That the Society reposes confidence in the intelligence and integrity of the delegates recently elected by it, and that it trusts them to act in such a manner as shall best conduce to the interests of the medical profession of this city, State, and county.

After discussion, participated in by Drs. Garrish, Jacobi, A. H. Smith, and others, Dr. Roosa struck out the last clause of his resolution, when Dr. Piffard withdrew his substitute.

Dr. Dwyer next offered the following substitute to the original resolution:

Resolved, That the code of ethics recently adopted by the New York State Medical Society should be rescinded.

This was in turn discussed by Drs. Austin Flint, C. R.

Agnew, Fordyce Barker, O. D. Pomeroy, F. A. Burrall, S. O. Vanderpoel and others. The previous question was then ordered on the substitute, viz.: that the code of ethics recently adopted by the New York State Medical Society be rescinded, and the ayes and nays were demanded. The long roll was then called by the Secretary, with the following results: Ayes, 60; Nays, 147.

A motion to adjourn was put and lost. Then a standing vote was had on Dr. Roosa's motion endorsing the new code, with the result of 135 affirmative to 43 negative, and the meeting adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE TRAGEDY AT HOUNSLOW—THE PERILS OF THE DOCTOR FROM BLACKMAIL—THE COMMUNICABILITY OF PHTHISIS—HIGH RATE OF MORTALITY ON OCEAN STEAMERS—TYPHOID FEVER IN LONDON—SPONGE-GRAFTING—REOPENING OF MUSEUM OF COLLEGE OF SURGEONS.

LONDON, January 13, 1883.

YOUR readers have, no doubt, heard that a medical man at Hounslow has committed suicide under tragic circumstances. It can scarcely be possible, though, for them to realize the excitement the sad event has caused here, not only locally, but throughout the community. The facts are briefly these: Dr. W. W. Edwardes, a young medical man of thirty-two, went to Hounslow about fourteen months ago as partner in the practice of Dr. Whitmarsh. The latter had been twenty years in Hounslow, and represented that he had a general practice of about two thousand pounds a year. Dr. Edwardes paid eighteen hundred pounds for a half share. He soon became dissatisfied, and he and his partner were evidently lately on bad terms. Mrs. Edwardes asserts that the amount of actual cash received by her husband during the first twelve months was only £180, of which sum £160 were absorbed in keeping his carriage. The day before Christmas day Dr. Edwardes received a letter from a laborer's wife, whom he had been attending for some nervous and uterine trouble, charging him with having behaved improperly to her on the previous day and threatening proceedings. The deceased at once communicated the fact to his partner, his wife, and his father-in-law, and asserted the falsity of the charge. The woman, in fact, afterward retracted it, and, together with her husband, signed a written retraction and apology, which was also signed by Dr. Whitmarsh as a witness. She seems to have subsequently renewed the charge, saying that although she had consented to withdraw it, it was virtually true. Dr. Edwardes then determined to prosecute her for libel.

In the meantime, however, Dr. Whitmarsh endeavored to induce Dr. Edwardes to withdraw from the practice and dissolve the partnership for the small sum of five hundred pounds. It appears that on the night of the death of Dr. Edwardes the solicitor of the woman in question met Dr. Edwardes at Dr. Whitmarsh's house and threatened the former to obtain a warrant for his immediate apprehension. Dr. Whitmarsh, it appears, took occasion to renew his efforts to dissolve the partnership on very unfavorable terms to Dr. Edwardes. The latter appears to have gone home in great distress and to have committed suicide with prussic acid almost immediately. The whole of the facts are not yet before the public, as the inquest is still proceeding.

The public feeling at Hounslow has been so strong that the surviving partner has been compelled to leave the town for a time, and his house has been attacked by a mob of several thousand persons. The woman who made the

charge has not yet been examined before the coroner, but from what has been already elicited respecting her character, her evidence does not seem likely to be worthy of much credence.

Dr. Edwardes was an industrious student, very popular at his hospital when resident obstetric officer, and appears to have gained the esteem of his fellow townsmen, although he had been but a short time at Hounslow. He was, however, a singularly nervous, sensitive, reserved, and in some respects, eccentric man. I can quite corroborate the evidence given on this head from my personal knowledge of him. When a student at St. Mary's Hospital, he refused to compete on one occasion in a class examination for which he had been working hard many months, simply because a fellow-student would not exchange numbers with him and let him go in first for the *viva voce*.

The Collective Investigation Committee of the British Medical Association have issued a circular on the "Communicability of Phthisis." The general consensus of opinion amongst the profession at present would seem to be that it *may* be communicated under some circumstances, but that such communication does not often occur. The *British Medical Journal*, in a recent article, enumerates some instances apparently showing the transmissibility of phthisis from patients to persons brought into close relation with them. The writer does not mention, however, one possible explanation of such cases, viz., that, as Dr. Henry MacCormac, of Belfast, has suggested, the disease may be induced in healthy persons by breathing and re-breathing their own pulmonary exhalations when confined either alone or with invalids in a badly ventilated chamber.

Attention has lately been called to the high rate of mortality among passengers on steamers crossing the Atlantic. It has been stated that the sanitary arrangements on these vessels may be partly to blame. Another explanation is the unsatisfactory position of ship surgeons. They are badly paid, worse lodged, and their recommendations on sanitary matters often treated with contempt. In any case, they have no authority to enforce their recommendations.

Typhoid fever is still prevalent both in London and in Paris. In spite of the progress made in sanitary matters and the improved systems of drainage, I cannot help thinking from my own personal experience of both cities that much still remains to be done and that the present state of affairs is accountable for much of the typhoid now prevalent. In London, if not in Paris, the main drainage system is now complete and mostly in good order, but the drainage of individual houses is often defective. I have been in many West-end houses in which the water-closets were placed in the centre of the house and ventilated only on to the staircase. I noticed this arrangement in the town house of the late Earl of Beaconsfield in which he died.

Several cases of successful sponge-grafting have lately been reported.

Professor Owen's friends are very anxious about his health.

The President of the College of Surgeons, Mr. Spencer Wells, held a reception at the College of Surgeons, this afternoon, on the occasion of the re-opening of the Museum after extensive repairs. Most of the leading men were present. The improvements in the Museum met with general approval.

BUBO MAY BE A BIRD.—The *Boston Medical and Surgical Journal*, November 2, 1882, contains the following warning: "Lest any of our readers may misunderstand a statement in the daily press that a specimen of *Bubo Virginiana* was lately seen in Pemberton Square, we take occasion to explain that this is merely the expression of the scientific reporter for the great horned owl which lately appeared in that locality."

THE CARE OF THE CHRONIC INSANE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have always been opposed to the distinction between hospitals for the acute and chronic insane, and am not in any way responsible for any regulation or usage by which the Hudson River State Hospital has obtained the distinction of being for the acute insane alone. The allusions made by Dr. Chapin, in his letter to your journal of January 20th, to myself, have therefore no pertinency whatever to the question as to the "scientific," "humane," and "economic" care of the insane in our State.

Every person of ordinary intelligence in our State knows that the chronic insane are better treated in the asylums for the chronic insane than they are, or ever can be, in the county poor-houses. Every one at all familiar with the Willard Asylum, which is under the care of Dr. J. B. Chapin, your correspondent, knows how admirable it is in many of its provisions. What I object to is the absence in our State of any broad plan for the "scientific," "humane," and "economic" care of the insane as a great class, including acute and chronic cases. At present there is no such plan. County officials naturally send county insane where they can be treated the cheapest. At this time they are sending all portable cases across the State to Willard and Binghamton, because in those places the rate of board per week is lower than it is possible to make it at the State Hospital at Poughkeepsie, or in any other State or private asylum, on the basis of present number of inmates. When the State Hospital was first opened at Poughkeepsie it cost nearly thirteen dollars a week to keep a patient, because the population of the hospital was small and every item of expense in attendance and maintenance was divided among a few only. An establishment had to be maintained on the basis of a few patients which would have been adequate for three times their number. As the population in the hospital increased, the expense per head went down to less than half the original cost; but it has been impossible to make the cost, on the basis of two hundred and fifty or three hundred patients, the present population, as low as Dr. Chapin can make it on a basis of fifteen hundred or two thousand patients. Through the favor of the State Board of Charities, and through opinions favorable to the western part of the State, and legislation procured to maintain asylums for the chronic insane, we now see the remarkable process going on of drafting the insane from the eastern counties of our State to fill and compel the enlargement of Willard and Binghamton. Of course this depletes the State Hospital at Poughkeepsie, advances the cost of board in that institution, and makes it therefore more and more unpopular with county supervisors and superintendents of the poor. New York and Kings County, and some others, are out of the calculation, because in those counties they undertake to provide for their insane, and having large numbers to provide for, keep down the per capita cost to a very low figure—much lower, let us say, than the immediate interests of the insane justify, or the remote interests even of the taxpayer make desirable.

Now let me say in a word what I think should be done. Stop sending the chronic insane from Hudson River or eastern counties to Willard or Binghamton after those institutions are full, and use the three hundred acres owned by the State at Poughkeepsie, in connection with the State Hospital, for such cheap model lodging-houses and workshops as would afford sanatoria and schools not only for such cases as become chronic in the halls for the treatment of the acute there, but to relieve the overcrowding at the hospitals in New York and Kings Counties.

The cost of the care of the acute insane will always be four or five-fold greater than that of the chronic insane. Sixty or seventy per cent. at least of the chronic insane are available for such industries as would provide, meas-

urably, not only for their own support, but to lessen the cost to the State of the care of the acute insane. A hospital for the care of the acute insane should be allowed to retain within its precincts a sufficient population to secure a "scientific," "humane," and "economic" care of all classes of its beneficiaries. I am in full accord with Dr. Chapin regarding the cruelty of taking insane persons to common county houses. It should be forbidden by law. I urge, and I trust with his approval, that every existing State hospital be not only allowed but compelled to provide for its chronic insane, so far as possible, within its own precincts.

I do not propose, by carrying one thousand or fifteen hundred patients from New York and Kings County to Poughkeepsie, to make that institution another chronic asylum, as he alleges I do, but only to make it an economic success, and to relieve the crowded institutions of New York and Kings Counties, and prevent the present expensive and objectionable method of transporting chronic patients from eastern counties to keep Willard overfull, and apparently justify the objectionable proposition to enlarge the Chronic Asylum at Binghamton.

If New York County and Kings choose to get farms of their own on which to colonize their chronic insane, I shall not object; but it does seem to me that the State property at Poughkeepsie should be turned to better account than it now is. That institution must be enlarged for the accommodation of the chronic insane in its vicinity, or else shut up.

Yours faithfully,

C. R. AGNEW.

"MEDICAL LATIN."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: This being my earliest opportunity, may I claim the privilege of a few words as to Dr. Rice's "rejoinder" to the article of mine entitled "Medical Latin," which appeared in THE MEDICAL RECORD of November 18th?

The Doctor alleges that "the paper contains some incorrect and misleading statements, which, if left uncontradicted, might" have a certain mischievous effect.

Briefly, the statements are that such nouns as *carbonas*, etc., are rightly classed as feminine and of the third declension, and that *rhus*, the fruit, is neuter.

Dr. Rice holds, on the contrary, that such words as *carbonas* are not substantives, but adjectives in concord with subintelligible substantives of the masculine gender, and that *rhus* is feminine, whether tree or fruit.

I do not propose to contradict Dr. Rice's assumptions; but honestly believing them to be erroneous, shall endeavor to show why I so believe.

The Doctor, in his "rejoinder," presents no arguments, but dwells on the fact that, in certain discussions regarding pharmacopœial nomenclature, "it has been shown that there is no analogy whatever in Latin for the feminine gender in the case of these nouns, it being altogether wrong to bring them into one category with the large class of Latin feminines ending in *-tas* (as *æstas*, *pietas*, *brevitas*, etc.)." He then refers us to certain arguments in *New Remedies*, 1882, p. 58, and adds: "It may be considered as finally settled that these terms should only be used as masculines." *Longè aliter censeo.*

Having read the article. I think I am prepared to prove that it refutes itself. Let us see (second paragraph):

"When the chemical terms sulphate, nitrate, carbonate, sulphite, etc., were first introduced and translated into Latin for pharmaceutical use, about the beginning of the present century, the different translators used them in various genders, according to their judgment," etc.

Which being so, the question arises, What, grammatically, are the terms sulphate, carbonate, etc.? Substantives or adjectives? That they are not adjectives is proved by the fact that they will not unite in grammati-

cal concord with any substantive, except in apposition. What say the dictionaries? The dictionaries decide unanimously that they are substantives, each representing abstractly a chemical combination.

How, then, should they have ceased to be substantives by being *translated* word for word into Latin? The writer admits, in effect, that by changing *-ate* into *-as* and *-ite* into *-is*, they are "translated into Latin," but insists, this having been done, that they are no longer substantives, but adjectives agreeing with *sal* understood.

But, if a single noun cannot be translated from one language into another by a single word, we are always obliged to resort to periphrasis, and every supplementary word necessary to the sense must be expressed, or we have imperfect sense or stark staring nonsense. Adjectives like *Capenas* will not supply the place of nouns like carbonate; adjectives like *Capenas*, found without a substantive expressed, invariably refer to persons, not to things.

Having assumed that such nouns as carbonas are adjectives, the writer is at pains to prove it by trying to show that they cannot be substantives. Hence he would have it that they do not belong to the large number of feminine nouns in *-tas*, making the genitive in *-ātis*, because their nominatives do not end in *-tas*; they cannot be classed with Greek feminines in *-as*, because their genitives do not end in *-adis* or *-antis*; nor with Greek neuters in *-as*, *-ātis*,¹ the *a* in the genitive of *carbonas*, etc., being long. He admits, however, that the termination *as* (*-ātis*), "which is the same as that in our modern terms *sulphas*, etc., does occur in Latin," and enumerates among instances "some technical and fanciful terms, like *anas*, *anātis*, old womanhood," but adds: "This noun is feminine, but really belongs to § 5 above" (nouns in *-tas*), "as it is contracted from *anitas* (*anītātis*)."

The termination *-tas* in the nominative is of no moment, as I shall presently show. That which in these pharmaceutical nouns demands the classification, which is claimed for them in "Medical Latin," is the genitive in *-ātis*. The genitive being in *-ātis* (not *-ātis*), they fall within the category of nouns so forming the genitive, no matter what the nominative may be. Did they make the genitive in *-adis*, *-antis*, or *-ātis*, we would as promptly refer them to the class thereby plainly indicated.

On the writer's own argument we might insist that *acetas* is a noun in *-tas* as much as *astas*. But wrongly, for it cannot be said that the *t* in *acetas* belongs to the termination, for it is part of the root in *acetum*; and in this particular the right of *acetas* and its analogues to this classification is approved by the admission of *astas*, which is in precisely the same predicament, the *t* (which occurs also in its primitive, *æstuo*) being part of the root, not of the suffix.

But were we disposed to maintain the claim of all our pharmaceutical nouns in *-as* to this classification, we would be sustained by the writer's own admission that the feminine *anas*, *anātis*, is contracted from *anitas*, *anītātis*.

The "translators," desirous of names as homophonous as possible to the original substantives, had warrant, most assuredly, in the examples of *anas* for *anitas*, and *satias* for *satietas*, in writing *acetas* instead of *acetitas*, etc.

As regards *sulphis*, etc., the writer insists that there is only one true Latin noun in *-is*, *-itis*, namely *lis*,² the lawsuit, which is feminine, but that there are a number of geographical and patronymic adjectives in *-is*, *-itis*, to which *sulphis*, etc., belong.

But *sulphis*, etc., being substantives translated, like *sulphas*, etc., are substantives themselves, and can follow only the analogy of *lis* in making the genitive in *-itis* and taking the feminine gender.

With regard to the Latin *rhus*, authorities differ.

¹ Among examples in *-as*, *ātis*, he mentions as a true Latin word *anas*, a duck. No philologist would so characterize it. It is a metaphor of *ῥῆσα*; theme, *ῥω*, whence Latin *no*, to swim. In the same way the German *ross* becomes the English *horse*.

² *Lis*, *ditis*, the god, is a very good Latin noun substantive; *dis*, *ditis*, rich, a good noun adjective of all genders. Neither of them is patronymic or geographical, or signifies descent.

Ainsworth gives *rhus*, -i. m. and f., the tree; *rhus*, -i. n., the seed or berry, quoting for the latter Pliny and Celsus, without reference to edition. Andrews gives *rhus*, *rhois*, and the accusatives, *rhūn* and *rhūm*. According to the reading preferred by Dr. Rice, Celsus made the tree masculine; and, inasmuch as the Latin of Celsus is unimpeachable, it is unfortunate for his argument in favor of *rhus glabra*. But the Doctor admits that, "in later writers, *rhus* occurs as neuter." Yes; and why? Because it is agreeable to the idiom of the language. Though Dr. Rice calls the rule for neuter fruit names "an alleged rule," it is a rule which is acknowledged by all scholars.

The Doctor says that *rhus* is not of the second declension; that "in Latin, it belongs to the third declension, and has the genitive¹ usually *rhois*."

He errs. *Rhūs* (Greek *ῥῶς*), in Latin, forms its genitive singular usually according to the third declension, *rhois*; and its accusative, according to the Greek second declension, *rhūn*; and, according to the regular second declension, *rhūm*.

Referring to the genitive, he says, in a note: "In Greek, the corresponding noun may take the terminations" (termination?) "of either the second or third declension—*ῥῶν* or *ῥῶς*."

It has a much larger variety of inflection. It may make the nominative singular according to the second declension, *ῥῶς*, or according to second or third, in the contracted form, *ῥῶς*; the genitive, according to the second *ῥῶν* or *ῥῶν*, and according to the third, *ῥῶς* or *ῥῶς*, the accusative singular according to the second, *ῥῶν* or *ῥῶν* (*rhūn*), and in the third declension, *ῥῶς*.

The Doctor declares with emphasis: "The form, *rhūm*, is the accusative singular of the third declension!"

Such it is not; and it is still for Dr. Rice to produce the first recorded instance of an accusative of the third declension, Greek or Latin, ending in *um*.

If *rhus*, like other Latinized Greek nouns, had an accusative of the third declension, it would be *rhoa*, as in Greek.

The Greek diphthong *ōū* was pronounced like long *ū*. The Romans, in spelling Greek words with Roman letters, substituted *ū* for this diphthong. Thus we have *rhūis* for *ῥῶς*, *chirūrgus* for *χειρουργος*, *Œdipūis* for *Οἰδίπους*; *rhūn* for *ῥῶν*, contracted from *ῥῶν*, the regular Greek accusative singular of the second declension.

One objection of Dr. Rice to *rhus glabrum*, is that *rhus* here being supposed to mean the fruit, *glabrum*, which has especial reference to the tree, cannot be predicated of it. With equal reason, he might object to the English name, sweet chestnut, applied to the tree, though the adjective serves to show that the tree meant is not the one which bears the horse-chestnuts, but a different one. *Rhus glabrum* does not mean the glabrous fruit of the *rhus*, but the fruit of the glabrous *rhus*.

The Doctor refers, in a note, to one Palladius Martialis. Who was he? There was a Palladius Rutilius Taurus, usually quoted as Palladius, who wrote on rural affairs and called the divisions of his principal work after the months; one of them being *Martius*; but I nowhere find mention of Palladius Martialis.

Dr. Rice charged me with having made "some incorrect and misleading statements," which he proposed should not go "uncontradicted." He has accordingly contradicted much, without, in my opinion, disproving anything.

Very respectfully,

JOHN A. ARMSTRONG.

BROOKLYN, E. D., January 19, 1883.

LONDON SMOKE.—London has only about 24 per cent. of sunny days, while towns near by have, on an average, 12 per cent. more.

¹ *Genitīvus* is formed from *genitum*, supine of *gignere*. The Greek name is *γεννη-πῶσις*.

² *ῥῶς ἑξάνθητα καὶ κοπέντα*.—Galen.

TWO CASES OF CARDIAC ASPIRATION.

TO THE EDITOR OF THE MEDICAL RECORD.

THE interest excited by Dr. Westbrook's very suggestive article on abstraction of blood from the right heart leads me to refer to two cases which came under my notice several years ago.

A young woman, aged about twenty-five, was suffering from acute nephritis. She was admitted to Bellevue Hospital and was under the care of the House Physician, Dr. P. M. Chadwick, in the fall of 1877. One afternoon, while sitting up in bed, and being apparently in fair condition, she suddenly fell over and ceased breathing. Heart action soon ceased. All possible means of restoration were used, but without success, by Dr. Chadwick and myself. Finally, Dr. E. G. Janeway, in whose service the case was, suggested the aspiration of the right ventricle. A veterinary hypodermic needle was inserted between the fourth and fifth ribs, a little to the left of the sternum, and half an ounce of blood drawn off. No result followed.

I have only meagre notes of this case and cannot recall the results of autopsy.

The second case, which occurred in my service in April, 1878, was that of an Irishman, a hard drinker, aged thirty-eight, slightly built and anæmic, who was suffering from acute lobar pneumonia in left lower lobe.

The disease did not progress very favorably. On the eleventh day he still had consolidation; temperature, 102°; pulse, soft; general condition, weak; slight signs of œdema of lungs. Large doses of whiskey and ammonia were given, also digitalis. In the afternoon the patient was suddenly attacked with tonic and clonic convulsions. Respiration and convulsions soon ceased; the heart continued to beat, however; artificial respiration, injections of ammonia, ether, inhalations of nitrite of amyl were applied in vain.

I then, at the suggestion of Dr. Janeway, inserted the hypodermic needle into the right ventricle and drew off an ounce of fluid blood. It produced no effect.

Post-mortem showed the trace of the needle through the heart-tissue and the right ventricle was empty.

I do not consider puncture of the right ventricle a difficult or even very dangerous operation. In experimenting upon dogs and cats I have often stabbed and pricked the heart substance, with the result sometimes of stimulating, never of checking its action. I would not advise aspiration of the right auricle, however, under any circumstances. Not because it is necessarily dangerous, but physiologists are agreed that the auricle is chiefly a regulator and reservoir, not a propelling muscle. The unloading it could have little effect on the work of the heart.

Cardiac aspiration may be indicated in cases of sudden heart paralysis, when the ventricle is presumably over-distended. The needle may possibly relieve over-distention, and by its irritation set the heart to work again. It is decidedly a last resort and was not tried in the two cases reported until every other measure was exhausted. In cases of laboring heart I should vastly prefer venesection, whose potency is unquestionable.

C. L. DANA, M.D.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 20, 1883, to January 27, 1883.

WATERS, WILLIAM E., Major and Surgeon. Detailed as member of Army Retiring Board, to convene at Fort Porter, Buffalo, N. Y., February 2, 1883. S. O. 21, par. 1, A. G. O., January 25, 1883.

HEIZMAN, CHAS. L., Captain and Assistant Surgeon. Will be relieved from duty in the Department of the

Columbia, and ordered to report to the Commanding General Department of the South for assignment to duty. S. O. 20, par. 10, A. G. O., January 24, 1883.

KILBOURNE, H. S., Captain and Assistant Surgeon. Leave of absence for one month, with permission to apply for an extension of two months, is granted. S. O. 218, Department of Dakota, December 21, 1882.

PRICE, CURTIS E., Captain and Assistant Surgeon. Detailed as member of Army Retiring Board, to convene at Fort Porter, Buffalo, N. Y., February 2, 1883. S. O. 21, par. 1, A. G. O., January 25, 1883.

SKINNER, JOHN O., Captain and Assistant Surgeon. Will report in person, at the expiration of his present leave of absence, to the Surgeon-General for duty in his office. S. O. 20, par. 10, A. G. O., January 24, 1883.

SPENCER, WM. G., Captain and Assistant Surgeon. The leave of absence on Surgeon's certificate of disability, granted September 20, 1882, is extended three months on Surgeon's certificate of disability. S. O. 16, par. 4, A. G. O., January 19, 1883.

TAYLOR, MARCUS E., Captain and Assistant Surgeon. Will report in person, at the expiration of his present leave of absence, to the Commanding General Department of the East, for assignment to duty. S. O. 20, par. 10, A. G. O., January 24, 1883.

WOOD, MARSHALL W., Captain and Assistant Surgeon. Will be relieved from duty in the Department of the East, at the expiration of his present leave of absence, and will report in person to the Commanding General Department of the Columbia, for assignment to duty. S. O. 20, par. 10, A. G. O., January 24, 1883.

WOOD, MARSHALL W., Captain and Assistant Surgeon. At expiration of present leave of absence, relieved from duty in the Department of the East. S. O. 15, par. 1, Department of the East, January 26, 1883.

WYETH, M. C., First Lieutenant and Assistant Surgeon. Is relieved from duty at Fort Snelling, and will proceed to Fort Stevenson, Dakota Territory, and report to the Commanding Officer of that post for duty. S. O. 15, par. 1, Department of Dakota, January 18, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending January 27, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
January 20, 1883	0	10	62	9	55	43	2	0
January 27, 1883	0	10	59	3	80	44	0	0

NEW BOOKS.—One hundred and nineteen new books, and fifty-eight new editions, upon medical and surgical subjects were published in Great Britain in 1882.

A HOMŒOPATHIC physician in Switzerland advertises that he performs "surgical operations *milder* than any physician of the other school." At last we know what a homœopathic surgeon is.

INTERNATIONAL MEDICAL CONGRESS FOR 1884.—It is announced by the Secretary-General of the International Medical Congress that the eighth session of that body will be held in Copenhagen during the days from the 10th to the 16th of August, 1884.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Whole No. 640

Original Articles.

THE ETIOLOGY AND TREATMENT OF CERTAIN FORMS OF NON-PUERPERAL UTERINE HEMORRHAGE.

By PAUL F. MUNDÉ, M.D.,

PROFESSOR OF GYNECOLOGY AND OBSTETRICS AT THE NEW YORK POLYCLINIC; PROFESSOR OF GYNECOLOGY AT DARTMOUTH COLLEGE; GYNECOLOGIST TO MOUNT SINAL HOSPITAL, ETC.

I DO not propose to discuss all the pathological conditions which may give rise to uterine hemorrhage in the non-puerperal state. While doubtless something new might still be said on the menorrhagia and metrorrhagia produced by carcinoma of the cervix and body of the uterus, by intra-uterine villousities, by fibroid tumors, by displacements and the therefrom resulting hyperæmia, by chronic ovarian congestion and inflammation; and while there may still be points of interest and doubt both as to the pathology and treatment of these conditions, I intend to limit my remarks to several etiological factors in the production of hemorrhage from the non-puerperal uterus, which seem to me rather less common and less recognized than those above referred to. In discussing this subject I beg to be understood as speaking of either profuse *menstrual* flow, or of a bloody discharge in the *inter-menstrual* period, when using the term "hemorrhage." The predominating variety will be specified at the proper place.

1. *Non-puerperal erosion of the cervix uteri.*—That blood may and does ooze from an abraded surface either of skin or mucous membrane, even though the abrasion be merely that of epidermis or epithelium, is an old story; and that this may take place on the cervix uteri, is also well known; but I do not think it is sufficiently recognized that, in certain instances, a more or less marked increase of the menstrual flow, or an inter-menstrual sanguineous discharge, or a constant bloody oozing, may be due to nothing but an apparently trifling superficial erosion of the vaginal portion of the cervix uteri. Such patients may have been treated by ergot, acids, and other hemostatics, by astringent injections, by rest and ice, with but temporary arrest of the oozing, until finally a specular examination is made, and the bleeding found to proceed, not from the uterine cavity, but from the eroded cervix. Only by a speculum can this diagnosis be made, for the finger can but suspect it if the surface of the cervix is felt to be particularly soft and velvety; and this suspicion may become almost a certainty if blood is found on the finger when it is withdrawn.

On exposing the cervix with a speculum, the whole or a portion of it is seen to be of a bright red color, with a rough surface, which bleeds readily on being wiped with cotton. This erosion may be situated on both the anterior and posterior lip, or on one only; in anteversions on the anterior, in retroversions on the posterior lip. The cause of this situation of the erosion depends on the cause of the lesion itself, namely, on the almost invariably present cervical catarrh. According as the profuse acrid discharge flows chiefly over the anterior or the posterior lip, is the erosion found on the respective lip.

In appearance the erosion resembles the well-known fruits, the tomato, the raspberry, and the strawberry. If the epithelium is merely abraded the surface looks raw, deep red and shiny, with dilated blood-vessels crossing

the field, not unlike the surface of a full-ripe tomato; if the papillæ also are enlarged, we see numerous bright-red elevations, like the tomato with its skin removed, or like the ridges on a raspberry; and if, in addition to these, the cervical glands are distended and filled with white or yellow opaque mucus, we have between the red papillæ yellowish white dots, similar to the seeds of a ripe strawberry. This description may seem, and, of course, is somewhat fanciful; still, it conveys fairly well the appearance of and difference between these three stages and forms of cervical erosion.

This lesion is found in virgins as well as married women, both nulliparæ and parous. I have seen young girls with intact hymen, who consulted me for profuse glairy, yellow discharge, menorrhagia, and "spotting" in the interval, the cause of which was such a cervical erosion; and married women who had had no children, or had not been pregnant for many years, in whom the cervical epithelium became abraded for some mysterious reason.

As a rule, the causes of this lesion are twofold: 1, catarrhal discharge from the cavity of the cervix, and, 2, friction of the cervix against the posterior vaginal wall. The fact should not be overlooked that in poorly nourished, debilitated women, such an abrasion of epithelium is much more liable to take place than in strong, healthy females.

The form of erosion to which I now refer is *not* that produced by and found combined with eversion of a lacerated cervix. The simple erosion is situated on the outer surface of an otherwise entirely sound cervix.

The chief symptom produced by this simple erosion is the profuse, greenish-yellow or sanious discharge, which annoys, and, in course of time, debilitates the patient. If a young girl, she is distressed by the soiled linen which the laundress naturally criticises, and by the constant moisture of the vulva; if a married woman, she fears possible injury to her husband, and consequent unjust suspicion of herself. But not this alone. In addition to the discharge, the menstrual period is more profuse or prolonged, and bloody spotting of the linen is observed in the interval. This loss of blood is usually not serious, but its recurrence and continuance not only mentally but physically depresses the patient, until she consults her family physician, who, especially if she be an unmarried girl, naturally feels averse to making an examination, and prescribes mild astringent injections, and possibly tonics, if anæmia is present. The latter medication eventually does good; the former is at the best palliative, and sooner or later the patient consults a specialist, who makes the necessary examination, and discovers in the described erosion the cause of all the trouble. A mere cleansing of the eroded surface with cotton on the forceps is followed by the oozing of blood from every enlarged and uncovered papilla, and from the external os hangs a plug of thick green mucus.

The *diagnosis* of this condition is much easier than its cure. I have found the following treatment effectual in all the cases which have remained under my care for a sufficient length of time to achieve a cure. The cervix is exposed either through a Sims or cylindrical speculum (the latter answers as well or better), carefully wiped dry with absorbent cotton, and the tenacious mucous plug is sucked out of the cervical canal by a long uterine syringe, or by dry cotton, or a small sponge on a dressing-forceps. This accomplished, a solution of nitrate of sil-

ver, ʒj. to ʒj. is applied on a cotton-wrapped stick within the cervical canal and thoroughly over the eroded spot. A thin dust of finely powdered iodoform is then blown on the cervix through an insufflator, a tampon soaked in glycerite of tannin, equal parts, placed against it, a dry pledget over this, and the speculum is withdrawn. These tampons are to be worn for thirty-six to forty-eight hours, and an injection of tepid water, with one to two drachms of sulpho-carbolated zinc or plain sulphate of zinc should be used twice a day for three days, when the patient should again present herself for local treatment. The same application will probably be repeated every three days, until the erosion shows signs of healing, when a milder solution of nitrate of silver (ʒ ss. or gr. xx. per ounce) should be used; or the absence of improvement calls for a change of treatment. In very obstinate cases, with chronic cervical catarrh, it is essential to cure the latter (the cause of the erosion) first, and this is a difficult matter. The removal of the hypertrophied endo-cervical glands and mucous membrane by the sharp curette and cauterization of the base with strong nitric acid or the actual cautery, is usually an indispensable preliminary to a successful treatment of the catarrh. Occasionally I have found it necessary to apply nitric acid, or pure chromic or pyroligneous acid to the erosion, before a change for the better allowed me to return to the milder astringents and iodoform. In every case it is well to notify the patient that the cure is certain, but that she must persevere for several months, at least, or she will not recover.

In a few intractable cases I have found the negative pole of a galvanic battery, applied by means of a round button to the erosion, the positive sponge being placed over the abdomen, to produce a marked tendency to cicatrization. In one such case, the last resort of grafting healthy mucous membrane on the erosion, as practised once by Dr. R. W. Amidon, occurred to me, but the galvanic current finally produced a cure. Had neither of these methods succeeded, an unfailing remedy would have been the paring of the erosion with scissors (as in Emmet's operation for laceration) and the union of the raw surfaces by sutures. This method was already proposed by me in my paper on the "Indications for Hysterio-Trachelorrhaphy," published in the *Journal of Obstetrics* for January, 1879. While the usual symptom of these erosions is the profuse mucous discharge, the menorrhagia and inter-menstrual oozing produced by them is by no means uncommon. That this latter symptom is not usually attributed to so simple a lesion as a superficial erosion of the cervix, is my impression, and the reason why I have thought the subject a proper one for discussion. A typical case, which occurred in my practice some time since, may serve as an illustration of my remarks, and of the failure of the ordinary measures to arrest the hemorrhage, so long as its real cause was unrecognized and untreated.

CASE I.—Mrs. —, aged forty-two, mother of one child, now in his twentieth year, had always been in fair health, although not very strong, until some two years ago, when she began to menstruate more profusely than ever before, but without pain or special inconvenience. Gradually, however, she began to experience pain in the left ovarian region, and in the fall of 1881 the menorrhagia became so profuse as to confine her to her bed for more than one month. Her physician, a gentleman very eminent in another specialty, treated her by ergot by the mouth, by rest, and on two occasions by tampons introduced through a cylindrical speculum. The hemorrhage was arrested by this latter remedy, and the lady was assured by her physician, that no doubt the next menstrual period would be normal, if she would only remain quiet until it had passed. She therefore remained in bed, but, to her disappointment, the period appeared as profusely as before, with acute pain in the left ovarian region. When it had continued a week, the lady decided to consult a specialist, and discharging her former physician, who had not visited her for several

weeks, sent for me. I found a nervous, anæmic woman, who plainly showed the effects of suffering and loss of blood. After obtaining the above history, I suspected that the menorrhagia was due to ovarian congestion, and as the lady was bleeding quite profusely, decided first to try the effects of ergot by the rectum and a blister over the left ovary, with dilute aromatic sulphuric acid, before making a vaginal examination. I accordingly ordered suppositories, each containing five grains of Squibb's aqueous extract of ergot, three times daily, and, as required, other suppositories with two grains extract hyoscyamus and one-fourth grain extract belladonna to relieve the ovarian pain (the lady asserted that she could positively not take opium). I assured her that the hemorrhage would probably cease in a day or two, and that then I would make a vaginal examination and endeavor to ascertain the cause of the bleeding. But, to my surprise, a week passed and still the oozing continued, and the patient began to be alarmed, as her menstrual period had now lasted two weeks. I accordingly determined to make an examination at once, and found the uterus anteverted, the vaginal pouch rather narrow (as though contracted by senile atrophy), and the left ovary decidedly enlarged and tender. The cervix had a peculiar soft, velvety feel, which induced me to make a specular examination, which I did through a Sims, and on wiping the cervix clean I at once discovered the source of the hemorrhage in a flat, superficial erosion of the size of a twenty-five cent piece on the anterior lip. I could positively determine that no blood issued from the os, and could see it oozing in drops from the erosion when I wiped it with cotton. I informed the lady of this fact, discontinued the ergot suppositories and the sulphuric acid, and at once brushed the cervix over with tincture of iodine (this being the only agent I had with me), and inserted a tampon with glycerite of tannin.

Two days later I painted the erosion with a solution of nitrate of silver (ʒj. to ʒj.), and reapplied the tampons, and this treatment was continued for about six weeks, fifteen applications being made in all, six at her residence, the remainder in my office. After the first two treatments the hemorrhage ceased entirely, and with it the ovarian pain; in less than two weeks the patient was able to come to my office, and in two weeks more the erosion was healed, the subsequent applications being chiefly of iodoform and tannin (equal parts), blown on the cervix in order to toughen it still more. The menstrual period, which came on about one month after I began treatment, was perfectly normal in quantity and duration, and painless, and has so continued up to the present time, and the lady has gained more in strength and flesh than during many years past.

In this case I think the erosion was due to the friction of the cervix against the contracted vaginal pouch; there certainly was no cervical catarrh or vaginal leucorrhœa.

A very similar case was reported by Dr. Pallen, at the meeting of the New York Obstetrical Society held May 3, 1881, at which I was not present, and the first notice of which I had while correcting proof of the proceedings of that meeting for the January (1882) supplement of the *Journal of Obstetrics*, at which time I was already treating the case just related. Dr. Pallen's case was that of a girl of fifteen, who had become greatly prostrated by menorrhagia. Other means having failed to check the hemorrhage, a specular examination was made, and a condition of the cervix discovered "which resembled very closely the catarrhal condition of the vaso-pharyngeal mucous membrane, and from its surface, which was denuded of epithelium, there oozed forth blood in great drops." A similar treatment to that described by me, together with tonics, etc., cured the case.

I wish it distinctly understood that the bleeding surface may be merely the most superficial erosion, and that the so-called "granular degeneration of the cervix" is by no means necessary to produce menorrhagia. That the latter more aggravated form of cervical disease produces that

result is well known. The chief point to be made from the preceding remarks is that a profuse menstrual flow may often depend on a lesion of the cervix, which is discoverable only by the speculum, and curable only by local applications; and that in severe cases it may be advisable to make such an examination, and use such treatment even during the menstrual period itself.

2. *Laceration of the cervix unhealed or temporarily healed.*—One of the most frequent sources of hemorrhage is undoubtedly a cervical laceration. Not only does the blood flow freely at irregular intervals from the eroded surface of the hyperæmic and hyperplastic everted lining membrane of the cervical canal, but also does the subinvolution and engorgement of the whole uterus maintained by the lesion entail menorrhagia. It is not of the large lacerations that I wish to speak, but of the minor degrees, in which the larger part of the everted surface has healed spontaneously, or been glazed over by astringents, frequently, however, leaving a small patch of hyperplastic papillæ or granulations just within the cervical canal. These granulations bleed readily on touch during coition, and often from friction during walking. This can be felt by the examining finger, and easily recognized through the speculum. The hemorrhage produced by these granulations is usually not sufficiently profuse to be serious; it is chiefly the annoyance of more or less constant oozing, and of frequently soiled linen, which induces such patients to consult a physician. The treatment is very simple, and consists in exposing the cervix thoroughly through any speculum of sufficient size, and with fine curved scissors snipping off these exuberant papillæ, or scraping them away with a sharp curette; their base is then seared with strong nitric acid, and the usual astringent after-treatment pursued until the surface is completely healed. So long as the cervical canal gaps, a return of these granulations is not improbable; a permanent cure therefore is to be found only in restoring the integrity of the cervix by trachelorrhaphy.

Those lacerations which have been apparently perfectly healed by caustics and astringents, or in which Nature has repaired the rent so far as she could by glazing over the raw everted surfaces with a delicate cicatrix, not unfrequently disappoint patients and physicians by causing the same annoying bloody oozing described above, as springing from eroded granulations. Here the surface is perfectly smooth, the os small, and no cervical catarrh present; but scattered over the pale, dull pink surface of the everted lips are seen several small dots or patches of a bright red color, which bleed on being touched or wiped with cotton. These are merely spots of cicatricial tissue which have broken down, as such tissue is liable to do if exposed to friction or bruising. That the epithelium has disappeared from these patches is shown by their turning white when a solution of nitrate of silver is applied to them, while the neighboring sound surface remains unchanged.

These are the cases which have been "cured" by those physicians who do not believe in the operation for laceration of the cervix. In my paper, already referred to, on "The Indications for Hystero-Trachelorrhaphy," I refer to the merely temporary character of this form of "cure," and give a colored plate illustrating the breaking down of a cicatrized laceration, which was taken from a case of spontaneous healing. Recently I have met with two typical cases of this occurrence in patients who had been treated in the non-operative manner by prominent opponents of the operation.

CASE II.—A lady consulted me during the past autumn for a prolonged menstrual flow, saying that four years previously she was delivered of her only child, and from that time on had been under treatment. In the first place, the bloody lochia continued unusually long and were very profuse; then she suffered a great deal from leucorrhœa, and her menstrual period was prolonged from four and five to ten and twelve days. At irregular intervals she would flow very profusely; but generally

about a week before the expected return of the period she would begin to ooze moderately, merely sufficient to soil her clothes and annoy her, until the regular flow came on. She was under the treatment of a prominent gynecologist of this city for three years, who, she says, cauterized the "ulcerated womb" frequently, giving her a great deal of pain, and after a few months of treatment she would improve, the menorrhagia and premenstrual oozing would cease, and treatment would be discontinued. But in a few months the same oozing would return, again to yield to treatment, and this rotation continued for about three years, when the lady decided to try a trip to Europe. There she consulted a prominent German gynecologist of the old school, who told her she had an ulceration, treated her by caustics, and discharged her cured. She returned to this country last September, apparently well, but in November the old bloody discharge again preceded the expected menstrual flow, and the lady consulted me. I expected to find an erosion, but my finger detected a double laceration, and the speculum showed me two everted lips glazed over, with six to ten raw, readily bleeding spots in them, varying in size from a pin's head to a pea. A sound passed into the uterus produced no bleeding. There we had the source of the stillicidium, and the explanation of the failure of either of the two prominent gynecologists to effect a permanent cure. Neither of them had told the lady that her cervix was ulcerated. Of course it is not to be supposed that they failed to recognize the rent; but the New York gentleman, while a skilful and bold operator, has chosen to deny the necessity for the operation of trachelorrhaphy, and the German, I presume, has retained the conservative ideas of his youth. My opinion was verified a week later, when the lady reappeared, the usual oozing having just begun. Exposing the cervix at once without touching it with the finger, the blood was seen oozing in drops from the eroded patches; none, as yet, came from the uterine canal. The remedy was obvious, viz., to heal the erosions (as had so often been done before), and then keep them healed by turning the everted cervical mucosa back within the cervical canal, and retaining it there by the operation of trachelorrhaphy.

CASE III.—A dispensary patient, a multipara, was told by me several years ago that the menorrhagia and leucorrhœa of which she complained could be cured only by the repair of her lacerated cervix. She dreaded the operation, and I lost sight of her until a few weeks ago, when she called at the Polyclinic, complaining of the same symptoms. She stated that she had been under the care of a prominent gynecologist, who took her into his service in a celebrated New York hospital, and treated her by astringents and tampons for two months, with the result of improving her condition, but finally admitted that to cure her completely without an operation would require a long time, and discharged her. It should be mentioned that this gentleman is also an adversary of Emmet's operation, and that, before consulting him, the woman sought the advice of the same gynecologist referred to in the previous case, who told her that no operation was necessary. I found the cervix in its old state of laceration of the third degree, with complete eversion; the eroded surface much smaller, it is true, but still sufficiently large and raw to bleed on digital examination.

Here we have two instances of long-repeated, persistent efforts to heal over permanently the eroded surfaces of a torn cervix, with the result of but temporary improvement in each case. The cases are both instructive as to the origin of the bleeding and its permanent cure. I am sure both cases could have been cured years ago if the proper treatment by trachelorrhaphy had been adopted. I have chosen these two cases from many similar ones, because they illustrate so well the uselessness of palliative treatment for hemorrhage depending on cervical laceration.

3. *Chronic subinvolution of the uterus* is a very common result of abortions, of long, tedious, and instrumental labors, and of lacerations of the cervix. One of the prominent symptoms of this condition, besides pelvic pain and weight, bearing down and backache, is profuse menstruation. In such cases the uterus is enlarged, soft, pulpy, and the blood appears to ooze from it as water does from a wet sponge when it is squeezed. I have frequently searched the cavity of such uteri with the dull curette, expecting to find granulations or remnants of placental villi, and have been disappointed at not removing anything but a few shreds or streaks of bloody pulp. Such women often bleed *very* profusely at their periods, and require all the inter-menstrual time to recover from the loss. In course of time this recovery grows less and less complete, and the patient becomes thoroughly anæmic. I have found constitutional treatment alone to give but slight benefit in these cases. Ergot, diluted sulphuric acid, viscum album, etc., have temporarily checked the flow, especially if rest and ice were likewise employed. But in several such cases only the tight tamponade of the vagina, repeated day after day, succeeded in finally arresting the hemorrhage. My method of treating these cases is to make applications of Churchill's tincture of iodine to the endometrium twice a week during the inter-menstrual period, taking care to make the application thorough by repeating it at the same sitting until any oozing of blood, which may possibly occur, ceases. The usual hot water injections are taken twice daily. These iodine applications should be continued up to the very inception of the flow. I have seldom failed to keep the hemorrhage within bounds by this treatment, which I have always practised at my office. I also give a pill of ergot, gr. j.; sulph. iron, gr. ij., and strychnine, gr. $\frac{1}{60}$, three times daily.

If the flow should still be too profuse, I put the patient to bed, and after four or five days do not hesitate to check it by the iodine application and firm tamponade, repeated daily until effectual. At the same time I give rectal suppositories of ergot, three to five grains each, three times daily. In a few cases the fluid extract of viscum album, in teaspoonful doses every two or three hours, has kept the flow in bounds.

Patient and physician should remember that usually several months of the above treatment will be required to insure a permanent benefit or a certain cure. If proper precautions are observed, as to rest for the remainder of the day after an application has been made and as to avoidance of exposure to cold, this treatment can usually be considered safe and harmless. The applications are made by cotton-wrapped hard rubber applicators, if the uterine canal is patulous (as it generally is in subinvolution and menorrhagia), or by the syringe-applicator (the syringe being first filled with tincture of iodine, the nozzle wrapped with cotton, and the fluid gently expressed into the cotton after the nozzle has been passed to the fundus) if the canal is of moderate calibre. The usual protective tampons are inserted for twenty-four hours. If the effect is to be a very decided one (as during the flow), I make the application by the slide-applicator, slipping the saturated cotton off and leaving it in the uterus, to be removed by a twine attached to it with the vaginal tampons. When the uterine cavity is tamponed in this way, absolutely no hemorrhage can take place. It is in this variety of uterine hemorrhage that I find intra-uterine medication (of whatever character) the most beneficial.

4. *Hemorrhage from chronic hyperæmia of the uterus.*—In a certain number of women, a profuse menstrual flow seems to depend on nothing but a chronic congestion of the uterus; at least the examining finger can detect no enlargement or other cause for the excessive flow, and the sound elicits more or less hemorrhage. I dare say an excessive friability of the vessels of the uterine mucous membrane may also be the cause of this hemorrhage. I have found this variety chiefly in young unmarried or in

married but nulliparous women. Ergot seemed to exert but little influence over it, but the iodine applications above described were invariably effectual. I have never had to practise them in this form at other than the inter-menstrual time, and a few months of treatment have always cured the case. Of course, we should remember that in some women profuse menstrual flow is physiological, and that then it should not be interfered with; but when the flow entails anæmia and debility, it needs active treatment for its control.

5. *Prolonged menstrual flow from retention of blood by flexion or pinhole external os.*—As a rule, when the normal menstrual flow has reached its termination, a period variable in every woman, the discharge of blood ceases, and merely a slight sero-mucous oozing continues for a few days. Until the next regular epoch the healthy woman has no discharge whatever from her genitals; but in a few instances I have been consulted for a return of the bloody discharge, from several days to a week after the apparent cessation of the flow, this discharge continuing for several days, and alarming and annoying the patient. In one case this recurrence of bloody discharge took place at irregular intervals during the month. In no case was the amount of blood lost sufficient to debilitate the patient, nor was this the reason for alarm, or for her seeking professional advice. The cases were all in unmarried or young married women, who had never been pregnant, and all ladies of refinement, who were particularly careful about their persons and whom this oozing annoyed. The color of the blood was always spoken of as being dark, and mention was made that it seemed to issue in gushes, small clots, preceded by pain of an expulsive character.

An examination in these cases would show one of two conditions: first, and most commonly, a small, "pinhole" external os, with dilated cervical canal, and, second, a retroflexion, with normal uterine canal. The explanation of the secondary menstrual hemorrhage complained of in these cases seemed perfectly simple. In the case of the narrow external os, the menstrual blood, which toward the close of the period exudes less rapidly, is prevented by the narrow orifice from escaping freely, coagulates in the cervical cavity, and is gradually expelled in gushes or coagula, several days after the supposed complete cessation of the menses. This is, of course, not properly a profuse menstrual flow, but merely a prolongation of the natural period.

The treatment of this case is perfectly simple. Remove the obstacle to the free discharge of the blood, make the whole uterine canal of equal width, and the menstrual blood will escape from the external os as it is poured out into the uterine cavity, and all discharge will cease as soon as no more blood is exuded. This is best done by making a so-called crucial incision of the external os, dividing the mucous membrane covering the cervix to the length of about one-fourth of an inch, and then trimming off each little flap with fine curved scissors, so as to make the external os funnel-shaped. Then, by stretching the uterine canal with divergent dilators, and, if thought advisable, swabbing it with tincture of iodine, this little operation is completed. Dilatation once a week for several weeks, or even several months, is essential to prevent the orifice from contracting again, and the iodine application may be repeated once or twice, if there be a hemorrhagic tendency in the endometrium.

This treatment resembles very much that necessary for chronic cervical catarrh, only that the latter needs much more active caustic treatment and is more intractable. In the case of retroflexion, it is evident that the last blood exuded at the close of the period is not sufficient to force its way up and through the angle of flexion, for the very simple reason that blood, no more than water, will flow up hill. Finally, when the uterine cavity is full the overflow takes place, or the uterine body reacts on the foreign contents and expels them by contraction. Hence the pain complained of. By elevating the fundus

uteri by a well-fitting pessary, and in addition straightening the canal by dilatation, this retention of blood will evidently be rendered impossible, and any chronic hyperæmia of the endometrium, which may exist besides, is easily remedied by repeated applications of tincture of iodine.

Both these conditions are readily susceptible of cure by the methods above described.

There is one other form of uterine hemorrhage which I had intended to speak of, namely, that caused by the pelvic congestion induced by a large cellulitic exudation. But this article has already surpassed the bounds originally set for it, although I have purposely avoided citing numerous cases in illustration of my remarks, and I shall be compelled to defer a further consideration of this subject to another occasion.

While the uterine hemorrhage treated of in this paper rarely, if ever, assumes alarming proportions, still its persistence and frequent recurrence renders it a subject of alarm and annoyance to the patient, and therefore of etiological and therapeutical interest to the practitioner.

ON THE INJUDICIOUS USE OF THE SULPHATE OF QUININE.

By D. B. St. JOHN ROOSA, M.D., LL.D.,

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In a paper read before the New York Neurological Society in 1874,¹ the writer of this article called the attention of the profession to the possible dangers to the organ of hearing from the administration of quinine. Some discussion arose upon this suggestion, for the remarks involved scarcely more than a suggestion at that time. This discussion led to a series of experiments conducted on the living human subject by myself, and upon animals by Dr. Wm. A. Hammond. The outcome of these experiments showed that the administration of the sulphate of quinine, in doses of from ten to fifteen grains, appeared to cause vascular injection of the auricle, auditory canal, the drumhead, the conjunctiva, and possibly of the optic papilla, although the latter point was not so strongly insisted upon, the evidence of support being based upon one case.

Besides these objective symptoms, which were well marked in four of the five subjects experimented upon, there was decided tinnitus aurium and exhilaration, the latter being apparently like that from a glass or two of champagne. A case of otitis, which was apparently caused by the use of quinine, and which has elsewhere been reported in full, turned my attention to this subject as early as 1870.² I have also reported³ a case where impairment of hearing already existing was greatly increased on the use of quinine, even in moderate doses. That the use of the drug does this in many cases I have been able to verify from frequent experience. It is particularly harmful to ears that are already in a state of hyperæmia or congestion.

Subsequent clinical investigation have placed the fact beyond doubt that it is not entirely uncommon to see inflammation of the retina or its blood-vessels and also of the middle and internal ear following the administration of large doses of this drug. The cases to illustrate this point are too numerous to be explained away, and I believe that argument has ceased against the credibility of the belief that the primary effect of moderately large doses of sulphate of quinine is a congestion of some parts of the ear and of the retina. There remain a few who deny that the effects of quinine are anything but evanescent, but the cases published first by myself,⁴ and subsequently by Voorhies, De Wecker, Gruening, Buller, Knapp, and others have finally set-

tled the point that in rare instances deafness and blindness may be caused by large doses of quinine. Dr. Baldwin, of Alabama, has also published a pamphlet, not at this moment accessible to me, in which he has shown the dire results that have sometimes occurred from the injudicious administration of quinine, especially in our Southern States.

I am far from saying, that in some of these cases, where the quinine was administered, for serious disease, it may not have been necessary to take the chances of ruining the sight or hearing. I simply wish to call the attention of the profession to the fact, that such a peril may be incurred. I believe, however, that this drug is sometimes administered in diseases where its effects are harmful, and only harmful. Such a disease is, I think, pyæmia. Dr. Edward T. Ely¹ and myself treated a severe case of this disease, without the use of quinine or of any other drug, and recovery ensued.

I believe that in similar affections in which quinine is generally administered it may be unnecessary, injudicious, and possibly dangerous.

I have taken great pains to avoid any undue exaggeration in the language which I use, for I know very well that the use of the sulphate of quinine in reducing temperature, in diseases where increase of temperature is a symptom, and the breaking-up of catarrhs, is firmly fixed in the minds of many practitioners as the one means of treatment to be at once seized upon. So strongly has the conviction of the almost panaceal properties of quinine come to the minds of the profession that there are hundreds of families in New York City, in which large doses, that is to say, ten to fifteen grains, of the sulphate of quinine are taken with no more provocation than the apparent coming on of a serious cold in the head. Now, I believe that quinine, given under no advice except that of the family of the patient, is a dangerous drug. I am behind no one in my appreciation of its value in appropriate cases, and I should certainly regard unmistakable malarial fever as an appropriate case, or intermittent neuralgia, and all diseases with a well-marked malarial type. That there is some abuse of the term malarial, however, perhaps all of us are ready to admit.

I am sometimes called to see cases of diseases of the ear, occurring in the course of the exanthemata, during convalescence usually, or at least during the middle stages, and I so often find that the symptoms are aggravated, in my opinion, by the administration, even to young persons, of ten to fifteen grains daily of the drug, that I have felt it my duty to go over this subject and bring to the mind of the profession these apparently forgotten facts concerning the effects of quinine, facts which I claim to have been largely instrumental in bringing to the mind of the profession. The effects of the sulphate of quinine in pyæmia, for example, are quite contrary to what we desire in the cure of that disease, if cure can be accomplished. If its cure is to be by elimination of the poison through the bowels, through the skin, and through the kidneys, quinine has for one of its chief actions the shutting up of these excretories, and is therefore in the opinion of some, of whom I am one, just the drug which is absolutely unfitted for the conditions. For the throwing off of the poison constituting pyæmia, the skin, kidneys, and bowels should be unclogged sluice-ways. This they cannot be in a patient fully under the influence of quinine. It seems as if a rapid reduction of temperature is considered the one thing desired by some practitioners in all cases of fever. None of us will say that this reduction by the use of a drug should always be sought for. How many patients die all the same, although the quinine "brought the temperature down!" There may be a natural reduction even of a temperature of 104°, and this may be in some cases at least more desirable than one induced by medi-

¹ American Journal of the Medical Sciences, vol. lxviii., p. 388.

² Treatise on the Ear, third edition, page 155.

³ The Medical Record.

⁴ Archives of Ophthalmology, vol. viii., p. 392; vol. ix., p. 41.

¹ Archives of Otolaryngology, vol. x., page 42.

cine. Certainly I recall one case where the sudden reduction of the temperature only hastened the fatal collapse. It is no light matter to bring down the temperature with such rapidity as large doses of quinine will sometimes do. Again, a cold in the head and congestion of the nasal cavities and of the frontal sinuses, I believe, are aggravated by doses of quinine sufficient to cause any appreciable effect.

I well remember a case, which I saw about a year ago, occurring in the family of one of my relatives, where a delicate woman had been seized with a severe naso-pharyngeal catarrh just after a long railway journey. She suffered excessively from the neuralgia arising from the congested frontal sinus, and naso-pharyngeal tract. Instead of what I regard as appropriate and anodyne treatment, in a warm room, to which she should have been confined, she was kept about the house, and drugged by her family with quinine until the *tinnitus aurium*, the fulness of the head, the nervous irritability often caused by it, added to the symptoms of the catarrh, made the patient a pitiable object of suffering. When the quinine was stopped, and warm fomentations applied over the frontal sinuses, the throat kept clean by the use of the chlorate of potash, the symptoms began to be at once ameliorated.

The very day that I was engaged in looking over this paper for revision, a gentleman who occasionally consults me in regard to a chronic inflammation of one of his ears, came to ask my advice about a cold in the head, and *tinnitus aurium*. His first remark was, "I took ten grains of quinine when I found this thing coming on, but it has made my ears ring so that I feel much worse." This practice of taking quinine to abate colds has good authority to back it, but in the face of such authority I interpose my objection that in all colds affecting the mucous membrane of the nares, Eustachian tubes, and tympanic cavities it aggravates the condition, and is therefore a bad remedy.

In diseases of the ear it becomes positively harmful by increasing the congestion which already exists. I have seen cases of subacute disease and acute disease of the ear which immediately began to recover as soon as the use of quinine was stopped.

Whenever a drug, as powerful and dangerous as quinine, becomes the property of the laity, we may expect to see abuses from its use. There never yet was a popular error with regard to medical subjects which cannot be traced, in my opinion, to indiscreet practice on the part of ourselves. It is very dangerous practice to allow the public to prescribe for themselves. I ask the profession to review this subject of the administration of quinine in cases not malarial in character. I believe that they will then determine that its value in any other than such cases is doubtful. In diseases of the ear it is especially harmful, as it may be in those of the eye, especially in large doses. As used for the elimination of poisons, I believe it to be dangerous and harmful. For the so-called simple maladies, such as colds in the head, its use is generally attended by aggravation of the symptoms, and may cause them to extend to the ear. Its efficacy in malarial affections remains, however, indisputable. In severe cases of fever with this type, I suppose we are justified in taking the slight risk to the organs of sight and hearing which its use in large doses may involve.

AN INGENIOUS DEVICE FOR SUPPORTING A HOSPITAL.—Mr. Arthur Keugh, of London, has hit upon an ingenious plan for getting funds for the Dental Hospital. He has started a "cigar thrift fund." He places boxes in cigar shops, clubs, smoking-rooms, etc., in which the ends of cigars can be placed. They are valuable enough, if the system is sufficiently widespread, to bring in a considerable sum of money annually. There is also a small cigar-cutter for the waistcoat pocket which preserves the tips, and these gentlemen themselves can save and forward.

SOME QUESTIONS RELATING TO TONSILLOTOMY.

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A BRIEF discussion of some of the questions involved in the operations for the removal of the tonsils, from a practical standpoint, will be the aim of what we have to say to you, and in order to arrive at some rational conclusions, we will give some of the views, based upon a personal experience with a large number of cases, as well as some of those arising from consultation, with authorities, who by their observation and experience are calculated to give intelligent opinions upon the questions as follows:

- I. The question of the operation itself.
- II. The question of hemorrhage after tonsillotomy.
- III. The question of the operation affecting the physical growth.
- IV. The question of virility being affected by tonsillotomy.
- V. The question of the voice as affected by the operation.
- VI. That of faucial utility.
- VII. The question of sleep.
- VIII. The question of the tonsils becoming again hypertrophied after their removal.

I. Without entering into the anatomical details as to the structure of these glands, we will deal more particularly with those phases of the first question* which most concern the utility and propriety of the operation itself. As regards its antiquity, there is none more honored than tonsillotomy,¹ and as to the methods there is scarcely an operation spoken of in the annals of surgery that has excited more human ingenuity with a view of increasing the practicability of its performance,² and hence there are a diversity of plans. However, the busy practitioner or specialist is most concerned with what is the best mode of operation, the indications for its performance, and a knowledge of some of the dangers to be avoided. Of one thousand cases collated at the London Hospital for Diseases of the Throat all but thirty-one were observed and operated upon in persons under forty years of age, and the period between ten and twenty years is the one in which more than one-third of the cases³ were seen and operated upon.

In patients suffering from enlarged tonsils the bodily powers are often feeble, some of them congenitally so. Others have derived cachectic constitutions from scarlatina, with throat complications, or from repeated attacks of quinsy, or have inherited a tendency to scrofula or tuberculosis.

It has also been thought by modern observers that patients with enlarged tonsils are not altogether free from the rheumatic diathesis. Be the causes whatsoever they may, we cannot but assert that the child which presents the peculiar stupid countenance, with the open mouth, drooping eyelids, dull expression, thick voice, and the profound impress of constitutional impairment, as well as intellectual dulness and morbidness of disposition, so generally seen in those suffering from hypertrophied tonsils—be the differences of professional opinion ever so varied as to the several questions noted, at least there is an urgent demand for operative interference, in order that the life of the patient, both waking and sleeping, may be more comfortable, and that the organs of deglutition, respiration, and vocalization may do their work unimpeded, and that the vitality of the growing child may assert itself, as it is sure to do after being freed from the constantly impending danger and distress of follicular tonsillitis and congestive pharyn-

¹ Mackenzie: Diseases of the Larynx, Pharynx, and Trachea, p. 52.

² Op. cit., p. 53.

³ Op. cit., p. 46.

gitis, with all the other attendant obstructive discomforts, which are so apt to follow the slightest exposure to atmospheric changes.

The presence of enlarged tonsils ought to be sufficient reason to demand their removal, but there are other considerations that increase the need for interference with them.

The breathing is often obstructed to such a degree as to become noisy during waking hours, and little children so afflicted snore during sleep like strong grown men, owing to the posterior nares and pharyngeal cavity being blocked up by the mass of tonsillar tissue on either side.

Interference with the sense of hearing is a rather common result of enlarged tonsils, but is not so much due to mechanical obstruction of the Eustachian orifice by the tonsillar growths, as to a general thickened condition of the pharyngeal mucous membrane, the result of inflammatory hyperplasia. Michel¹ has shown that this form of deafness is often due to the pressure of Luschka's tonsil upon the posterior lip of the Eustachian orifice.

The obstruction to free nasal respiration from enlarged tonsils exposes the patient to all the influences which tend to bring on inflammation of the air-passages.

In 1828 Dupuytren called attention to the frequency with which deformity of the chest was associated with enlarged tonsils, and the so-called pigeon-breast is often associated with the same condition.

Chassaignac² well observed, "that although increased efforts of the diaphragm to a certain extent neutralizes the impediment to respiration from enlarged tonsils, there are frequent intervals when the powers of the muscles become temporarily exhausted, and the oxygenation of the blood is very incompletely performed. The vital forces are in consequence very much lowered and the patient lives in a state of permanent ill-health and easily succumbs to any acute attack of disease particularly affecting the respiratory organs." This writer also mentions several cases to illustrate the evil effects of the disease on the brain, the digestive organs, and on the senses of sight, taste, and smell. He thinks the pressure of the enlarged glands obstructs the flow of blood to the brain, and impedes its return, whilst the digestive organs suffer when there is difficulty of swallowing.

Mackenzie³ has often observed that the senses of smell and taste are defective in the subjects of enlarged tonsils if the disease has existed for any length of time. This I have also observed in a few well-marked cases.

As this paper is not intended to treat of the medical applications recommended for enlarged tonsils, though there are many used, but in my own hands most of them have proved very tedious and unsatisfactory, we will, therefore, speak of some of the most approved operative procedures, and among these ought to be mentioned the various caustics, viz., the nitrate of silver, chromic acid, nitric acid, the acid nitrate of mercury, and the galvano-cautery. Most of these are regarded in some respects as safe remedies, but some of the caustics are liable to do unlooked-for mischief by dropping into the larynx, or they may do injury to the eyes of the operator, as I have once known to occur from the patient coughing some of the caustic application into the operator's eyes. The galvano-cautery has lately been used to destroy the enlarged tonsils, and few specialists there are who are familiar with the use of this battery who have not used it to a greater or lesser extent for this purpose.

Dr. Cohen, of Philadelphia, has used this method of removing them, and seems to be favorable to its employment in certain cases. The advantages regarding its use, are safety from hemorrhage, but the disadvantages attending it are several. The inflammation following its employment is often severe. The slough is never just what is expected. It is either more or less than desired, and during the operation there is the dis-

agreeable odor of burning flesh that few patients will tolerate more than once, and still fewer will permit longer than a few moments. The stump left after this method is often unsightly, and too often hard and of the nature of the cicatrices of burns.

This plan, as well as that by means of electrolysis will scarcely ever become popular with practitioners, and the same methods are destined to be decidedly unpopular with patients, at least this view is in accordance with my own experience. Hence I have a very decided preference for the cutting operation; and to perform it with ease, one assistant should always be present, and if he has had experience all the better. One of the best I have ever had was a colored groom, who not only seemed to have an aptitude for assisting in this operation, but a fondness for witnessing the flow of blood.

The patient being placed in a good light, either artificial, which I prefer, or the sunlight, which is quite as good, if not better, the assistant should support the head of the patient against his breast or stomach, and with the ends of the fingers make compression steadily and carefully beneath the angle of the jaws on each side to steady the head of the patient, and press the tonsils into the throat. The operator takes his place in front of the patient.

The guillotine is the best instrument for the operation if the growths are not too large to enter the fenestrum. The one I prefer is that of Professor Physick, of Philadelphia, as modified by Morell Mackenzie, of London (Fig. 1). With this instrument, a firm grasp can be had

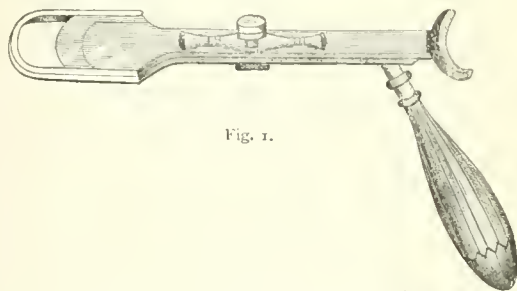


Fig. 1.

upon its handle, with which to hold it in place while operating.

The guillotine of Dr. Wm. B. Fahnestock, of Lancaster, Pa., is perhaps better known throughout the world, and more modifications have been made upon its original pattern than any other guillotine.

Guersant, Velpeau, Chassaignac, and Maisonneuve all made important modifications of it, and it is probably the instrument most used by surgeons everywhere.

The Physick guillotine being ready for use, the hilt is grasped in the left hand, and with the index finger of the right hand, the right tonsil of the patient is sought, and surrounded by the fenestrum. Some pressure is made by the guillotine as well as by the assistant, that the growth may be encircled well to its base. Then the knife is with the thumb of either hand pushed quickly home. The tonsil is usually brought away in the instrument, having caught by some shreds in the sulcus or slit which receives the knife.

I prefer to operate with the left hand first, as in case of any unruly behavior on the part of the patient, the dexter hand remains to do the operation on the other tonsil quickly. The entire operation can be done quickly and is usually painless.

When the growths are either too large to be easily removed by the guillotine, or when they are like a narrow

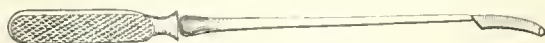


Fig. 2.

flap projecting into the throat, I then use these laterally curved knives with long handles, which were devised by myself (Fig. 2), and I have found them efficient, the part

¹ Krankheiten der Nasenhöhle, Berlin, 1876.

² Bulletin Générale de Thérapie Médicale, 1843.

³ Op. cit., p. 49.

to be removed, being seized by these vulsellum forceps (Fig. 3) or this tenaculum (Fig. 4), and any other nodular growths about the tonsils can as readily be removed with them.

With reference to these laterally curved-bladed knives,

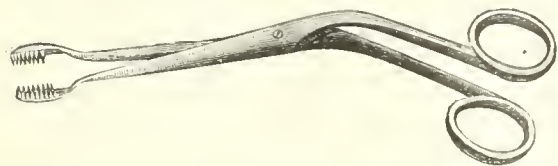


Fig. 3.

which have probe points, as you see, and long slender handles, I may say that they are probably only a modification of knives used before by others; but in my search after something to suit my purpose in these operations, I was unable to find anything in the many illustrated catalogues of instruments that met my own ideas of what I desired. These I have found to answer the purpose



Fig. 4.

admirably. I can safely assure any one who desires to use them, that they will do the work neatly and satisfactorily. They were made for me by Otto Helmold, instrument maker, Pittsburg, as modifications of one I had made by Tiemann, of New York, which is, as you see, rather large for the purpose for which it was designed.

My friend, Dr. Pollock, of Pittsburg, years ago used a curved-bladed knife in these operations, such as I show you, and while either instrument will do the work there is yet a vast difference in the construction of the two knives.

II. The question of hemorrhage after the tonsillotomy is one that every operator should be fully prepared to meet at once. I am lately in the habit of having beside me a pair of torsion forceps (Fig. 5), such as these, to

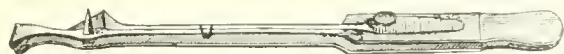


Fig. 5.

twist any artery that may emit too much blood. I also like to have a galvano-cautery battery ready for use, with a pharyngeal knife attached to the handle, in order to arrest hemorrhage, which may be copious and persistent from blood-vessels too minute to be seen with the naked eye. Indeed, the most alarming case of hemorrhage I have ever seen after this operation was in such a case; the patient became so weak from the loss of blood that he was neither able to stand nor sit.

It is true, a simple gargle of alum-water or tannin will most generally suffice, and either iced or very hot water as a gargle is quite equal to control most of the cases of hemorrhage that will occur, but to be prepared for emergencies is to only be guided by good judgment.

A case of hemorrhage after tonsillotomy was related to me by a medical man that contains such a valuable lesson that it is worthy of repeating here. He had an appointment to remove the enlarged tonsils of a farmer's boy, but when he punctually arrived, ready to operate, the boy had reconsidered the matter, and thought it wise to be away after the cows. The doctor, not to be outwitted by the boy, drove after him, and at length found him with the cows some distance from the house, on an out-of-the-way roadside. After some persuasion the boy finally assented to the operation being done on the spot. One of the tonsils was seized and removed by the guillotine, but the hemorrhage which immediately followed was so copious and alarming as to compel the medical man

to keep his fingers on the stump of the gland for several hours before any one happened along, in order to get assistance and save the patient's life. This operation was not performed soon again by that medical man, and when he did so, he secured a more auspicious occasion and surroundings for the work.

Dr. Morell Mackenzie says he has "only known of one case when hemorrhage actually seemed to endanger life out of the one thousand cases reported." Velpeau reported four cases of laying open the internal carotid artery in operations for the removal of tonsils.

I once had a case of serious tonsillar hemorrhage recurring two days after the operation, from the patient having attempted to eat solids, contrary to instructions.

III. The question of the operation for the removal of enlarged tonsils affecting the physical growth of children, may be briefly stated in my own experience to have always been most positive and flattering in the highest degree; so much so, that I have no hesitation in assuring the friends of the patient that they may look for improvement in the physical status of the child, and I have never yet been disappointed, especially so if proper treatment is carried out with reference to the cure of concomitant catarrhal disease of the naso-pharynx.

IV. Now as to the fourth question, viz., that of the virility of the individual being affected by tonsillotomy,¹ I have a very firmly fixed opinion that there is no more intimate or special relationship existing between the tonsils and the testicles and their functions, than there is between the hair on the scalp of the patient or the teeth and the testicle.

The recent revival of this question is chiefly due to a lecture delivered some months ago by Professor R. A. F. Penrose, of the University of Pennsylvania, in which his words, as quoted, were somewhat in this wise: "I some time ago asked a professional friend of mine, who was in my office," said the professor, "if his experience and observation would lead him to believe that the excision of tonsils had the effect of destroying the virile power in the male? He assured me it had no such effect. 'Why?' said he, 'I had my own tonsils excised when I was young.' Now, gentlemen," said Professor Penrose to his audience, "that man's wife had no children." Will you not allow me to mildly indulge in sophistry by saying that a man may have lost a toe, or a finger, or a nose, and his wife have also failed to bear him any children; it does not follow, however, that had some other woman been his wife that he would have been similarly childless, neither is this illogical assertion proof that the medical friend of Dr. Penrose was childless, although his wife bore him none. In answer to a communication to Dr. Penrose, a few days ago, I received a reply which contained the following: "The lecture (meaning the one above referred to) was published unknown to me in some obscure New York journal. Since then I have received several communications from medical men of cases where removal of the tonsils did *not* prevent procreation."

It is to be inferred from this that Dr. Penrose is not altogether prepared to say his position has been strengthened by the testimony of the profession, and as the most striking example cited by the doctor was the one case of his medical friend, it is scarcely necessary to pursue this side of the question further; but as to the opposite view, I will state that Dr. G. F. McC—, of Pittsburg, informs me that he had tonsillotomy performed when a child. He is now the father of two healthy children, and he, as well as his wife, are still young. Dr. Wm. Wallace, of Pittsburg, informs me of a friend of his, G. W. H—, who was operated upon for enlarged tonsils when a child, who is now the father of three children.

Dr. John Dickson, of Pittsburg, whose name as an able and experienced surgeon was a household word in

¹ British and Foreign Medico-Chirurgical Review for 1860.

Western Pennsylvania even before many of us were born, expressed to me his opinion that the excision of the tonsils had as little to do with the power of procreation as the excision of the toe-nails, and he cited the instance of A. B——, now of Alleghany City, whose tonsils he excised many years ago when the present man was a child, and who is now the father of a large family of healthful children. He also spoke of the wife of Dr. Wm. M——, of Beaver, upon whom he operated, and who has since been the mother of several children, as also one of the present daughters-in-law of the doctor, whose tonsils he excised when she was a child, but twelve years old, who has since been the mother of three children.

Mackenzie, one of the closest and most careful observers, as well as one who has had probably greater opportunities for observation than any other man who has practised as a specialist of throat diseases in any period of time, says only this, "The disease not unfrequently becomes developed for the first time about the age of puberty, owing, as *some suppose*, to a sympathetic connection between the sexual organs and the tonsils,"¹ and he says further, "Probably many of the cases in the earliest period were either congenital, or made their appearance soon after birth." In a conversation some time ago on this subject with the accomplished laryngologist, Dr. Elsberg, he expressed to me the opinion that there was no relation whatever between the operation of tonsillotomy and any subsequent loss of will-power.

V. The question of the voice being affected by the operation. It cannot be denied that the muffled or thick voice disappears sooner or later after the parts have healed.

VI. The faucial utility is much enhanced as the sense of the presence of a foreign body is no longer a source of annoyance, and the act of deglutition is performed with ease and comfort.

VII. The question of sleep. That repose is no longer disturbed by obstructive suffocation which patients complain of, is a matter of fact, and refreshing natural sleep, unaccompanied by noise or snoring, is productive of rest and recuperation.

VIII. As to the question of their liability to grow again, the answer can be included in the remark, "that with every badly treated or neglected cold affecting the throat, there will be some tendency for them to increase in size again, but the tendency is not marked by any means, and may be prevented altogether with ordinary care and proper treatment by local applications.

It is a matter of observation that enlarged tonsils have a tendency to subside after the age of forty years has been attained.

WOMEN DOCTORS IN SPAIN.—*La Tribuna*, of Madrid, has a long account of the granting by the medical faculty of that city of a Degree of Medicine on Señorita Martina Casella Bellaspi. She is the first Spanish woman who has studied medicine and taken her degree. The paper speaks in warm terms of her as a lady who, in spite of much opposition and national prejudice, has won high honors. Another Spanish lady is following in Señorita Bellaspi's footsteps. Finding that the Valencian School of Medicine had closed its doors against her, she is now studying in Madrid, where she has met with a more friendly reception.

THE RIGHT NAME.—The title of the new journal, *The Undertaker's Assistant*, may be objected to on the ground that it is ambiguous. *The Toy Pistol* is suggested as a substitute by *Harper's Weekly*. Perhaps *The Lancet* or *New Remedies* would do.

URETHRITIS CAUSED BY FROGS.—Dr. Bonarny, in a recent thesis (*Rev. de Therapeut.*, No. 19), describes two epidemics of urethritis among soldiers in Africa, caused by eating frogs which had fed upon cantharides.

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-seventh Annual Meeting, held in Albany, February 6, 7, and 8, 1883.

TUESDAY, FEBRUARY 6TH — FIRST DAY — MORNING SESSION.

The Society met in Geological Hall, and was called to order at 10 A.M. by the President, DR. HARVEY JEWETT, of Canandaigua.

Prayer was offered by REV. ALBERT FOSTER.

The inaugural address was delivered by the President and referred to a special committee, to be appointed by the Chair.

THE PRESIDENT'S INAUGURAL ADDRESS.

With pleasure and great cordiality the President greeted the Society on the return of its Seventy-seventh Anniversary Meeting, for the discussion of scientific subjects and strengthening the social and fraternal ties of the profession. He made his grateful acknowledgment for the high compliment of an unanimous election to the presidency of the largest medical society in the United States. Brief reference was then made to the progress in every department of literature and science which characterizes the present age. Speaking of the medical profession, he said:

"The result of all legislative enactments in this, and I believe in other States, for the last forty years, to regulate the practice and elevate the standard of medical education, has done little or nothing to abate quackery or increase the interest in the medical literature in this State. Whatever is done in regard to this subject must be done by the profession through their individual organizations. The profession is competent, through their representatives in the State and County societies, to establish what shall be the standard of attainments of those who are to be received into their ranks. A more complete and thorough preliminary education of young men who desire to enter upon the study of medicine is the first step in advancing the cause of medical science. A much higher standard of medical qualifications before the granting of a diploma is universally conceded and acted upon by the leading medical colleges in this country. These requirements, if carried out, will in the future tend to bring about the desired result. We have, as a nation, reached a stage of progress and development when our leading medical schools can carry the standard of professional education to a much higher plane than in years that are past."

Dr. Jewett then urged that the law of 1872 should be made mandatory, and that a State Board of Examiners, appointed by the Regents of the University and the Medical Society of the State, entirely disconnected from the schools, and whose certificate alone shall be a passport for graduation, would remove all imputation of partiality or favoritism from any source.

"All medical schools that fail to come up to the required standard of instruction" will go down for want of patronage, and we shall see illustrated the doctrine of evolution in the "survival of the fittest."

The recommendations of his predecessor in relation to the establishment of separate hospitals in our large cities for the isolation and care of those who are suffering from contagious diseases, such as scarlet fever and diphtheria, as well as the humane supervision of factory children, he regarded as eminently philanthropic and demanded considerable attention at the hands of this Society.

The subject of the adulteration of food and drugs received reference.

The President also respectfully suggested that the annual address of the President be delivered in the hall

¹ Crisp and Headland, Dublin Med. Press, vol. xx., p. 229, 1849.

where the daily sessions were held. He also directed the attention of this Society to the efficient and philanthropic labors of our State and National Boards of Health, and hoped that the Society would not only endorse the action and services of the National Board, but give an emphatic expression of their views in regard to withholding congressional appropriations to carry forward this eminently benevolent work.

With reference to the action of the Society, at its last annual meeting, or its system of medical ethics, the President said :

"At the annual meeting in February, 1881, this Society appointed a committee of five, from among the most distinguished medical gentlemen of the State, to consider and revise the old code of medical ethics which had governed our action for nearly forty years. In conformity with the instructions given this committee, they presented their report at the annual meeting in 1882. . . .

"The report of the committee, as well as a substitute, was printed and placed in the hands of every member of the Society who desired a copy, that they might examine and vote deliberately and understandingly upon the changes reported for their consideration and adoption. After a general discussion, in which all present had an opportunity to express their views, the report of the committee was adopted by a large majority. The new code has not been received by the profession, or the medical press, in this and in other States, with cordiality or favor, but, on the contrary, by the most outspoken and emphatic opposition. . . .

"A year's consideration, a calm and dispassionate discussion of the matter, has greatly modified the views of the profession in reference to the objectionable measure, and I trust a more conservative sentiment exists to-day than at the time of its adoption."

Reference was then made to the action of the American Medical Association, at the annual meeting at St. Paul, in June, 1882, refusing admission to the delegates from the Medical Society of the State of New York, because they had taken the liberty to accept what was deemed a more progressive and liberal spirit in reference to established rational medicine, as it exists at the present time, and to adopt permission of consultation with any legally qualified practitioner of medicine, as not derogatory to the interest and dignity of the profession.

The advocates of the new code asserted that this is merely permissive, that no one is under obligation, expressed or implied, to meet an irregular practitioner in consultation, unless he prefers to do so; but in certain cases it would be illiberal, inhuman, and contrary to the spirit of the age, to withhold professional aid, because of "difference of opinion in creed or belief." The attention of the Society at this meeting was directed to a consideration of the merits of this subject, to confirm, modify, or abolish the new code, as in their wisdom and judgment they might deem most conducive to the welfare, dignity, and interests of the medical profession of the State of New York.

Death has entered our ranks during the past year and removed those who stood high in the esteem of our profession; Prof. James R. Wood, of the city of New York, Dr. George Burr, of Binghamton, and J. Foster Jenkins, of Yonkers.

The following Committees were then announced :

Business Committee.—Drs. Alex. Hutchins, of Kings; C. C. Gay, of Erie, and D. L. Hovey, of Monroe.

Committee on Credentials.—Drs. E. V. Stoddard, of Monroe; L. E. Felton, of St. Lawrence, and T. H. Squires, of Chemung.

A recess of ten minutes was then taken for purposes of registration.

COMMUNICATIONS FROM COUNTY SOCIETIES.

Communications were read from Westchester, Monroe and Broome Counties, declaring opposition to the new code.

It was moved that they be placed on file. Carried.

EXPERIMENTAL MEDICINE.

DR. J. G. CURTIS presented the report of the Committee on Experimental Medicine. It was stated that the bill presented by Mr. Henry Bergh to the Legislature was defeated.

Reference was made to the British Society for Scientific Research. The committee had placed themselves in correspondence with this body, and had obtained numerous valuable documents thereby.

The \$100 appropriated for the committee's expenses was not expended and was returned into the treasury.

The following resolution was offered :

Resolved, That this Society wish to declare anew its often-expressed conviction of the supreme importance to the Art of Medicine of scientific experiments upon living animals.

The report was adopted.

REPORT OF THE COMMITTEE ON BY-LAWS

DR. W. C. WEY, Chairman of the Committee, reported that they had examined the by-laws of the County of Warren, and recommended their amendments be adopted as in accordance with the by-laws of the State Society.

The report was accepted and the resolution adopted.

Dr. Wey also reported concerning a communication from Otsego County—with reference to dropping the names of permanent members from the roll for non-payment of dues, that it was not expedient to rescind or modify section 5 of article 6 of the by-laws of this Society.

The report was accepted and the recommendation of the committee adopted.

Dr. Wey also directed attention to the fact that only seven of the counties in the State had responded to the request of the Society made at its last annual meeting, to forward their by-laws for inspection as to whether or not they accorded with the by-laws of this Society, and offered a resolution requesting that, before the next annual meeting, the several counties be requested to submit their by-laws to this Society, for the purpose of ascertaining whether or not they are in accord with the by-laws of this Society; and that the Secretary be directed, by circular or otherwise, to call the attention of the County societies to the present and preceding resolutions.

The communication was received and the recommendation of the committee adopted.

The following gentlemen were made

MEMBERS BY INVITATION.

Drs. R. B. Granger, of New York; W. W. Potter, of Buffalo; A. H. Riley, of Clinton County; A. H. Moore, of Niagara County; C. E. Willard, of Catskill; T. A. Foster, of Maine; H. R. Starkweather, of Albany; H. C. Cooper, of New York; T. Z. Gibbs, of Fort Ann; E. Clark, of Sandy Hill; E. H. Squibb, of Brooklyn; M. J. Leroi, of Albany; T. W. Goff, of Cazenovia; R. C. McEwen, of Saratoga; H. S. Case, of Oneonta; G. D. Dunham, of Plattsburg; G. P. Clark, of Syracuse; D. F. Dayton, of Potsdam; Herman Bendell, of Albany; C. C. Bartholomew, of Ogdensburg; A. W. Phelps, of Chateaugay.

The report of the Business Committee referred to the resolution adopted at the meeting of 1882, limiting the duration of the reading of papers to twenty minutes.

DR. E. R. SQUIBB moved that the resolutions of last year be made to apply to this meeting, with the reservation that the Business Committee be allowed to extend the time in such cases as they deem proper. Carried.

REGARDING THE REPEAL OF ACTION OF LAST YEAR.

Dr. E. R. Squibb offered the following resolution :

Whereas, The Special Committee on the Code of Ethics, in its report at the last annual meeting, recommended a change in one part of the Code which was more in the nature of a revolution than of a revision, and therefore may be more radical than was expected or desired by the constituency of this society; and

Whereas, That report was adopted at a session where-

in only fifty-two members voted in the affirmative, and thus legislated for the entire profession of the State on a subject of vital importance in a direction which may not have been anticipated or desired by the profession at large; therefore,

Be it Resolved, That all the action taken at the annual meeting of 1881, in regard to changing the Code of Ethics, be repealed, leaving the Code to stand as it was before such action was taken.

Resolved, That a new Special Committee of five be nominated by the Nominating Committee of the Society, and be appointed by the Society to review the Code of Ethics, and to report at the annual meeting of 1884 any changes in the Code that may be deemed advisable.

Resolved, That the report of this Committee be discussed at the meeting of 1884, and be then laid over for final action at the meeting of 1885.

It was voted that it be the special order for an evening session, at 7.30 o'clock.

DR. H. S. PIFFARD then read a paper on

THE ETIOLOGY AND TREATMENT OF ACNE.

The author used the term acne in the restricted sense of inflammatory affections of the sebaceous glands, presenting a variety of grades.

Extensive quotations concerning the etiology of the disease were made from Wilson, Tilbury Fox, Duhring, and others, and finally his own belief was expressed that in the majority of instances acne is not a primary condition, but one which depends upon irritation and disease of other organs reflected upon the skin, especially those connected with the sexual and digestive systems. Four causes of acne had been recognised: 1, local irritation; 2, gastro-intestinal derangements; 3, masturbation; and 4, uterine derangements.

With regard to external causes, Dr. Piffard believed that they had little if anything to do with producing the disease. Gastro-intestinal disturbances exercised a marked influence in its production. From his own observation, he regarded it as exceedingly difficult to arrive at the truth concerning the actual effect produced in the etiology of acne by the third and fourth causes.

Papers by DR. W. W. POTTER, of Buffalo, on "Puerperal Eclampsia," and by DR. C. R. AGNEW, of New York, on "Notes on the Dangers of Specialists in Medicine," were read by title and referred to the Committee on Publication.

DR. SAMUEL SEXTON, of New York, then read a paper

ON REMOVAL OF FOREIGN BODIES FROM THE EAR.

The removal of foreign bodies from the ear was rarely necessary in adults.

The speaker stated that living insects and vermin were generally removed without trouble by the use of water.

The various articles found in the ears were briefly referred to. One was sometimes called upon to remove the small shells and sand that get into the ears of surf bathers. In these cases the special forceps which he had devised were very useful.

In removing foreign bodies it was important to be sure that there was a body present. It was best to have the child lie supinely on a low couch, the operator standing above. The speaker showed a specially devised forceps and also a curette. A very large number of instruments that had been devised for removing foreign bodies was shown.

DR. ROOSA, of New York, believed that none but a surgeon should attempt to remove a foreign body from the lower part of the auditory canal, or from the other side of the membrana tympani. But when seen, as they generally were seen at first by the general practitioner, in the auditory canal, where the bean, etc., has been placed by the child or some of its playmates, there was opportunity for the safe, easy treatment by the use of the syringe and warm water, and he believed that failure would scarcely ever occur if the case was in its inception. If

it was a case which had been manipulated, he preferred to use the hook or curette rather than the forceps, and of the hooks and curettes, that invented by Prof. Gross, or some of its modifications, answered the best purpose.

DR. KNAPP, of New York, agreed with nearly all that had been said by Dr. Sexton, and also by Dr. Roosa. From experiments and a good deal of experience in the use of forceps for removal of foreign bodies from the eye, he had been prejudiced against their use in the ear; but latterly he had used Dr. Sexton's forceps and found it to serve an excellent purpose—for managing such bodies as can be impressed, especially when located in the strait of the canal. Beyond that point foreign bodies could be removed only with very great difficulty.

Dr. Knapp exhibited a forceps with dividing branches, which seemed to be admirably adapted for this purpose. For removal of bodies which had been pushed beyond the strait, syringing would bring them to view, perhaps, and then hooks could be used for their extirpation. For subduing the inflammation and stopping the otorrhœa, he recommended alcohol and powdered boracic acid.

DR. E. GRUENING, of New York, thought too much stress had been laid upon the use of instruments, and he believed that by proper syringing the foreign body could always be dislodged.

DR. A. H. SMITH, of New York, directed attention to a suggestion by the late Dr. T. B. Smith, of Nyack—namely, to carry down to the foreign body a string laden with some adhesive substance which would dry readily and firmly attach it to the foreign body. A solution of gum shellac in alcohol was recommended.

THE PRESIDENT, DR. JEWETT, said that while it was almost always possible to remove foreign bodies with the syringe soon after they were impacted, later it was not possible. He related the case of a boy deaf in one ear for several months from an impacted bug. He removed this by etherizing the patient and using a bent silver probe.

DR. DAVID WEBSTER said that the most important thing was to be sure and see the object clearly first. Any one who did this would be very sure to act intelligently afterward.

DR. MATTHEWSON said that there was rarely need of great haste in these cases, and that proper deliberation should always be taken.

DR. SEXTON said that his paper was prepared on the assumption that the members knew how themselves to make a choice of the proper means for extracting foreign bodies. As regards removal of the auricle, he did not believe that that was a possible operation for the removal of small bodies, but was applicable for the removal of bullets from the bone parts adjacent.

Dr. Sexton thought that both instruments and sponging were dangerous in unskilful hands.

DR. W. B. CHASE, of Brooklyn, read a paper on

HOT WATER AS A HÆMOSTATIC.

The speaker thought that although this topic was old, it was a subject not yet fully understood or appreciated. The modus operandi of hot water as a hæmostatic was not yet thoroughly understood. Its special advantages are:

First.—That it exerts no dangerous influence upon the tissues and does not affect the rapidity of union.

Second.—Its effect is more prolonged than that of cold water.

Sponging the parts with hot water, during an operation, was thought not only to check capillary oozing, but to remove coagula and allow a better chance for union by first intention.

The water should be at a temperature of 115° to 125° or 130° F. The good effects in post-partum and in other uterine hemorrhages were illustrated by cases.

DR. C. R. AGNEW read his report as delegate to the American Medical Association. He stated that his credentials were refused, and that he was not admitted as a delegate. He received, however, many congratula-

tions from members upon the stand taken by the New York State Medical Society.

Some discussion upon the report arose, and it was voted that the matter be referred to the evening session.

The Society then adjourned to meet at 3 P.M.

TUESDAY—FIRST DAY—AFTERNOON SESSION.

The Society was called to order at 3 P.M. by the President.

MEMBERS BY INVITATION.

Drs. S. S. Cartwright, of Roxbury; W. W. Seymour, of Troy; H. Wiggins, of Elbridge; H. H. Dean, of Watertown; B. Burr, of New York; L. E. Holt, of New York; C. W. Green, of Albany; J. W. Whitbeck, of Rochester; J. E. Burdick, of Johnstown.

TREATMENT OF CHRONIC URTICARIA.

DR. J. H. FOX read a paper on the above subject, in which he spoke first of the disease as commonly due to functional disturbance of the abdominal viscera, combined with an abnormal condition of the sympathetic nervous system. To effect a cure we must always depend upon internal medication. An important class are those remedies which tend to eliminate from the blood imperfectly oxygenated material. Bicarbonate of soda, ζ ss., in carbonic acid water, half an hour before each meal. Colchicum is also a valuable agent, at the same time abstaining from meat.

Another important class of remedies are those which allay irritation of the gastro-intestinal tract, such as rhubarb, with occasional resort to mineral water. Bismuth, in some cases of gastric irritation, has proved exceedingly beneficial. Sulphurous acid, in drachm doses, three times a day in sweetened water, has proved especially efficacious.

A third class of remedies are those which act mainly upon the nervous system, such as quinia, arsenic, etc. Special reference was made to salicylic acid, balsam of copaiba, ergot, nettle-tea, etc.

The conclusion was that the treatment is largely empirical and highly unsatisfactory. The apparent value of drugs has been based partly upon careless observations, and partly upon the fact that the eruption often disappears suddenly without any treatment whatever.

The successful treatment must depend upon a knowledge of its etiology, and a diligent study of the causes of the disease will produce results more conducive to its cure than blind experimentation with remedies.

The paper was discussed by Dr. Rochester, of Buffalo, who spoke of an emetic of ipecac as especially serviceable in the treatment of acute urticaria, and also of some chronic cases of the affection.

REPORT OF COMMITTEE ON PRIZE ESSAYS.

DR. ROCHESTER reported that but one essay had been submitted, entitled "Pathological study of epithelioma of the lip." It was well written and showed much research, but the committee regretted that its author had debarred himself from receiving the prize because he had revealed his personal identity in the manuscript. A paper presented last year was rejected for the same reason, and strangely it was from the same writer.

Signed, T. F. ROCHESTER,
W. S. ELY,
W. W. POTTER.

The report was received and ordered to be entered upon the minutes.

Dr. Rochester also offered a resolution that prize essays subsequently submitted to the Society must be printed either by type-writer or other means. Adopted.

COMMITTEE ON THE PRESIDENT'S ADDRESS.

The President appointed as the special committee on the inaugural address, Drs. J. C. Hutchison, of Kings; T. D. Strong, of Chautauqua, and W. S. Ely, of Monroe.

COMMITTEE ON NOMINATIONS.

From the Society at Large:—Dr. S. O. Vander Poel, of New York. *From Senatorial Districts*: *First*—F. A. Castle, New York. *Second*—P. R. H. Sawyer, Westchester County. *Third*—Maurice Perkins, Schenectady. *Fourth*—Conant Sawyer, Essex County. *Fifth*—J. D. Spencer, Watertown. *Sixth*—George Douglas, Chenango County. *Seventh*—H. D. Didama, Syracuse. *Eighth*—F. F. Hoyer, Erie County.

DR. J. O. ROE, of Rochester, then read a paper entitled

THE PATHOLOGY AND RADICAL CURE OF HAY FEVER.

Hay fever was universally acknowledged to be a very obscure disease. This was thought to be due to the fact that investigators had not studied the character of the tissue of the nasal passages. The author's belief was that the disease was due to a peculiar susceptibility of this tissue. The three prominent theories heretofore held regarding hay fever are 1, the pollen theory, which is the oldest, and has been most widely received; 2, the vibrio theory, suggested by Helmholtz in 1868; 3, the neurotic theory, propounded by the late Dr. Beard.

The writer discussed these theories, and contended that they were insufficient to explain all the phenomena of the disease. He then took up the subject of the sympathetic relations between different parts, by which irritations in one region cause disturbances in another.

In the nasal passages, along the turbinated bones, there is a large amount of very vascular or erectile tissue, which has been called the corpora cavernosa of the turbinated bones. This tissue is under the control of the vaso-motor system, and is very easily affected by irritants. In hay-fever patients the tissue is very susceptible to certain irritants, like pollen, dust, etc.

The reader reported five cases of hay-fever patients from whom this tissue had been removed. The patients were all cured. Another physician had treated three cases in the same way with like results.

Dr. Roe's

CONCLUSIONS

were:

First.—Hay fever is an affection not confined to any age or sex, and is not caused by the pollen of flowers or grasses, or by dust or irritating substances alone.

Second.—In some persons the nasal mucous membrane is very susceptible to certain floating irritants, while in others it is not.

Third.—This peculiar hyperæsthesia is caused by a diseased condition of the erectile tissue in the nasal passage.

Fourth.—The systemic effects in hay fever, viz., the lung, laryngeal, and other troubles, are all reflex in character, and are due to the local disturbance in the nose.

Fifth.—Treatment during an attack can only be palliative. The patient had best go where the floating irritating particles do not exist.

Sixth.—Curative measures should be attempted during the intervals of the attack. These curative measures consist in the entire removal of the diseased tissue.

The paper was discussed by Drs. Wey, of Elmira (who took exceptions to Dr. Roe's views); Sabin, of West Troy; Prout, of Brooklyn; Greene, of Homer, and Pomeroy, of New York.

OBITUARY NOTICE.

An obituary notice of Dr. Devillo White, of Sherburne, was presented by Dr. George Douglas, of Oxford, which was referred to the Committee on Publication.

DR. W. F. MITTENDORF, of New York, then read a paper

ON A NEW METHOD OF APPLYING REMEDIES TO THE EYE.

The method consisted in the use of impalpable powders, made of gum arabic, with a very small quantity of sugar of milk, and containing the alkaloid to be used.

The advantages claimed were that the preparations kept for an indefinite time unimpaired, and the quantity put into the eye could be regulated precisely. The disadvantages attending the use of aqueous solutions, such as formative fungi, which changed the strength of the solution; of vaseline, which in many instances simply suspended, and did not dissolve the agent used, etc. The powder is to be applied after the ordinary manner of applying calomel, from a camel's hair-brush.

DR. MITTENDORF also exhibited a new

EYE SPECULUM

involving the same principle used by Dr. Jarvis in his nasal speculum, namely, the sliding ring.

The communications were discussed by Drs. Pooley, of New York; Roosa, of New York; Squibb, of Brooklyn, and Gruening, of New York.

MEMBERS BY INVITATION.

The Committee of Arrangements announced the following: Drs. Wm. Hailes, of Albany; G. S. Munson, of Albany; John Edwards, of Gloversville; D. H. Cook, of Albany; J. B. Stonehouse, H. Lilienthal, J. C. B. Graveline, G. L. Ullman and S. E. Ullman, of Albany; S. G. De Le Matyr, of Duaneburg; C. B. Herrick, of Troy; R. H. Sabin and W. B. Sabin, of West Troy; E. B. Tefft, S. O. Vander Poel, Jr., and Frank Townsend, of Albany.

DELEGATES FROM OTHER STATE MEDICAL SOCIETIES.

Drs. Wm. Ingals and H. W. Williams, of Boston, delegates from the Massachusetts State Medical Society; E. F. Upham, of Vermont State Medical Society, were introduced to the Society and responded in appropriate words.

Two communications received from Clark Bell, Esq., New York, were referred to the Committee on Legislation, to be reported upon at the next meeting.

DR. DAVID WEBSTER then read a paper on

SYPHILITIC DISEASE OF THE LABYRINTH.

Two cases illustrating this trouble were related. They were characterized by deafness, tinnitus, and occasionally vertigo. In one case only one ear was affected. One case was cured; the other decidedly relieved.

DR. ORIN D. POMEROY read a paper entitled

SYPHILITIC DISEASE OF THE MIDDLE EAR, LABYRINTH, AND ACOUSTIC NERVE.

The writer discussed the subject of the inflammation of these parts together, because their differentiation clinically was not often possible. The symptoms were enumerated, and consisted of deafness, vertigo, tinnitus, often facial paralysis, etc. Various accompanying troubles were mentioned. As to the pathology, it was thought that the middle ear was oftenest involved. The points in diagnosis and treatment were given.

Dr. Pomeroy's paper gave rise to discussion, participated in by Drs. Roosa, Howe, of Utica, and Sexton, of New York.

DR. GRUENING then read a paper

ON THE INFUSION OF LICORICE BEAN (ABRUS PRECATORIUS) IN THE TREATMENT OF INVETERATE PANNUUS.

The treatment of pannus by inoculation was discussed, and the very serious obstacles to its use. Recently, De Wecker, of Paris, had experimented with licorice, and had found it to secure all the good results of inoculation without any dangers.

Dr. Gruening tried this method, but at first with no result, owing to the beans not being fresh. He then obtained a new supply, and used the infusion upon two cases of inveterate pannus, which had been before treated by various methods. The results were so brilliantly successful that the patients could be discharged cured in ten days.

The formula for making the infusion was as follows: Take 36 beans, pulverized, place in 500 grammes cold

water for twenty-four hours, then add 500 grammes of hot water, and filter immediately after cooling. Brush it three times a day upon the surface of the lids. It produces in a few days a decided croupous or purulent inflammation.

DR. LOUIS ELSBERG read a paper entitled

A NEW TONGUE SPATULA AND THE PROPER METHOD OF USING IT.

He referred to a paper presented to the Society just nineteen years ago. At that time he stated that the ordinary tongue spatulae were not much better than a spoon-handle. The various points required for a perfect spatula were enumerated, and some of the changes which he had found necessary to perfect the spatula then presented.

DR. DAVID LITTLE, of Rochester, read a paper entitled

A SINGLE CASE OF OVARIOTOMY.

The case was a successful one, although no Listerism was used. The speaker thought that scrupulous cleanliness was sufficient without antiseptics.

Dr. Gruening's paper was discussed by Dr. Pomeroy, of New York, after which the Society adjourned to meet at 7.30 P.M.

TUESDAY—FIRST DAY—EVENING SESSION.

SUSTAINING THE NEW YORK CODE.

The Society being called to order, the resolution for the special order of the evening was read. The Society went into Committee of the Whole, DR. HUTCHINS, of Brooklyn, taking the chair.

DR. E. R. SQUIBB presented his resolution and read an argument to prove that the present Code of Ethics was illegally adopted, because it was not presented to the County Societies first.

A prolonged debate followed. Drs. Roosa, Piffard, Hopkins, Seymour, Didama, Rochester, Gouley, Agnew, and others taking part.

The Committee of the Whole then rose and reported progress to the Society. The Society in Session then voted upon Dr. Squibb's resolutions, which failed to pass by a vote of 99 to 105, the yeas and nays being called.

DR. ROOSA then presented the declaratory resolution which he had presented at the meeting of 1882. It was voted to postpone its consideration for twelve months.

DR. J. G. ADAMS read a protest against the action of the Society regarding the Code of Ethics.

WEDNESDAY, FEBRUARY 7TH—SECOND DAY—MORNING SESSION.

The Society was called to order at 10 A.M. by the President.

Prayer was offered by Rev. Dr. McGee.

MEMBERS BY INVITATION.

W. R. Pierson, of Schenectady; T. A. Foster, of Portland, Me.; H. M. Eddy, of Geneva; G. H. Newcomb, C. L. Merrill, and W. H. Munson, of Albany; I. G. Johnson, of Greenfield; A. B. Husted, of Albany; H. M. Eddy, of Ontario County; J. C. Carson, of Willard; I. de Zouche, of Gloversville; D. G. Tucker, of Albany; D. M. Wilcox, of Lee, Mass., and Thomas Riley, of Adams, Mass.

DR. F. E. BECKWITH, of New Haven, was introduced as delegate from the Connecticut Medical Society.

TREASURER'S REPORT.

DR. CHARLES H. PORTER, of Albany, Treasurer, read his report, which showed a balance in the treasury of \$1,264.21. It was referred to an Auditing Committee consisting of Drs. M. Perkins, W. S. Ely, and Hopkins, of Buffalo, which subsequently reported that the accounts of the treasurer had been found correct. The report of the Committee was adopted.

Report on the Merritt H. Carl fund showed \$149.26 available for purposes of prize essays.

DR. F. R. STURGIS reported for the

COMMITTEE ON LEGISLATION.

Several points were involved in the report, and a resolution was offered asking for an appropriation of \$500. to be used by the Committee on Legislation in defraying necessary expenses incident to looking after medical legislation and the interests of the medical profession in the passage and obstructing the passage of medical laws.

With regard to the two bills forwarded by Mr. Clark Bell, the Committee recommended that they lie over and be transferred to the next Committee on Legislation.

DR. VAN DE WARKER offered certain amendments, which he subsequently withdrew.

A communication from the Chancellor of the University of the State of New York concerning

BOARDS OF EXAMINERS, FOR THE EXAMINATION OF CANDIDATES FOR LICENSES TO PRACTISE PHYSIC AND SURGERY,

was read by Dr. Hutchins, on behalf of Dr. Vander Poel, in which the desire was expressed to have the co-operation of the State Medical Society in the appointment of persons to fill vacancies now existing in the present Board.

DR. HUTCHINS moved that a Committee of three be appointed to confer with the Regents of the University in the matter referred to. Drs. S. O. Vander Poel, E. M. Moore, and A. Jacobi, were appointed as the Committee.

REPORT ON THE PRESIDENT'S INAUGURAL ADDRESS.

DR. J. C. HUTCHISON, Chairman, reported that, in the opinion of the Committee, further legislative enactment is unnecessary; that the study of medicine by those deficient in preliminary education should be discouraged; that those medical schools should be recommended which furnish the most thorough course of instruction; that a State Board of Examiners cannot be made so free from political influence as to entitle it to recommendation; that State Boards of Health should be supported; that there should at present be no change with regard to the place where the annual address is delivered; but that it *would* be well hereafter not to require an annual address, as all matters pertaining to the Society and the profession could be incorporated in the inaugural address.

The report was accepted and placed on file.

DR. A. JACOBI made a report of the Committee on the President's Address in 1882. The report concerned the establishment of

HOSPITALS FOR SCARLET FEVER.

The history of the successful attempt to provide for such a hospital in New York City was given.

The report was accepted.

DR. W. S. ELY reported as

CENSOR TO THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF SYRACUSE.

The report was favorable to the qualifications of the candidates for examination.

DR. MUNDÉ then read a paper on

NON-PUERPERAL UTERINE HEMORRHAGE.

The paper is published in full in the present number.

It was discussed by DR. VAN DE WARKER, of Syracuse, who regarded it as a most valuable and practical communication. It was also discussed by DR. B. F. SHERMAN, of Ogdensburg.

DR. F. A. CASTLE, of New York, reported a resolution to the effect that a complete list of

REGISTERED PRACTITIONERS

in the State be made and appended to the volume of Society Transactions. After considerable discussion the

resolution was laid on the table, on the ground that such a work belonged more properly to the State.

DR. DIDAMA, of Syracuse, presented the following resolution as an

AMENDMENT TO THE BY-LAWS.

"That all action taken at the annual meeting of 1882 in regard to changing the Code of Ethics, be repealed, leaving the code to stand as it was before such action was taken."

It was received and recorded to be acted upon at the meeting of 1884.

Laid over under the rule.

An obituary of S. M. Van Alstyn, of Richmondville, prepared by Dr. A. Vandever, of Albany, was read by title and referred to the Committee on Publication.

DR. LOUIS ELSBERG read a paper on a

FORCEPS ECRASEUR FOR REMOVING NASAL POLYPI.

A number of instruments were shown, and the special advantages of the speaker's were described.

It simply replaced the transfixing needle, as in Jarvis's snare, with a forceps.

DR. ROE showed a long serrated clamp which he had used to seize the tissue, crush it, and then cut it off.

DR. H. KNAPP, of New York, read a report on the eighth series of

ONE HUNDRED CATARACT OPERATIONS.

The results were that among one hundred cases there were ninety good results, seven moderate results, two failures, and one case not recorded, as the patient died of hæmaturia. The method of operating was Graefe's modified linear. The speaker thought that he could obtain no better results, as there must always be a certain number of failures, owing to the unruliness of patients and other causes. Dr. Knapp said that in cataract operations there must be more than antisepsis—there must be effort to secure primary union. To secure this there must be absolute cleanliness in every detail and perfectly smooth incisions. The speaker had used strict antisepsis (Listerism) in every other case, but got no better results than when these measures were not employed. He made a clean incision into the capsule instead of tearing it. After the contents were removed, healing by primary union took place. The capsule was then removed two weeks later in many cases, by operation with a scalpel needle.

The Society then adjourned to meet at 3 P.M.

WEDNESDAY—SECOND DAY—AFTERNOON SESSION.

The Society was called to order at 3 P.M. by the Chairman of the Business Committee, and DR. W. C. WEY, of Elmira, was elected President *pro tem*.

DR. ROOSA, of New York, then read a paper on

THE INJUDICIOUS USE OF THE SULPHATE OF QUININE.

It appears in the present number of THE RECORD. It was discussed by DR. T. R. POOLEY, of New York, who cited cases confirmatory of Dr. Roosa's statements; by DR. JACOBI, who thought sufficient distinction had not been made between pyæmia and septicæmia; in pyæmia it had been established that quinine counteracted the migration of white blood-corpuscles, and so was beneficial in pyæmia; while in septicæmia but slight benefit follows its administration.

DR. W. MANLIUS SMITH spoke of some observations made with reference to the different effects produced upon himself by cinchonine, cinchonidia, and quinia; as that cinchonine affected his vision more than did quinine, and it also diminished the urinary secretion, etc.

DR. ROOSA did not believe there was any such distinction between pyæmia and septicæmia as had been made by many authorities.

The paper was also discussed by DR. INGALLS, of Boston.

DR. H. W. WILLIAMS, of Boston, then made some remarks on

ERYSIPELAS EXTENDING INTO THE ORBIT.

He had seen four cases of orbital cellulitis resulting from facial erysipelas, and had never met with a case of this kind until two years ago, nor had any been brought to his notice in literature until after he had seen his first case. The symptoms were pain, projection of the eyeball directly forward rather than to one side, pale condition of the fundus, sensation of fulness, great engorgement of the tissues, swollen lids, chemosis of the eyeball. The treatment recommended was early evacuation of the pus, and this he did in all his cases by means of deep punctures.

In the discussion of Dr. Williams's paper, DR. T. R. POOLEY, of New York, referred to a marked case of acute protrusion of the eyeball, which he had treated by incision, and with success. He thought that a single large incision was the preferable method of treatment. He thought the loss of sight which sometimes occurred was due to pressure on the optic nerve. The disease had been described by Von Graefe under the name of retrobulbar neuritis.

DR. DANIEL LEWIS, of New York, presented a paper on "The Development of Cancer from Non-Malignant Disease," which was read by title.

DR. ROBERT NEWMAN read a paper entitled,
THE USE OF SUPPOSITORIES OF GELATINE FOR LOCAL MEDICATION.

The speaker had used cocoa butter and various other substances, but with no good result. Two years ago, he began to use bougies of gelatine and with great success. The speaker showed suppositories of this material for the urethra, rectum, nose, vagina, sinuses, etc.

Especial attention was called to the urethral bougies. Their advantages lay in being neat in appearance, soft, elastic, flexible, not easily broken, and slowly dissolved. They contained the medicines equally dissolved and distributed. They are not injured by time or temperature.

The best time to introduce them was at night and not in the daytime. They had better be moistened with water. In order to keep them in, apply a small piece of cotton at the urethral orifice, and over the latter a bit of adhesive plaster. They are to be used *only* when the urethra is acutely inflamed and will not tolerate anything.

A number of cases were reported. In prostatitis great care must be used; ten to twelve bougies will generally be sufficient.

DR. POOLEY, of New York, read a paper on
RUPTURE OF THE CHOROID.

A number of cases were related illustrating this trouble. The patient's history, with distorted or more or less loss of vision and the ophthalmoscopic appearances of a crescentic white patch with concavity toward the optic disk, revealed the disease.

DR. WILLIAMS, of Boston, and DR. POOLEY discussed the paper.

DR. FREDERICK HYDE, of Cortland, read a paper entitled,

WHEN SHALL THE TREPHINE BE USED IN FRACTURE OF THE SKULL?

The general tenor of the paper was in favor of a non-conservative treatment of cranial fractures. The writer especially urged the use of the trephine in cases of fracture, even when symptoms of pressure were not present.

DR. T. H. SQUIRE, of Elmira, read a paper on

SOME POINTS IN RESPECT TO OVIOTOMY.

The first was with regard to the proper form of trocar. The speaker thought that a plain tube with a slot half an inch from the extremity would be an improvement on that generally used. The inner canula might often be dispensed with.

The second point was as to the time when ovariectomy

should be performed. There used to be a belief that the operation should be delayed. The speaker thought that the tendency now was to perform it as early as possible. A course of preparatory treatment would always be needed.

Dr. Squire also gave the history of a case of

VESICAL CALCULUS

occurring in a girl seventeen years of age. It was removed through the urethra, which had been fully dilated. The nucleus of the stone was some foreign body, like a pin or needle, which had been left in the bladder.

The Committee of Arrangements announced the following as

MEMBERS BY INVITATION:

Drs. Lewis Granger, of Tioga County, Pa.; L. A. Tourtellot, of Utica; A. James Browne, of Newport; and C. W. Hamlin, of Middleville; J. D. Lomax, of Rensselaer County; G. E. Lyon, of West Troy; W. C. Cooper, of Troy; Wm. Stevens, of New York; and D. H. Cooks, of Albany.

DR. L. E. FELTON, of Potsdam, then read a paper on the use of

LACTIC ACID IN DIABETES.

Eight cases were reported in which favorable results had been obtained with this drug. The patients presented the ordinary symptoms of those suffering from glycosuria, passed large quantities of urine with high specific gravity, and containing sugar. Lactic acid was given, a drachm and a half daily, diluted in a quart of water, and an exclusively meat diet was adopted. Meat, sour milk, and lactic acid constituted the chief factors in the treatment, the drug being given in smaller quantities than recommended by Cantanni.

DR. WEY, of Elmira, referred to a case in which the patient had lost thirty, or more, pounds in weight, and was passing six gallons of saccharine urine daily. The ergot treatment recommended by Dr. DaCosta was adopted, and in a very short time the daily quantity of urine was reduced eighty ounces, the skin became moist, the specific gravity of the urine fell, the sugar materially changed in quantity, and there seemed to be fair prospect of recovery.

DR. FRENCH, of Montgomery County, thought that strict attention to diet could do more in these cases than could medicine.

DR. JACOB regarded restriction of the diet as the principal factor in the treatment of diabetes, as a rule. At the same time it was well known that the treatment of diabetes nowadays is much more successful than it was thirty years ago, when it was supposed that every case of the disease would invariably terminate fatally. He then referred to the fact that sugar occurs in the urine temporarily not very infrequently; and also mentioned three cases in which sugar had promptly disappeared from the urine under the internal use of eight grains of iodoform daily, together with restricted diet. He believed that if the urine was tested for sugar as frequently as it is for albumen, that sugar would be found to be present in a much larger proportion of cases than is generally supposed.

DR. W. GILLIS, of Fort Covington, then read a paper entitled,

REPORT OF A CASE OF PUNCTURED WOUND OF THE SKULL THROUGH THE ORBIT WITH COMPLETE AMNESIC APHASIA.

The patient, a boy, was struck in the eye with the prong of a dung-fork, which penetrated the skull through the orbit for a distance of three or four inches. The child was unconscious, and remained so for three days. Facial paralysis and hemiplegia of the right side appeared and lasted for about three days, gradually disappearing. Eight months later the child was entirely recovered, except that from the beginning it had been unable to articulate. Hearing, vision, and all the special senses were perfect. Intelligence was unimpaired.

The paper was discussed by Drs. W. S. Ely, of Rochester, H. R. Hopkins, of Buffalo, B. F. Sherman, of Ogdensburg, and F. Hyde, of Cortland.

The Society then adjourned to meet in the Assembly Chamber at the new Capitol, at 8 P.M., to listen to the President's annual address.

WEDNESDAY—SECOND DAY—EVENING SESSION.

ANNUAL ADDRESS OF THE PRESIDENT—SOME OF THE PERILS TO LIFE FROM THE PREVENTABLE DISEASES.

"Life and health may be regarded as the sum of all good to the human race." The health, happiness, and prosperity of mankind must be intimately and inseparably connected with and dependent upon its sanitary condition. The people are slow to comprehend the dangers that arise from trivial causes, and from habits of life in which they have indulged for years, because they are unable to trace any direct connection between obscure and indirect causes and positive results. They are also unwilling to accept the fact that disease and death may result from their own carelessness and uncleanly practices.

The excessive civilization of modern times, the æstheticism of the age has blinded our eyes and perverted our judgments, and led us to stray from the habits of primitive times that gave our ancestors more vigorous constitutions and more stalwart frames than we of this generation can boast.

There are some conditions which greatly affect the health of the community over which sanitary work has little or no control; as, for example, the temperature and moisture of the air, variations in which greatly influence the health of the people. But these are not the agents with which we are to deal in endeavoring to check the progress of diseases, so much as it is certain combinations of heat, moisture, and animal or vegetable decomposition, occurring either in the course of nature or, more often, as the sequence of man's careless and slovenly habits. To these we are to look for predisposing conditions, even though we may not always see the actual cause of disease. Attention was then directed to preventive medicine and to the work of the general practitioner in relation to it. National boards of health must be backed by local boards, and local boards must be sustained by individual practising physicians.

At this point special attention was directed to the inability of the majority of practising physicians to properly advise their patients and patrons in sanitary matters, owing to their deficiency in knowledge of the first principles of sanitary science, which involve a study of defects in drainage, the best means of furnishing and protecting water supply, securing ventilation, etc. A knowledge of chemistry, natural philosophy, and the natural sciences generally, should be had, and here the President passed to a consideration of the demand for more thoroughly educated men before entering upon the study of medicine. The advantages to be derived from the observation of contagious and epidemic disease in rural districts, where it is isolated as it were from special prejudicial influences, were then presented. Brief reference was then made to the part which germs are supposed to play in the production of disease, and a conservative conclusion was reached.

Attention was then directed to the influence of defective drainage and sewerage upon the health of the people, and the President believed it to be safe to give patients the benefit of the doubt whether it be established or not that diphtheria, scarlet fever, or other diseases are produced by sewer-gas or micro-organisms. The influence of wet soil, cesspools, ground water in building sites, and of contaminated water, was then referred to. The profession needs gentlemen in every district, who, in general information and culture, shall be leaders among the people in every good enterprise, and give the dignity to and respect for the profession of medicine which it does not fully possess to-day. Under the present system of medical education, the President failed to see the pros-

pect for the achievement of this desirable result. When such a result shall have been obtained, and when preventive medicine shall have attained its destined eminence we shall hold a prouder position and be more than ever the benefactors of the race.

THURSDAY, FEBRUARY 8TH—THIRD DAY—MORNING SESSION.

The Society was called to order at 9 A.M. by the President. Prayer was offered by REV. DR. REESE.

DR. SMITH, from the Committee on Publication, reported that the delay caused in issuing the last volume of the "Transactions" was due to failure on the part of authors to return proof-sheets.

DR. HOWE, of Buffalo, introduced the following as an amendment to the By-laws: "That the Code of Ethics of the American Medical Association be substituted for the one adopted by this Society in 1882, and having thus gained the unquestioned right to representation that our delegates be instructed to advocate such modification of that Code as shall be in accordance with a spirit of greater liberality, or if advisable to urge its entire abolition."

DR. PORTER, of Albany, offered a resolution that a committee be appointed to confer with the Capitol commissioners concerning appropriating a room in the new building for the use of the State Medical Society. Adopted, and Drs. Porter, Bailey, and Mosher, of Albany, were appointed.

Dr. Porter also offered a resolution that a committee be appointed to consider the propriety of publishing, and to publish, if deemed desirable, the "Transactions," from 1837. Adopted, and Drs. W. M. Smith, C. H. Porter, and F. S. Curtis were appointed.

OFFICERS FOR ENSUING YEAR.

The Committee on Nominations submitted the following report, which was adopted:

For President—Alexander Hutchins, of Brooklyn.

For Vice-President—H. G. P. Spencer, of Watertown.

For Secretary—William Manlius Smith, of Syracuse.

For Treasurer—Charles H. Porter, of Albany.

For Censors—Southern District: J. W. S. Gouley, Austin Flint, F. A. Castle, of New York. Eastern District: C. E. Nichols, M. H. Burton, W. S. Cooper, of Troy. Middle District: Alonzo Churchill, S. G. Walcott, J. K. Chamberlayne, of Utica. Western District: C. C. Wyckoff, Thomas F. Rochester, F. F. Hoyer, of Buffalo.

Committee of Arrangements—S. B. Ward, J. S. Mosher, of Albany; W. S. Ely, of Rochester.

Committee on By-Laws—W. C. Wey, of Elmira; H. G. Piffard, of New York; Wm. Manlius Smith, of Syracuse.

Committee on Hygiene—E. V. Stoddard, of Rochester; Stephen Smith, of New York; Jacob S. Mosher, of Albany; P. R. H. Sawyer, of Bedford; Caleb Groen, of Homer; Edwin Hutchinson, of Utica; Theodore Dimon, of Auburn.

Committee on Legislation—Jacob S. Mosher, Albert Vanderveer, of Albany; F. R. Sturgis, of New York.

Committee on Medical Ethics—C. R. Agnew, of New York; E. M. Moore, of Rochester; S. O. Vander Poel, of New York.

Committee on Prize Essays—Thomas F. Rochester, of Buffalo; Wm. S. Ely, of Rochester; W. W. Porter of Buffalo.

Committee on Publication—Wm. Manlius Smith, of Syracuse; Charles H. Porter, of Albany; George J. Fisher, of Sing Sing.

Curator for the College of Medicine, Syracuse University—C. S. Starr, of Rochester.

For Permanent Members—First District: F. P. Foster, Laurence Johnson, Alfred C. Post, David Webster, of New York; John Byrne, of Brooklyn. Second Dis-

tract: J. J. Linsen, of Tarrytown; E. F. Quinlan, of Monticello. Third District: S. B. Ward, of Albany; C. E. Willard, of Catskill. Fourth District: A. J. Browne, of Herkimer; A. M. Phelps, of Chateaugay. Fifth District: J. N. Goff, of Cazenovia; J. D. Spencer, of Watertown. Sixth District: L. D. Witherill, of Union; D. W. Birge, of Peach Orchard. Seventh District: J. B. Chapin, of Willard; Alfred Mercer, of Syracuse. Eighth District: W. W. Potter, of Buffalo; J. W. Whitbeck, of Rochester.

For Honorary Members.—T. J. Turner, of the United States Navy and National Board of Health; William Goodell, of Philadelphia; Lockhart Robinson, of Edinburgh, Scotland.

Eligible to Honorary Membership.—W. B. Robinson, of Edinburgh, Scotland; W. Bronson, of New Canaan, Conn.; Professor J. Cabell, of the University of Virginia; Professor J. G. Richardson, of the University of Pennsylvania; Professor J. T. Whitaker, of Cincinnati, Ohio; W. Hingston, of Montreal, Canada.

Delegates to State Medical Societies.—Massachusetts: Geo. C. Smith, of Rondout; E. N. Brush, of Utica; P. V. S. Pruyn, of Kinderhook; George G. Hopkins, of Brooklyn. New Hampshire: Wm. M. Chamberlain, of New York. New Jersey: J. C. Hutchison, of Brooklyn; Robert Newman, of New York. Ohio: Thomas R. Pooley, of New York. Pennsylvania: H. C. May, of Corning; Sol. Van Etten, of Port Jervis; T. D. Strong, of Westfield. Vermont: D. Lyon, of Plattsburg; A. G. Long, of Whitehall; C. C. F. Gay, of Buffalo. Connecticut: P. R. H. Sawyer, of Bedford; E. V. Stoddard, of Rochester; George Douglass, of Oxford.

Delegates to the Canadian Medical Association.—B. F. Sherman, of Ogdensburg; H. G. P. Spencer, of Watertown; L. E. Felton, of Potsdam; J. C. Hutchison, of Brooklyn; R. J. Robb, of Amsterdam.

Censor for the College of Medicine, Syracuse University.—C. S. Starr, of Rochester.

Respecting the American Medical Association, the Committee reported that it deemed it inexpedient at present to name any delegate to that body.

A vote of thanks was extended to the President for the impartial manner in which he presided, and the Business Committee recommended that the Society adjourn to meet on the first Tuesday in February, 1884.

MASSACHUSETTS HEALTH STATISTICS.—The annual report of the Massachusetts Board of Health, Charity, and Lunacy, for 1881-2, has recently been submitted to the Legislature.

Under the head of public health, it is stated that Massachusetts is more exposed to small-pox than any other State, and in 1881-2 it appeared in about thirty cities, but no extensive mischief resulted. The deaths from this disease in the State in 1882 were less than the small-pox deaths in Chicago in one week. The presence here of small-pox is due to immigration at our ports, paper, rags, and the Canadian immigration by land. The year 1882 was one of average health, and no disease can be said to have prevailed excessively.

Malarial fever has not appeared in so many towns east of the Connecticut as in the previous years, but in the western part of the State it seems to have been more prevalent than ever. In connection with the National Board of Health and the State Boards of New York, Connecticut, and Rhode Island, this board took steps for a combined investigation of the subject of malarial fever. A mass of valuable information has been secured, but the laboratory work, by reason of the failure of the National Board to obtain the usual appropriation, was suspended in July.

The aggregate number of the insane in the State is at least 5,100, a net increase of about 200. The latest investigations prove that not more than 50, probably not more than 30 per cent. of the insane permanently recover. Only about two-fifths of the insane are Americans.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE MEETING OF THE STATE SOCIETY.

THE meeting of the Medical Society of the State of New York was, as will be seen by our full report, one of notable interest. The attendance was unusually large, every county society being duly represented. There was one feature in connection with the papers presented which calls for special comment. The lack of variety of the subjects discussed by them was strikingly apparent.

If a stranger had dropped in at any time during the sessions he could very justly conclude that the Medical Society of the State of New York was specially interested in one of two things—either the study of diseases of the eye and ear, or the merits of the question of freedom in consultations. There was altogether too much of both of these subjects to develop a proper scientific interest on the part of the general practitioner in the proceedings. It was perfectly proper to make the discussion of the merits of the new Code a special order of business for one evening, but that was enough. As to quantity of material, so might it be said of papers by our good friends who have taught us so much concerning diseases of the eye and ear.

Although each of these papers had been carefully prepared, and presented the latest views on their subjects, they in the main lacked practical application to the wants of the general practitioner. While there was an embarrassment of riches in one direction there was a notable falling off in another. This should hardly be the case in a society composed, as this is, largely of men who, in the broadest sense of the term, are general practitioners, and whose real interest consists in the freest opportunities for exchanging news and comparing experiences in the treatment and diagnosis of the commoner diseases. Perhaps the fault is as much to be laid at the door of the average member, who is disinclined as a rule to read papers, as to the specialist, who is more of a worker in that direction and who occupies time which otherwise might be entirely unappropriated to scientific purposes. Hence the complaint that the specialists are generally to the front should react upon the very members who have it in their power to divide the honors by contributing their own proportion of work. The example of New York in respect to scientific zeal should be imitated by the rural brethren, whose fields of observation are large enough to afford them every opportunity for the contribution of most valuable experience, and who really have

no excuse for not adding to the scientific interest of the meeting accordingly.

A great deal of the interest of the meeting centred, as might have been anticipated, upon the discussion of the new Code. This discussion took place before the largest meeting the society ever held. The freest interchange of opinion was invited and the conclusions arrived at were deliberate and pronounced. It is a matter for congratulation, that, with few exceptions, a becomingly charitable spirit characterized the debate and that all the arguments pro and con that were collected from so many sources during the past year were quite exhaustively presented.

The vote against Dr. Squibb's resolutions to restore the American Code, was unexpectedly large, considering the amount of extra-State and extra-professional pressure that had been brought to bear upon County Societies. The matter can now be safely left where it is.

We may be permitted to say, however, in the greatest courtesy, that the present action of the Society conclusively shows that New York State is determined to take care of its own ethical affairs and resents meddling interference from outside influences.

As a result of the meeting, we believe it to be settled beyond all cavil and question that the majority of the physicians in the State are in favor of the non-restrictive Code. Equally strenuous efforts were made by both parties to have all their forces represented at the recent meeting. The vote was fairly taken, and plainly showed the sentiments of the delegates and members. We need hear no more now about the arts of "New York specialists," since, out of the 105 votes, hardly a dozen were cast by these gentlemen.

As a further confirmation of the fact that the vote expressed the sentiment of New York State, we would state that Dr. Manlius Smith, the secretary of the Society, received nearly seven hundred answers to queries from practitioners throughout the State to his card, asking their opinion of the Code. Of these, a very considerable majority favored the present Code. Yet a large part of the answers came from the country, while it has been claimed that the cities represent the real strength of non-restrictive principles.

ABDOMINAL SECTION.

DR. J. EWING MEARS, of Philadelphia, presented to the College of Physicians of Philadelphia a *resumé* of twenty-five cases of abdominal section, in which some interesting and instructive facts are considered. Twenty-two of these operations were performed for the removal of tumors of the ovary. In none of the twelve cases in which aspiration or tapping was performed did any serious results occur, nor were there evidences in the operations which followed of complications due to the previous aspiration or tapping. The incisions were closed by metallic sutures, the needle being carried so as to include the peritoneum. In all cases but one the pedicle was secured by the application of the clamp; in the case excepted a carbolyzed catgut ligature was applied and the pedicle was returned to the abdominal cavity. In one instance of an extremely short pedicle, where, in fact, the wall of the cyst was separated not more than half an inch from the uterus, a double animal

ligature was applied, which failed to control the hemorrhage. The clamp was then applied over the ligature, bringing the uterus well up between the edges of the incision. Although the patient had a tedious convalescence, the ligature and clamp came away in good time and the abdominal incision healed kindly. Beneath the cicatrix the uterus could be distinctly outlined, and after the return of the patient to her usual duties no complaint was made of pain caused by traction upon the organ. In one case only was there noticed a slight tendency to the occurrence of ventral hernia. The healing of the abdominal incision was not materially delayed by the application of the clamp. In three cases menstruation took place by the pedicle, but did not produce any serious inconvenience. In one of the three fatal cases which occurred, the ligature was applied and the pedicle returned to the abdominal cavity; death resulted on the third day from septicæmia. In this case the cyst was adherent in every part to the parietes and viscera. In fourteen cases the antiseptic methods were employed, the spray, however, being omitted. One of these cases proved fatal. The constitutional effect of the carbolic acid has been observed in two or three cases in the condition of the urine, other than this no symptoms were noted. Thirty to sixty grains of quinine, in divided doses, were given in the twenty-four hours preceding the operation, with a view to obviate shock, and in this respect its use has been attended with success.

THE CIVILIZED AND UNCIVILIZED WOMAN IN LABOR.

THE remark of Carlyle that science originated from a belief of man "that there was something wrong" has certainly received confirmation in the literature of the science of obstetrics.

The blessings of civilization with its attending comforts and advantages, so much coveted by mankind, has its reverse side of horrors, the worst aspect of which is seen in the present physical condition of women.

It is fortunate for the peace of mind of the stronger sex that a veil is drawn before the portals of a room in which woman fulfils her duties of maternity. Could the experience of the gynecologist and the accoucheur be known to the general public, few would face the consequences of married life.

The agony endured by women during natural labor is sufficient to account for the biblical belief that such torments are the result of a special curse of God. But what are these human pains to those involved when complications exist, beginning with the forceps and ending in the classic Cæsarean operation, as now performed in Germany without anæsthetics?

Turning from the richly furnished room of the fashionable mother, in which all the resources of civilization have been gathered to ward off the effects of luxury and ease, resulting often in the necessity of making an abdominal section and thus releasing the child; let us turn to barbaric life and observe how perfectly and painlessly the act of the reproduction of the species is performed. Lieutenant Bove, speaking of his experiences among the Jagan tribe of Terra del Fuego, says, "When the great moment arrives the future mother leaves her wigwam, accompanied by a few female friends, and seeks

a secure retreat in the woods. The very next day the young mother is often seen fishing in a canoe, or gathering shell-fish along the coast." These women marry young and are very prolific; seven, and even eight, being the average number of children.

Lieutenant Bove states that the Fuegian women lead a hard life, and are treated as slaves; but hard work, a scant diet, and plenty of fresh air seems to result in the production of very small new-born children, hence the ease of childbirth. On the contrary, luxury, ease, gluttony, and other evils of fashionable life, appears to effect an over-development of the fœtus; this combined with a weak and debilitated body may help to explain those complications in child bearing which are so often witnessed among civilized women.

AN AUTHENTIC CASE OF TYPHOID FEVER IN A MAN AGED SIXTY-EIGHT.

DR. W. G. ENGLAND, of Cedartown, Ga., writes to us regarding an alleged case of typhoid fever in a person aged seventy-two, and adds that he has undoubtedly treated a case of this disease in a patient of sixty-eight years. Dr. England sends us the notes of his case, from which there appears to be no question as to the correctness of the diagnosis. The patient had at first a gradually rising temperature, tympanitis, and iliac tenderness, the rose rash, and the cerebral symptoms of typhoid. Convalescence began in the fourth week. The fever rose as high as $105\frac{1}{2}^{\circ}$ at one time. Dr. England concludes: "When first called to this case I looked upon it as being a malarial continued fever, as we were then having an epidemic of malarial manifestations; but the evidence became so convincing that I was forced to abandon my first opinion. I determined to give quinine a fair chance to control the disease, if it would do so, as is asserted by various authorities, but soon saw that it was not meeting my expectations, therefore I abandoned it. In the past eighteen months or two years, I have treated several cases of what I considered typhoid fever, and in all of them I have given quinine a fair and impartial test, but in none has it met my expectations, and I therefore stopped its use; possibly I did not continue it long enough."

Dr. England gave quinine in three grain doses, which is not enough to secure the antipyretic effect.

THE DOCTOR AND CULTURE.

DR. J. MILNER FOTHERGILL says (*Philadelphia Medical Times*), alluding to the attainments of Sir Thomas Watson, Sir Henry Thompson, Seymour Haden, and Dr. Richardson, in other fields besides those of medicine or surgery:

"There has long existed an impression that if a medical man knew anything out of his profession he could know little of it, or at least have little acquaintance with the latter practically—an impression most unjust to many. Because a man is without other culture, therefore his intellect is completely devoted to his profession, was a view which it was convenient for a good many medical men to do their best to keep up and disseminate. But the tendency is setting the other way. If a medical man manifests good sense and acumen in other matters

of which the public can judge, they are now inclined to give him credit for like qualities in his profession—an act of justice which the public is readier to render than the medical man's professional brethren, it is to be feared."

This is eminently true, and we are not lacking in similar examples in our own country.

SCARLET FEVER IN THE NEWLY BORN.

DR. A. M. OWEN, Surgeon U.S.N., stationed at Pensacola, Fla., writes that scarlatina anginosa has been rife among the children in that locality. The disease assumed a mild form, and has been followed in but few cases by unpleasant sequelæ. He mentions an instance, however, in which the affection attacked the newly-born, an occurrence rarely observed. A younger sister of the lady about to be confined, and who occupied the same bed with her, was taken ill a few days previous to the accouchement, with what proved to be scarlet fever. The invalid was removed from the lying-in room on the day that the labor took place. Five days after delivery the baby had fever, sore throat, scarlet efflorescence, and the strawberry tongue, followed by partial desquamation of the cuticle. Before the end of the week the child resumed nursing and made a rapid recovery. The mother had a severe sore throat, as did also the nurse.

News of the Week.

REGULATING MEDICAL PRACTICE IN PENNSYLVANIA.—A bill has been prepared to amend the existing law regarding registration in Pennsylvania. It provides for the creation of a State Board of Health who shall have the supervision of registration, instead of the various colleges, as is now the case.

AN ACT TO REGULATE THE SALE OF POISONS IN NEW JERSEY.—A bill has been introduced into the New Jersey Legislature making it imperative to suitably label all drugs usually denominated poisons, placing upon each box or package the name of the articles and the word *poison*, together with the name and place of business of the seller.

THE PRICE OF QUININE has declined 10 cents, and is quoted at \$1.80 to \$1.95 per ounce.

THE TRAGEDY AT BELLEVUE HOSPITAL.—Michael Kelleher, an inmate of the alcoholic ward in Bellevue Hospital, was killed on Sunday last by Geo. E. Mahan, another patient, who was suffering from delirium tremens.

THE EFFECT OF INHALATIONS OF ETHER UPON THE ACTION OF THE KIDNEY.—Mr. Lawson Tait, in a recent communication to the *Lancet*, makes the important observation that in several cases noted by him, the excretion of urine from the kidneys was entirely suspended during the administration of ether. He observed this in a case of fistula between the ureter and cervix of bladder. Also in several cases of vesico-vaginal fistula, the same thing was noted. The observation, if true, is important. It is known, however, that ether increases the gastrointestinal secretions, and there is no *a priori* reason for believing that it always affects the kidneys as described.

THE BRAIN OF GAMBETTA.—The brain of Gambetta weighed only 1,160 grammes, or about 36 ounces. This is extraordinarily small, since the average weight of a Frenchman's brain is 48 ounces, the range being from 45 to 56. Decided microcephaly is usually considered as beginning at about 37 ounces, and Gambetta must, therefore, if report is correct, be pronounced microcephalic. The range of brain weight in idiots is between ten and thirty-five ounces, and the distinguished French statesman touched very closely upon the anatomical basis of idiocy. The convolitional development was rich and clearly marked.

It is something almost unique and incredible that a man of such brilliant intellectual attainments should have had so small a brain. It is well known, however, that inferences as to mental development cannot usually be drawn from a study of individual brain weights. The size of the brains of a race do furnish an indication of development. Highly civilized races are capable occasionally of producing what may be called physiological megaloccephaly. The lower races cannot do this to the same extent. Such at least is the most plausible of the present views regarding the significance of brain weight.

GERMAN MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting of the German Medico-Chirurgical Society of New York City and vicinity, the following officers were elected for the current year: *President*, Felix Nordemann, M.D.; *Vice-President*, Charles Heitzman, M.D.; *Secretary*, Ludwig Weiss, M.D.; *Corresponding Secretary*, H. J. Boldt, M.D.; *Treasurer*, Joseph Glaser, M.D.; *Librarian*, Samuel Kohn, M.D.

IMMIGRANT INSPECTION SERVICE.—The final report of Superintendent John H. Rauch shows that a total of 115,057 immigrants were inspected in the District between June 1 and December 31, 1882. Of this number, 57,302 were found to have been satisfactorily vaccinated before sailing or during the voyage, and 3,127 were found to have had small-pox—making about 53 per cent. of the total number protected. There were 28,408 of the remainder vaccinated or revaccinated after arrival and before reaching this District; and 21,618 similarly treated by the Western inspectors, leaving 4,602 unaccounted for, including those whom it was deemed inadvisable to vaccinate.

ANOTHER CARDIAC STIMULANT.—In Russia the *adonis vernalis* is a popular remedy in cases of dropsy and heart disease. Exact experiments have recently been made with it by Dr. Babnow, of St. Petersburg. It stimulates the motor and inhibitory ganglia of the heart, acting very much like convallaria and digitalis. Unlike digitalis, it is not cumulative in its action. A glucoside "adonidini" has been isolated by Cervello; it contains the active principles of the drug.

CHOLERA IN SOUTHERN MEXICO.—A recent letter from Chiapas, one of the southern States of Mexico, gives a pitiable account of the havoc being wrought there by cholera. The writer says: "The town of Tuxtla had eight thousand inhabitants—six hundred of whom are dead. Of the six thousand in Tonala, upward of one thousand are dead. This town suffered most severely,

twenty to thirty persons dying daily. This horrible epidemic broke out in July, 1882, on a farm bordering on the River Chiapas. Then it extended to San Bartolo, where it worked havoc for a month, and then moved onward, visiting Chiapas and Tuxtla, almost on the same day. It remained in those towns about twelve or fourteen days, and then went toward Tehuantepec. Then it penetrated to the Atlantic, and caused many deaths in Tabasco and other places. It is certain that it is a disease that only affects the hottest regions, as not a case occurred in San Cristobal Las Casas."

TOBACCO-SMOKING AMONG AMERICAN BOYS.—The head master of the Latin School at Boston, Mass., states that tobacco is used by half the boys in the upper classes in his establishment, while the Principal of Harvard Grammar School, in Charlestown, avers that out of 300 boys, about 40 per cent. use tobacco habitually.

DR. CHEW KIN FONG.—It is darkly hinted that New York physicians may yet be ruined by Chinese cheap labor. A Chinese physician, Dr. Chew Kin Fong, who enjoys a large practice among his fellow-countrymen here, has recently applied to the Board of Health for recognition. He could talk no English, but showed a certificate issued by the Harbor Department, Hong Kong, and affirming his qualifications as surgeon of a Chinese emigrant ship. The certificate was not recognized, and Dr. Fong will have to be examined. Assuming that he passes, the serious question arises whether it would be proper to consult with a person who practises, it is said, on strictly oriental principles.

BACILLUS OF TUBERCLE IN THE BREATH.—Dr. Arthur Ransome has recently announced before the Royal Society that he has been able to discover the bacillus tuberculosis in the condensed aqueous vapor of persons afflicted with phthisis. This is a new source of alarm, if Koch's malignant bacillus can be puffed in our faces by all our phthisical cases.

A NEW HOSPITAL at Dayton, O., has recently been completed and opened. It cost \$75,000, and has a capacity of 200 beds.

THE PARIS FACULTY OF MEDICINE.—The Faculty of Medicine now comprises four separate departments: the ancient Faculty, the Practical School (which is temporarily lodged in the buildings of the former College Rolin), the Botanical Garden of the Rue Cuvier, and the Clinical Hospitals. The number of students who followed the course of lectures for the last year (October 16th, 1882 to 1883) was 4,209, this being exclusive of fifty foreigners and thirty-nine women, the latter being thirteen fewer than last year. The number of examinations at the Faculty of Medicine was 6,076, nearly a third of whom were "plucked."

A NEW PRIZE.—The French Government has recently resolved by decree to found a prize, to be called the Prix Volta, and of the value of 50,000 francs, which shall be awarded for the most successful application of electricity, either in the production of heat, light, chemical force, or mechanical power, or in the transmission of messages, or in the treatment of disease. Competitors may be natives of any country, and claims to the reward must be lodged by June 30, 1887.

Progress of Medical Science.

THE HISTOGENESIS OF CARCINOMA.—Dr. Carl Hempel Reed, in the *Philadelphia Medical Times*, reports the results of some studies in the Pathological Laboratory of the University of Pennsylvania, upon the histogenesis of carcinoma. He concludes that cancers have an exclusively epithelial origin, and summarizes the essential points in favor of this view as follows: 1. Primary true cancers are found only in locations where there is pre-existing epithelium. 2. No cancer has been proved beyond doubt to have originated heterotopically. 3. The cicatrization of cancers explains the young connective-tissue infiltration. 4. Young connective-tissue cells or white blood corpuscles never being seen inside the alveoli. 5. The independence of the epithelial cancer-cylinders from the connective tissue. 6. The intactness of endothelial ensheathments of connective-tissue trabeculae forming the alveoli. 7. The mode of development and concentric growth of secondary cancers. 8. The proliferating power of epithelium normally is greater than that of any other tissue. 9. The results of my experiments showing that the epithelial covering in the healing of ulcers is exclusively derived from the epithelium of the border, a most conclusive proof of this being the gradual advancement of the pigment from the borders of the healing ulcer; this fact, by analogy, forming a strong testimony in favor of the epithelial origin of cancer. 10. The transformation of connective-tissue cells into epithelial cells, in extra-uterine life, does not occur, either physiologically or pathologically.

MERCURIAL GLYCERITE.—Dr. Vigier states (*Gazette Hebdomadaire de Médecine*) that medicinal agents, incorporated with fatty substances, are absorbed to only a limited extent. Mercurial ointment, however, forms a noteworthy exception to this general rule. Drugs incorporated with glycerine are, according to Vigier, not at all absorbed. He considers that this property of glycerine is due to its not wetting the skin. Experiments on himself and his pupils have proven that the active substance thus incorporated never produces its constitutional effects. It is for this reason that he recommends glycerine instead of lard in mercurial preparations for scabies, pediculi, etc., as such a mixture has an antiparasitic effect without being absorbed. The following glycerite, notwithstanding the caustic nature of its principal ingredient, he says, may be used without danger:

R. Hydrarg. bichlorid. 3 iss.
Glycerine 3 iij.

M.

THE ENDERMATIC USE OF QUININE IN MALARIAL PNEUMONIA OF CHILDREN.—Dr. L. Galanti, of Rome, applies an ointment of sulphate of quinine to the raw surface produced by blistering, in the malarial pneumonia of children. By this means he avoids the difficulties often encountered in the internal administration of this drug.—*Gazzetta medica di Roma*, No. 19, 1882.

WASHING OUT THE STOMACH WITH CHLOROFORM WATER.—Dr. Aurelio Bianchi, reports three cases in which he employed chloroform water, in the proportion of one drachm of chloroform to a quart of water for washing out the stomach. The first case was one of supposed cancer of the pylorus, and is claimed to have been much benefited by this procedure. The two others were instances of chronic dyspepsia, and are said to have been cured.—*Lo Sperimentale*, No. 10, 1882.

LYMPHADENITIS OF THE CONJUNCTIVÆ.—Dr. W. Goldzieher, of Buda-Pesth, Hungary, recently removed from the conjunctival cul-de-sac of a fourteen-year-old boy a hard, painless tumor the size of a filbert. On the surface of this growth were to be seen yellowish, cheesy-looking plaques, which apparently penetrated into the

depth of the tumor; whilst in other places small, round, grayish nodules could be made out through the translucent mucous lining. There was a family history of scrofula. Dr. G. first thought that it was a case of tuberculosis of the conjunctiva, but the microscopic examination of the specimen showed that it was an enlarged lymphatic gland. The existence of lymph-follicles in the normal conjunctiva, though vouched for by some microscopists, has been strenuously denied by others. The present case would seem to afford corroborative evidence of the real presence of these conjunctival follicles.—*Centralblatt für Praktische Augenheilkunde*, November, 1882.

HYDROTHERAPY IN THE TREATMENT OF SYPHILIS.—Dr. Pascal advocates the employment of cold water, conjoined with the internal administration of specific remedies, in the treatment of syphilis. He states that it is of great service in the early stages, by virtue of its tonic effects, in overcoming syphilitic anæmia. In the later stages it is employed with advantage in the various cerebral accidents of specific origin. He condemns the thermal baths, however, as tending to cause the very cerebral complications for which the cure is sought. The cold bath alone is of little utility, but should always be regarded as an adjuvant to internal medication.—*Journal de Médecine de Paris*, No. 15, 1882.

DIABETIC COMA.—Drs. Foster and Saundby record a carefully studied case of diabetic coma in the *Birmingham Medical Review*, January, 1883. They have summarized their conclusions as follows: 1. Diabetic coma is especially liable to supervene in acute cases in young persons. 2. Diabetic patients and their friends should be warned of the danger of constipation, muscular exertion, nervous excitement, and cold, as probably predisposing causes of death by coma. 3. The discovery of the ferric chloride reaction in the urine should be taken as a warning to look out for the premonitory symptoms of coma. 4. Deep respiration, rapid pulse, and abdominal pain are the earliest premonitory signs of this condition. 5. Cyanosis may be absent in spite of the dyspnoea, and may appear only just before death. 6. Convulsive seizures are not an uncommon occurrence just before death. 7. Diabetic coma, with all its classical symptoms, occurs independently of any excess of fat in the blood, and the pathological value of lipæmia, when present, is yet undetermined. 8. The toxæmic theory, or poisoning by acetone or some nearly allied substance or substances, affords the best explanation of this remarkable group of symptoms.

STRANGULATED HERNIA, COMPLICATED BY DISEASE OF THE SPERMATIC CORD.—Dr. John L. Atlee reports in the *American Journal of the Medical Sciences* for January, 1883, a case of strangulated hernia, in which the scrotum was enormously enlarged; at the bottom it was twelve inches in circumference, and came down nearly half way to the left knee. The surface of the scrotum was marked by numerous large and very dark veins. The bulging at the external ring was as thick as the wrist, and no impression was made by the taxis. When the sac was opened the first thing that presented was a large mass of omentum running down to near the bottom of the scrotum. This was raised up, and a knuckle of intestine, ilium, about five inches in length, firmly strangulated and of a dark mahogany color, but with no ash-colored spots. After the reduction of the hernia from the ring proceeded a cord as thick as a lead pencil for about three inches. It then became much thicker and highly vascular, resembling the omentum, which he had already removed. There was a large mass lying in the very bottom of the scrotum, in some places nearly as thick as a bantam egg, with many smaller lumps extending down the mass, and fringed with highly vascular membranes; when drawn out it measured eighteen inches in length, and weighed twelve ounces. As it approached the testicle it became as small as at its origin in the

ring. He found the testicle wasted and very soft and firmly attached to the bottom of the cavity. The conclusion was drawn that it was an immense hypertrophy of the cord and epididymis, and it was concluded to remove it, which he did after tying at the ring above and at the testicle below. After plugging up the ring with the stump of the omentum and cleansing the empty sac, he closed the external wound and applied a bandage. The patient bore the operation well.

CANCER OF THE TESTICLE FOLLOWING ORCHITIS.—At the recent meeting of the Rhode Island Medical Society, Dr. Fuller narrated a case of carcinoma following orchitis. The patient, aged thirty-four, had chronic orchitis for twenty-two years caused by a blow on the testis when a lad of twelve years. Four months before removal the tumor became painful and rapidly increased in size, adding one-third to its bulk in four months.

Excellent recovery from the operation, and immediate recurrence in the abdominal cavity, forming a tumor the size of a man's head, and causing death in two months.

The upper two-thirds of the tumor was fibrous, and contained cysts and enchondromatous masses. The lower third was encephaloid. The abdominal tumor was also encephaloid.

LARGE DOSES OF ALCOHOL IN SCARLATINA.—At the last meeting of the Academy of Medicine of Cincinnati, O., Dr. Giles Mitchell reported forty-three consecutive cases of scarlatina treated with large doses of alcohol, without a single death. The quantity of alcohol given in some cases was enormous. To a patient two years old a half-ounce of whiskey was given every hour for a number of days, without having any other than a favorable effect, and without producing any symptoms of alcoholic intoxication. The doctor claimed that when this treatment was instituted, the disease had always pursued a more favorable course, hyperpyrexia being neither so frequent nor so prolonged, nor were renal complications so likely to ensue. In case the kidneys became affected, the alcohol was still pushed, and the complication fully relieved. If the temperature was high before the administration of the remedy, it would rapidly fall below the danger-line after the treatment was instituted. The report of Dr. Mitchell called forth a lengthy discussion from the members of the Academy. Prof. Whittaker thought that the favorable influence exerted by the remedy was due to its antiseptic properties. He had no doubt that the brilliant results obtained were due to the antiseptic and parasiticidal properties of alcohol, as manifested in these cases by the destruction of the germ of scarlatina. Prof. Reamy was a firm believer in the efficacy of large doses of alcohol. He attributed its good effects rather to its influence in preventing tissue-metamorphosis, to its value as a food, and to its antipyretic action.—*Philadelphia Medical Times*, December 30, 1882.

RENAL SURGERY.—In its annual retrospect of the advances made in medicine during the past year, *The Medical Press*, December 27, 1882, makes the following comments on this subject: Several operations for removal of renal calculi, and for relief of symptoms set up by presence of pus in the organ, have been recorded, the majority eventuating successfully. Nephro-lithotomy, as performed by Mr. Morris, has been repeated by Mr. Beck, who points out that favorable subjects for the operation should not be too fat, and that when pus in the urine affords indication that the stone in the kidney is setting up irritation, then the time for operative interference has arrived. Mr. Beck repeats what Mr. Morris pointed out in respect to the bleeding from the incised kidney. Though seemingly very profuse for a moment, it is at once and permanently controlled by the pressure of a sponge, and does not subsequently seem to cause embarrassment.

From the numerous cases reported before societies and

in journals, in which grave operations on the kidney have been attended with success, it is evident that an increasing feeling of hope as to the consequences of such interference is growing up among surgeons, who will now proceed to cut into or remove a kidney with much less hesitation than would have been shown a few years ago. The most hopeless cases of this kind that are met with now are those extreme examples of degeneration in which the kidney is little more than a sac containing pus, and which yield the least likely of all probabilities of successful removal of the mass. A very considerable number of cases in which operative treatment for removal or evacuation of diseased kidneys has succeeded have been reported during the year, and it is a justifiable conclusion, from consideration of these proceedings, that a much more evident willingness to attempt to give relief to patients by such measures is exhibited now than formerly. In fact, this may be said of surgical operations generally. Many which are now by no means uncommon would have been promptly rejected not very long ago, as involving an amount of risk not justified by the probabilities of success or even of relief to distressing symptoms.

SUPERINVOLUTION OF THE UTERUS.—Dr. Sinclair, at a meeting of the Boston Obstetrical Society (*Boston Medical and Surgical Journal*, December 21, 1882), reported a case of what he regarded as uterine superinvolution. The woman was twenty-six years old, and, after the third child-birth, she ceased to menstruate. Although plump and well, she was very nervous. There had been no menstruation for a year when she consulted Dr. Sinclair, who found an extremely small, infantile uterus. This would not admit a small uterine sound, but a probe could be passed up two and a half inches. She is now thirty-six years old. A year ago the husband had called to say that his wife was in charge of a physician who said that the trouble was due to a ruptured perineum and lacerated cervix. Dr. Sinclair claimed an examination in his own defence, and found no laceration whatever.

A NEW OPERATION FOR SPINA BIFIDA.—At a recent meeting of the Leeds Medico-Chirurgical Society (*British Medical Journal*, December 30, 1882), Mr. Robson showed a child six weeks old, upon whom, when six days old, he had performed a new operation for spina bifida. The redundant parts removed by the operation were also shown. After the removal of these parts and after stitching up the arachnoid over the spinal canal, periosteum from a rabbit was inserted between the meninges and the skin so as to cover the gap in the bones. The wound had perfectly healed; the skin over the lumbar region was quite level; there seemed to be no tenderness on pressure; the child looked strong and healthy. The sac was found to be of the size and shape of half a swan's egg; the wall consisting of true skin and subcutaneous tissue lined by serous membrane. At one point the sac was very thin and transparent, appearing to consist only of the serous membrane covered by a thin layer of epidermis, when fresh minute blood-vessels could be seen to ramify over it. Mr. Robson drew attention to the following points: 1, the operation was performed with full antiseptic precautions, eucalyptus air being used instead of carbolic spray; 2, the meninges were closed by uniting the serous surfaces, as in peritoneal surgery; 3, the transplantation of living periosteum and its continued vitality; it had not yet, however, formed new bone, but already the covering of the canal had a greater than mere skin-firmness; 4, the entire absence of bad symptoms in the child, operated upon at so early an age, was noticed.

ETHYL BROMIDE INTERNALLY FOR SPASMODIC COUGH.—Dr. Squire recommends a solution of bromic ether in water (1 to 200) for administration in whooping-cough, as well as for angina pectoris and spasmodic pain. It may be given in the same manner as the aqua chloroformi of the British Pharmacopœia.

Correspondence.

THE TREATMENT OF ASTHMA.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: By practising in strict accord with accepted pathological data, pure spasmodic asthma may be radically cured. In the treatment of this commonly intractable disorder I have met with such success that I now assume charge of asthmatics with a feeling of pleasure, confident of the relief so sure to come.

In THE MEDICAL RECORD, over two years ago, I pointed out the striking fact, that *counter-irritation applied over the pneumogastric nerves*, from the upper part of the thyroid cartilage to near the upper borders of the clavicles, stopped paroxysms of asthma. I detailed the case of a lady, aged fifty years, afflicted with that disease nearly all her life, and whom I had attended at times for over three years, and to whom I was last called on April 1, 1880. On that day commenced the most violent attack of asthma she ever had. Until May 10th she had never left her room—scarcely the chair in which she sat. Morphine alone quieted her continued dyspnoea, and to diminish the quantity was only to increase the dyspnoea. At last, but semi-conscious, extremely weak, with face and limbs greatly swollen, and the head fallen forward on her chest, I feared dissolution.

Her case was one of pure 'nervous or spasmodic asthma, a disease in which I recognize two pathological elements: 1, *nervous spasm* of the bronchial tubes; 2, *hyperæmia*, approaching or amounting to inflammation. Difficult breathing involves all the physical signs. The *râles* have a *double character*; *id est*, they occur *both in inspiration and in expiration*. This I recognize with Professor Alonzo Clark as a *sure sign* of spasmodic asthma.

In this affection I have relied on morphine most of all; then nauseants and antispasmodics *ad infinitum*. But nothing longer benefited my patient. I was perplexed, when at last the idea arose in my mind, and with Churchill's tincture of iodine I applied counter-irritation over the course of the pneumogastric nerves. Relief followed so rapidly and absolutely as to make me doubt that it was due to my application. Benefited in less than twenty-four hours, freedom from asthma was absolute in less than forty-eight. I determined to paint again so soon as the paroxysm returned. It never returned.

In June I applied the same treatment to two more cases, with the same happy result. And up to that time all I had observed was relief of the paroxysm, and only of the first, because no patient had any return of them after the one application of iodine. Those three cases were placed upon iodide of potash internally for a short time. Not one of them, to my knowledge, has ever had a return of the paroxysms.

Apropos of my report in THE RECORD, my friend, Dr. J. M. Lee, of Pittsburg, mentioned to me a case in his service at the Mercy Hospital, of uncomplicated spasmodic asthma so severe that he had become alarmed for his patient's safety, when Dr. T. C. Christy called his attention to my article in THE RECORD, which he had that evening received, and suggested "that Faulkner's plan be tried." Dr. Christy's suggestion was acted upon, and Dr. Lee reports the effect to have been "brilliant;" relief came rapidly and completely. The man unceremoniously left the hospital next day, remarking that "he was well and there was no use in remaining longer."

Again, in February, 1881, my friend Dr. James B. Murdoch was pleased to draw my attention to an article in *The British Medical Journal*, by Dr. Robert Saundby, in which, having adopted my plan and terming it "the iodine treatment of asthma," wrote as follows: "H. H. had suffered for the last six or seven years from attacks of dyspnoea, coming on at three o'clock A.M., which for-

merly occurred only in June or July, but latterly throughout the year. I painted the lines of both pneumogastrics with a mixture of equal parts of the liniment and tincture of iodine and ordered him to repeat it every night. The next time I saw him he told me that he 'had not had such a good night's sleep for twelve months.' He slept all night, and was so surprised upon waking in the morning that he got out of bed to look at his watch before he would believe it. He discontinued the iodine after a few applications, as the skin became sore, but he has had no return of the attacks."

Since my first successes in the treatment of this malady, I have studied with interest and quite peculiar favor the disease in its several bearings upon thirty-seven cases: 1st, regarding constitutional differences in asthmatics; 2d, regarding treatment of occasional complications; 3d, regarding climate and change in residence. Close observation has led me to think that one great source of failure in treatment is to be found in insufficient consideration of constitutional variations. The treatment of a name, in lieu of pathological condition, has never been more impotent than in asthma. Little meditation is required to show that tall, thin, anæmic patients need different management from short, fat, full-blooded. Obesity must be reduced by hygienic means, by diet, laxatives, exercise. Slender and emaciated patients must be strengthened by wholesome food, by tonics, such as iron, strychnine, digitalis, cod-liver oil, phosphorus, exercise.

In common torpidity of the bowels, regularity in function is often insured by a pill at bedtime, containing one grain each of blue mass, rhubarb, purified aloes, and extract of hyoscyamus. In many asthmatics there is depreciation of the nervous system. And then my reliance is upon cod-liver oil. Useful, too, are iron, arsenic, phosphorus. Strychnia seems especially beneficial in giving fillip to the muscular fibre of the bronchial tubes, aiding expectoration. Fits of sneezing and eruptions upon the skin give assurance for the administration of arsenic. Bronchial congestion requires iodide of potash. The skin of most asthmatics is so impressionable to atmospheric changes as to require particular attention. To strengthen the skin, I consider a cardinal point in the treatment of asthma. And for this purpose I administer salt-water baths, by seating the patient upon a cane-bottomed chair, and throwing over him a blanket, fastened around his neck and covering the chair, underneath which is placed an ordinary or Bumstead evaporating pan with spirit-lamp, the pan containing about three ounces of water and a heaping teaspoonful of salt. As soon as the sweat has freely broken, the patient is rapidly shampooed, rinsed with pure, cold water, carefully dried, and then rubbed until the skin glows. I sometimes find it weeks before I can make it glow. But I persevere. The bath I order repeated twice a day, daily, or every alternate day. Its advantages can scarcely be told.

Another cardinal point in treatment is inflation of the lungs: 1, to increase or restore the natural breathing capacity; 2, to cleanse the bronchial tubes and air-cells of secretion. This I do not attempt with the extravagant apparatus of Waldenburg, but with a simple and inexpensive Politzer's inflator. It answers admirably. Asthmatics are short of breath because of spasm, and partly because of diminished breath space. Now air forced into the lungs expands the tubes, dilates the vesicles, and is followed by free expectoration and comfort. The patient is directed to take as long an inspiration as possible; then the nozzle of an inflated Politzer bag is inserted between the closed lips, the nostrils held, and the bag compressed. Thus do I force into the lungs at every inspiration from one to three bagfuls of air, and continue this process for ten minutes, and repeat it morning and evening. Professor J. C. Dalton says that "the average amount of air inhaled at each inspiration is twenty cubic inches, and that representing from ten to

thirteen per cent. of the entire quantity of air in the lungs, it will therefore require from eight to ten respirations to change the whole quantity of air in the cavity of the chest." An ordinary-sized Politzer's bag will hold about ten to eleven cubic inches of air. Remembering these facts, we know the quantity of air which can with safety be forced into the lungs, and also have a gauge whereby to tell the amount of improvement made in the dilatation of the air-vesicles and small tubes, or in other words, of the increase in "vital capacity of the lungs."

To a change in the residence of asthmatics I object, because the benefit so derived is generally only temporary, the malady soon returning in the new residence. And it is reasonable to suppose, not even considering the expense of travel that patients can be managed better at home by men, to whom, as Jacobi philosophically remarked, "the science of medicine is no longer mere formula, and its art no routine," than by charlatans, so numerous at all "resorts."

It has been insisted upon by great authorities that an urban residence is best for asthmatics, and more especially that portion of a city in which the atmosphere is heaviest and smokiest. That I cannot believe. Smoke and heaviness are synonyms for fog and dampness. I dissent, because here in Pittsburg, where the atmosphere is the smokiest, heaviest, and as such, of largest area on the continent, we have, I dare say, more native asthma, and from it a death-rate, great, if not greater than that of fairer cities, in which there is a pure atmosphere, dry, warm, and of nearly equable temperature. No one ever visited Pittsburg without complaining, almost within an hour of their arrival, of the "dirt" in their throat and the blackness of their nostrils. There is a faucitis peculiar to Pittsburgers. The sulphur-charged atmosphere is irritating to the delicate mucous membrane of the eye, nose, throat, and bronchi, and produces a chronic congestion, the secretion of which catches and holds to view the carbonaceous material of the atmosphere. The inspection of the oral cavity of every resident reveals its secretion charged with black, carbonaceous material. This carbon, drawn in with every inspiration, affects alike the mouth, throat, and chest, as I have seen upon post-mortem examination. The inhalation of the smoke of Pittsburg is not conducive to health.

True, there are some asthmas benefited by Pittsburg residence, but only, I believe in accordance with the fact that travel and *change* will bring relief—the centres of relief being, however, elsewhere as well as here.

On the whole, I judge the opinion of preference for city over country residence to be mainly traditionary, and due to failure in differentiation of the forms of asthma.

Yours, etc.,

RICHARD B. FAULKNER, M.D.

PITTSBURG, PA.

DISINFECTION BY HOT AIR.—Koch and Wollhügel, in experiments made to determine the disinfecting power of hot air, have been led to the following conclusion: 1. Bacteria are destroyed by being exposed to a temperature of a little over 100° C. for an hour and a half. 2. Spores of brewers would require for their destruction an exposure for the same time at 110–115° C. 3. Bacilli are killed only by three hours' exposure at 140° C. 4. The heat of hot air penetrates articles so slowly that in three or four hours' heating, at 140° C., of small objects, such as a bundle of clothes, etc., disinfection was not secured. 5. Five hours' heating at 140° C., necessary to certain disinfection, does serious injury to most articles.

On the announcement in Russia that the course of medical instruction for women would be closed, a great meeting was held to protest against the measure, and a Moscow merchant offered to spend 200,000 roubles if the St. Petersburg authorities would undertake the management of the lectures.

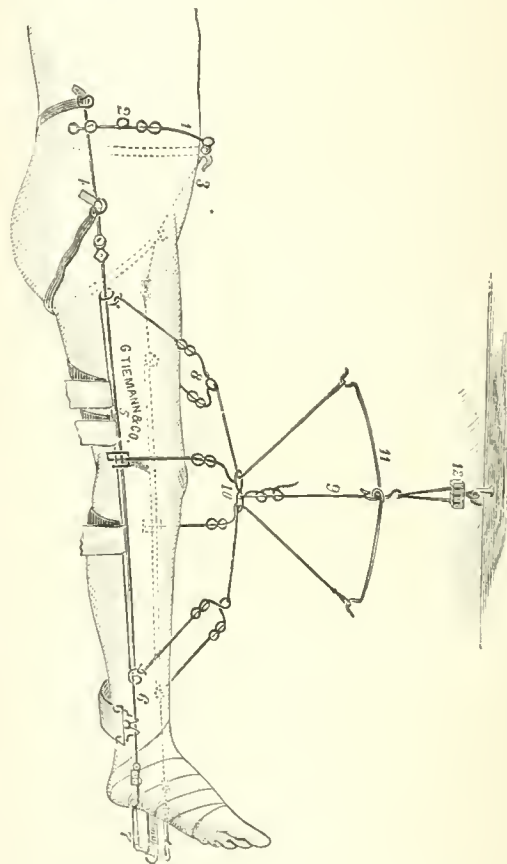
New Instruments.

IMPROVED GENERAL EXTENSION SPLINT FOR LOWER EXTREMITY.

By A. CLENDINEN, M.D.,

FORT LEE, N. Y.

THE splint may be said to be composed of three sections. First, the main section, constituted by extension and counter-extension rods Nos. 5 and 6, with their reverse tractors Nos. 8; tractive lines through ringlets, over brass rollers; of centre brace No. 10 to cross bar No. 11, with fixation or check line No. 9, and suspension line No. 11. Second, the pelvic section or attachments Nos. 1, 2, 3, and 4 with ischio-pubic and abdomino-lumbar bands attached to ringlets, as seen in cut. The ringlet in No. 3, for the attachment of ischio-pubic band, is within three



inches of point of attachment to main section, while the ringlet at and in No. 4 is six inches from point of attachment to main splint where shown by the nut of bolt in plate. This difference is necessary to conform band to the pelvic lines and obtain easy bearing and even fulcrum. Third, is the foot section 7, with attachment, as seen by the bolt nuts opposite ankle, which is the point of its attachment, and where by the temporary withdrawal of one of the bolts, hinge motion can be had for the prevention of ankylosis, when feared. Centre ringlet is in the end of foot-piece, for attachment of plasters from foot and at each corner, for guy lines. This splint is made of unannealed wire, is simple, cheap, and easily portable.

The patient is supposed to lie upon a *level* surface, with the exception of pillow for head. On upper section of bed lay an extra two inch thick mattress, reaching to the buttock. In suspension of limb use as little elevation as possible, viz., have the limb's heel within four inches of the level bed surface of the first mattress. By so arranging, the limb is in about natural line with body,

and yet we have obtained room for use of bed-pan and removed any chance of fouling the dressings. The splint which has been suspended is now held over the limb in order to open or close the tractors 8, so as to maintain proper width just to clear diameter of limb, and at the same time the foot-piece is bent to the same width, so that the side lines will be parallel, in avoidance of friction. Piece No. 3 should now be bent to suit the rise over mons veneris and abdomen, and the same must be done with pieces 1 and 2, which are coupled, for the purpose of enabling them to be used in application to either side and to avoid much bending. Whichever of the ringlets of No. 2 piece reaches No. 4 is now coupled with bolt. The fixation line 9 is so tightened that the tractors 8 cannot displace the extensor and counter-extensor rods, which remain their entire length side and side, the ringlet hook at either end being in juxtaposition to the bolt nuts seen in plate where the pelvic and foot attachments are connected. After felting or other dressing has been applied to abdomen, etc., the splint, to off side of which the bands and plasters have been fastened, is lowered, and the surgeon draws under limb the plasters to the near side, and by pins adjusts the same to the proper rod, viz., those plasters applying to the upper fragment will be fastened to the counter-extension rod, and those of the lower fragment to extension rod. By so doing we avoid friction and get the benefit of full weight of limb for the extension of its lower fragment. The plasters are now adjusted to foot, etc., and attached to the foot-piece; the ischio-pubic and the abdomino-lumbar bands are made taut, and the suspension cord is drawn to the proper elevation of limb. Measurement is made, shortened estimated, and the fixation cord 9 is slackened to allow the tractors 8 to effect the extension, while digital and eye attention to the line of fracture will decide surgeon when to order the tightening of No. 9 cord. His judgment must be confirmed by comparative measurement and allowance for articular separation, and to overcome excessive muscular spasm extra traction may be judged temporarily necessary, and can be held by fastening the tension lines at 10. Measurements should be made and remade during the first fourteen days, and at the different periods not only spasmodic tension but muscular relaxation and atrophy judiciously accredited. Extra antagonistic bandages can be used in oblique and other fractures.

THE HEALTH OF BROOKLYN.—The report just published of Health Commissioner Raymond, of Brooklyn, comprises a record of eleven months ending November 4, 1882. During that period there have been 15,092 deaths, or 559 in excess of the actual mortality in the year 1881. No cases of small-pox were reported since the first week in September, due to the fact that house to house vaccination has been systematically enforced. Dr. Raymond very earnestly and very properly urges the establishment of a hospital in that city for the reception and treatment of persons suffering from contagious diseases.

REMOVAL OF A LARGE BRONCHOCELE.—Dr. Cheever, of Boston, removed, quite recently, a large bronchocele at the Boston City Hospital. The tumor weighed ten ounces. The right and left lobes were dissected in turn from their beds by the usual incisions, and the thyroid and other arteries tied before they were severed. The amount of blood lost was inconsiderable, scarcely equalling eight ounces. The patient subsequently died of shock at the end of twenty-four hours.

PERFORATION OF NASAL SEPTUM.—Dr. John B. Roberts, of Philadelphia, has invented a punch for cutting out a disk of cartilage in cases of nasal obstruction due to deviated septum. He does not consider the prevalent notion that the partition between the nostrils must not be perforated in efforts to render the occluded nostril patulous as well founded.

Reviews and Notices.

ON THE NATURE AND TREATMENT OF GOUT. By DR. W. EBSTEIN, Professor of Internal Medicine, and Director of the Medical Clinique in the University of Göttingen; with atlas containing five quarto chromolithographic plates. Wiesbaden, 1882.

THIS work is dedicated to Prof. Henle, in commemoration of the "Jubiläum" held in honor of the fiftieth year of his doctorate; and forms, as the author of this really thorough book modestly says, "an attempt to give a history of the physiological changes in gout, which will furnish an explanation of the clinical features of the disease."

The particular aim of the writer is, however, to show that the gouty symptoms are a necessary effect of the presence of uric acid in the blood. The discovery of uric acid by Scheele in 1776, and the proofs furnished by Wollaston in 1787, that the gouty concretions contain uric acid, did not place the proper significance upon the relation which this acid bears to gout; even Henle regarded it as an accidental product, and Garrod, in 1848, was the first indisputably to prove the presence of urate of soda in the blood of gouty patients; from his time on could we speak of a uratic arthritis.

Our author attempts to solve the many still open questions by means of experiment and anatomical investigations, and finally reaches the conclusion that in gout the disturbances of nutrition in the tissues are primarily caused by the *fluid neutral urates* circulating in the blood; the crystallization of these salts as acid salts, and their deposit in the tissues, being a secondary effect. The free acid necessary for this transformation is formed in the necrosed tissues, and consequently is an effect of the necrosis, which, in its turn, has been produced by the fluid neutral urates circulating in the blood.

A piece of blue litmus paper, placed between the cut ends of a necrosed cartilage, turned red. Whilst part of the uric acid is deposited in various localities (kidney, cartilage, tendon), but is particularly formed, according to the author, in the muscle and bone marrow of the affected extremities, another part passes into the blood and causes in the different tissues and organs manifold disturbances (visceral, retrograde, vague gout). Therapeutically the author recommends diet regulation; fat accumulation to be avoided; meat and a certain quantity of fat are permissible, while hydrocarbons and alcohols should be reduced to a minimum. Mineral waters are occasionally to be advised.

The excellent matter contained in this work is made the more comprehensible by the chromo-lithographic plates, which also artistically deserve the highest praise.

The investigations are original, the results new, and divergent from the doctrines now held on this subject; the book is therefore to be highly commended to the general practitioner as offering new and original views in regard to the protean manifestations of this disease.

ANATOMICAL TECHNOLOGY AS APPLIED TO THE DOMESTIC CAT; An Introduction to Human, Veterinary, and Comparative Anatomy. With Illustrations. By BURT G. WILDER, B.S., M.D., and SIMON H. GAGE, B.S. New York and Chicago: A. S. Barnes & Company. 1882.

THIS work is intended as a manual for the instruction of persons studying, or intending to study medicine, comparative anatomy or physiology.

Its peculiar features are, that it assumes no previous knowledge of anatomy; its descriptions are based upon the domestic cat; these descriptions are very direct, simple, minute and practical. Directions for dissection, preservation of material experimentation, and proper instruments are given, and a new system of anatomical nomenclature is introduced, which makes the work very technical in character.

The book is chiefly designed for beginners, yet it contains many references and suggestions of great value to teachers.

The descriptions are for the most part of macroscopic structure.

The book bears the mark of much conscientious labor and thorough familiarity with its subject. We can most cordially commend it as filling a place in text-books hitherto unoccupied.

The only feature of the work which calls for special criticism, is the nomenclature adopted. To this subject Dr. Wilder has given great attention, and his views are already quite generally known. His object is so to change our anatomical names that they will equally apply to all vertebrates and be equally intelligible in all nations. He therefore substitutes Latin or Greek names for some organs at present badly named, and uses words of a more general application in his descriptions. Some of the changes may be indicated. Thus, as regards names indicative of relative position, we have cephalic, for upper or anterior end; caudal, for lower; dorsal, for back or posterior; ventral, for front or anterior; sinistral, for left; dextral, for right; mesal, for median; ectal, for external; ental, for internal.

The suffix "ad" is used to turn the above adjectives into adverbs. Thus one surface is entad, or placed internally as regards another.

The change in the nomenclature of certain parts of the body is very great. Thus for the upper arm the name is brachium; for the arm, ante-brachium; for wrist, carpus; then metacarpus, pollex, index, medius, annularis, and minimus.

Dr. Wilder speaks of holding a frog between the pollex, index and annularis, then "dorsiventing" it.

There are some things which are good in themselves, but whose value we must question simply because they are impracticable.

Dr. Wilder's nomenclature, or at least the view on which it is based, is correct, and we believe would be a help to comparative anatomists. But there will long remain obstacles very nearly insuperable toward applying it to the human body. Human anatomy is a practical, and almost a popular science, in the sense that its terminology is part of our literature, and a knowledge of it part of a general education.

We must make one more criticism, and it is this: Dr. Wilder has undertaken to do what should have been done by some national or international body. The nomenclature of one individual will never be universally accepted. Although Wilder's is probably the best so far offered, the human mind is peculiar, and we doubt if a single comparative anatomist will accept it *in toto*. It is a good step, however, in unifying the present grotesque and fortuitous system of naming and description of the animal body.

The book is well printed, and is copiously illustrated with excellent cuts.

CHROMATOPTOMETRICAL TABLE. By DR. OLE B. BULL. Christiania: P. T. Mallings Boghandel. New York: Wm. Wood & Co.

THE methods which have hitherto been offered to the profession for the examination of the qualitative and quantitative perception of color have been so laborious and complicated that they have not come into general use, even among specialists. The chart constructed by Dr. Bull is intended to afford a convenient means of testing and recording the color sense (*C*) of eye patients by a practical and expeditious, though not over-scientific method. It shows ten rows of small colored squares, each row representing a different degree of saturation as expressed by printed figures. These figures enable one to record the power of quantitative distinction of color in a similar way as *V* is recorded after being tested by Snellen's test types.

Dr. Bull's chart, though scarcely adapted to work out

the difficult problems presented by cases of congenital color-blindness, will be very useful to the busy eye surgeon in tracing the progress of the different diseases of the retina and optic nerve.

SECOND ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Albany, N. Y.

THIS report is a work of great value and interest. It is, we believe, by far the best that any State Board has yet produced. The amount of scientific work which its contents represent, is indeed too great for any adequate notice here. It is but due to the Board and our readers, however, that we point out the chief features.

The reports made regarding the prevalence of disease, and upon sanitary organization, relate to the year 1881, and much of what is said is now old, and has been already noticed. It is sufficient to say, that the organization of local health boards, and the registration of vital statistics, has progressed in a most satisfactory manner. We note, also, that the sanitary arrangements for school-houses have been investigated and improvements extensively made. Also, that during the past three years there have been built in New York City, tenement and apartment houses sufficient to accommodate one hundred thousand persons, all upon plans previously submitted to the local health authorities.

Over one hundred pages of the present volume are devoted to the report of the standing committee on school buildings and the hygiene of public schools, together with special reports by Dr. D. F. Lincoln and Dr. C. R. Agnew. These documents constitute a valuable source of information upon all matters relating to this branch of sanitary science.

The report upon quarantine is of more public importance than of direct interest to the medical reader.

Dr. E. H. Janes contributes a report on the outbreak of typhus fever which occurred in New York City in 1880-81.

The Report of the Committee on Drainage, Sewage, and Topography, with supplementary reports on Methods of Sewage for Large Cities and Villages, and on Effluvia Nuisances, occupy one hundred and more pages. They include a study of the various malarial regions of the State, and a history of the Hunter's Point nuisances. The best and simplest methods of disposing of sewage in small towns, are also described.

The most interesting portion of this volume to the medical man, is the part containing the reports of the Sanitary Committee, of which Professor Chandler is Chairman. These reports relate to the purity of drinking waters, the testing of inflammable oils, and the adulterations of food and drugs.

Dr. Elwyn Waller gives the results of the analyses of about forty specimens of drinking water taken from different parts of the State. Of these, 24 were pronounced bad, and 10 unsatisfactory. It is admitted, however, that there are no absolute criteria for drinking-water, and probably at the present day, the nose and eye are as good tests in most cases as the reagents of the chemist.

With regard to inflammable oils, Dr. Arthur H. Elliott states that in New York City in 1880, there were 103 fires out of a total of 1,783, due to kerosene oil; 54 of these were due to explosions, and none need have occurred if the oils were of proper quality, *i.e.*, had a high flashing and burning point. We find from the report that the testers ordinarily used are quite variable in value, but the per cent. of actually dangerous oils in the market is not given.

The report upon butter and milk, by Drs. Chandler and Munsell, shows that among 40 samples of butter, over 16 were adulterated. Of 28 samples of lard, 10 had from 1 to 7.5 per cent. of water, and were more or less bad in quality.

Of 16 samples of olive oil, 9 were considered adulterated.

As regards milk, the old story of skimming and water-

ing is repeated. Among 73 so-called "creameries," 63 send skimmed milk to New York City, which is sold as pure milk. The condensed milk sold to New York customers was found to be unobjectionable, except that in a few instances the milk had been skimmed.

Professor Caldwell analyzed 29 samples of quinine pills, and found that in every case the quinine sulphate was below the amount claimed.

Professor A. H. Chester presents the analyses of nine samples of popular meat extracts. A few contained gelatine, but there was no other adulteration. Even in a peptone preparation, however, there was no soluble albumen, and in general the claims for the extracts are considered very much exaggerated.

In a report upon baker's chemicals, Dr. Love takes up the "alum question," and considers that at the present time there is not sufficient evidence of the injurious action of alum upon the animal system to warrant its prohibition.

Professor Labimore shows that out of 180 samples of spices, 112 were adulterated.

In a report upon drugs, Dr. Frederick Hoffman states that among 232 samples of crude vegetable drugs, 85 were adulterated or below the proper standard. Nearly one-half of the powdered drugs were not of the required purity or strength, and powdered drugs are considered to be of questionable reliability.

A DICTIONARY OF MEDICINE, INCLUDING GENERAL PATHOLOGY, GENERAL THERAPEUTICS, HYGIENE, AND DISEASES PECULIAR TO WOMEN AND CHILDREN. By various writers. Edited by RICHARD QUAIN, M.D., F.R.S. Fellow and late Senior Censor of the Royal College of Physicians; Member of the Senate of the University of London, etc. 8vo, pp. 1,816. New York: D. Appleton & Co. 1883.

In this large, double-columned, closely printed octavo volume, we have alphabetically arranged the various subjects connected with practical medicine, clearly, fully, and concisely discussed by a large corps of distinguished writers. Each contributor was invited to write upon such topics only as he was familiar with. The description of each subject includes an account of its etiology and anatomical characters; its symptoms, course, duration, and terminations; its diagnosis, prognosis, and lastly, its treatment. General pathology comprehends articles on the origin, characters, and nature of disease. General therapeutics includes articles on the several classes of remedies, their modes of action and methods of use. The articles on hygiene treat of the causes of disease and their prevention, also the agencies and laws affecting public health. The diseases peculiar to women and children receive the fullest practical consideration both in aggregate and detail. Not only is the work a Dictionary of Medicine in its fullest sense; but it is so encyclopædic in its scope that it may be considered a condensed review of the entire field of practical medicine. Each subject is marked up to date and contains in a nutshell the accumulated experience of the leading medical men of the day. As a volume for ready reference and careful study, it will be found of immense value to the general practitioner and student.

A SYSTEM OF HUMAN ANATOMY, INCLUDING ITS MEDICAL AND SURGICAL RELATIONS. By HARRISON ALLEN, M.D., Professor of Physiology in the University of Pennsylvania. Section III., Muscles and Fasciæ. Philadelphia: Henry C. Lea's Son & Co. 1883.

The third section of this admirable work, treating of the muscles and fasciæ, contains nearly two hundred quarto pages, with several page plates, besides illustrations in the text. The general design is consistently carried out by a description of the organs from a strictly anatomical standpoint, with such discussion of their relations and functions as are considered of practical interest. The author succeeds in infusing an individuality in his work

which gives it the highest value. As remarked in a previous review, he studies anatomy in a new way, by applying it in a striking and direct method to the actual wants of the student and practitioner. In perusing page after page, the reader cannot fail to be impressed with the profound knowledge of the subject possessed by the author. He succeeds in making each topic interesting by the manner in which he applies the facts presented; facts which, except for this application, might not be sufficiently impressed upon the mind. So much for the text. We regret to say that the illustrations, although much improved in character, will hardly realize reasonable expectations. With few exceptions, they partake of a coarseness of execution which does neither the author or artist much credit. In a work of this kind such a criticism should by no means obtain. Some of the drawings are lacking in accuracy, while others fail, in consequence of their heavy and sketchy shading, to bring out the due proportions of different parts. For instance, the latter point obtains more particularly in Plate XLV., representing the muscles of the neck. In Fig. 1 the larynx and trachea are much too large, as are also the first rib and clavicle. The first rib and clavicle in Plate XIV. are also nearly twice the size they should be. In Fig. 2, on Plate XLV., the constrictor muscles of the pharynx do not represent the requisite degrees of rotundity, and have curiously distorted relations with each other. The muscles of the forearm and hand, as well as those of the abdomen, are well drawn, as are also those representing the muscles on the inside of the jaw on Plate XLIV. It is to be regretted that the artist has such a predilection toward heavy shading, which appears to render necessary such coarse printing of the names of the muscles on their surfaces. If the outlines only of the muscles were shaded, the drawings would have a more artistic appearance and finer finish, the different layers would be more satisfactorily brought out, while at the same time the names of the organs could be clearly represented in finer and better type.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 27, 1883, to February 3, 1883.

KILBOURNE, HENRY S., Captain and Assistant Surgeon. The leave of absence granted December 21, 1882, Department of Dakota, is extended two months. S. O. 24, par. 3, A. G. O., January 29, 1883.

PAULDING, H. O., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect on or about February 1st. S. O. 11, par. 1, Department of the Platte, January 27, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 3, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
January 27, 1883.....	0	14	59	3	80	44	0	0
February 3, 1883	2	10	59	1	92	44	0	0

THE PHILADELPHIA POLICLINIC AND COLLEGE FOR GRADUATES.—New York has been visited by so many Philadelphia physicians, anxious to see the working of our Post-graduate Medical College and our Polyclinic, that it is evident that a polyclinic endemic is imminent in the Quaker City. In a recent issue we mentioned the inauguration of such a movement. The departments have been assigned as follows: Operative Surgery and Clinical Surgery, R. J. Levis, Surgeon to the Pennsylvania Hospital; Diseases of the Throat and Nose, J. Solis Cohen, Professor of Laryngology in the Jefferson Medical College; Diseases of the Mind and Nervous System, Charles K. Mills, Lecturer on Nervous Diseases in the University of Pennsylvania; Orthopædic and General Surgery, Thos. G. Morton, Surgeon to the Orthopædic and to the Pennsylvania Hospitals; Diseases of the Eye, Geo. C. Harlan, Professor of Ophthalmology in the Jefferson Medical College; Diseases of the Ear, Charles H. Burnett, Aural Surgeon to the Presbyterian Hospital; Diseases of Women and Children, Edward L. Duer, Obstetrician to the Philadelphia Hospital; Pathology and Microscopy, E. O. Shakespeare, Pathologist to the Philadelphia Hospital; Applied Anatomy and Practical Surgery, John B. Roberts; Diseases of the Chest and General Medicine; James C. Wilson, Physician to the Philadelphia Hospital; Clinical Chemistry and Hygiene, Henry Leffmann, Demonstrator of Chemistry in the Pennsylvania College of Dental Surgery; Diseases of the Skin, Arthur Von Harlingen, Consulting Physician to the Philadelphia Dispensary for Skin Diseases.

The Secretary is Dr. J. B. Roberts, who is known to New York physicians, in connection with the Philadelphia School of Anatomy, and as editor of the last American edition of Bryant's "Surgery." Reference to the "Medical Register" of Philadelphia, shows that seven of the twelve professors are graduates of the University of Pennsylvania. The alumni of this time-honored institution, thus again prove themselves active promoters of advanced medical education. The fact of the two great Philadelphia Schools being almost equally represented in the new enterprise, is an auspicious omen for the future.

With one or two exceptions, all these men are known in medical literature. Good writers, however, do not always make good teachers. Some of them are among the younger members of the profession; but youth is not objectionable if united with energy and intellect. It will be interesting to watch the further development of this medical embryo of mixed parentage.

MILK AND TYPHOID FEVER.—An interesting case of the probable spread of typhoid fever, by milk contaminated by the use of impure well water for dairy purposes, is related in a report quoted in the *Lancet*. Twenty-one persons in sixteen households in Clapham, England, were affected. The houses were of the superior class and widely separated. Investigation exhibited no one sanitary condition as a cause common to the households affected, but suspicion attached to the supply of one milk dealer who obtained a part of his milk from two dairy farms at Musbury, near Axminster. His customers were divided into those who took "nursery" milk alone, nursery and ordinary milk, and ordinary milk alone. The enteric fever was found to be entirely limited to the consumers of the ordinary milk, one in seven of every house so supplied being affected. Several of the large houses taking large supplies were affected with the disease. The ordinary milk was supplied from the two farms referred to, and these were at once inspected. Neither of them exhibited the sanitary conditions which should exist on a dairy farm. At one the water was derived from a well sunk in a gravelly soil, and was shown on analysis by Dr. Dupré to be largely polluted by sewage or surface drainage, being entirely unfit for drinking or culinary purposes.

About eight yards from the dairy and twelve yards from the supposed position of the well belonging to it is a brook which higher up flows through a rough stone

sewer. Last winter six cases of enteric fever occurred in Musbury, the last one being still ill during the month of March; and it is known that the infectious excreta from this case were thrown into a privy with a vault of primitive construction, from which, when full, the contents are got rid of by pouring down water, and washing them away through a rough drain into the sewer. The persons affected with enteric fever were not specially exposed to any known local conditions likely to have brought about the disease; they were not in any close personal relation with each other, but they had a milk supply in common, and that this supply came from the dairy farm in question at Musbury, where there had been at no remote date enteric fever, with the possibility of access of the specific poison to the dairy farm well by percolation from the sewage-polluted brook through a porous, gravelly soil. These facts render it highly probable, if not practically certain, that the infection was distributed through the medium of the milk.—*Sanitary Engineer*, November 23, 1882.

CONCERNING THE DOSE OF ACONITE IN THE BRITISH PHARMACOPEIA.—Dr. W. M. Bracken, of Thompson, Conn., writes: "In your issue of January 13th, p. 56, Dr. Murrell is reported to have said, 'The dose of tincture of aconite recommended in the British Pharmacopœia—from five to fifteen minims—is absurdly large, and no one with any regard for his patient's safety or his own reputation would ever think of giving it.' The same statement will apply to the dose—one to five minims—generally recommended by American authors. A comparison gives the following: The B. P. formula has one part powdered root in eight parts of the tincture. The U. S. P. formula has one part powdered root in *two and a half* parts of the tincture. Dose, B. P., five to fifteen minims; dose, U. S. authorities, one to five minims—equal to three and a half, to sixteen and a half minims of the B. P. tincture. The U. S. minimum dose is less, but the maximum dose greater, therefore, than that which Dr. Murrell condemns. It is further recommended 'to put half a drachm of the tincture in a four-ounce bottle of water, and to tell the patient to take a teaspoonful of this every ten minutes for the first hour, and after this hourly for some hours.' This, of course, refers to the B. P. tincture. The U. S. P. equivalent would be *eight and a half minims*.

"The case of poisoning also reported in the same issue (p. 42, 'Directions Regarding Administration of Medicines') seems worthy of note. A physician directs two teaspoonfuls of chlorate of potash 'to be dissolved in a tumbler of water' (about six drachms by weight of the potash in six ounces of water), two teaspoonfuls of this solution to be used at intervals as a gargle. The patient, a girl aged fourteen, by mistake takes the two teaspoonfuls of the solution internally four times daily and develops symptoms of poisoning in less than thirty-six hours, death following. Supposing all the chlorate of potash to have been dissolved, the patient was taking fifteen grains four times a day. This would hardly be considered *poisonous*, the ordinary dose for an adult being from five to twenty grains. But it is not at all probable that the chlorate of potash was entirely dissolved, for this would have given one part in eight of the solution, while only one part of the chlorate is soluble in sixteen parts of cold water. A cold saturated solution, therefore, would have given but seven and a half grain-doses. We are glad to learn that the 'jury exonerated the physician!'"

THE MEDICAL STUDENTS OF SWITZERLAND.—There are in the four Universities of Switzerland—Basle, Berne, Geneva, and Zürich—a total of 543 medical students, of whom 51 are women. The largest class is at Zürich, where the number is 180. At Berne the number is 164. There are women medical students at all the universities except Basle. At Berne there are 26, at Zürich 17, and at Geneva 8.

The Medical Record

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Whole No. 641

Original Articles.

ON THE SUCCESSFUL TREATMENT OF EXTRA-UTERINE PREGNANCY.¹

By A. D. ROCKWELL, A.M., M.D.,

NEW YORK.

ELECTRO THERAPEUTIST TO THE NEW YORK STATE WOMAN'S HOSPITAL, ETC.

IN the first case of extra-uterine pregnancy which it was my fortune to treat, I was asked by Dr. T. G. Thomas, one of the consulting physicians, whether it was possible to readily destroy the life of the fetus by the electric current. I replied that it could undoubtedly be done, but the important question, it seemed to me, was, whether it could be accomplished without injury to the mother. This question was answered in the affirmative by the results that followed. The case was one of tubo-interstitial pregnancy, at the third month, and terminated favorably by the expulsion of the fetus and placenta through the uterus. The history of this interesting and remarkable case was carefully written out by the attending physician, Dr. Charles McBurney, and published in the *New York Medical Journal*, vol. xxii., No. 3. At the same time Dr. Thomas wrote out an interesting description of the case accompanied by illustrative drawings, which he kindly placed at my disposal, and which can be found in my third edition of "Beard and Rockwell's Medical and Surgical Electricity," p. 606.

The second case upon which I operated was in the practice of Dr. C. E. Billington, the accuracy of whose diagnosis was again confirmed by Dr. Thomas. The result in this case was entirely successful.

The third case I treated for Dr. Bache Emmet, who had in consultation both Dr. T. Addis Emmet and Dr. T. G. Thomas. Dr. Emmet's account of the case, with its favorable termination, may be found in the *New York Medical Journal*.

In the fourth case I operated for Dr. Everett Herrick, the diagnosis being doubly confirmed by Drs. Thomas and Emmet. In this case again the fetus was effectually destroyed, followed by the prompt recovery of the mother.

At the last meeting of the American Gynecological Society of Boston, Dr. T. G. Thomas read an exhaustive paper upon the subject, giving the histories of some twenty cases of extra-uterine pregnancy that had fallen under his observation, together with an account of most of the cases to which I have just alluded, and in which electricity was so successfully used. In addition to these I have more recently seen and operated upon three other cases of like character that have never been reported, and which, if possible, even more strongly confirm the incalculable value of the treatment in these dangerous but somewhat rare abnormalities of pregnancy.

The fifth case, which I saw with Dr. N. S. Westcott, was of a most interesting and unusual character, from the fact that with a normal uterine pregnancy was associated what we have every reason to believe was a tubal or extra-uterine pregnancy. Dr. Westcott had previously called Dr. Thomas in consultation, and it was at his suggestion that electricity was used. The patient, a lady, aged about thirty, last menstruated August 6, 1882. Subsequently she complained of more or less

discomfort and pain, with tenderness in the region of both ovaries, but especially marked on the left side. On September 18th an internal examination was made, and by conjoined manipulation a small tumor was discovered, about the size of a pullet's egg. It was situated some two inches to the left of the median line, nearly on a level with the brim of the pelvis, and could be moved from Douglas' cul-de-sac toward the margin of the ribs. The tumor gradually increased until it was larger than a billiard-ball. There seemed to be no reasonable doubt as to its character, and on October 24th, the treatment by electricity was attempted.

The constant current was used, with one pole introduced to the mass through the vagina, and the other over the tumor externally and with rapid interruptions. The maximum of current strength employed was eighteen cells, or, to speak more accurately, as different apparatus vary much in electro-motive force, a power of twenty-four volts.

This operation was repeated on October 25th, 28th, and 30th, causing the tumor not only to perceptibly decrease in size, but to change its seat by an inch or so as well. Since the last treatment it has gradually grown smaller, until at the present date it can barely be detected. At the same time there is now developing in the uterus a six months' fetus.

The sixth case occurred in the person of a young unmarried woman, residing outside the city limits, and by special request, and for sufficient reasons, the name of the attending physician will not be mentioned. From him I obtained the following history: Two weeks previously he first saw the case professionally, and found that she was suffering much pain in the right side, together with irregular discharges of blood. The patient had confessed to the possibility of pregnancy, and examination elicited many of the objective and subjective signs of this condition. Nausea occurred every morning, and changes had taken place in the areola. Digital examination revealed the fact that the os uteri was little, if any, changed from its normal condition. By pressure over the right side it was possible to feel a certain hardness not present on the other side, but by conjoined manipulation, with one finger in the vagina, a distinct rounded mass could be felt.

Examination per rectum revealed its presence even more distinctly. If pregnancy existed—and of this there seemed to be no reasonable doubt—it had advanced nearly to the fourth month, and as the tumor was large, much larger than in the case just related, there was evidently no time to lose. I had brought with me a suitable apparatus, and immediately operated by introducing one pole into the rectum, and placing the other externally. On account of the great distention of the Fallopian tube, and the danger of rupture, we felt the necessity of exercising the utmost care, and consequently made use of the interruptions, with a current strength of but twelve cells, or about sixteen volts. The current would then be quickly increased without interruption and allowed for a moment to pass in a continuous stream. The treatment was concluded by a second application on the following day. Visiting the patient some two weeks subsequently, I found that the tumor had decreased in size at least one-half, and at this time, after the lapse of several months, it may be said, so far as any external evidence of it is concerned, to have entirely disappeared.

* ¹ Read before the Harlem Medical Association, February 8, 1883.

The last case is as follows: On December 14, 1882, I was informed by Dr. H. Marion Sims, that Mrs. A—, a patient of his, was suffering from extra-uterine pregnancy, and was by him requested to undertake the destruction of the foetus by electricity.

Although married a number of years, she had never before been pregnant. Dr. Sims, on first discovering the possibilities of this condition, called in consultation Dr. T. Addis Emmet, who positively confirmed the diagnosis. The pregnancy had advanced to the third month, and the tumor, which was about the size of a child's fist, was movable and could be distinctly felt both from without and within.

The size of the enlargement was such that the operation was urged immediately. For fear that the cyst might be in danger of rupture through uncontrollable movements of the patient, Dr. Emmet advised the administration of an anæsthetic.

Ether having been given by Dr. M. H. Nash, Dr. Sims placed the uterine electrode, and shocks from a galvanic current of but sixteen volts in strength were passed through the foetal mass.

The mildness of the treatment was necessitated because of the unusual nerve-irritability, and the violence of the muscular contractions.

Although it was probable that the destruction of the foetal life had been effected at the first séance, the operation was repeated on the 18th, 24th, and 27th of December, for the purpose, first, of absolute certainty, and second, to accelerate the absorptive process. The contour and seat of the tumor were not only changed after the first application, but it rapidly decreased in size. The patient experienced no unpleasant effects, and within a short time was able to start for Europe.

In the treatment of extra-uterine pregnancy, it is an important point to be decided, as to the best form of electricity to be used. Not only has galvanism and electro-magnetism been successfully employed, but it is said that the common magneto-electric battery has also proved sufficient, but from both a physical and physiological point of view, and as well through the teachings of experience, I cannot, for my part, doubt that galvanism is preferable to the other forms. It is more certain in its effects. It has a greater power of overcoming resistance, and consequently its influence is felt deeper than the other forms. Four important effects attend the passage of the electric current through the living body, and all these undoubtedly enter as factors, either in destroying the life of the foetus, or in the subsequent process of absorption.

These effects may be designated as mechanical, physical, chemical, and physiological.

The mechanical effects of the interrupted galvanic current are equal to those of the faradic current, while the physical effects, manifested by heat, and the modification of endosmose and exosmose are in the main the results of galvanic action.

By the passage of the galvanic current, the endosmotic phenomena may be both stimulated and reversed. The faradic current from the secondary coil produces no such effect. The current from the inner coil, produces these effects, but in a much less degree. Chemical or electrolytic effects, again, are almost wholly the result of galvanic action, and it should be remembered that the electrolysis of organic substances starts a process that continues long after the current ceases to flow. The physiological effects of electricity are those which take place by virtue of the vital properties of the body, and unlike the other effects, are only observed in living substances. Physiological effects are manifested on the circulation, on secretion and excretion, but only as absorption is effected does it interest us here, and it is quite evident that the absorptive powers of the secondary current are quite limited.

In any case of tubal pregnancy, and especially in those advanced conditions where the tube is greatly dis-

tended, and there is danger of spontaneous rupture, the possibility of hastening this catastrophe in the attempt to destroy the life of the foetus should never be lost sight of. The tubes themselves are but slightly supplied with muscular fibre, and the danger would more especially arise from the powerful compression that is liable to be exerted by the abdominal muscles, and the effort should be so to diffuse the current proceeding from the external pole, as to produce the least mechanical effect possible. In regard to the diagnosis of extra-uterine pregnancy, it must be confessed that it is not always an easy matter, and in the cases just related the question may arise as to its accuracy. The eminence of the gentlemen associated in the cases should perhaps be a sufficiently strong argument for the correctness of the diagnosis, but conclusive evidence lies also in the effects of the treatment itself. The results of the electrolysis are well known, but in no other form of tumor, cystic or otherwise, is it possible for the galvanic current, used as described, to produce similarly prompt and effective results. In regard to the effects of electricity on normal pregnancy, suggested by the case of double pregnancy that I have related, a word may be said. It is a mistake to suppose that abortions are readily produced by electricity. Without the electrode is introduced directly into the uterus, which would of course be sufficient without the passage of any current, the strongest treatment that it is prudent to give may prove insufficient. Of this I have had evidence in several justifiable attempts to bring on a miscarriage. In the case just alluded to the current was strong, applied by shocks, and in close proximity to the uterus, affecting it not only reflexly, but in some measure directly, yet the normal pregnancy was in no ways disturbed; and, so far as concerns general applications for the production of constitutional tonic effects, I have in many instances administered them with impunity through the whole course of gestation, and with the most happy results.

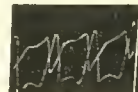
THE NEGATIVE PULSE OF THE VEINS.

By S. E. POST, M.D.,
NEW YORK.

TRACE No. 1 was obtained fortuitously during the early part of my experiments with the faradic brush.¹



No. 1.



No. 2.

It was obtained from a young woman, formerly active in habit, but who, without organic disease, had developed inability for physical work. She appeared incapable of effort, and would frequently remain all day in bed. She had become somewhat emaciated, but her appetite remained remarkably good, her digestion was perfect, and she slept well. She was always pale, and upon walking a short distance her lips would become almost white, yet she never experienced dyspnoea, her heart and her lungs were healthy, and her blood-corpuscles approached the normal in number and size. She complained of constant fatigue, and of a sensation of heat in her extremities, which was especially present at night. Upon one of these occasions the temperature of her hands was found to be 99° F., that of the mouth and of the hands being the same. The veins of the hands were prominent, and usually gorged with blood. This patient felt better in cold weather, and she derived benefit from sea-baths.

In the observation referred to, Ponce's sphygmograph was used. It was supposed to have been adjusted over the radial artery at the wrist.

The usual reactions of my experiment were an increased arterial blood-pressure, then a diminished arterial

¹ Cutaneous Irritation and the Pulse: New York MEDICAL RECORD, September 30, 1882.

blood-pressure and a slowed pulse, following the stimulation of the cutaneous nerves. The pulse of this patient was sometimes accelerated. In no other way was it affected by the irritation employed. The observations were therefore discontinued, and for several months the subject was dismissed from my mind.

Later, however, similar tracings were obtained from other cases, in which also the pulse was unaffected by the irritation. I therefore grew to associate their contrary character with a peculiar obstinacy toward the reactions named.

By closer observation in Case I., at the side of and external to the artery, a vein was discovered, which sometimes could be rolled under the finger, and frequently distinctly felt. The instrument was applied over this vein, and a tracing, which in every essential characteristic resembled Trace No. 1, was obtained.

In other cases, where the vein could not be felt, having recognized the arterial pulse, the instrument was moved slightly toward the external side of the arm. This manœuvre produced with many subjects an absolutely negative result. From a number, however, tracings similar to Trace No. 1 were obtained. In each of these instances the corresponding arterial trace registered a tension which was abnormally low. The heart was normal in each case.

With good arterial tension, by the readjustment of the instrument a line which resembled a line of respiratory variation was sometimes produced. This line did, in fact, correspond with the movements of the patient's chest, its convexity was formed during expiration, and its concavity during inspiration. This line was more frequently met than was that of pulsation. In one patient both were present, the base of the pulsation following the curve of the respiratory line.

The vessels of the forearm alone were subjected to observation. In Case I., however, a similar pulse was obtained also in a vein of the foot. Traces 3 to 6 were methodically taken from this case.

CASE I.—Arterial relaxation—heart normal.



No. 3.—Pressure 16; radial artery.



No. 4.—Pressure 6; radial vein.



No. 5.—Pressure 12; dorsalis pedis artery.



No. 6.—Pressure 4; dorsalis pedis vein.

Trace 3 from the radial artery, Trace 4 from its external vein, Trace 5 from the dorsalis pedis artery, and Trace 6 from its internal vein. I suppose one of the *venæ comites* always to have been employed.

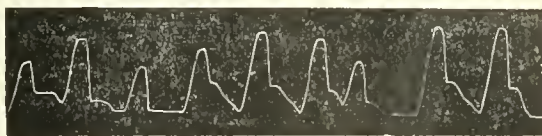
I never obtained peripheral pulsation in a superficial vein. From this circumstance a transmitted arterial impulse was suggested to me.

Very early, therefore, in the course of my investigation,

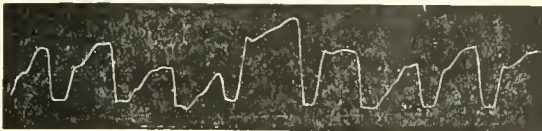
with the finger upon the artery and the instrument upon the vein, their points of coincidence were marked. In each instance, as shown in Trace 2, the impact of the artery occupied in the tracing of the vein the time of its line of descent. The pulsation of the vein, therefore, did not depend upon the relative position of the arterial wall.

The remainder of these tracings were obtained from two patients, whose symptoms referred to the heart. Case II. possessed stenosis of the aortic valve, without altered area of the apex beat.

CASE II.—Stenosis of the aortic valves.



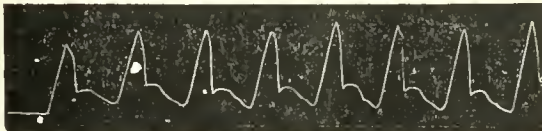
No. 7.—Pressure 16; carotid artery.



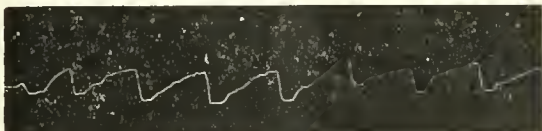
No. 8.—Pressure 16; internal jugular vein.



No. 9.—Pressure 4; external jugular vein.



No. 10.—Pressure 16; radial artery.

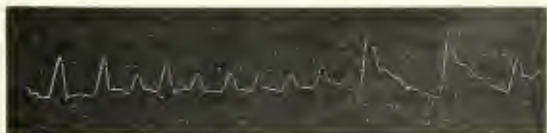


No. 11.—Pressure 6; radial vein.

Traces 7 to 11 represent the pulse of the carotid artery, of the internal jugular vein, of the external jugular vein, of the radial artery, and of the radial vein in this patient.

Case III. presented no lesion of the valves. Dr. A. L. Loomis kindly examined each of these patients. Tricuspid difficulty was eliminated in both. Trace 12 represents the pulse of the radial artery, and Trace 13 the pulse of the external jugular vein in Case III.

CASE III.—Irregularity and feebleness of the heart—no valvular disease.



No. 12.—Pressure 12; radial artery.



No. 13.—Pressure 4; external jugular vein.

I did not obtain a tracing from the radial vein of this patient, neither did I obtain one from the jugular vein, excepting when the contractions of the heart were more than usually strong. In the veins of the neck, pulsation was sometimes apparent to the eye. Visually its most marked characteristic was its descent. As Case III. once

said, its beat was inward, or toward the vertebral column. In these cases, also, the descent of the vein occupied the time of the arterial percussion stroke.

We have therefore presented in this brief report a pulse which falls while that of the artery rises, and which rises while that of the artery falls, which has been found in veins of the neck, of the forearm, and of the foot, and which has been associated with arterial relaxation, with stenosis of the aortic valves, and of irregularity with feebleness in the action of the heart.

The occurrence of venous pulsation is not infrequent. Reports of such occurrence have been made, notably by Marey,² of pulsation in a vein of the leg with a systolic regurgitant murmur in the heart; by Boyer,³ of pulsation in superficial veins; by Friedreich,⁴ of pulsation in the veins of the neck, in the thyroid, and in an external thoracic vein with stenosis of the mitral and of the tricuspid valves; by Parrot,⁵ of pulsation in superficial veins; of pulsation in the veins of the extremities by Ward,⁶ by Davis,⁷ and by Groves;⁸ by Benson,⁹ of pulsation in both upper extremities in a patient having mitral stenosis and tricuspid insufficiency with dilatation of the right heart; by Seidel,¹⁰ of pulsation in the jugular and in superficial veins; by Bamberger,¹¹ and by Geigel,¹² also a venous pulse with insufficiency of the tricuspid valve; by Collis and Groves,¹³ of venous pulsation in pneumonia; by Quincke,¹⁴ of pulsation in the veins of the forearm and hand in a case of cholelithiasis, also in a case of paraplegia from fracture of the spinal column at the level of the fourth cervical vertebra, and more recently by Dimer,¹⁵ of pulsation in the pulmonary veins and in the inferior vena cava after the opening of the thorax; by Gottwalt,¹⁶ of pulsation in the venæ cavae, in the veins of the neck, and in a brachial vein, and by Mosso,¹⁷ by Riegel,¹⁸ and by Franck,¹⁹ of pulsation in the veins of the neck.

Three varieties of venous pulsation have been recognized. The first variety consists of a regurgitant wave. It is due to insufficiency of the valves of the veins and of the auriculo-ventricular valve of the right side of the heart. By means of this insufficiency the ventricular systole causes not only a forward impulse to the blood in the pulmonary artery, but also a backward impulse to the blood in the auricle, the venæ cavae, the jugulars, and even in more peripheral veins. This variety was the earliest known. Formerly any venous pulsation was considered pathognomonic of regurgitation through the tricuspid valve. Friedreich²⁰ says: "It is unquestionable that without valvular insufficiency a venous pulse cannot exist."

In agreement with this opinion were Roncati,²¹ Thomm,²² Rosenstein,²³ Eichhorst,²⁴ Oppolzer,²⁵ Bamberger,²⁶ Geigel,²⁷ and Seidel.²⁸

The second variety of venous pulsation is due to relaxation of the minute arteries. It consists of a projection of the arterial wave.

In Bernard's experiment upon the submaxillary gland²⁹ by stimulation of the chorda tympani, or of the lingual below the emergence of that nerve, it is observed that the arterioles become dilated, pulsation appears in the capillaries, and the blood issues in jets from the veins. This occurrence is recognized by all physiologists. Flint³⁰ has called it the true venous pulse. Marey³¹ considers every peripheral venous pulse to be so produced.

Quincke³² in particular was assured of the centripetal character of his wave. He observed that the finger-tips paled and reddened with the contractions of the heart; also, that by compression of the brachial artery the pulsation could be made to cease, while with compression of the vein it ceased only on the proximal side. Low arterial tension was a prominent characteristic of Quincke's cases. Of the first he mentions that the pulse fell away quickly from the fingers, and of the second a paralysis of the vaso-motor nerves.

Pulsatory movement of the blood in the veins may occur, therefore, both from a centrifugal and from a centripetal impulse. In the latter instance the pulse is most marked at the periphery, in the former it is most marked near the heart. Both, however, are positively systolic. In both the wall of the vein rises at the same time as does the arterial wall.

The third variety of venous pulsation has been called the negative pulse of the vein.³³ It consists of an abrupt fall of pressure, which is synchronous with the contraction of the ventricle, and which is due to a periodic acceleration of the flow of blood into the heart. Modern interest in this pulse dates from the observations of Mosso.

Widemeyer,³⁴ however, in 1828, with one end of a glass tube immersed in water and the other end inserted into the jugular of a horse, noted pulsatory oscillations of the fluid in the tube.

Weyrich,³⁵ in 1845, repeated the experiment upon dogs. He found the fluid to rise during the systole and to fall during the diastole of the heart. The phenomenon was obtained, however, only in the vena cava and in the innominate vein. According to Rollett,³⁶ Weyrich attributed the ascent of the fluid to the aspiratory influence of the auricle at the moment of its relaxation. This theory is referred to also by Ludwig³⁷ and by Donders.³⁸ Mosso,³⁹ however, considered the negative pulse due to periodic acceleration of the venous flow from the increased thoracic aspiration which accompanies the systole of the heart.

That the heart occupies less space during its systole than during its diastole has been demonstrated by Marey,⁴⁰ by Mosso and Pagliani,⁴¹ and by François Franck.⁴²

The yet contracting amphibian heart was placed in water, having access to a tube through which its oscillations were measured. The fluid was found to rise during the systole and to fall during the diastole.

François Franck and Stefani⁴³ corroborated this result upon the living animal by means of a canula inserted into the pericardial sac.

Also Voit⁴⁴ obtained a similar result with an instrument for measuring aspiratory force. With the tube in the mouth during suspension of respiration, he observed the fluid to rise during the systole and to fall during the diastole of the heart.

² Marey: *Phys. de la Circ. du Sang*, p. 529. 1863.

³ Boyer: *Jour. Compt. des Sc. Med.*, xxi., p. 330.

⁴ Friedreich: *Deutsches Archives f. klin. Med.*, Bd. I., S. 241.

⁵ Parrot: *Histoire de l'Acad. Roy. des Sc.*, p. 159. 1704.

⁶ Ward: *London Med. Gaz.*, June, 1832.

⁷ Davis: *Dublin Hosp. Reports*, vol. iv.

⁸ Groves: *Dublin Jour. Med. and Chem.*, vol. vi., p. 54.

⁹ Benson: *Dublin Jour. Med. and Chem.*, vol. viii., p. 324. 1836.

¹⁰ Seidel: *Deutsches Klinik*, 1836.

¹¹ Bamberger: *Würzburger Med. Ztschr.*, IV., S. 232. 1863.

¹² Geigel: *Würzburger Med. Ztschr.*, IV., S. 332. 1863.

¹³ Collis and Groves: *Leçons de Clinique Méd.*, trad. p. Jacoud, t. ii., p. 63. 1863.

¹⁴ Quincke: *Berl. klin. Wochenschr.*, XXXIV., 1868.

¹⁵ Dimer: *Ueber die Pulsationen der Vena Cava inferior*. Bonn, 1876.

¹⁶ Gottwalt: *Pflüger's Archives*, May 14, 1881.

¹⁷ Mosso: *Archives p. la Scien. Med.*, ii., p. 401. 1878; *Die Diagnostik des Pulses*. Leipzig, 1879.

¹⁸ Riegel: *Berl. klin. Wochenschr.*, May 2, 1881; *Deutsches Archives f. klin. Med.*, May 30, 1882.

¹⁹ Franck: *Gaz. Heb. de Med. et de Chir. Opér.*, 1882.

²⁰ Friedreich: *Loc. cit.*

²¹ Roncati: *Diagnosi d. Med. d. Petto, d. Ventre e d. Sist. Nerv.* Napoli, 1868.

²² Thomm: *Berl. klin. Wochenschr.*, No. 13, 1869.

²³ Rosenstein: *v. Ziemssen's Hdb. der Sp. Path.*, VI., 2 Aufl., S. 42.

²⁴ Eichhorst: *Lehrbuch der Phys. Untersuchungs Methoden*, etc. 1861.

²⁵ Oppolzer: *Vorlesungen redigirt von Stoffella*. 1867.

²⁶ Bamberger: *Loc. cit.*

²⁷ Geigel: *Loc. cit.*

²⁸ Seidel: *Loc. cit.*

²⁹ Foster's *Physiology*, p. 240. 1879.

³⁰ Flint: *Text-book of Human Physiology*, p. 99. 1881.

³¹ Marey: *La Circulation du Sang*. 1881.

³² Quincke: *Loc. cit.*

³³ Foster's *Physiology*, p. 166. 1879.

³⁴ Widemeyer: *Untersuchungen ueber den Kreislauf des Blutes*. 1828.

³⁵ Weyrich: *De Conditiis Asperimentis experimentalibus*. 1853.

³⁶ Rollett: *Hermann's Hdb. der Phys.*, Bd. IV., Th. 1., S. 331.

³⁷ Ludwig: *Lehrbuch der Physiologie*, Bd. II., S. 141.

³⁸ Donders: *Physiol. d. Menschen*, 2 Aufl., I., 153.

³⁹ Mosso: *Loc. cit.*

⁴⁰ Marey: *Trav. du Lab.*, p. 51. 1875.

⁴¹ Mosso u. Pagliani: *Gion. della R. Acad. di Med. di Torino*. 1876, N. 10, 11, u. 12.

⁴² François Franck: *Trav. du Lab. de Marey*, p. 187. 1877.

⁴³ Stefani: *Arch. per le Scienze Med.*, III., 1879.

⁴⁴ Voit: *Ztschr. für Biologie*, I., S. 390. 1865.

Mosso's observations have attracted considerable remark, though physiologists have been, as a rule, conservative regarding the acceptance of his views.

Rollett,⁴⁵ however, credits Mosso with the recognition of a normal venous pulse.

Franz Riegel (*Berl. klin. Wochenschrift*, May 2, 1881) states that he has observed in dogs a venous pulse which alternated in time with that of the arteries. Also that in many healthy men he had obtained a pulse which did not differ from that which he had obtained in dogs. He sums up by saying there exists a normal venous pulse. This pulse falls during the heart's (ventricle's) systole and rises during its diastole. It is explained by the fact that during the systole of the heart (ventricle) the flow of blood from the veins is accelerated, while during the diastole of the heart it is retarded.

May 14, 1881, an article appeared by Gottwalt entitled "The Normal Venous Pulse" (*Pflüger's Archives*) Gottwalt's observations were upon dogs. His apparatus was somewhat unique. The vein was dissected from its surroundings. Under it was placed a concave tambour and above it a closely fitting metal plate. The conducting and registering apparatus were of the usual kind. Gottwalt's curve consisted of one large wave followed by two smaller ones. So nearly as he could judge, the second sound of the heart corresponded in time with the apex of the first smaller wave.

The efforts of this author, however, were principally directed toward determining the extent of the pulse. For this purpose other methods were more satisfactory than the use of the tambour. A small mirror was placed upon the vessel, and its reflection was noted upon the wall. Also the handle of a scalpel was placed under the vein, sufficient upward pressure being used to obliterate its lumen. If the pulse were present upon the proximal side of the scalpel, the blood might be seen to advance and to recede like waves upon the level shore of a summer sea. By this means he traced it in the inferior vena cava to the renal vein, in the internal jugular to the head, in the external jugular to the middle of the neck, and once in a vein of the arm.

Gottwalt says the respiratory undulations extend farther than do the pulsations. He detected respiratory movement in the femoral when pulsation was confined to the vena cava above the renal vein. He opposes Mosso's theory of causation, finding the pulse equally marked after the opening of the thorax.

In 1882 an article appeared by Riegel upon "The Normal and Pathological Venous Pulse" (*Deutsches Archives f. klin. Med.*, May 30, 1882), with simultaneous traces from the carotid artery and from the jugular vein. The normal pulse was found upon patients as follows:

CASE I.—Woman, thirty years of age; joint-affection; four months pregnant; thin, but has no disease of internal organs, nor of the circulatory apparatus.

CASE II.—Girl, eleven years of age; pale; has a large ovarian cyst; no lesion of the heart.

CASE III.—Young man; chronic nephritis; heart normal.

CASE IV.—Man, fifty-five years of age; somewhat enfeebled; having the appearance of commencing multiple sclerosis.

CASE V.—Man, thirty-five years of age; hæmatemesis; high grade of anemia.

CASE VI.—Boy, eleven years of age; convalescing from croupous pneumonia.

CASE VII.—Man, twenty-five years of age; convalescing from pneumonia.

CASE VIII.—Man, thirty-three years of age; chronic nephritis.

CASE IX.—Shoemaker; poorly nourished; signs of phthisis.

CASE X.—Girl, sixteen years of age; convalescing from pleurisy.

In the tracings obtained the time of the ascent from the artery occupied the time of the descent from the vein. The ascent was prolonged and dicrotic, while the descent was monocrotic and quick.

Riegel also gives simultaneous venous and arterial traces in stenosis of the mitral and insufficiency of the tricuspid valve. These traces did not differ in character from those obtained with the normal heart, but the percussion-wave from the artery here occupied the time of the second and greater wave from the vein.

Riegel concludes:

First.—In dogs there is a normal pulsatory movement in the jugular vein.

Second.—In many healthy men there can be found likewise a pulse in the jugular vein. It is probable that such a pulse always exists.

Third.—This pulse is not dependent upon a backward wave, but upon the alternate retardation and acceleration of the flow of blood into the heart.

Fourth.—The normal venous pulse falls synchronously with the heart's (ventricle's) systole, and rises with its diastole.

Fifth.—The normal venous pulse does not require any insufficiency in the valves of the veins.

Sixth.—Besides the normal venous pulse there is a systolic venous pulse observed in men, and principally in the jugular vein and in the liver.

Seventh.—This backward venous pulse can occur only from insufficiency of the tricuspid valve.

Eighth.—This pulse does not differ from the normal venous pulse in form, but in time, being systolic, while the other rises during the diastole of the heart.

Still more definite observations upon this subject were reported in April, 1882, by François Franck (*Gaz. Hebdomadaire de Med. et de Chir.*), who gives tracings taken simultaneously from the jugular vein and from the heart.

The tracing from the vein is similar in form to that given by Riegel. Following the sequence of the cardiogram, however, it is supposed to consist of, 1, a sudden rise and descent at the commencement of the total curve; 2, a second rise and descent; 3, a gradual ascent, and then again a sudden rise, indicating the commencement of a new series. The sudden rise and descent were synchronous with the contraction and relaxation of the auricle, and occurred with equal promptitude when the contractions of the ventricle were arrested by stimulation of the pneumogastric nerve. The second rise accompanied the ventricular systole.

His explanation is as follows: The sudden rise is due to increased pressure from obstructed flow at the instant of the contraction of the auricle and the sudden fall to rapidity of the current at the commencement of the diastole when the blood precipitates itself into the relaxing auricle. The second rise is due to retardation of the current from the loss of the aspiratory influence of the auricle and the second fall to a new acceleration from relaxation of the ventricle, while the gradual ascent is due to retardation from the gradual repletion of the whole right heart.

According to Franck's schematic representation his curve commences at a point midway between its apex and the base line. Riegel, on the other hand, considers his curve to extend between the points where it reaches that line independently of the cardiac cycle of events. Riegel, however, agrees with Franck, in finding his abrupt line of descent synchronous with the contraction of the ventricle, and therefore of commencing auricular diastole.

Gottwalt, also, by placing the second sound of the heart at the apex of the first smaller wave has determined the apex of his largest wave to exactly the same period in time as the other two. Because each has similarly located his abrupt line of descent, not different, but the same phenomenon is supposed to have been under the observation of all, their peculiarities of description being due to the varying point at which the curve was supposed to have commenced.

⁴⁵ Rollett: Hermann's Hdb. der Phys., IV., 1, 188.

My own tracings, also, on account of their systolic descent, must be considered as records of the same pulse which has been described by Mosso, by Gottwalt, by Riegel, and by Franck.

From the history of the subject it is apparent that I have first recognized this pulse in the forearm and in the foot. The observations of Mosso, of Riegel, and of Franck were limited to the veins of the neck, while Gottwalt, who investigated the extent of the wave, found it only once beyond the jugular veins, and then in a vein of the arm. All of these observations were conducted under conditions which the observers have called normal. My tracings were obtained only with the circumstance of arterial relaxation or of insufficiency in the heart.

Venous pulsation with effusion into the pericardial sac has been noted by Stokes, by Knoll,⁴⁵ and by Cohnheim.⁴⁷

Riegel, upon animals injected the pericardium, and with one monometer in the carotid of one side and a second in the jugular of the other, noted the changes which occurred. In the commencement of the experiment the pulse of the carotid was high and possessing arterial character, and the pulse of the jugular was low and small. As the injection proceeded that of the carotid fell, until it could no longer be perceived. At the same time the pulse of the jugular up to a certain point gradually increased in size, when it, too, commenced to fall, and finally ceased to exist.

Riegel's tracings of this venous pulse did not differ in character or time from those obtained with the normal heart. Franck⁴⁶ has determined that with pericardial compression the arterial pressure sinks, while that of the veins is increased. By arterial relaxation the same condition may be attained through increased swiftness of the arterial current, for while this swiftness is directly as the vigor of the heart, it is inversely as the peripheral resistance, which resistance is determined by the arterial tone.⁴⁹

The low arterial tension and the fulness of the veins in Case I. have been noted. The veins were prominent also in Case II.

This case presented aortic obstruction and regurgitation without alteration of the apex-beat. Niemeyer⁵⁰ notices that venous engorgement must result from a non-compensated valvular disease. In Case III. cyanosis was frequently marked. This case, however, only presented the venous pulse when the action of her heart was more than usually strong. Riegel's picture of the pulse of pericardial effusion is typical of my entire experience. With venous engorgement the negative pulse of the veins increases in size and extent until the advent of a pronounced failure in the heart, when it, too, tends to disappear with the disappearance of the arterial pulse.

To recapitulate:

First.—The negative pulse of the veins—called the diastolic venous pulse, called also the normal venous pulse—may occur in the forearm and foot.

Second.—This pulse contrasts with the arterial pulse not only in its negative character, in the slow ascent and quick descent of its curve, but also in the fact that its amplitude is increased with the increased fulness of the vessels in which it is found.

Third.—That it is therefore extended and accented by any cause which increases venous engorgement, whether it be arterial relaxation, obstruction in the lungs, insufficiency in the heart, or effusion into the pericardial sac.

The recognition of this pulse is important, because it may be of sufficient amplitude to mark the trace of the arterial pulse; because it must be eliminated in the diagnosis of the pulse of regurgitation through the tricuspid valve; and because it probably possesses a diagnostic importance of its own. With the Poud sphygmograph

its recognition in the forearm is not difficult. Having obtained the radial artery at the wrist, move the instrument $\frac{1}{2}$ to 1 c.m. toward the external side of the arm, remit one-half the pressure which had previously been employed, and if the pulse be present its tracing will appear.

113 EAST THIRTY-FIRST STREET,
January 23, 1883.

HINTS ON CASE-TAKING.

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NEW YORK.

This paper is intended to give an outline of the symptoms and signs to be sought for and recorded in medical cases. The importance of accuracy in recording cases is self-evident. The scheme here given may seem long and complicated, but in serious cases the facts sought may be all of importance. It will be seen that many of the questions refer to the possible existence of chronic disease of certain viscera. Information is sought in regard to such disease for various reasons, among which are the following: Prognosis in a given acute case may be gravely influenced by complicating chronic disease; differential diagnosis may be assisted by knowledge of such disease; an acute case may be followed by an outbreak of symptoms due to pre-existing chronic disease, which had heretofore remained in a comparatively quiescent condition, in which case knowledge that symptoms of such disease have previously existed is of interest and value. Moreover, autopsy frequently shows diseased conditions of certain organs which were never suspected during life. It is a matter of importance to know whether symptoms of such disease were ever manifest during life, or whether the conditions never gave any symptoms. It is often as necessary to state that symptoms do not exist as that they do.

The order in which the facts are recorded is, of course, not that in which they are obtained. It is suggested merely, because, if followed, it makes a connected history, with facts of a general nature as a sort of introduction. If the history of the case be covered by one of heads suggested in the scheme, it seems better so to change the order that such history fall just before the heading, "Present Condition." Common-sense must dictate how far the scheme shall be followed in each case.

In taking a history, the first points to be ascertained are the symptoms which trouble the patient most. He should, as far as possible, be made to tell his own story. Direct questions should be avoided until the physician is convinced that no more information can be obtained without them. The history should cover every point; but be as short as possible. Notes should be taken at the bedside, if practicable, in the form in which they are to be recorded, as this saves writing, and does away with the temptation to alter the record so as to fit the case, should it pursue an unexpected course. The physician should have no preconceived idea of how the case should run, but simply aim to record facts as they come to notice. Every sense should be trained, so that nothing escapes notice, and nothing is imagined to exist which does not exist. The previous history of a patient should be verified by judicious cross-examination. A history, when first recorded, had better be too long than too short. It may be shortened afterward, though the information contained in it should not be altered unless shown to be false.

GENERAL PLAN FOR THE RECORD.

Name of patient, age, civil condition, occupation, birth-place, race, residence.

These facts should head the history. The importance of recording the age of a patient is obvious. By civil condition is meant whether married, single, widow, or widower, facts which may or may not be important. Occupation, because of its bearing upon certain diseases

⁴⁵ Knoll: Ueber die Folgen der Herz-Compression.

⁴⁷ Cohnheim: Vorlesungen ueber Allg. Pathologie, Bd. I., S. 37.

⁴⁶ Franck: Trav. du Lab. de Marey, 1877.

⁴⁸ Rollett: Hermann's Hdb. der Phys., Bd. IV., Th. 1, S. 300.

⁵⁰ Niemeyer: Prac. Medicine, vol. II., p. 178. 1850.

should be noted. It is customary to note the birthplace, because information may thus be obtained leading to suspicion of diseases, endemic in certain localities, which may influence diagnosis. In this country, where so many races come under observation, information upon this point is interesting, because of the alleged different courses of various diseases in different races. Residence should be noted, because of its importance in infectious diseases, and in general hygienic conditions, favorable or unfavorable to disease.

FAMILY HISTORY.

Information should be obtained in regard to the existence or non-existence of the following diseases among near relatives (parents, grandparents, uncles, aunts, brothers, sisters, children):

Phthisis should be looked for. In connection with phthisis or tuberculosis, *struma* should be borne in mind.

Syphilis.—Unless the parents themselves can be observed, a history of syphilis in a family can rarely be obtained. When found, it is often of great value. Of course, this disease is of importance among relatives in a direct line with the patient, hardly so among collateral branches.

Gout, rheumatism, cardiac or renal disease, existing among relatives, may be of much interest and value.

Especially in the case of patients suffering from disease of the *nervous system*, similar disease among relatives should be noted.

Intemperance in many members of a patient's family should be recorded.

Tumors among relatives of patients, themselves suffering from tumor, is important.

Hæmophilia among relatives deserves investigation.

When any of the above diseases are shown with reasonable certainty to exist, it is sufficient to note the fact. When their existence seems only probable, the reasons for supposing them to exist should be stated.

The early history of the patient himself should now be recorded.

PREVIOUS HISTORY.

Use of stimulants.—Note if the patient drinks, how much, and what kind of liquor he uses. Cross-examination on this point is necessary. Before forming a judgment as to the temperance or intemperance of a patient, the number of glasses drunk daily should be ascertained. Also inquire whether the patient gets drunk, and if so, how frequently. Men who are not habitual drunkards rarely drink before breakfast, and the habit of drinking at this time almost necessarily shows that the patient drinks to excess. Information on this point may be valuable. There are patients who are evidently suffering from alcoholism who deny the use of liquor. Such must be judged upon their own merits. This subject is enlarged upon because of mankind's tendency to deceive in regard to the matter. Excessive use of tobacco may be noted.

Syphilis may be a factor in any case, no matter what the social or moral standing of the patient. Here, again, deliberate deception is not uncommon. Sometimes patients, especially women, do not seem to have noticed the primary sore. It will not do merely to ascertain the existence or non-existence of a chancre; the following symptoms should be looked for: If a sore be acknowledged, it should be ascertained how soon it appeared after a suspicious connection. Whether a sore be acknowledged or not, symptoms of constitutional infection may be discovered. Eruptions, falling off of the hair, sore throat, sore eyes, nocturnal headache, or other pains, tenderness of tibiae, sternum, clavicles, enlarged glands, gummy tumors, staining of the skin, ulcers—these are symptoms individually of more or less value, a history of which may be obtained from patients who deny all primary infection. The diagnosis of syphilis may be safely made if a number of them be admitted. The nature of the primary sore should be inquired into, and whether it was followed by

a suppurating or non-suppurating bubo. In infants the special symptoms of inherited syphilis must be looked for.

Rheumatism.—Attacks of acute inflammatory rheumatism, because of their relation to cardiac disease, and of the predisposition of patients having had one attack to others, must be noted. If a patient suffer from chronic arthritis, whether due apparently to rheumatism or not, it is as well to record the fact. So-called muscular rheumatism may be noted. Chorea should be noted for the same reason as rheumatism.

Scarlatina, being frequently followed by rheumatism, should be inquired into. The rheumatic attack in very young children may show itself only by tenderness of the joints without swelling or redness. The child seems to suffer pain and is restless, but only upon touching one of the affected joints can the cause of these symptoms be appreciated. It is very easy, therefore, to overlook the disease if the patient be too young to speak. Yet a rheumatic attack of this obscure nature may induce serious cardiac lesions.

Gout.—This disease should be differentiated from rheumatism, with which it is frequently confounded by the laity. The train of evils which gouty poisoning is stated by various authorities, with more or less show of reason, to induce, make an investigation of the subject necessary. It is stated to be an etiological factor in forms of renal and cardiac disease, skin diseases, dyspepsia, diabetes mellitus, asthma, bronchitis, neuralgia, especially of the fifth pair of nerves and sciatics, renal colic, and various affections of the central nervous system, besides a number of other diseases. Whether these statements are correct or not, should be determined, at least so far as certain diseases are concerned, by farther study.

The pains of syphilis or neuralgia may be mistaken by a patient for attacks of rheumatism or gout.

Malarial fevers.—In this country, where diseases of this type are so common, attacks of intermittent or other true malarial fevers should be noted. Poisoning from these diseases seems sometimes to leave its mark upon the constitution for a long time. It is to be remembered that typhoid and other continued fevers may be spoken of by the patient as "malarial." Hectic from any cause may be mistaken for intermittent. In cases where the patient states that he has had "chills and fever," he must be made to describe the disease.

Severe attacks of *any acute diseases* should be noted, and any *injury* which the patient may have received should be described.

Pulmonary disease, chronic in its nature, should be looked for. Cough and its character, expectoration and its nature, shortness of breath, fever, night-sweats, progressive loss of flesh and strength, hæmoptysis, any such symptoms are important, even if they have ceased to exist for some time before the patient comes under observation.

Cardiac disease, renal disease, dyspepsia.—These three classes of diseases are grouped together because some of their symptoms are so similar that it is impossible to separate them for purposes of general investigation. Palpitation of the heart, attacks of dyspnoea, and the effect of exertion upon those conditions; præcordial pain and anxiety, anginal attacks, or true angina pectoris; dimness of vision, seeing of floating spots (*muscae volitantes*); headache, local or general, sense of discomfort in head, mental depression, confusion of mind; lumbar pains; cedema of face or extremities, or any form of dropsy; changes in color or amount of urine (frequency of micturition may be mistaken for increased amount of urine); nausea and vomiting, abdominal pain or discomfort, flatulence, eructations, bitter or sour in taste, and the relation of these symptoms to the kind of food and the time it is taken; variations in the appetite, constipation or diarrhoea; these are the principal symptoms to be sought for in ordinary cases. Attacks of *jaundice* should be noted. The

presence of *hemorrhoids*, or the *passage of blood* at stool, may serve to direct attention to obstructed portal circulation.

Symptoms of disease of the *nervous system*, epileptiform seizures, paræsthesiæ, paralysis, neuralgia, and other pains, whether apparently of central origin or not, mental symptoms, hysterical symptoms, etc., are frequently important.

In men *sexual habits* should be investigated.

In women the history of the *menstrual life* should be taken. The time of the establishment of the function, irregularity of menstruation, menorrhagia, metrorrhagia, suppression of discharge, painful menstruation, leucorrhœa, pain in the back, headache, should be noted. Pregnancies, and their results in miscarriage or labor may be important. There are a certain number of cases in which sexual habits should be looked into. Hysteria in men or women must be remembered.

The *place of residence* of the patient, its sanitary condition as regards light, ventilation, cleanliness, warmth, drainage, and number of residents, is highly important in many cases. In *infectious disease* every possible source of contagion by fomites or otherwise should be sought.

After these facts should follow a clear account of the attack for which the patient seeks advice. The exact time when the attack commenced should, if possible, be ascertained; its mode of invasion, the order of development of symptoms, the possible causes (exposure to cold or infection, extraordinary exertion, a spree, anything which may be a factor in the case) should be carefully noted. Every detail which the patient is able to give in regard to his case should be recorded.

PRESENT CONDITION.

Under this heading it is intended to record the condition of a patient when he first comes under observation. The *general muscular development* of a patient and the quantity of adipose enveloped and his condition as to strength or weakness, being general notes, form properly the first observations to be recorded. The points next to be noted are the expression of the face, decubitus if the patient be in bed, peculiarities of gait or attitude if he be up. The color of hair, eyes, etc., may or may not be important. It is important to observe whether the face is pale, flushed, or normal in color. If pale, the skin may be translucent or opaque, very white, or yellowish or dirty white, or greenish; the lips and mucous membranes may be pallid, or bluish, or normal, or too red, and any of these conditions may be moderately or extremely marked—facts which should be recorded. If flushed, the redness may be bright or dusky, diffuse or localized, with the rest of the face pale or natural in color. The surface may be cyanosed. The color of the sclera may be white and natural, or yellowish or quite yellow, or bluish. It may appear opaque or translucent. The conjunctivæ may be injected or not. There may be lachrymation, or discharge of mucus from the eyes. There may be strabismus—a symptom of little value unless its existence or non-existence before the attack for which the patient seeks relief be ascertained. There may be nystagmus. The condition of the pupils, their size and reaction should be noted. They may be unequal or equal, both may react badly or well, or not at all, they may be dilated or contracted, one may react and the other not. One pupil may be irregular in outline, and this may be due to an old iritis, possibly, in its turn, due to past syphilitic or rheumatic outbreaks. In testing the pupils it is necessary to observe all the precautions usually advised. The eyes may be protuberant or sunken. The alæ of the nose may both dilate extremely with inspiration, or one may do so, or their movements may be hardly noticeable, or one or both may have a tendency to fall in with inspiration. The lips may be tremulous, pale, or red, or bluish, or purplish, dry or moist, cracked, or coated with sordes. The facial muscles may be almost immovable, giving the face

a vacant expression, or they may twitch, or they may be contracted, producing any variety of expression. The muscles upon one side of the face may be paralyzed, and on the other not; in muscular twitchings of the face any muscle or group of muscles may be affected. The tongue, its size, color, and coat, if present, must be described. The condition of the pharynx, tonsils, and interior of buccal cavity should be observed. Visible small veins should be noted when they occur in the face. They may be generally distributed over the face, or localized, as on the nose. The condition of the larger veins of the head and neck, as to fulness or emptiness, is important.

When possible, the entire body of a patient should be examined. The color of the skin, its temperature as appreciated by the hand, its moisture, its reaction to irritation, as shown by the redness which follows friction, the presence of the *tâche cerebrale*, the condition of the circulation as shown by the rapidity of the return of a normal color after pressure has whitened it, are points to be noted. Scars or ulcers should be described and their causes sought. Eruptions should be described in detail, and not merely mentioned by name. The condition of the extremities, in regard to warmth or coldness, and the condition of the circulation in them, clubbing of the fingers, whether the clubbing seems due to an increase of the size of the finger-end, or to wasting of tissue in this part, and consequent curving of the finger-nails, should be recorded. (Edema must be looked for. Enlarged cervical, epitrochlear, inguinal, or other lymphatic glands must be observed. When a gland is enlarged it should be stated whether it is hard or soft to the touch, painful or not.

The frequency of the *pulse* should be noted, and its character described. Some confusion has arisen in descriptions of the pulse owing to the loose way in which terms are used. Walshe, in his work on "Diseases of the Heart," gives the following classification of terms: "Each individual beat may be: 1, quick or slow; 2, short or long; 3, soft or hard, compressible or incompressible; 4, loose or tense; 5, empty or full; 6, narrow or broad, small or large; 7, single, double, treble, or multiple; 8, with or without special character, vibrating, jerking, bounding, undulating, wiry, filiform. In a series of beats the movements may be, 9, frequent or infrequent; 10, equal or unequal in force; 11, rhythmically regular or irregular." These terms are perfectly easy to comprehend, and as accuracy is important it is better to use them in the sense in which they were originally intended. The terms "quick" and "slow" must not be confounded with "frequent" and "infrequent," and due weight should be given to the terms describing the special character of the pulse. The sphygmograph, in the hands of one accustomed to its use, is a valuable means of recording certain conditions; but the tracings to be of value must be taken by one familiar with the instrument and its applications. The condition of the superficial arteries must be observed. They may be tortuous; their walls may be thickened; calcareous plates may be discovered in the wall; they may visibly pulsate. Pulsation in a vein will, of course, be noted. Influence of posture on the pulse is sometimes important.

The *respiration* should be observed, and its frequency and special character, if peculiar, noted. It may be shallow or deep, almost entirely abdominal or thoracic, labored or quiet. The rhythm may be regular or irregular, or of that peculiar type the "Cheyne-Stokes." When the respiration is labored it should be noted whether the intercostal spaces and supra-sternal notch, and supra and infra-clavicular regions collapse in a marked degree with the inspiratory effort, and also to what degree the accessory muscles of respiration are thrown into play. It is needless to say that thoracic respiration is the characteristic type with the female after puberty, and abdominal with the male and in children, and that a departure from this rule is abnormal. The respiration may be obstructed

by some abnormal condition in the larynx, in which case it may be accompanied by noises produced in this organ. There may be obstruction in the pharynx or nares, or buccal cavity. There may be stertor, due to paralysis from some cause of the *velum pendulum palati*; there may be dyspnoea, subjective, that is appreciated by the patient, or objective, that is appreciable to the observer. The effect of posture and exertion upon this dyspnoea are important points.

The *temperature* should in all cases be taken and recorded for a sufficient length of time to exclude fever. The frequency of the observation must vary in different cases. In continued fever of any type observations should be taken at least twice daily of the temperature, the frequency of the pulse and respiration being recorded at the same time. In severe cases the record should be made as frequently as may seem needful. The thermometer may be placed in the axilla, rectum, vagina, or mouth. The difference in heat between the axilla and the rectum or vagina is generally stated to be about one degree. It varies, however, in different cases. Whenever temperature records are made the situation in which the thermometer is placed should be noted.

The condition of the *bowels* and the appearance of the *stools* are important. Notes should also be made of the *appetite*, and any abnormalities of it.

The *urine* should be examined in every case. Albumen and sugar are the most important substances usually sought, and bile or bile-pigment. The reaction, specific gravity, and presence or absence of abnormal constituents should always be noted. It is better, in every case, as a matter of routine, to examine the urine by Fehling's test for sugar, no matter how low the specific gravity, for low specific gravity does not exclude this substance. In looking for albumen, the nitric acid test, applied according to the directions of Roberts, seems the best. The test-tube containing the urine is held at an angle of about 45° with the horizon, and a small amount of concentrated pure nitric acid allowed to trickle down the side. Being heavier than urine, it sinks to the bottom, and if albumen is present, even in very small amount, a cloud will form just over the surface of the acid. If this cloud disappears on heating the fluid, it is a precipitate of urates, if not, it is albumen. The quantity of acid used should not exceed one-tenth of the bulk of the urine. Heat should always be applied, as a proof that the cloud is albumen and not urates. It is well to boil some of the urine, and if a cloud forms to add a little acetic or nitric acid, when, if the cloud dissolves, it is composed of the phosphates; if not, it is albumen. The nitric acid test, as applied above, is, for clinical purposes, the most delicate yet proposed. A rough estimate of the amount of albumen present may be made by acidulating the urine, boiling, setting aside in a cool place, and after some hours estimating the proportion of the precipitate to the whole amount of fluid in the tube. The amount may be expressed in fractions. In collecting urine for examination, only perfectly clean vessels should be used, and it should be kept in a cool place, otherwise fermentation takes place rapidly. When observations are made upon the specific gravity, a specimen should be taken from the mixed urine passed in twenty-four hours, in order to obtain an average. It would be well, if possible, to estimate the amount of urea present in the urine. As far as I can discover there is no way of accurately ascertaining the amount of urea present, which is safe for any one but a chemist to use. The margin of error in every method which I have yet tried is, in the hands of one unaccustomed to chemical manipulations, very great. In all cases in which albumen is present, and in all cases where, from suspicion of renal disease or other reasons, it seems advisable, a microscopic examination should be made. The frequency of the chemical and microscopic examinations must vary in different cases. Once a week, in cases of albuminuria or glycosuria, seems the mini-

imum. As cases increase in severity the examination may be made more frequently. Some cases require a daily record of the amount of urine passed.

When necessary, the *reflexes* of skin and tendons should be examined, and areas of anaesthesia and hyperaesthesia, or other peculiarities of sensation sought for and described.

After these facts have been noted in every case, there should follow, as nearly as possible, in his own words, the symptoms of which the patient complains at the time he comes under observation. This is highly important. It gives clearness to the record, and brings into prominence symptoms which annoy the patient most. Every symptom should be described in detail.

Physical examination.—Although many of the signs to be recorded under the former heading are noted in a physical examination in its broader sense, yet it seems well to record in a separate paragraph the results of physical examination of the thorax and abdomen, and of any tumors which may be found. There is little to be said upon this subject, except that physical signs should be recorded in detail. Murmurs should be located accurately, their time, and areas of transmission, and intensity described. Abnormal signs in the lungs or pleurae should also be located. The size of the liver and spleen should be ascertained as far as possible. The condition of the abdomen as to distention from gas or fluid, the presence of pain or gurgling on pressure, and the location of such pain or gurgling must be noted.

FURTHER RECORD OF THE CASE.

The subsequent history of the case and its treatment must be noted as frequently as may seem advisable. All subsequent physical examinations should be recorded when made. It is better to have too many notes than too few.

A few more suggestions may be of value. It is important that a more detailed description of certain phenomena of disease be given than is usually the case. If a patient have a convulsive seizure, it should be noted whether he lose consciousness, whether the convulsion is local or general, tonic or clonic, or one form alternating with the other; whether the tongue is bitten; whether there is frothing at the mouth, flushing or pallor of the face, how the respiration and pulse are affected; whether there is a flow of urine soon after the fit, how severe the seizure is, what the condition of the pupils and eyes, the expression of the face. If there is an aura, it should be described. Any circumstance which may seem to have determined the seizure should be recorded.

Cases of unconsciousness call for most careful observation. Such information as may be derived from friends will be recorded. The age should be noted when it can be ascertained. When accurate information cannot be obtained, some conclusion in regard to age must be drawn from the patient's appearance. The muscular development and adipose envelope should be observed. It should be noted whether the insensibility is complete, or whether the patient can be roused in any way. The odor of the body and breath, condition of the mouth and tongue, frequency and character of the pulse and respiration, temperature, presence or absence of vomited matter, and character, if present; presence or absence of faeces or urine upon clothing are matters of importance. Oedema must be looked for. The color of the face and body, condition of circulation in extremities. Condition of the walls of the arteries as evidenced by touch. Condition of heart as evidenced by physical examination. Examination of lungs should be made. Condition of abdomen should be noted. If the coma be not so deep as to mask them, signs of paralysis may be found. Wounds or bruises must be described. The condition of the pupils and position of the eyes should be observed. Signs of tenderness in any part of the body are important. The urine should be drawn and examined, and its amount noted.

If many of the suggestions in this article are trite, it must be remembered that nothing original is claimed. If it arouses public attention to the necessity of more accuracy in the record of medical cases, it will have served its purpose. If it is dogmatic in style, it is because of the amount of compression necessary to condense the facts within the limits of a journal article.

THE IMPORTANCE OF A KNOWLEDGE OF THE RADICAL DIVERSITIES IN THE HUMAN RACE TO THE PHYSICIAN AND SURGEON.

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WERE the science of ethnography more generally cultivated by practitioners of medicine than it is, and the great importance of race distinction and peculiarities better understood by physicians in their relations as cause and effect in certain epidemics and individual diseases also than at present, far less difficulty would be experienced in arriving at important information concerning the etiology and the therapeutics of many cases occurring in communities composed of diverse races, and of the hybrids frequently resulting from the intermingling or interbreeding of such races. While age, sex, idiosyncrasy, hereditary tendency, occupation, and habits of life, etc., are pretty generally discussed by professors in medical colleges and in the text-books in their relations to diseases, very little notice is taken, if any at all, of the great and radical distinctions and peculiarities which exist between the primordial types of mankind in their impressions upon, and in not a few instances their marked and unmistakable effects in the development and influence in diseases. These facts are well known to many intelligent practitioners in the Southern States of this country, whose experience extends back to ante-bellum times, and they always recognize their existence as factors of the greatest value in the treatment of their patients. Their importance can indeed hardly be overestimated by the judicious physician in many communities in which considerable numbers of the Caucasian and negro races exist. When they have been thoroughly studied and their value duly appreciated, I have no hesitancy in saying that they will be carefully regarded ever afterward, and their mandates promptly obeyed in the treatment of cases by all such practitioners as are at all ambitious of attaining a high standard of excellence and success in their profession. It is hardly necessary to mention the fact, in this connection, that there are anatomical and physiological differences and distinctions, of a conspicuous and permanent character, existing *now* between the three more prominent varieties of mankind, viz.: the Caucasian, Mongol, and Negro races, and there is every necessary reason for believing that they were stamped thus *ab initio* by the fiat of the Creative Will. The anatomical characteristics have not been lost in the osteological framework, at all events during the geological, monumental, and historic periods, and if certain Hebrew words or expressions admit of the interpretation that will be given to them further on in this paper, there can be no doubt of a diversity of creation and thus plurality of origin of the races of men; and hence those anatomical distinctions have continued commensurate with the being of the races upon the earth.

Parity in the general form and features is not greater among the races than are some of the symptoms in the diseases to which they are subject in common; but there are certain other symptoms that are more widely separated than even the color, and other anatomical peculiarities of face and form, in the three primordial types alluded to above. It does not appear necessary to introduce them here in support of our position, nor to present irrefutable evidence of the non-liability of some of those

races to certain diseases, *cæteris paribus*, to which the others are exposed, in order to show that nature has stamped in permanent living characters, in the phenomena to be seen at the bedside, laws that were ordained when they came into being for their governance throughout the ages. And thus we see the reason why the primordial races may be easily differentiated etiologically as well as ethnologically. Such being the case, it will be clearly obvious to those accustomed to interpret natural phenomena and law, that the highest degree of skill and success in the practice of our profession will not be attained by physicians generally until the professors and writers in all the *practical* departments of our science shall give due and proper weight and consideration to the laws ordained "in the beginning" for the control of those races, and that of the amalgamations that so often occur when they are intimately associated or brought into juxtaposition for any considerable period of time. And probably nowhere else in the vast expanse of the created universe, as far as we are permitted to know anything at present, can the operation of fundamental law be more clearly seen and easily appreciated by the thinking mind than in the structure, functions, and pathological characteristics that so conspicuously mark and distinguish the *hybrid offspring* of the Caucasian and Negro races when it is found breeding *intense*.

Properly directed and intelligent investigation and study of the mulatto in his individuality as a hybrid, and in his relations to the races from whom he sprang, at the present time, would render important service to the theologian as well as the physician, and also to the educated portion of mankind generally. It must be evident to the careful observer of events, that the enthusiasm which amounted to a furor almost on the advent of the Darwinian hypothesis, a few years ago, and which so violently assailed some of the old systems of theology as to shake them to their very foundations, and to threaten the overthrow, if not the utter annihilation of the less stable ones, is now gradually yielding to the pressure of new and important facts and to a better system of inductive reasoning, and no "missing links" are found necessary to show that the races of men are *now* what they were when they came into being under the fiat of the Creative Will. It appears, indeed, that, if a few Hebrew words are correctly translated, theology and ethnology (the written and the scientific teaching on the origin of the races constituting the genus homo), are in full and perfect harmony with each other, and establishes the further fact that all knowledge and "all (science) are but parts of one stupendous whole."

The axiom that like produces like is too universally known and admitted as a fundamental law to require anything much further than mere mention of it here; so that any subversion of its operations now by merely human or other agencies, if such were possible, would soon convert the harmonious relations of the existing order of things into utter chaos or complete annihilation. According to this law of propagation and descent, the primordial types of mankind have certainly undergone no marked or essential changes in their physical characteristics since their original creation. Caucasian men do not beget negro children, and *vice versa*. It were therefore a physiological absurdity to suppose that the testes and ovaries of a single pair of either of those primordial races contained, *ab initio*, the germs of their own future progeny and those of the descendants the *two other* races at one and the same time, to say nothing of the physiological impossibility of *any* race having been born and perpetuated from two individuals only. Hence, according to the doctrine of "like," such theories or assertions do not rise to the level of absurdity even when philosophically contemplated for a single moment; and I would therefore respectfully invite the attention of the reader to some statements made by Prof. Joseph C. Richardson at a late meeting of the Philadelphia County Medical Society, as

published in the *Medical Times*, page 166, December 2, 1882, in confirmation of my assertion. They are as follows, viz.: Dr. Richardson said "If you took the spermatozooids of an African, a Malay, an Indian, and a Caucasian—notwithstanding they were exactly alike morphologically, chemically, and in their reaction with staining fluids—and introduce them into suitable culture apparatus, you would find them, after a suitable number of months, so developed that they differed from one another *as much* as black does from white." This is the teaching of science, and not conjecture or hypothesis! Was it not always true? Hence I feel sure that few subjects of deeper interest or greater importance could well be brought before the thinkers in our profession, whether they should be of the Christian faith or Jewish belief, or of those inclined to the hypothesis of evolution, than this brief effort to prove from the Hebrew text that both the Bible and science teach the penal or diverse origin of the primordial types of the human race. And I therefore take the liberty to introduce a few Hebrew words and certain translations from the Sacred Volume to confirm what has been said above, so that the theologian as well as the physician, be he Christian or Jew, may readily join the rapidly advancing hosts of science, without the slightest apprehension that the truths of Revelation will sustain the smallest injury from the discoveries that are being almost daily made in the material world.

The Hebrew words alluded to above are *naphesh chayah*, which may and seemingly should be rendered "intellectual creatures with immortal souls," when we have only the words "living creatures," as in Genesis i., 24. If the word *naphesh* qualifies and invests *chayah*, the "living creatures," with "immortality and intellectuality," as it is thought to do, though it has not been translated in our present version of the Bible, it prepares the way for a clear and perfect understanding of what occurs in the twenty-sixth verse, where it is stated Elohim created *ha-Adam*, or "the Adamite." It appears that it was *Adam* that the Deity created in his image rather than "man," as rendered in the text. *Adam* and *ish* seem not to be convertible terms that may be translated alike, as the latter is always used, so we are informed by Hebrew scholars, when speaking of *man* and mankind generally. Thus: "And the Lord said, My spirit shall not always strive with *the Adamite* (*ha-Adam*), for *he also* is flesh." Not *ish*, or "man," as the former is translated in our present version of the Bible. It will be seen that the definite article is prefixed in the Hebrew. "And it repented the Lord that he had made *the Adamite*" (*ha-Adam*), not *ish*, or "man." "And the Lord said, I will destroy *the Adamite*," etc. "The sons of God" (evidently the sons of *Adam*, or *the Adamite*) (red men) and the *fair* "daughters of men" were manifestly of *different* races, and their intermarriage was a physiological necessity for the perpetuation of *the Adamite* race, as may be seen in Genesis vi., 2. And the *giants* alluded to in Genesis vi., 4, when speaking of the coming of "the sons of God" into "the daughters of men," were presumably, at least, of *another* and *entirely* distinct *race* from either of the other two just then spoken of.

It has been thought proper to introduce the foregoing testimony from the Bible for several reasons, but chiefly so for the following, viz.: 1st. As science and revelation are both of God, they must harmonize in the very nature of things; and, 2d, to establish as conclusively as facts are capable of doing, when applied by human intelligence and reason, the immutability of the laws of the Great Jehovah in their operation upon the human race; and, finally, to clear away, as far as may be, the mythical errors and hypothetical speculations which have so long environed the origin and subsequent intermingling of the types of the *genus homo*, so that perspicuous conceptions may be had concerning the physical, mental, and psychological character and characteristics of the races, in order that their mutual relations and their present dependence

upon one another may be better known and appreciated, both in health and in disease.

The paucity of our practical professional literature on this very important subject is such as scarcely to attract attention, and yet if we have succeeded in making our treatment of it at all well understood, even in its leading features, it will be seen that proportion, adaptation, and symmetry are the relations of the great facts we have been attempting to present, and that neither accident, nor chance, nor "natural selection" could have had any agency or control whatever in their original development. On a subsequent occasion some important facts in regard to the general effects of disease upon the varieties of mankind, and upon the human hybrids in particular, may claim attention in a brief journal article.

I would venture to state, in concluding the present paper, that I believe I can assert, without the fear of contradiction, or of satisfactory refutation at the least, that the Hebrew Bible positively and indubitably teaches that there were certainly *two* if not more *separate* and *distinct* creations of the human race, and that certain statements and logical influences, in particular narratives and allusions on many occasions, admit of a fair deduction that there were *several* if not many races or tribes that were contemporaneous with the Adamite race at its origin, and at other times, that were generally inimical to it and usually avoided consanguineous affiliations with it. All these facts will be readily elicited from our English version of the Bible by any one whose mind is free from early prejudice or training in regard to the teaching of the Sacred Volume. True science unquestionably declares a diversity of origin of the human race to the intelligent anatomist, physiologist, and physician. And thus the Bible and science are found to harmonize completely and perfectly in *all* that relates to the duty and obligation of the physician to his fellow-man in his moral, intellectual, and physical nature.

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ADDISON'S DISEASE.—Semmola (*London Medical Record*, January 15, 1883), by new studies, confirms the opinion that Addison's disease must be considered an affection of the central nervous ganglia, and that the anatomical alterations of the suprarenal capsules are not the point of departure of the disease; but where they exist, they represent trophic disorders produced by the nervous filaments which preside over the nutrition of these organs, and this he demonstrated at the International Congress in London, with drawings which showed the microscopical alterations of some points of the central ganglia and of the dorsal section of the spinal cord, the alterations being a myxomatous transformation of the stroma of the coeliac axis, and leucocytic infiltration of the spinal medulla around the central canal.

He concludes that Addison's disease is a profound disorder of the renal nutrition, determined by the successive alteration of the functions of the sympathetic and of the different nervous centres of organic life (coeliac axis, etc.). And with the help of the physio-pathology of the central nervous ganglia, he explains all the successive symptoms of the malady, such as the disorders of digestion, the cachexia, the lowering of the temperature, etc. The discoloration of the skin, when no lesion of the suprarenal capsules can be found, may be attributed to the influence of the sympathetic and central nervous ganglia, which are certainly concerned in the formation of pigment. Not a few cases of melanodermy have occurred a few days after violent moral emotion.

Semmola confirms his assertion by quoting a case of Addison's disease, accompanied by syncope, in which the electrical current, passed from the neck to the epigastrium, did good. In other cases, with the same treatment, there were restoration of strength, increase of the temperature to the normal, improvement in digestion, and, above all, gradual disappearance of pigmentation.

Progress of Medical Science.

GOLTZ ON THE CORTEX CEREBR.—Professor Goltz, of Strasburg, has published a new series of experiments on the cerebral hemispheres of the dog, in which, instead of following his old method of destroying the cortex with a stream of water, he established the lesions by means of a White's boring machine. The general conclusions he arrives at are :—1. The hypothesis of circumscribed centres for special functions in the cerebral cortex is untenable. 2. There is no area of the cortex exclusively concerned with sight, hearing, smell, taste, or touch. 3. It is impossible by any circumscribed lesion of the cortex to produce permanent paralysis of any muscle, or remove it from the influence of the will. 4. The vital manifestations which we regard as indicative of intelligence, feeling, emotion, instinct, are not dependent on functionally differentiated cortical regions. 5. Destructive lesions of the frontal regions of the hemispheres cause defects which differ in certain respects from those caused by lesions of the occipital regions. These differences depend probably on simultaneous lesion of the conducting tracts which lead to the crura. So far as yet made out, the difference amounts only to this—that while removal of the anterior regions shows itself in clumsier movements and reduced tactile sensibility, removal of the hinder lobes more distinctly affects sight and other specialized senses. This concession to the localization hypothesis is guarded by a suggestion that the ground of the difference is to be sought for, not in the cortex itself, but in the underlying white tracts. The general intelligence is also somewhat more affected in destruction of the hinder lobes.—*American Journal of Insanity*.

ANTAGONISM BETWEEN VERATRIA AND POTASSIUM SALTS.—In some previous experiments Dr. Sidney Ringer found that circulating simple saline solution through the ventricle causes it after each contraction to dilate very slowly. In fact the trace is just like the trace of a ventricle poisoned by veratria. He showed also that a small dose of any potassium salt, 1 in 10,000 to 1 in 15,000 parts, will obviate this prolonged dilatation, making the ventricular dilatation normal. From numerous experiments more recently undertaken, Dr. Ringer concludes that a small dose of potassium chloride will completely obviate the effect of veratria, and restore normal cardiac contractions.—*The Practitioner*, January, 1883.

THE TREATMENT OF INTUSSUSCEPTION.—A prolonged and practical discussion on this subject was had at a recent meeting of the London Clinical Society (*British Medical Journal*, December 16, 1882).

The whole field of treatment was thoroughly gone over. And the points that should especially claim our attention throughout the course of such cases were brought out clearly and distinctly. There was a pleasant unanimity of opinion, more particularly as regarded surgical interference.

The general consensus of opinion pointed to the early treatment of all cases by inflation and operation. But it was also shown that a great distinction must be drawn between cases of simple intussusception, which may last for weeks when the bowel is not strangulated, and those of strangulated intussusception, in which any delay in operating is to be deprecated, since peritonitis is almost certain soon to ensue. The former cases are those most likely to be benefited by inflation and injection of liquid per anum, possibly the two combined, while the patient's abdomen is kept relaxed by the use of an anæsthetic. But if the strangulation has lasted for some time, and the symptoms are severe, so that there is reason to fear that adhesions may have formed, or the wall of the bowel have become softened by the inflammatory process, inflation or forcible enemata should scarcely then be attempted. Should the case be one of severity, and inflation be found valueless, the surgeon should at once have recourse to

abdominal section; just as in hernia, when taxis has failed, he directly proceeds to herniotomy.

The median line of the abdomen is to be chosen for incision, and the operation should be done with antiseptic precautions. The invaginated bowel may be either withdrawn by gentle traction from the encircling portion, or its withdrawal assisted by pushing up from below. Many speakers remarked upon the extreme difficulty they had sometimes experienced in returning the distended bowels into the peritoneal cavity after the operation, a difficulty which may be necessary to overcome by puncture of the intestine with a trocar and cannula, for the withdrawal of gas and liquid. But in cases in which the intussuscepted bowel cannot be withdrawn, what is to be done? As Dr. Buzzard pointed out, the portion of intestine inclosed goes on to slough and separation, and this is nature's method of cure in the very few cases which struggle on to recovery through the various dangers which beset the patient. Surgeons recommended that nature's method should be imitated, as nearly as may be, by a bold excision of all the implicated portion of bowel, and a stitching together of the two cut ends. Mr. Howse had already done this in two cases, though as yet without success. To avoid risk of the passage of any fecal material into the peritoneal cavity, he recommended that a thin sheet of gutta-percha material, with a slit in its centre, should be spread before the abdomen, and all the bowel to be operated upon drawn forward through the slit. It might then be treated without fear of fecal contamination of the peritoneum. It remains to be seen whether this bold procedure of excision will in future result in more success than has hitherto attended it. In certain cases, in which the bowel protrudes through the anus, Mr. Howse would also remove it bodily from that situation by amputation, securing the cut end by pins. An Italian surgeon has already done this by inadvertence, not knowing what he was taking away, and the patient recovered.

NEGLECTED MEASLES.—Dr. Danford Thomas, in his capacity as coroner, has directed public attention to the mortality which follows the neglect of measles. It is a common opinion among the poor that a child must have the measles, and that when it gets the disease it requires no treatment and but little care. This is a mistake. In the records of vital statistics it may be seen that it often proves more fatal in the large towns than any other zymotic disease, more even than scarlatina. With medical and parental care the disease generally does well. But without this it is liable to serious complications, and apt to leave disagreeable consequences.—*London Lancet*, December 23, 1882.

HEBEPHRENIA.—Dr. Fric, of Würzburg, considers that hebephrenia occupies in cerebromental pathology as legitimate a place as general paralysis. Its symptomatology is clear and well defined, and the prognosis can be established with certainty from the outset. This affection is tributary to psychic degeneration, by which is understood an early arrest of development of the brain, in virtue of which the intelligence does not attain its proper development, and at the period of puberty undergoes a regressive evolution. The truth of this statement can be deduced from the proteiform character of the delusions which occur, and from the incoherence of the ideas and acts, which are impulsive and instinctive—depression alternating with exaltation, and complete remissions unexpectedly supervening, followed by rapid relapses. Hebephrenia—and this has not escaped the notice of Morel—is a psychosis of degeneration, a congenital defect which remains latent during childhood and the early period of puberty, showing itself when the subjects are affected by the inexorable exigencies of life, or are called upon to make intellectual efforts of which they are incapable. Moral insanity cannot be mistaken for hebephrenia beyond its characteristic symptomatology; it remains stationary for a long series of years, while in hebephrenia

the intellectual loss is precocious. In hebephrenia the delusions are absurd and unreasonable, like those in general paralysis, and this character, which is an attribute of dementia, serves to distinguish them from systematized delusions. It is possible to confound hebephrenia with *folie circulaire*, such as has been described by Falret, but it is to be remarked that in *folie circulaire* the courses of mania and melancholia do not exclude a certain degree of lucidity which never occurs in hebephrenia, on account of the dementia; and the complete remissions observed in the latter never occur in the former. From the point of view of frequency, it can be affirmed—a neuropathic or psychopathic predisposition being admitted—that hebephrenia is that form of cerebro-mental disease which most frequently makes its appearance during adolescence. This fact is, however, only verified as regards men. Among females hysterical insanity is its equivalent. Katatonia and hebephrenia have so many points in common that it is often difficult, if not impossible, to distinguish them, for the spasmodic or cataleptic condition met with in the former is also often present in the latter, and one form may succeed another. In katatonia, however, recovery often ensues; hebephrenia, on the contrary, is absolutely incurable.—*Dublin Journal of Medical Science*, January, 1883.

THE TREATMENT OF DELIRIUM TREMENS.—In spite of all that has been written on this subject, Dr. Atkinson (*Practitioner*, January, 1883) thinks that sufficient attention is not given to the necessity of supplying the system with adequate nourishment. Certainly in the second stage, when the appetite is bad, the blood corpuscles deficient in quantity and shrivelled, and the brain anæmic and starved, it is useless to expect relief from sedatives unless the brain is at the same time supplied with the nourishment it requires. Death, no doubt, in delirium tremens arises from want of sleep, but then it must be remembered that the want of sleep is caused by want of nourishment. The most important part of the treatment then, is to improve the quality of the blood as quickly as possible by throwing into the system frequent supplies of light, nourishing, and easily digestible food. The best way of accomplishing this end is by cutting off all stimulants and ordering half a tin of Brand's liquid essence of beef, and half a pint of milk to be taken alternately every two hours. As regards medicine, twenty-five grains of chloral with thirty minims of compound tincture of cardamoms in an ounce of water taken every four hours, after the beef-tea, will be found most useful. Very little effect, though, is produced by the first dose of the chloral, inasmuch as the brain is without the nourishment it requires, but after the second dose the food begins to tell—some sleep, generally speaking, results, and this goes on increasing in proportion as the support is maintained. If nourishment is withheld, sleep disappears, and the old delirium returns.

By this treatment the patient is generally free from all delusions in about thirty-six hours, but good strong liquid food must still be taken for some days, though not quite so frequently. When there have been from ten to twelve hours more or less continuous sleep, then it is advisable to give up the chloral, and give thirty minims of the compound tincture of gentian with five minims of the tincture of nuxvomica three times a day for about three days. This restores the tone of the nervous system and stomach, and creates an appetite. A little tincture of euonymin may next be substituted for the nuxvomica, and some Carlsbad salt may be given in the morning when required. By this treatment the duration of the delirium and the after-effects of the alcohol are very much lessened.

RESECTION OF THE LUNG.—A medical man, practising in Dantzic, recently undertook the resection of the lung of a young female patient, with the consent of her parents. Through the denunciation of two colleagues, the case, which ended fatally, will be made the subject of judicial

inquiry. All parties, however, appear to admit that the attempt of the surgeon was made in perfect good faith, and in the full belief that it gave the patient a chance of recovery from an otherwise incurable disease. Was the surgeon's conduct simply foolhardy and entirely reprehensible, or was he, on the other hand, before his time? It is by no means impossible, judging from analogies that abound in scientific literature and biography, that works may appear, one century hence, treating of resection of the entire lung as a recognized operation, and recording how, in the nineteenth century, the first pneumotomist got into trouble. Some, though not the majority of innovators, live to see their views and their practices established.—*British Medical Journal*, December 30, 1882.

POISONING FROM SWALLOWING CHLOROFORM.—Oliver relates the case of a weakly man who swallowed over three ounces of chloroform. He was brought to the hospital at 11 P.M. The respiration was almost imperceptible, pulse very slow (twenty to the minute), feeble, and scarcely to be felt, skin cold and pale, face livid, pupils widely dilated, patient sleepy and anæsthetic. The breath smelt slightly of chloroform. Artificial respiration was at once begun. One pole of an induction-coil was placed over the heart, the other on the nape of the neck. Enemata of beef-tea with brandy, and subcutaneous injections of ether over the cardiac area were given. At 2 A.M. the skin was still cold, and showed no trace of sensibility. Five drops of nitrite of amyl were then given by inhalation, and at once the respiration began to improve. At 3 A.M. half a drop of nitrite of amyl dissolved in alcohol was injected beneath the skin, without any perceptible effect. At 5 o'clock, after six hours of artificial respiration, sensibility of the conjunctiva began to return, and the natural respiration became deeper. Gradually the skin grew warmer, and consciousness returned. In a few days the patient was well, complaining only of pain in the epigastrium, and of some pimples under the tongue. The urine contained neither albumen nor sugar. The absence of vomiting was notable; it was doubtless due to the local anæsthesia of the stomach and œsophagus. When the general anæsthesia was most profound the pupils were contracted; they dilated when the respiration had almost ceased. They contracted again on the application of the battery. Dr. Oliver was led to give nitrite of amyl by observing the general capillary spasm of the skin.—*The Practitioner*, January, 1883.

THE CHEMISTRY OF ACUTE YELLOW ATROPHY OF THE LIVER.—In a case of this disease Salkowski estimated the quantity of peptone and hemi-albumose in the liver, spleen, and kidneys. In normal conditions these substances are either absent altogether or only present in traces in the organs named. In this case the amount of peptone and hemi-albumose in the liver were respectively 3.57 and 0.71 per cent.; in the spleen 3.40 and 0.95; in the kidneys 2.56 and 0.39. The great resemblance between the decomposition of albumen in the organs in this disease and digestion with trypsin led him to search for tryptic ferment in the liver. By extracting with glycerine, however, he got no definite result; the glycerine extract dissolving fibrine but only after several hours and incompletely. In regard to the hemi-albumose, he found that Kühne was right in his statement that this body is insoluble in water. His own previous statement that it is soluble in water he now finds to be due to a slight error; the specimen he used having contained a small quantity of acetic acid.—*The Practitioner*, January, 1883.

DEATHS OF ENGLISH PHYSICIANS.—The past year brought death to the doors of no fewer than twenty-two prominent English medical men, and all were far advanced in age, the ages varying from seventy-eight to ninety-two.

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THE ANATOMY OF THE SCROFULOUS.

Not long ago we gave a brief account of the anatomical anomalies found by Beneke in the scrofulous. These were, speaking generally, a disproportionately small size of the viscera, the lungs being excepted.

A contribution to the same subject has recently been made by Dr. H. F. Formad, and is published in the *Philadelphia Medical Times*. Dr. Formad makes no reference to Beneke's laborious researches, and is apparently not aware of them. His own views, however, are the result of much experimental investigation, and have a special interest, since they are quite opposed to any infection theory of tuberculosis.

Scrofulous persons, he states, have an anatomical characteristic, lymph-spaces which are abnormally narrow, or partially obliterated by cellular elements. This characteristic is found also in certain animals which are known to be scrofulous, such as the rabbit and guinea-pig. An examination of the connective tissue from similar regions in the cat, which is non-scrofulous, and the rabbit, will show a noticeable difference in the appearance of the lymph-spaces and the amount of cellular infiltration. Scrofulous animals have proportionately, also, larger blood-making glands and more red bone-marrow. Non-scrofulous animals can be made scrofulous by impoverished diet and confinement. The same can be done with individuals who are naturally not scrofulous.

The evidence brought forward by Dr. Formad to prove a coincident change in the blood-glands and lymph-spaces appears to us to be insufficient. The views propounded regarding the blood-making glands in scrofulous human beings are, we believe, contradicted by Beneke.

The scrofulous individual is not necessarily tuberculous, nor is it his certain fate to become so. There is needed for this an inflammation. In normally constituted connective tissue, the lymph-spaces are large enough to carry off inflammatory products, or if this does not happen, there is tissue destruction and suppuration. In the scrofulous, however, these alternatives are not presented—the lymph-spaces are blocked up, there is lymphoid infiltration, caseation, and tubercular tissue formation. Scrofulous beings can have no other than a tuberculous inflammation, although that may remain local and harmless. *Per contra*, inflammation (tuberculous) is the only means by which the scrofulous (or non-scrofulous) can get tuberculosis. "Without inflammation, no

tuberculosis," is Dr. Formad's dictum, in which we may perhaps detect something of the bias toward inflammation as a pathogenetic factor which that investigator has previously shown.

It is admitted that non-scrofulous persons or animals do sometimes become tubercular, even with normal connective tissue. In these cases, it is contended that the injuries or inoculations must be made, and so far have been found to be, in the serous membranes. In these membranes there is easily produced a blocking up of the lymph-spaces, so that the anatomical characteristics of scrofulous tissue are artificially obtained. The sequence of tuberculosis after croupous pneumonia is explained on the ground that the lining epithelium of the lungs resembles very closely a serous membrane. The reasoning here, however, is weak, and we cannot concede that the clinical phenomena of the etiology of tuberculosis are satisfactorily explained. Yet the statement that tuberculosis can only be *inoculated* artificially by bringing the virus into contact with serous membranes is important. We are informed that Koch, in inoculating his bacilli into scrofulous animals, injected it into any part of the body with successful results. But when inoculating non-scrofulous animals, he always deposited the parasites in the anterior chamber of the eye or in the peritoneum.

Dr. Formad's conclusion is that there is no specific virus of tuberculosis, but that there is a specific constitution. Inflammatory processes in the latter, however produced, lead to tuberculosis.

MEDICAL INSTRUCTION IN EUROPE.

THE *Allgemeine Medicinische Central-Zeitung*, No. 76, 1882, gives some statistics concerning the medical schools in the different countries of Europe, from which the following account is taken: In Holland there are four universities with medical schools attached. The course of study is for six years, with an examination before a royal commission at the end of the fourth and sixth years. Spain has eight universities which grant a license to practise, though the University of Madrid alone has the privilege of conferring the degree of Doctor. Only doctors are allowed to teach medicine, and any one who desires to give medical instruction must first pass a year in study at Madrid. Portugal has one university and two medical schools. The course of study is for five years, with an examination at the end of each year. All examinations are conducted by the faculty of the university. In Italy there are nine universities, with a six-years' course of study. Attendance at the lectures is for the most part obligatory. Switzerland has four universities which confer the degree of Doctor. This, however, is not a license to practise, for which a further examination on natural philosophy and the medical branches is required. The course of study is six years, and two examinations must be passed. Austro-Hungary possesses eight universities of equal rank in the conferring of degrees. Three examinations occur in the course of five years' studies. In Russia six of the eight universities possess medical faculties. At St. Petersburg there is, besides, a medico-chirurgical academy for the education of military surgeons. At the end of a five-years' course of well-arranged and obligatory studies the

candidate may pass to a degree of physician or doctor. The former grants a license to practise only, the latter authorizes the holder to teach medicine. For army and navy surgeons a further examination is necessary. Sweden has three medical schools, which grant a license to practise *only after ten years' study* and three examinations. Norway possesses but one medical school for theoretical instruction. Clinical experience is gained in the hospital in Christiania. The candidate for a medical degree is required to pass four examinations. In Denmark from six to seven years must be passed in study in the University of Copenhagen. Instruction itself is free, but an examination fee is required. The license to practise medicine is given to natives of Denmark only. In France there are three "medical faculties" besides two "écoles de plein exercice" and fifteen "écoles préparatoires." The degree of "docteur en médecine," which permits the holder to practise anywhere in the country, is granted only by the three faculties. Graduates of the other schools are called "officiers de santé" and may practise only in the department in which they have studied. Doctors who aspire to professorships must present themselves, after a further study of three years, to one of the medical faculties for examination. They then receive the title of "professeur agrégé," which corresponds to the privatdocent of the German universities.

SOME RECENT RESEARCHES ON THE PHYSIOLOGY AND PATHOLOGY OF THE STOMACH.

IN order to decide at what precise time an excess of free hydrochloric acid appears in the stomach, Dr. Edinger has recently undertaken a large series of observations. He experimented upon his own person and that of many others. It appears from his investigations (which are recorded in the *Deutsches Archiv. für Klinische Medizin*, vol. xxix.) that from three to four hours after a meal is the usual time for an excess of acid to be present in the gastric juice. Vomited matter from a typhoid fever patient was examined, and found to contain a large amount of free acid, and that, too, at a time when the fever was at its highest. This observation affords contradictory evidence of statements made by others, who assert that in febrile conditions an appreciable diminution of gastric hydrochloric acid is an invariable occurrence.

Edinger has also studied amyloid degeneration in connection with the stomach. He found that the vessels of the gastric walls were commonly implicated in the process of degeneration, but in addition the muscular coat was also frequently involved, and in not a few instances the connective-tissue structures of the stomach, and its glandular elements likewise participated in the amyloid change.

The author holds that an amyloid stomach easily becomes a dilated one; for in this change, provided the gastric muscle suffers, mechanical distention is not opposed by healthy contraction on the part of the walls of the stomach.

When ulceration supervenes in amyloid stomachs, it is the otherwise healthy portions that are primarily attacked, the amyloid matter seemingly resisting the destructive tendencies of the gastric juice. There is also noticed in

amyloid stomachs a want of free hydrochloric acid at the proper time, showing that the gastric function is materially impaired by this degenerative process. Frerichs was the first to point out a vital sign that should arouse the suspicion of amyloid infiltration of the stomach, in cases where other organs are known to be affected in a similar manner. This symptom is the loss of appetite, with occasional vomiting, while the tongue shows no coating. But Edinger very justly contends that these symptoms are quite vague and unreliable, for they may occur in a variety of other disorders. On the contrary, he has found that patients with amyloid stomachs have a natural appetite. He says, however, that the absence of epigastric pain, vomiting with a healthy-looking tongue, associated with amyloid changes in other organs, may justify a positive diagnosis.

One practical point may evidently be learned from these interesting observations. If muriatic acid is to be prescribed, with a view to aid digestion, the best time to give it would be some hours after eating, and not, as is often done, immediately after a meal.

DEATH IN NEW YORK CITY.

IT is sometimes charged, that the physician can extract morsels of comfort in contemplating the unusual prevalence of disease. If so, a study of New York City's vital statistics for 1882 will have much attraction for him.

There died in this city last year 37,951 persons, which is at the rate of 29. + per thousand. This is, we believe, a higher ratio than exists in any other Northern or Western city. The death-rate, as shown in the accompanying table, was very large at the beginning of the year. It slowly fell, reaching almost its lowest point in June.

1882.	Deaths.	Births.	Stillbirths.
January	3,498	2,278	200
February	3,298	2,092	218
March	3,481	2,506	199
April	3,395	2,042	221
May	3,353	2,150	240
June	2,871	2,065	200
July	4,482	2,060	208
August	3,329	2,469	213
September	2,579	2,365	226
October	2,588	2,471	230
November	2,461	2,292	245
December	2,522	2,531	246
Total	37,857	27,321	2,646

It then suddenly rose, and in July there were 4,482 deaths, making the enormous ratio of 41 + per thousand inhabitants. This wave of mortality gradually sank, and during November reached its lowest point, when only 2,461 deaths occurred. For the whole year the deaths have been 673 less than they were last year, despite increased population. This decrease has been almost entirely in zymotic diseases. The number of deaths from these diseases in 1881 was 13,493, against 12,522 during the year just past. As the accompanying tables show, there was a decrease in all the contagious diseases during 1882 except measles.

CASES OF CONTAGIOUS DISEASE.

Year.	Typhus fever.	Typh'd fever.	Scarlet fever.	Measles.	Diphtheria.	Small-pox.
1880 ..	2	508	3,048	3,891	3,307	67
1881 ..	568	965	7,338	3,116	5,272	1,342
1882 ..	207	684	6,594	4,733	3,842	708

DEATHS FROM CONTAGIOUS DISEASES.

DISEASES.	1882.	1881.	1880.
Small-pox	269	451	31
Measles	912	429	479
Scarlet fever	2,070	1,964	618
Diphtheria	1,521	2,249	1,390
Croup	730	1,038	910
Whooping-cough	655	286	277
Erysipelas	151	192	171
Typhus fever	66	160	3
Typhoid fever	363	446	241
Malarial fever	533	605	470
Yellow fever .....	....	....	1

Twenty-five persons died from accidental poisoning ; and the special records concerning these are instructive : One died from rat-poison, one from soothing-syrup, one from acetic acid, four from opium, seven from lead poisoning, two from laudanum, one from chlorate of potash, two from iodine, one from carbolic acid, one from whiskey, one from bromide of potassium, one from morphine, one from hydrate of chloral, and one from arsenic.

The whole number of suicides recorded was 199, against 166 in 1881, and 152 in 1880. Of these, 165 were men, and 34 were women ; 71 were Germans, 50 Americans, and 20 Irish.

PHYSICIANS AND THE CRIME OF SUICIDE.

In a paper recently read before the New York Medico-Legal Society, by its President, Mr. Clark Bell, some of the facts regarding suicide were summarized, and the question of its criminality discussed. The works of Forbes Winslow, Morrelli, and O'Dea have furnished to the public a great mass of statistics regarding suicide. These have shown that suicide is an integral part of human society, and is governed by certain laws, which are quite beyond the immediate reach of individual volition. They show, for example, that suicides are most numerous between the ages of twenty-five and fifty-five ; that they increase proportionately until extreme old age ; that men commit suicide oftener than women, in the proportion of two or three to one ; that men kill themselves later in life than women ; that sorrow, reverses of fortune, physical suffering, domestic trouble, hindered passion, and insanity are the more prominent causes ; that suicide and insanity are both increasing, but with no definite ratio between them ; that the diffusion of education increases suicide ; that the number of suicides varies greatly with the race, from seven per million in Portugal, twenty-six in Italy, forty in the United States, sixty-eight in England, one hundred and ten in France, one hundred and twenty-three in Prussia, to two hundred and eighty-eight in Denmark ; that the proportion in the United States is largest in California and Nevada ; and finally, that in the civilized world suicide is steadily increasing.

The question of what shall be done is partly a legal, partly a moral and medical one. The advisability of enacting laws which will make suicide a crime is discussed by Mr. Bell, who is somewhat inclined to favor such a measure. To oppose successfully this increasing practice of suicide, however, something much more powerful than legal measures will be required. And the more one studies social problems, the greater appear the duties and functions of the physician toward them. Healthy minds in healthy bodies are very nearly safe from suicide. The securing for his young patients a well-balanced and vigorous constitution is the work which the physician has to do in helping to relieve civilization of the vice of self-destruction.

CHARCOAL-FUMES AND COAL-GAS.

It is universally conceded that the growing complexities of modern civilization are correspondingly fraught with danger to life and health. The increasing number of deaths from the effects of various noxious gases furnish but a single, though quite apt illustration of this dictum. Poisoning by charcoal-fumes or coal-gas is doubtless of daily occurrence. And medico-chemical interest in such agents is a natural consequence of accidents of this kind. Accordingly, Drs. Biefel and Poleck have reinvestigated the toxicology of the agents in question. (*Zeitschrift für Biologie*, vol. xvi., 1882.) In charcoal-fumes they found carbonic oxide and carbonic acid in the relative proportions of one to twenty. The former was chiefly responsible for the poisonous properties of these fumes. Their experiments were conducted by placing animals in an atmosphere gradually contaminated with the noxious charcoal-fumes. When the oxide introduced had reached 0.44 per cent., severe symptoms of poisoning arose. Death occurred when the gas had risen to 0.62 per cent.

Coal-gas behaved in a somewhat different way. It required from 1.5 to 1.94 per cent. of carbonic oxide to produce fatal effects. In coal-gas the absence of carbonic acid, formed at the expense of the oxygen, appeared to materially modify the poisonous effects of the carbonic oxide. The effects of the latter, as compared with carbonic acid, are contrasted by the authors as follows :

Carbonic acid produced varying degrees of coma. Dyspnœa resulted, which gradually passed into asphyxia. Violent tetanic convulsions or general tremors were but rarely observed. Respiration appeared to become slowly paralyzed. Post-mortem examinations revealed dark red blood, congested, œdematous, and dilated lungs, moderately hyperæmic brain, and the right side of the heart distended with dark blood.

Carbonic oxide, on the other hand, never led to coma ; but it produced muscular weakness and transitory paresis of the extremities. Dyspnœa was not observed ; but there were convulsive expiratory efforts, and general convulsions. Autopsical inspection showed hyperæmia of the brain and its coverings, together with altered red blood in the latter. No pulmonary œdema, but vesicular emphysema. The heart was filled with liquid blood. This fluid also frequently contained bubbles of air. Finally the occurrence of subcutaneous emphysema was noted.

THE POVERTY OF MEDICAL MEN.

DR. B. E. COTTING, in an address before the Massachusetts Benevolent Society (*Boston Medical and Surgical Journal*) took a somewhat gloomy view of the pecuniary status of medical men. He said that an eminent clergyman once investigated the incomes of physicians in one of the larger cities of another State, and found that, after deducting expenses necessary to the practice of the profession, they did not annually receive, on an average, more than workmen in the same city.

He related the following anecdote:

"Rouse up," said the members of the family to one of the first physicians of France, then on his couch, sinking under most painful and wasting malignant disease—"rouse up—a patient is waiting. Go earn a few francs—there is not any bread in the house!"

We might instance the case of a distinguished surgeon of this city, widely known and justly celebrated for his skill. He died a year ago after twenty years of practice and now subscriptions for his widow are being made.

This is an extreme case, it is true, but helps to explain why even the best qualified medical men cannot always succeed. There is not only a plentiful supply of first-class practitioners in all our large cities, but the profession is year by year becoming more and more crowded. Hence competition is fiercer and the chances of brilliant success are proportionately fewer.

THE BACILLUS OF WHOOPING-COUGH.

AN interesting paper, pertaining to the pathology of whooping-cough, was lately read before the Medical Society of London, by Mr. Dolan, F.R.S., in which views were advocated which were put forth by Poulet, in 1867; by Letzerich, in 1873; and still later by Tschamer. Mr. Dolan has repeated the experiments of these former investigators, and with successful results.

Poulet, in 1867, found certain bacteria of a peculiar kind in the sputa of patients affected with pertussis; Letzerich commenced a series of investigations a few years later. The latter found constantly present in the sputum of pertussoid patients a bacterium belonging to the genus *Ustiligo*, Tul.; with this micrococcus he inoculated the tracheal mucous membrane of tracheotomized rabbits and noted the results. He invariably produced a spasmodic catarrhal affection resembling whooping-cough, and he observed that the bacteria do not penetrate the epithelium, but live on the surface of the mucous membrane, to the detriment of the latter.

Tschamer, of Gratz, working in the same department of micro-pathology, has lately found, in the expectoration of pertussis, a microphyte, which he identifies with a black mould which develops on orange-peel. This he thinks that he has proved by different cultures. Satisfied of the identity, he took some of the black powder which constitutes the mould of orange-peel and experimented with it on himself, inhaling the powder as deeply as he could. At first no effect was observed, but after eight days he began to have convulsive fits of coughing, and expectorated the fungus in abundance.

He explains the phenomena of whooping-cough in this way. After an incubation of seven days, these microphytes determine an irritation of the bronchi which

induces catarrh and spasmodic cough; then, as the irritation increases, the expectoration becomes more abundant and eliminates the fungoid organisms.

Dolan, in repeated experiments, found that by inoculating rabbits with the sputa of whooping-cough patients, he not only induced a catarrhal spasmodic affection, but the death of the animal generally ensued. Inoculation with the blood of such patients was without effect. This certainly seems to confirm the conclusions of Letzerich, that the *materies morbi*—be it a bacillus, or be it what it may—lives on the surface of the epithelium, and does not get into the blood.

Dolan does not claim to have arrived at certain knowledge respecting the special bacteroid for which causes pertussis.

The theory, then, is a simple one, that whooping-cough, like other contagious diseases, is the product of germs, which, given off in the breath of pertussoid patients, are inhaled by persons of proper susceptibility, and set up irritation of the respiratory epithelium; the result is the vascular and nervous disturbances, and other phenomena which characterize whooping-cough. The severe constitutional disturbance which sometimes attends the disease is a secondary effect.

Mr. Dolan suggests nothing new with regard to the treatment of this affection (which must be largely directed to the palliation of symptoms); but adds that if the dependence of pertussis upon a specific virus, be the true explanation of its pathogeny, the lines on which its rational treatment and prophylaxis are to be pursued become clearer and more hopeful.

SANITARY PROTECTIVE ASSOCIATIONS.

SANITARY Protective Associations seem to be the rage in Great Britain. A third has recently been founded in Liverpool, called "The Northern Sanitary Association," of which the Earl of Derby is president. This would indicate that the London and the Edinburgh associations, which have been in existence for some time already, are in a flourishing condition. The services of these associations are most valuable to vendors, purchasers, and intending tenants of house property, since they provide good practical advice on sanitary matters at a moderate cost. They advise, inspect, and superintend, but do not undertake the execution of work, thereby avoiding interference with builders and contractors. Associations of this kind would find a very wide field in the United States, and we hope that some will be in running order before the summer exodus to the seaside and the country takes place.

THE PRACTICE OF MEDICINE IN NEBRASKA.

THE law regulating the practice of medicine in the State of Nebraska is, as might have been expected under the circumstances, reported to be virtually a failure, so far, at least, as affording protection to the people from the impositions of quacks. There is no provision for any tribunal by which may be determined the genuineness of a diploma, or license. It is, therefore, wisely recommended to establish a State Board of Health, with authority to refuse its certificate to any person not properly

qualified to practise medicine, and also to order before them for examination any one practising medicine, be he a graduate or not.

The total number of graduates of all schools practising in the State is 567, practising under the ten years provision of the law, 206; "first course students," 38; of less than ten years' practice, and in open violation of the law, 27; number practising that are not registered, 40; number of fraudulent diplomas detected, 87.

News of the Week.

AN ASYLUM SUPERINTENDENT SUES FOR DAMAGES.—Dr. Wylie, of the Dixmont Insane Asylum, has begun a libel suit against the Erie (Penn.) *Herald* for \$40,000 damages for publishing an interview charging cruelty and injustice to the inmates of the institution.

FEES OF THE HEALTH OFFICER OF THE PORT OF NEW YORK.—The following resolution has been introduced into the New York Assembly:

Resolved (if the Senate concur), That the Congress of the United States be and is hereby requested to establish by law such just and uniform quarantine fees for the port of New York, and for all ports of entry in the United States, as a conference of the representatives of the State Boards of Health of the maritime States may recommend, or as Congress in its wisdom may direct after full knowledge of the irregular quarantine fees now imposed by law, the object of this resolution being to establish economical and efficient commercial and health service in the principal quarantine ports of the country.

WHOLESALE BODY SNATCHING.—It is stated that one hundred and fifty bodies have been stolen from graveyards in the vicinity of Montreal during this winter, one-half of which were sent to medical schools in the United States.

A LADY DOCTOR FOR THE LONDON POST OFFICE.—Mr. Fawcett is said to intend appointing a lady doctor for the lady employees in the London Post Office. The *Lancet* is stirred up to protest against such action.

DR. ANDREW CLARK has recently been elected President of the London Clinical Society. Dr. Clark is the medical attendant of Mr. Gladstone, and *Punch* publishes his caricature with the following lines:

"There was a sharp doctor, and what do you think?
His simple prescription was 'Wittles and Drink.'
Wittles and Drink—most important is diet—
And mind, Grand Old Man, you must keep yourself quiet."

MIXING ITS ANATOMY.—Our esteemed contemporary, the *British Medical Journal*, has been advertising a work entitled "Diseases of the Prostate in Both Sexes," by David Jones, M.D.

SYPHILIS SPREAD BY A MIDWIFE.—Much excitement was caused recently in Sheffield, England, by the trial of a midwife on the ground that she had communicated syphilis to about thirty married women, and to two infants, while in the discharge of her professional duties.

A NEW ITALIAN JOURNAL especially devoted to children's diseases, and called *Archivio di Patologia Infantile*, has just been started by Prof. Luigi Somma, of Na-

ples. It is to be published bi-monthly, and includes on its editorial staff as many as twenty-five professors and practitioners.

THE LANCET AND NEW YORK PHYSICIANS.—The three leading articles in a recent issue of *The Lancet*, were contributed by New York physicians.

MEDICAL RELIEF IN PARIS.—The Municipal Council of Paris recently voted the sum of \$600,000, of which \$400,000 is to be spent in the improvement of existing hospitals, while \$200,000 will be devoted to erecting new establishments for the relief of the city's sick poor.

THE BROOKLYN HOSPITAL SATURDAY AND SUNDAY COLLECTION for 1882-83 amounted to \$3,925.37, to be divided among seven hospitals. This was the first year, and is an excellent beginning.

FACTS FROM THE CENSUS.—A few copies of the advance sheets of the "Compendium of the Tenth Census" have been distributed. Some of the facts therein contained we publish here prior to a more extended consideration of the complete volume.

The defective classes, which include the insane, idiotic, blind and deaf-mutes, numbered in 1870, 98,484; in 1880 the number was 251,698. The increase of population was only thirty per cent., that of the defective classes apparently one hundred and fifty-five per cent. The ratio of this class to the whole population was in 1880 as 5,018 to each million. This startling increase, however, is only apparent, as it is admitted that previous census reports were very inaccurate.

The total number of the insane is given as 91,997, of whom only forty-four per cent. were in hospitals. These are nearly the same estimates as those made by Dr. Dana in a paper read before the National Association for the Prevention of Insanity, a year ago. Among 76,895 idiots, three per cent. were in training schools for the feeble-minded; of 48,928 blind persons, less than four and one-half per cent. were in schools and industrial homes for the blind; and of 33,878 mutes, nearly sixteen per cent. were in schools established for them.

It appears from the report that insanity in the United States attacks women more frequently than it does men, but men on the other hand are more liable to be idiotic, blind, or deaf. The negro population is much more liable to idiocy than insanity. Both the negro and the foreign population are singularly more liable to blindness than to deafness. The tendency of the foreign population to insanity is especially worthy of attention. "It is startling to know," says Mr. Wines, "that of 50,000,000 of inhabitants over 400,000 are either insane, idiots, deaf-mutes, or blind, or are inmates of prisons, reformatories, or poor-houses. If to these we add the out-door poor and the inmates of private charitable institutions, the number will swell to nearly or quite 500,000, or one per cent. of the total population."

The death-rate of the United States, as established by the number of deaths recorded, was 15.1 to the thousand, a rate decidedly higher than those given in the censuses of 1860 and 1870. This does not indicate, however, any actual increase in the rate, but shows that the returns in 1880 were more complete. Adding estimates of deficiencies, the agent in charge estimates the actual death-rate at somewhere between seventeen and nine-

teen per thousand. The rate in England in the same year was twenty and one-half. Of the total number of deaths reported, which was 756,893, the cause in 91,551 cases was consumption; diphtheria caused 38,398 deaths; enteric fever, 22,905; malarial fever, 20,261; and accidents or injuries, 35,932. The death-rate of the colored race is much greater than that of the white.

FINAL REPORT UPON THE HOSPITAL COLLECTIONS.—The detailed report regarding the hospital Saturday and Sunday collections has been published, and is as follows:

Episcopal churches	\$11,898 55
Presbyterian churches	3,329 19
Baptist churches	392 69
Reformed (Dutch) churches ..	394 69
Lutheran churches	241 40
Methodist churches	203 46
Unitarian churches	221 68
Swedenborgian churches	147 00
Reformed Episcopal churches ..	50 00
Congregational churches	25 00
Synagogues	1,556 17
Total for churches	\$18,459 78
Trade collections	8,635 40
Hebrew lodges	235 00
Box collections	857 71
Individual donations	2,141 97
Balance from last collection ...	237 16
Total	\$30,567 02

In addition to this are sums from other sources, making the total amount \$33,862.72, against \$42,535.45 in 1881, \$44,371.97 in 1880, and \$26,455.07 in 1879.

The falling off in receipts is thought to be due to exceptional causes which will not be present next year. It appears that while there was a very liberal advertisement and a great display of yellow boxes, there were few successful attempts to secure the co-operation of any but Episcopal churches. The collection was essentially an Episcopal one, so far as the churches are concerned. It will probably remain so until a thoroughly representative Board of Managers takes the matter in charge. A promising feature in the present year's statistics is the increase of the trade collections.

INVESTIGATING A HOSPITAL.—The Marine Hospital at Cleveland is being investigated by Dr. Geo. Parviance, one of the surgeons of the service. The charge is that a contractor who had the lease of the hospital from the Government and formed a Hospital Association to manage the institution, ostensibly for charity, used it to make money by neglecting the patients, failing to give them proper medical treatment, and depriving them of nourishing or wholesome food.

NEW YORK CITY VITAL STATISTICS.—There were 2,818 deaths reported during the month of January. The deaths from contagious diseases were as follows: measles, 64; scarlet fever, 75; diphtheria, 108; croup, 73; whooping-cough, 27; typhoid fever, 17; cerebro-spinal meningitis, 23; and malarial fevers, 23.

PASTEUR AND KOCH.—Dr. Koch has published his reply to Pasteur, as he announced that he would do at the session of the Geneva Congress. Koch takes the ground

that "it is not yet proved that all infectious diseases are parasitic in character, but that the parasitic character must be proved in each case separately." As a model of how such proving should be done, he modestly cites his own experiments with the tubercle bacillus. He criticises the methods adopted by Pasteur in studying rabies and glanders, and denies that that experimenter's conclusions regarding them have been established. Koch also claims priority in regard to the discovery of the cause of anthrax and denies Pasteur's statements regarding the mode of propagation of that disease (*i.e.*, by the agency of earth-worms). Regarding preventive inoculations, Koch states that while some bacterial diseases may be so prevented, there are others, like gonorrhœa and erysipelas (?), against which one cannot be protected. Koch considers that Pasteur's claims for the value of preventive inoculations are exaggerated, and that his methods are cumbersome and defective. It remains now for Pasteur to say a word.

A CONSCIENTIOUS DRUGGIST.—Some weeks ago a druggist in Burslem, England, had carelessly served a customer with poison instead of magnesia. He summoned the bellman as soon as the mistake was discovered and sent him about the streets warning the unknown purchaser not to use the deadly drug. This is a rather novel way of neutralizing personal error, as it may be called, but it was successful.

A CINCINNATI PHYSICIAN has been sent to the Work-house for thirty days for cruelty to his family.

FIVE STUDENTS of the College of Physicians and Surgeons, and two of the University of Maryland, have been attacked by small-pox during the present winter. Two of the former have died of the disease. The others are progressing well toward recovery.

GRANT ON HOMŒOPATHY.—U. S. Grant, when asked to sign the petition in favor of making all physicians equal before the law in the Government service, said he would "give homœopaths no encouragement directly or indirectly!"

THE CARTWRIGHT LECTURES OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS for the present year will be delivered at the Hall of the Young Men's Christian Association, corner of Fourth Avenue and Twenty-third Street, by Dr. W. T. Belfield, of Chicago, on the evenings of February 19th, 21st, 24th, and 27th, at eight o'clock. Subject: "The Relations of Micro-organisms to Disease."

CIGAR-MAKING IN TENEMENT HOUSES.—At the meeting of the Board of Health last week, the Commissioners condemned Assembly bill No. 173, to prevent cigar-making in tenements, which bill was reported to have their support. They declared that such work was not detrimental to the health of the tenement house population, and directed that resolutions to this effect be sent to the Governor, the President of the State Senate, and the Speaker of the Assembly.

THE DANGER OF ADMINISTERING ETHER IN DISEASES OF THE KIDNEY.—Mr. Lawson Tait's observations regarding this point, mentioned in a previous number of THE RECORD, merely corroborate those originally made by our distinguished townsman, Dr. Thomas Addis Emmet, as long ago as 1872.

Reports of Societies.

MATERIA MEDICA SOCIETY.

F. P. FOSTER, M.D., PRESIDENT, IN THE CHAIR.

VIBURNUM OPULUS IN DYSMENORRHOEA.

THE paper of the evening, on "Viburnum Opulus," was read by its author, DR. A. E. M. PURDY. The genus viburnum of the natural order caprifoliaceæ furnishes two plants used in medicine, viz., viburnum prunifolium and viburnum opulus. The first has been quite extensively used, is described by numerous observers, and has obtained a place in the forthcoming revision of the United States Pharmacopœia. The second, however, has received but little professional notice, and its literature is meagre and unsatisfactory. Believing the viburnum opulus to be more certain in its action than its companion of the same group, the author proposed to present some points in its history and some of the clinical results of its use in dysmenorrhœa. After speaking of its botany and history, he took up its pharmacy and chemistry. For medicinal purposes is employed the bark of the root, shrub, and its limbs (fresh bark being preferable). From this a tincture is made with alcohol of 75 or 80 per cent. (Hale). The tincture should have a dark red color and a peculiar acid odor not unlike that of valerian. Referring to its therapeutic properties and uses, the author quoted Hale, who recommends high cranberry as a powerful anti-spasmodic. In virtue of this property, says this writer, it is known among American practitioners as cramp-bark. It is very effective in relaxing cramps and spasms of all kinds, as asthma, hysteria, cramps of the limbs and other parts in females, especially during pregnancy. It is said to be highly beneficial to those who are subject to convulsions during pregnancy or at the time of parturition, preventing the attacks entirely if used daily for the last months of gestation. In the treatment of spasmodic dysmenorrhœa, for which variety this remedy is especially indicated, Hale prescribes of the tincture, a few drops a day for a week previous to the expected period. When the pains begin, he gives it every half hour, or every quarter if they be severe. He has found it equally useful for the severe false pains preceding normal labor and often rendering the woman's life a torture for weeks. In after-pains it is of great value, and should be given after each pain. Cramps in the abdomen and legs of pregnant women he was able to quickly control by its use. He claims that it will prevent miscarriage if given before the membranes are injured and when the pains are spasmodic and threatening. The use of the viburnum opulus for the relief of dysmenorrhœa, said Dr. Purdy, does not seem to have originated from professional sources. It has been in domestic use for a very long period as a remedy in the painful affections of women. Hale first gained his knowledge of the plant from its domestic employment. In neuralgic and spasmodic dysmenorrhœa he has yet to meet with a single case in which it has failed to cure, and states: "So confident have I been of its almost marvellous powers, that I have taken pains to look up some old cases that I had dismissed years ago as incurable, in order to test the remedy on them. In every instance so far it has cured these obstinate cases. Its sphere of action seems to cover about the same grounds as galvanism." In spasmodic affections of other organs, the same writer predicts its usefulness. The question is whether it acts through the motor nerves or directly upon the muscular tissues. It may prove to be a spinal remedy. Dr. Meyer, of Wilkesbarre, Pa., in his pamphlet on "Specific Medication," states that viburnum opulus, or high cranberry, and viburnum prunifolium or black haw, seems to be anti-spasmodic, and to have a specific action upon the uterus. He has only used the first named. Its employment has convinced him that it is a uterine sedative, and often a

remedy for neuralgic dysmenorrhœa and for the commonly associated spinal irritation. He gave it in doses of five to ten minims of the concentrated tincture for these conditions, and also as a preventive of threatening abortion. He believes that in the majority of cases it has accomplished the object for which it was given. Dr. Charles E. Hall (*Philadelphia Medical and Surgical Reporter* for June 22, 1878), a number of whose cases the author abstracted, states in conclusion that many more instances could be given to show the positive effects of the drug, and predicts a cure when the pain is spasmodic and neuralgic, palliation when it is congestive or pseudo-membranous. He also used it in menorrhagia with intense crampy pain, and obtained speedy relief in cases of uterine colic. The only other allusion in literature the author could find was a brief statement on page 13 of "Piffard's Materia Medica and Therapeutics of the Skin." Here it is stated that dysmenorrhœa is sometimes promptly relieved by pulsatilla and viburnum opulus.

Dr. Purdy then narrated a number of cases of his own, which led him to conclude that viburnum opulus is a powerful uterine sedative. He is satisfied that, if preparations of the fresh drug be used, many cases beyond the reach of any therapeutic aid, except opium, might be relieved, and more positive results obtained from its use than from the employment of viburnum prunifolium. He had been using a preparation similar to the abstract of the new Pharmacopœia. One grain equals in strength two minims of the tincture. The latter is made from one part of the fresh drug to two parts of alcohol.

DR. FARNHAM had had no experience in the use of this species of viburnum, but had obtained good results from the viburnum prunifolium. He had employed it in doses of a fluidrachm of the extract three times a day.

DR. PURDY stated that he had used the viburnum opulus abstract in five-grain doses.

DR. FARNHAM related the case of a lady who had aborted six times, and had been subjected to a variety of treatment. The accident always occurred before the third month. Being put upon viburnum prunifolium, she went on until the sixth month. Then, at a time corresponding to a menstrual epoch, death in her family caused her to be hurried out one stormy night and taken quite a distance in a carriage. Premature delivery took place, the child being born alive and living twelve hours. In the next pregnancy no other remedy was used, and no local treatment employed. She was told to rest four days every month at the periods corresponding to menstrual epochs, and to attend to ordinary hygiene. She went on to full term, and gave birth to a child weighing twelve pounds. Having had excellent results with viburnum prunifolium, he had used that to the exclusion of the viburnum opulus.

DR. CASTLE had used viburnum prunifolium, and had found considerable difference in the activity of the fluid extracts generally used. A good fluid extract gave pretty good results in doses of half a drachm repeated at intervals of three hours for dysmenorrhœa. He had only used it twice for the purpose of arresting threatened miscarriage. In one case it seemed to have secured a good result; in the other, small doses of ergot were also employed, so that no definite conclusions as to its efficacy were possible. While speaking of dysmenorrhœa, an observation had occurred to him bearing upon the medical treatment of many cases of this affection. He had seen what might account for the reputed efficacy of any drug tried for a limited period. In many cases he had noticed that women would suffer much from dysmenorrhœa one month, while the next they would be free from pain. On the following period they would again be much distressed, to be again comfortable on the subsequent epoch, and so on. After one attack of dysmenorrhœa they would take medicine, and the next period would be painless, the relief afforded being attributed to the remedy. It would then be abandoned, directions of the physician would not be followed out, and the follow-

ing month the old difficulty would arise. Then their experience would lead them to again resort to the remedy, with the result apparently of once more procuring a quiet time.

DR. PURDY stated that he administered as much of the abstract to a dose as could be put on a five-cent piece (*i.e.*, about five grains).

DR. CASTLE remarked that each grain of the abstract represented two minims of a fluid extract, each minim of which corresponded to one grain of the crude drug; the abstract was accordingly twice the strength of the crude drug.

DR. JOHNSON had not had much experience with *viburnum opulus*, but had used the *viburnum prunifolium* to some extent. In dysmenorrhœa, however, although cases showed a decided effect from the drug, his experience with this trouble had been of such a nature as to render him rather suspicious in regard to the virtues of the remedy. There seemed to be cases of dysmenorrhœa in which the pain appeared to be diminished on the production of a strong impression upon the mind of the sufferer. He had given minute doses of *pulsatilla* in a case where he could not make himself believe that this drug had really exhibited any of its therapeutical action, yet the woman had painless periods. One young lady, hysterical and broken down, suffering from pain so severely every month that she was prostrated, was ordered to take small doses of *pulsatilla*, being assured at the same time that this would relieve her. It did, and relief was complete. In those cases in which *viburnum* had been given for months with gradual diminution of pain, the remedy certainly did seem to possess therapeutical value.

DR. PURDY again drew attention to one of the cases mentioned in his paper. The patient was a seamstress who had had a hæmatocele for six or eight months. Pain, aggravated at the menstrual periods, had been controlled by opium. *Viburnum opulus* afforded relief without opium.

DR. JOHNSON asked whether rest had been insisted upon.

DR. PURDY stated that the patient sewed and embroidered for a living, and endeavored to do nothing else during the employment of the remedy.

DR. JOHNSON inquired whether the diminution of pain might not have depended upon diminution in size of the exudation.

DR. PURDY had noticed no such diminution in a number of examinations made.

DR. JOHNSON thought that if the decrease in the amount of pain was not due to a diminution in size of the hæmatocele, it perhaps depended upon the fact that the woman had become accustomed to its presence.

DR. PURDY agreed with Dr. Johnson that such an explanation might with reason be urged. He referred to the astonishingly long list of remedies brought forward in the "National Catalogue" for the cure of dysmenorrhœa.

DR. JOHNSON did not wish to be thought a doubter, but it seemed to him that it was exceedingly difficult to prove the efficacy of any drug in dysmenorrhœa.

DR. PURDY had been using the *viburnum prunifolium*. When Dr. Piffard suggested the *viburnum opulus*, he took up the latter and employed it. He had found that it gave him better results.

DR. WEBSTER inquired for the situation of the hæmatocele.

DR. PURDY stated that it was well down in the pelvis, pressing upon the rectum—a pelvic hæmatocele.

DR. WEBSTER stated that he had no experience in the use of the drug at all, but asked whether it might be made use of in ophthalmological practice in treating spasm of the orbicularis muscle.

DR. PURDY replied that Hale spoke very enthusiastically of it in all forms of spasm.

DR. FARNHAM had found that books attributed to it a selective action on the uterus.

DR. PURDY had Hale's authority for its efficacy in

heart cramp. *Viburnum opulus* was not an unsafe medicine, it acted as a tonic, had no nauseating taste, was non-irritating, and could be conveniently given in the form of a powder. In judging of its value, one definite preparation should be used.

DR. CASTLE regretted that the abstract unfortunately was a new preparation. There were different abstracts in the market. He could not find in the literature what dose to use.

DR. JOHNSON suggested that it would be better to use a tincture of the remedy.

DR. FOSTER was very happy to have presented positive and well-arranged testimony to the value of *viburnum opulus* in dysmenorrhœa. He had not used the remedy himself, for lack of opportunity, and perhaps for the reason he was under the impression that *viburnum* was not expected to do good in dysmenorrhœa, except in that form which is accompanied by profuse menstruation. He had not had a case of that kind for the last few months. He had used *viburnum prunifolium* a good deal, and always as Dr. Castle prescribed it—in the form of a fluid extract in doses of half a drachm three times a day. Lately he had not employed it to any extent. He was pretty well convinced that it possessed some efficacy. He administered it in cases of dysmenorrhœa accompanied by excessive menstruation. Quite recently he came to the conclusion that it had no effect whatever, and as it was a very nauseous drug, he had almost concluded to discard it. In looking over his notes, however, he found one case in which it produced good results, that was all, he thought. He was, and had been for some time, thoroughly imbued with the idea, so well expressed by Dr. Johnson, that dysmenorrhœa was in very many cases relieved by mental impressions. He had seen illustrations of this over and over again. He had frequently noticed that patients would feel comfortable for one or two periods, then nothing would give relief. He had seldom observed the alternations mentioned by Dr. Castle. These had been referred to the alternating action of the ovaries, one acting one month, the other the next. If the dysmenorrhœa was ovarian in pathology, and but one organ affected, these alternations of pain and absence of suffering were to be easily explained in accordance with this doctrine. It might have been possible that he had not obtained a good sample of *viburnum*. He had never, however, designated any particular preparation in his prescriptions, and as these had been put up in various parts of the city, he ought to have procured a good specimen occasionally. His patients objected to *viburnum prunifolium* as vile to the taste, most of them refusing to take it for any length of time. As to *viburnum opulus*, he hoped it might prove to be superior to its congener. He should specially investigate it, using the abstract, which was a good preparation for those wishing to dispense the drug themselves. In the matter of the case of hæmatocele, of which Dr. Purdy spoke, he could not see how a drug which had no hypnotic or anodyne effect, should be efficacious, how a remedy that had no action upon the hæmatocele should relieve the pain caused by it.

DR. PURDY referred to a case mentioned by Hale, in which opium had been used, and then *viburnum opulus*, as a substitute. He had administered the remedy at a venture in this case.

The Society then went into executive session.

NASAL PHYSIOLOGICAL CONDITIONS.—The nasal protuberances of the citizens of St. Louis must present some striking physiological peculiarities, to judge from the following remarks of one of their local savants: "In China they always vaccinate people on the tip of the nose, and when there is danger of an epidemic the whole city gets vaccinated at once. It is said that after the things begin to 'take' it is impossible for an American traveller to realize that he is not in St. Louis."

NEW YORK ACADEMY OF MEDICINE.
SECTION IN OBSTETRICS AND DISEASES OF WOMEN.

Stated Meeting, December 28, 1882.

HENRY E. CRAMPTON, M.D., CHAIRMAN.

DR. A. S. HUNTER was elected Chairman and DR. H. GRISWOLD Secretary for the ensuing year.

DEFORMITY OF THE PELVIS—INDUCTION OF PREMATURE LABOR.

DR. GRISWOLD reported a case as follows: In the spring of 1880 he was called to assist two of his professional brethren in a case of difficult labor. The patient was an Irish woman, twenty-five years of age, muscular and well-proportioned, who had been married four years. She had a still-birth at seven months, and a second still-birth at full term. She had been in active labor three days, the membranes having ruptured early. The pains had been hard but were then very feeble. The breech presented with the back in the hollow of the sacrum. The parts were clammy, and oil or lard failed to remove the rubbing sensation as the fingers were passed into the vagina. Under chloroform the fetus was delivered. Its surface was macerated, and the epidermis peeled off under pressure of the fingers. The vagino-rectal wall was torn for three and a half inches. The parts were cleaned, placed in apposition, and silver-wire sutures were introduced. The bladder was evacuated with the catheter and frequent carbolized vaginal injections were prescribed.

On the second day following delivery the nates were found excoriated and the right labia presented a blistered appearance. On the fourth day erysipelas was ushered in with a chill. Around each suture a slough was forming and they were removed. The woman recovered in about two weeks with the loss of a portion of the vagino-rectal wall. The cause of the difficult labor was found to be in the narrowing of the diameter between the rami and an approximation of the ischial tuberosities, forming what is usually called the masculine pelvis. It is a modification of the infantile, and according to Dr. Barnes, of the Royal Maternity Hospital, England, "is accompanied by development of unusual muscularity, corresponding to the laborious employment of the individual." This delivery occurred in April. In December following she was operated upon for restoration of the integrity of the rectum. The edges of the rent all around for a full quarter of an inch were vivified, and the needles carried through so as to just avoid the edges of mucous membrane of the rectum. Incisions along the lateral walls were necessary in order to remove the tension upon the sutures, and the surfaces thus made were left to granulate. Union took place throughout, save at the superior portion of the perineal body, about an inch and a half above the anus. Here on the eighth day a fecal fistula was established. Hardened feces, making free use of the finger necessary, caused much annoyance until the expedient was tried of administering a teaspoonful of compound licorice powder in half a glass of water at bedtime, followed by an enema of flaxseed tea and sweet oil in the morning, when no further trouble was experienced. It is now his habit to use this method in all cases of operation about the perineum. The daily action of the bowels did not seem to retard the healing of the fistula, although fecal matter frequently passed into the vagina. The occasional application of nitrate of silver was all the treatment that seemed necessary to complete the union. At the end of the month the fistula had entirely closed, and the patient rapidly gained in strength and flesh. Fifteen months later she again became pregnant, and about the first of the present month we decided to induce labor at seven and a half months of pregnancy, with a view of preserving the integrity of the parts gained in the last operation and also, if possible, obtaining a living child. At the suggestion of Dr. A. S.

Hunter, three or four small sponge-tents were introduced into the os, side by side, which in six hours was dilated sufficiently to admit the smallest Barnes dilator. This was filled by a Davidson syringe and the two larger sizes soon followed. The internal os, almost its entire length, was dilated by these means to easily admit three fingers. A bag of waters presented and pains in the back commenced. Mechanical means were then discontinued, in the expectation that nature would complete the labor, but the pains gradually subsided, and in twenty-four hours all was quiet. A No. 3 Barnes dilator was then introduced into the uterus, inflated, and left overnight. Uterine contractions expelled the bag and labor ceased. A No. 9 bougie was then introduced for five inches between the membranes and the uterus. It remained overnight without producing any effect. As the os was then dilatable, and all previous efforts had failed, rupture of the membranes was practised. Twelve hours later labor came on and the pains were uniform and progressive. The nates presented. The progress was arrested by strong cicatricial bands in the regions that had been left to granulate in the operation. These bands were divided with a blunt bistoury; no hemorrhage followed, and the delivery of a dead fetus was effected twenty-four hours after labor had commenced. Its presenting parts were much excoriated by friction. The mother made a rapid recovery and suffered no inconvenience from the incisions that were made. The after-treatment consisted in a complete washing out of the uterus, after the expulsion of the placenta, with a two per cent. solution of Calvert's carbolic acid. Her diet was sustaining and lactation was restrained by the application of stramonium ointment and powdered camphor to the mammae.

It was possible that had labor been resorted to two weeks sooner a living child might have been saved. One interesting question suggested by the case was, How can labor certainly be induced? For a week beforehand she had resorted to the hot douche, and then the hot and cold alternately, with no avail. Besides, the various recognized methods already mentioned were adopted, but nothing was effected until the membranes were ruptured, and this only after twelve hours of delay.

DR. ISAAC E. TAYLOR thought the cases in which there was simply narrowing of the antero-posterior diameter of the pelvis differed from those in which the pelvis was equally or generally contracted, or, as he preferred to call it, "naturally faulty." He then referred to a case in which the antero-posterior diameter was two inches and a half, the pelvis being substantially what is known as the male pelvis. The description given by Dr. Griswold led him to the conclusion that there was narrowing of the inferior strait in the case, and that it was probably reduced to two inches and a half or three inches in diameter. He thought that these differences should be kept clearly in mind, and made distinct when considering Cæsarean section, laparo-elytotomy, craniotomy, and cephalotripsy. If the antero-posterior diameter was only an inch and three-fourths, or two inches, and the head of the child was transverse, it would probably be better to perform craniotomy and cephalotripsy rather than resort to Cæsarean section. There might, however, be exceptional cases. The reason was that as the head was transverse in the pelvis it was in a favorable position, so that after craniotomy the base of the head could be crushed with the cephalotribe. He very much questioned as to whether delivery could be completed by means of the cephalotribe unless the base of the skull was crushed several times. He doubted also whether in one out of twenty cases the base of the skull was crushed with that instrument, but he believed that the head could be easily delivered by a slight manipulation, namely, by tilting the base of the head, and in that manner the operator was able to bring it down readily. He then referred to a case in which, after craniotomy was performed, he introduced the blunt hook, tilted the head, and the labor was completed very promptly. At the next labor the same patient

preferred Cæsarean section. Porro's operation, however, was performed, and the uterus and ovaries were removed, and the patient passed on very well until the twenty-eighth day when phlegmasia dolens developed. From this she recovered, but disobeying orders, she got up, and suddenly died of cardiac thrombosis.

The generally contracted pelvis, the naturally faulty, the equally contracted pelvis, ranging from three and a half to three and three-fourths inches in diameter, required Cæsarean section when early performed; or if the labor had existed for some time, laparo-elytrotomy might be preferable to Cæsarean section. In Dr. Griswold's case, where the diameter of the inferior strait was so narrow, the child already being dead, there was no proper way by which delivery could be completed, except by breaking up the base of the skull or tilting the head.

With regard to methods of producing premature labor there were none which he had not employed. He thought sponge-tents were objectionable because of the length of time required. If the uterus could be pushed down, he would first introduce the finger, as it was the best dilator which could be used. After this a small Barnes dilator might be used, which might be succeeded by others of larger size. He was unable to recall a case in which this method had failed. As a rule, labor could be established from thirty-five to forty minutes after the first Barnes dilator was introduced.

His conclusions were, that the generally contracted, the naturally faulty pelvis demands Cæsarean section if performed early; or laparo-elytrotomy might be preferred if labor had existed for some time.

The infantile and male pelvis probably would require in some cases laparo-elytrotomy if the labor was far advanced. In the pelvis in which the antero-posterior diameter at the superior strait was two or two and a half inches, he would perform craniotomy and cephalotripsy.

METHOD OF MEASURING THE DIAMETERS OF THE PELVIS.

Dr. Taylor then spoke of the method to which he had frequently resorted for measuring the diameters of the pelvis. Introduce the hand, and for measuring the transverse diameter turn the thumb toward the right or toward the left, and then estimate the difference between the diameter of the pelvis and the width of the hand, which could be done with the thumb. To measure the antero-posterior diameter, turn the hand, the thumb toward the pubis and make the estimate in a similar manner. He believed that when the hand could be introduced, the operator could get a more correct view with regard to the antero-posterior as well as the transverse diameter than by any other method which could be employed. If after introducing the hand into the pelvis it could not be rotated freely, it was safe to assume that the pelvis was generally contracted. He believed that the so-called justo-minor pelvis, or what he denominated the naturally faulty pelvis, occurred much more frequently than had been supposed.

DR. C. JEWETT, of Brooklyn, referred to a case as follows: An Irish woman, thirty-five years of age, a primipara, had been in labor several days. The physician in charge had been in attendance from time to time, and had given ergot during the last twenty-four hours, supposing that delay was due to inertia of the uterus. When Dr. Jewett was called, he found the abdomen tympanitic and the uterus firmly investing the fetus. The occiput was presenting antero-posteriorly, and the head was arrested at the outlet of the pelvis on account of the narrowness of the inferior strait. The actual measurement of the transverse diameter at the outlet was three and one-sixteenth inches, the pubic arch measured fifty-eight degrees. These were the measurements made upon the pelvis after it had been removed, cleaned, and dried. The physician in attendance had attempted to deliver with the forceps, but had been unable to do so. Dr. Jewett subsequently, however, attempted to apply the forceps, but the space was not sufficient to admit the

instrument and permit it to be locked. He subsequently attempted to apply Dr. Lusk's cephalotribe, but failed. The woman was delivered by craniotomy and died sixteen hours afterward. In this case also the head of the child was unusually large and firm. He believed that had he seen the case before the head had engaged and become so firmly impacted, he should have performed laparo-elytrotomy.

With regard to the induction of premature labor, the method which he had usually employed was to introduce a flexible bougie into the uterus and leave it in position overnight. In the subsequent treatment he had sometimes resorted to Barnes' and sometimes to Molesworth's dilators. He had not had any difficulty in inducing labor in that manner. Manual dilatation was certainly a most excellent method, but he had quite uniformly succeeded in the manner indicated.

DR. A. S. HUNTER remarked that he had used sponge-tents for the induction of premature labor in a few instances, and had had reason to be satisfied with the results. He thought that if the os was filled completely with them the results desired could be obtained very readily, and, if there was sufficient time, he would not hesitate to resort to that method. For example, in Dr. Griswold's case, where there was nothing to indicate special haste, he advised the use of sponge-tents. In cases in which results must be obtained more speedily it might be necessary to resort to other measures.

He certainly would perform laparo-elytrotomy rather than craniotomy and cephalotripsy if the child was living and if the life of the child would necessarily be sacrificed by attempting to deliver it through the pelvic canal.

DR. WARNER, of Boston, remarked with regard to the induction of premature labor, that he had never resorted to any means except manual dilatation, and had always succeeded. He thought that method was much the safest, and in his experience it had always acted promptly. After introducing one finger another might be made to follow, never changing position until he had taken hold of the child's feet and completed the labor. The advantage of manual dilatation was that the operator could know exactly what he was doing, could feel just how much force he was using, could determine how much the womb was yielding, and could estimate very precisely the amount of pressure which was being made.

DR. GRISWOLD remarked that the objection which he had to introducing the hand in his case was the condition of the tissues in the vagina. Moreover, the uterus was so high up that it was only with a great deal of pressure that he was able to reach the os. Under the circumstances where almost all the perineum was composed of cicatricial tissue, some of it was very thin, it seemed to him to be best to induce uterine contractions and allow labor to progress slowly so that the parts might dilate gradually.

DR. WARNER further remarked that where the uterus was high up it could be pushed down into the pelvis by the hands of the assistant, and held there firmly while gradual pressure with the finger was made against the os externum.

CANCER OF THE NECK OF THE UTERUS.

DR. TAYLOR narrated a case as follows: In December, 1881, he saw a patient, twenty-eight years of age. Upon examination it was with very great difficulty that he could introduce the finger on account of the resistance offered by the hymen. Finally, he reached a firm, smooth body, and afterward found that the entire posterior portion of the cervix was gone. He diagnosed cancer of the uterus, and decided that the best thing to do was to excise the anterior portion of the cervix, which was exceedingly hard to the touch. No hemorrhage had occurred during the patient's illness, nor was any hemorrhage induced by the examination. Upon making further examination, with reference to operative interference, he discovered that the anterior part of the cervix was ex-

ceedingly vascular, and he decided at once to let it alone, and to await further developments. No hemorrhage occurred, nor discharge, and he did not deem it necessary to make any examination. In the course of a month it became evident that gas escaped from the vagina. There had occurred perforation of the rectum. On account of pain the patient had been obliged to resort to the use of opium, which was gradually increased in quantity until finally she took the equivalent of six or seven hundred drops of laudanum daily; besides, she took a bottle and a half of brandy daily. During all this time the patient's weight and strength rather increased. She died almost instantly from the sudden occurrence of hemorrhage, probably three pints of blood escaping at one gush. At the autopsy the body of the uterus was found to be almost one complete mass of cancerous disease, and the neck was entirely gone. The actual source of the hemorrhage could not be found; that is, no open vessel was discovered. The interest in the case was that it was one of cancer, without hemorrhage or discharge during its progress, and death occurred suddenly in the manner indicated. Dr. Taylor believed that in very many cases of cancer of the uterus it was better to allow the patients to go along under the use of opium and perhaps stimulants rather than resort to operative interference, such as the curette, cauterizing, etc.

DR. WARNER remarked that the only question with regard to the treatment of carcinoma of the uterus was not whether we should curette or resort to any other operative interference, but what benefit is to come to the patient? Does it cure, or prolong life, or lessen suffering? From his own experience in the treatment of carcinoma of the uterus he believed that, as a rule, the plan of interfering surgically rather hastened than retarded the progress of the disease.

DR. TAYLOR believed that in some cases amputation might be followed by beneficial results. He then referred to cases which had been under his observation, and in which the disease had occurred early in life, as early as at the age of from nine to fifteen years, notwithstanding the opinion which had been expressed that carcinoma of the uterus never occurred in virgins.

DR. GRISWOLD referred to a case in which the patient had been operated upon by Dr. Mundé, who removed the entire cervix. He saw the woman two months afterward, and there had been complete reproduction of the growth, and involvement of the vaginal wall. The curette was used, also the scoop, and chloride of zinc was applied, etc., but there was another reproduction of the growth within four weeks. After this nothing was done in the way of operative interference, but the patient was made as comfortable as possible, and she lived for nearly two years. The operation, however, seemed to relieve her from the severe burning pain from which she had suffered.

DR. WARNER asked if it was not a fact that large quantities of alcohol and opium prevented disintegration of tissue. It had seemed to him so in these cases. He doubted very much whether curetting ever arrested the progress of the affection.

EXTRA-UTERINE PREGNANCY.

DR. A. S. HUNTER narrated a case of extra-uterine pregnancy in which the pregnancy had existed apparently not more than three weeks. There was evidence of rupture of the sac, but the patient recovered. He gave the details of the history of the case, which he proposed to make the basis of a paper upon that subject.

DR. WARNER referred to a case in which there was a small tumor in Douglas' cul-de-sac. The woman was forty or fifty years of age, and had never been pregnant. The tumor was somewhat soft, doughy to the feel, and he thought it was a hæmatocele. The uterine sound could be introduced to the depth of five inches. Aspiration removed two ounces of blood, which coagulated im-

mediately. The blood was examined microscopically, and nothing was found which indicated that it came from an old hæmatocele. On the following day another physician was called, who aspirated the tumor as a hæmatocele and drew off twenty-four ounces of blood, which coagulated promptly. The woman died, and the case was reported as one of hæmatocele. The specimen was presented to Dr. Cutler for preservation, and on further examination he found in the cul-de-sac a little foetus. This foetus had probably been there for three or four months.

DR. TAYLOR referred to a specimen of tubal pregnancy which he obtained, and which could be seen in the Wood museum at Bellevue Hospital. The woman had advanced to a little more than eight months in pregnancy when she suddenly fell into collapse and died. It seemed evident that death had been caused by internal hemorrhage, and at the autopsy it was found that the sac was filled with blood, but it had not ruptured.

DR. GRISWOLD referred to a case as follows: About a year ago he was called to see a woman who was believed to be suffering from cholera-morbus. She was not aware that she was pregnant, although she had passed over one menstrual period. She had pain, vomited severely, and had diarrhœa. The patient fell into collapse and died with evidences of internal hemorrhage, and he reported the case as one of internal hemorrhage, probably from rupture of an aneurism. It was made a coroner's case, and upon examination the abdomen was found filled with blood, and closer inspection revealed the presence of a foetus, which indicated that the woman was advanced about eight weeks in pregnancy. The uterus contained a well-marked decidua. The foetus was not found in the Fallopian tube, but the tube when examined gave evidence of the existence of a cyst which had ruptured, and hemorrhage had taken place from the edges of the opening. No distinct blood-vessel could be found which had ruptured.

DR. HUNTER referred to a case of extra-uterine pregnancy which, three years subsequently, was followed by normal pregnancy and delivery of a living child. Not long after the completion of the normal pregnancy the remains of the extra-uterine pregnancy were discharged by the rectum. This was attended by symptoms which indicated purulent infection, and the woman died. In this case, as also in the case which he had already related, the woman when suffering from extra-uterine pregnancy had severe pains, which were remittent in character, and not intermittent. He thought this was characteristic of the pains of extra-uterine pregnancy not infrequently, if not always; particularly in those cases in which rupture of the sac occurred.

The Section then adjourned.

WITH AND WITHOUT ANTISEPSIS.—The statistics of the Surgical Clinic at Basle, in the ten years before and after the introduction of antiseptics, are in interesting contrast.

Thus, of traumatic amputations and exarticulations:

1861-70, 36 cases; mortality, 41.6 per cent.

1871-80, 46 cases; mortality, 15.2 per cent.

Pathological amputations and exarticulations:

1861-70, 28 cases; mortality, 44.4 per cent.

1871-80, 93 cases; mortality, 9.6 per cent.

Internal herniotomies:

1861-70, 36 cases; mortality, 52.7 per cent.

1871-80, 80 cases, mortality, 10.0 per cent.

Complicated fractures of the long bones with primary amputations:

1861-70, 38 cases; mortality, 50.0 per cent.

1871-80, 85 cases; mortality, 12.9 per cent.

Complicated fractures, treated conservatively:

1861-70, 36 cases; mortality, 52.7 per cent.

1871-80, 80 cases; mortality, 10.0 per cent.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE PICRIC ACID CONTROVERSY—THE TESTS FOR ALBUMEN—COLLECTIVE INVESTIGATION OF DISEASE—ANTISEPTIC MIDWIFERY.

LONDON, January 27, 1883.

AN amusing controversy has now been going on for some weeks among prominent medical men, on the subject of urinary tests. The ball was set rolling by Dr. George Johnson who attempted to show that a saturated solution of picric acid was a convenient and reliable test for albumen in urine. Dr. Pavy replied and combated Dr. Johnson's views, recommending, in preference, a saturated solution of potassium ferrocyanide, the urine being freely acidulated by citric acid. Dr. Johnson then returned to the charge, reinforced by his son, an able young chemist, who is a demonstrator of chemistry at King's College. The controversy has lately become somewhat personal. The contemptuous tone assumed by Dr. Pavy toward Mr. G. S. Johnson is scarcely creditable and is not likely to promote good feeling, as Dr. Johnson is not generally believed to be one of the best-tempered men in the profession.

The discussion has had one good result—that of bringing to light several new or modified tests for albumen. Dr. Wm. Roberts recommends a solution of acidulated brine. Mr. Stephen modifies Tannet's test with a standard solution of potassio-mercuric iodide by strongly acidifying the urine with citric instead of acetic acid. Dr. George Oliver has just published a communication in which he recommends the use as reagents of pieces of filtering paper saturated with various test-liquors, then dried, and, when required, dipped in the urine to be tested, which is then boiled. He describes the method as trustworthy, and says that by graduating the papers with standard solutions he has been enabled to make quantitative determinations. I should say that besides employing picric acid as a test for albumen, Dr. Johnson has also employed it as one for sugar.

The event of last week was the large meeting of the Metropolitan Counties Branch of the British Medical Association, convened at the Royal School of Mines to consider the subject of the "Collective Investigation of Disease." Addresses were delivered by Sir William Gill and Sir James Paget. The powerful advocacy of two such distinguished men can scarcely fail to stimulate a movement which has already attained some not inconsiderable success. The replies already received would seem to indicate that not only the hospital staffs of London and the large towns but many general practitioners throughout the country are disposed to assist in advancing the scientific study of disease. Organized by a central committee and working on definite lines the profession may reasonably expect great results from their united labors.

Antiseptic midwifery is receiving a fair trial at the British Lying-in Hospital. A little information as to the methods in use, derived from personal visits to the hospital, may interest your readers.

Antiseptics are now employed in every case. Previous to fresh patients being received into a ward it is washed out with a solution of carbolic acid, disinfected by burning sulphur in it, and then left with the windows open for several days. A long-spouted kettle containing an aqueous solution of carbolic acid (one in twenty) stands on a table in the centre of every ward. This is heated by a small jet of gas and, being always kept going, the atmosphere of the wards is kept constantly impregnated with carbolized spray. Carbolized oil is used by the midwives and nurses to anoint the fingers before making digital examinations. The patients are delivered under a cloud of carbolic spray (one in twenty solution), which is kept playing

on the vulva during labour. A steam spray is usually employed, but a hand-ball spray with three jets is always kept in readiness besides, for use when the steam spray is not ready, so that the spray is never omitted in any case. Dr. Fancourt Barnes thinks that this prevents the entrance of any germs into the uterus at the moment when the vagina is dilated by the passage of the child. He gives a quinine, opium, and ergot mixture for the first few days after delivery to keep the uterus contracted and thus prevent any germs from entering. The vagina is syringed out daily for the first ten days after delivery with a (one in sixty) solution of carbolic acid. All washings of the genitals are performed with carbolic solution (one in eighty). These antiseptic measures have been used at the British Lying-in Hospital for about two years, and since they have been in vogue no deaths from puerperal fever have occurred, and during the past two years (1881 and 1882) only two deaths from any cause whatever among three hundred and thirty-two women delivered. Febrile temperatures after delivery, which were formerly common, are now quite the exception. It should be noted that in addition to these antiseptic procedures, so called, *the strictest cleanliness is observed*. The tables and chairs, etc., in the wards are painted *all over*, and when washed are thoroughly washed *all over*, so that no hiding-place for dirt is left anywhere. Ample provision for ventilation is made by means of open fireplaces, cross windows, inlet openings on Tobin's plan with wire screens (which can be washed out periodically) under the windows, and outlets in the ceiling, which communicate with an exhaust shaft. Each ward only contains four beds, and is large and lofty. There is a separate labour ward. The mattresses are disinfected from time to time by being baked in a hot oven. During the month of August in every year the hospital is closed and thoroughly cleaned throughout, and the walls limewashed afresh.

CONVALLARIA MAIALIS—A POWERFUL POISON TO ANIMALS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have read with the greatest interest the clinical experience of Dr. Henry Ling Taylor with the new cardiac tonic—convallaria maialis. One caution only seems necessary. From experiments on animals, it is proved that convallaria is a powerful toxic agent, not inferior to digitalis in its power to cause speedy death. Therefore, in its clinical application to human patients it is well to be a little careful about the dose prescribed. I am surprised at the largeness of the dose given in some of Dr. Taylor's cases, *i.e.*, one ounce of Parke, Davis & Co.'s fluid extract. It would never do to give this as a commencing dose.

I have made some experiments on animals to determine the poisonous effects of convallaria. The preparation used—the only reliable preparation now in the market—was Parke, Davis & Co.'s fluid extract. I shall not burden you with the details of all these experiments. I am a very crude experimenter, and my experiments all lack precision. I shall therefore copy from my note book memoranda of only three or four:

September 16, 1882.—Poisoned a four weeks kitten with fluid extract convallaria; ten drops Parke & Davis's fluid extract under skin of back. Tremblings; hurried respiration; staggering. These convulsions and death in fifteen minutes from the reception of the poison. Necropsy showed heart arrested in systole, both ventricles empty and firmly contracted.

October 3d.—A four months kitten, plump and healthy. Fifteen minims convallaria under skin of back. Kitten lay stupefied fourteen minutes, rapid respiration and circulation, then went into convulsions, first clonic, then tonic, and died with screams. Heart ventricles empty and firmly contracted.

Other experiments on kittens are so similar that a detailed account is not necessary.

Five minims under the skin of a frog's back arrested the heart's action in less than twenty minutes. Professor Sée says: "The phenomena are identical in the same conditions in cold-blooded animals, but the heart of the frog and turtle resist longer the action of the drug."

Convallaria, then, is a cardiac poison which arrests the heart in systole like digitalis. In several experiments on kittens which I have poisoned with digitalis, and in which I injected under the skin from ten to fifteen minims of the tincture, death took place in about a quarter of an hour, but *without convulsions*, complete stupefaction and paralysis of all the vital functions being the marked phenomena.

In some of Professor Sée's recorded experiments with convallaria, he found *four drops* of a fluid extract cause the death of medium-sized dogs in *ten minutes*. From a private letter from Dr. H. L. Taylor, dated February 3d, I quote the following sentence, which shall be my justification for citing these few imperfect experiments—especially imperfect because I did not ascertain the minimum dose which would cause death, as well as the weight of the animals experimented on: "I am afraid that incautious men may do damage to their patients and to the reputation of the drug by beginning with large doses in susceptible persons unless the toxic power of the drug is known. My article failed to bring this out."

E. P. HURD, M.D.

NEWBURYPORT, MASS.

TRANSPLANTATION OF THE CONJUNCTIVA OF A RABBIT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: On page 42 of THE MEDICAL RECORD of January 13th ult., a brief editorial transcribes an interesting case in the Jefferson Medical College Hospital, Philadelphia, where, for the relief of cicatrization of the lids to the eyeball, a rabbit's conjunctiva had been grafted in lieu of the one destroyed. The case seems to have been unusually severe, as the right eye was entirely destroyed, and the left, as stated, was ankylosed to both lids. This operation of transplantation of the major part of a rabbit's conjunctiva has been rarely performed, probably on account of its tediousness and indifferent success. It is not as recent a procedure as might be supposed. Wolfe, of Glasgow, an authority in plastic operations within and without the lids, claims to have made the first transplantation in 1872, again in 1873, and has been followed by Wecker, Becker, Cohn, Schoeler, and others. Wolfe's description in "Diseases and Injuries of the Eye," 1882, details the questions of narcosis of the rabbit and patient, one or both, the method of transfer of the flap, and his own success. He mentions one of the elements of failure, viz., the facility with which the edges and corners of the delicate flap roll forward. He omits to mention the difficulty of keeping the flap in the inferior cul-de-sac, which may be overcome by stitching it at intervals down through the whole lower lid. In the spring of 1876 the writer assisted Schoeler and Sellerbeck, at the eye clinic of the former in Berlin, in several transplantations from the rabbit where the loss of human conjunctiva had been large. The success of these operations was mediocre. It is interesting to note that in gynecology the mucous membranes of the rabbit have been successfully transplanted. In this connection, attention might be called to the ingenious operation devised for improvement of sight in eyes with dense opacity of the cornea, almost total blindness, and a consignment of the patient to a life of helplessness. Schoeler practised it early in 1876 with large success in several cases. In brief, the conjunctiva of the patient was dissected in two parallel lines from the inner canthus to the periphery of the cornea, was reflected over the latter so that the external surfaces of both tissues were *enface*, and the tail of the rhomboid flap was stitched to the outer conjunctiva. The gap at the inner canthus was then filled with rabbit's

conjunctiva. The two epithelial surfaces united, while the remainder of the reflected conjunctiva sloughed away. Finally, the cornea has been transplanted in section with success, an operation attempted nearly fifty years ago, and which, in 1839, attracted the attention of the University of Munich.

EDWARD S. PECK, M.D.

NEW YORK.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 3, 1883, to February 10, 1883.

DE LOFFRE, AUGUSTUS A., Captain and Assistant Surgeon. Will be relieved from duty in the Department of the Missouri and report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 26, par. 3, A. G. O., January 31, 1883.

ELBREV, FREDERICK W., Captain and Assistant Surgeon. The leave of absence on Surgeon's certificate of disability, granted July 21, 1882, is extended six months. S. O. 26, par. 5, A. G. O., January 31, 1883.

TAYLOR, B. D., Captain and Assistant Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability. S. O. 13, par. 2, Department of Texas, February 1, 1883.

TAYLOR, MARCUS E., Captain and Assistant Surgeon. So much of S. O. 20, A. G. O., January 24, 1883, as directs him to report in person to the Commanding General, Department of the East, is amended to direct him to report in person to the Commanding Officer, David's Island, New York Harbor, for duty at that station. S. O. 33, par. 2, A. G. O., February 8, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 10, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
February 3, 1883.....	2	10	59	1	92	44	0	0
February 10, 1883	0	4	69	6	73	41	0	0

A SANITARY CONVENTION was held at Pontiac, Mich., January 31st and February 1st, under the auspices of the State Board of Health.

THE ONTARIO LEGISLATURE will probably contain three doctors, and the Dominion Senate two.

INOCULATION OF MONKEYS WITH SYPHILIS.—Dr. Martineau, of the Lourcine Hospital, claims to have at last inoculated a male monkey with syphilis. A typical chancre is said to have appeared on the penis twenty-eight days after the inoculation. The virus is being tested upon other monkeys.

THE DUBLIN HOSPITAL SUNDAY FUND.—The last collection amounted to about twenty thousand dollars.

BLACK SOAP.—Several of our correspondents ask what is the composition of *black soap* mentioned in connection with Kern's cataplasmata for the treatment of malignant lympho-sarcoma. Will any of our readers answer?

AT AN ANTI-VACCINATION MEETING recently held in Edinburgh, it was claimed that thirty thousand names had been obtained to a petition against vaccination, and that Edinburgh University had lost \$60,000 in consequence of Dr. Rutherford's experiments. There is probably some exaggeration in the statements.

THE GELATINE URETHRAL BOUGIES.—Dr. Robert Newman, of this city, calls our attention to an error in the report of his remarks made before the State Society concerning the use of the gelatine urethral bougies. He wishes it to be understood that these bougies should never be used when their introduction causes pain, the latter being the case when the canal is in a high grade of inflammation. Under all other circumstances they can be employed with impunity.

DIPHTHERIA FROM INFECTED MILK.—Drs. Cameron and Morell Mackenzie have recently traced a severe and sudden epidemic of diphtheria to infected milk. Fifteen persons were attacked in the same day. The milk vendor was found to have washed his cans in a brook polluted with sewage.

HYOSCYAMIN AND HYOSCYAMINE.—Hyoscyamia or hyoscyamine, of which the dose is one-sixtieth of a grain, is the true alkaloid of hyoscyamus, being analogous to atropia or atropine, which is the alkaloid of belladonna. But for years there has been in the market a preparation of variable strength, stronger than the extract, but much weaker than the true alkaloid; and this preparation is called hyoscyamin. Of this preparation one-eighth to one grain may be given. The only distinction between these two names, when properly written, is in the final letter "e" being added to the name of the true alkaloid; but what shall we say when, on turning to the United States Dispensatory for 1878, we find the terms used synonymously? The cautious physician who is acquainted with these facts will beware how he prescribes hyoscyamin, unless he has thorough confidence in his druggist.—DR. C. F. CLARK, *Therapeutic Gazette*, January, 1883.

THE INFLUENCE OF SULPHUROUS ACID IN ARRESTING PHTHISIS.—Herr Kircher, a pupil of Liebig, has been, during forty-four years, director of an ultramarine factory, in which a special process of manufacture is employed which involves the formation of sulphurous acid by the burning of sulphur. He maintains (according to the *Gesundheit*) that none of his work-people have ever suffered from consumption, typhus, cholera, or any disorder, which is produced by bacteria. He recommends the following treatment in the case of tuberculous patients. They should be brought into a room in which small quantities of sulphur (one to two drachms) are burnt every hour over a spirit-lamp or on a stove. At first coughing of a more or less aggravated character takes place, and after eight or twelve days the bacteria gradually disappear and cease to irritate the lung-tissue. To complete the cure, the patients should be brought into rooms which contain some aromatic vapors.—*The Lancet*.

THE ANÆSTHETIC ACTION OF STYRONE.—Dr. S. A. Popoff has made experiments with styrene, a substance first described by Dr. Beach (*Boston Medical and Surgical Journal*, July, 1880), and obtained from storax and balsam of Peru. Aside from its powerful antiseptic properties, he found the following in experimenting upon frogs and dogs. 1. Hypodermic injections of one milligramme in frogs caused complete anæsthesia dependent on paralysis of sensory nerves. 2. A large dose caused convulsions followed by motor paralysis. 3. The intravenous injection of five to eight centigrammes per kilogramme of weight in dogs caused also anæsthesia. The drug was found to depress the respiratory centre and at times the temperature.—*Mediz. Obozr.*, February, 1882.

THE SEDATIVE ACTION OF STIGMATA OF MAIZE.—M. Ducasse has recently experimented largely with the extract of this drug, and finds it to have a specially sedative

action on the genito-urinary tract. In the dose of twenty-two grains he finds that the extract has a calming influence on the pain of chronic cystitis, gravel, and nephritic colic, at the same time aiding in the expulsion of gravel. This anæsthetic action is very marked, especially in nephritic colic, where it calms the pain when morphine injections have proven ineffectual; its action is followed by micturition, the urine carrying away with it a large proportion of gravel. If the medicament be continued for a time, the accidents rarely return. It is, in fine, he claims, the best preventive of gravel and of nephritic colic.—*Philadelphia Medical and Surgical Reporter*, January 20, 1883.

ICHTHYOL IN THE TREATMENT OF ARTICULAR AND MUSCULAR RHEUMATISM.—Dr. Rudolf Schröter, of Hamburg, has discovered a peculiar oily compound, which he calls ichthyol. It is obtained from a bituminous substance found in certain fossiliferous rocks. This is distilled and treated with sulphuric acid. Dr. P. G. Unna states that its action in acute and chronic articular and muscular rheumatism is astonishing. Several of his colleagues report similar results. Ichthyol has been used chiefly in skin diseases, psoriasis, etc.—*Monatshefte f. Praktische Dermat.*, December, 1882.

THE SUCCESSFUL QUACK.—In the *Therapeutic Gazette*, December, 1882, Dr. Neiller, of Kansas, draws an amusing picture, apparently from nature, of a successful quack:

This individual changed teams, and even conveyances, three or four times daily, driving into town with break-neck speed one moment, with a match of grays and a buck-board wagon, and going out the next with a bay and a black and a top carriage. He never came nor went by the same avenue twice the same day, but always selected different portions of the town to pass through, so all could see him, and those who had forgotten him one day would not be left in oblivion of him the next. His horses and carriage were always found waiting for him at his office, down town, every Sunday morning about 10 o'clock, so that people going to church, especially country people, would not miss this opportunity of being reminded of him once again. They were found there on Saturdays, off and on, all day long; they were there upon all public occasions when there was the least or the greatest chance of displaying them. Although always before the public eye, either in whirling around town or in scouring the country over, he never missed a call to my knowledge, and could always readily be found when wanted. He never walked a step, being driven even in his visits about town, an ordinary country town, though the distance was but the half of a block. He subscribed to all charities, public and private; he belonged to all the orders, associations, societies, fellowships and leagues in the town and county; his mail was an immense one, nightly, of medical journals, newspapers, pamphlets, letters, books and circulars, which he never read, but which were conspicuously displayed, by the armful; he supported the widow and the destitute, having the donations conveyed by the broadest avenues; his house was ever open to the lame, the blind, and the halt, simulating, in a manner, a hospital, on a small scale, and he who once entered his portals never departed therefrom but with an exalted opinion of its owner. This was not only the case in regard to the stranger, but was also a studied point with the neighbors, friends and patrons, with all those who had any occasion to enter his doors, where they were taken in charge by the "better half" and given a thorough course of training. To enter but once was certain oblivion to all other gods but the little god brought forward for display, and all the cunning of a singularly crafty nature was brought to bear upon this one point.

His fees were always less than the ordinary fees for the services rendered, from an inherent feeling of justice; they were never collected but by routes entirely foreign

and circuitous; they were "charmed" from his patrons in a manner not well understood themselves. He had a well paid clique constantly surrounding him, who were ever filling the community with the records of his skill and good deeds; he felt so much at peace with his own dear little self and all the world that he could not help but show it in his face, in his arms and in his swagger; his office was a perfect little curiosity shop of instruments, appliances, devices, chromos, crayons (by his wife), oil paintings (also by his wife), and medical anomalies. Five years of this kind of quackery had built him up such an extensive practice and had woven such a web of popular fanaticism about him that it were next to impossible to break down.

THE CORSICAN BROTHERS AND MIND-READING.—The powerful melodrama of the "Corsican Brothers," recently played in this city, originated from a supposed case of mind-reading. The story, as told in "Men of the Time," is as follows: "As Louis Blanc was returning home one evening in October, 1839, he was suddenly assailed from behind by some ruffian, who inflicted a violent blow with a stick on his right eye. The author of this cowardly attempt—which was made the day after M. Louis Blanc had published a review of Louis Bonaparte's work, 'Les Idées Napoléoniennes'—was never discovered. M. Louis Blanc had a brother one year younger than himself, who was at that time at Rodez, in the department of l'Aveyron, and who entertained so strong a conviction that his brother was being assaulted at the precise moment when it really occurred that he was induced to write at once for information to Paris. This incident was the origin of M. Dumas' 'Corsican Brothers,' the main subject of which is the preternatural sympathy between two brothers." It may be mentioned that the death of Louis Blanc followed that of his brother with very little interval.

QUACKERY IN LONDON.—Apropos of the remarks in the *Medical Press and Circular*, characterizing New York and the "States" generally as terribly quack-ridden, we quote the following from the *Journal of Science*. It shows that things occur in London which would not be possible in many parts of America: "A quack who has his headquarters near Westminster Bridge has an ingenious method of beguiling the public. He tells his hearers that if a person affected with incipient consumption blows through a glass tube into water it will at once turn milky, and invites them to make the trial. As the liquid which he offers is lime-water, the result follows as a matter of course. He then adds a few drops of his medicine (containing some acid) to the water, when the cloudiness at once disappears. This he argues is a proof that the same remedy will eradicate consumption from the human system. Multitudes of those present believe him, and buy his secret remedy."

A SOUND IN THE OESOPHAGUS FOR THREE HUNDRED AND FIVE DAYS.—Krishaber reports a case of malignant disease of the oesophagus with stricture. In order to keep the passage open, an oesophageal tube was introduced and allowed to remain. The outer end was carried through the nose and attached to the forehead. After a time tolerance was obtained and the instrument was kept in until death occurred.—*Deutsch Med. Woch.*

THE SALTS OF NICKEL are claimed to be excellent and powerful disinfectants. Dr. Hugo Schulz, who has studied their action, uses the chloride, and finds that even one-tenth of one per cent. solutions will kill bacteria *termo*.

A NEW HYPNOTIC AND DEPRESSO-MOTOR.—Herr Schiffer, of Berlin, has recently been studying the action of guachamacá, a Venezuelan plant. It acts very much like curare, in allaying spasm, and in large doses causing a general paresis. The juice taken from the plant in the rainy season makes the most powerful preparation. If ten milligrammes of the extract are given to a frog, an interval

of fifteen to eighteen minutes passes before any effect is noticed. After this period, however, the action is rapid. The animal becomes stupid, allows the head to fall, permits itself to be laid on its back, and does not draw back the leg if extended, etc. So far its action is exactly similar to that of curare; but now comes the difference. The respiration continues, the circulation and cardiac activity are undisturbed. Its effect was tried on a young man in Frerich's clinic who was suffering from cramps. Ten milligrammes of the extract were injected, but for three-quarters of an hour no effect was observed. The patient then, in broad daylight, suddenly fell into a rather deep sleep, which lasted for nearly three hours; respiration and circulation were undisturbed. Schiffer believes that in guachamacá we have an agent capable of combating disorder of the motory apparatus, as well as a useful hypnotic.

MARWOOD'S DROPS.—Mr. Marwood, the London hangman, being asked by a neighbor what was a good remedy for a troublesome cough, is reported to have replied that his "Marwood's Drops" had never yet been known to fail.

SUICIDES IN PHILADELPHIA.—There were 89 suicides in Philadelphia last year. This is more than in 1880, when the number was 68. New York as usual is far ahead of her neighbor: in 1880, 152 persons killed themselves, making a ratio of 12.59 per 100,000, while Philadelphia had a ratio of 8.03 per 100,000. Boston has a ratio of 11.03 and San Francisco of 37.65 per 100,000.

A PRIOR CLAIMANT TO GALVANI'S DISCOVERY.—Professor S. Thompson points out the little-known fact that Swammerdam anticipated the famous initial experiment of Galvani by more than a hundred years. Being on a visit in Tuscany, in 1678, the illustrious Dutch naturalist showed to the Grand Duke that when a portion of muscle of a frog's leg, hanging by a thread of nerve bound with silver wire, was held over a copper support so that both nerve and wire touched the copper, the muscle immediately contracted.

THE IMMIGRANT AND SMALL-POX.—Dr. P. H. B., of Washington, D. C., writes: "Referring to an excellent article in THE RECORD of January 6, 1883, entitled 'The Immigrant and Small-pox,' I am of opinion that the efforts of the Health Officer of your port, Dr. W. M. Smith, are being made in the right direction. He stated in my hearing that he had long ago instituted a measure which, if properly carried out at other ports, would obviate all necessity for an 'Immigrant Inspection Service' within the interior of the United States. His plan had been to require the inspection and vaccination of immigrants to take place on the other side of the water, or in case that was not done, to be completed on shipboard within three days from the time of the vessel leaving a foreign port. He stated that he had issued many circulars and cards to this effect, explaining thereon that by such inspection and vaccination, immigrants would be saved from detention upon their arrival at quarantine in New York. He thought that similar measures adopted at other ports with a penalty or fine for non-compliance would result in immediate benefit, and that ultimately steamship companies would find it to their advantage to transport no immigrant who was likely to get them in trouble either by delaying them in quarantine or causing them other expense.

"I would supplement these suggestions of Dr. Smith by adding that if ships were made liable for all expenses incurred in the care and treatment of all immigrants infected with small-pox or other contagious disease landed by them, or who are taken sick with any contagious disease within ten days after landing such immigrant, the necessity for inspection by the United States Government would not only be obviated, but the importation of disease would be greatly decreased and local quarantine establishments less cumbersome and expensive."

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Original Lectures.

ON THE RELATIONS OF MICRO-ORGANISMS TO DISEASE.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE
ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS
AND SURGEONS, NEW YORK.

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LECTURE I.¹

Mr. President and Gentlemen: In accepting your flattering invitation to deliver the Cartwright lectures, I have, in compliance with your request, selected my present subject—almost the only one indeed which I would venture to discuss in your presence—not simply because of its intrinsic importance and interest, but also because there exists in the medical public of our land a diversity of opinion concerning it, which is not, in my estimation, warranted by the facts. For since trustworthy original investigations in this direction, demanding continuous devotion of the observer to the subject and the renunciation of other pursuits; demanding special training and experience; requiring laboratory and other expensive facilities; since such investigations, possible therefore in general only through State or corporate assistance, have been, and under existing circumstances must be made almost exclusively in other lands than ours; since, further, important results attained within recent years and published in foreign tongues have been as yet but partially incorporated in our standard literature; since the tendency of the practising physician—to which category we all, with rare exceptions, of necessity belong—is ever toward the cultivation of the art rather than the science of medicine; since, finally, there is a prevalent disposition to ignore the entire subject as trivial or fanciful; for these, and perhaps other reasons, there prevail, as it appears to me, some misconceptions as to the present state of knowledge on this subject. It shall be, accordingly, my effort to present in these lectures no original investigations, no theories nor views, but simply the facts already established, and the deductions incident thereto—an effort which I am encouraged to undertake by some familiarity with pertinent literature, and by some little practical knowledge of the methods and manipulations involved.

In order to discuss intelligibly the more recent and familiar subjects, such as the rôle of the bacillus tuberculosis, we must bear in mind certain facts, less sensational and perhaps less widely known, concerning the life-history of microscopic parasites.

Although even the early microscopists, beginning with Leeuwenhoek (1675), observed and studied bacteria; although these minute bodies were observed in animals dead of septic infection by Fuchs, in 1848, and in the blood of sheep dead of anthrax by Brauell and Davaine, in 1849 and 1850, no effort appears to have been made to establish a genetic relation between the plants and the disease until the publication of Pasteur's work on fermentations, in 1861. Then the bacteria which had been

the unenvied monopoly of biologists suddenly acquired deep interest for pathologists. The experimental work on septic infection, by Mayerhofer, Coze and Feltz, Rindfleisch, Wokleyer, and Recklinghausen, in 1865, 1866, and 1867, drew the attention of the medical public to the subject. Meanwhile Lister, impressed with the results of Pasteur's work, and desperate (as I was informed by a Glasgow neighbor of his) at the death from pyæmia of several cases in rapid succession, anticipating the tedious progress of experimental science, submitted the question to empiric arbitration on the operating table. His clinical results revolutionized surgical methods on the one hand and infused new vigor into experimental pathologists on the other; the number of workers and of works so rapidly increased that to-day simple mention of the literature of this subject would be the work of hours. I deem it, therefore, inexpedient to attempt, in the limited time at my disposal, a historical sketch of the development of the question, and shall endeavor to present merely the present knowledge of the subject, with a review of the evidence upon which it rests.

Many of the elongated bacteria have been demonstrated to possess also a thread-like projection from the extremity, a flagellum or cilium; these, as well as some other varieties not yet proven to possess flagella, are capable of independent, often rapid locomotion in liquids; others are devoid of flagella, and incapable of motion; hence it is highly probable that the power of locomotion is associated with the possession of cilia. Beyond this bacteria seem to possess no differentiation of structure nor localization of function; nutrition and assimilation are processes of osmosis. This simplicity of structure and function has given rise to discussion as to whether they should be regarded as animals or vegetables; the question is, of course, merely a technical one of classification; since the features which distinguish the higher animals from the higher plants disappear as we descend the scale of organic life until few or none remain; yet because almost all of the simplest organisms hitherto called animals, the flagellata, possess a rudimentary mouth and are capable of absorbing solid food, while the simplest plants are not so characterized, the bacteria have been assigned to the vegetable kingdom. Whether they should be called algæ or fungi is a question for botanists to decide; the power of independent motion exhibited by some varieties suggests affinity with the algæ; but the absence of chlorophyll is generally considered to require their classification among the fungi.

The necessities of their existence are as simple as those of the mould fungi; indeed, so nearly identical as to require no discussion. As to the chemical reactions incident to their vital activity, our present knowledge is very scanty; one variety is known to induce the transformation of grape and milk sugar into lactic acid; another the decomposition of glucose or lactic acid with formation of butyric acid; another the change of urea into carbonate of ammonia; some produce pigments, blue, red, yellow; of many we know only that they transform a solid substance—gelatine, for example—into a liquid; but one of the most important facts in regard to them is the proof that putrefaction of albuminous substances is a phenomenon incident to the vital activity of certain varieties—the bacterium termo and probably others—as must be admitted by every one familiar with the work of Pasteur, Tyndall, and their pupils. Until the chemistry of their vital processes is ascertained, it will be impossible to as-

sert how they can be injurious to a living tissue, whether by simple mechanical irritation, by the appropriation of oxygen and other nutritious elements, by the excretion of substances injurious to animal cells, or in several of these ways combined. The formation of substances incompatible with the life of the animal cells seems to play a prominent rôle in the production of injurious effects by at least some varieties.

The simplicity of organization and vital requirements explains their extensive distribution in nature: every moist substance of organic origin and all water containing even a trace of organic matter is favorable soil for one or more varieties; the upper layers of the earth, containing these essential ingredients, and remaining comparatively warm, constitute a continual breeding-place for these organisms. The minuteness and lightness of bacteria explain their presence in the atmosphere; they are swept by currents of air from dry or moist surfaces; they float in clouds of dust; they are carried by insects; the persistence of their vitality, the rapidity of their propagation, result in practical ubiquity. Direct microscopic observation of atmospheric dust, and the experiments of Tyndall with the electric beam in a dark chamber, have shown that wherever we find dust, at moderate temperature and altitude, we may expect to find bacteria. Yet the atmospheric bacteria are probably not so numerous as has been pictured. The observations of Miquel and of Koch show that even in a laboratory many litres of air contain no organisms. Whether or not bacteria are swept from surfaces of liquids; whether after once drying upon a given surface they can be removed by air-currents, are as yet undecided questions which may have practical bearings in the future. At present we know no laws of atmospheric distribution wherein bacteria exhibit other behavior than particles of dust in general.

The champions of spontaneous generation, compelled to surrender their maggots in decaying meat to the simple demonstration that covering the meat with fine gauze, which prevented the access of flies, prevented also the development of maggots; forced to abandon intestinal worms by the successive demonstrations of numerous observers that each worm proceeded, though often by devious ways, from a similar pre-existing organism, found a tower of strength in the bacteria, a position fortified by a series of careful, conscientious, and delicate experiments by Bastian and Pouquet. The result of that contest is known to all. The errors in manipulation and interpretation upon which the proof of spontaneous generation rested were detected, and a series of hitherto unassailable experiments by Pasteur, Tyndall, Traube, and Brefeld compelled the admission that bacteria, like the intestinal worms and the maggots, and all other living things, illustrate the dogma, "*omne vivum ex ovo*." Yet this phantasy of spontaneous generation seems a spook which can never be exorcised from man's imagination. Quite recently Arndt has deduced from experiments, to which I shall presently refer, a conclusion which may be regarded as modified spontaneous generation; namely, that certain elements of animal-cells can, under favoring conditions, continue to exist and develop into bacteria after the death of the cells of which they were previously constituent molecules. Yet the evidence adduced does not as yet warrant any hesitation in accepting the current doctrine that bacteria, like all other organisms, proceed from pre-existent similar beings.

In order to discuss intelligibly the individual bacteria, we must agree upon a classification. The nomenclature has given rise to much discussion and more confusion. At first each investigator christened, after his own fancy, every new variety. The French school, first in the field by virtue of Pasteur's work on fermentation, employed, very loosely, the terms vibrios, monads, torulaceae, etc. Natural selection has proven Cohn's classification the fittest to survive, which is quite natural,

since the greater part of our exact knowledge of this subject is due to this distinguished botanist and his pupils. Cohn's original classification permits and will doubtless need amendments; in fact, he has already proposed some essential modifications based chiefly upon the form and mode of association of the individual cells. I shall adhere to that nomenclature in general use by the German mycologists.

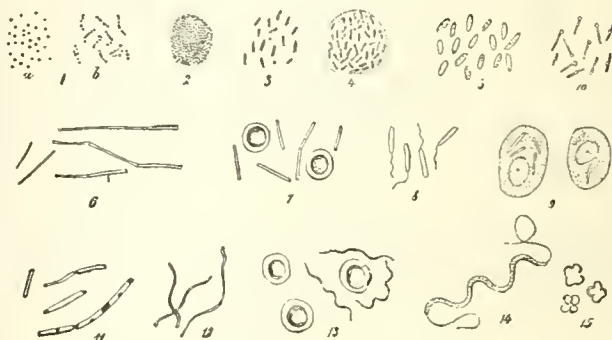


FIG. 1.—Various bacterial forms. 1. *Micrococcus septicus*; 2, scattered; 6, in chains—torula. 2. Same in zoöglœa form. 3. *Bacterium termo*. 4. Same in zoöglœa. 5. *Bact. lineola*. 6. *Bacillus subtilis*. 7. *Bacillus anthracis* and blood-corpules. 8. *Bacillus* (from mouth) with cilium. 9. *Bacillus lepræ*. 10. Bacilli with spores. 11. *Bacillus malarie*. 12. *Vibrio serpens*. 13. *Spirochete Obermeieri*. 14. *Spirillum volutans*. 15. *Sarcina*. X 500. (Copied from Ziegler's path. Anatomie, Jena, 1882.)

Bacteria are distinguished in this system according to form simply into (1) micrococci, or sphaerobacteria; (2) microbacteria, or simply bacteria; (3) bacilli, or rod bacteria; (4) spirilla, or spiral bacteria. A disadvantage in this nomenclature is the employment of the word bacteria to designate two different conceptions—the entire tribe including all four classes, a general name, and the second class, microbacteria, in distinction from the others—a double signification which has led to some confusion. The micrococci are the smallest, and, hence, individually least perfectly known; so small, indeed, often less than one micromillimetre in diameter, that nothing definite as to structure and contents has, as yet, been ascertained. They seem to exhibit in general no independent motion; they occur either isolated, in pairs, in chains (*streptococcus* or *torula*), or, when multiplying rapidly, in large numbers imbedded in a gelatinous material produced by the organism—the whole mass being termed zoöglœa. Some are colorless, others pigmented.

Of the bacilli, Cohn makes two genera—*bacillus* and *vibrio*; others add more varieties. The members of the genus *bacillus* are cylindrical rods; they multiply by fission, and some certainly exhibit a second mode of reproduction—the formation within their sheath of minute globular or ovoid bodies, spores, which subsequently escape by rupture of the sheath, and are capable, under proper conditions, of growing again into the rod form. These spores exhibit a tenacity of life not possessed by the mature bacilli, nor indeed by other varieties of bacteria, since their vital activity is sometimes unimpaired by prolonged boiling, or by immersion for months in absolute alcohol, either of which procedures destroys mature forms. The spores seem under ordinary conditions the impersonations of immortality: time seems powerless to weaken them.

In order to study the phenomena accompanying the presence of bacteria in animal tissues, one must naturally first identify the bacteria. Now this is a more serious undertaking than the current literature on the subject in our language would imply. A bacterium is a mass of matter which possesses a definite size and shape, may or may not exhibit motion, has a certain chemical composition, and is capable of growth and reproduction—is, in short, a living organism; and no mass of matter can be justly called a bacterium until proven to possess these several characteristics; for one or more of these several properties may be exhibited by bodies found in the animal tissues which are not bacteria.

An unfortunately large number of publications on this subject exhibit by negative inference or positive demonstration, a failure to appreciate this self-evident fact. Size, shape, and, above all, movement, are considered conclusive evidence of bacterial nature. Size, shape, and presence or absence of motion may be determined by direct observation under the microscope; distinctive chemical traits may be detected by behavior toward certain reagents; the various aniline colors distinguish at once the protoplasm of bacteria from cell-bodies, fibrin threads, fat-granules, crystals; for every known bacterium absorbs one or more of the aniline dyes in watery or alcoholic solution. Yet size, shape, motion, and absorption of aniline dyes do not conclusively prove the bacterial nature of the body under examination, since the same phenomena may be exhibited by material forms which are not bacteria. Micrococci cannot thus be individually distinguished from the granules found in the nuclei of many cells, in leucocytes, and floating free in the blood; rod bacteria are sometimes closely simulated in size and shape by fibrin threads and organic crystals. Groups of bacteria, especially of the micrococcus tribe, are simulated by nuclear detritus floating in the blood, as pointed out by Riess; by large granular cells, the "Mastzellen" of Ehrlich, which are found in large numbers in various inflamed tissues, in diphtheria, typhoid fever, elephantiasis Græcorum, for example; by cross-sections of fibrin threads in blood-vessels; by globular masses usually considered to be leucine, which may occur, apparently, in any tissue, in normal as well as in certain pathological states. It is true that experience teaches one to distinguish these bodies from bacteria, in some cases, by their appearance and reaction to staining agents. Yet absolute certainty can usually be secured, even by the experienced mycologist, only by cultivation outside of the body. In the independent exhibition of reproductive power, by fission or spore formation, or both, lies, therefore, the only positive proof that a particle under examination, exhibiting the size, shape, and reaction to staining agents characteristic of a bacterium, is actually one of these lowly organisms, and not an unorganized mass of similar appearance.

The theoretical considerations end here, but the practical difficulties begin; for, in order to be sure that an organism which grows in a liquid outside of the body is the same as the particle previously observed within the tissue, we must be assured that no other organism can have obtained access to the culture fluid; for the microscopic dimensions of the particle prevent continuous observation during the transfer, and the morphological similarity of different varieties, especially among the micrococci, render individual recognition impossible. Every object which can come into contact with the liquid or the particle under examination—the skin of the animal from which the tissue is transferred, the instruments, the vessel or slide containing the nutrient material, the material itself, the surrounding air, so far as possible—must be sterilized, liberated from all contained and adherent organisms; and even then there remains an element of uncertainty, since it is impossible (by the ordinary methods of cultivation) to demonstrate that these precautions have been efficient. These difficulties of sterilization cannot be fully appreciated without actual experience, which soon demonstrates that the greatest care and attention is often impotent to secure the isolation of a given species from other bacteria; Bastian's famous experiments in support of spontaneous generation may serve as an illustration.

In his earlier work, though carefully and conscientiously performed, the apparently spontaneous appearance of bacteria in various animal and vegetable infusions was easily explained by his failure to previously heat the glass vessels in which the infusions were kept; for the observance of this now elementary precaution prevented the appearance of organisms in the liquids. But later experiments seemed indeed unassailable; he

found that thoroughly boiled urine remained, in a previously heated and well-stoppered flask, perfectly free from organisms; when, however, the urine was made alkaline by the addition of a caustic potash solution, also previously boiled, the conditions remaining otherwise unchanged, bacteria were soon developed in immense numbers. Bastian explained by the hypothesis that alkaline was more favorable than acid urine to the generation of these organisms. Pasteur, skeptical as to the accuracy of Bastian's manipulations, repeated the experiment and secured the same result—bacteria were developed, even with the greatest possible attention to details of execution. He found, however, that if the caustic potash were added to the urine, not in watery solution but in the pure state after heating to redness, no organisms were developed; further, that if Bastian's solution of caustic potash and urine were heated to 110° C., no development of life occurred. The error was therefore the assumption that all organisms in the potash solution, as well as in the urine, were destroyed by boiling—an assumption now known to be at variance with the fact. Tyndall also narrates an instance which would have been in less careful hands misinterpreted. He removed from a clear, sterilized infusion a drop of liquid, and to his astonishment found it, under the microscope, swarming with bacteria; examination of a second drop showed none. The mystery was soon explained; he had cleansed his pipette before taking the first drop with distilled water, a drop of which had remained in the tube, and which contained, as examination of the water in the bottle revealed, numerous bacteria. In these days pipettes are cleansed, not with distilled water, but by a Bunsen flame; knives, needles, test-tubes, flasks, etc., are considered sterilized after heating for five minutes to 150° C.; and fingers are allowed under no circumstances to touch anything which could possibly come into subsequent contact with the culture.

A consideration of the difficulties thus briefly sketched in the way of even the accurate recognition of bacteria, discloses the value to be attached to many publications concerning these organisms—which exhibit but too often the author's neglect to comply with, sometimes even his ignorance of, the elementary requirements of principles and practice. As illustrations I shall select from the mass of literature of this description a few which, from the eminence of their respective writers in other departments of medicine, have attracted considerable attention without as well as within our professional ranks. Some four years ago a most genial and accomplished gentleman, an eminent practitioner of New England, made a tour of our large cities with the benevolent object of instructing his professional brethren as to the etiology of tuberculosis and of syphilis. He asserted the discovery in the blood of such patients of "germs" not found in other blood; he exhibited a series of transparencies in which granules—the germs—were shown in the blood; he showed a loaf of bread which had been fermented by organisms from the defection of tuberculous and syphilitic patients. The good work was not limited to the medical profession; a noted Boston clergyman delivered a Monday lecture upon this subject, in which the doctor's blood-granules, projected upon a screen, posed before the conscience-smitten audience as the avengers through whose dread agency the way of the amorous transgressor sometimes becomes hard. Only two links were lacking in the chain of evidence; first, there was not the slightest proof, nor attempt at proof, that the blood-granules were germs; second, it was unfortunately demonstrated that identical granules were usually found in healthy individuals.

A few weeks ago the startling discovery was announced that the famous bacillus tuberculosis was a fat crystal. A distinguished pathologist, failing to detect the bacilli in tuberculous tissues, treated his sections with a thirty per cent. solution of caustic potash, whereupon crystals of fat of course appeared. These crystals are al-

leged to be identical with the bacilli tuberculosis; therefore these organisms exist only in the imagination of benighted individuals who blindly follow Koch.

Now what proof is adduced that the crystals and the alleged bacilli are identical? Merely that they have the same size and shape. When we remember that the discoverer of the crystals had never seen the bacteria in question, we can admit that the former have the same size and shape as the bacilli of Dr. Schmidt's imagination, but not necessarily as the actual organisms. A comparison of the two demonstrates, as Dr. Schmidt has recently learned by personal observation, that they are widely different, even in appearance. But, assuming that in size and contour Schmidt's crystal and Koch's bacillus were similar, would that justify the assertion of their identity? Evidently not to an individual whose conception of a bacterium comprises something more than size and shape. The crystal cannot be made to absorb and retain aniline dyes, as Dr. Schmidt expressly states; the bacillus, like other bacteria, is readily stained by any one of several aniline colors. The crystal, we may assume, does not grow nor reproduce; the bacillus elongates, divides, and produces in its substance two or more globular bodies, which in turn grow into rods. Dr. Schmidt fails to appreciate these vital differences; ignores the absorbent and reproductive powers of the true bacilli, attested by a score of competent observers. For him size and shape are enough, and upon this fancied resemblance of his crystals, in outline, to bodies that he has never seen, he assumes their identity. I shall consider Schmidt's paper in the discussion of tuberculosis, and make this allusion here because it illustrates admirably the fact that even in these latter days publications about bacteria, by men of experience in other departments of medicine, even in pathology, evince a failure to appreciate the first principles of mycological investigation.

To ascertain the relation to a disease of bodies whose bacterial nature is thus recognized, and which are found in the blood or tissues of a diseased animal, it is evident that the first step must consist in the perfect isolation of the bacteria from the enclosing tissue; since otherwise the possible effect of inoculation may not be ascribed to the bacteria rather than to the accompanying unorganized substances.

The isolation of bacteria from the blood and tissues of an animal has been attempted chiefly in two ways: by simple filtration through paper, clay, or other porous substance, and by artificial cultivation. Filtration is evidently a very unsatisfactory attempt at isolation; the separation of the smaller bacteria, especially micrococci, is practically impossible; and since other ingredients of blood or tissue are or may be retained on and in the filter, the proof of isolation is not convincing. In artificial cultivation advantage is taken of the fact that the bacteria reproduce indefinitely, while the animal tissues of course do not. A drop of blood or pus, or a particle of tissue containing the bacteria, is placed in an appropriate nutrient medium in a flask, tube, or other receptacle. In a few hours or days the organisms have become diffused, by virtue of their rapid multiplication, throughout the entire liquid. A drop, or fraction of a drop, of this fluid containing bacteria, is then transferred to a second vessel similarly prepared; after the growth of the organisms in this, a minute quantity is transferred to a third flask, and so on indefinitely at the will of the operator. In this way the bacteria can be practically isolated from the animal tissues introduced with them into the first culture vessel; and the effect of inoculation from the tenth, twentieth, or thirtieth successive culture cannot be reasonably ascribed to the unorganized constituents therein contained. But it is evident that in order to attribute the effect of such inoculation to that particular bacterial species contained in the diseased animal, one must be absolutely certain that no other variety has obtained a foothold in the cultures—that the original bacteria are

isolated not only from the animal tissues—a comparatively simple matter—but also from all the other varieties of bacteria—which seem omnipresent. And just here is the difficulty which has been until recently almost insuperable; here is the possible source of error which weakens materially some brilliant deductions from experimental work; and this possibility of error is the basis of the general criticism which Koch urges against Pasteur's work—a criticism which, as is evident from a comparison of methods, is not without foundation. Although numerous modifications of culture methods have been employed, all may be grouped in three general classes. The first, the earliest, and by far the worst, is cultivation in flasks, tubes, or other vessels containing the nutrient liquid, usually in large quantities—one or more ounces. This method, thanks to its adoption and retention by Pasteur, as well as to the facility of its manipulation, has secured an unfortunately extensive and persistent employment. The defects become apparent when we consider the vital properties of bacteria. Different species require different pabulum and various temperatures for their successful cultivation. The bacillus subtilis (Cohn), for example, grows luxuriantly in a simple infusion of hay, which is ordinarily slightly acid in reaction; the bacillus anthracis, which is morphologically similar, indeed almost identical with the former, grows very slowly or not at all in the same infusion; the addition of a little magnesia or other base, sufficient to render the liquid somewhat alkaline, reverses the relative reproductive activity of the two. The hay bacillus (*b. subtilis*), again, can reproduce at a temperature incompatible with the reproduction of the *b. anthracis*. If, then, the two be sown in the same sterilized hay infusion, the crop will be determined largely by the reaction and by the temperature of the liquid. Another feature to be remembered is the variable rapidity with which different species multiply, even under the most favorable surroundings; for as Nägeli has shown, if two bacterial varieties, A and B, be present in a liquid adapted to each, A dividing its cell into two in twenty-five minutes, B in forty minutes, the latter, even if present at first in 1,800,000 times the number of the former, will in eighty hours have been stifled by A. In a mixed cultivation—in other words—the quickest to propagate will, *ceteris paribus*, in a few hours or days remain alone—a principle with whose applicability to higher organisms we are of course familiar. It is evident, then, that the best method of isolation is that which affords (first) the greatest security against the intrusion of other organisms than that under cultivation, and since such intrusion cannot by any method at present employed be with certainty prevented (second), the greatest probability of the detection of such invasion by other bacteria. The isolation cultures in flasks suffer the same dangers of adulteration as other methods, aggravated somewhat by the increased difficulty of sterilizing large quantities of the nutrient material. These dangers recur with the institution of every new culture; for in order to secure isolation of the organisms from the blood or tissue which accompanied them into the first flask, many transplantations must be made. Successful induction of infection by inoculation from the first culture is, of course, met by the objection that the liquid contains solid or fluid unorganized ingredients from the animal diffused through it, and that the effect cannot be attributed to the contained bacteria alone.

With every transfer to fresh culture fluid the possibilities of adulteration by intrusion of other organisms contained in the liquid, the flask, the air, etc., are encountered; moreover, the last culture, however long the series may be, is theoretically, at least, a dilution of the animal juices present in the first flask, although by many successive generations the dilution becomes homeopathic and may be practically disregarded. That this danger of the intrusion by other bacteria during transfer, however carefully done, is not trivial, is known to every experienced observer. Mr. Cheyne ("Antiseptic Surgery,"

page 261) says: "In the room in which I work I have never been able, without the aid of the spray, to transfer micrococci from one flask to another. For in the latter flask bacteria" (in the generic sense) "almost invariably developed."

The chief objection to flask- or tube-cultivations, however, one which renders them utterly unsatisfactory as attempts at isolation, is the impossibility of detecting with certainty the presence of foreign organisms. Some varieties, it is true, indicate their presence macroscopically, but the absence of them does not prove the absence of others. One is compelled to remove the cotton, withdraw a drop of the liquid, and submit it to microscopic examination—a proceeding perilous to the purity of the culture. But even in this way no certainty can be assured, for the one drop may be free from intruding organisms, which may nevertheless be present in the flask. More than that; since many varieties, at least many bacteria growing under different circumstances, are morphologically indistinguishable, one is not always certain that the organisms found are really the offspring of those planted rather than morphologically identical intruders. Suppose, for example, we are attempting to isolate the micrococci found in the blood of a pyæmic patient; on examining a drop from our tenth generation, our tenth successive flask, we find only micrococci identical in appearance with those planted. Are we warranted in asserting that these are the descendants of the organisms seen in the blood? To answer the question affirmatively we must assume first that the micrococci contained in the blood were the only ones which gained access to the first flask; then that our ten flasks, ten liquids, ten stoppers were rendered and remained sterile; that our pipettes, forceps, etc., have been always free from organisms, and that during the nine transfers, and perhaps numerous test examinations, no micrococci have gained access to our cultures from the air—an assumption not warranted by experience. By such assumptions Bastian demonstrated spontaneous generation.

A source of possible error in these methods, not always recognized, is the necessary assumption that apparent community of form among bacteria proves identity of function. The fallacy of such assumption is *à priori* evident, and has been repeatedly demonstrated. A Cyclops whose exaggerated retina might fail to distinguish objects less than three feet in diameter, could perceive no morphological characteristics wherein a wolf differs from a sheep, and could have no conception of the perversity which distinguishes a mosquito or a wasp from the house-fly. In 1875 even Cohn pronounced the harmless bacillus subtilis of hay infusion morphologically identical with the bacillus anthracis; to-day we can, thanks to improvements in technique, distinguish the latter not only from the hay bacillus, but also from two other important varieties which are morphologically extremely similar, though physiologically quite distinct. Further research may possibly reveal differences of form even among the minute bacteria. But granting that two micrococcus varieties are actually, as well as apparently, identical in form, that alone proves identity of function as conclusively as the morphological identity of two sugar-coated pills, containing arsenic and bread respectively, establishes the unity of their effects.

I have considered this subject at such length because it will be necessary, in the course of these lectures, to criticize certain experiments, and reject as not proven certain conclusions, because attained by this method of cultivation in liquids. The solution of many problems would be, in my judgment, materially hastened, and much conflict and confusion avoided by the substitution for this still popular method of one demonstrably far more accurate, to be presently described. Flask- and tube-cultures are certainly convenient for cultivation *en masse*, but evidently imperfect for investigations as to the rôle of bacteria in disease.

The fact that bacteria growing under different condi-

tions, and apparently functionally different, are morphologically identical and all so widely distributed and ubiquitous, renders it evident that one condition must be fulfilled in order to demonstrate conclusively and finally that the organisms present in a culture at a given moment are the progeny of those previously planted by the experimenter; the former must be observed *to proceed by continuity of structure*, from the original bacteria. In this way, and thus only, can all doubt and objection be silenced; all possibility of misinterpretation be eliminated. The first requisite for the execution of this method is evidently continuous observation of the growing bacteria through the microscope; a method long used. A drop of nutrient liquid is placed on a cover-glass, the bacteria sown therein, and the cover inverted over a hollow slide or a cell of glass cemented to the slide; the edge of the cover is then or previously smeared with oil, for the double purpose of limiting evaporation from the droplet and of preventing the intrusion of foreign substances or organisms.

If foreign organisms capable of growing in the liquid obtain, by any error of manipulation or other means, access to the droplet, they may become in a few hours diffused throughout its extent; if perceptibly different in size or shape from the variety sown, the intrusion may be detected and the culture abandoned; if morphologically indistinguishable, the intrusion cannot be detected, the culture is considered pure, and lamentable errors of interpretation may result. Even in Koch's skilful hands nearly one-half such cultures were found to contain foreign organisms.

Such, then, were the methods of attempted isolation in general use until three years ago, and unfortunately still extensively employed; methods which, even in skilful hands gave conflicting results, and in inexperienced hands have demonstrated incredible things. By these methods spontaneous generation is easily proven; the metamorphosis of a pathogenic into an innocent bacterium, and conversely, is established with great facility; in fact almost any plausible hypothesis can, with a reasonable amount of ingenuity and inexperience, be clearly demonstrated. It is difficult to conceive, indeed, a shorter road to scientific notoriety than by the cultivation of bacteria in flasks—an opportunity already amply improved. One need only extend his series of successive cultures long enough, make transfers and pipette examinations often enough, permit the temperature of his oven to vary a little, perhaps spice his work with a touch of the fashionable evolution hypothesis by varying the composition of his culture-fluids so as to invite the growth of various organisms, and, presto! there appears a conclusion whose adoption would revolutionize mycology, medicine, and perhaps modern society. A bacillus may be made to grow out of a bacterium, this out of a micrococcus, or any of them out of nothing. A bacillus anthracis can, in the course of fifteen hundred transfers, be robbed of its terrors—the leopard can change its spots, the lion can become a lamb.

Three years ago there was introduced—thanks to the ingenuity of Koch—a method which avoids, theoretically and practically, the difficulties inseparable from previous attempts at isolation of a given bacterial species found in an animal, both from other varieties and from the accompanying animal juices. The essential feature of this method consists simply in the substitution of a solid—transparent when possible—for the liquid material adapted to the nutrition of the organism.

The general plan is as follows: a solution of gelatine, beef-extract, pepton; or blood-serum, the relative proportions of the various ingredients varying with the species to be cultivated is sterilized by repeated heating and then spread as a thin layer upon a disinfected slide and allowed to dry or coagulated by heat. A previously heated needle or scalpel is then dipped into the material containing the bacteria—septic mouse-blood, for example—and drawn lightly over the surface of the culture substance on the

slide, or a series of punctures are made with the point. Thus a number of shallow furrows may be made, in and on the edges of which the bacteria are deposited. The slides so prepared are then transferred to the incubator or placed under a bell jar; or, if they are to be long preserved, in a thoroughly disinfected vessel

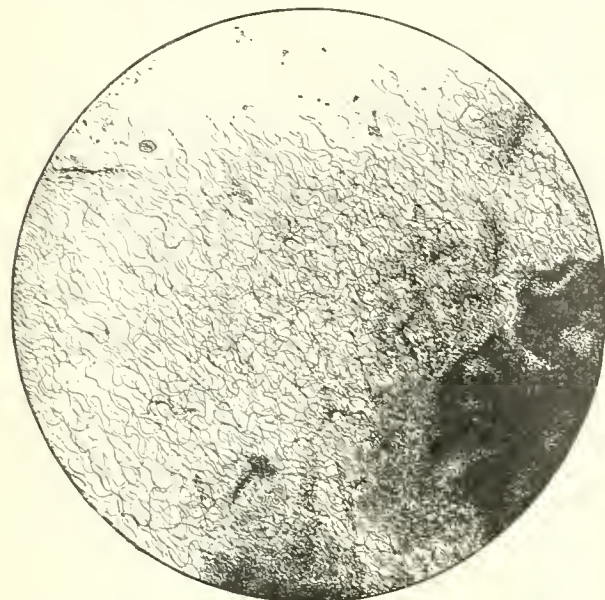


Fig. 2.—Anthrax bacilli growing from rabbit's liver, on blood serum. $\times 40$. (This and succeeding cuts are copied from original photomicrographs.)

closed with cotton. A disadvantage of this method, like that with liquid media, is the uncertainty of sterilizing the nourishing medium; further, the occasional settlement and growth of foreign organisms in the vicinity of those planted. Yet these accidents are in this method, in distinction from others, detected with ease and certainty. For there is no diffusion through this solid medium of growing bacteria; each organism, whether intentionally planted or not, remains in one spot, any admixture must occur by continuity of growth.

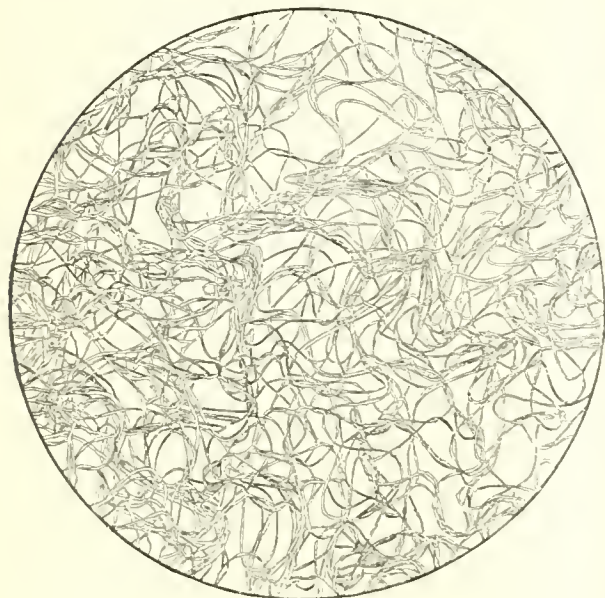


Fig. 3.—Anthrax bacilli, pure (isolation) culture on blood serum. $\times 140$.

By this method, then, there is ocular demonstration that the organisms of the successive cultures proceed as continuities of structure from those of the first; we may see the bacteria in the leucocytes of septic blood freshly deposited on the first slide, watch them multiply until they break out of the containing cell and extend over the ge-

latine, transfer these to a second slide, observe their continued multiplication, and so on indefinitely. By this method, and by no other at present employed, we have ocular demonstration that the organisms injected into an animal from the tenth, fiftieth, hundredth culture are structural continuities of the organisms present in the first animal; by this method we know that the tenth culture, for example, contains absolutely nothing of the original tissue except that incorporated into the living organisms; by this, and by no other method with which I am acquainted, it may be unhesitatingly affirmed that the effect induced in a healthy animal by inoculation with the tenth, twentieth, or fiftieth culture must be ascribed not only to bacteria, but to the direct descendants of those bacteria contained in the animal from which the first cultures were made. And permit me to add that after such demonstration has been furnished in scores of repetitions with identical results, by independent competent observers, by every one indeed, who has attempted it, it is unwise and unreasonable, to put it mildly, for any of us to deny, oppose, ignore, scoff at, or equivocate about a fact established far more firmly than are the majority of accepted facts, so called, in the science and art of medicine.

A consideration of importance in estimating the value of observations upon bacteria, is the microscopical technique employed by the observer. That good objectives should be used is well understood; but it is now essential also, in delicate investigations, to employ a condenser made after the pattern of Abbé's illuminator. The feature which makes this apparatus invaluable in the detection of bacteria is the possibility of obliterating, through the large aperture of the lenses, the picture of the object due to refraction, thus practically eliminating



Fig. 4.—Anthrax bacilli—showing spore formation. $\times 300$.

from the field of vision everything which is not colored. Bacteria not only absorb coloring matter—aniline dyes, for instance—but retain these pigments in the presence of reagents which decolorize the animal tissues, generally speaking. To detect a minute organism, the bacillus tuberculosis, for example, amid the cells, fibres, and granules of lung-tissue is, with ordinary illumination, extremely difficult or impossible; but after decolorizing the tissue and then, by means of the illuminator, obliterating refraction outlines, the bacilli appear almost alone, by virtue of their retained color, in a luminous field—distinct and easily recognizable. When, therefore, an observer asserts the absence of all bacteria from a tissue—tuberculous or leprous, for example—usually supposed to contain them, it is in order to inquire first whether he knows

how to use the aniline dyes, and second, whether he has the optical means, an Abbe's or similar illuminator, necessary to enable him to utilize these staining methods in the detection of bacteria; if he lack either he is but ill-equipped for public entrance into the arena of original investigations on this subject; for both are essential to the development of the histologist into the medical mycologist.

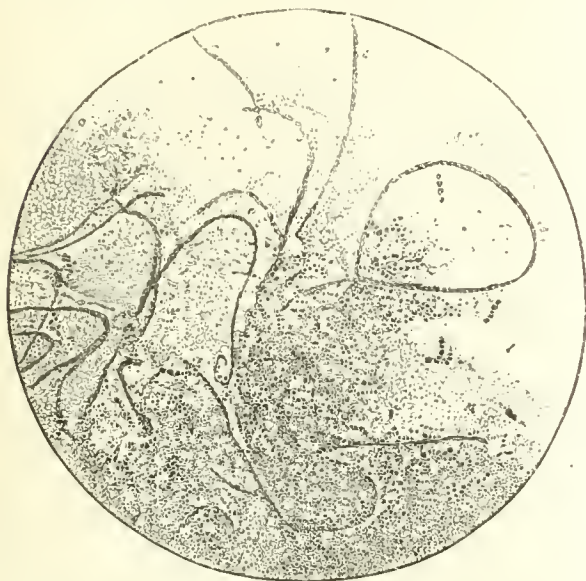


Fig. 5.—Anthrax culture invaded by other bacteria. $\times 300$.

I have thus endeavored, Mr. President, to sketch the principles involved in the study of bacteria, in order that we may on subsequent occasions form a somewhat accurate and intelligent estimate of the evidence already adduced as to the relations of these minute beings to various morbid conditions of the human subject. If the effort to convey the facts has been successful, you will agree that an original contribution to this evidence demands serious consideration only when it evinces, on the part of its author, not simply skill and experience as a microscopist and histologist, but also a practical acquaintance with and employment of the special methods and manipulations necessary for the recognition and cultivation of bacteria. Medical mycology has become a special department of investigation, comprising most delicate and easily vitiated technical methods, to be acquired by special study and experience; the time has passed when the ability to focus a quarter-inch objective entitled a man to an opinion upon the subject. Medical mycology may not be compared in age or attainments with chemistry; yet the necessary technique is as delicate in the one as in the other; and there exists therefore the same necessity for the recognition of individual knowledge, and by consequence of general ignorance of the one subject as of the other. I am led to indulge in these rather commonplace remarks by the observation that there is a more or less prevalent lack of appreciation of the evident facts in the case; witness the recent discovery of the pseudo-bacillus tuberculosis and the comments thereupon in current literature and society meetings. Not a few medical journals announced the complete annihilation of the bacillus tuberculosis in particular and bacteria in general, a dictum pronounced by a witty rural editor, equally familiar with mycology and Latin syntax, in the words—"Sic transit bacteria." Even a leading New York journal remarked that "the case against the bacilli is very strong." If it should be announced by Dr. A. that pyæmia is not characterized by an excess of carbolic acid in the urine, as asserted by Brieger, we practising physicians would not undertake to decide; we know too much about chemistry. There are at present perhaps a score of men who have given abundant evidence of competence in bacterial investigations;

to them and to such as they, not to dermatologists, surgeons, or pathologists, we must look for facts upon this subject, and for experimental criticisms of one another's assertions.

Before discussing the relations of bacteria to the body in disease, it is well to consider their relations to the animal in health and after death. It is a much disputed question whether any varieties of bacteria may exist in the blood or tissues of a healthy animal. In former years the affirmative was maintained by many, notably Billroth; with improvement of methods and differentiation between organized and unorganized particles the number of such affirmations decreased; and the three most noted observers of the present day—Koch, Pasteur, and Ehrlich—affirm that they have never detected bacteria in a healthy animal. Numerous attempts have been made to decide the question experimentally—by the history of healthy tissues, transferred under precautions against contamination, from the living or dying body to conditions of perfect isolation from bacteria. Such experiments demonstrate that some healthy tissues, at least, contain no organisms capable of inducing putrefaction; as the majority of bacteria are, however, incapable of effecting this process, the failure to putrefy does not necessarily prove the absence of all bacteria. Observation and experiment on the living body would also prove the absence of bacteria from healthy animals. The familiar fact that a dead human fetus may remain in the mother's body for months or years without putrefaction, as in extra-uterine pregnancy, supports the same conclusion. Indeed, it has been repeatedly demonstrated that certain bacterial species, even when injected in considerable numbers directly into the blood or tissues of the living animal, cannot be found after the lapse of some hours; they appear to suffer the same fate as unorganized particles. Hiller even injected into his own skin some bacteria obtained from putrid flesh, and observed only a slight, transient, local oedema.

This failure of putrefactive and other bacteria to reproduce in healthy tissue seems to indicate their inability to maintain the struggle for existence against the animal cells indigenous to the soil. For seventy years a man may eat, drink, and breathe the ordinary bacteria, and carry a vast and varied assortment of them in his alimentary canal, without suffering putrefaction; yet so soon as his component cells are destroyed, generally, as in the death of the animal, or locally, as in the gangrene of a toe, the tissues swarm with these minute organisms. While some bacteria seem capable of development in tissues only after the death of their competitors, the animal cells, others exhibit this power in the presence of these cells when the tide is turned against the latter by the impairment of their nutrition, or by the presence in the blood of material favoring the invaders. The exudate on the cardiac valves frequently contains, not only in ulcerous, but also in simple "rheumatic" endocarditis, colonies of growing micrococci, a fact first observed by Klebs and confirmed by Eberth, Ehrlich, and Osler. In some cases it is demonstrable that the appearance of the bacteria upon these vegetations was subsequent to the inflammatory process. Abnormal blood composition seems to favor the development of some bacteria which may gain access to the tissues. The presence of glucose and increased metamorphosis of albuminous blood-constituents in diabetes are usually considered responsible for the proneness of diabetics to abscesses, carbuncles, cataracts, gangrene of wounds, sloughing of stumps even under most careful antiseptic dressings. These spontaneous abscesses and carbuncles contain, when freshly opened, micrococci in a high state of activity, as shown by Kraske, Eberth, and Pasteur. A clinical observation in the history of diabetics, their susceptibility to consumption, acquires peculiar significance in this connection, since the presence of the bacillus tuberculosis is now certainly a recognized anatomical characteristic, whatever may be said of its etiological relation. Cheyne

refers to a weak, cachectic patient who had an abscess wherever he received a bruise, and whose abscesses always contain micrococci. Another question, formerly much disputed, is the possibility of invasion of animal tissues by bacteria without previous solution of continuity. The only possibility for discussion now remaining is as to what shall be considered a solution of continuity; for it is definitely demonstrated that these organisms gain access to the body without the existence of any wound or abrasion discoverable upon the closest scrutiny. Trichinae force their way from the intestine into the muscles; particles of coal are conveyed, probably through the agency of white corpuscles, into the parenchyma of the lungs, bronchial glands, and even the liver; it would seem *a priori* certain that many bacteria, much smaller than these particles, could also be received into the tissues. Ogston, using the most approved technique, found micrococci in every one of seventy previously unopened acute abscesses. Cheyne reports a similar experience. Micrococci have been repeatedly observed in the blood in spontaneous pyæmia, osteomyelitis, etc., and Obermeier's spirilla in recurrent fever patients, in cases where no lesion of the integuments was discoverable. But the question seems to have been finally decided by experimental demonstration. Buchner has induced anthrax in animals by the inhalation of powdered material containing the spores of the bacilli. When we remember the endothelial nature of the cells lining the pulmonary alveoli, we readily appreciate the facility with which particles, large or small, organized or unorganized, gain access to the circulation through the lungs.

Bacteria, then, which, by virtue of their ubiquity, are in constant and frequently recurring contact with the animal body, are, like other minute bodies, organized and unorganized, frequently introduced into the body through solutions of continuity of the integuments, or through intact skin and mucous membranes, particularly by way of the lungs.

The burning question in pathology to-day is, In what degree are the various species of bacteria, present in human tissues during certain morbid conditions, to be regarded as the cause of the morbid processes with which they are respectively associated? Having already reviewed the conditions of eligibility for witnesses and of authenticity for evidence, we are prepared to consider in detail the present state of the question as to the individual diseases.

Before admitting the causal relation of a bacterium to the disease, we must be convinced not only that all observed phenomena can be easily reconciled with such assumption, but also that they can be as plausibly explained by no other assumption. The evidence of such casual relation must establish, therefore, the competence of the observer and the accuracy of the observation; the presence of a constant bacterial form in every case of the disease, and in numbers sufficient to explain the morbid phenomena; the demonstrable isolation of the bacteria by successive cultures; the induction of the disease in numerous healthy animals by inoculation with the isolated organisms; the reproduction of the same bacterial form in the inoculated animal. Gauged by this standard, the evidence already adduced warrants the following unscientific but convenient classification:

First.—Disease, the demonstration of whose bacterial origin has been completed, through inoculation with isolated bacteria, by several competent observers—anthrax.

Second.—Disease whose bacterial origin has been affirmed, after inoculation with isolated bacteria, by one competent observer—tuberculosis.

Third.—Diseases which are uniformly characterized, *intra vitam*, by the presence of bacteria in the tissues; but which have not as yet been induced by inoculation with the isolated bacteria—recurrent fever, pyæmia, diphtheria, erysipelas, leprosy, rhinoscleroma, gonorrhœa (urethræ et conjunctivæ), and some forms of septicæmia. Puerperal fever, osteomyelitis, and ulcerous

endocarditis are considered to belong etiologically with pyæmia, septicæmia, erysipelas, and diphtheria.

Fourth.—Diseases after death from which (in some cases also during life) bacteria have been observed in the tissues: variola, scarlatina, typhoid fever, croupous pneumonia.

Fifth.—Diseases in which the presence of bacteria, ante or post mortem, has been asserted: syphilis, intermittent fever, yellow fever, typhus, measles, lupus, rabies, tetanus, *et al.*

The investigation of the diseases included in the fourth and fifth classes is as yet quite imperfect and inaccurate, partly at least because they are with few exceptions peculiar to man.

The evidence as to the relations of bacteria to disease rests largely upon experimental observations upon the lower animals. The impossibility of thorough examination of human tissues, not only during life, but also for hours or days post-mortem, restricts materially the field of clinical observation on this subject: for a few days, even hours, suffice to people a dead body with bacteria. We may simply ignore such contributions as that of Zander (*Virch. Arch.*, Bd. LIX.), in which he announced the probable discovery of the bacterial origin of acute yellow atrophy of the liver. In one fatal case of the disease he found bacteria in the liver, the section having been made fifty-four hours after death. He anticipates the possible objection that the bacterial development was perhaps post-mortem, and refutes it with the convincing statement that "the body did not, so to speak, exhibit any marked symptoms of putrefaction." Indeed, while defective methods may be chiefly employed by the practically inexperienced, most egregious misinterpretation is unfortunately not monopolized by them. Several pioneers in this subject, notably Pasteur and Klebs, have, by the publication of hasty and, as subsequently appeared, erroneous conclusions, forfeited much of the prestige acquired by their earlier classical works on fermentation and gunshot wounds respectively. These two observers have ignored successive improvements in technique; have apparently assumed that all infectious diseases are of bacterial origin; that therefore the discovery of a bacterium in a diseased animal is ample proof of its pathogenetic influence. Years ago, Klebs announced the discovery of the bacterium of tuberculosis, and even declared that the disease could be cured by an agent, benzoate of sodium, which destroys the parasite. With equal facility he discovered the bacterial origin of syphilis, typhoid fever, etc.

Pasteur seems to have a fondness for micrococci, especially in the figure of 8 form, to which he ascribed puerperal fever, rabies, his "nouvelle maladie," as well as chicken cholera, and typhoid fever. His famous publications about the inoculation of chickens with anthrax, and about the rôle of earthworms in transporting anthrax spores, further illustrate the inability of his judgment to cope with his imagination.

EDUCATION AND CRIME IN FRANCE.—In a report on the connection between education and crime the records of the courts of France show the following result, which is directly opposite to the records for the United States: 1. That 25,000 persons of the class wholly illiterate furnish five criminals. 2. That 25,000 of the class able to read and write furnish six criminals. 3. That 25,000 of the class of superior instruction furnish more than fifteen criminals. 4. That the degree of perversity in crime is in direct ratio with the amount of instruction received. 5. That in the departments in which instruction is most disseminated crime is greatly more prevalent—in other words, that morality is in inverse ratio with instruction. 6. That relapse into crime is much greater among the instructed than the non-instructed portion of the community.

Original Articles.

SUCCESSFUL CASE OF LAPAROTOMY FOR ACUTE INTESTINAL OBSTRUCTION, DUE TO STRANGULATION; WITH REMARKS.

By PROFESSOR LÉON LE FORT,

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INTESTINAL obstruction by volvulus, by invagination, by constricting bands, imposes on the surgeon a problem whose solution is often difficult. If he decides on intervention by a capital operation, he must choose between enterotomy and laparotomy. Enterotomy is limited to an incision of trifling extent through the abdominal walls into the peritoneal cavity, where a loop of intestine is sought above the obstruction, of whose site and whose nature the operator is generally ignorant. A small opening is made in the intestine, and exit given to gas and fecal matters.

In laparotomy the abdomen is freely opened by a large incision, which enables the surgeon to hunt for the obstacle without any hindrance, and, having found it, to overcome it, whether it be an invaginated intestine, the twists or knots of a volvulus, or strangulating bands.

Laparotomy, practised in France by Dupuytren, by Malgaigne, and in 1859 by Depaul, performed a little oftener in England since 1847, did not win favor with French surgeons, and under the influence, more especially of Nélaton and his followers, enterotomy, in spite of the want of success which almost always attended it, was for a long time the only operation employed. However, the past twelve years, since ovariectomy has been in fashion and has demonstrated that the danger of free incisions into the abdomen has been greatly exaggerated, there has been a reaction in France in favor of laparotomy, which to-day tends to take the place of enterotomy.

I do not intend to discuss the relative value of the two operations; I limit myself to mentioning the principal reason which leads me to prefer laparotomy to enterotomy. In 1865, that is seventeen years ago, I pointed out the danger of purgatives in hernial strangulation, advising the substitution of opium. I sought to show what at this epoch had not been clearly stated, that the dangers from strangulation do not depend on retention of fecal matters in the intestinal tube, but on the reaction occasioned throughout the entire ganglionic nervous system by irritation of the splanchnic nerves included in the portion of intestine strangulated. In fact, in peritonitis, in strangulated omental hernia, in the orchitis of a testicle retained in the spermatic canal, we have the principal phenomena of strangulation: vomiting, absence of stools, smallness of the pulse, coldness, alteration of the features, and at the same time there is no material obstacle to the evacuation of the intestines. On the other hand, after operating for strangulated femoral hernia, I have known the bowels to be confined for five, six, and even nine days after the operation, by reason of the administration of opium; and yet all the dangerous symptoms began to disappear as soon as the strangulation was remedied. In short, who, conversant with the facts of speedy death from traumatic peritonitis, or peritonitis from perforation, can suppose that a few drachms of effused liquid of an irritating kind in the peritoneum may so quickly give rise to fatal symptoms; or who, believing this, can explain by what mechanism death takes place?

The theory, then, that I have maintained and taught for many years, is that the unfavorable symptoms in all these cases of peritonitis and strangulated hernia, whether of the intestines or omentum, are due to irritation of the splanchnic nerves (of the intestine or omentum) by the band constricting the gut, and in some measure by the over-distention of the bowel; an irritation, moreover,

which is reflected on the great abdominal sympathetic, and through it on the heart.

Without doubt the excessive distention of the intestine by gas and fecal matters accumulated above the point of obstruction adds another source of mischief, but the primary irritation, the constricting band, is infinitely more grave in its consequences, and will almost inevitably result in death to the patient, even when by enterotomy the intestine above the obstruction has been opened, and the contents of the bowels evacuated by a false anus.

It is because laparotomy gives us hope of being able to arrive at the original cause of the evil, and thus remove it, that I prefer laparotomy to enterotomy.

I am obliged to admit, however, that errors in diagnosis are not at all rare in these circumstances. I shall never forget my first operation for laparotomy, in 1870, when, with the aid and concurrence of my friend and colleague, M. J. Bucquoi, of the Hôpital Cochin, I operated on a patient in his service. The opening of the abdomen disclosed not a strangulation by organized lymph, or by volvulus, as we supposed, but a cancer of the sigmoid flexure of the colon, causing complete obstruction of the bowel.

It is easy to understand why, in these conditions of uncertainty, the surgeon should hesitate to freely open the abdomen, and prefer an operation less terrifying to the patient and his family. Enterotomy having (wrongly) the reputation of being little dangerous in itself, it seems to the surgeon less painful, in the event of want of success, to discover at the autopsy an error in diagnosis than to discover this error at the moment when, by a large incision, he has exposed to view the viscera of the abdominal cavity of his patient.

However, facts only can carry conviction, and for several years laparotomy, which counts many cases of success, mingled, it is true, with failures, has been growing in favor with the profession.

In the following observation, where the operation of laparotomy was performed under very disadvantageous circumstances, I do not believe that enterotomy would have saved the life of the patient. Merely giving issue to the gases and liquids of the intestine would have been a sorry relief, when a constricting band was suffered to remain, provoking irritation and inflammation by compression of the intestine, engendering, in fact, a peritonitis, which would in all probability have been fatal had not laparotomy come to the rescue of the patient. I have copied the report from the memoir presented to the Academy, believing that it would interest the readers of the *NEW YORK MEDICAL RECORD*.

Observation.—The first day of last June (1882) I was called to Colombes by Dr. Tachard, to see a young man of eighteen years of age, suffering since the 25th of May, that is to say one week, from internal strangulation. My confrère gave me the following history of the case:

During the evening of the 25th of May, the patient experienced some pain in the abdomen, which about midnight took on the character of violent colic. Dr. Tachard called in the night-time, ordered a laudanum injection, innunctions of belladonna to the abdomen, and hot poultices. The next day the pains were on the increase, the belly was sensitive to the least pressure, somewhat distended, and since the morning of the day before there had been no passage from the bowels. A dose of castor-oil was given, which was immediately vomited; then a copious enema was administered, which came back without bringing away any fecal matters. As the patient had a small inguinal hernia on the left side, attention was directed to that, but as the hernia was found to descend and to return with all ease, it was evident that the cause of the trouble was elsewhere.

The complete absence of evacuations, the persistence of the vomiting which soon became incessant, the absence of fever, the alteration of the features, the smallness of the pulse, seemed to justify the diagnosis of internal strangulation. This diagnosis was rendered still

more probable by the fact that in 1879 the patient had had an attack of subacute peritonitis, which would have been likely to leave troublesome sequels in the form of bands of organized lymph and adhesions.

The condition of the patient becoming alarmingly worse, the family asked for a consultation, and the 29th of May, that is to say the fourth day, a confrère from Paris, who in 1879 had attended the patient, was summoned. He counselled purgatives, which had no favorable result. It was then that Dr. Tachard, seeing the patient growing worse all the time, declared to the family that, in his opinion, nothing but a surgical operation could save the patient. The family inflexibly opposed any operation, and it was not till three days after (June 1st), the seventh day of the strangulation, when death seemed imminent, that it was decided to summon me in consultation.

When I saw this young man in the evening of the day above mentioned, I found myself in the presence of an apparently moribund patient. His countenance bore a pinched expression, his body was covered with a cold sweat, his extremities were cyanosed, and icy cold. The pulse was small and rapid, and the least movement brought on fecal vomiting. The abdomen was tympanitic; the markings of the intestinal convolutions could be seen on the abdominal walls.

There was, however, no exaggerated sensitiveness to pressure, no dulness or obscurity of sound in the lateral and inferior portions, nothing which could lead me seriously to suspect the existence of peritonitis. I represented to the family that the chance was a forlorn one, but without surgical intervention the case was hopeless. I was willing to attempt what could be done by gastrotomy, though the patient might die in the operation. The family having left all responsibility in the matter to me, I proceeded to operate, with the assistance of Drs. Tachard and Ducor.

The patient having been partially anæsthetized with chloroform (which was charily administered on account of the prostration), I made an incision, fifteen centimetres in length, in the linea alba, from the umbilicus to the pubes, and with the usual precautions. As soon as the abdomen was opened, coils of the distended intestines protruded. We took pains, with our outspread hands, to keep back all but a few coils, which I returned as soon as I had examined them, drawing out carefully, little by little, other portions of the intestinal mass, and scrutinizing them closely before putting them back; we thus drew out through the opening in the abdominal wall, in successive portions, the larger part of the small intestines before the seat of the obstruction presented itself to our view. One of the coils resisted my attempt to bring it out by the incision; I felt that I was near the obstruction. Then, following with my hand into the abdominal cavity the resisting loop of intestine, which was considerably distended, I found, near the right iliac fossa, a little tumor, formed by hardening and agglomeration of the intestine, and I discovered that the intestinal loop which I was following with my finger, engaged itself in a tight circular aperture, which seemed as if formed by a firm membranous cord. Hooking the extremity of my index finger into this constricting ring, I drew carefully to the surface, on a level with the abdominal opening, a coil of congested coarcted intestine, and we had under our eyes a band, a sort of fibrous ring, very resisting and very thick, formed by organized adhesions, and which encircled the small intestine five centimetres (or thereabouts) from its termination in the cæcum. I cut the band, which was about five millimetres in width, with a few clips of my scissors, and thus released the intestine.

The small intestine was congested throughout almost its entire extent, but there was no fluid in the peritoneal cavity; peritonitis had not as yet set in, and at the site of the stricture, despite the long duration of the malady, the vitality of the intestine did not seem to be compromised, the stenosis not having been absolute.

The intestine was returned, and the wound in the abdomen closed by seven deep silver-wire sutures, passed separately through and fastened to a bougie. I then put in a dozen superficial sutures in the ordinary manner.

In the night-time the patient had a large stool, very fetid, and for several days following copious alvine evacuations. The patient, though very weak, was restless and intractable, not comprehending the necessity of absolute repose. The seventh day after the operation he rose suddenly in bed, in a state of agitation, and the superficial sutures gave way, letting the wound gape open. Fortunately, union of the deeper parts was effected, so that the abdomen was not opened. Being summoned to the patient, I applied several new sutures, using the quilled suture, and three days after, Dr. Tachard applied an abdominal belt, with pads nicely adjusted to the sides of the wound, to secure exact approximation. Cicatrization was effected in a few days.

Convalescence went on favorably, and by July 1st the patient was able to go abroad.

It is now seven months since the operation, and a curious and most gratifying change has been effected in the condition of this young gentleman, who previously was thin and in delicate health. The difficulties of digestion, the obscure abdominal pains from which he had suffered from the time of his attack of peritonitis in 1879 down to the date of the operation have all disappeared, and his health is now excellent. He has become stout and fleshy, so as hardly to be recognized by those who knew him a year or so ago. There is now no trace of the old inguinal hernia which he had before the operation.

The past few years the reports of most of the successful surgical operations have ended with these words: *the operation was performed with the usual antiseptic precautions*. I shall have to finish this report by adding that the antiseptic method was not employed. But if I do not believe in *ferment* germs, I do believe, and have for the past seventeen years believed, in *contagion* germs. Drs. Tachard, Ducor, and myself took precaution, not only to cleanse our hands before the operation, but to wash them thoroughly in camphorated alcohol. The dressings consisted simply in the application of compresses soaked in camphorated alcohol and water, covered with a piece of sticking-plaster and supported by a body bandage.

A CURIOUS BILL.—Rev. Dr. Robinson, of Paterson, N. J., has sent to the city Clerk the following modest bill for services rendered :

To breaking up the ravages of diphtheria, by showing that it consists of a few ounces of foreign matter in the blood which can only escape through the pores.....	\$1,500
To lowering the death-rate of the city to the extent of 538 lives in two years, by means of circulars, etc., showing what fever consists of...	2,000
To stopping the ravages of small-pox, by showing that 100 cases of it can be expelled from the blood, in two or three hours, by the vigorous action of the pores produced by hot tea...	1,500
Total.....	\$5,000

He adds: "I can prove in any court of justice that I have been the instrument of saving 1,000 lives in this city, without including the thousands whom these discoveries will save in the present generation." It will be seen that the dominie rates the life of the average Patersonian at only five dollars. "Dominie" Robinson is a well-known clerical physician or medical clergyman in Paterson, and although peculiar in some respects, is generally esteemed.

A CASE OF
STENOSIS OF THE RIGHT AURICO-VENTRI-
CULAR OPENING IN CONSEQUENCE OF
FŒTAL ENDOCARDITIS.

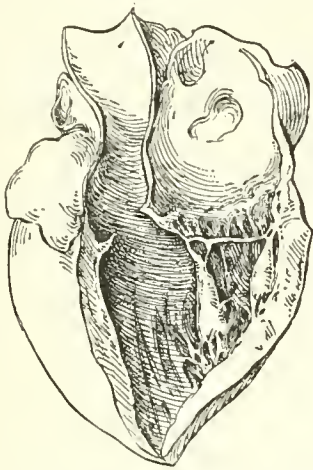
A TRANSVERSE CHORDA TENDINEA IN THE LEFT AURICO-
VENTRICULAR OPENING.

By JOSEF KUCHER, M.D.,

NEW YORK.

ALTHOUGH cases of foetal endocarditis are not uncommon, stenosis of the right aurico-ventricular opening is very rare. Rauchfuss (*Entwicklungsfehler am ostium atrio-ventriculare*, Gerhardt, "Handbuch der Kinderkrankheiten," p. 103) found only two similar cases on record, one by Peacock and one by Romberg. In both the aorta and pulmonary artery were normal. In Romberg's case (boy four years of age) the aurico-ventricular opening was very narrow; the tricuspid valves had disappeared. There was no defect in the inter-ventricular septum. In Peacock's case (girl of seven months) the stenosis was not considerable, and was apparently due to synechiæ of the thickened valves, with inflammatory deposits on their outer walls. There were two defects in the inter-ventricular septum.

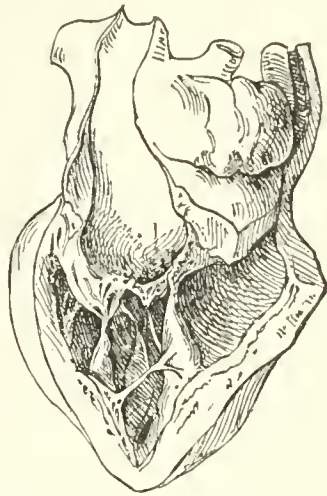
The present specimen is taken from a child who died twenty-four hours after labor. The mother, a primipara,



strong, healthy, was quite well throughout her entire pregnancy. No history of rheumatism. Labor at the normal term. I had to apply the forceps, when the head was already visible in the vulva, because the pains had almost completely stopped. When the child was born, the chord did not pulsate and was flaccid, and as the child did not cry at once, I was afraid that the application of forceps had been delayed too long. But after having shaken the child a little, it cried lustily and breathed freely. It was a boy, weighing about nine pounds, well formed, except the thorax, which was arched, corresponding to the sternum as in cases of rachitis; but there were no other signs of rachitis. Such an arching (voussure) has been observed in several cases of foetal endocarditis, but it corresponded to the heart-region on the left side of the sternum. The next morning I was told that the child had cried all the night. When I saw it, the face was bluish, the respiration weak, but not superficial as in cases of partially atelectatic lungs; the muscles were flabby, with no tonus in them. I shook it a little, then it began to cry and breathe regularly. Vesicular respiration was distinct all over the lungs. I paid no attention to the heart-sounds. In the evening I was called because the child became cold. On my arrival it was dead. The nurse had seen that the heart of the child palpitated very much before death occurred. From this history, and especially that vesicular respiration was distinct all over the lungs, Dr. L. Conrad and I concluded

that atelectasia pulmonum could not have been the cause of death, and that most likely there must be some congenital defect of the heart.

On post-mortem we found the lungs dark-colored, hyperæmic, everywhere well inflated with air, under the



pulmonary pleura several bloody extravasations. The cut face of the congested lungs discharged reddish serum with bubbles of air. No vernix caseosa or other ingredients of liquor amnii were found in the lungs. The heart was of normal proportions, except the right auricle, which was larger than the left. On opening it, we found the aorta and pulmonary artery with their valves normal, the right aurico-ventricular opening funnel-shaped, with two openings permeable for a Simpson sound at the bottom of the funnel. This change had been brought about by the coalescence of the three curtains of the tricuspid valve, which had been changed into a sclerotic thickened membrane with the two mentioned openings. No inflammatory deposits or other changes were noticeable on the walls of the auricle or ventricle. The inter-ventricular septum was normal. The endocarditis was limited to the curtains of the tricuspid valve, all other valves being normal. In the left aurico-ventricular opening we found a transverse chorda tendinea. The diagnosis of such a chorda was once made by Schroetter on the living subject by its peculiar musical tone, and the diagnosis was confirmed by the post-mortem.

PREHISTORIC SURGERY.—The interesting pamphlet of Dr. Paul Broca describing the trepanned skulls which have been discovered in the caves of France, belonging to the earlier periods of the new stone age, places the date of the first operation of this nature far back in the prehistoric times.

The fact is certain that a great number of these skulls were trepanned during lifetime, probably in infancy and early youth, and that they healed up again, the subject of the operation surviving it for many years. M. Broca supposes this trepanning to have constituted a sacred rite of some sort. For we find that the skulls of these very persons who had undergone the operation in their lifetime were after death subjected again to the same operation. A number of small disks were cut from them in such a way that each disk contained a portion of the cicatrized edge made by the original trepanning. These disks were used as amulets by living persons. But the skull thus treated was in its turn provided with one of these talismanic disks in place of those which had been cut from itself.

It is clear, from M. Paul Broca's descriptions, that this early form of trepanning was performed as an act of mutilation in relation to certain primitive beliefs.

Progress of Medical Science.

ACUTE ENDOCARDITIS LIMITED TO THE RIGHT SIDE OF THE HEART.—Colomiatti (*London Medical Record*, January 15, 1883) describes five cases of acute endocarditis of the tricuspid valve. Having shown that these are not so rare as is supposed, he points out that the affection may fall on the tricuspid or on the pulmonary sigmoid valves only, or on both at the same time; that it may be perforating in one orifice, whilst it is as a vegetation in the other; that it has nothing to do with sex or age, being found in infants, and in youth and old age in both sexes. From a sixth case he infers that endocarditis may affect only the right parietal endocardium, and from their first origin the vegetations may be limited to the right auricular appendage. In all the cases the microscopical examination of the vegetations showed that they consisted of embryonic connective tissue, the elements of which were for the most part in a state of fatty degeneration. The vegetations were very easily torn, and frequently gave origin to pulmonary emboli.

THE ACTIVE PRINCIPLES OF OFFICINAL PODOPHYLLIN.—Continuing his important researches on podophyllin, Dr. V. Podvysotsky, of Dorpat, states that both the root of the *Podophyllum peltatum* and podophyllin (that is, the alcoholic extract of the root) contain a resinous, amorphous, bitter, and very active substance, which the author named podophyllotoxin. This is a mixture of two distinct chemical compounds, called by Dr. Podvysotsky, "picropodophyllin" and "picropodophyllinic acid." As experiments on animals show, both emetic and drastic properties of podophyllin and podophyllotoxin depend exclusively upon their containing picropodophyllin, large doses of which produce vomiting, small ones only purgation. In view of the high price of the preparation of picropodophyllin (which represents the essential active principle of *Podophyllum peltatum*), the author recommends to use podophyllotoxin, best of all in form of an alcoholic solution. While prescribing, it is necessary to take into consideration that this substance is precipitated by an excess of water and by alkalis. When used internally, the remedy begins to act at the end of four hours, or still later; hypodermically, after about two hours. The careful study of clinical results of his own and of other observers, and the experiments made on animals, lead the author to the conclusion that podophyllotoxin is a very useful remedy for constipation, is very comfortably borne by patients, and does not interfere with digestion even when used for a long period. It is indicated especially in chronic constipation in consequence of intestinal atony and sluggishness, in catarrhal icterus, and similar cases. The doses are given as follows: for an adult, from one-fourth to one-third of a grain at a time, from one-half to two-thirds of a grain daily; for a child, from one-one-hundred-and-twentieth to one-twentieth of a grain in each dose; the second dose is to follow not sooner than eight to ten hours after the first. The best preparation for an adult is made by dissolving two grains of podophyllotoxin in two hundred grains of rectified spirit. The dose is thirty drops in a small glass of wine. Alkalis should be avoided during the treatment.—*London Medical Record*, January 15, 1883.

TREATMENT OF ERYSIPELAS BY SUBCUTANEOUS INJECTION OF RESORCIN.—Dr. T. F. Bogusch reports (*London Medical Record*, January 15, 1883) four cases of erysipelas which he successfully treated by hypodermic injections of a five per cent. solution of resorcin. Having marked the margins of redness with ink, he made a number of injections around the whole inflamed region, along the line running outside of the mark, at a distance of about $1\frac{1}{2}$ cm. He used for each injection 0.25 cub.c. of the solution, always directing the needle toward the cen-

tre of the diseased part. As many as sixty-seven, twenty-nine, thirty-six, and seventy injections (at points nearly equally distant) were required in various cases to complete an elevated ring around the affected region, resulting from the blending of individual swellings produced by injections. In all cases the injections completely cut short the further spreading of the inflammatory process, the temperature rapidly falling to the normal level. No untoward symptoms were caused by this treatment, and no other treatment was used.

PATHOGENESIS OF VARICOSE ULCERS.—It is evident enough that varicose ulcers are caused by the presence of varicose veins. But that something further is necessary for their production is shown by the fact that ulcers are not formed in every case, even of marked varicose veins. This second necessary condition has been supposed, by several observers, to be a neuritis in the affected limb. That this supposition is correct, M. Quinn believes to have demonstrated by examination of the nerves of the member. He states that he has always found a neuritis. This could not have been caused by extension of the inflammation from the neighboring tissues, as the portions of nerve examined were taken at a considerable distance from the ulcer. It could not have been an ascending neuritis, as then the sclerosis would have attacked only those nerves whose distribution corresponded to the seat of the ulceration, which he states was not the case. M. Quinn thinks the neuritis is occasioned by varicose dilatation of the veinules passing from the nerve-trunks. This dilatation is accompanied by phlebitis, and the inflammation is quickly propagated to the nerve-sheaths.—*Journal de Médecine de Paris*, December 22, 1882.

CARDIAC HYPERTROPHY CONSECUTIVE TO NEURALGIA OF THE ARM.—Dr. Potain relates several cases in which neuralgia of the left arm, due to traumatism, was followed by hypertrophy of the heart. He explains the occurrence by the nervous connections existing between the cardiac plexus and the brachial plexus, and remarks upon the reverse conditions which obtain in cases of angina pectoris.—*Archives Médicales Belges*, December, 1882.

PLEURISY WITH INTERCURRENT ANASARCA.—Dr. Rossignol relates the case of a cavalryman, twenty-one years of age, who was admitted to hospital, suffering from a slight attack of bronchitis of the larger tubes. He had never had any severe illness. Eight days after admission he was seized with repeated chills, fever, sweating, and pain in the chest. Pleurisy with effusion was developed on the left side. The disease ran its usual course, though somewhat slowly, during a period of five weeks. At that time slight œdema of the feet was noticed, but was attributed to the anæmic condition of the patient, and to slight obstruction to the circulation. On the following day, however, there was another chill with fever and sweating, and on the day succeeding that there was marked general anasarca. The heart was perfectly normal, and there was not the slightest trace of albumen in the urine. The fluid in the chest re-accumulated when the anasarca set in. The œdema gradually disappeared under appropriate treatment, and at the time the report was made (two months later) the patient was nearly well. Dr. Rossignol offers no satisfactory explanation of this curious occurrence.—*Archives Médicales Belges*, December, 1882.

SUBCUTANEOUS INJECTIONS OF CARBOLIC ACID IN MUSCULAR RHEUMATISM.—The results of some investigations recently undertaken by Binz would seem to show that the action of carbolic acid and other so-called antiseptics in preventing suppurative inflammation is due, in great measure at least, to the influence exerted by these substances upon the white blood-corpuscles. In certain experiments upon the mesentery of a frog, this observer ascertained that the migration of the white corpuscles was almost entirely prevented by applications of a very

dilute solution (1 in 1600) of carbolic acid. Led by a consideration of these results Dr. Edgar Kurz, of Florence, instituted some experiments in the treatment of muscular rheumatism by subcutaneous injections of carbolic acid. He reasoned that in this disease we have to do not merely with hyperæmia and serous exudation, but with plastic infiltration of the perimysium and migration of the white corpuscles of the blood. In proof of this assertion he instances the formation of rheumatic nodes in severe cases. This method of treatment was tried in three cases only, but in each the success was stated to have been remarkable. In one case of deltoid rheumatism, marked relief of pain followed within an hour after ten injections of a two per cent. solution. After six injections on the following day the patient was cured. The second case was one of lumbago. The patient had had several previous attacks in which relief was obtained only by morphine. Twelve injections were made in the painful region in the morning. In the afternoon the patient appeared in the doctor's office, complaining only of a slight inconvenience in free movements. The third case was one of rheumatism of the right lower extremity with sciatica. The patient had previously suffered for an entire winter. The present attack was of eight days duration. The patient could with difficulty take a few steps, and suffered severely also at night. The treatment consisted in injections of a two per cent. solution of carbolic acid. At first twelve insertions were made each day, and the number was gradually increased to forty every day or every second day. After the second day the patient was able to stand upright and to walk with tolerable ease. The nights were restful. Fourteen series of injections were made and the patient was entirely relieved of pain. No symptoms of carbolic acid poisoning were observed even when forty insertions were made at one sitting, amounting to 12 minims of carbolic acid. Dr. Kurz states that the injections should be made into the muscle itself, and not immediately beneath the integument. In parts where there is considerable overlying adipose tissue, as in the thigh, he plunges the needle perpendicularly into the limb as far as it will go. No pain is caused by a two per cent. solution, or at most only a very slight burning sensation. Each injection consists of fifteen drops of the solution, containing three-tenths of a minim of carbolic acid.—*Memorabilien*, December 30, 1882.

LOCAL EMPLOYMENT OF BORACIC ACID.—Dr. King relates several cases (*Memorabilien*, December 30, 1882) of the successful employment of boracic acid in affections of the mucous membranes. Four cases of vaginitis of long standing in little girls were promptly relieved by the local application of the remedy. In quite a large number of cases of leucorrhœa, due to cervical catarrh, a cure was effected by tampons of boroglycerine or by boracic acid in powder. In a case of ozœna of forty years' duration considerable relief was obtained by boroglycerine (2 parts in 10) applied on cotton. In several instances of pharyngitis with posterior nasal catarrh the troublesome symptoms rapidly disappeared under treatment by boracic acid in powder.

CONVALLARIA MAIALIS IN HEART DISEASE.—Dr. Berthold Stiller has met with very indifferent success in the treatment of heart disease with convallaria. He reports upon twenty-one cases of various forms of disease, in patients aged from eleven to seventy years. The drug was administered in infusion ($\frac{3}{4}$ –1 to the pint) in tablespoonful doses every two hours. In seventeen of the cases absolutely no results were obtained. In two there was a slight increase in the amount of urine, but no improvement in the other symptoms, and no diminution in the anasarca. Indeed, in one case, the œdema actually increased during the administration of the remedy. In one case of weak heart with general anasarca, a slight improvement was noticed after the convallaria had been taken for twelve days. The pulse was dimin-

ished in frequency and strengthened; the œdema of the scrotum, though not of other parts, subsided, and the patient expressed himself as feeling better. In another case of mitral and aortic insufficiency with general anasarca, digitalis had been taken for some time, during which the symptoms became worse. Convallaria was now given with apparently good result. The dyspnoea was lessened and the excretion of urine increased, but there was no improvement in the irregular action of the heart or in the dropsy. The reporter raises the question, however, whether even this slight amelioration may not have been due to a cumulative action of the digitalis previously administered. From these experiments Dr. Stiller concludes that convallaria, so far from being an efficient substitute for digitalis, is not worthy of even ranking as an adjuvant to this remedy in cardiac disease. He admits, however, that the specimens of convallaria used by him may have been of quality inferior to that employed by other observers, who have reported such brilliant results.—*Wiener Med. Wochenschr.*, November 11 and 18, 1882.

HISTOLOGICAL CHANGES IN THE SKIN IN MEASLES AND SCARLET FEVER.—Neumann states that the principal changes in the skin in these diseases are met with in the glands and blood-vessels. The latter are dilated and surrounded by a round cell proliferation which even accompanies the capillary loops in the papillæ. Similar changes are observed in the sweat-glands, although the surrounding cutaneous tissues are free from the infiltration. About the sebaceous glands the new growth is deposited chiefly at the under part. It never is found within the walls of the glands. The arrector pili muscle is always infiltrated. In scarlet fever the cutis and epidermis also participate in the inflammatory process. Clinically, it is important to remember that this round cell exudation extends even into the horny layer of the epithelium. The epidermis presents numerous cracks and fissures which seem to be filled with round cells and blood-corpuscles. In like manner the cuticular fibres are compressed by the new growth, and in places are dislodged by aneurismal dilatations of the blood-vessels. The contagious properties of the epithelial scales are due, the author believes, to the above-mentioned changes in the epidermis.—*Wiener Med. Wochenschr.*, November 18, 1882.

DOUBLE EXISTENCE.—Dr. Verriest relates the case of a woman who passes her life in two entirely distinct and alternating states. In one of them she can talk, but cannot swallow liquids; in the other she is able to swallow, but is deprived of all power of speech. While in one state she remembers perfectly all that has happened previously in that same state, but is totally oblivious of everything that occurred in the alternating existence. Lately, a third state has developed, the external characteristic of which is a total paralysis of the right leg. All remembrance of this condition is also lost when once the patient has emerged from it.

A similar case has been recorded by Jessen. A young woman fell suddenly into a deep sleep, and upon awakening had lost all memory of past events. She was obliged to relearn to read and write, and to make the acquaintance again of persons with whom she had formerly associated. After a few months she returned to her former condition. Thus she continued to alternate between the two states of existence, the change being always preceded by a deep slumber. Memory was retained only for events happening in the like states, and was lost for the alternating periods. Two other cases of like nature have been reported by Schroeder v. d. Kolk and Azam.—*Deutsche Medicinal-Zeitung*, November 23, 1882.

MUSTARD AND MOLASSES.—Dr. Tyson, of Philadelphia, recommends the addition of molasses to mustard in making plasters. This furnishes a mild persistent counter-irritant which can be worn for hours.

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CEREBRAL LOCALIZATION AND THE PSYCHICAL FUNCTIONS.

WITH regard to the general physiology of the cerebral hemispheres there is little doubt or dispute.

If Hippocrates really taught (what is by no means certain) that the brain is a cold inert gland, of no use but to secrete phlegm and cool the blood, the school founded by him soon promulgated a different doctrine, and one celebrated treatise ("on epilepsy"), attributed by some critics to Hippocrates, but probably of a later date, defines the functions of the cerebrum in a manner which could hardly be improved by any modern, except in the way of amplification and precision. Galen, in the second century of the Christian era, first gave authoritative statement to the doctrine of cerebral physiology which henceforth prevailed for more than fourteen centuries, and which, with some slight modifications of phraseology still holds. Galen had observed cases of paralysis from brain disease, the perturbations of intellect which arise from cerebral inflammations, the abolition of consciousness and volition which follows an apoplectic stroke, and the partial losses in the psychical sphere (amnesia, aphasia, etc.), which commonly attend a return to consciousness after apoplexy.

It can hardly be said that much was added to the sum of knowledge of cerebral physiology taught by Galen, till the modern era of experimentation on animals commenced—an era almost dating with the beginning of this century.

If the physician of the olden times obtained important scientific data respecting brain-function from clinical observation, aided now and then by the autopsy, the phenomena of dementia and mental alienation being also of great suggestive value, his modern successor is able to utilize all these facts, and to greater advantage, since the means of precision have been multiplied, and cerebral physiology has received a powerful reinforcement from comparative neurology.

In accordance with what logicians call the "method of concomitant variations," the physiologist studies the gradations of the brain and nervous system throughout the animal series, and observes like gradations in the powers of mind. The effects of toxic agents and stimuli in altering cerebral function are also noted. By the "method of difference," i.e., removal of *parts* or the *whole* of the hemispheres, more important results still

are gained. Of course it is assumed, as the basis of these investigations, that throughout the entire animal kingdom homology of structure implies homology of function, and that inferences fairly deduced from carefully conducted experimentations, are legitimate inferences.

The only animals that have survived the entire removal of the cerebral hemispheres, so as to be subjects of experiment, are birds and cold-blooded animals. The general characteristics of animals so mutilated are alike in all. Though excito-motor and sensori-motor action (terms for which we are indebted to Dr. Carpenter) remain, ideo-motor and voluntary action are lost. "How admirable!" says Flourens, who must be credited with the first experiment of this kind, "all the organs of sense remain, and all the perceptions are lost."

With the loss of perception, volition, desire, judgment, and memory are lost. Automaticity is at its highest in these animals, the control of whose limbs is little dependent on voluntary acquisition, all the faculties and functions except the most psychical being fully developed in them at birth, and co-ordinated in the sensori-motor and spinal centres; consequently destruction of the cortical centres does not cause that paralysis of movement which is noticed (more or less permanently) in all animals higher in the scale of development. Such, at least, is Ferrier's explanation of that retention of motricity which succeeds the mutilation.

If it were possible in a human being to remove the cerebral hemispheres, and not produce such a shock as to cause immediate death; if the individual could survive such an operation as does the pigeon, we should undoubtedly witness a man reduced to the state of an automaton, without desire, without emotion, without perception, without volition. Nature does, in fact, produce the experiment for us, although the lesions are far more complex than those above described. There is a form of melancholia called by Baillarger, Ball, Etoc-Demazy, and others, *stupor*, whose material lesions produce suspension (by pressure) of the functions of the cortex, and whose psychological accompaniment is absence more or less complete, as the lesion is more or less general, of all mental manifestation. In pronounced cases the subject is listless, emotionless, and unconscious—remains fixed to one spot (like Flourens's bird), and seems as if deprived of his special senses. The characteristic lesion of this form of mental alienation, according to Etoc-Demazy, is œdema of the convolutions. In marked cases of general paralysis of the insane, intelligence and general motility are extinguished, anæsthesia and analgesia are complete; a dementia of the most absolute and hopeless kind exists. The autopsy always reveals, as the essential lesion, atrophy of the cortical layers of the hemispheres. The living protoplasmic elements are choked out and perish by reason of excessive development and thickening of the meninges and neuroglia. Dementia is acquired idiocy, and is always due to destructive lesions of the cortex; idiocy is due to congenital arrest of development of the cortex.

Hence we see that grave lesions of the encephalon, whether morbid or artificial (the result of experiment), are attended with enfeeblement or disappearance of the most noble psychical qualities, and that motricity also suffers in a marked degree. Whether there be distinct

psychical centres (as the phrenologists taught), or whether those portions of the cortex which are peculiarly the seat of mind act as a unit, so that *all* participate in feeling, volition, perception, etc., as Flourens believed, is not absolutely determined. The supposition that the brain "acts as a whole" (so far as the purely psychical operations are concerned), is quite in harmony with the results obtained by a gradual slicing away of the cerebral lobes, as performed by Flourens, Vulpian, and others, on pigeons. It also agrees with the results of lesions, as gunshot wounds, abscesses, etc., in the frontal regions in man, as well as with that integrity of consciousness which often attends complete hemiplegia when one hemisphere is extensively damaged. Goltz, who denies cerebral localizations altogether, believes that every portion of the cortex (those supposed to pertain to motricity, as well as others) is in relation with every function exercised by the hemispheres. His views are thus in harmony with those of Flourens and those of Brown-Sequard.

SIR WILLIAM THOMPSON ON THE SIXTH SENSE.

It is announced that the distinguished physicist, Sir William Thompson, ascribes to man six senses, namely, those of *force*, heat, sound, light, taste, and smell.

We apprehend that this announcement comes rather late in the day, as American text-books have for some time past taught this doctrine. As an instance we may mention "The Human Body," by Dr. H. Newell Martin, of the Johns Hopkins University, published in 1881. In this work Dr. Martin states, "We commonly distinguish five senses, those of sight, sound, touch, taste, and smell," and he then suggests that "temperature" should be added.

It will be noticed that both authors claim for man the possession of six senses, Sir William Thompson substituting "force" as a sense, for "touch."

Physiologists are indebted to the science of physics for an explanation of many facts which would otherwise baffle research, but we fear that the present excursion of Sir William Thompson into the domain of physiology will not prove a success.

A physicist describes "*force*" as being any action between two bodies, which changes or tends to change their relative condition, as to rest or motion, or, more generally, which changes or tends to change any physical relation between them. Our readers must not confound "*force*" with "power," the latter word having relation only to the work to be done.

It is difficult to read this definition of "force" and at the same time class it as a human sense, or to discover the sense organ involved. Our sense organs have a special relation to some one form of "*force*" or energy, but that "*force*" is external to the body, and acts merely as an irritant to excite our sensory nerves, and some organ is necessary for generating this nervous impulse. Where, may we ask, is the organ of force?

Unless Sir William Thompson considers that "*force*" is synonymous with "*touch*," it is incomprehensible how he can omit "touch" from the list of our senses. The organs of "*touch*," or the nerve-end organs in or immediately beneath the skin, have been described often enough, and, from an evolution point of view, touch is the first

distinctly differentiated sensation, and this primary position it still largely holds in our mental life; a man who could see but had no touch sense, would conceive solid objects very differently from the rest of mankind.

The delicacy of the tactile sense shows it to be one of the most valuable of our senses. For instance, we believe that a weight of .03 grain pressing on an area of .0139 square inch can be distinctly felt in the back of the fore-arm, and that on the front of the fore-arm .036 grain can be similarly felt.

Doubtless, muscular sensations are often combined with proper tactile sense, and moreover, temperature sensations are also involved, thus *pure* tactile feeling is rare.

Tactile and temperature feelings are ordinarily so very different, that we can no more compare them than luminous and auditory sensations, but we are aware that some persons maintain that they are identical. In favor, however, of the view that touch and temperature are sensations of distinct modality, with different end organs, nerve-fibres and brain-centres, several weighty facts can be produced. The regions of most acute discrimination for each sensation are different, and cases of disease are recorded in which persons have been extremely sensitive to variations in temperature, while their tactile sensibility was unaltered; and conversely, cases in which the patient could feel that he had been touched, but was unable to say whether with a hot or cold object.

It is impossible to do justice to this subject in the space at our command, but perhaps sufficient evidence has been given to show the necessity of withholding assent to Sir William Thompson's assertion, that "*force*," which is a form of motion, should be classed as a human sense.

THE PROTECTION OF COLLEGE STUDENTS FROM VENEREAL DISEASES.

PHYSICIANS living in college towns or in provincial cities near institutions of learning, not infrequently find themselves invaded by bands of students who are suffering from various forms of venereal disease. The history of the case generally is that these young men go off on a "frolic" to some neighboring place, get to drinking, and end their exuberance in some cheap brothel. Few escape becoming infected with venereal disease in some shape. This they are apt to neglect, or, at least, they fail to secure the best treatment, and serious results thus ensue.

There are certain reasons why especial attention deserves to be paid to the facts above stated. The young men or boys who enter college have as yet neither habits formed nor character matured. The social life fosters the natural exuberance of spirits, and opportunities to work them off are gladly seized. There is often considerable pride felt by these amateur men in being a little bad. It is very easy to go from one step to another, and end a sportive night with a dispenser of syphilis.

This thing is done with little knowledge of the physical—to say nothing of the moral—dangers which are encountered. With a class, therefore, peculiarly exposed and peculiarly susceptible to temptation, it is but right that some special care should be taken.

We urge it upon college faculties, therefore, to consider these special dangers to which their students are

intrusted. Let them inculcate directly, and not in spiritual generalities, the fact that the truer manliness lies in self-restraint and continence. If such appeals have no force, the real dangers should be portrayed; finally, it is but right that the erring but more or less noble victims of indulgence should be able to reach competent medical men. In some places this is not possible.

THE SUCCESSFUL TREATMENT OF EXTRA-UTERINE PREGNANCY.

THE interesting and important article in our last issue entitled "The Successful Treatment of Extra-Uterine Pregnancy," by Dr. A. D. Rockwell, has called forth numerous inquiries, and we take this method of answering them in a general way. Formerly, as is well known, these cases resulted either in immediate death through rupture of the distended tube, or in protracted suffering, with frequently a fatal ending, through the efforts of nature, to rid itself of the foetal mass. The only other alternative was the knife, with its attendant dangers.

The method described by Dr. Rockwell, on the contrary, and used with such uniform success, cannot but commend itself to the profession everywhere, and especially, as it is simple in its details, certain in its results, and attended with but comparatively little suffering or danger to the mother. We observe in this communication, however, one word of caution in the performance of the operation, which may well be emphasized, and this is, the possible danger, in cases well advanced, of rupturing the sac by too powerful, or injudicious applications. We can readily believe that this is a possible complication, but the total of cases reported is as yet too few for ultimate conclusions. Up to the second month there can be but little, if any danger, but, unfortunately, the pregnancy often advances considerably beyond this period, before its seat is discovered. Nature is not always a "kind mother," but in these cases there can be no question of her generous aid. It would seem that she supplemented the efforts of art by first encysting and then gradually absorbing the offending material.

THE IMPRESSIONIST SYSTEM IN MEDICINE.

WE have received, from an esteemed contributor in Ohio, the following letter:

"DEAR SIR: For the last three years I have been giving to my typhoid fever patients muriatic acid, with excellent results. The symptoms of meteorism and diarrhoea have appeared to be much less prominent. There have been fewer pulmonary complications also, and I believe that the mortality has been lighter, and that the patients have passed through the disease with fewer bad symptoms generally. My impression is, also, that the duration of the fever has been shortened. I have not notes of all my cases, but I am so convinced of the value of this acid that I venture to call the attention of your many readers to an old but somewhat neglected remedy. Yours, etc."

We publish this letter, for it illustrates so well the faulty and valueless system of reaching conclusions used by so many American physicians. Medicine is not an exact science, but so much the more is it necessary to use every possible means to make it such. We consider

the observations of our correspondent as of no use whatever. His conclusions are only impressions; the numerous factors which enter into the etiology and pathology of typhoid fever are not considered. The number of cases is not given, nor the age, or sex, or character of epidemic, if there was any.

Many a doctor, in treating disease, gives a certain remedy with apparently excellent result. Immediately he feels confident in his new drug; his views of subsequent cases are colored by his enthusiasm over a single success. His therapeutic method for years, in particular diseases, turns upon the happy ending of the first few cases. He is the victim of a rose-colored "impression."

This constitutes what we choose to call "the impressionist system in medicine." It is now and always has been the bane of therapeutical science. We have fashions in medicine, because fancy, more than exact method, so often determines what drug we shall use.

It would be well if some one could define for medical men the sources of error in reaching therapeutic truths, the minimum test which a drug must undergo in order to take rank as a remedy. This has been done in a certain indefinite way for some diseases, but we need more careful and extended determinations.

The impressionist method is very well in art, which interprets nature from an emotional standpoint, but only exact observation and careful deduction are allowable in medicine, which at least strives to be a science.

THE THIRD CORPUSCLE OF THE BLOOD.

DR. NORRIS, of London, in his book on "The Physiology and Pathology of the Blood," claims to have discovered a third or invisible corpuscle of the blood, which he regards as identical with the hæmatoblasts of Hayem and the small blood-plates of Bizzozero. The soundness of his theory rests entirely on the demonstration of the presence of the invisible corpuscle as a normal element of the blood. He claims that he has made this satisfactorily, and gives in evidence a large series of photographs which illustrate his views.

A "criticism and refutation" of Dr. Norris's theories regarding this body has been published by Mrs. Ernest Hart, of London, in which the writer claims that Dr. Norris's conclusions are based upon "illusions engendered by his peculiar methods of working," and reviews the successive steps in his processes with a keenness which is both searching and interesting.

Evidently Dr. Norris's critic is not a novice, for everywhere a familiarity with the action of reagents and the influence of mechanical conditions is shown that speaks of practical manipulation and study, and therefore the physiologist and the histologist must give her work careful scientific attention. The pamphlet also tells us that this is not the first time its author has criticised Dr. Norris's work, and in order that the reader may understand exactly upon what the controversy centres it will now be necessary to state briefly the view held by that author. He describes what he calls the "advanced lymph-disk," somewhat smaller than the red disk, colorless, transparent, and homogeneous, and states that it is found in the lymph-glands, is present in larger numbers in the thoracic duct, and is incapable of being seen in the

blood because it has the same refractive index as the liquor sanguinis, and has not become colored by endogenous secretion of hæmoglobin. These bodies, says Norris, are the nuclei of the uninucleated corpuscles seen in such abundance in the lymph and blood-forming organs, which, either while remaining in the gland or during their passage through the thoracic duct, shed their close-fitting, granular cell-wall. When colored they are visible, and are then seen as red blood-corpuscles.

Certainly this is an ingenious theory, and we share in the "genuine regret" expressed by the writer of the criticism, that any one should feel forced to conclude that it is based upon error in observation. We also share in the belief that only the most diligent investigation, conducted by the most conservative methods can place such a theory upon a solid basis, "so delicate and unstable are the blood-corpuscles, so careful and exact must be the conditions under which they are examined after quitting the vessels, and so guarded and cautious must be the deductions drawn from appearances presented under the microscope." All these conditions seem to have been fully appreciated, and their influence carefully estimated by Mrs. Hart. The effect produced upon the corpuscles by pressure between two glass surfaces bound firmly together, the question whether all red corpuscles lose their hæmoglobin in an equal ratio, whether there is any difference in the quality of these bodies, the effect produced by solutions having a different refractive index, points bearing directly on the question at issue, have been considered closely, and the sources of error eliminated so carefully, the reader is led to the conclusion that Dr. Norris's theory has been shivered to a degree which will render it difficult to collect the fragments.

News of the Week.

TENEMENT-HOUSE CIGARS.—The bill before the State Senate to prevent the manufacture of cigars in tenement-houses, or in apartments occupied as dwellings, has been ordered to a third reading without opposition. Mr. Covert made a statement that several authentic cases had occurred of serious diseases having been communicated to smokers of tenement-house made cigars, and the cigar-smoking Senators, who comprise a large majority of the thirty-two, immediately gave their adhesion to the bill, in spite of the certificate of the Board of Health that there was nothing dangerous or detrimental to health in the business of tenement-house cigar manufacturing.

A MUTUAL AUTOPSY SOCIETY.—Our esteemed contemporary, the *Philadelphia Medical and Surgical Reporter*, refers to the fact that Gambetta belonged to the Société d'Autopsie Mutuelle, and urges the formation of similar societies in this country. Such an organization has existed for some time in New York City.

A CHAIR OF LARYNGOLOGY has been established in the Royal University of Rome, and Dr. Zawerthal has been appointed to fill it.

AN EPIDEMIC RESEMBLING CHOLERA has been prevailing in Waterbury, Conn. It has affected hundreds of people. The cause is not yet known.

THE LOUISVILLE MEDICAL NEWS comes to us without its brown cover and enlarged to sixteen pages.

THE CHICAGO MEDICAL REVIEW has become *The Weekly Medical Review*, and is published simultaneously at Chicago and St. Louis.

THE PHYSICIAN AND THE DRUGGIST—A MEDICO-LEGAL DECISION.—About a year ago Martin McIntyre, a Fonda, N. Y., druggist, put up a prescription for John Cook, written by a Dr. Parsons, of Fultonville. The medicine nearly killed Cook. The physician claimed that the prescription had been altered, and commenced an action against the druggist for damages. The prescription called for one drachm of podophyllin. Dr. Parsons claimed he had written it one grain, and that it had been altered by the druggist to cover up his mistake. The case was tried recently. On the trial McIntyre swore the prescription had not been altered and Dr. Parsons swore it had. Two experts testified that no alteration had been made. Another question in the case was whether or not the druggist was justified in putting up a prescription in which he noticed a dangerous excess of any ingredient. Judge Landen ruled that if the prescription of a regular practising physician is put up as written, the druggist is not responsible. The jury decided that the prescription had not been altered, and therefore no cause for action.

REGULATING MEDICAL PRACTICE IN MICHIGAN.—The Michigan State Board of Health, at its recent meeting, passed the following resolution: That an examination should be required of all who are to practise medicine in this State, as to their qualifications. That such examinations should be restricted to questions in demonstrable knowledge as distinguished from questions of mere opinion.

AMERICAN PUBLIC HEALTH ASSOCIATION.—A meeting of the Executive Committee of the American Public Health Association was held in Washington, D. C., on Friday, the 16th inst. The business before the Committee was the arrangement of the programme for the next annual meeting of the Association to be held in Detroit next fall—October or November, as the Committee decides.

The committee is composed of Drs. E. M. Hunt, President of the Association; Albert L. Gihon, James E. Reeves, J. Berrian Lindsley, Azel Ames, John S. Billings, G. P. Conn, Thomas J. Turner, J. J. Speed, Thomas L. Neal, H. D. Fraser.

THE LIBRARY OF THE LATE DR. GEO. M. BEARD.—We learn that the library of the late Dr. Geo. M. Beard is being catalogued, with a view to disposal by auction.

MORE ABOUT BROKEN THERMOMETERS.—The subject, "broken thermometers," has developed into an important branch of the general department of fractures, and will soon have a literature of its own. We continue to receive communications upon the subject.

Dr. G. M. Kells, of Cincinnati, O., says that a better plan than any yet recommended to save thermometers is the following: "Take any ordinary thermometer case (the wooden ones are the best for the purpose), throw around it a piece of wire just below the junction of the top and body of the case, and twist it tight, leaving an eye on the end of the wire. To this eye attach a chain

about four inches long and secure to the vest with a small pin, the thermometer to be carried in the upper vest pocket."

Dr. Z. T. Dellenbaugh, of Cleveland, O., suggests a plan which must certainly be very effective. He writes: "Having a metal case with enough loose wool in each end to hold the thermometer rather firm; and having procured a rather heavy piece of corrugated, preferably, or plain white rubber tubing one inch longer than the case, it is cut in two pieces at a point corresponding to the screw-joint of the case, so that each piece is one-half inch longer than the part of the case it is designed to cover. Wet the tubing and slip the case in, noting that the rubber projects one-half inch beyond each end of the case. This rarely ever falls out of the vest pocket; should it, the protection the rubber affords is almost certain to save the instrument."

Dr. C. Irving Fisher, of Holbrook, Mass., writes that he has always been lucky with thermometers, and ascribes it to the fact that he buys short ones with metallic cases. Over each end of the case he slips a six-sided rubber tip, such as are used on lead pencils. This prevents slipping from the pocket.

REMOVAL OF A BEAN PIECEMEAL FROM THE EAR.—Dr. T. Y. Sutphen, of Newark, N. J., sends us an account of a case illustrating the difficulties and accidents in removing foreign bodies from the external auditory meatus. A boy, eight years old, was brought to Dr. S. with a common white bean in his ear, which he had placed there two weeks before. Attempts had been made by others to remove the body by the use of the syringe and instruments. These had only resulted in injuring the canal, which was swollen so as to hide the bean from sight. There was a muco-purulent discharge from the ear. The boy was etherized, and an attempt was made to remove the body with a syringe, but it failed. The ear was then syringed with warm water, for four days, which reduced the swelling somewhat. The bean could be seen, and was immovably impacted. With a lance-shaped paracentesis needle, the bean was broken up, with the help of a bent probe, and removed.

THE MEDICAL LIBRARY OF THE LATE DR. J. FOSTER JENKINS, of Yonkers, N. Y., was sold at auction last week. There were one thousand eight hundred lots and about four thousand volumes, not including miscellaneous pamphlets. The library was particularly rich in the literature of obstetric medicine and surgery, from the end of the fifteenth century to the present day. All the specialties were represented, even to atlases and bibliography. A large number of works in black letter, rubric, and some MSS. brought high prices, while some books out of print were sold astonishingly low. Aside from the large purchases of dealers, several public libraries of Boston, Washington, and New York secured handsome additions. Some private libraries in this city will be enriched chiefly from the special departments of medical literature. The collection is said to have cost its late owner \$12,000. The proceeds of sale were about \$4,000.

AN ARMY MEDICAL EXAMINING BOARD TO MEET IN NEW YORK.—An Army Medical Board has been ordered to assemble at the Army Building, corner of Houston and Greene Streets, New York City, March 1,

1883, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the Medical Corps of the Army, and will probably continue in session about three months.

All candidates for appointment in the Medical Corps must apply to the Secretary of War for an invitation to appear for examination. The application must be in the handwriting of the applicant, must state date and place of his birth, and place and State of which he is a permanent resident, and must be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character, and moral habits; testimonials as to professional standing from Professors of the Medical College at which they graduated, should also accompany the application, if they can be obtained. The candidate must be between twenty-one and twenty-eight years of age (without any exceptions), and a graduate of a Regular Medical College, evidence of which, his Diploma, must be submitted to the Board.

Further information regarding these examinations, and the nature thereof, can be obtained by addressing the Surgeon-General of the United States Army, Washington, D. C.

POISONING FROM THE PRESCRIPTION OF A CLERGYMAN.—Clergymen are very fond of dabbling in physic. This sometimes leads to serious consequences. The Rev. Mr. Timins, of West Malling, England, has just been committed for trial on a charge of manslaughter. The reverend gentleman appears to have been in the habit of prescribing gratuitously for the members of his flock on the strength of a short period of medical study nearly half a century ago. On the present occasion he administered a spoonful of the essential oil of bitter almonds to a young girl for some supposed complaint, and she died in his arms in a few minutes. His intentions were doubtless good, and it is pitiable to see a clergyman of hitherto unblemished character, and sixty-nine years of age, in such a position. Still zeal, untempered by knowledge, is not of much avail in the practice of medicine. Clerical minds have been too apt to busy themselves with the mysteries of medicine, and let us hope that the unfortunate position in which Mr. Timins now finds himself, may serve as a warning to others of his profession.

SMALL-POX AND THE IMMIGRANTS.—The Health Officer of the Port of New York reports that among the 300,000 immigrants landed in Castle Garden during the last eight months, not a single case of small-pox has been discovered.

GOVERNOR BUTLER AND THE MASSACHUSETTS BOARD OF HEALTH, LUNACY, AND CHARITY.—Governor Butler is credited with the intention to recommend to the Legislature of Massachusetts the abolition of the State Board of Health, Lunacy, and Charity, on the ground of expense, mismanagement, and practical inefficiency.

WOMEN PHARMACISTS.—A systematic attempt to educate women as pharmacists has been initiated in Louisville, Ky. The Academy of Pharmacy opens on March 1st with a class of women students. The Academy has received the gift of a laboratory and a botanic garden.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 24, 1883.

GEO. F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

PRIMARY CARCINOMA OF THE LUNG.

DR. E. G. JANEWAY presented a specimen removed from the body of a man fifty-six years of age. The clinical history was peculiar in the fact that patient's mother was the only relative who had had cancer, and that was an epithelial cancer which had been removed from the lip a number of years previous to her death, and the disease did not return. The patient began to complain, about one year before death, of not feeling well, but no marked complaint was made until about six months previous to death. His history was that of progressive failure of strength and flesh, a very slight febrile movement toward the latter part of his life particularly, 100° F. being the highest, pain in the right side from the beginning, and afterward some shortness of breath upon exertion. Dr. Janeway saw him about seven weeks before his death, and learned that of late the pain in the side had increased in severity. He found flatness over one-half of the right lung, a distinct friction sound over the upper part, with breathing somewhat bronchial and vocal fremitus impaired, and enfeebled and absent respiratory murmur over the lower part. The line of flatness was nearly horizontal. A hypodermic syringe was introduced, and only a very small quantity of bloody serum could be withdrawn. His presumable diagnosis, leaving it for demonstration at another visit, was cancer of the lung, and besides he thought it possible that a malignant process back of it involved the pleura. At his second visit he found no marked change in the physical signs. Exhaustion was increasing, there was no marked febrile movement, no renal trouble, and, by exclusion, he reached the diagnosis of cancer of the lung, perhaps of primary origin. At that time the patient complained of some disgust for food, but there was no special difficulty in swallowing, although he preferred liquids. He expectorated a slight quantity of mucus, which apparently came entirely from the throat. There was no bloody expectoration. The patient suffered markedly from dyspnoea on very slight exertion, and finally died from exhaustion.

The left side of the chest was normal, excepting a slight bronchitis, and this was the only abnormal condition found at the autopsy.

The specimen presented consisted of two parts: first, the right lung, in which the new growth involved the middle and lower lobes; and second, a mediastinal growth. There was no enlargement of glands above the clavicles. In the lung the neoplasm showed itself in the form of an infiltrated cancer, with nodular outgrowths taking up the pulmonary tissue entirely, especially at the peripheral part. The lung was separated from the diaphragm by a layer of fluid one inch and a half in depth, but the diaphragm was normal except where it was covered by a very slight fibrinous deposit. The mediastinal tumor consisted of a mass of enlarged glands at the root of the trachea. In this apparently uniform tumor the new growth had undergone considerable fatty degeneration. In the lung the new growth encircled the bronchi, and crowded their walls from without inward, so that they were apparently filled. There was a pin-head new growth in the lower part of the right lobe of the liver. All the other parts of the body, including the œsophagus, were normal.

From the history of the case and the appearance of the specimen, Dr. Janeway believed that the primary growth was in the lung, and that the mediastinal tumor was secondary. Microscopical examination showed alveoli of medium and large size, containing small polygonal epithelial mono- and bi-nucleated cells.

This was the fourth specimen of primary cancer of the lung which he had seen. In one case he made the diagnosis of carcinoma of the lung ten months before death, and at that time there was no other trace of the disease in the body, but at two months before death carcinoma began in the left breast, and at the time of death the latter growth had reached considerable size. In that case there was no mediastinal tumor, but there were secondary nodules in the liver and right lung. The patient's father died of carcinoma of the stomach, and a cousin had lympho-sarcoma of the pleura.

In the third case it had been supposed that the patient had pleurisy, but the autopsy revealed primary colloid carcinoma of the entire lung. The lung and the liver were the only organs involved.

DISSECTING METRITIS.

DR. H. J. GARRIGUES presented three specimens, all obtained at the Maternity Hospital. About three months ago he exhibited a specimen to the society, illustrating this pathological lesion, and then stated that he regarded it as a rare disease. Since that time he had been able to find the records of two cases. Even in special works on the pathology of the female sexual organs no reference whatever has been made to such cases. Besides, he had asked a large number of physicians, whom he had met, if they had observed loose bodies in the womb after confinement, but all of them had answered in the negative. Nevertheless, he began to surmise that the disease was not so rare as might be inferred from the literature of the subject.

The first specimen presented was derived from a primiparous woman, eighteen years of age. There had been a low forceps operation, very simple in character. She did not seem to be seriously ill at any time; her highest temperature was only 102° F. At no time was there any fetid discharge, and no uterine treatment was instituted. On the thirteenth day after delivery she expelled a cylindrical body which was six centimetres in length by two and a half in width.

The second specimen was also removed from a primiparous woman, eighteen years of age, and in this case there were extensive diphtheritic patches on the vaginal wall and cervix. Her highest temperature was 102.5° F., and that only once. On the eighteenth day after delivery, when she was apparently entirely recovered from her labor, she expelled from the vagina a body six centimetres in length and three and a half in width, and one and three-tenths centimetres in thickness.

The third specimen was from a patient twenty-nine years of age, in whom there was retention of placenta. The placenta was removed, artificially, one hour and three-fourths after delivery, and was composed of two parts joined by membrane. This patient had a high temperature, 103.5° F., and, besides, the lochial discharge was fetid and almost constant. The uterus was washed out with a two per cent. solution of carbolic acid two or three times a day. She was comparatively well, although there was constantly some indication of slight septicæmic condition until, on the seventeenth day after delivery, she expelled from the vagina a body which was twenty centimetres long and thirteen wide, and of variable thickness. The house physician stated that it was one inch thick in some places when first expelled.

Dr. Garrigues remarked that some little time ago a specimen was presented to the society for a candidate, which he had always believed was of the same character. These, together with two cases reported by Russian physicians, made seven in all. He believed that they were diphtheritic in character. In two out of his four cases, there was pronounced diphtheritic inflammation. In the others there was not sufficient disturbance to lead to a vaginal examination. How these large bodies are thrown off he had been able to understand by the study of another condition, in which the change was simply diphtheritic. In that case there was pronounced metritis, the

wall of the uterus measured from one to two inches in thickness, and there was diphtheritic membrane on the cervical mucous membrane, and in the interior of the body of the womb, around the opening of one of the Fallopian tubes. On the other side there was a patch of diphtheritic membrane of the size of a three-cent piece, and from this small patch he was able to follow a similar yellowish formation coming out of the external part of the uterus so as to form a layer just below the perineum. Associating the thickening of the uterine wall and this yellow mass extending in two directions, he was able to understand how it was possible that such pieces can be thrown off from the uterus. He did not regard the process as especially unfavorable. There is this danger, however, that if the person again becomes pregnant, there is likelihood that rupture of the uterus may occur during labor.

DR. J. C. PETERS remarked, that in the last volume of the "Transactions of the Edinburgh Obstetrical Society," a series of such cases were reported, and were spoken of as positive sloughs. So far as he recollected, however, almost all the patients recovered. He thought it probable that they belonged to the same class of cases described by Dr. Garrigues.

DR. GARRIGUES thought that his cases could not be regarded as those in which sloughing had occurred, because there was not the least fetid odor to the discharge, except in the last one.

THE PRESIDENT said, that in the specimen presented for a candidate, and referred to by Dr. Garrigues, the body expelled was several inches in length, about an inch in width, and contained smooth muscular fibre in its substance. There being some question as to the structure of the mass, it was examined by a distinguished gynecologist, who presented it at a meeting of the New York Obstetrical Society, and asserted that it was composed mostly of striated muscular fibre, with the conclusion that it might possibly be the muscular fibre of the heart of a monster, the heart being the only portion remaining within the uterus.

DR. JANEWAY said that small polypi might exist in the pregnant uterus, become detached during the progress of labor, and appear subsequently in the discharges. He thought that a true dissecting metritis was a serious process. In several instances, at post-mortem examinations, he had found evidence that a septic fluid from an inflamed uterine mucous membrane had found its way into the blood-vessels, and led to the formation of a thrombus in the vena cava, and he had been led to believe that it was not a process which terminated in recovery in very many cases.

DR. BOZEMAN thought the explanation given by Dr. Janeway was very satisfactory, concerning the formation of some of these growths, and referred to a specimen, already presented to the society, of a myo-fibroma expelled from the cavity of the uterus. A miscarriage took place, and six weeks subsequently a body of considerable size was thrown off.

DR. GARRIGUES thought that the explanation offered by Dr. Janeway was very ingenious, and perhaps would apply to two of the specimens which he had presented. He thought, however, that it would not apply to the third case because the shape and size of the mass was unlike that of a polypus. Neither did he think it would apply to the specimen presented by the president in behalf of a candidate, because in that instance the substance expelled was a sheet-like piece of membrane, several inches in length, and only of slight thickness and considerable width. In reply to a question, Dr. Garrigues said that he was able to prove the existence of diphtheritic infection in two of his cases, and inferred that it existed in the others.

DR. JANEWAY remarked that he had seen two cases in which there was complete exfoliation of the mucous membrane of the bladder. In one instance it was discharged before death, giving rise to a condition closely

resembling labor, and in the other he found a cast of the bladder at the autopsy. The lesion was regarded as a croupous inflammation of the bladder.

DR. PEABODY had seen one such specimen in the bladder of the horse.

DR. GARRIGUES believed that it could be proved that his specimens were not mucous membrane, because there was no trace whatever of glandular structure. He had seen only one case of shedding of the mucous membrane of the uterus, and that was in the practice of Dr. Jacobi.

DR. BOZEMAN had seen a case of what he termed ulceration of the bladder, in which nearly the entire mucous membrane was thrown off. In that case there was very great hypertrophy of the muscular coat of the bladder, the wall of the organ being three-fourths of an inch in thickness. He made an opening into the vesicovaginal septum about the size of a half-dollar, and the patient was relieved of the tenesmus and other symptoms, and went on very well for two or three weeks when the opening closed, and he was obliged to make another and increase it nearly to the size of a silver dollar. After the second opening was made he was able to explore the bladder completely with the finger, and was also able, placing the patient in the knee-elbow position, to see, by the aid of reflected light, the entire inner surface of the bladder and found that it was denuded of its mucous membrane. The progress of the case after the second operation was satisfactory, the muscular coat gradually became thinner and softer, and after six or eight months he performed an operation for closure of the fistulous opening, but it was subsequently demonstrated that the cure had not been complete. The former symptoms again developed, the bladder was again opened, and the patient was allowed to go six or eight months longer. In the meantime her general health improved. Subsequently an operation was performed for closure of the fistulous opening, and the cure was complete with a perfect reproduction of the mucous membrane. He thought the condition resulted from an ordinary attack of cystitis, and believed that it was the only one of a similar character on record.

DR. G. L. PEABODY presented a specimen of

SARCOMA OF THE RIGHT OPTIC NERVE.

The patient was in the New York Hospital about two weeks, and complained of general malaise, loss of appetite, inability to work and sleep. He went on into a condition of apathy, which lasted for ten days, and then symptoms of cerebral disturbance became well pronounced. He died with a diagnosis of meningitis, based upon the clinical history. At the autopsy, there was found meningitis and intense congestion, and there were two small deposits of pus, neither of which was large enough to make him sure of their existence from examination with the naked eye. Besides, he found a small tumor upon the right optic nerve about half the size of a small French pea. The tumefaction upon the optic nerve was largely fibrous in character, but between the fibres of the optic nerve itself was a dense layer of small round cells, and ascending between them in this stroma were large blood-vessels filled with blood. The interpretation which he gave to the case was that the sarcomatous tumor developed on the optic nerve and caused meningitis. It probably had existed for some time, but was too small to produce physical evidence of its presence.

DR. JANEWAY said that he had seen a little larger tumor than this produce similar trouble in a case brought to him by Dr. Maxwell. An oculist had operated upon the patient for internal strabismus. Shortly afterward the patient died of general paralysis. At the autopsy there was found a small sarcoma, not larger than half a split pea, which pressed upon the sixth nerve and led to softening of the pons, and in that way caused death. The paralysis of the ocular muscle was due to

the pressure, but death occurred from acute softening of the pons. He had also had another case, in which a small tumor pressed upon the cervical dura and gave rise to symptoms of acute meningitis. Of course, in meningitis it was necessary to think of the various sources of possible origin. In one case lately, he had found well-marked otitis media purulenta without symptoms during life, and it had doubtless given rise to meningitis. In a second case, one of ordinary typical cerebro-spinal meningitis, there was well-marked otitis media purulenta.

DR. PEABODY said he had observed the same thing, and had found in acute cerebro-spinal meningitis, otitis media purulenta where there was no suspicion during life of ear trouble.

DR. J. L. SMITH remarked that it was a well-established fact that in cerebro-spinal meningitis, if the disease continued for some time, inflammation of the middle ear is liable to be developed.

DR. T. E. SATTERTHWAITE presented specimens as follows :

ABSCESS OF THE LEFT SUPERIOR MAXILLA—OPERATION
—EMBOLIC PNEUMONIA AND HEPATITIS.

Post-mortem examination of Dr. George M. Beard, January 24, 1883, at 3.15 P.M., death having occurred on the previous day at 10.30 A.M.

Present at the examination, Drs. J. L. Little, J. R. Leaming, T. H. Kellogg, G. H. Mitchell, D. H. Goodwillie, W. H. Porter, J. A. Hegeman, Charles L. Dana, J. Messenger, and T. E. Satterthwaite.

The following account of his illness was furnished by the physicians who had him under charge.

On Thursday, January 18, 1883, about 10 A.M., Dr. Beard called at the office of Dr. D. H. Goodwillie. He was then suffering from an infra orbital neuralgia of the left side; his face was swollen, and his left eye congested; both pupils were much contracted; there was also stenosis of the left nostril, pus and mucus passing down from the left posterior nares into the pharynx. The root of the left second superior bicuspid had an amalgam feeling in it, and at its apex was a maxillary abscess having no communication with the mouth. Under an anæsthetic the bicuspid root was extracted, and the abscess trephined through the external alveolus. A good deal of pus escaped. It was now found that the maxillary abscess communicated with the left nostril. Dr. Beard was again seen at his rooms about 3.15 P.M., by Dr. Goodwillie. Dr. T. H. Kellogg was found in attendance, having been summoned by Dr. Beard, and visited him at 2.30 P.M. Dr. Beard was then recovering from a prolonged chill. Dr. Kellogg had found the patient sitting dressed on the sofa, but in evident distress. Antipyretics and stimulants were immediately ordered, and this treatment receiving the approval of Dr. Goodwillie, was continued on his arrival. At 4 P.M. the temperature was 104° F.; pulse, 95. At 8 P.M., the patient was again seen by Drs. Goodwillie and Kellogg. Marked constitutional depression existed. Temperature, 102° F.; pulse, 90. Dr. Kellogg then expressed his belief, in which Dr. Goodwillie concurred, that Dr. Beard was suffering from septicæmia. The patient was again seen by Dr. Goodwillie at 10 P.M. Temperature, 102° F.; pulse, 85. Face not painful. At 9 A.M. the next morning Dr. Goodwillie cleansed the abscess. There was now no pain and little swelling of the face. The chest was examined with negative results. A consultation was then arranged for 8 P.M. Drs. J. R. Leaming, J. L. Little, and T. H. Kellogg in attendance. Temperature was found to be 102° F.; pulse, 108. Little or no swelling of the face. No cough, but some pain in the right side, referred to the region of the liver. Mind clear. By general consent Dr. Little assumed the management of the case, with Dr. J. R. Leaming in consultation. On Saturday morning Dr. Goodwillie again saw the patient, and found that the symptoms were rather more unfavorable. The

night had been passed in restlessness. Temperature, 103° F.; pulse, 105. When seen by Dr. Little on this same morning the temperature was 104° F.; pulse, 100. A cathartic was administered. On Saturday evening the temperature had fallen to 102° F. The cathartic had acted briskly.

On Sunday morning the temperature had risen to 103° F. There was dulness on the right side, bronchial breathing and crepitations. On Sunday evening Dr. Leaming saw the patient and found pleuro-pneumonia, as had previously been diagnosed by Dr. Little, and in addition he detected adhesive pleurisy of the left side (plastic exudation). Temperature, 102° F., pulse, 104-8. On Monday morning the temperature had fallen to 101° F. Dr. Leaming then stated that the affection of the right side had progressed rapidly; in the left likewise. Face flushed; pulse rapid and variable. Monday evening: Temperature, 99° F.; patient cyanotic; great difficulty in breathing. Death occurred at 10.30 A.M., Tuesday, January 23, 1883. There was no sweating throughout the attack, and the cough had been slight, though the rusty expectoration of resolving pneumonia was observed during the last twenty-four hours of life.

Post-mortem examination by Drs. T. E. Satterthwaite, and W. H. Porter: Body well nourished. Rigor mortis only slightly marked.

Thoracic cavity.—The costal cartilages contained an unusual amount of calcific material, considering the age of the deceased.

Pericardium and heart.—There was a slight excess of serum, which was clear, in the pericardial sac. Amount about one and a half ounce. The heart was found in its normal position, and neither its substance nor valves affected. The pulmonary artery contained a firm white clot, that was adherent to the wall of the vessels, and extended through the pulmonary valve into the right auricle.

Right lung.—This organ was not attached to the chest-wall at any point, but had apparently been attached recently, and then separated by the moderate pleuritic effusion that was found in the right pleural cavity. There was pneumonia of all three lobes. The lower lobe was in a condition of gray hepatization throughout; the middle lobe was solid at its outer extremity only, and was the seat of a large reddish gray, wedge-shaped infarction, the outlines of which were sharply defined by a narrow zone of vascular tissue; the upper lobe was solidified in its posterior and external portions. One inch below the right apex anteriorly there was a small nodule, which was taken to indicate the site of an old pleuritic adhesion. Along the anterior and lateral surfaces of the lower lobe, and in the interlobular fissures, there was a thick, yellowish white plastic exudation, easily detached, and evidently of recent formation. On pressure the right bronchus exuded a reddish and frothy mucus. On examining the left lung it was found to be attached to the chest anteriorly, by quite old fibrous adhesions situated in the mammillary line, and corresponding with the cartilages of the third, fourth, and fifth ribs. The apex was also attached posteriorly by old adhesions. The diaphragm was free. The lower lobe of the left lung was solid throughout.

The upper lobe was free. The secretion from the left bronchus was similar to that in the right. Along the posterior and axillary border of the lower lobe, the visceral pleura was rough, and exhibited traces of recent pleurisy. At the apex there was puckering of the lung substance, and on the anterior surface of the lobe there were depressed cicatrices. The substance of the lower lobe was deep red in color, soft, and almost pultaceous, especially near the line of the pleural exudation. It contained also in spots small areas of a grayish yellow appearance, corresponding to the distribution of the vessels, and having the appearance of small infarctions.

The *spleen* was enlarged, pale, and soft.

The *kidneys* were enlarged, soft and fatty. The capsules

were in the main non-adherent, and there was no ocular appearance of any considerable interstitial deposit.

Liver.—The right lobe was enlarged. Its substance also was extremely soft. On the surface of the right lobe there were numerous small superficial yellowish infarctions. The gall-bladder was normal in size and contents.

The *stomach* was dilated, and its mucous surface coated with a somewhat abnormal amount of mucus.

The other organs were not examined.

DR. PEABODY asked, Why is not the right lung a specimen of ordinary croupous pneumonia, clinically and pathologically?

DR. JANEWAY thought the appearance was that of ordinary gray hepatization in lobar pneumonia.

DR. SATTERTHWAITE said that so far as the lower lobe of the right lung was concerned it presented the ordinary appearance seen in the gray hepatization of lobar pneumonia; but in the upper portion of the middle lobe there was a large wedge-shaped mass, entirely different in appearance from the rest of the lobe; it was dryer than the other portions of the lung. This condition, together with the peculiar condition of the left lung, and the clinical history, he believed justified the conclusion that the case was one of embolic pneumonia.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 15, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. WILLIAM H. DRAPER read a paper on

DIET IN THE TREATMENT OF THE GOUTY DYSCRASIA.

The relations of food and normal nutrition, and the evolution of vital energy to the etiology and treatment of disease, constitutes some of the most interesting and important problems in the experience of the practical physician. It is one of the encouraging signs of the progress of scientific medicine that these problems are attracting wider and closer attention. The physician is nowadays expected to prescribe the diet as well as the drugs. It is only necessary to refer to the part which judicious feeding now plays in overcoming the consequences of malnutrition, originating either in inherited or acquired disease, to illustrate the change which has taken place in the medical mind with reference to the importance of the question of diet in its manifold relations to health and disease.

Before entering upon the immediate consideration of the subject of the paper, Dr. Draper made a few preliminary statements with regard to the accepted pathology of gout. Gout, as a disease, in the traditional acceptance of the term, is a specific arthritis characterized by the deposit of uric-acid salts in the affected articulations. Gout, as a diathesis, is an accumulation of uric-acid salts consequent upon either increased formation or defective secretion of the products of proteid metamorphosis. Recent investigations seem to indicate that the liver is chiefly concerned, not only in the metamorphosis of the carbo-hydrates, but also in the arrest and the formation of urea. Glycosuria and lithæmia in the same patient, and the frequent alternation of gouty and saccharine diabetes, are significant facts in the support of the common origin of these diseases.

The purely chemical theory of gout and its allied disorders, that it is a disease of suboxidation, has much to commend it, but it must be acknowledged that it is impossible to reduce the theory of defective oxidation to the simplicity of a chemical equation. Dr. Draper then presented some objections against this theory, such as the modification of the metabolism of the food in its chemical process by natural forces, hereditary complications, etc., and the fact that the uric-acid salts are pres-

ent in other conditions which are not necessarily accompanied by gout. Another fact worthy of notice in the consideration that excess of uric acid is an epiphenomenon in the disease and not the exciting cause, is that the power of digestion of farinaceous and saccharine foods in gout is markedly diminished. The conclusion was that the chemical pathology of this dyscrasia is still involved in considerable obscurity.

It is recognized by many that gout is a neurosis. The great variety of nervous manifestations arrest the attention in the history of the gouty person, and nervous exhaustion is well recognized as a frequent precursor of gouty disease. Again, the influence of certain diseases of the nervous centres furnish another striking analogical argument on the possibility of the nervous origin of the affection. But such considerations do not invalidate the humoral theory of the affection. The conclusion reached by the writer was that neither the chemical nor the neurotic theory is justified completely by the results of clinical experience. Whether gout is primarily a neurosis and determined by some chemical process, or whether it is primarily a chemical process and determined by some neurosis, were questions which at the present time it was impossible to answer.

The treatment of gout, based upon the theory that it is a neurosis, is chiefly successful in the acute arthropathic lesions of gouty origin. The treatment of the constitutional vice is more successfully managed upon the theory that it is due to suboxidation of foods. The treatment of the gouty dyscrasia involves primarily complete combustion of food, whether carbonaceous or nitrogenous, and has to be brought about partly by dietetic rules, partly by hygienic, and partly by medicinal treatment. The hygienic treatment embraces an abundant supply of oxygen, and the medicinal treatment the use of such drugs as facilitate oxidation, etc. The dietetic means involves the consideration of the quantity and the quality of the food best adapted to maintain health and nutrition. It is impossible to arrive at anything more than a proximate estimate with regard to the quantity of food. It is variable, and must be proportioned according to the age of the individual and his surroundings, and the amount of work he is to perform, etc. In infants the amount of food required in proportion to the weight of the body is from three to five times that required for an average ordinary working adult. In the adult regard must be constantly paid to the protection to be secured against heat and cold, and to the occupation of the individual. Excess of food may be positive or relative; that is, it may be either more than can be assimilated, or more than is required. The relation of the qualities of food in the production of the gouty diathesis may be very striking, and deserve investigation, although they are less important probably than the quantity. The farinaceous, the oleaginous, and the saccharine foods are especially indicated for the production of heat. A nitrogenous diet is best constituted to maintain the health and nutrition of persons who do not require a large amount of animal heat, and whose occupations are mental rather than physical.

Leaving the consideration of the principles which should regulate the diet, Dr. Draper remarked that the almost uniform counsel with reference to treatment of the gouty dyscrasia is, that albuminous foods should enter sparingly into the diet of gouty patients, and that the non-nitrogenous foods, especially the farinaceous, should constitute the principal aliment. His own observation had led him to the conviction that the uric-acid theory of the gouty diathesis is not supported by the results of clinical experience, and he was persuaded that restriction of diet concerning the non-nitrogenous rather than the nitrogenous foods is essential. If there is one clinical fact more obvious than another in this class of patients, it is the limited capacity they possess for assimilating the carbo-hydrates, the sugars and the starches. These substances are the most common source of

dyspeptic troubles. The clinical fact was well established that the conversion of the nitrogenous foods is rendered more complete when they contain a minimum amount of carbo-hydrates rather than by allowing the minimum amount of nitrogenous food.

The order of restriction in diet which he recommended was first with reference to sugars, especially in the state of fermentation, or ready to pass into that condition; second, farinaceous foods, and, third, fats.

Abstinence from all fermented preparations of alcohol was, perhaps, the most necessary in the order of restriction. There could be no question concerning the effects of malt liquors in the production of the gouty diathesis, especially of the stronger English and Scotch ales. The directions, therefore, with regard to fermented preparations of alcohol should be very strict. The absolute prohibition of beer should be insisted upon, and the less wine allowed the better. Sherry, madeira, and port should be especially excluded. If alcoholics were indicated, the safest preparation which could be employed was very dilute spirit taken with food, and never upon the empty stomach. Saccharine food should be restricted. The common experience of the gouty individual confirms this statement.

The amylaceous elements were the next in order to be restricted, and pure starchy foods, such as potatoes, corn, and rice, and even wheat and barley, provoke indigestion. According to his experience the fats were easily digested by most gouty dyspeptics. The value of milk in cases of persistent rebellious lithæmia was well known, and constituted a precious resource. Salads, cauliflower, cabbage, indeed almost all vegetables except those which are nearly all starch, may be used with safety. A person pursuing intellectual labor and leading an indoor life should take only a limited supply of food which requires oxidation, and had not better try puddings and the like, or endeavor to quench his thirst with beer or wine.

The paper being before the Academy, the President invited DR. A. HADDEN to open the discussion, who remarked that Dr. Draper had recommended a line of treatment very much like that which he had pursued during the last four or five years in the treatment of gouty patients. However much it might be against the practice which had obtained very many years, the clinical facts, as he had already taken occasion to state elsewhere, were well established. The use of nitrogenous food, fully allowed, had counteracted the influence of the gouty dyscrasia, and especially so in subacute and chronic cases. The urates in the blood and also in the urine had been diminished by this plan of treatment, and cutting off as far as possible the use of saccharine and starchy foods. Dr. Hadden then spoke at some length concerning observations which had been made with reference to the presence of uric-acid salts in birds in captivity, such as the parrot, pigeon, and domestic fowl, and its absence in the wild birds, such as the eagle and the vulture, etc., and also spoke of similar observations made upon domestic animals. It was quite conclusive in his mind that the line of treatment advocated would solve the perplexing problem of the gouty diathesis.

DR. PUTNAM-JACOBI remarked that the question of suboxidation was certainly most interesting, and seemed to her unquestionably true as brought forward by Dr. Draper; but simply to state that certain substances did not pass through their normal term of oxidation was not offering any explanation of the fact, certainly did not bring into any single expression the effects of heredity upon various manifestations of gout and the nervous phenomena which exist, either as a cause or as a consequence of it. She referred to the experiments of Pettenkofer and Vogt on the respiration, who had developed one fact of special interest in connection with this subject, namely, that the amount of oxygen taken up in the blood is in proportion to the amount of albumen stored up in the tissues of the animal experimented upon. It was well

known that, contrary to previous expectation, it was extremely difficult to increase the amount of oxidation by increasing the amount of oxygen. By increasing the quantity of oxygen presented to the lung the increase of oxygen which entered into the blood was very trifling; but in proportion to the increase of the albumen in the food, there is a measurable increase in the quantity of oxygen taken in, and especially that which remains stored up in the tissues. This was the result of the experiments of P. and V. Further, it was determined that the oxidation of the circulating albumen is not carried on by means of oxygen absorbed at the time, but by means of oxygen which is stored up in the tissues from previous respiration. Thus, the difference between the amount of oxidation which goes on in the day and the night is considerable; more oxygen is taken in through the day, and more oxidation goes on during the night.¹

The last terms in the long and complicated process of proteid metabolism are probably defective in gouty persons, and the extraordinary nervous manifestations, such as pertain to the heart, mental depression, etc., are especially associated with the deficient evolution of force resulting from this. It was very certain that the source of the uric acid is by no means always the result of incomplete development of urea. There is no constant relation between the excess of uric acid and deficiency in urea. It is also certain that a person in whom the gouty constitution exists may sometimes have a most profound hypochondriasis and be almost upon the verge of insanity, and yet no lithates nor quantitative excess of uric acid be found in the urine. She had had one such patient under observation, who was cured by an exclusively milk diet. She added her testimony to that of Dr. Hadden with regard to the utility of purely meat diet in irregular lithiasis, and had a great many cases which would prove it, as shown by quantitative analysis of urine giving a fall of uric acid under its use. She would like to ask Dr. Draper what he did to enable the patients to tolerate the meat diet when any difficulty was experienced in taking it.

DR. H. G. PIFFARD remarked that, some seven or eight years ago, he read a paper in which he advocated precisely the same views presented by Dr. Draper, and also referred to a paper read by Dr. Draper at about the same time, and of the same intent, namely, that gout was due in a great measure to failure of complete oxidation of the peptones, and that a hesitancy in the oxidation process led to the formation of certain acids. He thought that that view was combated by Dr. Hadden's theory and also by his facts. However, stepping aside from theories, the practical fact remained, that if we wished to be good livers we must have good livers, else we shall suffer from over-indulgence. He thought it would have been well if Dr. Draper had called attention to the fact that the effects of these various articles of diet is more apparent now than twelve or fifteen years ago, and he believed it to be due largely to the use of glucose in the manufacture of beer and wine, especially American wine. Many of the German wines, particularly Rhine wine, also contained considerable glucose.

DR. F. P. KINNICUTT corroborated the clinical experience referred to by Dr. Draper, and also spoke of the intimate relation existing between diabetes and lithæmia.

DR. JANEWAY remarked that when milk diet was spoken of as purely nitrogenous, it must be admitted that a considerable quantity of sugar was taken, and also sugar which admitted of acid fermentation.

It seemed to him, from what he had seen of gout, that the main thing should be, so far as possible, to avoid dyspeptic occurrences. This, perhaps, may be accomplished sometimes by the use of nitrogenous food, and at other times we are obliged to resort to the reverse.

Again, with regard to the pathology, if the neural

¹ It was this influence of stored albumen on the ingestion of oxygen that might probably explain why an excess of albuminous food will provide for its own oxidation and uric acid will diminish.

pathology is to be accepted, he thought we ought to see among the immense number of nervous patients gouty deposits more frequently than they are met with. According to his observation, gout was not of so frequent occurrence among nervous patients. There are other manifestations in the joints, but not gouty in character. Again, there came in the fact that gout might be determined by anæmia, and sometimes it is determined by some nervous affection, but when it did appear after some nervous phenomena, it was, perhaps, more likely due to the nervous action setting up a dyspeptic condition than acting primarily. He was inclined to accept the humoral pathology, so called, rather than the neural explanation of the affection.

THE PRESIDENT said it had seemed to him that every case of gout was a problem by itself, depending not only upon hereditary tendencies, but also upon the habits and surroundings of the patient, and also certain idiosyncrasies which make it impossible to settle upon any special plan of treatment for all. There are gouty persons in whom a single strawberry will bring on an attack; others in whom a single slice of watermelon will develop a paroxysm; still others who can eat strawberries and watermelons with the utmost freedom, and yet are unable to take the slightest quantity of roast beef. Other patients are unable to take wines or malt liquors, and at the same time may take whiskey. There are gouty patients who cannot take any alkalies without an explosion of the disease, but at the same time they are able to take strong acid wines with benefit. Several cases were related illustrating these points. The point which he wished to draw out from the author of the paper was this: It seemed to him that it was extremely difficult to lay down any system or plan of treatment or diet which will apply to all. Consequently the danger lies in our attempting to generalize and reduce any general law applicable to all cases.

DR. FLINT remarked that, concerning a comparatively nitrogenous diet, he was not prepared to offer any opinion at present. He remarked, however, that he believed we must go to clinical observations to settle many of these questions; that a sufficient number of cases treated according to this plan or that plan should be secured, from which to draw conclusions. He should feel doubtful about accepting any views concerning the pathology of the affection based either upon neurology or chemistry. He thought it desirable to collect a considerable number of cases, as nearly analogous as possible, with reference to determining, by a clinical study, which of all these forms of diet would accomplish most.

Another reflection was the consideration of the influence of heredity upon the gouty dyscrasia. Perhaps there is no disease, or but few at least, in which dyscrasia plays so strong a part as in gout. There are but few diseases in which heredity is more distinctly manifest. Then again, it is developed at a certain period of life, as a rule. Exactly in what some of these influences consisted cannot be said, but the fact should not be overlooked, and in our investigations we should make a large allowance for the existence of these elements and the differences in different persons.

DR. DRAPER, in closing the discussion, said that he had not had much difficulty in getting his patients to carry out the kind of diet recommended because he had rarely found it necessary to keep them upon a strictly and absolutely nitrogenous diet, such as Dr. Jacobi seems to have done. Occasionally he had been obliged to restrict patients absolutely from the use of sugar and to a very moderate amount of wheaten bread. He believed, however, that persons, as a rule, who were confined to a diet of this kind were very rebellious, and after a time it became necessary to grant them some indulgence. He had never found any difficulty in adding to the diet certain varieties of green succulent vegetables, and they certainly contributed a great deal to the comfort of the patient.

With regard to Dr. Janeway's remark concerning milk,

he admitted its truth. Milk contains a considerable quantity of sugar, and its administration is antagonistic to the theory that gouty patients do not digest sugar, but he believed that in the use of milk it is always necessary to give patients more or less of an alkali, and that when soda is given with the milk it is commonly very well borne.

He entirely concurred with Dr. Flint in his reflection that these questions must be settled by clinical observation, and in the review of the pathology of the affection which he gave, he endeavored to say clearly that the diet recommended could not be explained, nor justified, by either of the theories given. It was well known, and this point was worthy of special attention, that the diet which has been prescribed in gout forms a part of that which has been based upon the chemical pathology of the disease. He did not think that anybody could explain why a diet of animal food was the one which agreed with the majority of gouty persons. And yet he believed that from his own experience it was absolutely true that it did agree with them, and that it was the best means of protecting these patients against the subjective and objective symptoms of the disease.

With regard to Dr. Barker's observation, he presumed that the experience of every physician could furnish a great variety of apparently contradictory facts, such as he had mentioned. So far as he was concerned, he was unable to explain them. Why an attack is determined by a single strawberry or a single slice of water-melon, or indulgence in grapes, he was unable to explain, unless it was upon the basis of the neural pathology, and that there was something in the nervous system of the person having the gouty dyscrasia which rendered him particularly susceptible to the irritations which are conveyed in certain articles of diet. Dr. Janeway had stated that he believed the majority of nervous patients, women for example, are very seldom gouty. Dr. Draper admitted that a great many of them were not, but he was quite sure that a great many of them were, although they have not had arthritic lesions, and he thought we were often led to wrong conclusions in supposing that gout did not exist on account of the absence of the arthritic affection. Other manifestations of this dyscrasia may be present, such as the dyspepsia provoked by fermented liquors, or the cutaneous irritations, or the inflammatory manifestations, or the hypochondriasis, and hysterical disturbance so common among men and women in the later periods of adult life.

DR. HADDEN stated that in his cases milk was not well borne, and he thought the fact was explained probably by the presence of the sugar in the milk. As a substitute for the gluten bread he had used wheaten bread thoroughly toasted.

The Academy then adjourned.

THE LICENCE-TAX ON PHYSICIANS IN VIRGINIA.—At the last session of the Virginia Legislature, the State licence-tax on physicians residing in cities and towns of 5,000 inhabitants or upward, was raised from fifteen to twenty-five dollars; and throughout the State the discrimination was made between city and country doctors to the extent of making city physicians pay *ten dollars* more than the country physician for the same thing. The *Southern Clinic* protests strongly both against the discrimination and the tax. The State, we are told, makes no provision for her sick poor, but expects the doctors to look after them gratis.

AN ALLEGED CASE OF LEPROSY IN DELAWARE.—Some excitement was caused at Lewes, Del., recently, by the landing of a stranger from an English vessel, who confessed to being a victim of leprosy. The man was of English birth, but had contracted the disease in Madagascar about ten years before.

Correspondence.

SECONDARY PUERPERAL HEMORRHAGE
COMPLICATING SEPTIC ENDOMETRITIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The interest awakened in the subject of secondary puerperal hemorrhage by the reading of a paper with that title, at the Academy of Medicine, on January 18th, by Dr. Paul F. Mundé, prompts me to publish the following somewhat detailed history of a case, in a number of respects like the one reported in that paper.

The patient was Mary C—, a native of Ireland, aged twenty-one. She was a primipara, and was seen by me two weeks previous to her confinement.

Previous history.—Although never robust, the patient had enjoyed fairly good health up to one year prior to the present pregnancy, at which time she contracted an initial lesion, which was followed by prolonged secondary manifestations. When I saw her, all that indicated the constitutional disease was a profound condition of anæmia.

Parturient history.—She was taken in labor at 10 A.M. on Wednesday; I saw her three hours later. On examination per vaginam I found a roomy vagina and pelvis of normal dimensions. The cervix was high up, soft, and distensible, and through the os, which was dilated to the diameter of a silver quarter of a dollar, the intact membranes were protruding. Passing the finger through the os, I made out the vertex presenting with the occiput to the right and anteriorly. Further examination proved that the head was hydrocephalic and somewhat enlarged. The fetal heat was 152°. The pains were slight, but together with her excitement, enough to keep her awake and uncomfortable. I therefore had administered chloral hydrate, 15 gr. per rectum, under the influence of which she soon fell asleep and slumbered until the membranes ruptured, which occurred about one hour before the os was fully dilated. The first stage lasted ten hours.

Seven hours later the head had descended to the inferior strait, but ceased to advance. After waiting half an hour, I had chloroform administered, and delivered with the forceps a living hydrocephalic male child. The second stage was of eight hours' duration.

After gentle massage at the fundus uteri there were delivered in eight minutes the placenta and membranes intact. Five minutes later the woman had come up from under the influence of the anæsthetic enough to be able to swallow one drachm of Squibb's fluid extract of ergot, which I invariably administer after the delivery of the placenta. A second drachm dose was given as soon as she was perfectly restored to consciousness. I held my hand at the fundus uteri for one hour after delivery, being occasionally relieved by the nurse, and when I left the patient's bedside the uterus was firmly contracted, the pulse was 100, and she had fallen into a quiet sleep. The cervix and perineum were uninjured.

Puerperal history.—During the following eleven days her average temperature was over 100° F., the highest thermometric point reached being 103° F.; this occurred on the third day, and followed a well-marked rigor. During all this period her pulse was over 100 and very small. The uterus underwent involution somewhat slowly, and was slightly tender when moderately compressed between the hands during conjoined manipulation. The os was widely gaping, and the finger through it felt the lining membrane of the uterus soft and boggy.

The lochia were suppressed for twenty-four hours after the chill, and when they returned were scanty at first, but later became very profuse, and varied from time to time from a grumous to a serous fluid. The odor was at all times offensive, and occasionally markedly foul.

I diagnosed the condition as being puerperal septic endometritis. The treatment consisted of intra-uterine and vaginal injections of hot dilute solutions of carbolic acid.

On the twelfth day the temperature went up to 102½° F., while the pulse ranged from 120 to 130. I attributed the rise of temperature to the separation of the slough at the placental site, by which a solution of continuity was caused, and this, by opening up mouths capable of drinking in from the septic matters present in abundance in the cavity of the uterus, allowed of a sudden although slight general septic intoxication.

After washing out the uterus the temperature steadily fell, until at 8 A.M. of the following day it was normal, and she was feeling better than at any time since her delivery. This was the morning of the thirteenth day; about 10 A.M. I was summoned to her by the message that she was dangerously flooding. I arrived twenty minutes after the bleeding began, and found her extremely exsanguinated. The bed, bedding, and clothing were saturated with blood, while a large mass of clots lay in the bed between her thighs. The vagina contained a number of soft clots; these I gently removed, and was much relieved to discover that the bleeding had ceased. The pulse ranged from 150 to 160, the lips were absolutely without color, and the countenance was blanched and anxious. The patient's intellect was clouded and she had slight hallucinations. The uterus had not been distended by the blood, as it was not perceptibly increased in size, so far as I could make out by gentle abdominal palpation. I gave her hypodermically ten grains of ergotine, and had her partake freely of alcoholic stimulants and iced milk. She was allowed to lie upon the bloody sheets, and nothing was in any way disturbed about her. The bleeding recurred again twice or three times during the day, but the amounts of blood lost were so trifling that I was not sent for. Twelve hours after the bleeding occurred, I had dry linen placed under her, and after having a second hypodermic of ergotine, she was left undisturbed for the night.

For eighteen days after the hemorrhage the temperature remained above normal, and it was over six weeks before her general health began to show marked signs of improvement. Her uterus remained in a state of subinvolution. I would say in conclusion:

First.—I believe that puerperal septic endometritis occurs separate and distinct from metritis more frequently than is generally supposed. The slight symptoms it gives rise to are usually attributed to light general septic poisoning.

Second.—The above condition may undoubtedly cause secondary puerperal hemorrhage. This is probably brought on by the separation of an unhealthy slough from abnormal tissue at the placental implantation, and this, by opening up the mouths of the uterine sinuses, allows of free, or it may be even fatal bleeding.

T. T. GAUNT, M.D.

132 WEST TWENTY-THIRD STREET, NEW YORK.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 10, 1883, to February 17, 1883.

BROWN, JOS. B., Lieutenant-Colonel and Surgeon. Detailed as member of Board for Examination of Assistant-Surgeons for Promotion, and Candidates for Admission into the Medical Corps, United States Army, to convene at New York City on March 1, 1883. S. O. 35, par. 1, A. G. O., February 10, 1883.

CLEMENS, BENNETT A., Major and Surgeon. Detailed as member of Board for Examination of Assistant-Surgeons for Promotion and Candidates for Admission into the Medical Corps, United States Army, to convene at New York City on March 1, 1883. S. O. 35, par. 1, A. G. O., February 10, 1883.

JANEWAY, JOHN H., Major and Surgeon. Detailed as

member of Board for Examination of Assistant-Surgeons for Promotion and Candidates for Admission into the Medical Corps, United States Army, to convene at New York City on March 1, 1883. S. O. 35, par. 1, A. G. O., February 10, 1883.

TOWN, FRANCIS L., Major and Surgeon. Is relieved from duty at Fort Walla Walla, and will report to Commanding Officer, Vancouver Barracks, for duty as Post Surgeon. S. O. 7, Department of the Columbia, January 27, 1883.

WOODWARD, J. J., Major and Surgeon. The extension of leave of absence, on account of sickness, granted October 6, 1882, is further extended six months, on account of sickness. S. O. 34, par. 9, A. G. O., February 9, 1883.

DE LOFFRE, AUGUSTUS A., Captain and Assistant-Surgeon. Relieved from further duty in this Department. S. O. 28, Department of the Missouri, February 5, 1883.

NEWTON, R. C., First Lieutenant and Assistant-Surgeon. Is relieved from duty at Fort Cummings, N. M., and will proceed to Fort Sill, I. T., and report to the Commanding Officer for duty. S. O. 28, Department of the Missouri, February 5, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 17, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
February 10, 1883.....	0	4	69	6	73	41	0	0
February 17, 1883	0	2	85	7	75	51	0	0

THE TARIFF ON SKELETONS.—In the present agitation over the questions of tariff and free trade, the needs of our Western anatomists should not be forgotten. The Chicago correspondent of *The British Trade Journal*, in enumerating the principal articles of import into that city, such as human hair, wigs, lace, nets, etc., says:

"Curiously enough, foreign skeletons of the genus *homo* are largely imported into Chicago, and are sold at less cost than they can be scraped, dressed, and mounted here. This, notwithstanding that we have no lack of pauper subjects, buried at the expense of the county of Cook, and on which our medical colleges largely depend for their cadavers. Still, will it be believed, these foreign skeletons are loaded down by a tariff of thirty-five per cent? This, too, is in face of the fact that the laws against 'resurrectionists' are extremely stringent in this and other Western States."

YOUNG AMERICA.—At the close of Dr. Morell Mackenzie's lecture at the Bellevue Medical College, New York, one of the students from "out West" remarked to his neighbor, "That feller talks our language very well for a foreigner."—*Lancet*.

THE MASSACHUSETTS GENERAL HOSPITAL.—Governor Butler has nominated Dr. Henry G. Clark as a State trustee of the Massachusetts General Hospital, in place of Mr. William Endicott, Jr. This hospital is to begin in March the erection of a large addition to the present quarters of the Out-patient Department. There were treated last year in this department over sixteen thou-

sand five hundred patients; and the present accommodations are too limited. There are male and female medical, surgical, nervous, eye, throat, and skin departments, as well as the dental clinic of the Dental School.

The new Thayer building for nurses is to be open by April 1st. This is a substantial brick structure, and will accommodate fifty-four nurses, giving each a separate room; and it contains a large parlor, and suite of rooms for the Superintendent of the Training School.

A most successful department of the hospital is the Convalescent Home at Waverly, beautifully situated on high land, convenient to the railroad station, and but a few miles from the city. It has now been open ten months, and has fulfilled everything hoped for by its projectors. The average number of patients has been ten. The medical officer in immediate charge is one of the surgical externes of the hospital. Those cases, so familiar to every hospital surgeon, that after operation advance to a certain point, and then remain stationary or begin to sink, are here found to recover rapidly, and many lives are saved that would be lost in the air of a city hospital.

THE MEDICAL LIBRARY ASSOCIATION, of Boston, has added to its library a new circulating department, which is intended to furnish the latest works to members at a low rate per day.

SMALL-POX IN BOSTON.—One case of small-pox recently arrived in Boston from Baltimore, by steamer. The Board of Health ordered vessels from that port to be quarantined accordingly.

AN UNPLEASANT AURAL INTRUDER.—Apropos of the late discussion in *THE MEDICAL RECORD*, on the Removal of Foreign Bodies from the Ear, Dr. J. M. W. Kitchen offers the following bit of experience: "On the 9th inst., during my service at the Metropolitan Throat Hospital, a German woman appeared and complained of trouble in her ear. She said that at twelve o'clock at night (eighteen hours previous), she had experienced 'a crawling in her cheek, and now she had it in her ear and knew it was there.' This was somewhat indefinite, but inspection showed that a brown shining body, resembling dried cerumen, covered the drum-head. Cautious touch with a probe disclosed the fact that the body was alive, and that the patient felt 'him scratching her head out.' Considering the insect's formidable claws, it must have created an unpleasant sensation, to say the least, to have it clawing at the sensitive membrane. The insect filled up the lumen of the canal completely, and was in close contact with the drum-head. The patient had prodded it in with a hair-pin. It could not turn around, and it could or would not back out; but it squirmed and twisted away from forceps and hooks in a marvellous manner, its horny shell being very slippery. It at last became evident that the bug must die, and finally, oil not being at hand, I succeeded in piercing its abdomen with Dr. Wagner's sharp-pointed cotton holder, and then poured a weak solution of carbolic acid into the canal. This procedure reduced the creature's vitality to the desired point; and then an improvised square flat hook being pressed between the insect and the wall of the canal, and a quarter turn being made, the hook engaged with some part of his anatomy, and he was dragged ignominiously into the outer world, much to the patient's relief, and putting an end to the discussion that was arising in my mind as to whether I should call with the patient upon Dr. Sexton or Dr. Knapp, for the help that their several instrumental aural armaments might afford. The insect looked like a young cockroach, and was one-half inch in length."

WHAT THE DOCTOR IS EXPECTED TO DO FOR NOTHING.—A correspondent from Pennsylvania writes: "In your issue of January 20, 1883, you compare the fees paid the medical attendants of the late President and those of the lawyers in the Star Route cases, also call at-

tention to the pay of surgeons on ocean steamers. Bearing on the same subject, is it not time for the profession to consider how generally their services are underrated, or rather, how much more gratuitous service is expected from them than any other class? Is a hospital established, other expenses may be liberally met, but physicians must be satisfied with honor alone, in return for a liberal daily expenditure of time and the best skill the city affords, and the resident physicians must give all time and not leave the premises without permission, and yet *pay their board in advance*; at least this was the custom in the City (Blockley) Hospital in Philadelphia, twenty years ago, and I suppose is now. This general idea applies to all the dealings of the public with the profession. No matter how liberally other expenses are compensated, physicians must serve the public for honor. Can you mention any other profession, trade, or business where liberal pay is not expected for all services? Apprentices, clerks, lawyers, students, get paid for their services while learning the business, and criminals who claim to be unable to employ counsel, either have a lawyer furnished by the State or go without. My personal experience bears this out, living here among the miners. Let one be injured, liberal collections are often made to pay his grocer, etc., but never a cent for the doctor; on the contrary, he is generally expected, while giving constant daily attention, perhaps for months, to contribute more than his fair proportion for other expenses. Several years ago a wealthy corporation called upon me to attend one of their men, who was terribly injured by an explosion. It required constant attention for several months, at a distance of six miles from my home. They paid the patient's board, furnished him a nurse and all other necessary expenses, but when the man finally got well, told me that they were incorporated to mine coal, not pay doctors. All are under the universal idea that the profession is under special obligation to work for the poor gratuitously. Where else will not the same amount of skill and education command better remuneration than in the medical profession, when public services are to be performed, and where else is the same amount of gratuitous services required?"

AN ANTI-QUACK WRAPPER.—Dr. F. H. Darby, of Morrow, Ohio, has published a four-paged and double-columned sheet wrapper, filled with useful information for the sick; designed for druggists and physicians who dispense their own medicine. It can be torn into halves, quarters, eighths or sixteenths, without marring the printed matter. The paragraphs comprise abbreviations of that portion of the Code of Ethics relating to "The duties of patients to their Physicians," useful receipts, etc. Dr. Darby says that these wrappers can be supplied at a very nominal cost.

DISSOLVING COAGULA IN THE BLADDER.—Dr. W. Titus, of Newark, N. J., reports a case of hemorrhage into the bladder in which the resulting clots were satisfactorily dissolved by the injection of a solution of pepsin.

HYSTERICAL HAIR-CURLING.—A very curious and unique case, which is denominated as above by Mr. Le Page, of Durham, England, hysterical hair-curling, is reported in the *Lancet*. The history is suspicious, but the facts are well vouched for, as will be seen. The patient, aged seventeen, with a history of irregular menstruation, had felt ill with various neurotic symptoms, and a feeling of "pins and needles" over the scalp and general numbness of sensation. In the evening she washed her head in tepid water. After partially drying her hair with a towel (she did not approach a small fire which was in the room), and while so engaged in the presence of her parents, nearly the whole of the hair on the right side of her head drew up into a hard lump, and felt as if it would pull the roots out. Her father and mother were engaged until nearly two o'clock the next morning in the endeavor to untangle and straighten the almost solid mass, with but little

success. The few ends combed out were spread on a pillow she then slept on; on awaking they found them drawn up as before. The hair on the left side of the head was quite smooth, very lightly waved, and not in the least tangled or drawn up. Viewed with the microscope, it was evident all the hairs which are contracted are flat, while those hairs which remain comparatively straight or looped and festooned are round. This disposed of a shadow of suspicion which naturally accompanies any unexplained phenomenon in a "hysterical" female. Viewed without the microscope, it was at once evident that no dexterity could have produced the condition of the hair. Mr. Le Page's hypothesis in explanation of the case is that excessive nerve-tension found vent in the pigmentary portion of the hair—viz., that some change analogous to electrolysis took place in the medullary portion, leading to chemical change, decrease of bulk, and contraction. Sir Erasmus Wilson regarded the condition as very interesting and extraordinary, and, as never seen by himself, had desired and received permission to deposit Mr. Le Page's specimen in the dermatological department of the museum of the Royal College of Surgeons of England.

THE REMOVAL OF A FOREIGN BODY FROM THE EXTERNAL MEATUS.—Dr. E. L. Holmes, of Chicago, writes: "The perusal of quite recent articles on this subject in *THE RECORD* leads me to relate an experience in removing, some years since, a pebble firmly impacted in the external meatus of a boy six years of age.

"Inspection showed that no form of forceps could grasp the stone, as it had been pressed with considerable force deep into the external meatus, in malicious sport, by an older companion.

"A protracted use of the syringe failed to dislodge the foreign body.

"As I had but one ordinary steel hook, it occurred to me to employ with it an old and unusually large cystiotome used in cataract operations.

"After the administration of ether, the hook and then the cystiotome were each in turn pressed between the stone and walls of the meatus, with little injury of the integument. The handles of the instruments, parallel and near each other, were then so turned that the points of the hooks were directed to the axis of the meatus. The instruments, held firmly together, were withdrawn with considerable difficulty, bringing with them the stone.

"A special instrument with two hooks could be constructed, with suitable handles and a simple 'lock.' Properly introduced and 'locked,' they would constitute in fact a double hook.

"I have never met, in a long experience, with another case in which a hard foreign body in the ear was not removed by syringing.

"A very hard substance, equal in size to the diameter of the meatus, and crowded against the membrana tympani presents to the aurist a serious problem. Such a contingency is rare, and does not fall within the purpose of this communication."

ON THE MEANING OF THE WORDS NYCTALOPIA AND HEMERALOPIA.—Mr. Tweedy communicates to the "Royal London Ophthalmic Hospital Reports" a long and learned article, discussing, in all its bearings, this much-vexed question, and arrives at the conclusion, now generally accepted, that the true meaning of nyctalopia is night-blindness (*ὁ τῆς νυκτὸς ἀλαός*), and, consequently, that the true meaning of hemeralopia is day-blindness.

GOATS AND HOMŒOPATHY.—It is a pleasure to learn that the goat is an animal which responds well to homœopathic remedies. In Surrey, England, there is a goat farm where *Guillemus capricornis* is raised and milked for the alleged benefit of the babies of London. A visitor says: "The goats, young and old, appear clean and perfectly healthy; their bright, hairy coats are subjected to curry-combing; no troublesome foot disease

demands attention as in the case of sheep, and any internal ailments are promptly and successfully dealt with by homœopathic medicines, of which the manager, Mr. Farrer, speaks with the greatest confidence and satisfaction." We should like very much to have Mr. F. report to us some cases. No doubt infinitesimal doses will affect a credulous man, but not a sensible goat.—*Journal of Comparative Medicine*.

DONATION TO VETERINARY COLLEGE.—A subscription of \$10,000 from Mr. J. B. Lippincott, for the establishment of a veterinary college in connection with the University of Pennsylvania, was received by the trustees of that institution, recently.

THE ACTION OF PILOCARPIN UPON HORSES.—After a subcutaneous injection of pilocarpin (gr. j.) the saliva begins to flow and continues for about an hour. The injection of a large dose (gr. iij.) will cause the secretion of one or two quarts of saliva in a short time. There is also a considerable discharge from the conjunctival and nasal mucous membranes. The temperature rises from two-fifths to one degree F. The heart beats faster by five to ten pulsations. General perspiration does not often occur. Frequent urination will be noticed. After several days' use of pilocarpin the feces become softer. The horse does not seem to be weakened or made less active by the drug. It has been found somewhat useful in diminishing dropsy from kidney or heart disease, also in lessening the amount of pleuræ effusion (in dogs). Its action on the heart is weakening—a fact to be remembered.—*Journal of Comparative Medicine*.

THE REIGN OF ABSINTHE IS DRAWING TO A CLOSE.—A rival has invaded its dominions and is making most rapid progress. The new beverage is called Amer-Picon—that is, Picon Bitters. It is said to be tonic, to assist digestion, to be an aperient and a febrifuge, and withal an agreeable stimulant. The Amer-Picon is prepared from Algerian plants, and it is more than thirty years since M. Gaetan Picon began to make it in that colony.

THE STIMULATING PROPERTIES OF OATS.—We have heard much lately about the remarkable therapeutical powers of *avena sativa*, which powers have been generally discredited. M. Bouley recently presented to the Académie des Sciences the results of investigations by M. A. Sansom upon the subject. Experiments were carried on at the Ecole de Grignon. With the aid of Du Bois Reymond's apparatus, the neuro-muscular excitability in horses was tested before and after the ingestion of oats. Numerous and repeated experiments have established, says M. Sansom, the following facts:

1. The pericarp of the oat contains a substance, soluble in alcohol, which has the property of stimulating the motor cells of the nervous system.

2. This substance is nitrogenous, and probably belongs to the group of the alkaloids. It is uncrystallizable, brownish, finely granular. Its formula (subject to verification) is $C_{10}H_{21}NO_{15}$. It is called *avenine*.

3. All varieties of oats contain some of this alkaloid, but not to an equal extent. The differences depend upon soil as well as variety. The *variété noire* generally contains the most.

4. If the amount of avenine is below 0.9 per cent. of dried oats, it is insufficient to cause excitation.

No facts are given regarding the effect of the avenine upon the human organism.

UNION BY FIRST INTENTION IN SCALP WOUNDS.—Dr. Robert T. Morris, of Bellevue Hospital, N. Y., gives the following directions for securing primary union in scalp wounds:

Let us take for example a typical case.

A man in good health is struck upon the head by a falling beam, and receives a lacerated and moderately contused wound. The wound is a couple of inches long,

extending entirely through the skin, and gaping perhaps to the extent of a quarter of an inch. The bleeding is so profuse that the patient comes to you promptly, thereby giving you a great advantage.

Of course the first thing to be done is to make sufficient pressure to control the hemorrhage, and then the hair is carefully trimmed away from the edges and vicinity of the wound. A patient who is bald here finds for the first time a redeeming feature to his condition.

After sufficient hair has been removed a thorough syringing of the wound with carbolyzed water (1-30) should follow, and then a most thorough search must be made for any foreign body, a single hair left in the cut being sufficient to prevent union by first intention in its vicinity.

Twist together two or three horse hairs which have been kept in carbolyzed oil and lay them in the wound, allowing the ends to project from either extremity, and then, with a medium-sized curved needle, put in enough silk sutures to bring the edges of the skin closely in apposition, taking care that the needle penetrates the entire thickness of the skin each time that it is inserted.

After all of the sutures have been tied, the horse-hairs should be pulled back and forth a little by means of their projecting ends, in order that the canal for deep drainage may be free.

Superficial drainage is next to be looked after, and this end may be gained very nicely by wringing out six or seven thicknesses of cheese cloth in carbolyzed water (1-30), and applying as a compress on the wound, first rubbing a little iodoform well into the portion which is to come next the skin. Gutta-percha tissue, or any other waterproof material, should then be placed over the cheese cloth, and the edges allowed to project far enough over so that everything beneath will remain moist and warm. A bandage applied not too tightly completes the dressing.

In twenty-four hours the horse hair may be removed, and the dressings replaced. In forty-eight hours or later, the stitches should be removed, and a warm and dry dressing placed over the site of the wound. If the patient is asked to return for examination in a day or two, the wound will almost always be found to have united beautifully by first intention, and a long period of suppuration, with numerous complications, to have been avoided.

When failure occurs in a case like the one described, the causes are usually due to lack of care in the application of the deep or superficial drainage.

The sutures may have been tied more tightly than necessary, or some foreign material may have been left in the wound.

HEART SCANNING, OR THE METRICAL TREATMENT OF THE PULSE.—Dr. Samuel W. Francis, of Newport, R. I., says that the normal "beat" of a healthy heart is iambic, — ; and that when it is trochaic —, pyrrhic —, or like a spondee —, it should be regarded as a signal, to the physician, that there is something wrong, which calls for a thorough investigation by auscultation and percussion.

Dr. Francis also reports a case where the pulse was only 29 to the minute; and the beat dactylic — —: the long and two short being well marked. The patient was a lady, sixty years of age, who recovered under diffusible stimulants and counter-irritation.

INEBRIETY AND THE TEETH.—The pastor of a large mission chapel in this city is in the habit of using moral compulsion with his people to have them keep their teeth in good condition. If any one has bad teeth he is sent to a dentist, who fills or extracts them, as may be needed. A dentist is supplied who does the work for nothing, if the patient cannot afford to pay. The clergyman in question states that he has had much less trouble from drunkenness since he adopted this plan. We commend it to the attention of our inebriate specialists.

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Original Lectures.

ON THE RELATIONS OF MICRO-ORGANISMS TO DISEASE.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE
ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS
AND SURGEONS, NEW YORK.

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LECTURE II.

SEPSIS AND ANTISEPTIC SURGERY.

THE infectious diseases usually consequent upon wounds, and therefore falling within the province of the surgeon, merit somewhat extended discussion. Such diseases were known to the earliest medical writers, and, we may assume, antedate man himself by so much time as the existence of highly organized life preceded him. Clinical experience had, long before the advent of experimental research, identified infectious septic material with the products of that complicated process whereby lifeless organic substances are de- and re-composed into chemically less complex matters—putrefaction; and early experimental investigation was directed to the elucidation of that process and its relations to disease. Gaspard first proved experimentally that the injection of putrefying substances of animal or vegetable origin—blood, pus, bile—was followed by the clinical features of sepsis. Panum demonstrated that the putrid infectious substance is not gaseous; that it is not destroyed by eleven hours' boiling and complete desiccation; that it is insoluble in alcohol, but present in the watery extract of putrid materials, even when dried; that the albuminous matters in putrid fluids are not *per se* septic, but condense the infectious matter upon their surfaces; for the filtrate, containing no solid particles, preserves the septic properties unimpaired. Panum concluded that the putrid agent must be a definite chemical compound like curare and the alkaloids, and named this hypothetical substance sepsin. Billroth, Weber, Hemmer, and Schweninger repeated and confirmed these experiments. The last-named observer concluded from the fact that different results followed the administration of the same quantity of the same putrid liquid at different stages of putrefaction, that not one only, but various putrid products, arising at different periods of the process, possess septic properties. Bergmann and Schmiedeberg obtained from putrefying beer-yeast a crystalline substance, melting on contact with air and charring under heat, which induced in dogs the clinical and anatomical appearances of sepsis. This they termed sulphate of sepsin. Zuelzer and Sonnenschein isolated a similar compound. Hiller and Mikulicz demonstrated that the septic agent of putrid materials could be extracted and retained by glycerine, and in so far was analogous to the active ingredient of vaccine lymph, to pepsin, ptyalin, etc.

It was thus established, and so remains, that the clinical and anatomical features of septicæmia could be induced by unorganized substances obtained from the products of putrefaction. Yet in these cases two char-

acteristics, frequently observed in the septic infection of human subjects were often conspicuously absent—the stage of incubation and the infectiousness of the septic blood and tissues. Panum noted particularly that the influence of his boiled putrid materials became manifest in fifteen minutes to two hours, and attained its acme in four to eight hours. Meanwhile a new path of investigation had been opened by Pasteur's demonstration that the putrefaction of animal tissues is a phenomenon incident to the vital activity of certain bacteria—facts established incontestably by the researches of Pasteur, Tyndall, Traube, Brefeld, and their pupils. The determination of the relation between the bacteria and the diseases caused by the putrid products of their vital action soon became the object of most patient and careful investigation. Coze and Feltz found vibrios *intra vitam* in the blood of animals infected with putrid fluids; and similar organisms post-mortem in the blood of a patient dead of putrid infection. With this blood they inoculated a rabbit, which then exhibited septic symptoms, and whose blood was found to contain similar vibrios. Rindfleisch found colonies of bacteria in the heart-muscle from a case of pyæmia; Recklinghausen and Waldeyer followed with similar discoveries. The work of Klebs on "Gunshot Wounds" (1872) opened the new epoch in pathological investigation. The examination of numerous gunshot wounds, both before and after death, showed that the organs and tissues exhibiting morbid changes due to such wounds were populated by bacteria; serous surfaces, both those opened by the bullet and those which, though still intact, lay adjacent to an abscess or to the track of the missile; the walls of blood-vessels, not only those which had been the seat of secondary hemorrhage, but also those which, while not ruptured, showed beginning thrombus formation; metastatic abscesses in liver and lung; leucocytes in and near the track of the bullet—all contained colonies of bacteria. A series of experiments upon animals showed that while the injection of putrid liquids, containing naturally myriads of bacteria, was followed by continuous fever and metastatic abscesses—*i.e.*, pyæmia—the injection of the same liquids after filtering through clay and thus deprived of solid particles, including the organisms, was followed by fever just as intense, though transient, but never by metastatic abscesses—*i.e.*, septicæmia.

The work of Klebs, which proved that there must be some intimate relation between the pathological processes and the bacteria, was soon followed by a series of accurate experimental observations by Samuel, from which he concluded that the varying effects of putrid fluids upon the living animal were due to various substances therein contained; that the specific septic (toxic) influence is the effect of certain volatile matters, probably combinations of sulphur and of ammonia; to the bacteria he ascribed the influence whereby the infection is localized progressively in various organs remote from the original wound.

Billroth concluded, as the result of much careful clinical and experimental observation, that the presence of bacteria was the result and not the cause of certain changes in secretions and tissues. He assumed the formation, during inflammation and putrefaction, of a "zymoid" substance whose presence (1) conferred upon pus and exudate their infectious character and (2) converted wound secretions into favorable soil for organisms. He believed, however, that bacteria might be the

means for transporting and multiplying his hypothetical zymoid, and in this capacity might be, probably are, the carriers and originators of specific pathological processes. Since the publication of this work (1874), Billroth has materially modified certain of his conclusions.

From these investigations it was generally concluded that septic infection was due to an unorganized though perhaps organic substance; that the presence of bacteria was an epiphenomenon—a sequence, not a cause; that their deleterious agency, if any, consisted simply in the transfer of unorganized infectious matters from one part of the body to other portions, perhaps from one individual to another.

But there soon appeared from various sources, notably Koch and Pasteur, investigations more or less incompatible with these views. Pasteur found that in the serous sacs, muscles, liver, and spleen of a septicallly infected animal there are always present microscopic organisms (*microbe septique*), although the blood may be until death free from them. Inoculation with a drop of peritoneal serum, or a piece of muscle from an animal dead of sepsis, induces, in a second animal, all the appearances, ante- and post-mortem, of the original disease; while a drop of blood from the heart-cavity (proven microscopically to contain no septic vibrios) is, on the contrary, innocuous. Pasteur cultivated his vibrio septique in various fluids, such as solution of beef extract, in the manner already described; and found that a drop of fluid from the last flask, containing presumably none of the original unorganized septic matters, but crowded with the vibrios, produced the original septic disease. In the tissues of infected animals Pasteur was unable to find any unorganized substance capable of inducing sepsis, as had been affirmed by Panum, but he found that a putrid fluid, a few drops of which induced sepsis and death, lost its poisonous properties entirely in a few hours, when exposed in a thin layer to the air. Now, since the vibrios likewise lose their vitality in a few hours in the presence of free oxygen, Pasteur insists that the loss of virulence in the fluid is due solely to the enforced inactivity of the contained vibrios. Yet he is inclined to the belief that just as the alcoholic fermentation of grape sugar is a vital phenomenon manifested by any one of several species of fungi, so the production of septic substances may accompany the vital activity of any one of several different bacteria.

Pasteur further reports that among the organisms usually present in ordinary water is one identical morphologically with the bacteria termo, but physiologically distinguished by the fact that its injection from an isolated cultivation under the skin of a rabbit is followed by abscess formation at the site of puncture. Injection of the same organisms directly into the circulation, or in several places subcutaneously, is followed by the formation of abscesses in lungs and liver; by fever and death—in short, by pyæmia. A piece of the liver or lung develops in a culture liquid, the same micrococcus in great numbers. Such liquid, if previously boiled, however, so as to destroy the organisms therein contained, causes, upon subcutaneous injection, abscesses as before, but without general infection of the animal. He rejects, therefore, for pyæmia as for septicæmia, the agency of an unorganized, soluble septic agent, and considers the bacteria alone responsible for septic infection.

Markedly different was the reception accorded to a monograph published in 1878, by a then almost unknown young German physician, Robert Koch. He surmounted, by improvements in technique, some of the hitherto insuperable difficulties in the recognition and investigation of bacteria—improvements which confer such evident and extreme advantages that they have become absolute necessities for original research in this field; indeed so many errors of commission, as well as of omission, have been thereby detected in other methods, that one is disposed to regard as uncertain any researches in which these measures most essential to accuracy of observation

are neglected. Having demonstrated the life history of the bacillus anthracis, which the French school, working with Pasteur's clumsy method, had for sixteen years failed to discover, Koch turned his attention to the etiology of surgical infectious diseases. He found that the subcutaneous injection into a mouse of five drops of putrid blood was followed by immediate prostration, and in four to eight hours by the death of the animal. There occurred in these cases no local reaction, the internal organs were apparently normal, no bacteria were detected in the blood or tissues, inoculation of other animals with the blood from the heart caused no perceptible effect. Koch considers this disease, therefore, as septicæmia, etymologically as well as clinically—the introduction into the blood of a poisonous substance, soluble, not reproducing itself, analogous, in fact, with the effect of certain vegetable alkaloids and of ptomain, the substance isolated by Selmi from human corpses, which so closely resembles atropine in its physiological effects. This is also the effect obtained from the injection of boiled putrid materials by Panum, Bergmann, and Schmiedeberg, and others. Koch found, however, that the injection of a smaller quantity, one-half to one drop of the same putrid blood, was followed by entirely different effects. In some cases the mouse was apparently unaffected; in others brief, transient depression was observed; in perhaps one-third of the cases there ensued, twenty-four hours later, progressive weakness, retardation of respiration, drowsiness, and, in forty to sixty hours, death. Section revealed no other pathological changes than local œdema at site of inoculation and decided enlargement of the spleen; but after inoculation of a second mouse with a minute quantity (one-tenth to one-half drop) of liquid from this œdema, or of blood from the heart, the latter animal presented, in forty to sixty hours, precisely the same clinical and pathological picture as the first; from the second, a third was successfully inoculated, and so on *ad libitum*; indeed, the mere contact with a fresh wound of a scalpel-point previously dipped in the septic blood sufficed. Here, then, was something entirely different from the intoxication following injection of a larger quantity (five to ten drops)—differing in the existence of a marked stage of incubation, of local reaction, and in certain and uniform infectiousness. The blood of such an animal evidently contained something not present in that of the former mouse—a something requiring time for the manifestation of its influence, and finally distributing itself throughout the entire blood-mass, so that each drop thereof possessed the septic possibilities of the original, putrid drop. Such mode of action implies reproduction, and reproduction is a characteristic of organized matter. It was to be expected *à priori*, therefore, that the blood contained organisms; Koch found, in fact, invariably, that the blood serum, white blood-corpuscles, and various tissues of such animals swarmed with minute rods, which stained readily with aniline colors, and when removed from the body into similar artificial conditions multiplied by transverse fission. Since the blood of the infected and infecting mouse differs evidently from that of the intoxicated and non-infecting mouse only in the presence of these bacteria, Koch ascribes the infectiousness to these organisms. It is interesting to note that all attempts to inoculate rabbits and field-mice with the septic blood were fruitless. The animals remained unaffected; no bacilli were found in their blood, although the mouse-blood used for inoculation was full of them. Further, that although the putrid fluids injected contained organisms of numerous varieties—micrococci, bacteria, bacilli—all of which were subsequently found in the local œdematous liquid, yet only one species, the minute bacillus, was found distributed throughout the blood and tissues. The living mouse seemed to be a culture-medium for isolating these from the other varieties, to whose growth the animal's tissues were less perfectly adapted. In the second or third mouse successively inoculated only the specific bacilli were found.

By methods essentially similar, Koch demonstrated the association of a form of septic infection of mice, which he denominates malignant œdema, with a micrococcus species; of septicæmia in rabbits with a bacterium; and of pyæmia (with metastatic abscesses) in the latter animal with a micrococcus variety. Yet, although the fact of association was amply demonstrated, there still remained the possibility of objection that the essential agent in the infection was a soluble, unorganized substance contained in the putrid liquids and the infectious tissues used for inoculation, the bacteria being the result and not the cause. The final demonstration to the contrary, the proof that these different effects could be induced by inoculation with the respective bacterial varieties after complete isolation from accompanying animal tissues by cultivation upon solids, was not furnished at the time of this publication by Koch, but has been subsequently completely established by Koch, Gaffky, and Löffler in the laboratory of the German Health Bureau, for the bacilli of mouse- and the bacteria of rabbit-septicæmia. The extreme accuracy and critical supervision of manipulations, the logical sequence of methods, and withal the unpartisan candor and earnest desire for truth evident throughout this work of Koch's, inspired at once a confidence which has not as yet been diminished or betrayed. It is worthy of note that the infectious disease of mice described by Koch as malignant œdema is identical in clinical and pathological appearances with that which Pasteur ascribes to his "vibrio septique;" while the pyæmia of rabbits corresponds accurately with the purulent infection which, according to Pasteur, follows the injection of his microbe of pus. These results, obtained quite independently by two observers, using different methods, have been confirmed not only by Gaffky and Löffler, but also by Rosenberger in Würzburg, in a series of carefully performed experiments.

A review of the evidence already considered shows, then, that infectious diseases, identical in clinical and anatomical appearances with the various forms denominated septicæmia in man, have been induced in the mouse and rabbit by inoculation with animal tissues in various stages of putrefaction; that the resulting infection is just as certain if the putrid substances be previously boiled and thereby deprived of living organisms (Panum, Bergmann, Rosenberger). On the other hand, it is certain that *per se* innocuous culture fluids—infusions of beef, etc.—acquire, after inoculation with minute quantities of infected blood or tissue, the same septic properties, provided such blood or tissue contain living bacteria; it is further certain that this multiplication of the septic substance in such liquid is a concomitant of the vital action of the organisms therein contained (Pasteur, Koch, Rosenberger); it is further demonstrated that these organisms can and do, not alone multiply the septic material, but when isolated by successive cultures from all the accompanying animal tissues, induce, independently, fatal infectious disease (Pasteur, Koch, Löffler, Gaffky, Rosenberger).

The same principle—vital activity of bacteria—permeates all these phenomena; for the artificial induction of septic diseases has been, in all these experiments, originally accomplished by the incorporation into the animal of *putrid tissues*, with or without bacteria. Now, since putrefaction must be regarded, in the present state of our knowledge, as impossible without the presence of these organisms, it is evident that sepsis, putrid infection, was in every case due, directly or indirectly, to the action of bacteria; since even the boiled substances used by Panum and Rosenberger, and the sepsin obtained from rotten yeast by Bergmann and Schmiedeberg, had acquired their septic properties through putrefaction, *i.e.*, through the action of bacteria. Hence we are logically driven, by all this work, to the belief that septicæmia implies the introduction into the animal either of living bacteria, or of a substance which has acquired noxious properties through previous vital activity of these organisms.

More recent experiments have demonstrated, however, that the etiology of the group of clinical and anatomical appearances known as septicæmia is by no means restricted to putrid infection. In the researches as to the nature of blood coagulation, instituted by Schmidt, of Dorpat, and his pupils, it was noticed incidentally that the introduction or production in the blood of fibrin-ferment in considerable quantity produces effects identical with those of putrid infection—septicæmia. In this case the result is of course attributable to coagulation of the blood. Similar phenomena were observed by Köhler, Angerer, Naunyn, and Francken, to follow intra-venous injection of fresh blood-serum (containing therefore both fibrinoplastin and ferment), of hæmoglobin solution (which is known to favor the formation of fibrin-ferment in the blood); of sulphuric ether (which sets free hæmoglobin and hence indirectly fibrin-ferment). Injected in large quantities, these substances caused immediate death by instant coagulation of the blood in the heart and large arteries; after smaller quantities the animals survived hours or days, and exhibited the usual symptoms of septicæmia; their blood contained free fibrin-ferment, while that of healthy animals does not. Finally, Edelberg, working under Schmidt's direction, established clearly that the injection of fibrin-ferment alone, isolated from other ingredients of blood, can induce the same phenomena.

In a series of experiments communicated to the Congress of German Surgeons, in 1882, Bergmann observed the clinical and anatomical features of septicæmia—fever, swelling of spleen and lymph-glands, gastro-intestinal inflammation, cardiac weakness, ecchymoses in mucous and serous membranes—after the injection of the physiological ferments, pepsin and trypsin, in small doses; large quantities induced, like fibrin-ferment, immediate death by coagulation of blood in the larger vessels.

Raynaud and Lannelongue inoculated rabbits with saliva from a child dead of rabies, and induced thereby an infectious disease, terminating fatally in forty-eight hours or less. Pasteur found in the blood of these animals a bacterium which he regarded as the cause of the disease. Inoculation of rabbits with saliva from children dead of broncho-pneumonia caused the same result, and produced the same figure-of-8 bacterium. The same organism was found in the saliva of a healthy adult. Sternberg found that injection of fresh saliva from certain healthy individuals caused a similar fatal infectious disease, which he calls septicæmia, in rabbits, characterized by the presence of a micrococcus apparently identical with Pasteur's; and asserts that this organism, isolated by flask cultures, induced the disease again upon subcutaneous inoculation. Neucki and Gantier isolated from saliva a substance capable also of producing fatal infection of certain animals. Saliva, then, can also induce septicæmia, not only after death of the subject, but even fresh from the living individual. Whether the effect shall be ascribed to a contained bacterium or not is immaterial to our present purpose, which is to emphasize the fact that the group of phenomena called in general septicæmia may follow other causes than putrid infection; may be induced on the one hand by the vital action of isolated bacteria, and on the other by unorganized substances—the boiled septic materials of Panum and Rosenberger, the sepsin of Bergmann, the fibrin-ferment of Edelberg, pepsin and trypsin of Bergmann, hæmoglobin, etc.

The mode of action common to several, at least, appears to be the liberation of fibrin ferment; for the blood of septicæmic animals is characterized by the presence of free ferment, which is not found, unless perhaps as traces, in normal blood. This ferment seems to arise, according to the researches of Schmidt, in the disintegration of white blood-corpuscles; and these are known to be invaded and apparently disintegrated by bacteria, in the septicæmia of mice and rabbits, at least. It would appear, although not for all cases demonstrated, that the clinical and anatomical features common to the various

forms of septicaemia are attributable to the rapid liberation of fibrin ferment in the blood; and that any agent—organized or unorganized, putrid or fresh—capable of effecting such liberation may induce the disease.

This conception, at any rate, enables us to understand much that is otherwise perplexing. Various have been the attempts, for example, to explain the so-called aseptic wound fever, which occurs in the majority of severer wounds, even under the most perfect Lister dressing. Küster and Sonnenburg ascribed it to absorption of carbolic acid; but extensive experiments upon man, as well as the lower animals, have proven that the acid does *not* cause fever; but induces, on the contrary, after slight, brief, and by no means constant elevation, a decided depression of temperature. Others have referred the phenomenon to absorption of chloroform—a hypothesis incompatible with the fact that wound fever follows operations performed without anaesthesia (as is so often done in Germany and Austria) as usually as those done under chloroform. The more general opinion, that aseptic wound fever differs from sepsis,—*i.e.*, putrid infection—in degree rather than in kind, meets a serious objection, as Gussenbauer remarks, in the fact that the former occurs within a few hours after the infliction of the wound, before decomposition and consequent sepsis can be reasonably presumed to have occurred.

The clinical facts—(1) that a large minority of wounds, severe as well as slight, are followed by no fever under the Lister dressing, as was the case in over three hundred of a thousand reported by Volkmann and Genzmer, and in nine of twenty-four most carefully observed by Edelberg; (2) that the course of subcutaneous fractures without extravasation of blood is usually afebrile, while similar fractures with extensive blood extravasation often induce fever; (3) that the application of a tight bandage to a wound or fracture, which must cause some extravasation of blood, is often followed by fever in a patient previously afebrile (Edelberg); (4) that the blood of patients during simple surgical fever sometimes contains free fibrin ferment in appreciable quantities—such facts indicate that a septic wound fever is caused by absorption from extravasated blood, especially since it has been demonstrated, as already remarked, that blood, fluid or coagulated, hæmoglobin, or even isolated fibrin ferment can experimentally induce the same phenomena. It is further conceivable, though not demonstrated, that the products of a local inflammation, or the modification of cell-activity through fatigue or emotion, may also be directly responsible, through destruction of leucocytes and liberation of fibrin ferment, for some of those cases of spontaneous septicaemia which we ordinarily ascribe to unperceived entrance of bacteria or putrid products into the body.

Septicaemia is, then, a collective name for processes more or less similar, but etiologically distinct—at least, in certain lower animals; any one of several unorganized substances, any one of several bacteria (at least, three in the case of the mouse) may induce characteristic symptoms. It has been proposed to adopt the term *sapraemia* for putrid infection without bacteria, retaining the usual name to indicate the effect of organized agents; yet the clinical distinction is probably rarely possible.

The clinical experience of all ages has unanimously ascribed the second type of septic infection—characterized by chills, a remittent or intermittent fever and the formation of multiple abscesses—to absorption from pus; and it has always been designated by a name—pyæmia, purulent infection—indicative of this supposed origin. The discussion of the relations of bacteria to pyæmia begins, therefore, naturally with the consideration of their relations to suppuration. That these organisms should exist in pus exposed to the air, as in other albuminous liquids under like conditions, was *a priori* probable and long ago demonstrated; that they exist also in the pus of abscesses which have never been opened, has been conclusively demonstrated by Klebs, Nepveu, Rind-

fleisch, Waldeyer, Cheyne, Ehrlich, and especially by Ogston, who found micrococci in every one of seventy previously unopened acute abscesses, though rarely in chronic, cold abscesses.

The mere fact of association does not, of course, necessarily prove a causal relation of the organisms to the suppurative process; but the observation that a zoöglæa mass of micrococci is often the centre of an abscess; that indeed abscess-formation in all stages, from a simple accumulation of straggling leucocytes to the fully developed destructive infiltration of tissue, has been observed around a nucleus consisting of a minute embolus composed entirely of micrococci; that the progressive purulent infiltration of the surrounding tissue is preceded by an invasion of the same by micrococci—can be impartially and satisfactorily explained, in the present state of knowledge, by no other hypothesis than that the micrococci *cause* the suppuration. Experimentally there is direct evidence to the same effect.

Pasteur saw, after cultivation of a micrococcus found in ordinary water, that the injection of a few drops of the previously harmless culture-fluid, now containing myriads of micrococci, was invariably followed, in the rabbit, by suppuration around the point of injection, the pus and tissues containing numbers of the same organisms. The intra-jugular injection of the same fluid caused multiple abscesses in the internal organs. He found the same micrococcus in pus from cases of puerperal fever. Klebs, Zahn, and Tiegel found that while the injection of pus from a pyæmic abscess or putrid fluid was followed by local suppuration and multiple abscess formation in the infected animal, the same pus or liquid, after filtration through clay cylinders—whereby the bacteria were separated from the liquid—caused intense general infection, but no suppuration, even at the point of injection. Koch observed also the constant association of a characteristic micrococcus with infectious suppuration in the rabbit after putrid inoculation.

It appears, therefore, impossible to evade the conclusion that suppuration can be and is induced by micrococci. That this effect is induced by one or more specific varieties of these organisms seems probable from these researches of Klebs, Koch, and Pasteur; that it is not induced by *all* species is apparent from the fact that colonies of micrococci are frequently present in the human and other animals during various morbid processes in which suppuration does not occur—as in

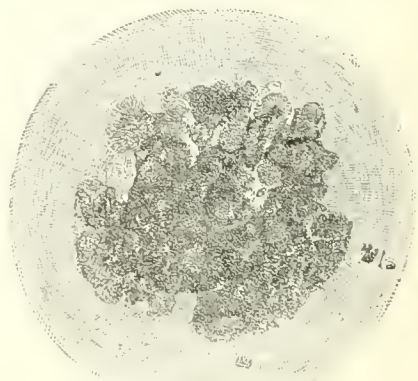


Fig. 6.—*Actinomyces bovis*, tongue of ox. $\times 140$.

erysipelas. As to the mode in which this influence is exerted, there is no definite knowledge: the assumption that the deleterious effect results from changes in the chemical constitution of the containing medium, as an essential feature of the vital activity of these organisms, is supported by analogy with the processes of fermentation and putrefaction, by the phenomena known to attend the life of other bacteria, and by the direct observations of Koch and Pasteur.

Yet the induction of suppuration is not a monopoly of

micrococci: the growth of the *actinomyces bovis* in the tissues is accompanied by the formation of abscesses; upon microscopic section the fungus is found constituting the nucleus of a miliary abscess; and inoculation with the isolated actinomycetes proves that the fungus itself, and not a hypothetical soluble substance accompanying it, is responsible for the suppuration. Experimental researches upon suppurative keratitis by Leber, of Gottingen, make it highly probable that another bacterium, the leptothrix of the mouth, and a mould fungus, *aspergillus glaucus*, can also induce suppuration. On



Fig. 7.—*Actinomyces bovis*, and pus corpuscles. $\times 260$.

the other hand, several bacterial varieties are known to inhabit at times human and other animals without causing suppuration—the bacillus anthracis, for example.

The school of pathologists of which Weigert is a prominent exponent, has been inclined to regard micro-organisms not merely as a cause, but as the sole cause of acute suppuration. This view was certainly incompatible with many clinical observations, and has been recently quite dissipated by experimental research. Uskoff, under Ponfick's direction, has shown that the subcutaneous injection into rabbits of turpentine oil, is followed by the formation of pus in which no bacteria can be detected; an assertion which has since been corroborated by others. The most accurate and conclusive experiments in this direction were recently made by Dr. Wm. T. Councilman, of Baltimore, in the laboratory and under the direction of Cohnheim. Councilman made a number of glass capsules, heated them to redness, poured into each, while still hot, a boiling mixture of croton and olive oil, and sealed the open end in the flame. Fourteen of these were inserted, with antiseptic precautions, under the skin, at various places, in different rabbits. In no instance was suppuration or even adhesive inflammation observed—the capsules remained freely movable in the subcutaneous tissue. After intervals varying from two to fourteen days, when the incision wound was firmly healed, the capsules were broken subcutaneously, by force applied to the skin; in every instance suppuration followed in a few hours. An examination of the pus and abscess walls revealed nothing that could be recognized as bacteria.

Chronic or cold abscesses may have a different etiology—their clinical history and appearances, and the fact that they seldom cause pyæmia, would point to that conclusion. It is significant that of eighteen chronic abscesses, Ogston—employing the most approved technique—could detect bacteria in but four, which were consequent, moreover, upon erysipelas, typhoid fever, pharyngitis, and pulmonary consumption, respectively; in the remaining fourteen, both microscope and attempts

at cultivation gave only negative results. Their absence at the time of examination does not exclude the possibility of their presence at an earlier period of the process; that they may have lost their vitality, and with it their power to absorb the coloring agents.

Suppuration must be regarded, then, as indicating the presence of an element foreign to the living animal cells; which may be introduced directly, like the croton oil in Councilman's experiment, or indirectly as an incident in the life of various fungi. That a derangement of cell-nutrition, local gangrene, may by mechanical or chemical irritation, without the presence of other organisms, effect the same result, seems probable in view of clinical experience, but is not yet experimentally proven. Practically, we may regard acute suppuration as proof of the access of external irritant matter, organized or unorganized; and clinically, we must agree with Cohnheim, that suppuration not due to bacteria or other fungi is extremely rare. The comparative rarity of pus-formation under the Lister dressing—although this is, at best, an uncertain means of excluding organisms—is highly significant of the relations between the two.

That form of septic infection known as pyæmia is distinguished by abscess formation in external organs—from which fact alone it is evident that bacteria must play an essential part in the disease. Yet there is abundant direct evidence to the same effect: these metastatic abscesses always contain bacteria; these organisms exist not simply in the pus and in the inflamed tissue constituting the abscess wall, but also in a zone external to the territory already involved in inflammation; the invasion by organisms may therefore apparently precede the inflammatory re-action; further, incipient inflammation and suppuration are observed around minute emboli consisting of micrococci; and finally, although thrombosis and embolism occur in various pathological conditions, no suppuration occurs in such fibrinous masses, nor in the adjacent tissues, unless bacteria also be present. These anatomical facts are quite in accord with the independent evidence of experimental research. Panum found that the injection into the jugular vein of minute balls of wax or mercury caused the formation of emboli in the lungs, but that no suppuration occurred around them; he then combined embolic formation with putrid infection by the injection of putrid fluids just before or just after the formation of emboli, through the incorporation of wax, mercury fibrin or cheese particles; and varied the experiment by the artificial induction of superficial phlegmonous inflammation, in the course of which the formation of emboli was secured by injections as before. The result was always the production of simple, non-suppurating embolic masses; the substitution of fresh blood-clots for the wax, mercury, etc., whereby a closer approximation to the natural embolic process was secured, gave the same results. Emboli caused by intra-venous injection of particles of putrid flesh, however, were promptly followed by suppuration. Other experimental researches into the formation of embolic (metastatic) abscesses—by Virchow, Billroth, Weber, Waldeyer, Cohnheim—confirmed these results of Panum; putrid emboli always softened and excited suppuration; others rarely; it was further established (Waldeyer) that puriform softening of a thrombus can be caused by contact of pus or putrid matters with the external surface of the containing vessel, as well as by admission to its lumen. Since suppuration in the immediate vicinity of a vein may cause inflammation and thrombus formation in the vessel, it is apparent that phlebitis, puriform softening of thrombi—in short, pyæmia—may occur without any artificial solution of continuity in the vascular walls. Experiment has always shown that fluids (pus and putrid matter) capable of inducing pyæmia, lose by boiling (Panum, Bergmann, Pasteur) or by filtration (Klebs, Zahn, Tiegely) this power to cause metastatic suppuration—pyæmia—though still able to induce rapid and fatal infection—septicæmia. Since by these measures—boiling and filtration—the contained

organisms are destroyed or eliminated, experimenters are unanimous in ascribing the induction of metastatic abscesses to bacteria.

The clinical evidence is almost as strong; for, according to the unanimous assertions of eminent surgeons—Nussbaum, Volkmann, Esmarch, Thiersch, Verneuil, Schede, Gussenbauer, for example—pyæmia is practically unknown after wounds which have been treated from their inception by the Lister method, the avowed object and essential feature of which is the attempt to exclude organisms.

Perhaps the strongest clinical evidence of the septic influence of bacteria is afforded by the cases of so-called spontaneous pyæmia, where no suppuration nor solution of continuity is detected. In many of these a closer search would doubtless reveal a possible source of purulent infection. Weichselbaum has recently called attention to fatal cases of this kind in which the focus of infection was found as suppuration in the nose and antrum. Yet there still remain numerous cases in which pyæmia appears to proceed from deeply situated abscesses, which can have had no direct communication with the external world—after subcutaneous fractures, for example; and still another class in which a general infection without local suppuration during the first few days occurs without exciting cause, unless perhaps exposure to cold; and until the appearance of pus in the joints, etc., cannot be distinguished from acute rheumatism or from other infectious diseases. To this category belong cases of acute osteomyelitis and ulcerous endocarditis. The blood and metastatic abscesses contain in these cases also the usual micrococci; the history presents, in fact, nothing unusual except the obscurity of the infection. In some of these—as in one of osteomyelitis reported by Gussenbauer—the bacteria were observed in the blood and in the bone-marrow before suppuration had occurred; the general infection preceded the local affection. Such cases must incline us decidedly to the view that the micrococci caused not only the local suppuration, but also the primary general infection. It is noteworthy that such cases of primary pyæmia often follow exposure to cold; perhaps we should regard the retention of certain material in the blood, this interference in excretion, as a predisposing moment which has favored the development of organisms; diabetic patients certainly are especially prone to local gangrene and septic infection after a wound, and it is equally well known that a minute incision, even needle-puncture of the dropsical skin in amyloid degeneration of the kidney, exposes the patient to erysipelas and pyæmia. Yet in some cases the bacteria essential to pyæmia can and do exhibit their vital activity in the human body without the pre-existence of any recognizable deviation from the usual health, and without any discoverable solution of continuity in the integuments.

In this discussion I have assumed the etiological identity of the septicæmia and pyæmia of man with that of processes marked by the same clinical and anatomical features in animals. To such assumption objection may be made, based on the known differences in the effects produced on man and other animals by the same toxic agent; rabbits, for instance, live and fatten on a diet of belladonna leaves, and carnivorous animals are but slightly susceptible to anthrax. But when we consider that the septic processes of man are objectively identical with those of other animals, that they result in various animals alike from putrid and purulent infection, and furthermore, that they have been induced in animals by direct inoculation from the human subject, we must justify the application to man of the principles ascertained from the study of these septic diseases in other animals.

Although our present knowledge of the etiology of septic infection is thus incomplete, our ability to prevent such infection is fortunately more satisfactory. For we may practically classify all such cases into two categories—those in which a possible source of infection

is previously apparent, and those in which no such source is discoverable. The treatment of the former class, the large majority, comprising all wounds, I may be permitted to discuss in so far as the principles of such treatment are based upon a recognition of the agency of bacteria in the morbid processes. Septic infection from a wound means the absorption through that wound of one or more constituents of the putrefactive process. Now, putrefaction is impossible without bacteria; hence septic infection implies the vital activity of bacteria, past or present. The actual presence of bacteria in the wound is, as has been shown by Panum, Bergmann, and others, unnecessary—septicæmia may be induced by putrid liquids deprived of bacteria; *but these liquids are putrid*—they embody the products of bacterial life. Precaution against the introduction into a wound of already formed poisons—by disinfection of hands, instruments, sponges, etc., on the side of the surgeon, and by similar cleanliness as to the body of the patient, is evidently the first measure against sepsis—a measure quite overlooked occasionally by surgeons who intend to use all so-called antiseptic precautions. I once saw a laparotomy made by a rigid apostle of Listerism; the carbolic spray was used; hands, instruments, ligatures, etc., thoroughly carbolicized; but the patients' skin was not even washed; several coils of intestine were in course of the operation laid upon the skin, and came in contact with the pubic hair. The operation itself was not serious, but the woman died of purulent peritonitis.

If no infectious matter be thus carelessly introduced from without, the occurrence of sepsis from a wound necessarily implies decomposition in the wound itself. For the accomplishment of such decomposition it is evident that three factors must concur: 1, the presence of animal tissues deprived of vitality, and hence capable of putrefaction; 2, the presence of organisms capable of inducing putrefaction; 3, the prevalence of conditions which permit the vital activity of these organisms. The absence of any one of these conditions renders putrid infection impossible. We are familiar with analogous phenomena outside of the body. Urine or blood in free contact with ordinary air putrefies; if access of bacteria be prevented by closing the mouth of the test-tube with cotton, etc., putrefaction does not occur; the process can be prevented with equal certainty by changing the environment—addition of alcohol for example—whereby the vital activity of bacteria is arrested. We have abundant evidence, as has been already stated, that the same principles prevail within as well as without the living animal. That the bacteria ordinarily present in the air are powerless to destroy living tissues is proven by the fact that unfiltered ordinary air has been passed for hours through the peritoneal cavity of rabbits without inducing pathological changes—indeed, the entire subcutaneous tissue of animals has been inflated with air with like result; by the harmlessness of surgical emphysema; by Hiller's injection of such bacteria into his own body, etc. That the presence of putrefiable substances, if excluded from these same bacteria, gives rise to no putrefaction nor sepsis is shown in the cases of intra- and extra-uterine pregnancy, where a dead foetus is carried for months or years.

The prevention of decomposition and consequent septic infection from a wound can therefore be accomplished theoretically in any one of three ways: 1, the exclusion of putrefiable materials, *i.e.*, cleanliness; 2, the exclusion of bacteria; 3, the addition of a substance in whose presence putrefactive bacteria are inert.

It is evident that the accomplishment of any one of these three ends is antiseptic, or, if you prefer on etymological grounds, aseptic surgery. There is a prevalent inclination to consider Listerism and antiseptic surgery as synonymous terms; and to regard the success in avoiding sepsis which is secured by other methods—the open air and simple water dressing, for example—as proof not only that the Listerian details are unneces-

sary, but also that the agency of bacteria in the induction of sepsis—an agency which the Lister method was devised to defeat—is a myth, a mere craze, a fashion. It is manifest, however, that antiseptic surgery is far more comprehensive than Listerism. Listerism aims chiefly at but one of the three possible ways for the prevention of sepsis—the exclusion of ferments; the very methods whose success has been considered proof of the fallacy of antiseptic surgery demonstrate practically what is self-evident theoretically, that putrefaction and putrid infection from a wound can be prevented by the removal of putrefiable materials, just as certainly as by the exclusion of organisms. The aseptic success of Savory and Lawson Tait—rivaling that of Volkmann, Esmarch, and Lister, was secured by the most scrupulous care in avoiding the retention or accumulation of any discharge in the wound. The result is asepsis, the means a *pe* ic.

That this method of preventing sepsis affords the same certainty of success and possesses the same range of applicability as the Listerian, I would not maintain; indeed, my own limited experience, including some observation of surgery in St. Bartholomew's Hospital, inclines me to the contrary belief. I would merely protest against the not infrequent assertion that Savory's and Tait's success in avoiding putrid infection is an argument against the demonstrated agency of bacteria in the induction of sepsis.

There still remain a considerable number of cases, notably wounds of mucous membranes, in which anatomical relations prevent the execution of either of these aseptic methods: bacteria cannot be excluded, nor perfect cleanliness of the wound secured. In such cases asepsis can be theoretically obtained very simply by the presence of some substance in the wound which renders vital activity of bacteria impossible. There is a great variety of such agents—alcohol, carbolic acid, etc.—but for these cases all such are, from their volatility or solubility, practically useless; and it was reluctantly admitted on all sides that operation wounds involving mucous membranes could not, generally speaking, be rendered aseptic with certainty. Between 1860 and 1880 Billroth performed the amputation or extirpation of the tongue one hundred and nineteen times on one hundred different individuals; and notwithstanding the most careful attention, including frequent syringing with solutions of potassium permanganate, carbolic acid, or other antiseptic, twenty-six of these patients died, nearly all from septic infection, either directly from the wound or indirectly through the inhalation of septic products—"schluckpneumonie." With the introduction of iodoform into surgery the long-sought substance was found—comparatively insoluble and non-volatile—in whose presence the ordinary bacteria do not multiply. Under the proper use of iodoform wounds of mucous membranes are as secure from decomposition and septic infection as an amputated stump under a Lister dressing. This is admitted even by the fiercest opponents of iodoform—those who, like Kocher of Berne, having ignorantly poisoned their patients with it, would transfer to the agent the odium which evidently belongs to themselves. In 1880-81 Billroth made eighteen tongue extirpations, packing the wound with iodoform gauze which was allowed to remain undisturbed five to seven days, then sometimes renewed. Not a single septic infection occurred; recovery followed in every instance.

An operation which, though not *per se* formidable, had, even in Billroth's skilful hands, been followed by a greater mortality than that attending ovariectomy, was deprived of its septic terrors. I would particularly recommend this to the consideration of those who ignore all experimental work, who admit as worthy of consideration only clinical results, and who regard the success of Savory and Tait as the overthrow of aseptic surgery in particular, and of bacteria in general. Here is aseptic surgery *par excellence*, though the spray, protective

mackintosh, and attendant paraphernalia are absent; here is the prevention of septic infection by measures which do not exclude bacteria from the wound, but simply restrain their development. The method of Lister, conceived and devised upon a hypothesis, before the assumptions of that hypothesis had been verified, contained, as subsequent developments demonstrated, some errors of conception and execution. The spray, for example, that sign-manual of Listerism in the professional mind, seems less essential since we have learned that bacteria are less numerous in the atmosphere than was formerly supposed; and when we consider the researches published by the German Health Bureau, it seems somewhat doubtful whether the carbolic acid spray ever killed a single healthy bacterium; the vitality of certain spores is certainly not thereby affected. Koch found that the spores of anthrax bacilli, for example, retained their power of development after immersion for seven days in a two per cent., and after twenty-four hours in a five per cent. solution of carbolic acid; yet the bacilli lost their vitality after two minutes' contact with even a one per cent. solution. The clinical results also support the assertion that irrigation of the wound accomplishes quite as effectually the object for which the spray was designed. Yet it must be admitted that except in those cases, such as abdominal sections, where the spray causes positive and decided injury, there is a *possibility* of benefit from its use.

For application to the wound, many substitutes have been proposed for the objectionable carbolic acid: Fischer employs naphthalin; Schede and others report excellent results from corrosive sublimate; Langenbeck and Billroth regard iodoform as satisfactory.

To secure cleanliness—freedom of the wound from all putrefiable materials—surgeons now more generally appreciate the importance of ligating or twisting every vessel, however small, which could bleed when, with the discontinuance of the anæsthetic, the heart's impulse becomes stronger. The application of a firm, even, elastic bandage over the lips of the wound is often used, also, to accomplish the same object. For absorption of putrefiable materials Esmarch has used with great satisfaction turf enclosed in gauze bags; Schede is pleased with sand, previously heated and soaked in corrosive sublimate solution, which is poured directly into the wound. Perhaps one of the most important of antiseptic measures is the deep closure of the wound; whenever the lips of the wound are thick—as in abdominal sections and thigh amputations—the use of silver wire and lead plates for approximation of the deeper surfaces is essential to prevent the accumulation of blood in the pockets otherwise present, and the consequent danger of sepsis.

Antiseptic surgery, then, is not comprised in the spray and carbolic acid; it is not simply a question as to the relative anti-bacterial properties of this, that, and the other so-called antiseptic agents. It is an attempt to prevent the entrance into, as well as the formation within, a wound of all substances, organized and unorganized, which can interfere with cell-nutrition. It comprises, first, the exclusion or removal of all putrefiable materials—blood, pus, necrosed tissue (a point to which the Listerian school seems inclined to ascribe a subordinate place; witness Cheyne's "Antiseptic Surgery"); second, the exclusion of all ferments, bacterial or other; and, since neither of these can always be accomplished, since even under the most perfect Lister or other dressing, both putrefiable materials and bacteria may be present; third, the establishment of conditions incompatible with bacterial development. The most complete antiseptis is evidently not that which sees in bacteria the sum and substance of all surgical evil, but that which recognizes and endeavors to avoid *all* possible sources of infection. The most perfect realization of this ideal which it has been my fortune to witness, is seen, not in King's College Hospital, but in Billroth's clinic. Sponges are prepared by the abstraction of fat and sand,

and by at least fourteen days' immersion in five per cent. carbolic acid solution, in which they remain until used; for the operation they are put in two per cent. solution; ligatures (Billroth generally uses silk) are also kept in a similar solution. The skin at and around the location of the proposed incision is shaven, scrubbed with a flesh-brush and soap, and washed with carbolized water; hands and instruments are most scrupulously cleansed; operator and assistants wear clean linen dusters; no spray is used. Every bleeding point, however small, is caught temporarily in a clamp forceps, and at the close of the operation, ligated at the end of the severed vessel, to diminish the amount of necrotic tissue; the surface is thoroughly irrigated with three per cent. carbolic solution; a little powdered iodoform is often dusted into the wound—not, however, if immediate union be expected. If the soft parts severed be thick, the lips of the wound are approximated deeply by silver wires, and superficially by closely set silk sutures. The Esmarch bandage is removed from the limb—in amputations—as late as possible, since absorption does not occur so long as the bandage remains, but begins very actively so soon as the circulation is restored. A strip of iodoform gauze, usually also some powdered iodoform, is applied to the seam; then several layers of iodoformed or carbolized gauze; finally a very firm roller, starched organdine, or even elastic bandage is tightly applied over the lips of the wound. The first dressing remains unmolested as long as possible, the time varying, of course, with the case.

Original Articles.

TWO ATTACKS OF SCARLET FEVER IN THE SAME INDIVIDUAL WITHIN A PERIOD OF EIGHT MONTHS.¹

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ON April 15, 1882, M. W.—died of scarlet fever. On the 19th her brother, aged five years, was taken ill with the same disease. There was severe angina; the exanthem was very profuse, involving the entire body. There was marked delirium with the maximum development of the eruption. The temperature maintained a high range throughout the first week, varying between 104° and 105° F. (axilla). The subsequent desquamation was very extensive, and of the characteristic lamellar type. Unilateral inflammation of the middle ear, with perforation of the membrane, occurred, and moderate albuminuria was developed in the second week, which disappeared two months later. The patient was confined to his room for seven weeks. He was in good health during the summer and autumn.

On the 31st of the following December the patient suddenly became indisposed, and an examination a few hours later showed a slight congestion of the fauces and a swollen submaxillary gland; the temperature was 102° (axilla), and there was vomiting. The diagnosis of scarlet fever was not entertained at this time. Thirty-six hours later, however, an abundant and typical scarlet fever exanthem appeared about the neck, which rapidly spread, and in a few hours involved the entire body. The eruption reached its maximum development on the fourth day, with a temperature of 104° (axilla), and, if possible, was more profuse than on the former occasion. The manner of fading was characteristic, and a most abundant lamellar desquamation followed in the second week. The affected gland suppurated and was opened; slight albuminuria appeared at the beginning of the third week, which still persists. The patient has since suffered from a copious eruption of boils on various parts of the body.

On the 14th of January the grandmother of the patient, who had been in constant attendance in the sick room, was taken violently ill with facial erysipelas, which defervesced on the seventh day.

Remarks.—Recurring attacks of slight angina, with or without a somewhat rudimentary exanthem, in individuals exposed to scarlet fever contagion, who have previously suffered from a characteristic attack, are of comparatively frequent occurrence. True *relapses*, in which the characteristic eruption has reappeared during or at the close of desquamation and has again run its course with renewed fever, have been reported by several observers.

A second infection of scarlet fever, occurring within the short period of eight months, in which all the characteristic symptoms are manifested with as much prominence as in the primary attack, is sufficiently rare to be worthy of record. I have only been able to find similar cases recorded by West and Hillier (one case after thirty-six days), Laudeutte (two months), Holst and Wetzler (three months), Salzmann (five months), Easton and Trojanowsky (six and nine months). In the case reported above, the two attacks were of quite similar intensity, and were in all respects very typical.

The apparent slight susceptibility of other members of the family to the poison (the remaining children, three and nine years of age respectively, without previous infection, did not contract the disease, although fully exposed on both occasions), and the development of a facial erysipelas in an attendant upon the patient, are additional points of interest in the case.

TRANSPLANTATION OF PORTIONS OF THE CONJUNCTIVA FROM THE RABBIT TO THE HUMAN EYE—ALLOPLASTY.

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THE above proceeding has recently attracted attention, and I beg leave to report my experience with it. I will premise by stating that the operation was originated by Mr. Wolfe, of Glasgow, in 1872, and he gives a full account of it in his recent book on "Diseases and Injuries of the Eye," page 58, 1882. Many European surgeons have done the operation, but in this country it has, so far as my information goes, not been extensively imitated. Soon after it was announced, I made trial of it, and Dr. W. S. Little, whose case has recently been published, when he was my assistant in the New York Eye and Ear Infirmary during 1873-4, aided me on more than one occasion. I do not find a record of my earliest operations, but since 1878 there have been seven operations done at the Infirmary, of which one was performed by Dr. Callan and six were performed by myself. In the majority the lesion was symblepharon caused by burns of the eye, but about four years ago I employed the method to increase the size of the conjunctival sac, that a patient might be enabled to wear an artificial eye. I shall not attempt to relate the cases in detail, but shall state what experience has taught me in certain particulars.

The necessary dissection is first performed to remove all adhesions or deformity, and in the case of symblepharon to give the eyeball and the lids their proper freedom. For preparation of the conjunctival sac to make room for an artificial eye, incisions must be made as the peculiarity of the case may require. I have found that black rabbits are to be preferred to white, because in them the conjunctiva is firmer and can therefore be more easily handled.

The animal can be best controlled by having him in a pasteboard box, out of which his head protrudes through a closely fitting aperture. He should be etherized, but the anæsthetic need not be freely given. To dissect off the conjunctiva, I have in my last two cases begun by splitting the inner canthus, turning back the angles thus formed and stitching them temporarily to the adjacent skin. At the edge thus cut the dissection is begun, and

¹ The patient was under my personal observation throughout both attacks.

in taking up the conjunctiva the semilunar fold or third eyelid with its contained cartilage is lifted. I do not attempt to cut out the cartilage; I simply trim it as needful when the whole has been taken up. The dissection may include the conjunctiva of both lids and should be conducted from the circumference toward the cornea. It will not usually be needful to take more than half the membrane. I have found a pointed pair of scissors, curved on the flat, to be the best instrument. As the membrane is lifted, two threads of fine black silk with needles attached to them, should be put into one end of the piece and by these, when fully separated, it will be carried. The utmost care must be exercised to avoid snipping holes through it, and it becomes impossible to give form to the piece until later. It rolls into a mass, and the epithelial side cannot be distinguished from the opposite side except by the threads. When it has been separated I put it into a saucer of tepid water and fasten it on a submerged piece of cork by the points of threaded needles. I now trim it to proper shape. Next I carry it on the cork to the eye and run two of the threads from the piece into their places in the patient's eye. Then taking out the needles from the cork, draw their threads through the piece and pull it into its place and lay it out smoothly. I apply it to the eyeball and cover as much of the lid and globe as possible. To make the cul-de-sac, the stitches are brought through the eyelid and tied over a bit of stick on its outer surface. As many as ten stitches or more may be required to hold the piece in place. By operating in this way, a piece of conjunctiva three-fourths of an inch long and almost half an inch wide can be managed. Mr. Wolfe proceeds in a different way, which he describes as follows: "I put the patient and two rabbits under chloroform, one being kept in reserve in case of accident. I then separate the adhesions so that the eyeball can move in every direction. Next I mark the boundary of the portion of the conjunctiva of the rabbit which I wish to transplant, by inserting four black silk ligatures which I secure with a knot, leaving the needles attached. These black ligatures indicate also the epithelial surface, which would be very difficult to distinguish after separation. The ligatures being put on the stretch, I separate the conjunctiva to be removed with scissors, and transfer it quickly to replace the lost conjunctiva palpebræ of the patient, securing it in its place by means of the same needles and adding other two stitches or more if requisite."

I have found that to put the piece upon a cork under water was an easier mode of transfer than to do it directly by the threads from the eye of the rabbit. Mr. Wolfe lays the piece on the palpebral surface. I have applied it to both the ocular and palpebral surfaces. Whether any advantage can be claimed for one situation above the other, I do not know. My remarks apply, of course, to symblepharon, and usually the lower lid is at fault. In no instance have I met with entire failure while the degree of benefit has been various.

When done to make a cavity in which an artificial eye can be worn, I have caused the patient, after the parts were healed, to wear a small piece of porcelain, shaped like an artificial eye, to stretch the tissues, and have introduced larger ones as the increase in the size of the cavity would permit. In one case of a boy, twelve years of age, the result was satisfactorily accomplished in about four months. In some cases where the patients had long worn an artificial eye and the conjunctiva had grown thick and fleshy and ribbed, I have not had success in this endeavor; but if the tissue has not too greatly degenerated the case is hopeful. A condition of true xeroma, where the membrane has lost all secretory properties, is not favorable, because extreme shrinkage will occur.

The boy above mentioned had lost one eye from inflammation during infancy, and not only had the globe shrunken to a very small nodule, but the conjunctival sac had become practically obliterated. The boy

was extremely sensitive to his disfigurement, and was unwilling to go to school, because his companions made fun of him. As above stated, I succeeded in enabling him to wear an artificial eye, which, although rather small, removed the conspicuous deformity and relieved him from persecution. Unless a piece of new material had been introduced, it would have been impossible to enlarge the conjunctival cavity.

The transplantation of mucous membrane would *a priori* be regarded as more likely to succeed than would the similar treatment of large and isolated pieces of skin—an operation which Mr. Wolfe also was the first to propose. In both cases the cells of the transported tissue must for a time maintain their vitality without gaining any nutriment directly from the circulation. The more directly they can come into relations with the living tissues on which they are laid, the easier it will be for them to get a supply of fresh nutriment. At any rate, this seems a plausible supposition, and to be in favor of the better viability of mucous membrane as compared to skin. In the case of the latter, it is known to be necessary, as Mr. Wolfe pointed out, to reduce the skin to the utmost thinness. When this is done, it is found that the epidermoid layer perishes and is cast off, while only the deeper parts of the skin enter into real union with subjacent structures. In a recent case in which I have done transplantation of skin without any pedicle—to which, I think, the name of *alloplasty* may suitably be applied—the surface layers of the skin were not cast off; they seemed to undergo a kind of dry gangrene and became hard, black, and leathery. Nothing was exfoliated until six weeks after the operation. Then the dry scab dropped off, and underneath was found a well-formed cicatrix, which served the desired purpose, and removed the deformity of the eyelid, for which the operation was undertaken. It was evident that the deep layers of the inserted piece formed an attachment to the locality, and gave rise to the formation of material duly covered by epidermis. With mucous membrane no sensible separation of a living from a dead part can be recognized; yet the piece appears to undergo sloughing, which subsequent observation proves is either not a total death, or that a special activity is awakened in the surface covered by the piece which issues in the formation of a new covering material.

CONSIDERATIONS ON

ANTERIOR UTERINE DISPLACEMENTS AND A NEW METHOD OF TREATMENT FOR THE SAME.

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In the consideration of displacements of the uterus it is necessary to understand the term "normal position." I think I cannot do better than quote the view of Richer, "*Traité clinique Martineau*":

1. In the foetus, the newborn, and the child, up to ten or twelve years of age, the uterus has neither a fixed nor a determined direction or position; it is elongated, soft, flexible, not situated in the pelvis, but in the abdomen, unprovided with true ligaments, and is easily moved by any force whatever.

2. In adult women the uterus lies though it is lightly enough fastened by its very incomplete ligaments, subject to frequent displacements backward, forward, and to the sides, mostly in one direction, which may be called *normal*; this is more or less regularly flexed forward, its axis seeming to follow the direction of the pelvic canal. Therefore, as the pelvis describes an arc, with its concavity forward, the axis of the uterine cavity is inclined the same way.

Schultze and Fritsch have enabled us to discard those

abominable representations of *pelvic sections*, still scattered through most of our gynecological and obstetric works, and which are totally inadequate to render a correct representation of what may be called *the normal position*, and they have shown that dissections of dead or frozen bodies are by no means to be relied upon to give us the absolute position occupied by the uterus during life. Hach (Dissert., Dorpat, 1877) also has demonstrated that in two cases, where a displacement of the uterus was diagnosed twenty-four hours before death, *the exact counterpart appeared in the autopsy*. The abdominal and the blood pressure, two factors in keeping the uterus in position, discontinue after death, and consequently the representations obtained by the use of frozen bodies, etc., are frequently incorrect.

The uterus is sustained, more or less, by the so-called ligaments, the vagina, and perineum below, and the excessive quantity of erectile tissue and blood-vessels surrounding it, the vagina, and ovaries.

The round ligaments come into play as supports only when the uterus is in retroversion; shortened by disease they form a grave factor for displacement.

Professor Pallen, however, has for many years denied these functions of the round ligaments, and claims that they are but the analogues of the cremaster in the male, functioning only during erotic excitement, and then for the purpose of dragging the uterine body toward the pelvic arch.

The broad ligaments, though admitting of a good deal of mobility of the fundus, before being stretched by pregnancy, contribute much to keep the organ from lateral displacement.

Posteriorly the utero-sacral (utero-lumbar) ligaments, made up of the folds of peritoneum forming Douglas' cul-de-sac, strengthened by strong bundles of the pelvic fascia, and musculo-cellular prolongations from the vagina, and from the *cortex uteri* itself (Luschka's muscle), are, after embracing the rectum, inserted into the lower lumbar vertebrae. These are the ligaments, *par excellence*, a shortening or relaxing of which will produce various displacements. Continuing forward from the cervico-corporeal junction, they embrace the bladder, and are inserted in the pubes. Besides, about two centimetres of the cervix are attached to the bladder by cellular tissue.

The firmness with which the base of this organ is fixed (by ureters, cellular tissue, etc.), and its intimate connection with the vagina and uterus, make the vesico-vaginal septum a strong factor in the circle of uterine support, especially when it is considered that prolapse without cystocele is rare or almost impossible.

This line of support, extending from the subpubic ligament to the attachment of the sacro-uterine ligament above, forms what is described by Savage as the *pelvic roof*. It is this pelvic roof which, intersecting the uterus at its cervico-corporeal junction, allows of a free tilting mobility forward and backward, but not so much upward or downward. However, the cervix is, without doubt (Savage notwithstanding) prevented from sinking downward and backward by the posterior wall of the vagina. This, again, derives its support from the prolongations of the vaginal tube to the pelvic fascia, from its own inherent rigidity, and last, but not least, from the perineum. It is obvious, then, that it is not the perineum directly, which gives support to the uterus, but indirectly, in so far as it supports the posterior vaginal wall; besides which, the posterior wall, being rather below than behind the anterior wall, also supports the latter, and with it furnishes additional safety against cystocele.

The abdominal pressure materially influences the organ. The various plexuses of erectile tissue surrounding, as they do, vagina and uterus, and being filled in life with an amount of blood sufficient to give them a certain stability, will do much to restrain the apparently superabundant mobility of the uterus (Pallen).

Normal variations in its position occur every day; the

filling of the bladder lifts the fundus, and throws it backward; an abnormally distended rectum throws the organ *in toto* forward (and only exceptionally the fundus). The act of respiration draws the organ up, or depresses it, any exertion or compression of the abdominal muscles depresses the uterus; besides, congenital malformations, such as short vagina, or one short vaginal wall, an abnormally short ligament, may, in a given case, though deviating from the more frequently found position, represent the normal one here. It is only in those malpositions where free mobility is impeded, where the ligaments are shortened or relaxed by disease, where the blood-vessels are stretched or impinged upon, and an obstruction to the return circulation takes place, concomitant with congestion or inflammation, and where, even without any of these conditions, symptoms are produced which cannot be explained except by such displacement, that we are called upon for their rectification. Kiwisch, Simpson, and Velpeau indeed imagined, and fought for the theory that displacements under all circumstances ought to be corrected; but it is only exceptionally that we meet with a case where the displacement is not the result of some other trouble, though certainly it will aggravate this state, and usually will call for treatment.

As my ultimate purpose is to explain my pessary, let us omit displacements backward, upward, and laterally, and we find that exciting causes for prolapse and anteversion (with so much concomitant flexion as not to make this an extra factor requiring treatment) are:

1. *Increased weight of uterus.* a. Tumors, subinvolution of the organ, or inflammation in prolapse. b. Increased weight of fundus, subinvolution of placental site, or fibroids of the anterior wall in anteversion.

2. *Interference with uterine supports.* a. Rupture of the perineum, prolapse of the vagina, relaxed ligaments, or flabby abdominal walls in prolapse. b. Prolapse of anterior vaginal wall and cystocele, relaxation of the utero-vesical ligament, shortening of lower part of posterior ligaments, shortening of round ligament in anteversion.

3. *Pressure from above.* a. Tumors in the abdomen, tight lacing, violent efforts, ascites, and even, as described by Breisky, the entrance of intestines into the otherwise patent Douglas' cul-de-sac.

To recognize in each given case the cause of the displacement will be our first duty. the treatment will suggest itself.

A ruptured perineum ought to be united.

An inflamed or subinvolved uterus or vagina ought, by rest and hot water, etc., to be decreased in size; false membranes ought to be stretched or ruptured; fibroids in the uterus removed if possible; tight clothing discarded; tone given to an anæmic person or lax ligaments by out-door exercise and administration of iron and nourishment. Lax or obese abdominal walls are to be kept in place by a bandage, thereby distributing the pressure of the intestines equally over the pelvic roof. But in all these cases replacement of the organ and a well-adapted pessary, lifting the organ to its normal plane so as to relieve the pressure and stretching of blood-vessels, will always prove a valuable factor, with which I, for one, would not dispense. Of course, where abdominal tumors are the cause of the displacements, or where the uterus is so firmly glued down in its abnormal position that it is impossible to stretch the adhesions, these latter means will be of no avail.

The replacement will be always easiest performed in the knee-elbow position. The aid of gravity is thus brought into force. Elevating the perineum will admit the air into the vagina, which will rectify the cystocele, prolapse, or anteversion in many cases by itself.

Slight adhesions should be stretched, and the reposition completed by the finger, or a cotton ball held by a forceps. Whenever we cannot replace by these means, it is dangerous to use the sound or elevator, the application of which, even in the other cases, is always dangerous.

We now come to those means which we have to maintain a replaced anteversion or a cystocele with prolapse in position.

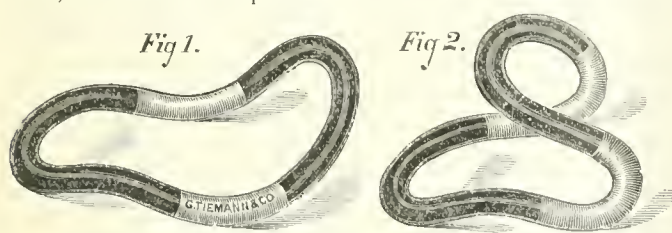
I do not wish to enumerate all those appliances which take their support from outside of the vagina, from an abdominal belt and perineal band. Nothing more unphysiological could be imagined; excluding the disagreeable sensation of the band, each jar and every different posture reflects violence on the uterus, giving rise to constant irritation. The number, however, of vaginal anteversion, or prolapse pessaries devised, and daily being devised, indicate that we have not yet found our *beau idéal*.

All such pessaries aim at the elevation of the vesico-vaginal septum, and thereby of the bladder and uterus, except rings, which stretch the sacro-uterine ligaments, and thus sling the uterus up from behind.

They take their support from either the posterior vaginal wall and perineum, or from the bony parts, the symphysis, or the planes of the ischium. Those taking their support from the soft parts, produce less irritation because they do not receive so much counter-pressure, and they allow more latitude to the instrument and uterus; besides, the smaller the pessary, the less irritation it will produce, and the more chance will the relaxed tissues have of regaining their tonicity. Therefore, all those rings, elastic or inelastic, and those appliances which act merely by their bulk, and which, to maintain their efficacy, have to be constantly increased in size performing their work by stretching the whole vagina, ought to be rejected.

Thomas', Pallen's, and Graily Hewitt's pessaries are excellent for some cases; but one of the grave objections to them is, that they cannot ordinarily be removed and reintroduced by the patient herself, a defect also of that otherwise most excellent pessary of Gebrung's.

This pessary—the double horseshoe—lies, in his diagrams at least, with the lower bow below the pubic arch, while the other one supports the vesico-vaginal septum. In reality both bows work themselves behind the symphysis (a position illustrated by a diagram by Mundé) and stretch the base of the bladder, giving rise to vesical irritations or peri-uterine inflammation. To obviate these defects I have devised a pessary, a small size of which, while supporting the anteversion or cystocele completely, is easy of introduction and withdrawal, as it takes its support ordinarily from the soft parts, and is even applicable in cases where the perineum is ruptured, and cannot be operated on.



It has the form of a Smith's modification of Hodges' pessary. The upper and lower parts consist of hard rubber, and are joined on either side by a spring, coated with soft rubber. The pessary is broad for those cases where the perineum is partly wanting, while it is narrower where the latter is intact.

After the anteversion or prolapsus are replaced, the pessary is introduced like an ordinary Smith's, but the upper bar is left in front of the cervix, instead of being placed behind it, as in a retroversion. The weight and the tendency for the malposition to reoccur are neutralized by the springs, which will only give way to a certain extent; while their elasticity makes it particularly adapted for such cases where tenderness would preclude the use of any other pessary.

In a case where the uterus is heavy the springs have to be strong; where the organ is light and easily movable they have to be more yielding.

CASE I.—Mrs. W——, aged thirty; married three years;

one full-term pregnancy two years ago, easy labor; menstruated three months after confinement; has always been well up to that time; menstruation regular as to time and quantity. Complaints of pains in back and left side, which are increased before menstruation, and upon exercise; frequent micturition, less when recumbent; constipated. Physical examination reveals a uterus which measures three and one-eighth inches, and is in a high degree anteverted; severing of the perineum proper, though skin surface intact.

Thomas' and Gebrung's pessaries produced only very transient relief, the former after a while produced irritation, a small size of the latter she lost in walking; wearing a larger size was attended with discomfort.

For this case I devised my pessary. The relief it gave her was immediate; she wore it for three months, and is now pregnant for the second time.

CASE II.—Mrs. B——, aged sixty-five; widow; mother of four children, the last of which was born twenty-six years ago after instrumental labor. Since that time patient has been troubled with dragging pain in pelvis. A few years ago a tumor appeared outside of the vulva, which she has carried since then by a diaper. This has incapacitated her for any exertion, though she is otherwise hearty for her age. Physical examination revealed complete prolapse, the uterus slightly anteverted, and a lax, partly lacerated, perineum.

Reduction was easy; a broad size of my pessary kept the uterus well in place (the patient would not consent to an operation). She has worn the instrument for the last three months without any discomfort; she is able to do her housework, and only in straining at stool does she stand in danger of losing it. By applying the tip of the finger to the lower arc she can easily obviate this difficulty.

CASE III.—Mrs. S——, aged thirty-two; married seven years, three children, the youngest of which is two years old, complains of menorrhagia, dragging pain, and frequent micturition. Physical examination showed enlarged anteverted uterus, deep unilaterally lacerated cervix, and slight perineal rent. The cervix was united by four sutures and healed promptly, leaving the uterus decreased in size, and the patient free from her accustomed flooding. The pain and anteversion were not modified. The uterus was now replaced, and one of my pessaries introduced. The relief was immediate; she did not return for ten weeks, and then she gave me the following history: Shortly after the introduction of my ring she had removed to Brooklyn; she had not felt any pain until after that event. Her idea was, that the ring, which she had not until then removed, was out of place; she consequently withdrew the instrument and reintroduced it, at once alleviating her sufferings; but in a few hours, after straining, she felt the pains return. Being disinclined to come over to New York, she consulted two gentlemen in Brooklyn, both of whom tried various instruments, none of which did her any good. On examination I found her uterus heavier and lower down than before, and upon introducing my pessary [the same which she had worn before] the uterus pressed it down instead of being supported by it. An instrument with stronger springs at once set matters right. For several months she has now felt perfectly well.

This strength of the spring must not be overlooked, because in another case I have, against my will, turned an anteversion into a retroversion, by a spring too strong for that individual case. Unfortunately this case has passed away from my observation, and I cannot tell how it terminated. In four more cases my pessary has given complete satisfaction to my patients and to myself, and I feel warranted in presenting it to the profession, only hoping that it will be given a fair trial. The instrument is manufactured for me by Messrs. George Tiemann & Co., of New York, who have managed to make the movable part of the pessary perfectly smooth and hard enough not to become imbued with the secretions of the vagina.

REVIVIFICATION.

By S. WATERMAN, M.D.,
NEW YORK.

THE following two cases are selected to show the necessity of making persistent efforts at revivification in cases of sudden death, especially from heart disease, as well as in cases of still-born children.

There is no doubt in my mind that in many cases of sudden death, especially from heart disease, prompt and persistent efforts to reanimate the apparently dead person may result in restoring life. It is probable that in many instances the heart's action may fail from transient causes; a dangerous syncope may supervene, and unless timely efforts are made, and proper measures are promptly resorted to, the person may pass from a state of suspension of vitality into the silent and lasting embrace of death.

A case in point happened to me in the month of February, 1880. Mr. B—, a gentleman of sound constitution, about six feet in height, springing from a healthy ancestry, aged eighty-four years, had an attack of senile gangrene in the inguinal region, two inches and a half in length, and one inch wide. The slough was in time thrown off, and healthy granulation filled the wound. A second attack subsequently, not quite so severe, destroyed a part of the integument in the umbilical region. Its cause and final cure was similar to the first attack. The third attack was in the great toe of the left foot. The entire toe perished, but a line of demarcation formed, the destructive process went no farther, healthy granulation formed, and the healing process progressed in the most healthy and satisfactory manner. Mr. B— suffered in addition from valvular disease of the heart, and likewise from Bright's disease (granular degeneration), probably in consequence of retarded circulation and diminished blood-pressure. One morning while I was sitting at his bedside, and in friendly conversation with him, he being to all appearance in a very happy mood of mind, he suddenly fell back, his eyes became fixed and glassy, a deadly pallor crept over his countenance, respiration and the heart's action ceased simultaneously, and death seemed to have carried him off suddenly and unexpectedly.

It was this suddenness of the event that impelled me to make efforts at revivification. Two nephews of Mr. B—, who were fortunately in the house, were brought under requisition, and under my direction systematic artificial movements were carried on for nearly thirty minutes. Then, to my unspeakable satisfaction one deep inspiratory effort was made by the patient himself. Thus encouraged, we redoubled our efforts for ten minutes more; other inspiratory efforts followed in quicker succession, the heart began to respond, hardly audible at first, it required force and momentum; it could now be felt at the wrist: the deadly pallor passed away, the eyes lost their glassy, fixed aspect, sighs and groans could be heard, twitchings of muscles of arm and fingers could be distinctly felt, and the rigidity of death made way for reanimated conditions.

He lay unconscious for more than ten hours, respiration being hurried, and breathing stertorous, the heart's action wild and irregular. During the night he was delirious and restless. Toward morning all untoward symptoms subsided, and a quiet sleep followed the extreme restlessness.

When I saw him next morning he sat up in his bed and partook of a good breakfast. Consciousness had returned, and all the life functions were in full operation. He died six weeks afterward under symptoms of uræmic intoxication. During these six weeks, up to the hour of his death, he had several other attacks—one very prolonged and almost fatal—during which my son, M. W. Waterman, attended. Artificial respiration was resorted to with the same success.

CASE II.—Mr. E— called upon me during the winter

of 18—, to obtain a death-certificate for a still-born child of seven months' gestation. I expressed a desire to see the child, and promised to visit him during the day. A midwife had assisted during the delivery. It was a cold stormy day and 1 P.M. before I arrived at Mr. E—'s house. He lived in a low basement. Mr. E— was a Hebrew, and according to Hebrew rites, the child had been laid upon a little straw upon the ground, and covered with a light black shawl. It had thus been lying since 5 A.M. As I was examining the child, I could detect some slight twitching movement over the region of the heart. I watched attentively, and I observed the movement again. I had the child removed from the ground and placed upon a pillow on the table. The child was as cold as ice but not rigid. I could detect no heart's-sound, nor any respiratory murmur, but the muscular twitchings were very evident. I immersed the child in a hot bath, and initiated artificial respiration. Twenty minutes passed in this seemingly hopeless work. Then the child opened its eyes. A little more work and respiration began, laborious and interrupted at first, more normal by degrees. The heart's action came up in good style, and a human life was saved! The child thus saved is now one of the most accomplished violinists in this city.

The preceding cases are well calculated to rouse our most serious attention. How often has it been within reach of the physician thus to save life if but strict and critical performance of duty had been attended to! How often are certificates of death written out without first scrutinizing the body, and ascertaining, by all means at our command, whether death has really claimed his victim irrevocably! Mr. B—'s case, especially, offers much encouragement to try revivification in sudden deaths, especially in heart disease. One case thus given back to life and light forms a recollection bright and pleasant upon the thorny path of a physician's life.

103 WEST FORTY-NINTH STREET.

PERMANGANATE OF POTASH IN THE TREATMENT OF AMENORRHOEA.—Drs. Ringer and Murrell have for some time made extensive trial of permanganate of potash as an emmenagogue in those cases of amenorrhœa resulting from some trivial cause, such as getting wet or catching cold. In their experimental observations they gave the one drug only. The most striking results were in young women between the ages of eighteen and twenty-five, who had missed two or three periods. The administration of one or two grains of permanganate of potash in pill, three or four times a day for a few days before the time of the expected period, will bring on the flow almost to a certainty. As a rule, the medicine must be taken three or four days successively to call out the catamenia.

In this connection a letter to the *Lancet*, January 13, 1883, may be of interest. Mr. Martindale writes: "Having during the last few days heard of cases of spontaneous combustion of these pills, which it is very probable will occur if the common excipient containing glycerine, now generally used by dispensers, be used to mass them, I wish to point out that any readily oxidized excipient should not be used. Having prepared a quantity of the pills, I found the following basis to answer best: Vaseline, two parts, paraffin wax, one part; melt, stir till cold, and add kaolin, three parts; mix well. This binds the powdered permanganate together, and with a little dexterity the pills may be rolled out without much difficulty, and dusted over with kaolin. They may be coated with sandarach dissolved in absolute alcohol, and rendered tasteless. Cocoa butter may be used as an excipient, but it in time reduces the permanganate, and it is troublesome to manipulate. In solution a dose of permanganate of potash is very nauseous; in a tasteless pill, which dissolves slowly and yet can be easily disintegrated, it is, besides, more agreeable to the stomach than in solution."

Reports of Hospitals.

THE ANTISEPTIC METHOD IN THE LONDON HOSPITALS.

(As reported by our London Correspondent.)

LONDON, January 22, 1883.

MR. LISTER'S work has now been so thoroughly canvassed before the face of the whole medical world, that it is not unfit at the present time to enquire how far his views and practice have prevailed to influence the hospital surgeons of London in modifying their treatment of wounds, whether the result of accident or caused by operation.

Mr. Lister has for some years been in London, where, at King's College Hospital, he shows almost daily to any that care to take the trouble to follow him round the wards, or to watch him in the theatre, the methods which he advocates, and which are the results of his labors for a very considerable time, as the best for combating the bugbear of "sepsis" which he first and foremost has the credit of showing in its true light, as the cause of those many diseases which formerly wrought such havoc in surgical wounds. To say that he has been successful in demonstrating the value of his theory, conveys but a small idea of the great steps which have been made, owing to the entire or partial acceptance by the surgical world of his views. London is on the whole well provided with hospitals, although their distribution is far from satisfactory, and the appeals for subscriptions which appear every morning in the daily papers show the difficulty which must exist in maintaining, by public benevolence, the funds of all but the happy few which are blessed with rich endowments. Still, as a rule, expense is never spared in rendering all the surroundings of their inmates as favorable to recovery as science can suggest. For this reason, it may be, hospital surgeons in London were well contented with the existing state of things, and were unwilling to allow that any change for the better could be possible from the routine which tradition or their own experience sanctioned. And, no doubt, until Lister's work and its results became known and discussed, they had very fair reasons to be satisfied. Their statistics, when they could be compared with those of other towns, and especially with those of foreign hospitals, were more than creditable. The statistics of the results of operations in some foreign hospitals, at the time when Lister's practice became known and his reasoning appreciated, were truly alarming. It is not to be wondered at, therefore, that foreign surgeons welcomed any method which offered prospects of obtaining better results under the same hygienic conditions; and we need only to look at the results obtained by Volkmann of Halle, under a lack of hygienic precautions which is almost incredible, to understand the enthusiasm with which all the work of Lister has been received abroad.

It will, then, be a matter of no little surprise to your readers to know that it is rare to find among the visitors to Mr. Lister's wards and the followers of his practice, many of the surgeons to London hospitals. Before leaving Edinburgh, statistics were published which contrasted the results obtained by Mr. Spence with those of Mr. Lister under the same roof, and, therefore, the same conditions. These were decidedly in favor of the latter's practice, and should have induced all who had the opportunity to see for themselves by what means such results were brought about. For it is not by reading or by listening to his description of others that a fair idea of the method can be obtained. The details are so carefully carried out, and their importance is so essential to the principle, that it can only be by continuous and careful study that any imitation can be attempted.

So much has already been spoken and written on the subject that it would be out of place in the present article to discuss the many objections to some of these de-

tails, but it may be well just to advert for a moment to the course which is followed with all wounds in Mr. Lister's wards. For example, let us take a simple operation, such as an amputation of the breast. So soon as the patient is under the influence of chloroform—which is still used in preference to ether at King's College Hospital—the parts around are sponged over with a weak solution of carbolic acid, 1 to 40 parts of water. So, too, are the surgeon's and assistants' hands, and the sponges to be used in the operation are dipped in the same solution. When all is ready the spray apparatus, placed at a convenient distance, is brought to play over the part, the patient's face being protected by a towel, and the management of the spray being the sole duty of an assistant. The instruments to be used are all immersed in a solution of 1 in 20 of carbolic acid, and are immediately replaced in it when not in use, the solution being contained in a large flat tray which stands on a small table within reach of the operator, and a towel soaked in the solution is spread just below the breast of the patient, upon which they may temporarily lie in the full atmosphere of the spray. When the diseased part has been removed, the vessels are tied with carbolized catgut, and all bleeding having ceased, a drainage-tube which has been carefully cleansed and washed inside and out with the stronger solution is inserted at the most dependent part, a separate opening in the skin being made, if necessary, to obtain that object. The edges of the wound are then brought together by sutures either of wire or of carbolized silk, and if there be much tendency in the wound to gape, or if the tension be great, the deeper parts are drawn into apposition by two or three stout silver-wire sutures made fast at each end to flat pieces of lead, the edges of which are turned up in such a manner that the wire can be easily secured by a turn or two around them.

On this accurate approximation of the deeper parts of all such wounds great stress is laid, and it is considered essential to secure rapid union of all such cases. The wound is then dressed, a narrow piece of "protective" being laid along the whole of its length, and one or two layers of gauze wrung out in carbolic solution being laid over and freely overlapping it. Above this the gauze dressing is carefully laid, and consists of seven or eight layers of dry gauze, with a piece of mackintosh beneath the outermost layer, and this is secured by a bandage of the same material. In order to ensure the accurate fitting of this dressing, which is sufficiently extensive to cover a wide area around the neighborhood of the wound and to pass up into the axilla of the affected side, an elastic bandage is adjusted so as to bind down the edges in all directions and obviate any chance of the ingress of air or the disturbance of the dressings by the movements of the patient. As soon as all this is completed the spray is withdrawn; but should any accident occur to the spray apparatus during the progress of an operation, a piece of linen soaked in carbolic lotion is always at hand to protect the whole of the wound.

The case is generally dressed on the following day with the same antiseptic precautions, and these are used until the wound is entirely superficial, when they are discarded, and ointments containing boracic acid are substituted. Such is a rough sketch of the method followed by Mr. Lister and those who adopt his treatment in its entirety. But it must not be supposed that any description can give an adequate idea of the precautions which are taken by all concerned in an operation such as that above described to thoroughly guard against the possibility of sepsis. Nothing but careful watching of the author's work can give the full estimate of its thoroughness. Mr. Lister himself attends to the dressing of all his cases whenever it is possible; but he has so thoroughly imbued his house-surgeons and dressers with the details of his system that he can well afford to trust them. So it is that all recent wounds are treated on this principle, whether they be the merest trifles or whether they are

complicated with a fractured bone or an injured joint. In all cases the wound is thoroughly cleansed by syringing into its innermost interstices a solution of carbolic acid, and then dressed in the same way as a wound caused by operation.

It is, perhaps, in the surgery of the joints that the contrast between past and present methods of treatment is most strongly marked. Any one who recollects the gravity with which an accidental wound of the knee-joint was regarded fifteen years ago—and with very good reason, for the tables of our hospitals show how fatal was such an injury—and contrasts with these tables those which have been published in connection with such injuries under the care of Mr. Lister, will be forced to confess, *nolens volens*, that some great secret has been unravelled which has divested this injury of most if not all of its dire fatality. But that is not all. The immunity which attends accidental injuries of joints has increased the number and magnified the nature of the operations which can be performed upon them with an almost entire freedom from those sad and frequent consequences which formerly made surgeons hesitate long before they proposed to the patient an operation, such as the removal of a loose cartilage, which incapacitated him from following any useful pursuit. Contrast with former experience the fact that since 1871 Mr. Lister has treated forty cases of injuries to healthy joints without a death, that these cases were in hospital wards, and that in only one, where the wound was made by the surgeon, did suppuration occur, and we need hardly search for further proof of the advance in surgery which has taken place in consequence of the method which has been so carefully and earnestly established.

As has been said, the number and the nature of operations upon healthy joints has been increased, and we need only look at the list of those which occur in the table to wonder at the boldness or extol the enterprise of a surgeon who dares to unite, by wire, the ends of a fractured patella, and to drain the knee-joint for relief of the effusion consequent, and who obtains after this, as a result, a united patella and a joint in no wise impaired as to its mobility.

It is not our purpose to detail the many operations which can now be performed with comparative safety, but we have thought it worth while to instance a few, in order to show the difficulty which some of the older surgeons must feel in reconciling such bold measures with all the teaching and experience of their earlier days. To this must be attributed, in some measure, the hesitation which in many cases has been shown to welcome or adopt any new method. Still it has been forced upon them to make a very great and thorough change in the treatment of their cases, and it has transpired that although many surgeons would deny that they are followers of Lister in all the details which he considers as vitally necessary to the complete and thorough carrying out of his views, yet they would indignantly repudiate the assertion that they were not "antiseptic" in their treatment of all their cases. Thus it has come about that to distinguish his own practice from that of others who are antiseptic but not Listerian, the author of this change of circumstances speaks of his own work as "aseptic," meaning by this distinction of terms that in his own case a distinct principle is followed which attains the ideal of results, viz.: a complete absence of putrefaction—an asepsis, while under the longer word are comprised "those methods by which the occurrence of putrefaction is more or less interfered with, but all acting on a more or less imperfect principle."

(To be continued.)

IODIDE OF BARIUM.—This substance, which, by the way, is actively poisonous, has been used in France as an application to enlarged lymphatic glands, and more especially as a local application in chronic eczema. For this purpose it can be mixed with a petrolate.

Progress of Medical Science.

THE TREATMENT OF LOBAR PNEUMONIA.—In a clinical lecture on pneumonia recently published in the *Lancet*, Dr. Francis Delafield speaks as follows regarding treatment: The treatment of lobar pneumonia calls for the exercise of much knowledge and judgment on the part of the physician. It is necessary to be practically acquainted with the course of the disease, and to appreciate fully the exact condition of each patient. There is no routine treatment for pneumonia; each case must be managed on its own merits. If we see a patient during the first twelve hours of a pneumonia, the question presents itself as to whether we shall try to abort the disease. This may be done in two ways: by general bloodletting, or by large doses of calomel. The latter plan is the one more frequently employed in New York. From twelve to twenty grains of calomel are placed on the patient's tongue, and this dose may be repeated in six hours. In favorable cases either the bloodletting or the calomel may cause defervescence to take place within a few hours. But both these plans fail in more cases than they succeed. Ordinarily no such attempt is made to abort the disease. Our first care is to put the patient into a condition of absolute rest. He is to be kept in bed, fed on fluid food, and given opium in small doses. Everything which can annoy or irritate the patient is to be strictly avoided. If the temperature runs between 100° and 104° it requires no treatment. If it rises higher than this we may sponge the skin with alcohol and water, give diaphoretics, and aconite or veratrum viride in small doses. Large doses of quinine, cold baths, and cold affusions not only make no permanent reduction in the temperature, but they are positively dangerous. The pulse should regularly be between 100 and 120. If it is above 120 and feeble, we should endeavor to render the heart's action slower and stronger. The most efficient agent for this purpose is alcohol. Either wines, whiskey, or brandy can be prescribed. The amount of alcohol used is to be regulated by its effect on the pulse. It is often well to combine with it either opium or the liquid extract of convallaria. This seems to be the only indication for the use of alcohol in lobar pneumonia. Unless it is required as a cardiac stimulant, the patient is better without it. If the breathing is not only rapid but oppressed at the onset of the disease, the patient may often be relieved by the use of wet cups, dry cups, warm fomentations, or mustard plasters over the whole of the chest. If such oppression continues through the disease, it may be mitigated by the use of calomel and opium in small doses, by aconite and veratrum viride, and by diaphoretics. For the pain in the side, the restlessness, and the sleeplessness, the most efficient remedy is opium, selecting the preparation and the dose to suit each patient.

From what has been said, you will infer that many cases of pneumonia require no treatment but rest and opium; and it is true. If the disease is running a mild and regular course, you are not likely to improve matters by interference. The only indications for treatment are to relieve an abnormal development of any of the symptoms which may threaten to disturb the patient.

ALBUMINURIA AND ANASARCA FROM CONTUSION OF THE KIDNEYS.—M. Boissard, in *La France Médicale*, reports a case of anasarca occurring after contusion of the loins. There was no hæmaturia, the urine was abundant, but contained a large amount of albumen. The anasarca disappeared in eight days, but the albuminuria persisted for a month.

CHANGES OF THE SOLAR AND HYPOGASTRIC PLEXUS IN PERITONITIS AND TYPHOID FEVER.—Dr. Kalantarianz has examined microscopically the condition of the solar and hypogastric plexus in eight cases of peritonitis and five of enteric fever, and found that both in the latter

and in acute cases of the former disease there are constantly present morbid changes in the ganglia, which point to the development of an acute interstitial inflammatory process, with subsequent opaque swelling of the parenchyma of the nerve-cells and their ultimate fatty degeneration, brown pigmentation, and atrophy. In the chronic forms of peritonitis the alterations consisted chiefly (1) in simple and degenerative atrophy of the ganglionic cells, which very often were found entirely disintegrated and transformed into mere accumulations of an amorphous pigmentary matter, and (2) in increase and sclerosis of the ganglionic connective tissue.—*London Medical Record*, January 15, 1883.

THE MEDICAL TREATMENT OF OBSTINATE NEURALGIA.—M. Verneuil, in a communication to the Surgical Society of Paris (*Le Prog. Méd.*, No. 49, 1882), referring to the surgical treatment of obstinate neuralgia, said that all therapeutic resources should be exhausted before surgical interference was undertaken. He recalled a case which was cured by hyoscyamin, after resection of all the ends of nerves and even amputation had failed to give relief.

PARTURITION IN PRIMIPARÆ OF ADVANCED YEARS.—Mangiagalli has advanced the opinion that the difficult labors usually observed in primiparæ of advanced years are due to some physical defect independent of the age of the patient. The women are deformed, and on this account marry late in life; but had they married earlier the same difficulties in parturition would have been encountered. In order to test this theory Dr. Rumpe has examined the records of one hundred primiparæ, over thirty years of age, at the Marburg Clinic. His investigations lead him to reject Mangiagalli's views. He concludes that the difficult child-birth in such cases is due to two causes—sluggish pains and rigidity of the soft parts. Another cause he finds in the relative frequency of male births in these cases. Out of the 100 mothers 8 died. The mortality among the children was also greater than in the first labors of younger women.—*Archiv. für Gynäkologie*, vol. xx., 1882.

HYDATIDIFORM DISEASE OF THE CHORION.—Dr. Stephens writes to the *British Medical Journal*, January 27, 1883, as follows: "On September 7th, I was sent for by a midwife to attend Mrs. C—, who was flooding. On my arrival, the hemorrhage had stopped. On making an examination, the uterine sheath was not sufficiently dilated to be able to ascertain its contents. On passing my hand over the abdomen, I remarked to the midwife how unusually circular it was. On the following afternoon, I was again hastily summoned, and found the woman had lost much blood. On making an examination, I found that, by a little manoeuvring, I could insert my hand into the uterus; and I vividly remember how astonished the midwife and Mrs. C— looked, when I informed them that it contained no child. In fact, the patient stoutly declared that she had felt the child many times; and that, being the mother of thirteen children, all living, she ought not to have been mistaken. After administering a full dose of ergot, some sharp uterine pains followed, soon expelling a mass, which, when collected, filled three ordinary sized chamber-utensils. After this jelly-like mass had been expelled, she made an uninterrupted recovery."

THE TREATMENT OF DYSENTERY.—In the *British Medical Journal*, January 27, 1883, Dr. Rawle describes a plan of treatment of this malady, which has proved very successful in his hands. Having placed the patient between warm blankets, a pint and a half of warm water, at a temperature of 90° F. is injected. This is seldom retained longer than a few minutes, but is pronounced very grateful to the patient. When the water has soothed the mucous membrane of the colon and rectum, and brought away any effete matter, two ounces, by measure, of the following enema is administered with a gum-elastic bottle. R. Quinine sulphate, ten grains; compound tincture of camphor, four drachms; decoctum amyli to

two ounces. Mix, and when about milk-warm, inject, which is generally retained; but, if ejected, it may be repeated after an hour or two. This has been found of great service, and very grateful to the patient. The effect is like magic. If griping pains be felt over the region of the epigastrium, half-drachm doses of chlorodyne, in some aromatic water—mint, caraway, or aniseed—should be given. The diet, of course, should be of the most soothing kind: jellies, isinglass, linseed, toast- and barley-water *ad libitum*. Ipecacuanha appears of little service, and Mr. Rawle has discarded it from his treatment. Warm turpentine stupes on warm flannels, over the hypogastrium prove very beneficial.

RUPTURE OF THE AORTA DURING PARTURITION.—Dr. Heinricus relates the following case: A woman, thirty-eight years of age, of apparently good health, was first seen after labor had begun. The os was dilating, the pains were regular, and everything seemed to be progressing favorably. Half an hour later she was suddenly seized with convulsions and died in collapse. A living child was delivered with the forceps. At the autopsy a rupture of the aorta was discovered, situated about three-fifths of an inch above the semilunar valves. The visceral layer of the pericardium was torn, and the pericardial sack was distended with blood.—*Centralblatt für Gynäkologie*, December 16, 1882.

SIR WILLIAM GULL ON SCIENTIFIC MEDICINE IN GENERAL PRACTICE.—In the course of an address delivered on January 17th, before the Metropolitan Counties Branch of the British Medical Association, on the subject of the "Collective Investigation of Disease," Sir W. Gull, observed: "It will be admitted that, had we leisure, proper means at our disposal, and from previous training a fitness for exact observation, we should find in general practice one of the most valuable fields of pathology, as here and here only we have before us the earliest signs of departure from health, and the only opportunities for tracing the course of a disease from its beginning to its end. Having passed many years in hospital and private practice, I have come to see that experience gained in the latter is necessary for the correction of that acquired in the former, especially as helping toward a truer pathology. It will perhaps, and naturally, be objected, that it is almost impossible to organize for any useful purpose the labors of men already overburdened by the cares and fatigue of practice; and that there is neither time nor fitness for delicate inquiries on their part. Admitting that this objection is valid, it may be urged in reply, that it need not be insuperable. It cannot be denied that when we see the meaning of the apparent trifles which in practice would otherwise oppress and worry us, our burden is thereby much lightened, and that nothing could encourage us more than to feel that even one daily observation recorded was adding to our general store of knowledge, and making the path of practice more easy. There is no tonic to the mind greater than the sense of work done; and our journey is likely to be made shorter, as it certainly will be easier, if the way is illuminated. We, indeed, owe it to those members of our profession, who are admittedly overwhelmed by the apparently senseless details of their work, to promote a movement like collective investigation, the object of which is to establish order out of chaos, and to help them to stamp a scientific value upon facts hitherto only burdensome. If we compare the unflagging interest of any pursuit where the aim is high and clear with the tediousness and wearisomeness felt when working in the dark, we shall readily admit that we are actually lightening the burdens of practice by thus adding to them, and by giving some portion of them a sense and meaning. It is the spirit of a man which enables him to do his work lightly and cheerfully, and he will certainly be helped in this by a combination with fellow-workers on the same subject."—*British Medical Journal*, January 27, 1883.

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REGIONAL PHYSIOLOGY OF THE BRAIN.

WHEN we come to the matter of regional physiology, we find ourselves in the midst of problems which still await complete solution, but the painstaking researches, the past eleven years, first of Fritsch and Hitzig, later of Munk, Ferrier, and others have done much toward clearing away the difficulties. The connection of aphasia with definite lesion in the posterior part of the third frontal convolution of the left hemisphere had been determined by Broca, as a result of some hundreds of observations, confirmed by the necropsy; but this first and capital fact in cerebral localizations was little understood and bore little fruit, till Ferrier confirmed conclusions, established by the French physiologist more than forty years before, co-ordinating these conclusions with his own valuable discoveries. That Broca's convolution is, in *right handed* individuals at least, the cortical centre for word ideation and word execution, seems to be a legitimate inference from some thousands of observations now on record. Ferrier's explanation of the occurrence of the speech-centre on the left side—that is, in the early history of the race, communication was by manual signs and gestures before language was invented, and the articulating centres were educated and became the organic seat of volitional acquisitions on the same side as the manual gesticulating centres, and as most people are right-handed, the education of these centres takes place in the left hemisphere—seems both possible and probable.

Lesions of the speech-centre which extend considerably into the antero-frontal lobes have been found to be attended not only with aphasia, but with amnesia—loss of the memory of ideas, as well as loss of words, and verbal expression. Multitudes of well-attested cases on hospital files and in medical journals substantiate this. Other considerations, such as the effect of destruction of these “inexcitable” lobes, go to show that their main function is psychical. If any motor influence emanates from them—and very many of the anterior fibres of the corona radiata certainly terminate in this part of the cortex—such influence would seem to be of an inhibitory character, *i.e.*, restraining, rather than inciting.¹ Ferrier's experiments, and a great number of subsequent experiments by Yeo and others, which confirm this, and the results of lesions of these lobes in

man, seem certainly to give striking support to the ancient and prevalent view (for which phrenology is probably largely answerable), that the frontal lobes have more to do with intellect than any other part of the brain.

It must be confessed that when first the proposition was formally announced that the parietal lobes were principally concerned with motor and not psychical function, it took almost the whole medical world by surprise. *A priori* it seemed quite improbable that “such valuable material as we must needs suppose the gray matter of the convolutions to be, should be taken up in such, so to speak, menial work as bending or straightening a limb” (M. Foster). It must be remembered, however, that the larger part of the lives of the greater portion of the animal kingdom, man not excluded, is taken up with motor performances of a very menial kind, which certainly require but very little intellect for their direction, no more in fact than the antero-frontal region might be supposed capable of supplying, and that *a priori* there can be no improbability in the supposition that a man's limbs and muscular groups have their representative centres in the cerebrum. The phenomenon of descending degeneration of the medullary strands between Ferrier's cortical centres and the basal ganglia, in the case of lesions of the motor area, and the coincidence of this degeneration with similar degradation of the motor columns of the spinal cord, has been noted by Charcot and Flechsig, and seems to point to direct anatomical connection between the anterior and crossed pyramidal columns of the spinal cord and those cortical regions. Moreover, Franck and Pitres have shown, by the results of section of those medullary fibres which terminate in the gray matter bounding the fissure of Rolando, that secondary degenerations occur precisely similar to those which occur in motor spinal nerves after their separation from their trophic centres in the spinal cord, and they reason from this (and it seems to us justly) “that the medullary fibres between the cortical centres and the lower motor nuclei, bear the same relation to the nerve-cells of the cortex as the spinal motor nerves to the multipolar cells of the anterior cornua.”

If electrical stimulation of certain areas of gray matter bounding the fissure of Rolando in the monkey (the crucial sulcus in the dog), have produced definite motor results, so that what will occur under similar circumstances can now be predicted with certainty, destruction of these areas, whether by caustic in the animal or disease in man, produces motor results no less constant and definite. Experimenters working in the same line with Ferrier (Carville and Duret, Luciani and Tambourini, notably Yeo) have, in numerous instances, added confirmation to Ferrier's experiments, and hundreds of careful clinical and post-mortem observations have demonstrated the concomitance of general or limited paralyses with lesions more or less circumscribed of those portions of the parietal lobes now known as Ferrier's motor centres.

Among the important contributions which have from time to time appeared in these columns, and which throw light on certain aspects of this subject, we may signal the papers of Seguin and Dalton, in *THE RECORD* for 1881. Seguin has found the “New Phrenology” (as a popular

¹ We have similar instances of motor neurility which is inhibitory, in the cardiac branches of the par vagum, in the depressor nerve of Cyon, and other vaso-dilator nerves.

scientific journal terms the modern doctrine of localizations) a valuable aid to diagnosis, and says with regard to Ferrier's statement of these localizations, "these are not theoretical guides, they are valuable life laws, and there has not a year passed the last five years that I have not seen cases illustrative of them, and verified them by post-mortem examination." He cites cases, occurring in his experience, where the diagnosis was made with great accuracy. In other instances, recorded by other observers, as Wernicke and Hahn, cortical abscesses have been diagnosed by these rules (motor and sensory [limbs] paralysis occurring in members on the opposite side), the skull has been trephined, the abscess evacuated, and amelioration has followed the operation. In other cases, light has been thrown on certain obscure forms of epilepsy, which have been found to be due to irritative or "discharging lesions" of the motor cortical regions ("Jacksonian epilepsy"). It is worthy of note that Dr. Hughlings Jackson, reasoning from clinical and pathological observations of unilateral and localized epileptiform convulsions, formulated in advance of any experiments of Fritsch and Hitzig views of the etiology of those convulsions, which—at the time considered fanciful—are now found to be in striking accordance with Ferrier's observations, and those of his German predecessors.

The experiments of Dalton (recorded in the paper alluded to) corroborate the position of Ferrier that the angular gyrus is the seat of visual perception. In two cases in which he excised the angular convolution in dogs, blindness of the opposite eye followed. These results coincide with those of Ferrier on monkeys and McKendrick on pigeons, but await confirmation by a sufficient number of pathological observations in man.

With regard to the other sensory centres, there is still great uncertainty; Munk, Luciani, and Tambourini agree with Ferrier in admitting the existence of such centres (as of hearing, smell, taste, tactile sensibility), but differ as to the precise location. Ogle, however, and Hughlings Jackson relate cases confirmatory of the location of smell and taste in the lower part of the temporo-sphenoidal lobe.

Whether or no the occipital lobes (which like the antero-frontal are inexcitable) have any loftier function than that of ministering to the visceral sensations, being the cerebral centre of the appetite for food, or whether they have even this humble function, is still undetermined. Considering the great account which, in man as well as in other animals, is made of the gratification of the alimentary propensities, it would seem *à priori* probable that the stomach has its representative in the cerebrum.

We propose at a future time to take up other aspects of the subject of localizations.

TRACING CONTAGION.

THE following analytical observations of Professor J. Leidy may assist the practitioner to trace the cause of anthrax or splenic fever, when other causes of contagion are not apparent.

A number of cases in the same herd, owned by a farmer at Salem, N. J., having died very suddenly, the veterinary surgeon submitted a specimen of the blood

from the last victim to Professor Leidy for microscopical examination.

The animal was apparently well on one evening, and was milked as usual; it died the next morning. The cause was not clear, but was suspected to be the result of anthrax or splenic fever. A post-mortem examination was made the following day; and the abdominal viscera were found much congested, especially the spleen, which was gorged with blood. The specimen of blood from the spleen was examined and found to be teeming with bacteria of the form known as *Bacillus anthrax*, which is now viewed by most competent authorities as the cause of anthrax. The bacilli were actually more numerous than the blood-corpuscles, which appeared unchanged.

This case shows that milk is forwarded to market drawn from cows which are within a few hours of their death from splenic fever. Such milk can hardly be wholesome, and doubtless contains the bacilli capable of giving contagion.

Let us hope that the fat from the carcass of such animals is not sent to the nearest oleomargarine manufactory, as this substance is rendered only at a temperature under 120°, by the patent which is now supreme. We need not state that the thermal death-point of bacilli is far above such a temperature, and we leave our readers to draw their own conclusions respecting the results when such uncooked animal produce is used as an article of diet.

ÆSTHETICS AND DRUG-TAKING.

It is a matter of some practical interest to the physician that he take account of the results of the impact of the æsthetic wave upon the medical profession. It has long been observed that, with developing civilization, the people have become more intellectual, and the doctor has had in consequence to become more wide-awake. The education of the æsthetic sense in this country has been more recent, but it too is now a thrifty and vigorous cultus. Our modern society, in fact, has become much more sensitive to what is disagreeable and much more responsive to what is agreeable than was formerly the case. The beautiful is ardently admired and the ugly as warmly detested. Æsthetics even supplants morals with many, especially of the fairer sex, vulgarity being often thought worse than wickedness, and good manners quite an atonement for bad morals.

Now, if any one doubts the bearing of all this upon medicine, let him prescribe nauseous draughts and ill-smelling mixtures among his upper-class patients for a while. He will soon find that it does not answer. The young physician of to-day has an additional lesson to learn. He must not only give the right thing therapeutically, but must give it agreeably.

The pharmacist has become well aware of this new demand of the public—the tradesman being always most plastic to developmental readjustments or fashion's changes. Note the history of cod-liver oil. No scientific problem has received more attention or diverted more cerebral force than has that of making oleum morrhue palatable. Even though it has proved a kind of North Pole of pharmaceutical ambition, the struggle is not yet given up. The demand for agreeable medicines

shows itself also in the remarkable growth of the pill trade. The bolus is now hardly known, and we give in small and slippery pellets what our grandfathers conquered asphyxia in attempting to swallow. The pill, to be sure, is tasteless, and its æsthetic value is chiefly negative, yet it accomplishes the object of attacking the disease without afflicting the senses. There are also popular practitioners in our city who are not content with this merely negative position of the pill, but require their druggist to put upon it a seductive coating of gold or silver foil. The mental effect of taking these expensive-looking globules is not to be ignored.

The manufacture of elixirs, syrups, and various aromatic compounds has also vastly increased under this demand for the non-offensive in medicine. To make something which "children will cry for" is the honest ambition of many a druggist who appreciates the signs of the times. Since medicine-taking with Americans often becomes as much a pastime as a serious business, the syrup and elixir trade flourishes, greatly to the delectation of childhood and the content of the adult.

The moral to be drawn from the state of things thus portrayed is most apparent and important. The practitioner must regard not only the disease but the palate of his patient. Not that we would always recommend the prescription of pleasant-flavored mixtures. There are some persons who measure the value of their medicine by the strangulating effects which accompany its taking. But the wise physician will study the whole case, and in prescribing for the disease not forget the individual.

MEDICAL EXAMINATIONS IN ENGLAND.

THE English Government, as previously noted, proposes to introduce a measure, during the present session of Parliament, for the purpose of amending the law relating to the licensing of medical practitioners. The recommendations of the late Royal Commission will probably be adopted, and a single board will doubtless be constituted before which the medical student will be sure of obtaining a fair examination in every branch of his art. We believe also that a second and higher board will be constituted, with power to confer degrees and higher titles.

The *Lancet* states that the present condition of the licensing system admits of no other course, and that students, the profession, and the public demand such a change. This state of things hardly accords with the generally received opinion that the English system of admitting medical students to practice is in advance of our method. Our medical brethren on the other side appear to consider that their system is far from perfection. We shall watch with interest this attempt to form an independent and competent board of examiners for medical students in England, and trust that the reform may produce a system which may be accepted as a model for some improvement in the same direction here. Medical opinion in this country is being gradually educated to the point of considering that State examinations for the degree of Doctor of Medicine are the main means of establishing an absolute, consistent, and trustworthy standard of medical requirements. In fact, all measures for reforms in medical education must necessarily centre around this point.

LIMITING THE POWER TO CONFER MEDICAL DEGREES IN MASSACHUSETTS.

A MASSACHUSETTS Judge recently decided that the Bellevue Medical College of Massachusetts was legally incorporated, and could legally confer degrees in medicine, even upon persons who had not studied medicine the proper length of time. Thereupon several new institutions started up, and the business of diploma-making in Massachusetts on the Buchanan plan seemed to be in a most prosperous condition. The legal profession has, however, stepped in, and on February 24th the Attorney-General of the State rendered an opinion, in which he held that institutions of learning or science created under the general law do not possess the power of conferring degrees.

This takes away the powers of the medical diploma mills, theoretically. It remains to be seen whether they will actually be stopped in their operations.

In this connection we would refer to the fact that somebody calling himself a "student" has asked the *Kansas City (Mo.) Times*: "Is there any State in the Union where I can practise medicine without a diploma? I have attended one course of lectures." To which the *Times* replied: "Yes—in Massachusetts."

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

THE Board of Trustees appointed by the American Medical Association to decide upon the plan of a weekly medical journal has issued a circular requesting medical periodicals to inform the profession that sufficient encouragement has been received from different quarters to warrant a report to the next meeting of the Association in favor of the establishment of said journal. We think the committee is in error in issuing a circular of this kind, which does not give the figures upon which such conclusions have been based.

As we understand it, this proposition involves very considerable financial responsibility somewhere, with no slight possibility of greater or less deficiency, to be made good, we suppose, by the Association. If this be so, it is right that the members should have the same data as that possessed by journal committees, that each member may exercise his own judgment before voting upon so important a matter. Let the committee give a synopsis of the pledges it has received from the forty thousand copies of the programme it has sent out. Let it state the estimates of the cost of publishing the journal received from four principal cities, etc. To give these figures only at the time of the meeting in June next will not afford the members of the Association a fair opportunity for considering them. Let us have light now.

THE POLLUTED WATER-SUPPLY OF BOSTON.

THE subject of water-supply in Boston is one that at present interests the inhabitants of that city very much. For the past two or three years, ever since the new basins connected with the Sudbury River have been used as a source of supply, the water has been bad—very bad. Experts pronounce it the worst water, with perhaps one exception, furnished to any city in the country. Those of the citizens that can afford to buy spring water at the rate of ten cents a gallon—as much as the farmers

in the centre of the State get for their milk—do so, and grumble at the expense added to the high water-rates. Dr. Bowditch echoed public sentiment when he said that the Boston water was not fit to drink, and was sometimes too dirty to bathe in.

For some time past the Water Board has endeavored to protest against the public voice in this matter, and has insisted that the water was good, though perhaps a little discolored. At last comes an official report from the commission appointed by the City Council, in which the public complaints are acknowledged to have a good foundation, and remedies for the existing evils are suggested.

The chief causes of pollution are, first, the sewage of the town of Natick, which flows directly into Lake Cochituate, and, second, the state of the Sudbury River basins. These basins are nothing more nor less than meadow and swamp lands which have been overflowed without having been at all cleaned, and in many places the water is very shallow, the bottom being made up of the above-mentioned mud and swamp which was lately covered with vegetation, now decaying and being furnished to water-takers in the form of a weak decoction. In such water algae flourish, and by their decay add more organic matter and the very disagreeable fishy taste so much complained of. The remedies suggested are, first, stopping the flow of sewage into the lake, and, second, the removal of the mud and loam from the basins, especially in their more shallow portions. It is hoped that these improvements will take place soon, as the health of the city is seriously threatened as long as the present condition of things exists.

News of the Week.

THE OHIO FLOOD AND TYPHOID FEVER.—Typhoid fever has appeared in the inundated districts of the Ohio Valley.

POISONING OF LUNATIC ASYLUM INMATES.—Eight inmates of the Western Lunatic Asylum at Staunton, Va., were poisoned last week, presumably by some crank having the freedom of the house. Six of the victims have died and two have recovered. The poison, the nature of which is as yet unknown, is supposed to have been mixed with medicines on their way from the dispensary to the wards.

EMERGENCY LECTURES TO LADIES.—A series of "emergency lectures" to ladies is being given by various members of the profession in Boston, the proceeds to be used in aid of the Training School for Nurses. The subjects to be treated of are dressing of wounds, hemorrhage, care of the sick, etc.

A CINCINNATI SANITARY COMMISSION.—The citizens of Cincinnati are urging the passage of a bill appointing a street and sanitary commission for two years, with \$1,000,000 to spend.

VICTIMS OF TRICHINOSIS.—Five members of a family in Port Jervis, N. Y., recently became affected with trichinosis, through eating raw pork. One of the persons, a child, died.

FURTHER BEQUESTS TO OUR CITY HOSPITALS.—The late E. D. Morgan left \$50,000 to the Presbyterian Hospital, and a similar sum to the Hospital for Ruptured and Crippled. The Manhattan Eye, Ear and Throat Hospital was also liberally remembered.

SMALL-POX IN COLORADO.—Notwithstanding the strenuous efforts to throttle it, the small-pox appears to be getting the upper hand of the authorities. The Leadville public schools have been closed. A new pest-house is being built there. The alarm is becoming general and is reaching out into the surrounding towns, some of which are establishing a quarantine.

DR. M. T. COUNCILMAN has been appointed the pathologist to the Baltimore Academy of Medicine.

A NAVAL MEDICAL SOCIETY.—We are glad to learn that the medical staff of the Navy has organized a Society called "The Naval Medical Society," in order to establish more intimate social and friendly relations among its members, to furnish occasions for the interchange of professional experiences, and to assist each other in scientific inquiry and research. Every officer of the medical corps has the right of membership upon notifying the Secretary that such is his desire.

The Society is to have regular meetings on the first Thursday of every month, in the city of Washington, and at such other times as the business committee may consider advisable, or when five other members may so request.

LIVELY MEDICAL WORK.—The investigation recently undertaken regarding the condition of Sing Sing Prison, reveals a bad state of affairs. The prison physician testified that there was really no wholesome air in the prison when occupied, and that the cells were all badly ventilated.

The same physician testified that he had 30,000 visits from convicts in the year 1881, and 29,000 in 1882. His daily visits amounted to from 80 to 100, and all of these were disposed of in about two hours. This really appears like the application of the lightning calculus to medicine. In our city dispensaries, where no time is wasted on individual patients, it is rare for more than 20 or 30 patients, at the utmost, to be disposed of in two hours. The doctor makes a most reasonable request when he asks for two assistants.

Notwithstanding the defects above alluded to, we are told that the mortality rate is less than at any other prison in the country except one in Wisconsin.

THE NEXT MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.—At the meeting of the Executive Committee of the American Public Health Association, held in Washington on the 16th ult., the date of the next meeting of the Association was fixed for November 13th to 16th, inclusive, at Detroit, Mich. The meeting was not so fully attended as was expected, Drs. Lindsley, Conn, Speed, and Frazier being absent.

An informal discussion of the programme was had, but its scope was not definitely settled upon, the details being left with Dr. Ezra M. Hunt, President of the Association. The subjects: Vital Statistics and Modes of Registration; Adulteration of Food and Legislation Thereon; Etiology of Malaria; the Physics of Hygiene;

House Drainage, and kindred topics, were the more important matters discussed.

It is understood that the next volume of the "Transactions" (vol. viii.) will be ready for delivery within six months, and that it is to be published on much more favorable terms than any former volume, thus greatly reducing the price.

THE APPROPRIATION FOR THE LIBRARY of the Surgeon-General's Office, U. S. A., including the Museum, has not yet passed the Senate. When it came up in the House Committee it was reduced from \$10,000 to \$5,000, but the original amount was restored when the Legislative bill was put upon its passage. The Senate Committee having it in charge has cut it down again one-half, but its friends anticipate no trouble in getting the full amount restored in the Senate.

An appropriation covering the fifth volume of the Index Catalogue of the Library of the Surgeon-General's Office will go through without opposition. The fourth volume is about one-half completed, finishing the letter "E," and running through "Fevers."

There is no bill before Congress this session looking to the transfer of the Surgeon-General's Library to Congress; in fact, Congress has no building suitable for its own Library as yet, the bill for the same having failed to get a two-thirds vote under suspension of the rules on Monday last.

THE NATIONAL BOARD OF HEALTH'S BILL has failed to come up in the House, and the \$10,000 recommended by the sub-committee for "pay of members" was struck out of the Sundry Civil Appropriation bill, thus leaving the Board with no appropriation whatever. The only health legislation proposed by this Congress is the following, taken from the Sundry Civil bill:

"The President of the United States is hereby authorized, in case of a threatened or actual epidemic, to use a sum, not exceeding \$100,000, out of any money in the Treasury not otherwise appropriated, in aid of State and local boards, or otherwise, in his discretion, in preventing and suppressing the spread of the same and maintaining quarantine at points of danger."

It also appropriates \$50,000 in aid of State and municipal authorities and corporations engaged in transportation of neat cattle, in establishing regulations for the safe conveyance of such cattle and shipment thereof, so as to prevent their exposure to pleuro-pneumonia, to prevent the spread of said disease and to establish quarantine stations; and to provide proper shelter for neat cattle imported.

A DIRECTORY FOR TRAINED NURSES.—The process of searching for a nurse has hitherto been a tedious one, and full of annoying delays. Hours of valuable time are spent in going from house to house with a selected list of names, finding again and again that nurses have moved, or are with cases, or are not at home. A systematic registry of nurses avoids all this delay and trouble, and we are glad to learn that the managers of the Bellevue Training School have recently established such a registry of the graduates of that institution at their office, No. 426 East Twenty-sixth Street. Here the addresses of the nurses are kept and their engagements known, and the superintendent can also answer all

questions as to the special qualifications of each nurse. In this way all necessary information can be obtained at once by simply applying at the Training School, and a nurse engaged without waste of time.

THE BLACK SOAP IN KERN'S CATAPLASMATA.—Numerous correspondents who have answered the query in a previous issue agree in saying that the black soap used in connection with Kern's cataplasmata is but another synonym of the ordinary *sapo viridis* of our Pharmacopœia.

HOSPITAL SUNDAY DISTRIBUTION.—The Hospital Saturday and Sunday Fund Committee have agreed upon the ratio of distribution of the sums collected through the various channels employed by the association. The report of the committee shows that the total amount of designated and undesignated funds collected was \$33,762.72, and this amount, minus \$3,935.56, was distributed among the following institutions:

St. Luke's Hospital.....	\$7,674 04
Hospital for Ruptured and Crippled.....	405 00
Mount Sinai Hospital.....	4,200 00
German Hospital.....	3,255 00
Presbyterian Hospital.....	4,191 03
St. Mary's Hospital.....	2,052 01
House of Rest for Consumptives.....	1,420 00
House of Holy Comforter.....	1,228 75
Home for Incurables.....	956 71
New York Eye and Ear Infirmary.....	217 60
New York Infirmary for Women and Children.....	561 00
New York Ophthalmic Hospital.....	570 00
Hahnemann Hospital.....	946 02
French Hospital.....	595 00
Orthopedic Hospital.....	570 00
Ophthalmic and Aural Institute.....	550 00
Manhattan Eye and Ear Hospital.....	475 00

Total.....\$29,827 16

SENSELESS OBJECTION TO TRANSFUSION.—Mr. Henry Bergh, in a recent issue of the *Evening Post*, comments savagely upon an article by Dr. Joseph W. Howe, which appeared in THE RECORD of February 3d. The letter of Mr. Bergh is intemperate and full of misstatements. So far as it implies that the transfusion of blood is not a useful practice, and one which has already saved many lives, it should receive a prompt answer and refutation. For the rest, Mr. Bergh's passions and prejudices are too apparent to mislead any but the very ignorant.

LEADING OFF.—The Annual Commencement exercises of the Buffalo Medical College were held February 27th. Diplomas were conferred on fifty-six graduates.

PROVIDING FOR IMMIGRANTS.—The bill introduced by Senator Miller, of New York, to amend the Act of August 3, 1882, regulating immigration, has not yet found its way to the surface, though it was read twice and referred to the Committee on Commerce in January last. It provides for a tax on all immigrants of fifty cents a head, creating a fund for the purpose of defraying the expense of regulating immigration, etc.

THE NATIONAL MEDICAL COLLEGE of the Columbian University held its Annual Commencement exercises on March 2d.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 24, 1883.

GEO. F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 218.)

DR. LEWIS SMITH presented specimens of

ACUTE TUBERCULOSIS IN THE LUNGS OF CHILDREN.

DR. BEVERLEY ROBINSON presented a specimen of

ANEURISM OF THE AORTA,

accompanied by the following history, furnished by Dr. Devlin, senior physician to St. Luke's Hospital: Mary E—, thirty-two years of age, married, and a native of the United States, had an attack of rheumatism eighteen years ago, which involved the ankles, and continued in a chronic form for about two years; a certain amount of synovitis remained permanently. The patient stated that for a number of years she had had oedema of the feet at intervals of one or two months and following slight exposure to cold. She had suffered from slight dyspnoea for several years, but there had been neither palpitation nor cough. Urine normal. About three years ago, after exposure, she had a chill, followed by fever and pain in the left mammary region. Sputum scanty, but color not noticed. The fever and dyspnoea increased, and the patient had two distinct chills, each accompanied by an increase of pain in the left side of the chest. During the last four days dyspnoea has been very marked. Cough incessant, and the patient has become very weak. Temperature, 101° F.; pulse, 140. The specific gravity of the urine was 1.018; otherwise normal. No cardiac murmur was detected; the heart action was very rapid and weak. There was diminished respiratory murmur over the left lung anteriorly and posteriorly. Subcrepitant râles were heard over both lungs. There was marked stridor and tracheal râles. A few hours afterward the breathing became very labored and the patient became cyanotic. An emetic of ipecac gave considerable relief. Harsh sonorous ronchi were heard over the whole chest posteriorly. Laryngoscopic examination was negative. On the following day her breathing was very labored, an emetic was administered, and the patient was cupped over the chest with marked relief. On the following day the patient became comatose and died.

At the autopsy the left ventricle of the heart was found hypertrophied, and the valves normal. The muscular tissue was pale, yellowish, and contained considerable fat. The aorta was slightly atheromatous throughout.

There was an aneurism two and one-half inches in diameter opposite the second and third dorsal vertebrae which were slightly eroded. The sac was lined with laminated fibrin and communicated with the aorta by an irregularly circular, smooth-edged opening, half an inch in diameter, situated at the junction of the descending portion of the arch with the thoracic aorta. The kidneys were small and granular, the cortex was thin, the markings were obscure, but the capsule was not adherent. The lungs were congested and cedematous, and in the lower lobe of the left were small areas of recent consolidation.

Dr. Robinson also presented a specimen of

RETRO-PERITONEAL SARCOMA,

accompanied by the following history, furnished by Dr. Devlin, Senior Physician to St. Luke's Hospital: Christopher L. H—, thirty-eight years of age; native of the United States; single; clerk by occupation; was admitted to the hospital November 19, 1882. His family and personal history were negative. Six weeks ago, while quietly walking across the room, he was suddenly seized with violent pain in the left hypochondrium. It

was so severe as to cause faintness and profuse perspiration, lasted about half an hour, and then subsided to some extent, but had been constant ever since, although there had been no paroxysmal attacks. The pain did not radiate into the pelvis. There was no pain or difficulty in micturition, and there was no change in the appearance or quantity of the urine. During the last two weeks the patient had had several attacks of vomiting, but no hematemesis. Fifteen days ago for the first, and on several occasions since, the patient had found in the urine blood-clots about half an inch in diameter, and varying in length up to two inches. Two weeks ago, and also one week ago, he had an attack of severe precordial pain and dyspnoea. Bowels have been constipated throughout the entire sickness. The urine has gradually become high-colored, but remains clear. There has been marked loss in flesh and strength. Examination of the urine reveals specific gravity of 1.030, acid, no albumen, and on microscopical examination blood-corpuscles, but neither renal epithelium nor casts. Liver and spleen not enlarged. There is a tumor in the epigastric region extending one and a half inches below the umbilicus, three inches to the left, and only slightly to the right. Its free border is separated by a slight sulcus from the left lobe of the liver. The tumor has a convex margin directed toward the left side, and a depression resembling the hilus of the kidney toward the median line.

November 24th.—Left epididymus enlarged and contained nodules. The patient has never noticed the enlargement before, but has had a slight dragging sensation in that region for a few days.

November 25th.—The patient was examined by Drs. Alonzo Clark, Packard, A. H. Smith, Leaming, Wheelock, and Ball. No positive diagnosis was reached. Dr. Clark believed that the tumor did not involve the kidney, but probably was malignant. Dr. A. H. Smith believed that it was a displaced kidney, and was the seat of tubercles or cancerous infiltration.

November 26th.—The patient passed a blood-clot one-twelfth of an inch in diameter and three-fourths of an inch in length.

December 3d.—The patient vomited matter containing clots of blood. Examination by the house surgeon per rectum and with the sound introduced into the bladder determined that the prostate was normal. He also examined the lungs and found no evidence of pulmonary disease.

On December 7th the tumor was aspirated by Dr. Ball, and a small quantity of bloody serum was obtained, which, on microscopical examination, showed only red blood-corpuscles and granular matter. The patient was examined by Dr. Weir, who diagnosed post-peritoneal neoplasm, and the diagnosis was concurred in by Dr. W. T. Bull.

December 8th.—The patient vomited blood copiously during the night. The feces had a tarry appearance. Rectal alimentation.

December 9th.—Vomiting of blood continues at intervals. Distressing hiccup has developed, which is relieved only by chloroform.

December 11th.—The patient begins to retain food by the mouth.

December 13th.—Hiccup severe and vomiting frequent.

December 15th.—Patient ate a hearty breakfast of eggs, fish, and bread, and it was retained. Begins to complain of painful micturition, and passes about forty ounces of urine daily. Slight cough with hæmoptysis has appeared.

December 27th.—No change in the physical signs in the chest. There has been occasional hæmoptysis.

Patient died on December 28th with the ordinary symptoms of oedema pulmonalis and heart failure.

At the autopsy two ounces of dark fluid blood were found in the pelvic cavity. A round mass of the size of a cocoanut was firmly attached to the vertebral column

posteriorly, occupied the left lumbar region, and to it the adjoining loops of intestine and other organs were firmly adherent. It was situated in front of the descending colon.

The spleen was large and soft, and contained no secondary deposits.

The liver contained about ten secondary nodules, most of which projected somewhat above the surface, and varied in size from a cherry-pit to a hen's egg. On cross section these nodules presented a mottled appearance, due to excessive vascularity and recent hemorrhage. They were quite soft and friable, were not surrounded by a well-marked capsule, but there was neither diffuse infiltration nor inflammatory zone. The other portions of the liver were pale and apparently fatty.

The left kidney was united by loose adhesions to the principal tumor and its ureter was, for several inches, firmly attached to the growth. The pelvis was dilated considerably. The right kidney contained one secondary deposit about the size of a pin's head. A nodule of the new growth, about the size of a bean, was found in the small intestine. Both lungs were studded with nodules of various sizes, the largest being of the size of an English walnut. There were bronchitis and œdema. There was a nodule of new growth in the left testicle. All the other organs were essentially normal.

Cross sections of the tumor presented the ordinary gross appearance of a very vascular sarcoma. At several points hemorrhage had occurred within the neoplasm.

Microscopical examination.—The tumor and the secondary deposits in the lungs and the liver are the same in their microscopical structure. The tumor is chiefly composed of cells and blood-channels which vary in size and shape. Some cells are large and irregular in their outline, some are spindle-shaped, and many of them are ovoidal. They are all furnished with one or more nuclei.

These cells are closely bound together by a minimum amount of inter-cellular substance, and arranged to form cavities, which are irregular in shape and differ in size, and contain blood and fibrin. The blood in these cavities is in contact with the cells already described. Everywhere throughout the tumor there are large areas of fibrin surrounding blood-channels, which in places communicate with each other. There are a few cells in the meshes of the fibrin which are large and spindle-shaped.

The tumor is not surrounded by a capsule. *Diagnosis*—Sarcoma.

DR. JANEWAY had seen two cases of lympho-sarcoma near the kidney. In one the growth occupied the position of the kidney exactly, and the kidney, completely normal, was situated within its capsule.

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. BIRDSALL presented the following:

The Microscopical Committee beg leave to report that the tumor of the uterus of a seal presented by Dr. Liautard, at the second meeting in December, was found to be a myo-fibroma, in which the muscular elements largely predominated, and were bound together with the connective tissue forming irregularly concentric layers and whorl-like arrangements, constituting a tumor of very firm consistency. A very scanty vascular supply existed. In the centre of the growth a spot, 2 to 3 cm. in diameter, was found, in which a fatty and granular degeneration had commenced.

The Society then went into executive session.

SOLUBLE SALTS OF CAFFEINE.—The double salts, salicylate of sodium and caffeine and benzoate of sodium and caffeine, are very soluble and can be used for hypodermic injections. Citric acid does not form a definite salt with caffeine, but simply augments its very slight solubility in water. The citrate so commonly used, therefore, is really quite insoluble.—*New Remedies*, February, 1883.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 26, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

DR. CHARLES HEITZMAN read a paper entitled

THE INTIMATE NATURE OF TUBERCULOSIS; ITS TRANSMISSIBILITY AND ITS PARASITIC ORIGIN.

When in 1873, the author of the paper first announced the reticular structure of so-called "protoplasm," he stood alone; since that time, however, a large number of good observers have corroborated the fact, and E. Klein, in 1878, enumerated over a dozen who, with more or less variations, and slight differences in their views, agree that "protoplasm" is really possessed of a reticular structure. Some of these have seen the structure in living and moving elements; some have claimed priority for its discovery in different tissues and parts of the body; e.g., for liver-epithelia, although the reader distinctly stated in 1873 that all epithelia have the reticular structure. In 1880, S. Stricker described the reticular, or trabecular structure in saliva-corpuscles, and he saw the trabeculae in motion so long as the corpuscle itself remained alive. Thus the last doubt was removed that the trabeculae themselves are the living matter proper. In the same year, S. Stricker stated that the basis-substance of the cornea may, under favorable conditions, under our very eyes, be transformed into "protoplasm." Quite recently, end of 1882, he asserted, in a public college lecture, that he is now thoroughly convinced of the correctness of the reader's statement, made in 1873, that the basis-substance is endowed with properties of life, the same as the cornea-corpuscles themselves, and added that it took him six years' labor to convince himself of this fact, which abolishes the theory: "Omnis cellula, ex cellula." Thus the speaker, at present, finds his two main assertions corroborated by the best microscopist abroad, and may, with some right, expect that also the third assertion, as to constitutional differences in the amount of living matter present in different elements of the same individual will, in time not far distant, meet with the approval of good observers.

On the ground of the new views, the process of inflammation becomes easily understood, for nothing is required, but a liquefaction of the basis-substance in any variety of connective tissue, in order to set free the living matter previously buried therein, with the result of the reappearance of the medullary elements which in the earlier stages of development share in the formation of the basis-substance. From any portion of the living matter of these newly developed corpuscles, may the new formation of elements ensue, leading to what is known by the term "inflammatory infiltration." So long as these corpuscles remain inter-connected, the inflammation remains plastic or formative, leading eventually to hyperplasia of the invaded tissue. As soon, however, as the newly formed elements are torn asunder, the inflammation assumes the character of destruction or suppuration.

In every inflammatory process a number of capillary blood-vessels are destroyed by being directly transformed into inflammatory corpuscles. Should the inflammation remain formative, new blood-vessels originate in the newly formed tissue; while in suppuration the blood-vessels are destroyed permanently. Any individual of good constitution, i.e., supplied with a sufficient amount of living matter will, in the process of plastic inflammation, reform the lost blood-vessels; while in persons of a poor constitution, i.e., those who have comparatively little living matter in their bodies, in any inflammatory process the reformation of the lost blood-vessels may be wanting, the product of inflammation in such persons must, by lack of nutrition, shrivel, dry out, as it were, and thus a product results known as tubercle. Tubercle,

therefore, is a product of inflammation destitute of blood-vessels; it makes no difference whether the process runs a slow course in the form known as chronic tuberculosis or phthisis, or an acute course, such as in miliary tuberculosis. Scrofulosis and tuberculosis from this point of view are pathologically identical, though clinically different, manifestations of a general, constitutional trouble, namely, want of living matter in the organism.

Several years ago the reader drew attention to the fact that the amount of living matter may directly be observed under the microscope in single pus or colorless blood-corpuscles. In persons of an excellent constitution these corpuscles look nearly homogeneous, viz., are richly supplied with living matter, and do not exhibit a reticular structure. The coarser the reticulum, respectively, its points of intersection, the surer it is that the corpuscles come from an individual with good constitution; the finer, on the contrary, the reticulum, the more delicate its points of intersection, the more are we entitled to define the constitution of the person, who furnished the corpuscles, as a poor or tuberculous one. Thus we are enabled to determine the constitution of any person by simply examining his pus or colorless blood-corpuscles. All products of tuberculosis and scrofulosis are known to be composed of elements scantily supplied with living matter, therefore finely granular, and here again is a proof of the fact that tuberculosis and scrofulosis are strictly constitutional diseases.

As to the transmissibility of tuberculosis, neither the observations of the physicians, nor the experiments of the pathologists since Villemin, have yielded positive results. Herbivorous animals, especially rabbits and guinea-pigs, may be rendered tuberculous by almost any injury. Much rarer is this the case with carnivorous animals. Not only the sputa of tuberculous persons, but almost anything brought under the skin of animals, for instance, pieces of gutta-percha, paper-scrap, etc., nay, injected granular aniline colors will produce tuberculosis in rabbits, especially in guinea-pigs, if these animals are kept imprisoned in cellars and poorly fed. A few days' sojourn in cellars is sufficient to produce diarrhoea in these animals, and a rapid sinking of their constitution, which, by itself, is poor. No rabbit, on the contrary, can be rendered tuberculous by any injury, or contamination with sputa of tuberculous persons, or any other material, if kept in yards, in freedom, and allowed to have plenty of fresh air and proper food. All experiments have, so far, proved that the infection of animals is successful only if the constitution be a poor or "tuberculous" one, and impaired by improper sanitary conditions. The experiments made on rabbits by transferring the so-called "tuberculous virus" into the anterior chamber of the eyeball, with subsequent tuberculous "deposits" in the iris, were the apparently most striking ones. Recently, however, the secretions of syphilitic ulcers or vegetations were transferred into the anterior chamber of the named animals, and the result was identical with that of experiments made with the "tuberculous virus," viz., tuberculous iritis.

Koch deserves great credit for his brilliant discovery of the bacillus in tubercle-matter and in the sputa of tuberculous persons. As to the presence of this low organism in the sputa there can be no doubt; it is plainly seen in specimens treated with certain aniline dyes (mainly gentianin and fuchsin). Recent researches made in Berlin and Vienna scarcely leave a doubt as to the diagnostic and prognostic value of this bacillus; for it is found only in persons invaded by tuberculosis, and the greater its number the more rapid is the course taken by the disease. But the proof that this bacillus causes the disease, stands, so far, only on the experiments of Koch himself, known to be an accurate and conscientious worker. If, by inoculation of the bacillus, gained by pure culture, tuberculosis can be brought about in rabbits, guinea-pigs, and rats, will this prove anything in the face of the fact that these animals, under the above-named

conditions, have been rendered tuberculous by inoculation of a great many other substances, partly or entirely neutral? The bacillus, whose germs may circulate in the liquids of any persons, may find a favorable soil for development in products of inflammation, deprived of their blood-vessels, in so-called cheesy masses, in the same manner as bacteria develop in the depth of the tissues—for instance, in the medulla of bone in osteo-myelitis without being in a direct causal connection with the primary inflammatory disease.

The paper being before the Society, the President invited DR. W. T. BELFIELD to open the discussion, who thought that Dr. Heitzman laid too much stress upon the fact that tuberculosis can be produced by simply introducing a mechanical irritant under the skin, etc. He then reviewed some of the points connected with this part of the subject, as already presented in a lecture delivered before the Alumni Association [the lecture will appear in a subsequent number of this journal], and again expressed the opinion that tuberculosis is infectious, as pyæmia is infectious. The real question, however, is not whether tuberculosis is infectious, but, What is the agent in that infection?

DR. A. JACOBI doubted, from a clinical standpoint, the absolute accuracy of some of the claims which Dr. Heitzman regarded as established facts. That the microscopical appearances of miliary tubercle and tubercular infiltration were identical, particularly when their centres were examined, had been well known for some time. But the origin of the two conditions which seemed so much alike must be different. Else, why does the miliary tubercle develop most commonly in very young infants, while the tuberculous infiltration is seen by far the most frequently—many cases occurring to be sure between the ages of five and ten years—between the ages of fifteen and twenty-five years? There must be some reason for this clinical fact. Concerning the peculiar condition found by microscopical examination of the white blood-corpuscles, Dr. Jacobi thought that the view had a certain amount of support in the irregular appearances presented by the milk globules, and yet he believed that the conclusions reached from such examinations must be restricted to the present condition of the individual, and not be applied to the general constitution. Dr. Jacobi believed that tuberculosis can be transmitted, and also that diseases regarded as the least transmissible can be transmitted, as, for example, eczema. Eczema may be transmitted from the head to a lower extremity by means of the finger nails, and the diseased particles produce the disease on the part to which they are so transmitted because the tissues of the person are in such a condition that an inflammation of this kind is readily produced. To say that the disease under these circumstances is of constitutional origin, does not explain the phenomenon. Thus he believed that phthisis was probably transmissible; transmissible when there exists either a congenital predisposition or a lowered state of the system already referred to.

DR. HEITZMAN was very much surprised to hear Dr. Belfield speak of pyæmia as an infectious disease, and thought that he must undoubtedly have used the word for septicæmia. Pyæmia certainly is a non-infectious disease, while septicæmia, as is well known, is infectious. With reference to the transmissibility of eczema, mentioned by Dr. Jacobi, he thought the argument did not prove very much. The fact that an eczema existed under the knee, and the next day upon the face, did not prove that the affection is contagious. The fact could be best explained on the ground that the skin is a continuous organ, and when diseased in one part of the body, it may, by reflex action, become affected in other parts of the body.

The Society then adjourned.

A HOMŒOPATHIC HOSPITAL is to be established in Minneapolis, Minn.

NEW YORK ACADEMY OF SCIENCES.

Stated Meeting, January 22, 1883.

PROFESSOR NEWBERRY, PRESIDENT, IN THE CHAIR.

MR. EDWARD PAYSON THWING, of Brooklyn, read a paper entitled

TRANCE IN ITS RELATION TO SEA-SICKNESS.

The histories of nine cases were given in which, by artificially inducing the hypnotic or trance condition, sea-sickness was allayed.

CASE I.—An English lady, aged fifty, of spare habit yet naturally vigorous constitution. She came on board an Atlantic steamer in ill-health, and sea-sickness began soon after. When first seen, two days out of port, she was unable to keep anything on the stomach and had not been able to retain any food since coming on board. Taking his position behind her, as she was extended in a steamer-chair, the speaker simply used gentle but firm pressure on either side of the head, following this with quiet and slow movements of the hands across the eyes and along the course of the orbicular muscle of either eyelid, uttering assuring words meanwhile. Little, if any somnolence followed, but, within a moment, the patient exclaimed "What a *heaven* it is to be relieved from pain!" An hour later she ate a dinner of her own selection, of which roast mutton and caper sauce made the central figure.

CASES II. AND III.—Two professional men on the same ship, similarly affected and similarly treated. With one of them drowsiness at once was induced and encouraged. No complaint of sea-sickness was afterward heard from them during the voyage.

CASE IV.—Two weeks later, between Stavanger and Trondhjem, on the west coast of Norway, a hearty, stalwart English sportsman complained of nausea, vertigo, and the other sensations of sea-sickness. He became drowsy as soon as manipulations about the head began. The slumber was made so profound that a sharp puncture of the hand caused no wincing. When the words "All right!" were spoken he waked and found his illness gone. He complained no more.

CASES V. AND VI.—A German governess and her pupil were crossing with me from Dover to Calais. The younger was vomiting violently and the teacher was on the point of following her example. Both were relieved by being thrown into the trance state.

CASE VII., like No. V., was that of lucid trance, without slumber. The vomiting was arrested and quietude was so suddenly established that an attendant suspected chloroform, and asked with earnestness, "What did you put on your hand?"

CASE IX.—Here hysteria, neuralgia, and sea-sickness made a joint assault on the patient, a middle-aged lady, in mid-ocean. A steady gaze full in the eye secured a concentration of thought and expectation, which the voice is sometimes sufficient to secure. The trance was almost immediate, and became so profound that some little force, thrice repeated, was needed to rouse. The sensation was described as that of delicious excitation at the beginning, which was followed by dreamless repose, of which no recollection was had.

Other cases had occurred in the speaker's experience, but did not materially differ in character or treatment.

Mr. Thwing's conclusions were:

First.—That the trance state, so called, will, in many cases, arrest sea-sickness by restoring the nervous equilibrium. Not every one responds, *i.e.*, believes, expects. Not every operator is able to excite expectancy in a willing mind, still less in a reluctant, incredulous mind. Failures are often our best teachers. Those whom I have failed to benefit are generally those who, by attending to or joining in conversation, or by some other diverting circumstances failed to fix their thought on the subject, and those querulous, despairing creatures who

seem determined not to get better, but "enjoy" poor health at home and abroad. Furthermore, failures at the first or second interviews I have found to be by no means decisive or final, as recent experiments with surgical patients have proved. When sequestration and silence can be secured success is sooner gained.

Second.—In transform states, where control is incomplete and unconsciousness is partial, great relief is often had.

Third.—The sense of subjugation and helplessness felt in sea-sickness is an important accessory to the process. It is analogous to that consenting attitude which the lower animals instinctively take when under the hand of the tamer or trainer, and something like the trance of fear, called panic.

Fourth.—The feeling of certainty on the part of the operator is helpful, if not absolutely essential, in awakening expectancy on the part of the patient. This assurance is not shown by bluster, but by gentleness; by undemonstrative rather than by pretentious and dramatic action; by low tones of voice that betray neither hesitation nor doubt; and by the general air of one who speaks a personal, private, and authoritative command. *Possunt quia posse videntur.* Hardly anything is more contagious than confidence or more masterful in power.

A CASE OF TRANCE ANÆSTHESIA.

DR. WILLIAM C. JARVIS presented to the Academy a patient from whose right nostril he had removed the turbinated tissue and re-established respiration after a year's closure, the operation, on January 20th, being performed while the patient was made as perfectly insensible, by Mr. Thwing, as if under chloroform. Other cases were mentioned by him, notably one where the terrified patient had required three attendants to hold her on a previous occasion, but who, under trance-anæsthesia, allowed the introduction and use of the *écraseur* in the removal of a glandular tumor behind the palate, contiguous to the base of the brain.

PROF. NEWBERRY, of Columbia College, remarked that this was a wholesome influence and worthy the attention paid to it. He had seen it utilized in surgery twenty-five years ago. Not all respond, yet in many cases it proves to be a beneficent power. Taken out of the hands of charlatans, it is now being used by those competent to investigate its phenomena.

EXPULSION OF FOUR HUNDRED AND FORTY-ONE LUMBRICOID WORMS WITHIN THIRTY-FOUR DAYS.—Dr. A. C. Pole, of Baltimore, reports (*Medical Chronicle*) the case of a girl aged seven, who had been complaining for months of nausea and colicky pains in the abdomen. The skin was icteric, appetite variable, bowels costive. She was treated for worms and was given *santonin*, *chenopodium*, etc. Within thirty-four days four hundred and forty-one lumbricoid worms were passed, in "lots" varying from one to thirty-five. Dr. Pole says: "Larger numbers than these have been reported, but such a number in so short a space of time I believe to be infrequent. Ransom, in his article on intestinal worms, says that cases are recorded in which various numbers, from one hundred to twenty-five hundred, have been expelled from one person within a few months. Cruvelhier cites a case of an idiot in whose intestines one thousand were found. Dr. Condie has known as many as a hundred and twenty to be voided in a single day by a child five years old. Dr. Meigs says: 'I have never myself known more than six, eight, or ten to be expelled within a few days' time, and very generally there have not been more than three, four, or five.' Hensch states that he remembers a case in which whole vesselsful of round worms were passed for a number of days in succession. Bartholow says there may be one, two, or three worms, or they may reach five hundred or a thousand."

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE TYPHOID EPIDEMIC IN PARIS—DISCUSSION ON THE TREATMENT OF TYPHOID FEVER BEFORE THE ACADEMY OF MEDICINE—THE COLD BATH NOT IN MUCH FAVOR—QUININE AS AN ANTI-PYRETIC—THE BEST MANNER OF USING THE DRUG TO OBTAIN ITS PERMANENT EFFECTS—ALCOHOL AS AN ARRESTER OF TISSUE METAMORPHOSIS—DR. HENRI NACHTEL ON THE PREVENTION OF STREET ACCIDENTS.

PARIS, FRANCE, February 9, 1883.

THE medical journals in and out of France have been so full of the typhoid epidemic in Paris, and the subject has been so ably treated of in your editorial of January 6th, that it would seem unnecessary to say anything more about it; but the importance of the subject having been revived by a remarkable communication made by Professor Germain Sée, at the Academy of Medicine, last week on the therapeutics of this dire affection, will be my apology for reverting to it here.

In reviewing the most recent methods of treatment employed, Professor Sée divided them into three classes, with the view of facilitating discussion. The first, which used to be termed simple expectation, is now decorated with the affix "armed," or, as Dr. Dujardin Beaumetz would have it, "expectation armée." The second has the pretention to be a specific method, that is to say, it has the power of destroying the germ which is the cause of the malady. The third comprises those agents, medicinal or otherwise, which simply reduce the temperature of the body ("antithermiques") and those which attack the fever itself ("antipyretiques"), or perhaps the learned Professor would mean to say, the source or cause of the fever or heat in the body. Professor Sée is not in favor of the expectant method, which he says consists in leaving the cure of the malady to the efforts of nature (*natura medicatrix*), as he had tried this method armed or unarmed, at the commencement of the present epidemic, and the results were anything but encouraging. He has also shown that the so-called antiseptic methods have up till now given no result, in short, they cannot do so in the proper sense of the term, as none of them can reach the seat where the microbe is evolved, even should there be such a thing as a specific microbe.

Before referring to the methods of treatment which he preferred, Professor Sée made a few remarks on the treatment of typhoid fever by cold baths, which he condemned not only as being useless, but absolutely dangerous in this affection, as cases have been recorded of severe and even fatal results having followed the use of the cold bath. The method of the cold bath is, like the other methods, founded on preconceived theories. In the present case the cold bath is employed ostensibly with the view of reducing the temperature of the body, but M. Sée proves that the cold bath has the opposite effect, and he has found that the internal heat is increased, and so is also the process of combustion, hence the necessity for feeding the patients who are submitted to this treatment copiously; but M. Sée has calculated that to repair the enormous waste of the tissues it would be necessary to give the patient at least thirty-five hundred grammes (a little over three pounds) of beefsteak a day, or its equivalent in another form, and it is well known that the digestion of typhoid patients is nil, or nearly so.

From Professor Sée's own experience he has come to the conclusion that the refrigerating property of cold baths is only apparent, or at any rate its effects are not permanent, nor does it shorten the duration of the disease, and if it does not reduce the rate of mortality, the Professor pertinently asks what utility there would be in subjecting typhoid patients to such a barbarous treat-

ment. To fulfil the indications for which cold baths are employed, Professor Sée prefers the use of quinine sulphate and alcohol, which he administers separately or combined, according to circumstances. The former he looks upon as the type of an antipyretic remedy. It prevents the too rapid oxidation of the tissues of the body, and acts on the heart and blood-vessels in the most favorable manner. The sulphate of quinine is also eminently "antithermic." It possesses this property in a much higher degree when given to patients who are suffering from fever than to healthy individuals. The lowering of the temperature of the body is proportional to its previous rise; in some cases, it has even been observed to exceed one degree. The quantity he administers is 2 grammes 20 centigrammes, or about 34 grains per diem, half of which is given in the morning and the other half in the evening, which he never exceeds, as it then becomes toxic. Moreover, he prefers this mode of administering the medicine to small divided doses in the twenty-four hours, as when thus administered it is rapidly eliminated from the system, and its effects are lost. Alcohol is another remedy Professor Sée considers most useful in the treatment of typhoid fever. Far from increasing the temperature of the body, as has been supposed, it does not burn, it prevents denutrition, and thus lowers the general temperature of the patient. In fine, alcohol is a substance that retards the waste of the tissues and prevents emaciation, hence termed "*un médicament d'épargne*." When one drinks spirits one is led to suppose that the temperature of the body is increased, as it produces a sensation of heat, but this phenomenon is merely temporary and coincides with a real diminution of the heat of the body. This effect, however, is less marked than in the administration of quinine. The Professor deems that the combination of the two substances named would be found most useful in the treatment of typhoid fever, or in any other condition where their effects are indicated. In any case, Professor Sée considers them absolutely inoffensive, provided they are employed in the proper therapeutic doses.

Professor Jaccoud, another eminent physician, following in the same wake, made a very interesting communication at the last meeting of the Academy on the same subject. He advocated, with slight modification, the treatment adopted by Professor Sée in typhoid fever, and, like the latter, condemned the cold baths as employed for some time in Germany and now adopted in a general way in Lyons, observing that he has obtained the necessary degree of refrigeration by sponging the body frequently with aromatic vinegar and water, which is attended with much less inconvenience and danger to the patient. He also severely criticised the growing tendency in the profession to adopt the germ theory of disease, and concluded his remarks by the following practical advice: "Whatever may be the fate reserved to microbes it must not be forgotten that we cannot reach or affect them in any way but through the medium of the patient infested with them, and that the power of resistance in the subject should always be kept in view."

Dr. Henri Nachtel, so well known in connection with the Night Medical Service, established in New York, and his efforts to introduce the American system of ambulance in Paris, is now occupied in endeavoring to introduce the system of "street-helpers" as it exists in London, New York, and St. Petersburg, where the policemen have strict orders to afford every help in their power to enable foot-passengers to cross the streets by stopping the carriages which follow in such rapid succession, particularly at certain hours of the day, and where the traffic is so great that crossing over from one side of the street to the other is simply impossible without being run over or knocked down. Dr. Nachtel has had a personal interview with the Prefect of Police on the subject, who has promised to make the necessary arrangements for the carrying out of such a desirable and philanthropic object.

OUR LONDON LETTER.

(From our Special Correspondent.)

MEDICAL ADVERTISING — TYPHOID FEVER — THE COLD BATH, AND OTHER TREATMENTS AT THE LONDON, NORTH EASTERN, VICTORIA, ST. MARY'S, AND UNIVERSITY COLLEGE HOSPITALS.

LONDON, February 13, 1883.

MEDICAL advertising continues to call forth anathemas from the powers that be. The London College of Physicians has on several occasions, by the votes of its fellows, publicly protested against the custom of advertising medical works in lay journals. By an unfortunate coincidence, however, many of the fellows who attend and vote at these meetings at which the resolutions condemnatory of advertising in the lay press are carried *nem. con.* are themselves actually guilty of the offence they condemn in others. In some cases, no doubt, they would say the advertisements are inserted by their publishers. Still the fact remains. A great deal of the agitation has arisen simply from professional jealousy. Those who have attained success and are reaping its rewards would gladly keep them to themselves. The medical journals decry the lay press, because they want to get the advertisements for their own columns. Not many years ago, though, when *The Lancet* was animadverting on this subject, and denouncing some physicians by name, it was pointed out by its contemporaries that *The Lancet* had its contents advertised weekly in *The Times*, large bills of contents exhibited at the Metropolitan Railway stations, and was itself exposed for sale on the railway bookstalls.

Typhoid fever is still prevalent. The cold-bath treatment has made considerable progress in England of late years. Still it cannot be said that we can show results as favorable as those of Liebermeister and other German physicians.

At the London Hospital the cold-water treatment is in use by several of the physicians. In some cases the immersion bath is employed at a temperature of about 60° F. (*i.e.*, ordinary tap water), the patient being placed in this for five or ten minutes. Cold sponging is, however, more frequently resorted to on account of the much less trouble it involves. The patient is directed to be sponged with cold water (or spirit and water sometimes) whenever the temperature is very high. The effect has been tried of placing patients in a bath and pouring over them water from a watering-pot with a hose attached. Drs. Fenwick and Sansom have tried the effect of placing a bed-cradle over the patient so as to raise the bedclothes from off him and within the hollow space thus formed, placing a piece of ice in a saucer so as to cool the atmosphere immediately surrounding the patient. Last year Dr. Sansom employed Rothe's method of treatment in some cases, the notes of which appeared in *THE MEDICAL RECORD*.

At the North Eastern Hospital Dr. Sansom, the senior physician, employs the cold bath treatment extensively. Whenever patients are hyperpyretic they are immersed for a few minutes in a bath containing cold water as drawn from the cistern, and therefore at about the temperature of the air. This is repeated as often as necessary, *i.e.*, whenever the temperature rises again. In severe cases Dr. Sansom has repeated them at intervals of two hours. Dr. Sansom states that he gave quinine an extensive trial some years ago and is not convinced of its efficacy, although he has made use of large doses, *i.e.*, as much as five grains or more to a child of two years. He has also frequently employed the sulphocarbates in cases of typhoid fever. His present treatment, in addition to the use of the cold baths, is mainly dietetic and expectant. A refrigerant mixture containing liquor ammonia acetatis is usually given.

At the Victoria Hospital for Sick Children typhoid fever cases are not admitted. Those originating among patients already in the hospital are placed on a diet of milk and lime-water. Complications are treated as they

arise. For hemorrhage from the bowels Dr. Venu administers an injection of gallic, and opium is occasionally given.

At St. Mary's Hospital the treatment is mainly expectant and dietetic. Patients are fed chiefly on meat broth and milk. Diarrhoea, if excessive, is treated by sulphuric acid and opium. A bed, the upper half of which can be raised or lowered by means of a lever, so as to place the patient at any angle without fatigue to himself, is usually reserved for typhoid cases. The cold bath treatment has not been employed to any extent, but has occasionally been used in hyperpyretic cases.

At University College Hospital the antipyretic treatment is employed both by Dr. Wilson Fox and by Dr. Ringer with good results in many cases.

THE LATE DR. GEORGE M. BEARD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you allow me to say a word in justice to the memory of the late Dr. Beard? I have looked through numerous medical journals and have failed to find anywhere a just recognition of his work and character. Furthermore, I have not been able to find that a single medical society has paid even the conventional tribute of resolutions to his memory. In many prominent medical journals half a dozen lines have been deemed a sufficient obituary. To those who knew Dr. Beard's many contributions to science, his active, keen, and original mind, his tireless industry, and his charming personal character, this seems a shameful neglect.

Dr. Beard, in connection with Dr. Rockwell, was one of the pioneers in electro-therapeutics in this country. Together they gave to the profession general electrization, a therapeutic measure whose value is everywhere acknowledged. Dr. Beard first gave to the profession also definite views and facts regarding neurasthenia; he was the first to study and show clearly and positively that Americans possess a peculiar and peculiarly great nervousness—a fact which, when recently commented upon by Mr. Spencer, in nearly Dr. Beard's language, was received as something wonderful, novel, and true.

Dr. Beard first explained the phenomena of mind-reading; he made original researches in trance and its allied conditions. In the same connection he formulated the sources of error in experimentation and in weighing human evidence. He was a friend of higher education in medicine, and an early promoter of the success of the American Academy of Medicine. He was identified with the reform movement in psychiatry now going on in this country. Aside from these and numerous minor contributions to medicine and psychology, he was a man of attractive character, incapable of double-dealing, true to his friends, helpful to younger men, generous, and of an unvarying good humor under the worst attacks of his critics or his enemies. With the faults only of a too prolific writer, but with the merits of an original thinker, a brilliant worker, and a persistently active scientific investigator, it seems that, so far, but scant justice has been done to his memory.

Very respectfully yours,

SUCCINATE OF IRON IN BILIARY COLIC.—Dr. Jas. A. Stewart, of Baltimore, revives the claim that the hydrated succinate of the peroxide of iron is efficient in the treatment of gall-stones. He reports one case in which a patient, a lady of forty, who had suffered for three months and was greatly emaciated, recovered health rapidly under drachm doses of the succinate. There had been no trouble for two years. Dr. Stewart's case, as reported in the *Maryland Medical Journal*, is not very convincing, as the trouble had only lasted a comparatively short time, and no gall-stones were actually found.

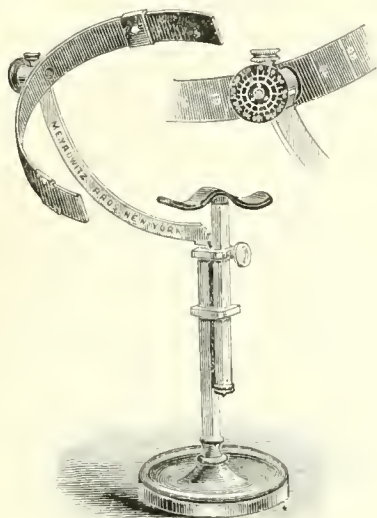
New Instruments.

A NEW INSTRUMENT FOR TESTING THE FIELD OF VISION.

By J. B. EMERSON, M.D.,

INSTRUCTOR IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; ASSISTANT SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL.

The principles on which this perimeter is constructed are chiefly the same as those of others now in use.



The arc is a semicircle of five inches radius, perforated at the middle, and divided on its convex surface into eighteen equal parts, and numbered from the middle to the extremities. On each arm of the arc is a perforated slide, so made that small pieces of paper can represent the objective point; and in testing the color zones, colored paper can be used. This slide is held in any position by means of a spring. The support of this arc is a rectangular rod, surmounted by a quadrant. This rod moves vertically in a sheath, so as to be elevated or depressed at will. The perforated axis of the semicircular arc is attached to the upper end of the quadrant, so as to revolve about a horizontal axis. The scale on which the angle of revolution is measured is fixed to the quadrant, and a pointer on the revolving arc indicates the meridian tested. The chin-rest is double, the right for the left eye and *vice versa*. The movement of the chin-rest is also vertical, parallel to that of the aperture, and at a horizontal distance six inches in front of it. The base is loaded. The minimum height is twenty inches, with an extension of four inches. It is made of polished brass, and its weight is about six pounds. The eye of the person tested should be five inches from the aperture, and on the same level with it. This can readily be effected by observing the eye of the person tested through the aperture. In other respects the working of the instrument is similar to that of other perimeters. The advantages claimed for the instrument are:

First.—By means of the aperture the eye of the person tested can be watched, and any deviation immediately detected.

Second.—The double chin-rest brings the eye of the person tested directly in front of the aperture.

Third.—The bearings of the instrument are principally rectangular, so that it cannot "wobble."

Fourth.—The centre of gravity of the chin-rest is directly over the base, while that of the arc is nearly so, thus rendering the instrument little liable to accident.

Fifth.—It is light, portable, and an ornament to the office, rather than a nuisance.

Sixth.—It can be easily and quickly used.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 17, 1883, to February 24, 1883.

CLEARY, PETER J. A., Captain and Assistant Surgeon. Granted leave of absence for four months on account of sickness, to take effect January 3, 1883, in extension of his authorized absence on certificates of disability. S. O. No. 40, par. 6, A. G. O., February 16, 1883.

HEIZMANN, CHAS. L., Captain and Assistant Surgeon. To be relieved from duty in the Department of the Columbia. S. O. 12, Department of Columbia, February 8, 1883.

TESSON, LOUIS S., Captain and Assistant Surgeon. To be relieved from duty at Fort Clark, Texas, and assigned to duty at Fort Ringgold, Texas, as Port Surgeon. S. O. 20, par. 5, Department of Texas, February 21, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending February 24, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
February 17, 1883.....	0	2	85	7	75	51	0	0
February 24, 1883.....	0	11	86	4	81	44	1	0

SOME CLINICAL INDICATIONS FOR CONVALLARIA MAJALIS.—Dr. E. L. Trudeau, of Saranac Lake, N. Y., writes: "From what has already been published in regard to convallaria, it seems that, as the study of this drug is in its infancy, little is known as yet in regard to the class of patients to whom it is most serviceable. It has been noted that in some cases of cardiac difficulty it acts most energetically, while in others it is of little value. Some broad indications to guide us in its use are, therefore, most desirable. From a year's experience in prescribing this drug, it has seemed to me that such an indication may, perhaps, be found in the fact that it is most successful in all cases where, to restore the balance of the circulation, stimulation of the RIGHT heart is imperative, while it is much less active where increased energy on the part of the left ventricle is called for. Its striking power in controlling dyspnoea in cases of emphysema, fibrous, and chronic phthisis (cases in which digitalis frequently fails), in relieving the orthopnoea of mitral disease, increasing at the same time the flow of urine, and its failure to mitigate the symptoms of aortic mischief or to increase the flow of urine in such cases, are clinical facts which tend to confirm this suggestion. It is in relieving dyspnoea that convallaria attains its most brilliant results, while it has only an uncertain and trifling power over cedema and dropsy, and it succeeds often in precisely the cases in which digitalis fails. Another indication for its use not hitherto dwelt upon, is in controlling the symptoms of purely functional heart disorder. Its efficacy in such cases confirms Dr. Beverley Robinson's opinion that it acts through the nervous system. Paroxysmal palpitation and dyspnoea due to nervous causes, rapid and irregular heart-action dependent upon debility, are symptoms almost always benefited by it, and which often entirely

disappear during its exhibition. Convallaria is a drug which offers a most promising field to physiological research, and it is to be hoped that extensive experiments upon animals will, before long, clear up many doubtful points in regard to the proper indications for its use."

THE DOSE OF CONVALLARIA.—Dr. H. L. Taylor wishes us to state that the largest dose of convallaria used by him was one drachm, and not one ounce, as stated by one of our correspondents in a recent issue of THE RECORD.

DR. HARVEY L. BYRD'S ARTICLE.—Dr. Byrd writes: "Please have the following corrections made in my article of February 17th in the next issue of THE RECORD, viz.: in line 26, on page 178, second column, read, 'Caucasian and negro races when it is found breeding *inter se*,' instead of '*intense*.' In the tenth line from the bottom, same page and column, insert *of* after the word descendant. The word *penal*, in line 18, first column, page 179, should read *plural*."

THE TREATMENT OF PNEUMONIA.—We are indebted to Dr. W. Thornton Parker, Acting Assistant-Surgeon, United States Army, Fort Elliot, Texas, for the following item, communicated to him in a private letter by Professor Baumler, of the University of Freiburg, Baden: "Our treatment in cases of pneumonia in the Freiburg Hospital is chiefly directed toward sustaining the strength of the patient until in the natural course of the disease the pyrexia leaves him. As the pyrexia is one of the chief causes of the exhaustion which in severe cases gradually sets in, we try to keep down the body-heat by means of cool baths or wet packing, as well as by quinine (fifteen to twenty grains in one dose in the evening) or salicylate of soda (sixty to eighty grains within an hour in the middle of the night). The patient must be sufficiently fed by broths, beef-tea, and milk, and in every case we give from one-half to one pint of light wine, to which the populace is accustomed, in the twenty-four hours. *An ice-bag is applied to the chest when there are pleuritic pains.* Dover's powder or morphia is only given when there is restlessness or great pain, or diarrhoea. With very sharp pains in the side we apply the morphia hypodermically. If there be much bronchial catarrh accompanying the pneumonia, we give ipecacuanhæ in infusion with or without opiates. Sweet spirits of nitre I have never employed in pneumonia. Altogether, it is but very seldom used in Germany."

MENSTRUATING AT THE AGE OF SEVENTY-SIX.—Dr. W. S. Higgins, of Penfield, Ill., sends us the history of the following singular case: "Mrs. Eliza McG—, born in Harrison County, Ky., September 28, 1806; worked on a farm, doing a great deal of out-door work; began to mature at the age of fourteen, but did not menstruate until at the age of eighteen; from fourteen to eighteen suffered more or less with wandering pains, supposed that washing clothes in the river was the cause of the suppression. Married at the age of twenty, first child born at the age of twenty-one. Enjoyed usual good health. Had twelve children, last one born at the age of forty-six. For seven years after the last child was born menstruation irregular and very copious. Since then *very regular* (with good health) *until the present time, at the age of seventy-six*, and always preceded with same kind of bad feeling that ushered in the flow when young."

THE HISTORY OF QUARANTINE AT PENSACOLA.—In 1853 yellow fever was brought to the navy yard by the St. Vixen from the West Indies and spread to the military post at Barancas, between which places there was unrestricted intercourse. In 1863 it was introduced into the navy yard by the United States supply vessel Nightingale, and although there were three thousand troops at Barancas, not a case occurred there, owing to a "strict quarantine of cavalry pickets" which was placed around the military camp. In 1867 it was brought to Pensacola

by ship and spread thence to the navy yard through constant intercourse between the two places. A picket line established against both these places prevented its reaching Barancas a second time. In 1874 it was again brought by ship to Pensacola and thence through intercourse to the navy yard; Barancas again quarantined against the two places and escaped the third time. In 1875 it was brought to Barancas by the Von Moltke; Pensacola and the navy yard quarantined against Barancas and both escaped. The past year the navy yard and the towns of Milton and Millview established rigid quarantine against Pensacola and all escaped, while other towns and hamlets which did not quarantine were attacked by the disease and suffered severely.

THE CHILDREN OF WOMEN SUFFRAGISTS.—In a list recently given of the children of twelve leading woman suffragists, it was shown that there was a remarkable preponderance of daughters. Among the forty-three children thirty-two were girls.

CARBONATE OF POTASH IN DIPHTHERIA.—Dr. S. S. Cartwright, of Roxbury, N. Y., sends us the history of two cases of diphtheria with croup occurring in the same family. The first patient, a boy of three years, died after a brief illness. About two weeks later, the second case, that of a boy four years old, developed. The disease went on rapidly and unfavorably, showing much the same bad symptoms as at first. Emetics were used, and chlorate of potassium given. Some improvement took place on the fourth day, but severe and apparently fatal relapse occurred five days after. Two grains of potass. carbonat. were then administered every hour, when improvement soon appeared, and the child recovered. Dr. Cartwright ascribes much virtue to the potass. carb., which, he writes, is recommended by Vogel. Our correspondent appears to have ignored local treatment, the use of alcohol, and of muriate of iron.

PRIMARY CANCER OF THE PANCREAS.—Dr. Chas. G. Partridge, of Bellows' Falls, Vt., sends us some facts regarding a case of primary cancer of the pancreas involving that organ alone. The case occurred in the practice of Dr. E. S. Albee. The patient was a woman only twenty years old. She had been ill "from an unknown cause for about seven years." The diagnosis of the disease was made from a microscopic examination of the tumor by Dr. White. The case is somewhat unique, and pathologists will be apt to doubt the diagnosis until the facts are more fully presented.

THE MEDICAL REGISTRATION LAW IN PENNSYLVANIA.—Dr. F. Griswold, of Sharon, Mercer County, Pa., relates, in the *Medical and Surgical Reporter*, cases illustrating the successful action of the registration law in his county.

NEW YORK MEDICAL JOURNALS.—Nine general and seven special medical journals are published in this city. There are four weeklies, seven quarterlies, four monthlies, and one bi-monthly.

THE SECOND GERMAN CONGRESS FOR INTERNAL MEDICINE meets at Wiesbaden, April 17 to 20, 1883.

THE TREATMENT OF CHILBLAIN.—*New Remedies* publishes a list of thirty-seven different remedies for chilblain, taken in part from the *Chemist and Druggist*. The list includes all kinds of liniments and ointments, also hot water, electricity, balsams, acids, and that odoriferous panacea, iodoform. Yet we are unable to say which is the specific.

SYRUP IODO-PHENIQUE (DÉCLAT).—The composition of this preparation is as follows, according to *New Remedies*: Iodine, five one-thousandths to one part; phenic, or carbolic acid, one to five parts; water, or other suitable solvent—say a solution of iodide of potassium containing one-tenth to two parts of the salt—enough to make one hundred parts.

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Whole No. 644

Original Lectures.

ON THE RELATIONS OF MICRO-ORGANISMS TO DISEASE.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE
ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS
AND SURGEONS, NEW YORK.

By WILLIAM T. BELFIELD, M.D.,

LECTURER ON PATHOLOGY, AND ON GENITO-URINARY DISEASES (POST-GRADUATE
COURSE), RUSH MEDICAL COLLEGE, CHICAGO.

LECTURE III.

IN 1879 Neisser made the assertion, based upon numerous examinations, that there is present in the purulent discharge of gonorrhœa, whether from urethra, vagina, or conjunctiva, a micrococcus not found in other pus, distinguished by its size, shape, and mode of reproduction. Neisser's previous work entitled this assertion to respectful consideration, and it was at once subjected to extensive tests. The reports have been, with one exception, unanimous in corroborating Neisser's assertion in all its details. I may mention especially Ehrlich, a most expert and experienced, yet conservative and trustworthy observer; Gaffky, a pupil and present assistant of Koch; Aufrecht, of Magdeburg; Löffler, Leistikow, Bockhart, Krause; and among the ophthalmologists, Leber, Sattler, and Hirschberg. The only dissenter, so far as I know, is Dr. Sternberg, who asserts that this micrococcus form is widely distributed, and is, in fact, the same as that which Pasteur has shown to cause fermentation of urea.

Several attempts have been made to inoculate human subjects—since animals are not susceptible to the contagion—with the isolated micrococci. Bokai, in Pesth, asserts the induction of urethral gonorrhœa in three out of six students so inoculated; but as he neglected to keep them in solitary confinement during the trial, the experiment is not so convincing as it might be. Bockhart, having cultivated the organisms on gelatine, inoculated with the fourth culture a paralytic hospital patient, and observed a typical gonorrhœa on the sixth day. Sternberg cultivated micrococci from gonorrhœal pus in flasks, and observed only negative results in each of five patients inoculated therewith. Thus far, therefore, it is not decisively established that the bacterium associated with gonorrhœa is the cause of the disease. Dr. Sternberg's present experiments, like all his previous work, evince great care, skill, and a sincere desire for truth that cannot be too much admired; yet his deductions would be far more convincing if he would substitute a solid for the liquid culture medium.

Sattler has recently found micrococci, apparently identical with those of gonorrhœa, in the conjunctival granulations, and affirms that inoculation with the organisms, isolated by cultivation, induced the disease in a human subject.

Micrococci, then, exist in the human body, locally and generally; yet excepting gonorrhœa there is no decisive evidence that a specific micrococcus is associated exclusively with any one specific morbid process in the human subject. But I would again remind you that many of these organisms are individually so minute that absolute, and hence comparative, measurements cannot be as yet

accurately made; further, that micrococci morphologically identical may be physiologically distinct. Hence it cannot be asserted at present that the same species is present in septicæmia, pyæmia, etc., although the contrary is not yet established beyond doubt.

Turning to the other tribes of bacteria, however, we find more definite information; for in size, shape, mode of propagation, often of locomotion also, they present such differences that a distinction into species is often possible.

The disease variously designated anthrax, splenic fever, malignant pustule, woolsorter's disease, charbon, and by the Germans Milzbrand, is proven to be not only associated with, but also caused by, a bacillus. About this all controversy has ceased; inoculation with the bacilli, isolated by filtration, flask cultures, by cultures upon solids, by scores of observers, have always and invariably given the same result; Koch has even induced the disease by inoculation with the one hundred and fifteenth successive culture upon solids. Further experimentation is as unnecessary as further proof that a dog can be poisoned with strychnine. Anthrax is as yet the only disease proven to be due to a bacterium, by demonstrations so clear and unequivocal as to convince skepticism and silence sophistry. It is, therefore, the rock of ages on which the bacteriologists seek refuge from the waves of ridicule; the cross to which they cling amid the storms of adverse criticism; the strong castle from which they repel the impotent assaults of their enemies. The knowledge of certain facts as to the occurrence of this disease has extreme value for those of us who, having no prejudices nor views to protect, belonging to no camp nor sect in pathology, are actuated by a desire, not to demolish every one whose views do not accord with ours, but to ascertain and interpret intelligently all facts bearing upon the relations of bacteria to disease.

Anthrax is endemic in some parts of Europe, particularly of Russia, Germany, and France, and exists also in the United States. A conception of its extent may be derived from the fact that in one Russian district alone there perished in 1867-70 fifty-six thousand domestic animals—horses, cows, and sheep—and five hundred and twenty-eight human beings. In 1770 there occurred an epidemic in the West Indies, in which, within six weeks, fifteen thousand men died from eating beef infected with this parasite (Law). Sheep appear to be the natural host of the bacillus, since they are affected during the entire year, while other animals exhibit the disease only sporadically. Anthrax is both contagious and infectious; is acquired by cattle in grazing in certain localities, particularly after inundations, and in spots where animals similarly infected have grazed; may be probably acquired through the agency of flies. By man the disease is contracted through contact with infected animals, flesh, hides, wool; by eating infected meat.

These clinical facts were established long before the discovery of the bacillus; and have become intelligible and coherent only since the life-history of the parasite has been studied—for it is demonstrated that this plant produces spores, which, when placed under favorable conditions, grow into the mature form; but which, meanwhile, may remain in this embryonic state for an indefinite number of years, unaffected by extremes of temperature, by many chemical agents, even absolute alcohol. The mysterious and inexplicable sporadic appearance of the disease is at once explained. These

spores may be transported in the hide, the wool, and the flesh of the animal, either of which may, therefore, cause an outbreak of the disease in a distant part of the world, and after the lapse of years. It is reported that anthrax once appeared among the workmen in an upholsterer's shop, limited to those who were engaged in repairing certain chairs, imported from a distance, which were stuffed with horse-hair. Some time ago a whole family in Scotland acquired the disease after eating soup made from beef by several hours' boiling. A local epidemic occurred in Paris among the workmen who had handled a cargo of hides from South America.



Fig. 8.—Kidney of rabbit; anthrax bacilli in the inter-tubular capillaries, $\times 700$. (Copied, by special permission, from a photograph by Dr. Koch.)

The natural habitat of the anthrax bacillus has not yet been discovered, though the plant is evidently indigenous only in certain limited districts. Koch's researches, as well as clinical observations, make it extremely probable that the bacillus is not properly a parasite of animals; that it, like many other fungi, grows upon living or dead vegetable matter, and its entrance into the cow or sheep is merely incidental to the consumption of its host as food by the animal—an accidental excursion from its usual life history—just as the presence of the trichina spiralis in the human subject is incidental to the consumption of uncooked pork.

When we reflect upon the close clinical resemblance between anthrax and certain other infectious diseases; their occurrence sporadically and epidemically; their usual limitation to certain conditions of climate and of soil; their especial prevalence during certain seasons of the year; the predisposing influence of heat and moisture; the stage of incubation; the contagiousness; the self-limitation of the disease, etc., it becomes evident to every one whose cerebral functions are normally performed that there may be, in this matter of bacteria, vastly more than the optical delusions of a microscopist, the impractical fancies of a pathologist; more than fat-crystals and fibrin threads. Yet it is understood that there may be no conclusions by analogy. Anthrax and septicemia may be very similar clinically and anatomically, yet the demonstrated parasitic origin of the one does not prove the same for the other; arguments of that sort have no place in exact science. The matter must be investigated in the case of each disease independently, precisely as it has been in anthrax—a fact which is insisted upon by no one more persistently and emphatically than by Koch—to whom, by the way, we are indebted for most of what we now know about the life-history of the bacillus anthracis. And just here is another of those vital differences which distinguish Koch's work from that of Klebs and of Pasteur. The latter seem to assume the parasitic origin of the infectious diseases, and their deductions are

but too often partially based upon such assumption. Koch assumes nothing, furnishes ocular demonstration of his assertions and uses all his influence, by precept and example, to raise this subject of bacterial investigation from the mire of uncertainty, doubt, skepticism, and contempt to the firm basis of exact science. For our patience has been so sorely tried, our confidence so often abused, that we have acquired a certain indifference to bacterial discoveries; we often fail to discriminate according to the evidence furnished, and regard all alike as essentially uncertain and obscure.

In this failure to discriminate between evidence and evidence, between assertions and assertions; in this failure to distinguish between a *deduction* and a *demonstration*, is to be found, in part at least, the explanation of the remarkable attitude, or rather variety of attitudes, maintained by the medical public of our land, and of our land only, on the question to be next discussed—tuberculosis. All pathologists worthy of the name, and I believe all others also, are agreed that the miliary tuberculosis of man is anatomically identical with the disease caused by the same name in rabbits, guinea-pigs, dogs, and cats; and that pulmonary consumption results from the aggregation and degeneration of miliary tubercles.

From the earliest times there seems to have been a suspicion among medical men that tuberculosis is a communicable disease; now and then an instance was observed in which a previously healthy individual, of non-consumptive stock, became tuberculous after assuming an intimate relation—as of husband or wife—to a consumptive individual; and domestic animals, even those not particularly susceptible to the disease, such as dogs, became in some instances consumptive after close attendance upon a human subject previously so afflicted. Yet the evidence of such cases, however suggestive, was not decisive; so difficult is the proof of inoculation, so insidious and gradual the inception and manifestation of the disease, so numerous and diverse the other influences to which the individual is exposed, so impracticable the restriction of personal liberty necessary for accurate observation, that the exclusion of other possible causes for the disease has not been, and probably cannot be, conclusively demonstrated in the human subject. Clinical observations have therefore never been decisive, either affirmatively or negatively. With experiments upon animals it is evidently otherwise; and this question was, early in the history of experimental pathology, submitted to experimental investigation. In 1865 Villemin demonstrated that the subcutaneous introduction of tuberculous human tissues was followed by local and general tuberculosis in rabbits and guinea-pigs. His results were in succeeding years corroborated by Klebs, Lebert, Waldenburg, Cohnheim, Fränkel, Tappeiner, Orth, Bollinger—in short by all who made the experiment; yet not every inoculation was successful: the animals most frequently subject to spontaneous tuberculosis—especially the rabbit and guinea-pig—were found also most susceptible to inoculation; those which rarely exhibit the disease spontaneously—the dog and cat, for example—often resisted attempts at artificial induction of the disease; this was to be expected, and was considered, indeed, as clinical confirmation of the anatomical evidence as to the identity of the spontaneous and the induced disease. Tuberculosis can, therefore, according to the unanimous testimony of observers, be induced by inoculation with tuberculous tissue. But it soon became doubtful whether this unquestioned fact could be interpreted as proof that there is anything specific about the tubercle; for it is evident that if all the effects produced by inoculation with tubercle can be just as certainly induced by non-tuberculous materials, no assumption of specific nature is necessary. It was demonstrated by Burdon-Sanderson, Wilson Fox, Martin, Waldenburg, Cohnheim, Fränkel, that after the introduction of mechanical or chemical irritants—a piece of wood or paper, a linen thread, a cork, glass, pepper,

cantharides—in short, after the induction of irritation and inflammation in the subcutaneous tissue or peritoneum, an eruption of miliary tubercles, indistinguishable histologically from those following inoculation with tuberculous matter, often occurred. It is a little strange, by the way, that Dr. H. F. Formad, in a recent paper, called “The Bacillus Tuberculosis,” in which he relates the repetition of these experiments by himself and by one of his own pupils, makes no allusion, direct or indirect, to this work to which I have just referred. This is doubtless an unintentional oversight; yet in consequence of this oversight, the casual reader derives the impression that a fact demonstrated by a score of observers in the last fifteen years was discovered two years ago in Philadelphia.

And then arose the school, represented among pathologists by Buhl and Cohnheim, and among clinicians by Niemeyer, who were inclined to deny altogether the specific nature of tuberculosis, who saw in the etiology of this disease only the caseous degeneration of an inflammatory product, a conception tersely expressed in the phrase—no cheesy product, no tuberculosis. Dr. Formad, after repeating these experiments, has recently arrived at the same conclusion; but, by a repetition of the singular oversight already mentioned, he conveys the impression, by his failure to mention Niemeyer, Buhl, and the rest (though citing one of his own pupils) that this doctrine is new.

Experimental investigation, however, revealed certain facts that demolished the Cohnheim-Niemeyer theory entirely, as admitted by Cohnheim himself.

It had long been observed that wild animals, which in their native state are not known to suffer from tuberculosis, are prone to the disease when kept in confinement; and that some tame animals, when closely confined, as is usually the case in physiological laboratories, exhibit an excessive mortality from this disease. Klebs suggested that the successful induction of tuberculosis after the insertion of glass, wood, etc., might after all be simply infection from contact with animals already tuberculous, or from tuberculous materials left in laboratories by previous subjects of the disease. Cohnheim repeated his experiments on rabbits and guinea-pigs, isolated both from other animals and from the stalls in which animals had been previously confined. The subcutaneous or intraperitoneal introduction of mechanical and chemical irritants was under these circumstances followed by tuberculosis—in *not a single instance*. Fränkel, who had performed with Cohnheim the original successful experiments in the Berlin Pathological Institute, repeated them in his private dwelling, with *absolutely negative results*. Cohnheim, with the moral courage born of true scientific spirit, published this fact, and acknowledged the justice of Klebs' suggestion.

Chauveau, Aufrecht, Bollinger, and others proved that tuberculosis can be induced in rabbits and other animals by simply mixing with their food tuberculous material, and that this tuberculosis begins not in the lungs, nor in some caseous inflammatory product, but directly in the intestinal wall. Giboux placed healthy rabbits in cages in each of two rooms; into one room was passed, for several hours a day, the breath expired by phthisical patients; into the other room the same, after filtering through carbolized tow; in a few months the rabbits in the first room were dead of tuberculosis; in the second apartment there was no sign of death nor of tuberculosis. Tappeiner, and after him Bertheau, demonstrated that the inhalation of sputum from phthisical patients in minute quantity is followed by pulmonary, and then general tuberculosis, not only in rabbits, which are so susceptible to the disease, but even in dogs; and that the inhalation of other sputum did not produce this effect. On the other hand, Schottelius observed among the inflammatory products following the inhalation of irritant particles, such as malodorous cheese, certain nodules histologically identical with spontaneous tubercle; and that similar nodules sometimes followed the

prolonged inhalation of non-phthisical sputum in large quantity. (Schottelius, by the way, has since acquiesced in the infectiousness of tuberculosis.) Weichselbaum found a few similar nodules in the lungs of one of three dogs treated in this way, but no tuberculosis. He found further, that the inhalation, even when brief, of phthisical sputum induced general tuberculosis; but after boiling, or after treatment with corrosive sublimate, the same sputum produced no tuberculosis, and rarely, if ever, nodules.

These inhalation experiments—of Tappeiner, Bertheau, Schottelius, and Weichselbaum—illustrate admirably from the experimental side what had been for years acknowledged from the histological standpoint: that there is nothing characteristic in the individual nodule. The same histological structure, including the giant-cell, may be found in the nodules of syphilis or lupus, as well as of tuberculosis; the same local anatomical change may follow the inhalation of large particles of Limburger cheese, as the inspiration of atomized phthisical sputum. For decades the pathologists from Virchow down, their eyes full of caseous matter and giant-cells, wrestled with one another over the question, what is true tubercle? Their hair-splitting disputes remind us of the bitter controversies of the mediæval philosophers as to how many spirits could stand on the point of a needle. Finally it dawned upon them—they were confounding anatomy with etiology; they were regarding as characteristic of one morbid process a histological structure common to several; they were ascribing to a single cause the common effect of many; *they were confounding tubercle with tuberculosis*. As Cohnheim said years ago: “Struggle against this as we may, there is no help for it—the anatomical definition suffices no longer for the tubercle and tuberculosis.” Even Schottelius, the last of the German pathologists to deny the infectiousness of tuberculosis, has finally recorded his conviction that tuberculosis is certainly infectious, though not all individual tubercles belong to tuberculosis.

And what shall be considered a tuberculous tubercle? Wherein may we distinguish a “true” tubercle from a nodule exhibiting an identical structure? The question is answered instantly when we consider what constitutes pyæmic pus. Pus is a definite anatomical entity, varying, like tubercle, within certain limits. The pus from a pyæmic joint, may be indistinguishable by the microscope from the pus of a simple abscess; yet there is none the less a vital, or rather a fatal difference. Fresh pus from a simple non-specific abscess does not cause pyæmia, as Virchow long ago proved; a minute quantity of pyæmic pus is fatal through pyæmia, as the death of many a physician has testified. The tubercle from Limburger cheese does not cause tuberculosis, as Schottelius himself admitted; the tubercle from tuberculosis *never fails* to do so, as all observers testify. Pyæmic pus, however similar histologically to that from croton-oil or turpentine, is unerringly distinguished by its infectiousness; tubercles from tuberculosis, though anatomically identical with those from mechanical irritation or from syphilis, contain a something sure to propagate itself in the proper soil. The non-specific pus of a simple wound or abscess may acquire pyæmic properties, without the intentional or even conscious introduction of pyæmic matter; the non-specific cheesy products of a simple inflammation may acquire infectiousness without the *intentional* introduction of a specific agent. This acquisition of pyæmic infectiousness never occurs, as has long been known, without bacteria; and the day has come when we can say that the infectious tubercle—of tuberculosis—is also characterized by a bacterium.

Perhaps the clearest proof—because a demonstration—of the infectiousness of tuberculosis is furnished by comparative observations upon the eye made by Baumgarten, Cohnheim, Salomonsen, Deutschmann, and others. When the piece used for infection is fresh, Cohnheim says “the irritation at the commencement

usually soon subsides, the particle becomes gradually smaller, and can indeed entirely disappear, and for some time the eye then appears entirely clear and intact, until there suddenly appears in the iris a greater or less number of very minute gray tubercles which, precisely like the human tubercles, grow to a certain size, then become caseous, etc. In rabbits Salomonsen and I observed the eruption of the tubercles usually about the twenty-first day after the inoculation, in guinea-pigs a week earlier as a rule." "Yet these observations have first acquired their full significance from the fact that the tuberculosis is generated by the inoculation of tuberculous matter *only* and of *nothing else*." These are the words of a man who, some years ago, was inclined to the belief, from the fact that the disease may follow subcutaneous or intraperitoneal mechanical irritation, that tuberculosis was not an etiologically specific disease. In his "Allgemeine Pathologie," in discussing the same subject, Cohnheim says, "After a few days the cornea is quite clear, the iris thoroughly clean and in perfectly normal condition; in the aqueous humor there is also no exudate to be seen, so that one can see the piece introduced sharply and clearly defined against the lens capsule; and thus it remains unchanged for weeks, except perhaps that the particle becomes somewhat smaller. All at once, in our cases between the twentieth and thirtieth day, the scene changes; there arises in the iris tissue a considerable number of small transparent grayish tubercles." "Yet the most interesting feature is that in numerous instances, though not always, a more or less extensive tuberculosis of lungs, lymph-glands, spleen, and other organs, occurs. From these experiments it cannot be doubted, first, that the tuberculosis by inoculation can develop *without the medium of a coagulated exudate*, and, second, that it has a stage of incubation." He says further, "Where experiments so positive and so easy of repetition are adduced, it would seem impossible to discuss any longer the question of infectiousness."

Until, therefore, we can otherwise explain the fact that general tuberculosis can be induced by mixing small quantities of tuberculous matter (but not by mixing any other tissue) with food; by simple inhalation of phthisical sputum, but by no other sputum, nor even by this after boiling or treatment with corrosive sublimate or filtration through carbolized tow; that general tuberculosis without caseous exudate follows the introduction of a minute tuberculous particle, but of nothing else, into the eye; until it shall be possible to offer another explanation, we must admit that there is a *something* peculiar to tuberculosis and not common to all tubercles. To assert with Niemeyer that the disease originates *de novo* in a cheesy mass, is to assume that because there is no *intentional* or *conscious* introduction of an infectious agent therefore none occurs. Surely no surgeon ever intentionally or consciously introduced pyæmic matter into a wound; yet infectious pyæmia was formerly the scourge of hospitals. Septicæmia, erysipelas, diphtheria, and pyæmia are none the less infectious because there is—especially in the so-called spontaneous cases of each—no discoverable possibility of contact with previous subjects of the same disease. *Infection*, in other words, does not necessarily imply *contagion*. No man becomes syphilitic unless there be incorporated into his body material from an individual previously syphilitic; no man acquires scabies without contact with a sufferer from itch; but pyæmia, erysipelas, diphtheria, anthrax, and tuberculosis are acquired not only by transfer from subjects of the respective diseases, but also without such transfer. The purulent secretions of a wound are doubtless favorable soil for the retention and propagation of pyæmic or erysipelatos virus; the catarrhal products in the throat for the origin of diphtheritic infection; the cheesy products of a bronchitis or of mechanical irritation for the location and propagation of the tuberculous infective agent; *but none of these are necessary*. Pyæmia, erysipelas, diphtheria, anthrax, tuberculosis occur not only by demonstrable con-

tagion, not only after a simple wound without demonstrable contagion, but also *without either demonstrable contagion or even a simple wound*—i.e., spontaneously.

Yet in the face of this perfect analogy with other infectious diseases, in the face of the experimental proof as above related, there are doubtless many practising physicians who cannot believe that tuberculosis is communicable. Why? First, because clinical proof to that effect is unsatisfactory; a surgeon pricks his finger in dressing a pyæmic patient, and in twenty-four hours has a chill and local symptoms pointing unmistakably to the source of infection; a physician inspires the breath of a struggling diphtheritic patient, and in three or four days gives evidence that the disease was communicated. Had tuberculosis ever been observed to occur in animals so soon or so violently, were the introduction of tuberculous as well as of pyæmic and erysipelatos virus accompanied by chill, fever, and severe acute local inflammation (it does seem to be so accompanied in general acute miliary tuberculosis), there might be reason in the objection that no absolute clinical proof has been furnished. But even when the freshest of tuberculous material is introduced into the most favorable soil, the eye of a susceptible rabbit, two to four weeks elapse before the first local manifestation of infection, and further weeks or months before the evidences of general tuberculosis are apparent; there is, indeed, nothing in the animal's history to indicate infection, the proof of which consists merely in the conscious act of inoculation. An observer who was not aware of this act, might honestly believe that the infection which manifests itself weeks or months later is spontaneous—even autochthonous; and some physicians, because they see no transfer of tuberculous material (though opportunities enough for such transfer are certainly given), because they see *no striking symptoms to mark the hour or the day of infection*, insist that no infection has occurred.

A man may be shot in the presence of witnesses; but if we find a body with a bullet in the heart, we are none the less certain that this body, alive or dead, has been shot, though no revolver nor human agent may be discoverable. A man may be killed by the lightning which dazzles all eyes; but he is none the less killed if the electricity be the invisible current of a powerful battery. If a man exhibits secondary syphilis, nothing can shake our conviction that he has, whether consciously or not, come into contact, mediate or immediate, with a syphilitic person, although the sufferer himself may be honestly unable to point out the moment or the mode of possible infection. In many cases of pyæmia and diphtheria the course of the infection is as plain as the track of the lightning; the effect as pronounced and almost as sudden as that of the murderer's bullet. In other cases, however, of pyæmia, diphtheria, as well as of anthrax, syphilis, and tuberculosis, there are absolutely no phenomena observable in the individual which attract attention to a given moment as the time at which an infection, subsequently manifested, may have occurred. A piece of tuberculous matter introduced into a rabbit's eye may entirely disappear; and for weeks the animal presents absolutely no signs, local or general, of tuberculous infection.

The opportunities for the usual mode of infection by syphilis are only occasional; and the attendant circumstances are such as to impress such occasions upon the mind and conscience; when, therefore, the first evidence of infection appears, perhaps weeks subsequently, upon that part of the anatomy peculiarly exposed upon such an occasion, it is but natural that the mind should associate the two phenomena as cause and effect. Were syphilis communicated not in the way at present in vogue, but by inhalation; were the initial evidence of infection not upon the integuments and therefore visible, but in the lungs and hence inaccessible to the eye, there might be the same clinical grounds for doubting the infectiousness of syphilis as of tuberculosis. The occurrence

of infection in tuberculosis is usually as unobserved clinically as in the exceptional cases of syphilis, in which a primary lesion was neither suspected nor discoverable.

Another argument often heard against the infectiousness of tuberculosis, recently uttered and printed by a Philadelphia surgeon, is the fact that we do not all die of this disease. Yet the same argument is valid against the infectiousness of cholera, yellow fever, diphtheria, scarlatina, etc. Indeed, since the death-roll of tuberculosis is greater, year after year, than that of any one or perhaps all of these diseases combined, the argument, if it had any sense at all, would tend to prove the excessive infectiousness of tuberculosis. Such an argument ignores the unquestioned and familiar fact that we are not all equally susceptible to any one of the infectious diseases; even the most malignant cholera or yellow fever attacks only a portion—usually a decided minority—of the community. Explain it as we may, there is a something which we may call predisposition, by virtue of which only certain individuals yield to infection by cholera or by tuberculosis; and the fact is, that the number susceptible to tuberculosis seems smaller than to any one of several other infections. Comparatively few of us attain maturity without having had measles, scarlet fever, and whooping-cough at least; yet six-sevenths of us complete our pilgrimage without exhibiting evidences of tuberculosis. That this is not mere accident is shown by experiment: guinea-pigs and rabbits rarely, dogs and cats usually fail to respond with general tuberculosis to inoculation with tuberculous material. Even the deadly anthrax usually fails to destroy carnivorous animals, although the most virulent material is introduced; and it was long ago pointed out by Chauveau, and often confirmed, that although sheep are very susceptible to this disease, yet some sheep resist all experimental attempts at inoculation, even when large quantities of fresh anthrax material are injected into the animal. Dogs enjoy in general immunity against infection by anthrax; yet young dogs are often successfully inoculated. Infection implies, therefore, not simply a virus capable of propagation in an animal, but also an animal capable of permitting such propagation. All variations of this relative adaptability may be exhibited between animals of the same species and a given virus. To affirm, then, that a disease—anthrax or tuberculosis, for example—is infectious is to assert that it can be communicated by the diseased to a healthy animal, not to all healthy animals, even of the same species. Herein lies evidently our security against tuberculosis, as well as against many other infectious diseases. The general principle—the survival of the fittest—seems to have been for generations at work in eradicating this disease from the human family, by removing those members of it susceptible to tuberculosis; the great majority of us now living are as safe from tuberculosis as most dogs are from anthrax.

Another, perhaps the most profound, argument against the infectiousness of tuberculosis should be considered here, namely, that the fact must cause us to relapse into barbarism. "Some of the most noble and tender traits of humanity threaten to be undermined. The consumptive who has been heretofore lavishly loved and cared for," etc., "is to be isolated and shunned as a leper, if such doctrines prevail" (*Philadelphia Medical News*, January 27th, p. 94). Therefore tuberculosis is not infectious. Incredible as it may appear, the author of these lines is not a clergyman nor a poet, but a distinguished surgeon who does not shun infectious pyæmia, septicæmia, and erysipelas; and who, we may assume, does not love his child less lavishly, nor care for his patient less faithfully because that child or patient may suffer from infectious diphtheria or scarlatina.

Were the susceptibility to tuberculosis as general as to diphtheria, scarlatina, and measles, there might be grounds, not for shunning the consumptive "as a leper," but for the observance of proper precautions for the protection

of the healthy many, even at the inconvenience of the diseased few. But since the experience of generations has shown that only about one-seventh of us acquire tuberculosis even with unrestrained intercourse with consumptives, it may be questionable whether any other protection than a knowledge of its infectiousness for some individuals be necessary; we do not invoke the law to brand syphilitic individuals, though to this infection not one-seventh but, probably, all of us are susceptible. But, however that may be settled, let us not confound a fact with a possible deduction which may be unpleasant.

These more or less prevalent arguments against the infectiousness of tuberculosis have been considered not because they have any bearing upon the question, but because there are those who will not or do not take into consideration the demonstrations attained by accurate experimental methods, and whose opinions rest upon distorted deductions from necessarily inaccurate clinical observations. Yet while those who are pleased to regard pathology as something extrinsic to practical medicine are still discussing the clinical proofs of the infectiousness of tuberculosis, it is quite otherwise with pathologists and clinicians whose opinions are founded upon knowledge without prejudice. One after another the German and French pathologists (who are not infrequently clinical teachers as well), honest in their previous conviction that the communicability of tuberculosis was not proven, honestly recorded their convictions as succeeding proofs were furnished, that the case was reversed; so that three years ago Cohnheim said, "To-day there scarcely exists a pathologist who would deny that tuberculosis is a communicable disease."¹

Cohnheim himself, extending and repeating more carefully his observations, saw and acknowledged the error of his former deduction. True, a would-be pathologist has occasionally reminded us that he was not yet convinced; yet even Schottelius, the last of them, has finally yielded the point. There have been in all ages, and on all questions, similar psychological curiosities; twenty-five years ago it was maintained on the floor of the French Academy of Sciences that intestinal worms originate *de novo* in a peculiar influence pervading the system—the vermicular diathesis. There is a gentleman in this State who recently reminded us that bacteria, so-called, are in his opinion fibrin threads and the like; and there is said to be a man in Virginia who still insists that the earth is flat.

You may have noticed that in this discussion the name of Koch has not been mentioned—a fact to which I call attention, because a popular impression, not entirely confined to the laity, saddles upon Koch the paternity not only of the bacillus, but also of the infectiousness of tuberculosis. Dr. Formad, for example, says (p. 3): "An analysis of Koch's experiments shows that he has not proved the parasitic nature of tuberculosis, so that the infectiousness of tubercular disease is still *sub judice*." It is apparent from the facts which I have endeavored to summarize that the communicability of tuberculosis was established years before the well-known publication of Koch's discovery. Dr. Formad says (p. 10): "The supreme question before the medical world is now, whether the disease under consideration is really infectious." This statement may represent faithfully that portion of the world bounded by the city limits of Philadelphia; the supreme question before that portion of the medical world including Virchow, Cohnheim, Billroth, Bamberger, Weigert, Villenin, and the other German, French, and Austrian pathologists and clinical teachers is, *not* whether tuberculosis is infectious, but whether the bacillus of Koch is the infective agent. For them the two questions are quite independent—the former established, the latter awaiting confirmation.

(To be continued.)

¹ In the *Medical News*, January 27, 1883, p. 94, Dr. Wm. Hunt leads us to infer that "most recent pathologists" agree in regarding tuberculosis as the result of a simple inflammation. Will he kindly name *one* pathologist who now holds this opinion, and mention the pertinent publication?

Original Articles.

CONDENSING OTITIS OF THE MASTOID PROCESS.¹

By ALBERT H. BUCK, M.D.,

NEW YORK.

HYPEROSTOSIS or sclerosis of the mastoid process of the temporal bone has, until quite recently, been considered rather as a pathological condition, which is occasionally encountered in operations upon that bone, or at the post-mortem examination, than as an active morbid process possessing a sufficiently definite train of symptoms to justify us in assuming its existence in particular cases. Many a surgeon has undoubtedly bored into the mastoid process of a patient who presented almost every symptom of an incipient or well-advanced caries of that bone, and has been astonished to find its cells wholly or in part obliterated, its substance almost as hard as ivory, and no pus discoverable at any point. He is afterward pleased to find that the operation has relieved the patient of pain, and that the evidences of active inflammation have all gradually disappeared; but he has undoubtedly been not a little puzzled to find a satisfactory explanation for the sequence of well-marked pathological phenomena of which he has been a witness. A few experiences of this kind led me years ago to maintain that in the great majority of cases which seemed to call for the operation of boring into the mastoid process, we should not be able to say beforehand whether we should find the bone in a carious condition or simply congested. When I have least expected it, my drill has plunged into a well-defined collection of pus and fragments of carious bone; while still more often, not a trace of pus has been discovered in the progress of the operation. In cases belonging to the latter class I have assumed, in my desire to find some reasonable explanation of the severity of the pain and of the pronounced character of the outward signs of deep-seated inflammation, that the operation was performed at a time when the bone was still in the first stage of an inflammation which, without operative interference, would be certain to eventuate in caries. It was difficult to realize that such severe pain and such well-marked periostitis might be simply the outcome of a subacute proliferative inflammation of all those soft parts which supply nourishment to the mastoid bone—and such indeed is undoubtedly the nature of the processes which take place in cases of hyperostosis of this part of the temporal bone.

So far as I can learn, Dr. C. R. Agnew, of this city, was the first person to suggest the idea that inflammation of the mastoid cells need not necessarily tend toward caries of its bony structures. He says that he is convinced that "caries is not the invariable and immediate result of mastoid cell disease, but that sometimes there may be, instead, an ostitis, with hyperplasia of the bone, filling a few or all of the cells."² Three years later (1873), in a paper which I published on the subject of mastoid diseases, I made the following statement with regard to sclerosis or hyperostosis of the mastoid process: "While this form constitutes a distinct pathological condition, we are not yet in possession of sufficient clinical facts to guide us to a positive diagnosis. Sclerosis or hyperostosis of the mastoid process is associated with either chronic catarrhal or chronic purulent inflammation of the middle ear. Its progress is so insidious and so rarely accompanied by any marked symptoms that it is only at the post-mortem examination, or when called upon to trephine the bone, that we discover the existence of this condition. As the very delicate membrane which lines the mastoid cells serves the double function of mucous membrane and periosteum to the intercellular bony septa, it will be readily understood how a chronic con-

gestion of the membrane may result, on the one hand, in thickening of its substance, and, on the other, in hypertrophy of the bone which it nourishes. In place, then, of air-containing cavities separated by thin septa of bone, we find a tolerably dense bony mass, whose substance is studded throughout with small collections of slightly vascular connective tissue." It was not, however, until at a still later date that any attempt was made to hazard a diagnosis of this condition. In 1876, and again still more recently, Dr. J. Orne Green, of Boston, Mass., published reports of cases in which he had made, and verified by operation, the diagnosis of hyperostosis of the mastoid process.¹ Finally, in 1879, Arthur Hartmann, of Berlin, Prussia, published a paper from which it appears that he also had arrived at the conclusion that sclerosis can appear as an idiopathic disease of the mastoid process, after cessation of inflammation of the middle ear, and cause the most violent pains.²

The preceding brief statement furnishes, I believe, a correct account of the progress of our knowledge with regard to this pathological process. It is also a fact that, even at the present time, this knowledge is still available only in a vague and disconnected form. It is my purpose to see how far I can succeed in bringing these fragments together into a logical whole, in the hope of thus reducing to order some of the confusion which now exists. The blame for a part of this confusion, as I can now see, may justly be laid at my own door, for in the paper which I published in 1873, on the subject of mastoid diseases, I endeavored to establish different forms of disease for what were in reality simply phases of one and the same pathological process. Another part of the confusion is to be attributed to the fact that very few of the cases reported as illustrations of hyperostosis of the mastoid process are sufficiently free from complications to render them useful as types. The pictures drawn are undoubtedly true to nature, and the expert assents at once to the correctness of the diagnosis, but the student, or the physician who sees such cases only at long intervals, would perhaps fail to appreciate what are the particular features which distinguish hyperostosis from ulcerative or carious disease of the mastoid bone. Finally, I am disposed to attribute some of the confusion to the terms which we commonly employ in speaking of the disease, viz., hyperostosis, sclerosis, and osteo-sclerosis of the mastoid process. The idea of active inflammatory changes is not embodied in any of these terms; but rather that of a pathological change which has reached completion, and has therefore ceased to be active. I much prefer the expression *ostitis* (as used by Dr. Agnew in the paper referred to above), which implies an activity of the inflammatory or hyperplastic processes; and, in order to convey at the same time the idea that the inflammation tends toward solidification, rather than toward destruction of the bone, I should be disposed to add the qualifying term *condensing*. While I have ventured to put this expression—condensing ostitis of the mastoid process—at the head of this paper, I have made no attempt to employ the term exclusively, through fear that I might create further confusion in the minds of those readers who are familiar only with the expressions commonly used.

Among a number of cases which have from time to time come under my observation, I have seen but two in which the two things required to render them suitable as types—viz., a maximum degree of hyperplasia of the mastoid process, and a minimum degree of activity of all disturbing complications—coexisted. One of these cases is still under observation, and consequently my history of it must necessarily be incomplete. The other, though seen more than ten years ago, and reported at the time, has always been more or less of a puzzle to

¹ Hyperostosis, sclerosis, or osteo-sclerosis of the mastoid process.² Report of the American Otological Society, 1879.¹ Report of the International Otological Society, 1876; Transactions of the American Otological Society, 1880.² Archives of Otology, 1879.

me, until I came to reflect upon it while reading Dr. Green's papers. The histories of these two cases are as follows :

CASE I.—The patient, a lady, about thirty-five years of age, consulted me on March 30, 1880, on account of a discharge from the right ear, and frequent attacks of pain throughout the right side of the head. I was not able to obtain a very full account of her previous history, so far, at least, as it related to the affected ear; but as the result of my cross-questioning, I ascertained that the disease had begun in early childhood, as an acute purulent inflammation of the middle ear; that it had then run an irregular course, lighting up at long intervals into an acute exacerbation, and then subsiding again into a comparatively quiet state; that there had always been some discharge from the ear, at one time very scanty, at another quite copious; and that the disease had finally, during a period of ten or twelve months, immediately preceding the time when I first saw her, settled down into a steady discharge from the ear, associated with frequent and sometimes quite severe attacks of pain involving the right side of the head. The affected ear still possessed a useful degree of hearing. An examination with the speculum and reflected light revealed the existence of a thick laminated mass of epithelium, pus, and cheesy matter, occupying the deeper part of the external auditory canal. Fresh pus was oozing out from beneath the mass. By aid of the curette, a slender silver probe, and a mop of cotton wound around the end of a cotton-holder, I was able to clear away all these old and foul-smelling products of inflammation, and to obtain a clear view of the diseased region. About two-thirds of the membrana tympani still remained, and the greater part of the discharge evidently came from the mastoid antrum, the tympanic mouth of which was partly blocked by a small polypoid growth. I removed this growth with the wire loop and Blake's snare, and advised the patient to use regularly, for a short time, the douche with lukewarm water. My scant notes say nothing about the condition of the mastoid process; and from this I infer that I must have overlooked certain conditions which very probably existed at that time, but which I did not discover until later.

On March 8, 1882, or nearly two years later, the patient again consulted me. During this long interval the ear proper had given her very little trouble, and there had only been an occasional slight discharge, but she had still continued to be subject to periods of pain involving the right side of the head, and occasional attacks of flushed face. During the previous week, however, the pain had been quite severe and had localized itself more particularly in the ear. She had also experienced considerable dizziness at times. I examined the ear and found that the desquamative process had a second time produced a tough plug that filled the deeper end of the meatus. I also found, by aid of a bent probe, that the upper part of the tympanic cavity, posteriorly, was filled with a rough white mass of laminated epithelium. It was only after prolonged efforts, made partly with the bent probe and partly with a douche provided with a slender glass end-piece, bent at a right angle, that I finally succeeded in completely freeing the cavity from the offending masses.

A sharp inflammation followed this prolonged operative interference. It spread along the cutaneous lining of the external auditory canal, and caused it to become greatly swollen; it extended along the Eustachian tube, and rendered the act of swallowing painful; and, finally, it involved the cellular tissues behind, above, and in front of the ear. Throughout all these outer regions tenderness on pressure, redness of the surface, and decided œdematous swelling were noticeable already on March 10th. The body-temperature was 102° F. The application of hot poultices having failed to afford much relief from the pain, I made a Wilde's incision and divided the mastoid periosteum freely. I also prescribed the frequent application of hot flax-seed meal poultices.

On the following day I found the patient in a more comfortable condition, but there was still a great deal of inflammation all around the ear. Three leeches were applied behind the ear, and the continuance of hot applications was advised.

On March 12th I found more decided evidences of the subsidence of the inflammation.

On the 13th the body-temperature was 99° F., and the patient expressed herself as feeling fairly well again. A small amount of pus constantly escaped from the auditory canal, and its walls were still so much swollen that I could not obtain a satisfactory view of the deeper parts. The tenderness, however, had almost entirely disappeared, except immediately over the mastoid region.

About the middle of April I removed another polypoid mass of granulations from the tympanic orifice of the antrum, and from that time forward the discharge ceased altogether.

On May 10th I made a careful examination of the ear, and found that all those parts of the middle ear which could be seen, were pale, dry, and perfectly free from the slightest trace of congestion. So far as I could ascertain by means of the bent probe, the antrum and the posterior upper portion of the tympanum were empty. The cutaneous walls of the auditory canal were also perfectly free from either redness or swelling. Behind the ear, however, the skin was noticeably red, and firm pressure with the finger, at almost every point over the mastoid process, caused some pain. These parts were at the same time slightly œdematous. On comparing this region with the corresponding one on the other side of the head, I discovered, for the first time, that the right mastoid process was appreciably larger than the left. On simple inspection it seemed to be markedly larger, but on palpation, and after making due allowance for the œdematous condition of the integuments, I became satisfied that the difference in size was only moderate in degree, though yet unmistakable. As the patient was still subject to almost constant pain in the region behind the ear, and in fact throughout the entire right side of the head, I applied three leeches directly over the right mastoid process, and allowed the after-bleeding to go on unchecked for a considerable time.

On October 6th I again had an opportunity of examining the patient's condition. She reported that the local blood letting referred to in the preceding paragraph, had afforded her decided relief from pain for a period of several days. The pain had then returned, and all through the summer she had experienced more or less of it, not constantly, but yet very frequently. Blisters had also occasionally been applied over the mastoid region, but without any beneficial effect. Notwithstanding the persistence of the pain, she had had the best of health in all other respects. On examination, I found the deeper parts of the ear in a perfectly quiet state, and free from even the slightest evidence of inflammation. On the outside, however, the previously described condition of redness, tenderness, and slight œdema still persisted. In fact, the tenderness extended as far back as the occipital protuberance. As the pain had been more acute than usual, during the previous three or four days, I advised a repetition of the local blood-letting. (The patient has since moved away from the city.)

CASE II.—A physician, a resident of South Carolina, fifty-six years of age, and of a strong constitution, consulted me on October 6, 1872, for a painful affection of the ear. He gave the following history: In 1835 he contracted an acute inflammation of the left middle ear from the violent concussion of the air caused by the bursting of a gun. The severe symptoms soon passed away, but the purulent discharge from the ear continued for some time afterward. Then, for a period of many years, he experienced no trouble beyond a moderate degree of deafness and some tinnitus. The perforation in the drum-membrane remained unclosed

through all these years. About twelve weeks before the time when I first saw the patient, he noticed that there was a slight watery discharge from the left ear, which was at the same time somewhat painful. The pain became gradually more severe and was associated with headache and fever. The doctor bled himself to the extent of about sixteen ounces; six hours later he took from the arm an additional quantity of about eight ounces. A profuse suppuration from the ear soon took place, and the pain then became less severe. For a month no marked change occurred in the condition of the ear. The discharge continued, though at times it would almost cease. On August 23d he had a rigor, which was followed by a return of all the acute symptoms. The pain was referred to the base of the brain, the mastoid process, and the articulation of the jaw, and was very severe. Bleeding to the amount of twelve or fifteen ounces afforded some relief, and the discharge again became abundant. For a week the pain remained moderate. On August 31st he had another rigor, followed by intense pain, referred to the mastoid process, whence it extended backward toward the occiput and occipito-vertebral articulation; in fact, the whole side of the head was painful. There was tenderness over the mastoid process, and the auricle was pushed out somewhat from the head. On September 18th, no material improvement having taken place in his condition, the doctor started for New York, in the hope of obtaining relief there. The sea-voyage from Charleston benefited him very decidedly. The severe symptoms abated, and, for some time after reaching this city, he enjoyed, at least during the day, comparative comfort; toward night, however, the old trouble returned with greater or less severity. During the few days preceding his visit to me, he suffered acutely from pain in the region of the ear. On examination I found the meatus in a normal condition, the membrana tympani perforated anteriorly, the Eustachian tube freely open, and only a trace of pus in the middle ear. The mastoid integuments were cedematous and tender on pressure. The tenderness also extended back toward the occiput. General condition fair: pulse a little accelerated; no heat of skin. At a consultation held by Dr. James R. Wood, Dr. Hermann Knapp, and myself, it was deemed best to perforate the mastoid process. At the patient's own request the operation was performed without the aid of an anæsthetic. The appearance of the bone, after the periosteum had been divided and lifted to one side, was entirely normal. The drill was applied on a level with the upper wall of the meatus, and was made to penetrate to a depth of three-fifths of an inch without encountering the characteristic cells. At this depth, however, a tolerably firm pad of connective tissue was felt. It was supposed at the time that this mass filled the antrum, but on subsequent inspection I became persuaded that, owing to the thickness of the swollen integuments and the recumbent position of the patient, I had erred somewhat in the direction which I gave to the drill, pointing it too far backward. The pad of connective tissue was undoubtedly the outer wall of the lateral sinus.

October 13th.—Patient passed a comfortable night. Pain much less than before the operation. Ordered quinine, gr. vj. daily.

October 14th.—Pain again severe. Consultation with Dr. Robert F. Weir and Dr. Hermann Knapp. A second perforation was made with the drill, this time nearer to the meatus and on a somewhat lower level than the first. The mastoid cells encountered were small and congested, but no pus was found. Tent inserted: poultices.

October 15th.—Slight improvement.

October 16th.—Pain diminishing. Temperature, 97° F. Free discharge from wound.

October 17th.—Marked improvement in every respect. Application of poultices to be discontinued.

October 23d.—Tenderness over mastoid process almost gone.

November 14th.—Patient is quite well again. There is no discharge from the meatus, and the wound behind the ear has healed except at two points, corresponding to the two perforations in the bone.

A few weeks later I heard from the patient, who had returned to his home, that he had remained free from pain, and that his general health was quite good again.

To these two cases I wish to add one reported by Dr. J. Orne Green. While it is comparatively free from disturbing complications, and therefore admirably adapted to serve as a type for purposes of study, I cannot help believing that this patient, at some earlier period of his life—perhaps many years before the occurrence of the acute attack which, according to the history given, apparently afforded the exciting cause of the mastoid hyperostosis—must have had a prolonged inflammation of the middle ear. The history of this case is as follows:

CASE III.—“Another case in which osteo-sclerosis existed, and was proven by operation, was that of a man seen in 1878. He was about thirty-five years of age, previously healthy; one week before he began to have pain in the left ear, followed by discharge two days after, and severe vertigo with vomiting and great weakness; there were also subjective noises as of hissing. Examination showed purulent inflammation of the tympanum with a minute perforation, which was enlarged with a paracentesis needle so as to give free evacuation. A few days after there was a slight paralysis of the left facial nerve. The inflammation of the tympanum subsided under treatment, the perforation healed, the paralysis disappeared, and at the end of two months the ear was apparently well, but the deafness was absolute on that side. Pain in the mastoid and over the side of the head continued, however, with slight tenderness of the mastoid on deep pressure, but without any swelling of the soft tissues; no enlargement of the bone was perceptible. Other means failing to relieve the pain, the bone was perforated under ether with a triangular borer to the depth of half an inch: no pneumatic cells were reached, the bone throughout being dense and ivory-like. The relief from the operation was gradual, but decided, and the patient made a good recovery. In this case also there was no reason to suspect syphilis.”

In the first of these cases the pathological events succeeded each other in the following order: purulent inflammation of the middle ear occurred in childhood, with destruction of a part of the membrana tympani; the inflammation did not entirely subside, but continued for years afterward, in a chronic subacute form, with occasional exacerbations. From the antrum, as the centre of its greatest activity, the inflammation spread to the pneumatic and diploëtic portions of the mastoid process and caused an active hyperplasia of this bone. During the continuance of this otitis the patient suffered from pain in the mastoid region and vicinity. At first the paroxysms of pain were of comparatively short duration and the intervals of freedom from pain lasted weeks or even months. Later, however, these painful attacks lasted for days, and finally even for weeks, and they recurred more frequently. In addition to the pain, in this later stage of the disease, certain external manifestations showed themselves, viz., redness, swelling, and tenderness of the mastoid integuments, and even an appreciable degree of enlargement of the bone itself. Furthermore, while at first the mastoid otitis required an exciting cause, in the shape of a more or less active inflammation of the middle ear proper and antrum, to keep it alive, in the later stage of its existence no such stimulus seems to have been required, inasmuch as the complete arrest of the inflammation of the middle ear and antrum by treatment, failed to restrain, in apparently the slightest degree, the diffuse mastoid otitis, which had already gone so far as to cause visible enlargement of the bone.

A similar synopsis of the second case shows much the

same sequence of pathological events. In early manhood a violent concussion of the air seriously damaged the middle ear, leaving it for a long time the seat of a purulent inflammation. Probably during this period a certain degree of subacute mastoid otitis was associated with the affection of the middle ear. For a period of many years all these parts remained quiet and free from all diseased action. Then, under some provocation which does not clearly appear in our history of the case, the middle ear again became the seat of a violent inflammation lasting several days, and afterward lighting up once or twice into exacerbations of marked severity. A fresh otitis was thus started in a mastoid process whose cells were probably already much reduced in size by the previous attack. For a period of several weeks it was kept in a state of activity by the continuance of the acute inflammation in the middle ear. Finally, when the latter subsided, the otitis still persisted, having in the meantime acquired sufficient momentum of its own. An artificial opening in the bone revealed the true nature of the disease, but the condition was not clearly appreciated at the time.

In the third case we find again essentially the same order of pathological events, but with some noteworthy variations. In the first place, the original inflammation of the middle ear spread, not only to the mastoid structures, but also apparently to the labyrinth, causing a total loss of the hearing of that side. Then, after the lapse of a period of less than three months, during which time the inflammation of the middle ear gradually disappeared altogether, a very decided degree of hyperostosis was found when an opening was made in the mastoid bone. In this case also the latter operation afforded decided relief from the persistent pain.

In these cases we have, as I believe, remarkably pure types of condensing otitis of the mastoid process. Many of the accidental symptoms, which are so apt to be present in these cases, and which complicate greatly the problem in diagnosis, are lacking. I refer to decided evidences of inflammation in the middle ear or external auditory canal, to fistule, to facial paralysis, to convulsions, to pyæmic symptoms, etc. When such conditions are present, the possibility of making a correct diagnosis will depend entirely upon the observer's ability to weigh nicely the significance of each of the phenomena presented, and to correctly estimate their relations to each other. This sort of work belongs to the expert, and no formulæ that I am able to lay down will materially aid an inexperienced person in arriving at the truth. I can only hope to point out those peculiar relations of symptoms to each other, which, in cases like those which I have narrated, may enable the general practitioner to arrive at a correct diagnosis. I will enumerate these distinguishing marks in the order of their importance:

First.—The persistence of decided pain in and around the mastoid region, despite the existence of an adequate outlet in the drum membrane for the pus secreted in the middle ear; despite the absence of anything like acute inflammation of the middle ear or external auditory canal; or, finally, despite the employment of such therapeutic measures as would be likely to allay any ordinary inflammation of these parts or a mere passing congestion of the mastoid structures.

Second.—The presence of such external signs as redness, swelling, and tenderness of the outer mastoid integuments, under the conditions just enumerated, furnishes strong corroborative evidence of condensing mastoid otitis. Actual enlargement of the bone itself may be considered as furnishing almost positive proof of the disease.

Third.—The history of previous chronic purulent inflammation of the middle ear justifies the assumption that the mastoid cells have already been greatly reduced in size, if not obliterated, by earlier attacks of subacute otitis of these parts.¹

Dr. Green expresses the opinion that as time goes on we shall find that cases of hyperostosis of the mastoid process become more numerous. I fully agree with him in this belief; and, inasmuch as experience seems to teach that simple non-purulent otitis is rather the rule than the exception, I would suggest that we emancipate ourselves hereafter from the idea that a purulent or carious focus is the lesion to be looked for in these painful affections of the mastoid process, and adopt rather the state of mind which will lead us to assume the existence of a simple condensing otitis. The prognosis is far less grave than in the other condition, and the indications for treatment are clear and simple. Leeches, hot poultices, and even Wilde's incision will probably fail to give more than temporary relief, and if such prove to be the case, we should not hesitate to perforate the bone with a drill or other suitable instrument. In the great majority of cases it will not be necessary to make any effort to reach the antrum. The desired relief will be equally well attained by the simpler operation of penetrating the bone, in one or, at the most, two places, to a depth of say half an inch. The relief seems to depend, not upon the establishment of an outlet for pent-up products of inflammation, but rather upon something which may be described as counter-irritation. I once tested this point in an obstinate case which presented every appearance of being one of simple mastoid otitis, and which had failed to improve under the action of blisters, local blood-letting by leeches, poultices, and, finally, Wilde's incision. I repeated the latter operation, and, as soon as the bleeding had ceased, I freely applied the stick of nitrate of silver to the raw surfaces, down to the very bottom of the wound. The vigorous inflammation thus set up effected a perfect cure of this painful affection, and satisfied me that the beneficial effects of the decidedly less barbarous method of boring into the mastoid bone, may in large measure be attributed to counter-irritation.

THE DANGER ATTENDING THE USE OF ETHER AS AN ANÆSTHETIC IN CASES OF BRIGHT'S DISEASE.¹

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THE fact that the employment of the comparatively safe anæsthetic, sulphuric ether, is not entirely free from danger has been attested by the record of a number of fatal accidents occurring from its use. In some of these cases death has taken place during anæsthesia, in some cases the action of the heart, in others respiration, first ceasing. In others consciousness has been restored but the patients have passed into collapse some hours after its administration. In these cases there has usually been no distinct organic affection on which could be laid the blame of the accident. Fright during the commencement of the inhalation, as is known to be the case with other anæsthetics, may account for some of them. It is possible that the shock of the operation during *imperfect* anæsthesia, as Mr. Lister claims to have observed under chloroform ("Holmes' Surgery"), may have caused deaths which were attributed to ether, but which would in reality have been *prevented* by the ether had the anæsthesia been more profound. Death occurred in some cases in

lent inflammation of the middle ear. From a study of fifty of Schwartz's cases (published at different times in the *Archiv für Ohrenheilkunde*) of perforation of the mastoid process, with drills or with gouges, I found that in twenty-three a chronic purulent inflammation of the middle ear, of not less than five years' duration, preceded the acute symptoms which induced Dr. Schwartz to perform the operation of perforating the mastoid process; and in thirteen of this number—or fifty-six and one-half per cent.—well-marked sclerosis of the middle and upper portions of the process was found. Of the remaining ten cases, there are four in which no mention whatever is made of the condition of the bone, and six in regard to which it is distinctly stated that there was no sclerosis. I found, furthermore, that out of five cases of my own, which were similar to Schwartz's twenty-three cases, there were four—or eighty per cent.—in which more or less pronounced sclerosis of the mastoid process was discovered at the time of the operation or on post-mortem examination. This evidence, it appears to me, corroborates the truth of the formula which I have given.

¹ In 1880 I published the statement that the existence of a sclerosed condition of the mastoid process may be assumed in the great majority of cases of chronic puru-

¹ Read before the Harlem Medical Association, New York.

which the patients, though presenting no gross lesions of heart, lungs, or nervous system, yet were very much debilitated, as for example in two cases narrated by Kappeller (*Deutsche Chirurgie*), of strangulated hernia, in several others by malignant disease. Others again have been caused indirectly by the ether, as we all know, by inhalation of vomited matters, usually during partial unconsciousness while recovering from the anæsthetic or from the filling up of the trachea by blood during operations about the mouth and fauces. To this list of accidents I might add that certain French observers¹ claim to have seen death caused by suffocative bronchitis induced by the inhalation in some cases of chloroform, in some, and more frequently, of ether.

There is one source of danger from the use of ether which has not yet, I believe, been generally recognized by the profession. I refer to the danger of congestion of the kidneys, and consequent suppression of urine in patients already subjects of chronic Bright's disease. The elaborate monographs of Turnbull, written in 1879, Duret ("Des Contreindications l'Anæsthesie"), 1880, and Kappeller in the *Deutsche Chirurgie*, 1881, make no mention of disease of the kidneys as a contra-indication to the use of sulphuric ether. Lyman, writing in 1881, says that "even sulphuric ether may prove fatal if the kidneys are seriously damaged, but does not go into the subject beyond this slight allusion.

Isolated cases, however, of death resulting, in the opinion of their reporters, from the irritant effects of ether on diseased kidneys have been recorded. It is my purpose in the present paper to present to the Society what information I have been able to obtain from the literature of the subject, and to endeavor to form some estimate of its importance.

The power of ether to cause temporary suppression of urine is illustrated very markedly in a case reported by Mr. Lawson Tait, in the *British Medical Journal* of 1880 (vol. ii., p. 845), in which a fistula existed between the cervix uteri and one of the ureters. A constant dribbling of urine occurred from the opening. On two trials the urine ceased to flow as soon as the woman was etherized. As the stream of urine was essential as a guide in the performance of the operation, it had to be performed without an anæsthetic. There is no record of any urinary examination.²

The first to call attention to the danger of suppression of urine and death, resulting from the use of ether in cases of chronic Bright's disease, was Dr. T. A. Emmet, who, about sixteen years ago, made an opening into the bladder of a patient suffering from chronic cystitis, under ether. No water was passed after its use, and the patient died of uræmia three days afterward. Marked chronic lesions of the kidneys was found post-mortem. The case was published at the time in one of the Southern journals, and an abstract of it can be found in his work on gynecology. Since that time he says, in the same work, that he has seen "at least five cases, in public and private practice," of death occurring under similar circumstances. So strongly has Dr. Emmet been impressed by his experience that he considers albuminuria the contra-indication par excellence against the use of ether, and in such cases operates with the patient under the influence of opium and without anæsthesia. Dr. Emmet, in a personal communication, informed me that he had reported each case as it occurred at the meetings of the Obstetrical Society of this city, but I have been able to find only one of them in print. In that case pyelitis and advanced chronic interstitial nephritis existed.

Dr. William Hunt, in the *Philadelphia Medical Times* of January 9, 1875, reports a case of death occurring two weeks after an amputation of the thigh, in a patient whose pulse dropped dangerously at the time of the operation,

after a few whiffs of ether had been taken. The patient had fever, which was not pyæmic, but never had any uræmic symptoms. Dr. Hunt asks the question, "Had the kidneys anything to do with it?"

Dr. Sims, in his article on a death from bromide of ethyl, in *THE MEDICAL RECORD*, vol. xvii., casually referred to two deaths from suppression of urine in cases similar to Dr. Emmet's.

Dr. Hutchinson, in the *British Medical Journal* for March, 1879, reports the death of a feeble old man, eighty-four years of age, who was operated on for carcinoma of the lymphatics of the neck, who never became completely conscious after ether narcosis, became completely comatose in eight, and died in forty hours after cessation of administration of the anæsthetic. There had been no great loss of blood. The right arm seemed paralyzed. Tremor, passing into convulsions of the right side of the face occurred, and, later, tremor of the right arm. Contracted kidneys and an old cyst, dating back, probably, to an apoplexy ten years previous, were found post-mortem. Thorax not examined. No allusion to the possible connection of the kidneys with the result is made by the reporter. The prolonged coma and the convulsive seizure, however, suggest such a connection.

Dr. W. F. Norris, in a paper read before the American Ophthalmological Society in 1881, gives the history of two of his patients, whose death he attributes to the irritant effect of ether on the already diseased kidneys. The first was a child five months old, probably syphilitic, who was operated on by discission for cataract. Four hours after the administration of ether the child had convulsions, became comatose, and died. The kidneys were found to be fatty and intensely congested. The second case was that of a woman sixty-eight years of age, apparently in good health. Operation was the extraction of a cataract. After the operation there was some fever, thirst, and disturbance of digestion. She became delirious on the sixteenth, and died on the eighteenth day. The kidneys were found to be congested. There was increase of their fibrous tissue and fatty degeneration of the renal epithelium. Numerous casts were observed *in situ*.

These cases constitute all that I have been able to find in the literature of the subject. In reviewing them, the question suggests itself—Was the ether really the cause of the fatal exacerbation of the kidney diseases which killed the patients? The cases of Drs. Sims and Emmet were all operations on the female genito-urinary organs. It is a well-known fact that surgical interference with these organs may give rise to suppression of urine by reflex influence upon the kidneys, though it is my impression that such a result is more apt to occur in the male than in the female. The answer that may be given to this objection is, that both the reporters are men of large experience in gynecological operations, and that Dr. Emmet's statements on the subject imply—although he does not make any direct statement to that effect—that he has not met with any corresponding accidents when he has operated *without* ether. His strong conviction on the subject is certainly entitled to great weight.

Dr. Hutchinson's case, again, occurring in an old, much-exhausted man, might well be attributed to the general depressing effect of the ether on a broken-down constitution. The convulsive seizure, however, strengthens the supposition that uræmia had something to do with the result. This case suggests a way in which ether might prove indirectly fatal in cases particularly of the form of disease, *i.e.*, contracted kidney, from which this patient suffered. It is well known that the high arterial tension which accompanies this disease calls upon the heart for extra exertion, which results in the hypertrophy of that organ. As long as the heart can respond to the demands upon it, the high pressure in the kidneys enables them to perform their functions satisfactorily, even when very much diseased. If, now, the ether depresses the heart's action, a corresponding diminution of the exertion

¹ Richet: Gazette des Hôpitaux, July 12, 1879. Revillout: Gazette des Hôpitaux, No. liii., pp. 633, 635, 1879.

² Since the above was written Mr. Tait, in the *Lancet* for January 6, 1883, p. 39, states that in every case of vesico-vaginal fistula in which he has operated since the above recorded operation he has "observed the same thing."

from the kidneys must result, independent of the direct irritant effect of the agent on these organs themselves.

The case of Dr. Norris' child, in which death followed four hours after the use of ether, with symptoms distinctly pointing to uræmia and after a comparatively trivial operation, seems to me to be the most conclusive of the series, though the child must be supposed to have been on the brink of a spontaneous outbreak for the fatal event to have followed in so short a time. Another matter must be considered in this connection, and that is the recognized fact that the mere shock of the operation is apt to prove a grave matter for people suffering from Bright's disease. In reference to this subject Sir James Paget says, in his "Clinical Lectures and Essays:—" "I do not know by how many times the risks of a given operation are increased in any patient who has albuminuria, but I do know that you will find it safe never to perform any operation without an acquaintance with the manner in which the patient's kidneys discharge their function, and never to perform one, except under something like compulsion on a patient whose urine is constantly albuminous. I do not say that you should never operate on such a patient, for the exigencies of the local disease may justify you, as they may justify you in operating in advanced phthisis; but be clear that you operate against heavy odds; for even if the patient do not die with erysipelas or pyæmia, or some other form of diseased blood, he will be apt to linger with a wound half healed, till at last he dies of his renal disease, just as if you had done nothing for him." The suggestion conveyed in this quotation is applicable especially to the cases reported by Drs. Hunt and Norris, in the former of which death occurred in sixteen, in the latter in eighteen days after the operation. The depressing effect of an operation, it must be remembered, depends not a little on the morale of the patient. A cataract operation in a nervous female might be quite as serious as a much graver operation in a phlegmatic male. Dr. Norris recognizes this objection to the second case and reports one almost similar, in which death followed a cataract operation, with the important exception, that no anæsthetic was used. On the other hand, the reflection suggests itself that some of the cases on which Sir James Paget bases his estimate of the unfavorable influence of Bright's disease on the results of operations, may have been cases in which the *anæsthetic* was to blame and not the operation. The suppression of urine in the only two cases of Dr. Emmet's, of which I have been able to find any detail, resulted fatally in one case thirty-two hours, in the other three days after the operation. It is certainly possible that many such cases may have occurred and the operator may have failed to recognize any causal connection between the ether and the fatal result.

That ether has been employed frequently in cases of Bright's disease *without* bad results is certain. Dr. Norris in his paper mentions two cases, one of which had been anæsthetized twice, and the other three times by ether without obvious ill effect. Dr. T. G. Morton, in discussing Dr. Hunt's case in connection with a death from ether in his own practice (*American Journal of the Medical Sciences*, October, 1876), states that he has frequently given ether in cases of albuminuria without accident. The same is probably true of every surgeon of large experience. It is not to be denied that the recorded experience which I have been able to find on the subject is not entirely conclusive. Nevertheless, I think that the evidence renders it highly probable that structural disease of the kidneys furnishes a grave contra-indication to the administration of ether. Further experience is necessary before any approximate estimate of its gravity can be made. The frequent immunity from accident may justify the employment of ether in such cases under certain circumstances, but the surgeon certainly ought to be aware of the risk to which he is subjecting his patient, and ought to be sure that the advantages to be gained by the use of the anæsthetic more than counterbalance its dangers.

REMARKS ON CARDIAC ASPIRATION.

By F. M. CORWIN, M.D.,

NEW YORK.

THE subject of cardiac aspiration having recently attracted some attention and comment in THE MEDICAL RECORD, perhaps the following account of a case which came under my observation may be of interest to some of your readers:

The patient, a man aged forty, a native of Turkey, was admitted to Bellevue Hospital, November 2, 1881, in the service of Dr. Janeway, Dr. W. C. Stone being House Physician. Owing to his limited knowledge of English no history was obtainable. He had a very badly deformed chest, due to right lateral curvature of the spine. On admission he was much cyanosed, the face, lips, and hands being very blue. His respirations were increased in frequency and labored in character.

His pulse was about 120 a minute, of fair strength but irregular. There was considerable œdema of the lower extremities.

Physical examination of the chest gave no evidences of consolidation of lung. There were numerous subcrepitant râles and pleuritic crepitations all over both lungs. Voice-sounds not sensibly altered.

The heart was pushed upward, the apex-beat being an inch or more above the left nipple, and the impulse diffused. There was thought to be considerable enlargement of the heart, but owing to the misshapen chest and displacement of viscera, that point could hardly be determined with accuracy. The heart-sounds were distinct, and there was no murmur.

He was ordered whiskey and digitalis every two hours with milk diet. He got some sleep through the night; but on November 3d he was still much cyanosed, and if anything changed, he was weaker than on admission. His urine was found to be scanty, specific gravity 1015, reaction acid, and to contain about ten per cent. albumen, with large and small fatty and hyaline casts. Infusion of digitalis was substituted for the tincture.

About 3 P.M. of this day he was seen by Dr. Janeway, and the question of hydropericardium being raised, the needle of a veterinary hypodermic syringe was introduced at a point where there was dulness on percussion, and but little or no motion apparent on palpation. On withdrawing the piston, the barrel of the syringe, which held nearly an ounce, was immediately filled with dark venous blood, and as the needle had been moved slightly while in the chest, it was thought the heart had been penetrated.

There was no change in the condition of the patient at the time, nor did he afterward develop any symptoms or physical signs which could be referred to the aspiration. After this a considerable diaphoresis was brought on by surrounding the patient in bed with hot bottles wrapped in clothes wrung out of hot water, aided by spirits of mindererus and nitre. The cyanosis remained the same.

On November 4th, it was apparent that he was gradually growing weaker, otherwise there was no change. Stimulants were increased during the day, but he continued to fail, and died quietly about 8 P.M., death apparently being due to exhaustion.

Autopsy, November 5th, 3 P.M.—Heart weighed fourteen ounces, the increase in weight being chiefly due to hypertrophy of walls of right ventricle, the cavity of which was much dilated. About an inch from the apex of the right ventricle was a small ecchymosis, evidently where the needle had entered. There was no evidence of inflammation around it, or in the heart muscle, the ecchymosis being subserous only and not traceable into the muscle. The valves were normal. The pericardium contained some reddish serum, as did the peritoneum, and both pleuræ. There were no coagula in the pericardium, and no appreciable difference between the fluid there and that in the other serous cavities.

The lungs were very small, the lower portions especially being compressed and in a condition of atelectasis. The remaining portions were cedematous, and the small bronchi contained some mucus. There were numerous and strong pleural adhesions. Kidneys were much congested and the seat of considerable parenchymatous change. Capsules were adherent. All the other viscera were markedly congested, and cellular tissue of dependent portions of body was cedematous. On examining the interior of the thorax after removing viscera, the right side was found to be much infringed upon, the left side being much the more capacious. Owing to nearness of sternal ends of right ribs to spinal column, the liver was displaced upward and to the left, the left lobe pushing the heart well up. The right side dilatation and hypertrophy of heart was thought to have been due to obstructed pulmonic circulation brought about by the condition of the lungs.

It was the opinion of those present at the autopsy that the aspiration had not crippled or injured the heart in any way.

During my house-service I saw and performed cardiac aspiration a number of times, where the patient was moribund or the heart had ceased to beat, but I never saw any benefit resulting from it. I have narrated the above case somewhat in detail, as I believe it shows right ventricular aspiration to be practicable, in some circumstances at least, if anything is to be gained by it.

Reports of Hospitals.

THE ANTISEPTIC METHOD IN THE LONDON HOSPITALS.

(Continued from p. 238.)

(As reported by our London Correspondent.)

LONDON, January 22, 1883.

It is to the antiseptic methods as practised in the hospitals of London that we now address ourselves, and in order to do so it is necessary to revert to what has already been said, that few London surgeons have taken the trouble to follow even once or twice the practice of Mr. Lister in his own wards. As a consequence, there are many now practising and even teaching surgery in London who in all good faith profess to treat their patients "*à la Lister*." That such persons have every desire to do justice to their patients and to the system is not to be doubted, but from lack of confident belief in or knowledge of the minor details, these are neglected, and the result is disappointing. For example: we have seen a surgeon in a well-known hospital stand in the way of the spray for several minutes together, call for an instrument from the cupboard, and, without washing it in lotion, plunge it into the wound and use it for the remainder of the operation. Such a detail seems trivial in itself, and may possibly lead to no bad result, because the antiseptic material in the wound may be sufficient to destroy anything conveyed on the unclean instrument; but the point to be noticed is that this system must not be hastily blamed if carried out in an ignorant and incompetent manner. Again, there are others in London at the present moment who show a sort of unwilling allegiance to the system by treating certain classes of injuries and operations by all the complete details, while in other cases they will follow a nondescript antiseptic treatment, in some cases using one form of dressing and in some another, but always allowing the necessity of its being antiseptic. It is certainly a noticeable feature in Mr. Lister's career that neither argument nor obloquy has turned him aside from the strict observation of his own results, and though he has and still does occasionally make slight changes and modifications of the details of his method, yet this is done in strict accordance with the principle maintained, and one detail is only discarded

because another, which seems to promise better results, can be substituted in its stead. Of all the details of his method, the one which he is most ready to discard as not absolutely essential is the use of the spray; for it may be safely said that the danger of organisms entering by the air is the least of all those which are likely to arise in an operation, and if they do obtain access, they can be destroyed by washing the wound with an antiseptic lotion; and it must be remembered that for many years Mr. Lister worked without the spray and obtained good results, and the results which have been published by the late Mr. Callender, at St. Bartholomew's Hospital in London, and by Wendlenberg in Germany, show that the spray is not the most vitally essential element in the system; but, on the other hand, there is the fact that the author of the system is unwilling to relinquish its use, and this doubtless from the fact that he expects less immunity from danger by any other plan.

To answer the question, therefore, as to what have been the results of the antiseptic system on the surgery practised in London hospitals, two facts must be regarded. First, the question of general results, and, secondly, that of new operations which have been rendered justifiable by reason of the greater immunity which attends them. The first is really the smaller question, and is most easily and satisfactorily answered. There can be no doubt that the mortality from operations and from injuries has become, in a very considerable degree, diminished. Pyæmia, erysipelas, diffuse cellulitis, which a few years ago were only too rife in all our hospitals, are rare, and daily are becoming more scarce. Speaking of one of the largest, most wealthy, and best conducted hospitals in the metropolis, situated in the most open and healthy part of London, we can remember that fifteen or even less years ago pyæmia and erysipelas were rarely absent from the wards, while at the present time they are so seldom seen that their occurrence is a matter of surprise and consternation among the authorities. Not that in this institution the practice of aseptic surgery is by any one individual strictly carried out, but the teaching of Mr. Lister's principles has had such an effect in causing attention to be paid to details and to the necessity of some antiseptic precautions being taken in regard to every wound that the cases of septic poisoning are reduced to a very small number—a number which is capable of still further diminution.

With regard to the second, it must be remembered that many operations have of late years been introduced into practice which before antiseptic surgery was carried out would have been condemned as unjustifiable. Such, for instance, are the operations for the correction of deformities of the long bones of the limbs, or the many expedients which have been resorted to for remedying the defects in germ valgum, not to mention the very numerous procedures in which the abdominal cavity has during the last few years been opened. In all these operations the spray and antiseptic treatment are almost generally used by London surgeons with a very few exceptions, and this fact is a silent but important tribute to the extra amount of safety which it is considered is given by this method. In the operation for curved tibiae, for example, a large number of cases have been treated during the last few years, with only one fatality, at the Children's Hospital, while as a contrast between the present and the past it is curious and interesting to reflect that the operation had been occasionally performed in former years by one of the surgeons, but had been desisted from on account of the risk and danger to the patient.

Again, in abdominal surgery, the Master of Ovariectomy, Mr. Spencer Wells, has given the strongest testimony in favor of the aseptic treatment, and has shown that since adopting it his results have eclipsed all that preceded. His successor, Mr. Thornton, at the Samaritan Hospital, was a pupil of Mr. Lister's in Edinburgh, and is naturally a firm believer in his doctrines, though it must in justice be stated that his colleague, Dr. Bantock, has obtained

very satisfactory results by a course which discards the spray and the form of dressing recommended by Mr. Lister.

Mr. Savory, of St. Bartholomew's Hospital, is no convert to the aseptic treatment, and his views were ably and eloquently expressed in the meeting of the British Medical Association held at Cork three years ago. He endeavored to show that by cleanliness alone the results obtained at the hospital to which he is the senior surgeon were as good as could be claimed by the advocates of the antiseptic theory. Among the deaths, however, which took place according to the report published by the Surgical Registrar for the year following this address—namely, 1880—there were 45 deaths occurring after 619 operations, large and small (74 were for phimosi and 25 were tenotomies). Of these 9 were caused by pyemia and 4 from erysipelas, and this in a hospital with the most favorable surroundings which can be given by a liberal administration with an almost boundless fund at its disposal.

The practice of the other surgeons at this the largest of our metropolitan hospitals and schools varies somewhat according to the circumstances of the case. While some are careful and thorough followers of the system under discussion, others use it only in the more severe and perilous cases. Mr. Mornas Smith is one of the latter category, using it in all operations on the abdomen or upon joints, while he has of late used all the other many antiseptics which have been advocated in the treatment of ordinary cases and wounds of minor danger and importance. The principal of these are eucalyptus oil, carbolyzed wool, iodoform, and wool saturated with this material, boroglyceride, and many others. This latter agent has been used for some time at St. Bartholomew's, and was advocated during the past year by a surgeon to another hospital in one of his medical papers, on the strength of some half dozen cases which had done well under its use. We have, however, seen at least one fatal case of erysipelas occurring when this form of dressing was used after amputation of the breast, and are disposed to think less well of it than of many other materials which are in use for the same purpose.

St. George's Hospital, the school of Brodie and Hunter, is perhaps the most conservative of all as regards its treatment of surgical cases, but that an improvement is capable of being effected in the results of amputations is shown by statistics published by Mr. Holmes in 1874, which analyzed the last five hundred cases of amputation and showed a mortality of 158, or 31 per cent. The last two hundred amputations which were performed between the years 1866 and 1874—the years during which Mr. Lister's treatment was under discussion—75, or 37.6 per cent., ended fatally. With the exception of Mr. Holmes, who has discarded the general use of the aseptic system except in operations upon joints and others involving serious risk, no one at this hospital follows systematically the treatment under discussion. On the other hand, some attempts have here been made to improve upon the materials used, and with this object sulphurous acid spray was tried, but the results were not encouraging. Speaking generally of the treatment followed here, it may be said that antiseptic lotions are freely used, principally carbolic, and wounds are dressed either with gauze and protective or with carbolyzed wool, but as the surgical reports have not been published, no conclusion can be arrived at as to any improvement in results obtained.

One prominent London surgeon, Mr. Jonathan Hutchinson, of the London Hospital, has continued a line of treatment of his own, and has not been carried away into any deviation from it by the many more recently advocated. The wound, after hemorrhage has been arrested, is washed out with pure spirit; drainage-tubes are then arranged at the most dependent part and the wound is stitched up. Thin compresses, soaked in a lotion composed of six parts of absolute alcohol, a half part of liquor

plumbi, and sixteen parts of distilled water, are then applied, and are kept moist by an irrigator. Thus by using per drainage he follows the principle of Mr. Lister, but differs from him in abolishing the use of the spray and in substituting a different lotion, which is, by virtue of the alcohol, a distinct and satisfactory antiseptic.

It is difficult and indeed almost impossible at the present moment, when the opinions of surgeons are so greatly at variance, and are undergoing so great a reaction from those held and taught but a few years ago, to describe and individualize the treatment followed by different persons at the more prominent institutions in London, but it is not invidious to state that what may be seen in London hospitals is a fair interpretation of the general views of surgeons throughout this country, and a sketch has already been given of the extent to which the exact acceptance of the antiseptic treatment of wounds has been received. At every hospital there are one or more who have given it every chance which faithful observance and careful following can require, and the fact that their seniors and colleagues are willing to follow it in those critical and severe operations on parts in which septic poisoning is most to be anticipated does not weigh against it, but inclines, on the contrary, to show an unwilling acceptance of its value. The dangers and inconveniences attending the use of carbolic acid as a lotion have been shown to be due to a want of properly appreciating the way in which it should be applied; for it must be carefully remembered that the use of the protective is solely to avoid the contact of carbolic acid with the wound, and that where any antiseptic is used upon an open surface some other material which is proved innocuous has to be employed, such, for instance, as salicylic acid, boracic acid, etc. Among other materials which have not been already mentioned in the present article as having had their fair trial are eucalyptus oil, which has been used as spray as well as for a dressing, salicylic wool and jute, thymol, and many others.

What, then, we may well ask, are the results of this new doctrine as affecting the treatment now pursued in London, when compared with that followed by surgeons before its introduction some twelve or fifteen years ago? Firstly, the answer comes, a very greatly improved rate of mortality in all severer cases of operative and accidental wounds, and secondly a very widely extended field, which is daily on the increase, of operative measures, since they can now be undertaken with so much greater an immunity from disaster. The surgical records of our hospitals, the medical press, and the transactions of the various societies tell daily of recoveries from accidents and injuries which we were taught to regard in former years as inevitably fatal, and record operations of which our predecessors never dreamt of even proposing, but which are now performed with a percentage of mortality which is truly astonishing.

One collateral reason for this improvement is, no doubt, the better understanding of and the stricter attention to the hygienic surroundings of our patients, and another is the very great improvement in the class and education of our nurses. But, these apart, the details of surgical treatment are the main factors in the advance of the science, and of these none is of greater importance and none has done more to improve results than the appreciation and use of drainage. Whatever be the means resorted to of dressing wounds, almost every surgeon now looks to the careful drainage of all cases in which there is a possibility for the collection of any fluids, whether he uses india-rubber tubing, horse-hair, catgut, or decalcified bone. A stricter attention to cleanliness is also universally practised, both in the cleansing of the wound itself, usually by some antiseptic, and of all that comes in contact with it, such as the hands, the sponges, and the instruments. Then, too, in some form or other, antiseptic dressings are almost invariably applied, and this, with the use of drainage, necessitates a less frequent disturbance of the wound, which alone is of powerful influence in promoting its

speedy union. These means permit also of the more close approximation of the surfaces, and by securing their absolute rest and freedom from disturbance, allow nature more opportunity for performing her share of the work.

It will be seen, then, that we have in the above endeavored to show some of the influences which are at work in London, and in England generally, to improve the results of surgery. The progress in the last few years has been of marvellous rapidity, and it still continues to advance, but this is not an unfitting time to review the past with the present, and some ideas on the subject are, it is confidently hoped, set forth in the pages of this article.

Progress of Medical Science.

THE USELESSNESS OF STYPTICS.—In a paper read before the Philadelphia County Medical Society, Dr. J. B. Roberts (*Philadelphia Medical Times*, January 27, 1883) argues with much force against the use of styptics in general surgical practice. He states his objections to their employment in the following propositions: 1. Their reputation as hæmostatic agents leads practitioners to resort to them when more trustworthy methods are needed. Thus valuable time is lost, for, after temporary arrest, the hemorrhage recurs in the already anæmic patient, and is perhaps followed by disastrous results. 2. If they fail to control the bleeding—which they generally do if the hemorrhage is important—it is often so difficult to rid the surface of the pasty clots that subsequent ligation of the vessels is well-nigh impracticable. 3. Many styptics prevent union by first intention, because they irritate the raw surface, lead to inflammation, or induce suppuration.

He says, further, that Monsel's salt—the subsulphate of iron—has probably more reputation than any other styptic, yet it is the most objectionable of all. It covers the wound with black, sticky clots, which obscure further examination of the surface, prevent primary union, and may even allow bleeding to occur beneath them. I have seen such leathery masses of coagulum raised up into vesicles by the subjacent hemorrhage.

There are but two scientific and satisfactory ways of arresting hemorrhage as usually observed in the practice of general surgery: 1. The first is occlusion of each individual vessel by ligation, torsion, or acupressure, and is generally not required for arteries smaller than the facial, nor for veins, except those of the largest calibre. 2. The second method is direct pressure by compresses and bandages, which, if properly applied, will always be effectual when the first method is not demanded. It is to be adopted when there is oozing from small arteries and capillaries.

In all cases of traumatic hemorrhage, it should be recollected that a man can lose many fluidounces of blood without serious injury, and also that no artery or vein can bleed if it is compressed by the fingers. These facts assure the surgeon that there are always time and means to control the bleeding, at least temporarily. Many arteries that spurt freely when first divided soon spontaneously stop bleeding. Therefore it is foolish to interrupt the steps of an operation by ligating every little vessel that throws out a jet of blood. Let the surgeon proceed, even if the arteries are quite large, and when he has finished his incisions he will find, to his surprise, very few points requiring ligatures. He should ligate these, and, after washing away the loose clots, make moderate and equable pressure. There will then be no part for styptics to play. It is possible, perhaps, that there may be occasional instances of oozing where pressure cannot be effectually applied; but these are certainly so rare that they do not materially affect the truth of the proposition that styptics are useless.

THE USE OF THE MULLEIN PLANT IN THE TREATMENT OF PULMONARY CONSUMPTION.—Dr. Quinlan, of Dublin, observes that from time immemorial the verbas-cum thapsus, or great mullein, has been a trusted popular remedy in Ireland for the treatment of phthisis. After relating some cases where it proved of benefit, he concludes: "These cases although too few to justify any general conclusion, appear to establish some useful facts. The mullein plant boiled in milk is liked by the patients: in watery infusion it is disagreeable, and the succus is still more so. The hot milk decoction causes a comfortable sensation, and when once patients take it they experience a physiological want, and when the supply was once or twice interrupted, complained much in consequence. That it eases phthisical cough there can be no doubt; in fact, some of the patients scarcely took their cough-mixtures at all—an unmixed boon to phthisical sufferers with delicate stomachs. Its power of checking phthisical looseness of the bowels was very marked, and experiment proved that this was not merely due to the well-known astringent properties of boiled milk. It also gave great relief to the dyspnoea. For phthisical night-sweats it is utterly useless: but these can be completely checked by the hypodermic use of from the one-eightieth to one-fiftieth of a grain of the atropia sulphate; the smaller dose, if it will answer, being preferable, as the larger causes dryness of the pharynx, and interferes with ocular accommodation.

"In advanced cases it does not prevent loss of weight, nor am I aware of anything that will, except koumiss. Dr. Carrick, in his interesting work on the koumiss treatment of Southern Russia (page 213) says: 'I have seen a consumptive invalid gain largely in weight, while the disease was making rapid progress in her lungs, and the evening temperature rarely fell below 101° Fahr. Until then I considered that an increase of weight in phthisis pulmonalis was a proof of the arrest of the malady.' If koumiss possesses this power, mullein clearly does not; but unfortunately, as real koumiss can be made from the milk of the mare only, and as it does not bear travelling, the consumptive invalid must go at least to Samara or Southern Russia. In pretubercular and early cases of pulmonary consumption, mullein appears to have a distinct weight-increasing power. In early cases, the mullein milk appears to act very much in the same manner as cod-liver oil; and when we consider that it is at once cheap and palatable, it is certainly worth a trial."—*British Medical Journal*, January 27, 1883.

INTERCURRENT PLEURISY IN HEART DISEASE.—Dr. Bacquoy has observed a number of cases of pleurisy occurring in the course of heart disease. He states that notwithstanding the weakened condition of the patients consequent upon the prolonged cardiac trouble frequently associated with albuminuria, the inflammation presents all the characteristics of subacute idiopathic pleurisy, and is entirely distinct from hydrothorax. It usually pursues a favorable course, ending after a variable duration in a cure with resorption of the effusion. The treatment should be that followed in ordinary pleurisy. It is, however, desirable that a cure be obtained as speedily as possible, because of the embarrassment of the already enfeebled heart by the pleuritic effusion. Consequently the author advises an early thoracentesis in all cases in which the absorption of the fluid is delayed. Especially should this be done if dyspnoea or other urgent cardiac symptoms be present.—*La France Médicale*, November 30, 1882.

UTERINE MOVEMENTS.—In formulating the results of a large number of experiments made upon rabbits, Dr. Frommel states that the uterus undergoes regular rhythmic contractions. These contractions occur in all stages of uterine development, though they are more regular in pregnant animals or in those which have previously borne young. The movements are slowed by a low temperature, and quickened by a slightly increased

one; but a high temperature (103° F. or more) abolishes them. Circulatory disturbances exert a marked influence upon the contractions. Compression of the aorta causes them to cease within a very short time; that of the vena cava produces the same effect after a longer period (fifteen to thirty minutes). The author states that the uterine contractions are independent of any nervous centre situated without the organ itself, though, of course, they may be modified by impulses received from the cerebro-spinal centres.—*Centralblatt für Gynäkologie*, November 25, 1882.

EXTIRPATION OF THE GALL-BLADDER.—Dr. Carl Langenbuch reports the following case in the *Berliner Klinische Wochenschrift* of November 27, 1882: A man, forty-three years of age, had been suffering for six years with repeated attacks of bilious colic. They recurred with increasing frequency until, at the time of the patient coming under observation, they came on usually twice a day. The pain was intense, and increasing doses of morphine were taken to relieve it. The patient was emaciated and weak, had no appetite, and suffered from constipation and constant nausea. It was determined to remove the gall-bladder. A T-shaped incision was made at the outer border of the rectus muscle, and the cystic duct was first ligated. The bile was then withdrawn by aspiration, and the gall-bladder removed. On the morning following the operation the patient was found sitting up in bed smoking a cigar. He went on steadily to recovery, complaining of nothing but a ravenous hunger, and in twelve days left his bed. In six weeks the patient gained thirty pounds in weight. Four months later he reported himself entirely free from pain, in excellent general health, and completely cured of the morphine habit which had been acquired during the last year of his sufferings.

INFLUENCE OF CONTINUOUS COLD UPON THE DEEPER TISSUES.—Dr. Bayer formulates the following conclusions from an elaborate series of experiments made upon dogs: 1. Local abstraction of heat causes a cooling of the neighboring and underlying organs and tissues. 2. The lowering of the temperature of a part is less marked the more distant it is from the cooled surface. 3. The heat-losing property of a given tissue is in inverse proportion to its vascularity. 4. The local cooling announces itself by a more speedy fall of the general temperature. As a practical application of his researches, he states that ice-water should not be used as a hæmodynamic, since the contraction of the vessels depends upon a continuous application of a moderate degree of cold rather than upon that of a very low degree. He does not, however, deny the efficacy of ice applications in bruises and subcutaneous injuries; but he states that in these cases the deeper tissues do not attain the same degree of cold as when ice is applied directly to the bleeding vessels. They receive only the proper degree of continuous cold to insure the contraction of the blood-vessels. The value of local cold applications in inflammations is thus explained: The direct cooling of the tissues depresses their activity. The vessels being contracted, the migration of white corpuscles is restricted, the general temperature is lowered, and the heat centre is depressed by reflex influence.—*Zeitschrift für Heilkunde*, November 15, 1882.

PARASITES IN AMERICAN PORK.—From an investigation into the parasites in the pork-supply of Montreal, Dr. Osler concludes: 1. That the hogs slaughtered for our markets present parasites in numbers sufficient to necessitate a more thorough inspection than is at present carried out. 2. As regards *trichina spiralis*, which was found in the proportion of 1 to 250, he is of opinion that, considering the extreme rarity of cases of trichinosis, and the difficulties attendant upon a systematic inspection, a compulsory microscopic examination of the flesh of every hog killed is not at present called for. 3. In the case of "measles," the liver should be carefully examined, and

if present in it, the flesh of the animal should receive the special attention of the inspector; if only in the liver, the entire carcass need not be confiscated. 4. Echinococcus cysts in the liver render that organ unfit for food, but in other parts, unless very numerous and disorganizing, they may be cut out, and the carcass remain marketable. 5. The public should be made aware of the possible dangers of eating, in any form, raw or partially cooked meat. The best safeguard against parasitic affections is not so much inspection of the flesh, unless, indeed, this is minutely carried out, as careful attention to culinary details. 6. To reduce the number of infected hogs, greater attention should be paid to their hygienic surroundings, particularly in the matter of feeding. The danger is not during the period when the animals are penned and fed on grain, etc., but when they are allowed to roam at large and feed indiscriminately.

TREATMENT OF BUBO.—Dr. Hermann Kümmell employs a dressing of bichloride of mercury after the extirpation of an inguinal bubo. He removes the whole group of glands, and not merely those that are affected. After the extirpation of the glands the wound is thoroughly dried with sponges, drainage-tubes being inserted into the deeper pockets, if necessary. The edges of the wound are then approximated by sutures, except for a short space at the lower edge, which is left open for drainage. The surface over the wound cavity is now covered with pads of gauze soaked in a bichloride solution, or with little ash bags, one or two larger bags being placed over all. Firm pressure is then made with a roller bandage. After eight or ten days the dressing is removed and a second one applied, if necessary. Disturbance of the wound by flexion of the thigh is prevented by a short splint extending from the anterior superior spine of the ilium to the middle third of the thigh. Where an ulcer has already formed, the infiltrated parts are removed by the scissors and the sharp spoon, and the cavity is filled with sand wet with a solution of the bichloride, and covered with a few layers of gauze. Should the discharge be sufficient to saturate the outside dressing, this is removed and fresh gauze applied. The sand, however, is not removed, but is wet again with the solution. Dr. Kümmell claims excellent results in the treatment of bubo by this method. In cases where the skin is still sound, he says that union by first intention is usually obtained, and where ulceration has occurred, the wound heals rapidly by granulation with a very moderate amount of suppuration.—*Centralblatt für Chirurgie*, December 30, 1882.

HYPERIDROSIS OF THE AXILLA IN THE NUDE SUBJECT.—Dr. Aubert reaches the following conclusions (*Annales de Dermatologie et de Syphiligraphie*, December 25, 1882), from a study of this phenomenon in a large number of individuals: 1. Axillary hyperidrosis is almost always present in nude subjects. 2. This is so great in many instances that streams of perspiration may be observed running down the body and inner side of the arm. 3. The chief cause of this phenomenon seems to lie in the anatomical disposition of this region permitting of a local elevation of temperature, while that of the general surface is lowered by the surrounding atmosphere. 4. This local elevation in a number of instances amounted to nearly 1° F. 5. Various facts lead to the supposition that this elevation of temperature finds in the glands of Robin an organ favorably disposed, by its innervation and structure, to the reception of thermic influences. 6. The mental effect produced by nudity and examination may aid in causing an increased secretion, but it plays a very subordinate rôle in the production of this phenomenon.

THE LEGAL RELATION BETWEEN DOCTOR AND PATIENT.—No binding agreement can be made between the patient and the doctor in Paris, as the patient is not regarded legally as a free agent.—*Detroit Lancet*.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE INFLUENCE OF THE THEATRE UPON THE PUBLIC HEALTH.

As long ago as 1856 an elaborate essay upon the relations of the theatre to the public health was written by M. Bonnaire of Paris. The author was at the time justly criticised for his extravagant denunciations of play-houses, which, excepting the opera, he considered to be little better than pest-houses in their influence upon the human body. Since Bonnaire's day occasional comments have been made upon the subject, but it has hardly received the consideration which it deserves. Artistic and moral questions are those which the drama chiefly excites. Our attention has been called to the subject now, however, by a number of instances communicated to us, which show, if that were needed, that the theatre bears a relation of no inconsiderable importance to preventive medicine.

It is not the question of protection against fire, which especially concerns the sanitarian. Even the results of sitting for two or three hours in over-heated and ill-ventilated halls, or of passing from these, while thinly clad, into the open air, are of a minor importance and do not concern us now.

The influence of theatre-going upon the young and immature of our cities is a matter, however, which does claim thoughtful attention. We venture to state most positively that this influence is bad. With a nervous system still unformed and unstable, the excitement of the melodrama or tragedy, the late hours, the precocious ideas, the distorted and often false notions of life and character presented, all tend to act injuriously both upon mind and body. In the larger cities there is always among the better classes a great number of silly stage-struck girls, whose nervous system, already unstable, is made more so by a fondness for theatre-going, or a secretly nursed ambition to become actresses themselves. Occasionally these city maidens become affected with a passion for a particular artist, which develops into an epidemic. Witness the popularity of an actor, not long deceased, of only moderate abilities, but of more than ordinarily pleasing appearance. The abnormal devotion which he excited was strictly comparable, though less grotesquely accentuated, to the dancing epidemics of the middle ages. That such perversions and exaggerations of youthful emotion may excite hysteria, chorea, and a varied train of morbid nervous symptoms was the claim of M. Bonnaire, and may be in part allowed.

Among the humbler classes who attend the spectacular

and murderous melodramas, or the licentious variety shows which make up the programmes in cheaper resorts, similar pernicious effects follow. We do not speak of the moral side, but only of the physical. The premature excitement of the sexual passion, the unhealthy stimulus given to the emotions and the imagination react upon the body.

It is quite universally agreed that stimulants injure the young and immature in a special degree. Remembering that the drama is a psychical stimulant and often one of great intensity by very poor quality, parents and perhaps even the State should be called upon to be careful how indulgence in it is allowed.

THE CAUSE OF TISSUE-METAMORPHOSIS.

THERE are a good many pathological theories which have a certain intellectual value quite apart from any more solid merits. The ingenuity of argument and elaborate collation of facts often shown stimulate the attention, at least, and furnish, perhaps, a little useful mental discipline.

Professor Schmiedeberg has given to the medical world an ingenious hypothesis, regarding which the foregoing remarks are pertinent. This gentleman has been for some time industriously studying the nature of tissue metamorphosis, or, in the learned nosology of modern science, metabolism.

The process by which the changes of formed tissue (e.g., muscle, gland, nerve, etc.) into excrementitious products takes place has long been the object of scientific inquiry. Professor Schmiedeberg claims to furnish us with a part of the solution. He shows first of all that when certain aromatic bodies, like benzol, are mixed with alkaline fluids or blood, only a slight amount of oxygenation takes place. When, however, these substances mixed with blood are sent through an isolated gland like the kidney or the lung, oxygenation takes place nearly a thousandfold more actively. From this and other facts he concludes that the tissues have a special action on oxidizable substances, rendering them able to take up that element actively from the blood. It is right, therefore, to expect that certain substances can unite with oxygen in the blood very actively by virtue of the tissue action about them—which action may be attributed to a ferment.

The exact significance and luminousness of this discovery are not so very apparent. A further series of experiments, however, with nitrogenous substances resulted in a discovery which, if corroborated, has a much more practical bearing. The decompositions of nitrogenous bodies in the system are due, says our investigator, to the presence of an unformed or soluble ferment, which he calls "histozyme." This ferment he has separated from a glycerine extract of pig's kidney by precipitation with alcohol. It is assisted in its decomposing actions by the presence of the oxygen in the blood. As an example of its effect a solution of benzylamine in blood, passed through the kidney of a dog produced benzoic acid. Without the histozyme, this effect cannot be produced. The chemical change is thought to be as follows: the benzylamine is turned by the ferment into benzyl alcohol and ammonia, then the oxygen of the blood

unites with the former to make benzoic acid, while the carbonic acid unites with the ammonia to form urea.

The practical side of this supposed discovery lies in the relation of the histozyme to the production of fever. When a solution of it is injected in large quantities into a dog, it causes malaise and rise of temperature. Professor Schmiedeberg thinks that some febrile conditions are caused by an excess of the ferment in the body.

The relation of the ferment to such diseases as gout and rheumatism is naturally suggested.

Further experiments in substantiation of the claims for the histozyme are being made, and they are, we confess, much needed.

FORENSIC MEDICINE.

In an inaugural address recently delivered by Clark Bell, Esq., before the Medico-Legal Society, some interesting facts are given regarding the condition of medico-legal science in Europe and America. There are, we are told, only two scientific bodies in the world devoted entirely to the study and discussion of medico-legal topics. These are the Medico-Legal Society of France and that of New York. A third society is, however, soon to be organized in Italy, and a fourth has recently been organized in this city.

As to the general condition of forensic medicine, it appears that the existence or not of definite organizations is not a strict measure of scientific work in different countries. Great Britain, for example, although without a society or a journal, has had some eminent writers on forensic medicine, prominent among these being Woodman, Tidy, Guy, Taylor, Husband, and Winslow. Germany, also, as regards actual work, leads all other civilized countries, and indeed contributes as much as all others combined. Of a series of works on poisons, numbering 152, 100 were written by Germans, 33 by French, and 19 by English speaking authors. Among 498 other contributions to the science in question, 319 were by Germans. Of late years, however, the number of articles by French, English, and American authors has very greatly increased.

The importance of medico-legal knowledge is recognized much more fully in many European countries than it is in America. Chairs for its teaching exist in many, if not all of the medical colleges, and in some of the legal schools in Europe. France appears to be at present most active in discussing the science, and disseminating a knowledge of it by means of official bulletins, journals, volumes of transactions, and society discussions.

America has shown an increasing interest in medico-legal subjects. The Medico-Legal Society of Massachusetts, organized not long ago, consists chiefly of medical examiners appointed by the Governor under the new law abolishing coroners. This body, though it has not published officially any scientific contributions, is likely to give an impulse to forensic medicine.

There is, undoubtedly, all over the country a growing interest taken in questions relating to insanity and the commitment and care of the insane than ever before. The New York Medico-Legal Society has had an addition of nearly one hundred members during the past year. Its library has also been increased by the addition of 564 pamphlets and 376 volumes. The continued

growth of this society and the organization of others seems inevitable. For every doctor, whether specialist or not, is liable to be called upon the witness stand, and thus be forced into an active interest in some branch of forensic medicine.

The New York Society proposes several undertakings which are likely to prove of great value. One of these is the securing translation and publication of foreign medico-legal works; another is the inviting of all superintendents of hospitals, asylums, prisons, charitable institutions, municipal boards, judges, district-attorneys, and others to communicate to this Society cases involving medico-legal questions. This plan has been adopted with success in France. Lastly, it is proposed to publish a medico-legal journal, which shall be the organ of the Society and contain its papers and proceedings. As there is no journal devoted entirely to medico-legal science in the world, it is thought that such a publication would meet wide support in both the legal and medical profession.

THE PANCREAS IN FEVER.

It is well known that disturbances of the digestive secretions take place in fevers, and these changes, so far as the stomach and salivary glands are concerned, are tolerably well known. Dr. S. Stolnikow has recently made a series of investigations into the condition of the pancreas in fever, and his observations form a noteworthy contribution to the pathology of febrile conditions.

His experiments were made upon dogs with permanent artificial pancreatic fistulæ. It was first found that these animals, in normal condition, secreted from 27 to 30 c. ctm. of pancreatic juice in the first two hours after a meal; and that then the secretion fell to about 1 to 2 c. ctm. per hour. Artificial fever was then produced in nine dogs by injection of septic fluids, and in two cases by inclosing the animals in hot boxes. It was observed that regularly after the injection there was an enormous increase in the pancreatic secretion for about two hours, the amount being from 70 to 79 c. ctm. (about 5 iiss.) per hour; then a change took place. The secretion rapidly diminished, and finally completely ceased. It was found, therefore, that in fevers there is at first a short increase, then a complete stoppage of the secretion of the pancreatic gland. This stoppage was not influenced by the taking in of food. We are not told how long the fever and its attendant pancreatic disturbance was kept up. It is not likely, however, that, in a prolonged fever of many days, the pancreas continues entirely inactive, but only that the general effect of the febrile condition is to lessen very materially the activity of this gland, just as it does that of the parotid and those of the stomach.

Stolnikow made some experiments in order to determine the nervous mechanism of the phenomena in question. His conclusion was that the septic poison (and probably also the heat) acted first as a stimulant to the local nervous ganglia which excite secretion, and that it then paralyzed them. In this latter action it resembled atropine. Our investigator found that the ferments of the pancreas were present in the gland during fever, although they were not carried off in the secreted fluid. He also found that they were present in quite varying amounts, and

concludes from this that the manufacture of each of the three ferments is under a different nervous control.

The practical suggestion which he offers is that possibly pilocarpin may be given with benefit in fevers, on account of its stimulating properties upon the pancreas.

BEER AND INEBRIETY.

IN the January issue of the *Journal of Inebriety* is an editorial article which strongly protests against a prevalent view that beer and light wines may be safely substituted for the stronger alcohols. Many persons who believe in temperance, but not in teetotalism, have held the opinion that, in this country, the introduction of malt liquors and table wines would satisfy the demand for alcohol without causing a serious amount of disease and vice. This theory, we are now told, is without support in facts. In Germany, for example, the consumption of brandy and whiskey has been steadily increasing since 1837, and in 1881 it was double the amount per capita to that in England or the United States. There has been also an increased demand for strong drinks in France. In this country the use of beer has increased far beyond that of distilled liquors. We are not allowed to draw comfort from this fact, however, but are told that inebriety is increasing at a greater rate than the population, thus showing that beer has no apparent beneficence.

The statements of our contemporary deserve much attention. The facts given, however, are far too few to establish the point claimed. The increased demand for stronger alcohols is often due to the stress of modern life. Certainly, a community that drinks malt liquors is safer than one which depends on whiskey for its stimulus. It would be better without either, but humanity is frail, and we must study it as it is.

QUACKS IN NEW YORK AND LONDON.

THE *Medical Press and Circular* a short time ago made some comments upon our editorial regarding "Quackery in Missouri." Our contemporary first bemoaned the sad state of affairs in Missouri, then transferred its melancholy and disapprobation to the whole United States, including especially New York. The logical process in the sympathetic and cosmopolitan mind of our esteemed contemporary was as follows: Missouri is a quack-ridden State, therefore New York and all the United States are the victims of a pestilent and utterly utter charlatanism.

Now, we trust that it is not merely a narrow and local prejudice which makes us protest against these conclusions on the part of the *Press and Circular*. We think it should really be known, for instance, that Missouri is half a continent from New York geographically, is governed by different medical laws, and is under somewhat different social conditions. We make no unfair insinuations against Missouri, which is a robust commonwealth, and one that contains many eminent and representative physicians. But it really is a very different place from New York and many other States, so far as quackery is concerned. The New York law compels every practising physician to have a diploma, which diploma is always an evidence of some medical education at least. We cannot boast that our State has been so purified of char-

latany as Illinois, or that there are not other States whose medical status is as good or better. But we are quite sure that London has as many quacks as New York, where the registration law is sharply enforced, and that the wholesale charge that the United States is pitifully quack-ridden is quite untrue.

THE TENTH CENSUS AND THE PROFESSIONS.

THE "Compendium of the Tenth Census" furnishes some facts regarding the professions of our country.

The total number of physicians and surgeons in the United States in 1880 was 85,671, of whom 2,432 were women. The number of lawyers was 64,137, of whom 75 were women, and the number of clergymen was 64,698, of whom 165 were women.

The following table shows that of foreign countries Germany contributes most to our profession, England and then Ireland following. The clergy are mostly supplied from foreign sources, while medicine ranks next.

Profession.	United States.	Ireland.	Germany.	Great Brit. in.
Physicians.....	77,092	1,021	2,640	1,748
Lawyers.....	60,342	1,008	791	948
Clergymen.....	51,967	2,516	4,301	2,589

As Germany contributes about one-seventeenth of all gainful occupations, the number of German physicians is not disproportionately large. The same may be said of Ireland and Great Britain.

The facts for a study of the duration of working life in the different professions are given.

Profession.	Under sixty years of age.	Over sixty years of age.
Physicians.....	77,274	8,397
Clergymen.....	55,779	8,919
Lawyers.....	60,241	3,896
Dentists.....	11,880	434
Musicians.....	29,450	837
Artists.....	8,699	368
Authors, etc.....	1,006	124
Commercial.....	1,726,020	54,611
Agriculture.....	6,324,053	625,711

From the above table it will be seen that more clergymen survive their sixtieth year than any other professional men. Physicians rank next, and lawyers last, with quite a gap between them. The agricultural classes have nearly as good a life as physicians, while of those engaged in trade and transportation a very small proportion continues in activity after the sixtieth year. Artists of all kinds have a short working-life, a fact which is in harmony with the general law that those who subsist by cultivating impressions and emotions die earlier than real brain-workers.

SURGERY FOR ENGINEERS.

THE trustees of the University of Pennsylvania have engaged a lecturer on operative surgery, who is to give a course of lectures on operative surgery to the senior scientific class of the collegiate department of the University. The object is to give them sufficient surgical knowledge to enable them to deal with the accidents and emergencies which are frequent in the lives of civil and

mining engineers. It is an application of the methods adopted by the First Aid to the Injured societies. The class selected for instruction, however, is presumably an intelligent and educated one. It is, therefore, quite likely that some instruction in anatomy, physiology, and minor surgery will be very useful. We take no roseate views of the great advantages resulting from elementary surgical instruction to the laity. No one, so well as the practising physician, knows how rapidly a little technical knowledge is forgotten unless continually applied. But the project adopted by the Pennsylvania University is a simple one, and while doing no harm, may occasionally be productive of good.

News of the Week.

A PUBLIC SCHOOL MEDICAL SERVICE.—It is proposed in Paris that a medical service be formed for the purpose of ascertaining what chronic or constitutional diseases affect the teeth, eyes, or ears of the pupils in the public schools, and of devising suitable remedies for the ailments.

PROHIBITION OF PATENT MEDICINES IN ITALY.—By a law which has just come into operation in Italy, the sale of patent medicines throughout the kingdom is prohibited unless the precise composition of the medicine is stated. The promulgation of this important decree has been made by the Minister of the Interior, the Customs, and the sanitary authorities. One well-known chemist in Rome has at the present moment nearly five hundred dollars worth of patent medicines lying at the Dogana, and likely to have to remain there or to be sent back to England undelivered. For the future, travellers will have to smuggle their favorite drugs into Italy.

FIRE IN BELLEVUE HOSPITAL.—A temporary excitement was caused in Bellevue Hospital last week by the breaking out of a fire in Ward 7. A considerable part of the floor was burned, but the flames were soon extinguished without assistance from the Fire Department.

THE MANUFACTURE OF DRUGS AND CHEMICALS IN THE UNITED STATES involves a capital of \$28,598,458. Products to the value of twenty-eight millions are annually made.

In contrast to this legitimate work, the manufacture of patent medicine involves a capital of ten and a half millions, and produces mixtures valued at fourteen and a half millions annually.

The number of manufacturing establishments is five hundred and sixty-three.

THE MIAMI MEDICAL COLLEGE held its annual Commencement on March 1, 1883.

THE OHIO MEDICAL COLLEGE held its Commencement March 8, 1883.

THE CINCINNATI MEDICAL COLLEGE held its annual Commencement on February 27th.

DEFEATING MEDICAL REFORM.—The Legislature of Indiana recently defeated the Bowers bill to regulate the practice of medicine in that State by a vote of (in the House) 46 to 41.

THE BILL TO PREVENT THE IMPORTATION OF ADULTERATED TEAS was passed by Congress.

THE MEDICAL DEPARTMENT OF THE ARKANSAS INDUSTRIAL UNIVERSITY held its annual Commencement on February 28th, graduating a class of four, to whom there were distributed six prizes.

A FRENCH SOCIETY OF OPHTHALMOLOGISTS has just been organized in Paris. M. Chilret was elected President pro tem. The meetings are to be held annually in January. M. Gayet, of Lyons, opened the scientific work with a paper upon a rare form of cyst of the iris.

A MEMORIAL TO THE LATE PROFESSOR BUHL is to be erected in the Pathological Institute at Munich.

PHILADELPHIA'S STREETS.—New York does not suffer alone from filthy streets. The grand jury in Philadelphia calls attention to the very dirty and unhealthy condition of the streets of the city at the present time, and to the evil effects of not providing some other and easier outlets for the sewer-gas than the dwelling-houses of the citizens.

THE MEDICAL COLLEGE OF INDIANA held its annual commencement on March 1st, at English's Opera House, Indianapolis, graduating a class of fifty-three. Two prizes were given.

A MEDICAL JOURNAL SUPPRESSED.—*The Wiener Medicinische Blätter* has had the honor of being confiscated by the Austrian authorities on account of an article which appeared in it criticising the sanitary arrangements of the army.

LA VOX DE HIPPOCRATES is the ingenious title of a new medical journal recently started in Mexico. The voice of Hippocrates has been sounding down the ages but we hardly thought it would bring up in Mexico.

A PROTEST AGAINST THE INDISCRIMINATE USE OF POTASSIUM CHLORATE.—The Medical College of Hamburg has issued a protest against the too frequent use, without medical advice, among the laity of chlorate of potash.

THE WIDOW OF PIROGOFF has given the University of Moscow 12,000 roubles, the interest of which is to be applied to the endowment of two lectureships in the name of Pirogoff.

THE IMMIGRATION OF GERMAN PHYSICIANS is a thing which is yearly increasing, and which deserves some attention from the profession in America. They now number over two thousand, and they generally succeed abundantly. Such, at least, seems to be the opinion entertained among themselves. A German (or Russian) physician, practising in Chicago, has sent a letter to the *St. Petersburg Medicinische Wochenschrift*, in which he answers, as he says, a large number of inquiries that he is constantly receiving, as to the prospect which European physicians have, if they come over here. He says: "With the ordinarily slight practical education which American physicians possess, it is not so very difficult for European physicians to obtain a very good practice here." It is only necessary, he continues (1) that the European in question have some knowledge of English; (2) that he have some money to start with; (3) that he select the right location. The letter concludes with some more

detailed advice. It has already been copied and widely circulated by German medical journals. There is no doubt some truth in the fact that German physicians coming over here, thoroughly equipped medically, easily keep, at least, the practice among their countrymen.

It may be seriously questioned if they will not do much more if our colleges continue at their present low standard.

A WOMAN PHYSICIAN PRESIDENT OF A MEDICAL SOCIETY.—Dr. Jennie McCowan was elected President of the Scott County Medical Society, Iowa, on February 15th. This is, we believe, the first instance on record in which a woman has been elected to preside over a body of medical men.

THE AMERICAN VETERINARY COLLEGE held its Eighth Annual Commencement last week, and degrees were conferred upon twenty-eight graduates. Rev. Henry Ward Beecher delivered the address.

AN INTERNATIONAL QUININE QUARREL.—During the recent typhoid epidemic in Paris, a German firm in Milan supplied a Paris house with considerable quantities of sulphate of quinine for the hospitals. It was suddenly perceived that this sulphate, which cost 450 francs a kilogramme, was adulterated with a substance costing only 150 francs. The adulterated article was refused, and the French newspapers denounced German and Italian manufacturers as fraudulent. This caused a great sensation in Italy and Germany. The manager of the Milanese factory hastened to Paris, and it was discovered that it was the Paris house that had substituted the spurious substance for the real sulphate of quinine—a fact which the head of the Paris house himself admitted in a letter to the manager of the Lombard factory. The latter has now commenced an action against the Paris house; but, though the French papers, especially the *Temps*, have acknowledged their mistake, the papers of Germany and Italy continue to manifest great irritation at an accusation which might have thrown discredit on their respective chemical products.

CONGRESS AND THE NATIONAL BOARD OF HEALTH.—Congress has adjourned and the National Board of Health has only been remembered to the amount of \$10,000 for "compensation and personal expenses of its members."

The most earnest friends of the Board look upon this action by Congress as indicative of a desire to discontinue the Board as at present organized. What will be the outcome it is difficult to surmise, but some prominent medical men think that Congress will eventually clothe the various services already in existence with ample power to manage epidemic diseases, without the intervention of an outside organization. Others think that as quarantine matters are of the same nature as police matters, they should be left with the States or municipalities interested, and that the General Government has no more jurisdiction in the one case than in the other. This opinion is held by President Cabell, of the National Board of Health, who says: "I hold that any attempt to supersede State authority, in matters of quarantine, or for the General Government to exercise concurrent jurisdiction with the States in regard to quarantine would be inexpedient."

The whole profession will regret the loss of a national scientific organization, and we trust that one will again be established on a satisfactory basis. Meanwhile a Board which has \$10,000 a year should be able to do some profitable work.

Reviews and Notices.

THE HOSPITAL TREATMENT OF DISEASES OF THE HEART AND LUNGS, with over Three Hundred and Fifty Formulae and Prescriptions, as Exemplified in the Hospitals of New York City: Bellevue, Roosevelt, St. Luke's, New York, Presbyterian, German. Charity, St. Francis, Mt. Sinai, in the services of Drs. Alonzo Clark, Austin Flint, Alfred L. Loomis, E. G. Janeway, W. H. Draper, F. Delafield, W. H. Thomson, A. Jacobi, J. R. Leaming, A. H. Smith, Beverley Robinson, J. Lewis Smith, G. G. Wheelock, J. H. Ripley, F. H. Bosworth, A. C. Post, A. A. Smith, etc. By CHARLES H. GOODWIN, M.D. New York: C. H. Goodwin, M.D., 245 West Fifty-third Street. 1883.

THIS unpretentious little volume will prove of great service to those numerous practitioners who come to this city for the purpose of refreshing and enlarging their knowledge of disease and its treatment. Its possession will save them much valuable time which, they otherwise would have to spend in taking and copying notes on treatment and prescriptions, and which they will employ to greater advantage by the observation and examination of cases. This book will also be found to be of value to the young graduates just entering upon their duties as internes in the various hospitals of this city, as well as anywhere else. It reproduces, with photographic fidelity, the features of treatment, as actually carried out, and has the advantage over bulkier books on therapeutics that it does not enumerate long arrays of remedies from which it is difficult to make a choice.

In a work like this careful proof-reading is very important, and we are glad to state that though we have searched for errors with an unsparing eye, we could not detect any of importance, except on page 81, where one ounce of the syrup of senega is put down as an expectorant dose, and on page 153, where fifteen grains of chloral hydrate is stated to be the quantity given to "children" as a sedative, without any specification as to age.

If we have any fault to find with this book, it is that there is not enough of it; but we hope that the inevitable success of this volume will encourage the author to compile similar handy volumes on the treatment of the other organs of the human body.

PROCEEDINGS OF THE AMERICAN SOCIETY OF MICROSCOPISTS. Fifth Annual Meeting, held at Elmira, N. Y., August 15-18, 1882. Buffalo: Bigelow Brothers.

THIS volume contains a large number of papers, most of which represent original work, which is most creditable to the Society.

THERAPEUTIC USE OF THE FARADIC AND GALVANIC CURRENTS IN THE ELECTRO-THERMAL BATH, with History of Cases. By JUSTINE HAYES, M.D. Chicago: Jansen, McClurg & Co. 1877.

THIS is a small work, written three years ago. The author claims so much that we are left as doubtful about electro-thermal baths as ever.

QUIZ COMPENDS; A COMPEND OF HUMAN PHYSIOLOGY. Especially adapted for the Use of Medical Students. By ALBERT P. BRUBAKER, M.D. Philadelphia: P. Blakiston & Co.

THIS little volume of 133 pages is necessarily incomplete, and is not minutely accurate, but for the purpose of cramming students it will no doubt answer. We are inclined to think that for New York students it says too little about the nervous mechanisms.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 1, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

INTRA-UTERINE INJECTIONS.

DR. LAURENCE JOHNSON related the history of a case which illustrated the possible dangers of intra-uterine injections with Chamberlain's tube. He had practised the injections for about one week without any accident whatever, and the next time, introducing the tube with the utmost care, and throwing the current of water in with as near as possible the same force as had been previously used, he found, when the injection had been finished, that the water was tinged with blood, and some blood followed withdrawal of the tube. A severe chill occurred within half an hour, the temperature rose to 107° F., the pulse to 160, and this condition continued for two or three hours and then subsided, and the patient had since progressed very favorably.

The PRESIDENT remarked that within the past few years he had had occasion to frequently use intra-uterine injections, and to express a word of caution to those whom he had met in consultation in regard to continuing the use of intra-uterine injections in the treatment of septicaemia and puerperal fever beyond a certain fixed point of time. It was well known that the uterine sinuses were closed ordinarily within three or four days after labor. It had occurred to him to see cases where the evidence had been conclusive to his mind that the introduction of the Chamberlain tube, a most excellent instrument to be used when intra-uterine injections are indicated, has been continued too long, and that after the sinuses have been blocked up by the formation of coagula or the contraction of the uterine tissues, some of the channels have apparently been opened, and the absorption of septic material has followed, as proven by serious reinfection. Furthermore, it has been noticed that after using intra-uterine injections for one or two days, when the tube is withdrawn it has been found to be covered more or less with little points of blood, and in some cases slight hemorrhage has followed, and in others profuse hemorrhage has occurred. Consequently he had frequently spoken concerning this possible danger in continuing the use of the tube for such a length of time that it becomes a source of traumatic injury to the internal surface of the uterus, and thus of infection.

DR. ISAAC E. TAYLOR then read a paper on

THE NATURALLY FAULTY OR CONTRACTED PELVIS; WITH THE HISTORY OF A CASE OF LABOR, THE NON-DELIVERY OF THE CHILD, AND THE DEATH OF THE MOTHER, AFTER CRANIOTOMY AND CEPHALOTRIPSY.

The faulty pelvis referred to embraced the equally contracted or the justo-minor, the infantile or the immature, and the male or the funnel-shaped. The patient, whose history was given, was twenty-nine years of age, healthy, whom he first saw in consultation with Drs. Wharton, E. A. Judson, Waterman, and others, on July 28th. At that time the pains were short and recurred at intervals of ten minutes; the os was dilated to about the size of a half-dollar, and the head occupied the left occipito-anterior position. Ergot produced only a very slight increase of pain. A third of a grain of morphine was then administered hypodermically, and the patient got some rest. On July 29th the os was found widely dilated, the head occupying the same position as before and resting at the brim. Forceps were applied, but no change could be effected in the position. Version was then attempted, but was unsuccessful. Craniotomy was then performed, and at that time the position of the head was transverse, and at the superior strait with the

brow presenting, and perforation was made on the right side. The cephalotribe was applied, the handles brought into position, and the brain more freely evacuated, and then traction was made for fifteen or twenty minutes without causing any advance. The instrument was then removed, and on examination it was found that the cranium had regained the same form as before its application, and this Dr. Taylor believed to be not unusual. He then applied his long narrow-bladed forceps, and brought the head more securely into the pelvis. A right-angled blunt hook was inserted into the mouth of the child, and Meigs' long embryotomy-forceps were applied, and the head brought into the inferior strait, and finally delivered after three hours' trial. The shoulders then offered an obstruction, and on examination he became convinced that the pelvis was naturally faulty, or equally contracted, and there was not sufficient space to permit any further manipulation by the hand. A right-angled blunt hook was introduced, and firm traction made, but no change in the position of the shoulders could be effected. During all this time the patient's general condition grew worse and worse, despite hypodermic injections of brandy and other measures, and she died undelivered after three and a half hour's faithful trial.

This form of pelvis, the equally contracted, he believed, was much more frequently met with than is generally admitted, and that it should receive as much consideration as those forms which depend upon certain general conditions, such as rachitis, malacosteon, etc. The infantile or immature pelvis is explained by an arrest of growth due to some important impairment of the constitution. For the equally contracted and the male pelvis no such explanation could be received. In the male pelvis, or the funnel-shaped, or the Irish pelvis sometimes called, a condition of advanced ossification exists, and indicates a healthy constitution. Barnes regards the equally contracted pelvis as due to the fact that the person is small, but Dr. Taylor believed that it did not necessarily follow that a female of small stature should have a small pelvis. With the exception of some German writers, the subject of equally contracted pelvis had scarcely been mentioned. Velpeau had once said that he had yet to learn that such pelvis ever offered an obstacle to successful parturition, but he soon afterward had an opportunity to become convinced to the contrary. The equally contracted pelvis sustains a normal relation to the size of the body, and the woman having it has the same general structure, and does not differ from health, either in stature or general condition. No positive information can be obtained in regard to the existence of this pelvis until labor has somewhat advanced. The position of the head may assist somewhat. It may be oblique at the superior strait; the occiput may dip at the commencement of labor, and it should do so, for flexion is absolutely and positively necessary. Should complete flexion not take place, a brow presentation, or a face presentation, will usually occur. After delivery is completed some notion of the condition of the pelvis may be formed by the condition of the head, and the specimen presented gave an excellent illustration of this point. There was marked overlapping of the parietal bones, compression of the frontal bones, and a ball-like appearance of the cranium. Another means for determining whether or not this pelvis is present is pelvimetry. Dr. Taylor did not place much confidence in the various methods of measuring the diameters of the pelvis, and believed that internal pelvimetry could be best accomplished by the introduction of the whole hand. If the hand moves freely in the cavity of the pelvis, the diameter must be more than three and three-fourth inches. In measuring the outlet of the pelvis Breisky's method was most valuable.

With reference to treatment, the use of the forceps was almost totally impracticable. Should craniotomy have been performed, version might succeed. Should the child's head rest in the cavity of the pelvis and the case be seen early, he would perform Caesarian section; but if

not. he would resort to either laparotomy or symphysiotomy, and he was inclined to regard symphysiotomy as the more acceptable operation.

DR. E. A. JUDSON gave a *résumé* of the clinical history of the case reported by Dr. Taylor, described the successive steps of the craniotomy and the difficulty experienced in attempting to turn the child. A great danger in these cases, he thought, was liability to rupture of the uterus. The most interesting question, perhaps, was with reference to diagnosis; that is, whether there are any certain means upon which we may rely. He was inclined to think that internal pelvimetry might furnish something in this direction, and then referred to a method recommended by Carl Schroeder for obtaining the diagonally conjugate diameter, as he had called it. It consisted in introducing two fingers, allowing the tip of the middle finger to rest upon the promontory of the sacrum, and then note upon the index finger the point at which it came in contact with the inner edge of the arch of the pubis. This diameter being obtained, it bears a certain relation to the other diameters, and perhaps in this way a proximate estimate might be formed with reference to the condition of the pelvis. With reference to external pelvimetry it did not seem to be of much service. He thought that some information might be obtained by resorting to abdominal palpation early.

DR. E. L. PARTRIDGE, from a clinical standpoint, suggested that possibly the early appearance of menstruation might lead to the early ossification of the bones of the pelvis, and therefore might be of some assistance in forming an opinion with reference to its general condition. Again, it should be borne in mind, in endeavoring to arrive at an opinion as to whether a difficult first labor is likely to be succeeded by labors equally difficult and perhaps dangerous, that the first labor is frequently severe, perhaps necessitates craniotomy, and yet subsequent labors are comparatively easy. This can be explained by the fact that ossification of the child's head is more complete in primiparæ than in multiparæ, and therefore the head less yielding. Practically he had found that the cephalotribe applied to the delivered head had facilitated delivery of the shoulders. He believed that the equally contracted pelvis should receive more consideration and study than simple cases of deformed pelvis from disease, because it probably occurred far more frequently, and it was very probable that craniotomy and cephalotripsy were performed more frequently in this class of cases than in any other.

DR. H. J. GARRIGUES thought there was no doubt that diagnosis could be made during pregnancy. Of the external methods to be employed, he thought Baudelocque's instrument offered the most advantages. Internal pelvimetry was difficult to practise, but it might be assumed that if the finger could touch the promontory of the sacrum the pelvis was contracted. In cases in which operative interference was necessary he thought the following should be considered in the order mentioned: first, gastro-elytrotomy; second, Cæsarian section, not according to the old method but according to the methods recently described in monographs; third, Porro's operation; fourth, total extirpation of the uterus.

The PRESIDENT directed attention to one important practical point on which we are all liable to be consulted. It had already been alluded to by the author of the paper, namely, that external conformation, form and figure and size of the patient offered but slight indication of the condition of the pelvis. This is a point which should be constantly borne in mind. He had repeatedly had patients under five feet two inches in height, who had a perfectly normal pelvis, and had given birth to fine, healthy, and often large children. Again, those patients who have had antero-posterior and lateral curvature of the spine, perhaps also hip-joint disease, have experienced no difficulty whatever in the process of parturition. In some cases he had been able to form a pretty accurate estimate of the probable diameters of the pelvis, but not

always, and oftentimes it was found quite impossible. He then referred to a case in which the woman had suffered from double curvature of the spine and also hip-joint disease in early life, and in whom he was unable to discover any deformity of the pelvis whatever, and she gave birth to a child weighing ten pounds and a half before her attending physician could reach her. The President also referred to a case of an exactly opposite character, in which a large, well-developed woman had so small a pelvis that it was with the utmost difficulty that she could be delivered of a child not very far advanced in development. Notwithstanding the proximate estimate which we might be able to make in certain cases concerning the diameters of the pelvis, he regarded it important to be extremely cautious with regard to promising favorable results during parturition even after having made a most careful and thorough examination.

In closing the discussion, DR. TAYLOR briefly alluded to the equally contracted pelvis from a gynecological standpoint, and expressed the opinion that very many cases of uterine displacements were due to this peculiar condition of the pelvis rather than to disease of the uterus itself.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. A. G. GERSTER presented, in behalf of a candidate, a specimen of

SARCOMA OF THE JAW.

DR. B. A. WATSON presented a specimen of

STENOSIS AND ATRESIA OF THE PULMONARY ARTERY, WITH AN OPENING IN THE VENTRICULAR SEPTUM.

Alexander A—, aged thirteen; born in Scotland; came to America in June, 1881; admitted to Christ Hospital May 2, 1882. According to patient's account, the cyanosis which later became a very marked symptom, was first noticed when he was four years of age, and appeared at the tips of the fingers, slowly extending over the hands and along the arms, later involving the lower extremities and finally the face and entire body. At the time of admission he was in a very exhausted condition, brought on by the fatigue and excitement of travelling the previous day and night from Birmingham, Conn., to Jersey City. Immediately after being put in bed, he became semi-comatose, in which condition he remained several days. On the fourth day (unable to take nourishment the three preceding days), and from that time till the end of the attack, he could be aroused sufficiently to take liquids, but would relapse into the former condition directly afterward. During the attack the cyanosis was extreme, being much more marked than at any other time, the pupils were widely dilated and insensible to light, the respiration slow and sighing, the pulse rapid and feeble (120 to 150), the temperature at first somewhat elevated (100° to 102° F.), but later slightly below the normal and the extremities cold and covered with a slight perspiration.

The patient gave no history of similar attacks prior to admission to the hospital, but had them at varying intervals subsequently. The later attacks were of less intensity and shorter duration, and were generally produced by slight fatigue or exposure to the heat of the sun. They were always preceded, for several hours, by severe headache and a general feeling of illness.

On the evening of the day before he died he complained of the usual symptoms of an impending attack, complicated by a severe pain in the precordial region, of which he had never before complained. He gradually became worse until he died, September 15th, at 10 A.M.

Physical examination.—Heart: Precordial area of dulness not increased and apex-beat in normal position, but on auscultation two murmurs were heard at the apex,

supposed to be mitral direct and regurgitant, and two at the base, supposed to be aortic direct and regurgitant. The lungs, when the patient was not in the semi-comatose and deeply cyanosed condition, were normal, but during the bad spells subcrepitan râles were heard over the entire chest.

Post-mortem examination.—Heart: Abnormally large (weight not known), left auricle one-half the capacity of the right, tricuspid and mitral valves perfect, and aortic valves atheromatous, covered with vegetations, two of them being joined together by a material of cartilage-like firmness. There was also found to be marked stenosis and atresia of the pulmonary artery, with an opening in the ventricular septum, which permitted the little finger to be easily passed into it. The left common carotid artery arises from the innominate and the left subclavian nearer the median line than in a normal body.

Remarks.—The principal interest connected with this specimen centres in the stenosis and atresia of the pulmonary artery, inasmuch as the interventricular opening and valvular lesions are probably dependent on the arterial obstructions.

The symptoms observed and fatal termination are in harmony with our published records; but, these cases are not of such frequent occurrence as to be therefore uninteresting.

DR. WATSON also presented specimens with the following history:

COMPOUND FRACTURE OF THE LEFT TIBIA—NON-UNION—
SUBSEQUENT AMPUTATION OF THE LEG.

August M—; born in Germany; aged twenty-six; laborer, admitted August 26, 1882. This injury had been produced by indirect force, and examination showed an oblique fracture in the middle of the tibia, the lower segment of which had been driven through the integument covering the anterior surface of the bone.

The patient was fully anesthetized and reduction attempted, but it was not accomplished; the soft parts were then thoroughly divided, and another thorough but unsuccessful attempt made at reduction, after which, both the lower and upper segments were exposed and sawn smoothly off. There was removed by this operation about three-fourths of an inch of bone, but nevertheless after the reduction it was found that the sawn surfaces remained in actual contact. A drainage-tube was introduced and the wound neatly closed with iron-wire sutures. The entire operative procedure was performed under strict antiseptic precautions.

August 27th, the patient was comfortable, but the pulse and temperature were above the normal. The temperature reached on the third day 104° F., although the patient was still comfortable; but from this date the temperature gradually declined, and before the end of the month his condition was normal in every respect. August 31st, the sutures were removed and the wound was found to be completely healed externally, except at the points where the drainage-tube made its exit. During the month of August the wound-fluids discharged, although not profuse, were sufficient to soil the dressings and make a daily change necessary. The removal and reapplication of these dressings were made under strict antiseptic precautions until September 1, 1882, when all Listerism was immediately discontinued.

There is a complete break in the history of this patient during the next four months, with the exception that he was transferred to the Jersey City Charity Hospital, November 2d, at which time his condition was designated in the books of St. Francis by the word "unimproved."

The amputation was performed in the Charity Hospital, January 5, 1883, after which the patient made a good recovery.

The pathological specimen exhibits at the point of the fracture a progressive necrosis which involves a portion of both fragments. There is also observed to the outside of the upper fragment a new bony formation which

is one and one-fourth inch in width, one-fourth thick, and one and three-fourths long, which passes down and overlaps the lower fragment one-fourth of an inch. This new bony formation has evidently been fractured near its attachment to the lower fragment, since its fractured surfaces were covered with a layer of firm fibrous material. This fracture, it is thought, occurred soon after the new material had attained its present dimensions. The original fragments are separated elsewhere by an irregular cavity surrounded by diseased bone. This separation at no point exceeds half an inch, and is shown to be due to the erosion of the diseased bone, while at other points still in actual or almost actual contact. There were several ligamentous bands which connected the original fragments together, but these have disappeared during the process of cleaning.

DR. WATSON remarked concerning the second specimen that the necrosis was due unquestionably to the accumulation and decomposition of pus, and that if he had been able to avoid this, union would probably have taken place. The question therefore arose, what should be done under such circumstances? Would it have been better to have excised the diseased portions of tibia, leaving as much of the periosteum as possible? or, would it have been better to have excised not only the diseased portion of the tibia, but the corresponding portion of the fibula? or, would it have been better to have removed the necrosed portion of the bone, and afterward attempted bone-grafting, an operation which he had never adopted and in which he had never had any experience?

DR. PUTNAM-JACOBI said that Dr. Watson's second case was also interesting because it illustrated the existence of the antiseptic traumatic fever to which attention had been called in an elaborate monograph recently published in Volkmann's series. The writer had collected a number of cases in which operations had been performed under strict antiseptic precautions, and afterward the patients had a very high temperature; but without any conscious disturbance of their well-being. Dr. Jacobi remarked that Dr. Watson's first specimen illustrated the statement which had been made, that as a clinical fact malformations of the heart can be almost entirely summed up in stenosis of the pulmonary artery; as this alone, or with its consequence—patency of the inter-ventricular septum, is almost certain to occasion clinical symptoms. It did not appear, however, in the history of Dr. Watson's case, that the openings in the septum had given rise to any symptoms, and so far sustained a very elaborate article written to prove that the opening in the auricular septum may persist without giving rise to physical signs or rational symptoms of cardiac disturbance.

DR. WATSON remarked that he was unable to obtain any history of preceding inflammatory attacks or any special cardiac disturbance.

CHRONIC OSTEOMYELITIS OF THE LOWER PART OF THE
FEMUR.

DR. A. G. GERSTER presented a specimen removed from a female child, ten years of age, who became seriously ill during the course of last August, with symptoms which led the family physician to make the diagnosis of cerebro-spinal meningitis. The child was in a comatose condition, had strabismus and convulsions, and in the course of the second week very high fever developed, and he noticed marked swelling of the lower third of one thigh. Dr. Gerster saw the child in consultation, and at once recognized that he had to deal with acute osteomyelitis of the femur. At that time also distinct fluctuation was present, and other evidences of a deep-seated abscess were obtained. The tissues situated above the bone, and not distended by pus, were very much thickened as usual by cedema. He advised immediate incision, and as soon as it was made an enormous quantity of pus was evacuated, and the general condition of the child improved very considerably. At that time he had

not noticed any contraction of the joint, but from that date contraction of the knee-joint commenced to take place, and finally within two months and a half an angle of twenty to twenty-five degrees was attained. The slightest attempt at passive motion caused pain. An effusion into the joint could not be detected, and he suspected that the contraction on the knee was caused by the presence of a cheesy focus in the lower epiphysis, or by necrosis of a portion of the cancellous tissue. In the month of November he performed necrotomy of the femur. After making suitable incisions he endeavored to expose the diseased part, and tried to penetrate the central portion of the condyles in order to determine the exact state of affairs in that locality. The specimen exhibited a femur covered with a thick layer of newly formed bone which had disappeared from the posterior surface at the part corresponding to the *linea aspera*. It was at that place where he endeavored to reach the central portion of the bone by the use of chisel and mallet. He succeeded in doing so, and scooping away a large quantity of diseased bone, mostly fragments of small size, one, however, being three-fourths of an inch in length. No improvement followed the operation. The bone continued to increase in size, suppuration continued, contraction of the knee-joint persisted, the child's general state of health began to suffer more severely, the liver began to increase in size, albumen appeared in the urine, and he decided to amputate the limb and performed the operation two weeks ago. After having removed the limb he sawed the bone through longitudinally, and found the following condition of affairs. The knee-joint did not contain any effusion whatever, nor present any signs of acute inflammation, although one portion freely communicated with the cheesy focus situated in the condyle. He mentioned this fact for the reason that the question was raised as to whether it would not have been well to have treated the limb by *brissement forcé*. The condition of things, revealed on examination of the bone, explained why such an undertaking might have been followed by serious consequences. The cavity of the joint was intact, yet the disease was so close to it that if the limb had been forcibly stretched, undoubtedly the contents of this cavity would have been emptied into the joint and immediately established purulent infection. As it was, the anterior wall of the capsule being put on the stretch, was drawn snugly over the opening of the cheesy focus, thus preventing an escape of its contents into the joint-cavity as long as extreme flexion was maintained. The external condyle was the original seat of the disease where the acute osteomyelitis had taken place. There was a thick layer of new osseous tissue enclosing the original bone. He had therefore to deal with chronic osteomyelitis in the epiphysis and of the lower end of the shaft of the femur, chronic periostitis of the entire shaft of the bone, producing periosteal new formation of the bone throughout the entire length of the femur. The specimen was especially interesting on account of the fact that although the necrosis was only circumscribed and confined to the epiphysis, yet there was an enormous new formation of bony matter throughout the entire length of the shaft, such as is characteristic of extensive central necrosis.

VENEREAL WARTS.

DR. GERSTER presented specimens of venereal warts, accompanied by the following history: They were removed from a patient thirty-two years of age, who had no history of either hereditary or acquired syphilis. When he first saw the patient he found about the anal opening numerous masses of villous growths covering an area of about six square inches, which he recognized as venereal vegetations or papillomata that had acquired a very large size. Their origin was doubtful. One peculiarity of the growths was that they occupied two semilunar spaces about the anal opening, leaving the median

line of the perineum along the raphe entirely intact, a fact which he had never before observed. Four or five years ago he saw a mass of similar growths removed from the skin surrounding the anal opening in a patient under the care of Dr. D. M. Stimson, during his service at the Mt. Sinai Hospital, and Dr. Gerster recollected that in that case the mass was removed very thoroughly by means of the galvano-cautery. Yet it relapsed three or four times, finally involved the anal mucous membrane, and necessitated a very severe cutting operation, in which a portion of the mucous membrane of the rectum had to be removed. Bearing in mind that fact, he did not lose any time in attempts at cauterization, but excised the growths, together with their bases, and he hoped to secure non-recurrence of the disease. Microscopically the tumors were simply warts. The incisions healed by granulation in six weeks.

Dr. Gerster, in reply to a question, said that he did not attempt to secure union by first intention in his first case, and that the child at the present time is doing very well. There had not been any notable elevation of the temperature. In several cases of osteomyelitis, especially central, he had known of the diagnosis of typhoid fever having been made, and in this case the diagnosis of another severe systemic disease was made.

DR. J. LEWIS SMITH asked if there was much swelling of the limb in the early stage.

DR. GERSTER replied that there was not, and that the swelling developed in the course of two weeks.

DR. PUTNAM-JACOBI referred to a case lately seen in dispensary practice, a child four years of age, suffering from osteomyelitis of the upper extremity of the femur, accompanied by complete separation of the epiphysis. There was considerable swelling of the thigh and buttock, and the swelling extended into the groin and to a considerable extent upward upon the abdomen, so much so that the question was raised as to whether osteitis of the pelvic bones did not also exist. The necessity for opening the abscess was certainly apparent, but, owing to the delays incidental to dispensary practice, this operation was unfortunately not performed on the occasion of the child's visit. The subsequent history of the case was, that the child had a violent attack of pain in the abdomen, and the swelling of the thigh and buttocks collapsed. Simultaneously the child passed into collapse and died two hours afterward from what, so far as could be inferred from this report, was shock due to bursting of the abscess into the peritoneum. Probably if the physician who saw the child previous to the time it came under her observation, or if she herself had acted promptly, the child's life would have been saved.

DR. FERGUSON presented a specimen of

DISSECTING ANEURISM OF THE ARCH OF THE AORTA.

A man, aged fifty-six, native of England, and a news-dealer by occupation, on February 9, 1883, at 9 P.M., suddenly felt faint and became unconscious. He was immediately transferred by ambulance to the New York Hospital. A friend said that ten years ago the patient had a similar attack, followed by unconsciousness which lasted for two days, and that he was sick for six weeks, but that since that time he had been quite well. On admission he was semi-comatose, was fairly nourished, and there was no oedema. He could be aroused, seemed to understand, but could not answer. His heart action was slow and feeble. The apex-beat was in the sixth interspace on nipple line. The radial arteries were stiffened; the right radial artery was tortuous. The radial pulse was from fifty-eight to sixty-four per minute. The day after admission he was completely unconscious, his breathing became stertorous, and his pulse ran up to ninety per minute. His right pupil was slightly dilated, and there was slight paresis of the right side of the face, with slight left hemiplegia. He continued in this condition until the time of his death, three days after admission. His heart action was imperceptible for two hours before

he died. Urinary examination showed a small amount of albumen, hyaline and granular casts. His temperature was 102.6° F., respiration 30, and pulse varied from fifty-eight to ninety per minute. He was given carbonate of ammonia, digitalis, and whiskey. The autopsy revealed intense oedema and congestion of the lungs, chronic diffuse nephritis, and atheroma of the vessels at the base of the brain. The brain and membranes were otherwise normal. The liver was congested. The stomach and intestines were normal.

Heart.—The pericardium contained 680 c.c. of fluid and coagulated blood. The left ventricle was dilated, the left ventricular wall hypertrophied, and the muscular fibres of the heart contained a great deal of fat. The valves were competent; the anterior segment of the mitral was atheromatous.

Aorta.—The arch of the aorta, especially its ascending portion, was markedly dilated. There was a rent in the wall of the ascending portion, through the intima and media, commencing just above the aortic valve and extending directly upward an inch and a half. The middle and outer coats of the artery were separated almost throughout the entire extent of the vessel. The blood passing downward into the pericardium, upward to a considerable distance around the vessels given off from the arch and separating the middle and outer coats of the thoracic and abdominal aorta, down to the iliac vessels. The aorta throughout was atheromatous.

(To be continued.)

Correspondence.

THE PROTECTION OF COLLEGE STUDENTS FROM VENEREAL DISEASES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Referring to the editorial in THE MEDICAL RECORD of February 24th, on "The Protection of College Students from Venereal Diseases," it may be proper to state that the suggestion therein made as to the inculcation of continence, "directly, and not by spiritual generalities," has been anticipated at Cornell University. In following to its legitimate conclusion the urgent and often-expressed wish of President White for "practical instruction in the laws of health," I have for several years supplemented the regular courses in physiology and hygiene by one or two lectures to the Freshmen upon the advantages of continence and self-restraint, and the dangers, physical and mental, as well as moral, of sexual transgression. In addition, when requested by a majority of the class, I have given to the Seniors, just before graduation, advice with regard to the hygiene of the marriage relation, especially the tendencies to excess, and to a lack of consideration for the wife. While far from satisfied with either the extent or the character of this instruction, I have reason to believe that it has diminished the amount of undergraduate immorality, and contributed to the welfare of married alumni. Similar instruction is, I think, given at Amherst College, and I trust the time may come when college faculties will generally feel in some degree responsible for such errors of their students as might have been arrested by the impartation of adequate information and sound advice.

BURT G. WILDER, M.D.

ITHACA, N. Y., February 26, 1883.

THE CAUSE OF DIABETES.—Among 600 cases of diabetes treated by Dr. Richard Schmitz (*British Medical Journal*), 248 were in families in which diabetes had already disappeared, 96 were in neuropathic or psychopathic families, and in 183 cases the exciting cause of the disease was attributed to some acute disturbance of the nervous centres. In 153 cases the disease was attributed to an excessive indulgence in sugar.

New Instruments.

GRUNOW'S NEW CAMERA LUCIDA.

MR. J. GRUNOW, of this city, has constructed a new camera lucida, which deserves the attention of microscopists. It was described by the editor of *The American Monthly Microscopical Journal*, at a recent meeting of the New York Microscopical Society.

The instrument consists of three rectangular, equilateral prisms, so arranged that, when placed over the eyepiece with the microscope inclined, which is the most convenient position, a portion of the surface of the work-table of the size of about twelve by fifteen inches is projected into the field of view, so as to be distinctly and clearly seen together with the object on the stage.



The two prisms e, f, g , and h, f, g , are cemented together so as to form a cube, the sides h, g , and f, e , being parallel. The hypotenuse f, g , of the prism h, f, g , is silvered, to do away with the blue halo otherwise peculiar to this form of prism, which would greatly obscure the reflected image. The silver is removed at the centre of the coating, at the point o , so as to leave a clear space about half the diameter of the pupil of the eye. The other prism l, j, k , is placed with the side j, k , inclined to the cube h, g, f, e , at such an angle as may be most desirable.

In viewing the object under observation in the direction of N, M , through the aperture at o , we see the whole field of view, while at the same time the drawing-board and pencil are reflected from the side l, j , of the prism l, j, k , to the silvered surface f, g , and then reflected to the eye in the direction of P, N . Both the pencil point and the object are very clearly seen without any strain upon the eye.

It is in this respect that the maker claims for this camera lucida superiority to any other form. It can be immediately applied, while the microscope is in an inclined or vertical position, without any change of conditions or loss of time. The camera is simply slipped over the eyepiece, the paper placed on the table, and the drawing proceeded with.

THE WANDERINGS OF A SWALLOWED NEEDLE.—Dr. W. P. Beach, House-Surgeon of Randall's Island Hospital, N. Y., sends us an account of the following case: The patient, a woman forty years of age, four years ago swallowed an ordinary cambric needle about one and one-half inch long, from which she experienced no trouble until two weeks ago, when she felt a slight soreness just over the middle of the sternum. Later a small sore appeared in that situation, and on probing it I felt a rough substance. Enlarging it I found about two inches from the surface a needle which was considerably oxidized and very blunt. The canal had the appearance of an old sinus, and was about four inches long.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 24, 1883, to March 3, 1883.

BURTON, HENRY G., Captain and Assistant Surgeon. The leave of absence granted October 2, 1882, is extended two months. S. O. 49, par. 2, A. G. O., February 28, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 3, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
February 24, 1883.....	0	11	86	4	81	44	1	0
March 3, 1883	0	8	69	6	100	49	3	0

SOME DELUSIONS REGARDING THE DIGESTION OF OYSTERS.—Some experiments with oysters by Dr. Chas. L. Dana (*Med. and Surg. Reporter*) dispel certain delusions concerning that bivalve. He finds that it does not possess the power of digesting itself, as has been asserted by some; that raw oysters are not always more digestible than cooked ones, but that when roasted they are digested very nearly as rapidly as when eaten raw; that fermented liquors do not have any special power in dissolving them (as claimed by Professor Haughton) or in assisting their digestion.

THE ANTISEPSIS OF TUBERCULOSIS.—M. Vulpian, as the result of numerous experiments with tuberculous virus, recommends sulphurous acid as the most powerful destroyer of its specific properties.

THE FRENCH MEDICAL POLITICAL LEADER.—Dr. Georges Clémenceau, the present leader of the Left in the French Assembly, is the descendant of a line of physicians. He began his medical studies in Nantes, and subsequently studied in Paris under Robin, now a Senator. He was admitted to the degree of Doctor of Medicine in 1865, on the strength of a remarkable thesis on the generation of anatomic elements, a thesis in which he expounded and formulated the theories which Dr. Robin had scattered confusedly in a score of diffuse volumes. M. Clémenceau's thesis remains up to this day one of the best expositions of the theories in question. The theory itself, however, is no longer entertained by physiologists. M. Clémenceau practised medicine until 1875. He then definitely abandoned his profession for politics, being elected Radical Deputy for the arrondissement of Montmartre. He represents extreme republican and materialistic opinions.

SMALL DOSES FREQUENTLY REPEATED.—In urticaria Dr. A. A. Smith recommends (*New York Medical Journal*) two grains salicylate of soda every hour or half-hour. In spasmodic croup, one one-hundredth of a grain of atropia in a goblet of water, a teaspoonful every hour or half-hour. In the nervous disturbances and excitements of children, the bromides in one or two-grain doses every ten or fifteen minutes. Teaspoonful doses of a solution of tartar emetic, one grain in a quart of water, given frequently, will relieve the wheezing and cough of a slight

bronchitis in children. In orchitis and epididymitis, and also in dysmenorrhœa, two-minim doses of tincture of pulsatilla every hour are most efficient. Hemorrhages from the uterus and hæmorrhoids will generally be stopped by two minims of the tincture of hamamelis every half-hour.

MORE ABOUT CEPHALHEMATOMATA.—Dr. P. L. Myers, of Fostoria, O., writes: "Dr. H. M. Battershall's case of 'subpericranial cephalhæmatoma,' reported in THE RECORD of January 27th, appears to have been peculiarly formidable. The doctor's action in early removing the '—oma' is certainly commendable; as death, in time, would have undoubtedly resulted—from the first effort of the child to utter the name of its difficulty. Last May I attended a multipara in confinement. Labor easy. The following day the nurse noticed a swelling over the sagittal suture. It was one and one-half inch in diameter, soft, fluctuating, and irreducible. As it caused no pain or uneasiness (to the child) I let it alone. After two days it was found considerably enlarged. I aspirated with a hypodermic needle. The dark blood not escaping freely, I made a small opening with a bistoury. After two more days there remained no trace of the tumor. The parents seemed sufficiently awed when I explained it to them as a 'blood-blister.'"

[Our correspondent could hardly claim his case to be a "subpericranial" hæmatoma, since these are very rare, and occur over bones, not sutures. Dr. Battershall also cannot be said to have proved his case positively to be subpericranial, although it seemed probable that it was such, and hence its interest.—ED.]

Dr. G. Frank Lydston, of Chicago, Ill., also sends us the history of a case of ordinary cephalhæmatoma, resembling that of Dr. Myers'.

A CASE OF UREMIC COMA HASTENED BY A DOSE OF MORPHINE.—Dr. E. T. Hubbard, of Madison, N. H., sends the history of a patient, a farmer, aged sixty, who had been suffering for fifteen years with attacks of renal colic. In the last six months cedema of the legs had appeared, with scanty urine. Dr. Hubbard was called to see him while suffering from the colic, and he gave half a grain of morphine in the course of an hour. He was relieved, but after a time fell into a coma, from which he was but partially aroused by most energetic treatment during the next three days. At the end of that time he died. Our correspondent thinks that "probably the uræmic condition existed in the system, and all it wanted was the morphia to fire the train."

WARTS may be removed by the continuous application of mercurial ointment containing five per cent. of arsenic. Prof Unna recommends this, or a plaster containing in each 0.2 square meter (eight square inches) ten grammes (154 grains) of arsenic and half that quantity of mercury.

THE LAST NIGHT OF THE HOUSE.—A Washington correspondent writes that during the last night of the House, some of the members began to relieve themselves from the strain of their assiduous statesmanship by throwing paper wads at drowsy members. One big wad struck the face of Dr. McLean, of Missouri, a manufacturer of patent medicines, who writes his name, "Hon. Dr. McLean, M.C." The member in question called a page and sent his assailant a bottle of his last patent mixture.

ANTE-PARTUM HOUR-GLASS CONTRACTION OF THE UTERUS.—Dr. H. W. Dorman, of Ashtabula, Ohio, relates the history of a case which seems to have been one of ante-partum hour-glass contraction. The patient was a young and healthy Swede in her third labor. The head was in the first position, and the pains strong, but although the neck dilated well, the child made no progress. Dr. Dorman then passed his hand into the uterus and felt a constriction near the child's neck which nearly baffled all his strength to dilate. He succeeded,

however. The membranes were then ruptured and the progress of the child thereby favored. Delivery was at last successfully accomplished. The whole duration of the labor was eighteen hours. A constriction was found around the placenta.

FURTHER FACTS FROM THE TENTH CENSUS.—*The Coffin Industry of the United States* employs 3,762 hands and manufactures goods to the value of eight millions annually.

The Number of Midwives in the United States is 2,118. The number of nurses is 13,483, of whom 1,189 are male and 12,294 are female.

Surgical Instruments are manufactured in the United States yearly to the value of nearly a million of dollars. The number of establishments is seventy-one.

The Number of Veterinary Surgeons in the Country, according to the last Census, is 2,130. Of these 1,457 are natives of the United States, 104 of Ireland, 156 of Germany, 252 of Great Britain, and 171 of other countries. According to a register prepared with much care by the *Journal of Comparative Medicine*, only about one-half of these have degrees.

ANECDOTES OF THE LATE SIR THOMAS WATSON.—The following are a few of the many anecdotes told by the late Sir Thomas Watson (*British Medical Journal*):

When attending Lawrence, the great surgeon, when he had hemiplegia with aphasia, it was thought desirable to give to the patient some sedative. Lawrence, knowing this, and wishing to indicate what remedy he desired, was unable to find the word he wanted, and became greatly agitated in consequence. Sir Thomas Watson got pen, paper, and ink, and asked him to write the word. This he could not do, but, taking the pen full of ink, made a large splash on the paper, and offering it to those at his side. Sir Thomas Watson at once perceived the drift of this, and saw that his patient wished for the "black drop," a discovery which greatly delighted and satisfied Lawrence. Once, when dining at a large dinner party where Lawrence and Brodie were, the former remarked that Abernethy was the only genius in surgery he had ever seen.

Sir Thomas, in relating some of his professional experiences, used to mention the extensive amount of venesection which he had witnessed, relating an instance in which a man in Edinburgh was bled to seventy ounces by a clinical clerk, and with benefit, having been told to let blood until a sensible alteration was produced on the pulse.

He remembered the following as having happened: When at the Middlesex Hospital, he once saw a chimney-pot fall to the ground, and out of it jumped a sweep-boy, who immediately ran away, unhurt, for fear of being beaten.

He used to relate that, after a letter of his in the *Times* on the cattle-plague, some one wrote to him from Norwich to ask him to come down and vaccinate his cattle. Watson replied "he did not know how."

Once, when dining in company with Mr. Richmond, and the conversation turning upon sporting, the latter said, "Well, he had never put a gun to his shoulder, and supposed that by not shooting he *missed a good deal*." Watson replied that, "if he did shoot he probably would *miss a good deal more*."

He told the story of 'some one at a medical dinner party asking another, "Well, what's the news?" "Oh," said his friend next to him, "Dr. Jones has refused a fee, Dr. Smith has taken one, and Dr. Smithson has had one offered to him."

SOME RARE FORMS OF DISLOCATION OF THE ARM.—Dr. Leopold Meyer, of Copenhagen, Denmark, reports three unusual cases of dislocation of the arm. The first two were cases of *luxatio humeri erecta*, so termed by Middeldorpf in 1859. The patients presented all the characteristic signs of subglenoidal dislocation, but with exaggerated abduction, the arm being elevated nearly to

a vertical position and the hand resting on the head. The third case was that of a woman who had fallen backward while carrying a pail of water in each hand. She had a subcoracoid dislocation on both sides. In all these cases reduction was easily effected.—*Nordiskt Medicinskt Arkiv*, vol. xiv., No. 23, 1882.

HOT WATER AS A TIPPLe.—An English physician writes, in *The World of Science*, some very interesting things regarding what to drink. "The habit of drinking strong tea, or black coffee, directly after dinner, is especially bad, and certainly interferes with digestion. At breakfast time a healthy man has all his sleep in him, and surely it is then unscientific for him to inflict upon his system strong tea or coffee. At 'tea-time' tea or coffee may well be indulged in moderately; the bulk of the day's work is done; the body not only wants rinsing out, but fatigue is felt which may well be counteracted by the use of a mild stimulant, such as tea; and bedtime is not yet so near that sleep is thereby interfered with. Most nations that drink coffee largely get a sallow skin; and I am inclined to think that the carbonaceous matter of the roasted coffee, when so largely and frequently taken, may perhaps have something to do with this. For hard-working people, who are not corpulent, I should suggest the thick flake-cocoa as the healthiest and most nutritious breakfast beverage. For those who do not want fattening drinks, and who often cannot digest cocoa, I should say drink hot water at breakfast. Those who dine late, and make their dinner their main meal, need a diluent drink an hour or two afterward, and if they drink tea it keeps them awake or makes them irritable and nervous. I find for myself that dining solidly, as I am obliged to do when I have done my work (7.30 P.M.), and often needing to work from 9 to 11, a tumbler of hot water brought into my study or laboratory is the best and wholesomest drink, and, after a few evenings, it will be as much relished as the usual draught of tea. The hot water assists to complete the digestion of residual food, it acts upon the kidneys, and rinses out the effete matters, and thus will be found to wake one up sufficiently, and neither to injure the stomach nor to keep the brain awake after bedtime. In cold weather warm water is by far the best drink at dinner time, and in hot weather a draught of warm water is far wholesomer and more cooling than cold or iced water."

MOST ARTFUL.—The *Western Medical Reporter* says: "For patients who have to use iodoform for certain purposes it is advised to spread some of the ointment on muslin and bandage a finger with it. Thus the purpose for which the agent is used can be concealed." Such a pleasing and (at meal times) appetizing arrangement may deceive the children of Light who populate the great West; but we fear that the children of Darkness, as generally met with nearer the Atlantic coast, would look with scorn upon so transparent a subterfuge.

DR. OLIVER WENDELL HOLMES, on retiring from his professorship at Harvard, received the following pleasant greeting from London *Punch*:

"Your health, dear 'Autocrat!' All England owns Your instrument's the lyre, and *not* 'the bones.'
Yet hear our wishes—trust us they're not cold ones!—
That though you give up bones, you may make old ones."

IPECAC DURING LABOR.—Dr. N. P. Reeves, of Grand Cane, La., referring to Dr. Pitkin's article in THE RECORD on the above subject, reports two successful cases (*New Orleans Medical and Surgical Journal*) in his own practice. He says in conclusion: "I, like Dr. P., never thought that ipecac increased the muscular power of the uterus; indeed I have inclined to the opinion that it *lessened* it, to some extent; yet, by its relaxing powers and co-ordinating influences it lessens the danger and greatly facilitates the desired end."

SALICIN in half-drachm doses every two hours will relieve acute coryza.

SLEEP-DRUNKENNESS.—A gentleman living in this city recently suffered from a very severe attack of nightmare. He imagined himself assaulted by highwaymen, and in his struggles he severely injured his affectionate and unconscious spouse. A surgeon had to be summoned, and the case was thought of sufficient interest to be put in the hands of reporters. These enterprising gentlemen consulted a number of medical luminaries from whom much valuable information was obtained.

It appeared that the case in question was not a simple one of nightmare from a late supper or an extra piece of Christmas pudding. It belonged to a well-understood and defined derangement of sleep known as *somnolentia* or sleep-drunkenness. It is a condition, said an eminent neurologist, in which some of the mental faculties and senses are fully awakened, others but partially so, while still others remain in the quietness of sleep. It is generally brought about by the sudden awakening of a person from a sound sleep. In children such derangements occur quite frequently; while a few persons are subject to them all their lives. Serious injuries have been inflicted by these sleep-drunken individuals, and works of medical jurisprudence discuss the questions of responsibility thus raised.

A COMPLICATED MONSTROSITY.—Dr. S. C. Franks, of Bentonsport, Iowa, sends us an account of a monstrosity delivered by him from a healthy primipara at full term. The monster, which was born dead, presented the following peculiarities: The brain protruded from posterior fontanelle with placenta adherent. Left eye much smaller than right. Double hare-lip. An opening reaching from the third rib to os pubis from which protruded heart, liver, stomach, and intestines. The forearms were flexed at right angles with arm and ankylosed. Right knee flexed and ankylosed so that the heel rested against the nates, and lastly double talipes varus. Both parents were healthy and of the laboring class. Our correspondent gives no details of prenatal history.

UTERO-OVARIAN DISEASE IN INSANE WOMEN.—Dr. Margaret A. Cleaves, Physician to the Female Department of the State Lunatic Asylum, Harrisburg, Pa., writes in her annual report: "Briefly formulated, my conclusions, then, are as follows: that a large proportion of women in insane hospitals have some form or another of utero-ovarian disease; that many of those under treatment make marked mental and physical improvement coincidently with the improved local condition, that in a majority of cases, however, this improvement, owing doubtless to the long standing of the combined physical and mental disorder, only reaches a certain point, beyond which it seems impossible to make further gain."

CALX SULPHURATA.—Dr. H. G. Piffard (*Journal of Cutaneous and Venereal Diseases*) says that calx sulphurata (commonly misnamed sulphide of calcium) is a mixture of the sulphide and sulphate of calcium, but contains not less than thirty-six per cent. (U. S. Pharm.) of the former substance. He adds: "My own experiences, extending over a series of years, lead me to the inference that the drug is an aplastic or resolvent of great energy; that its tendency, when given in sufficient doses, is to break down and dissolve, rather than build up and restore. This theory of its action is in perfect harmony with the observed effects of its administration; and if it be the correct explanation, it will lead us to a multitude of useful applications of the drug. In other words, it appears to me probable that calx sulphurata will be found capable of fulfilling the rôle that was assigned to mercury thirty and forty years ago, that of a general solvent in inflammatory exudations, chronic infiltrations, and possibly also in some forms of neoplasm."

TRITURATIONS.—Of late years the adoption of finely pulverized combinations of sugar of milk with medicinal substances has so largely increased that it has become practically impossible to supply the demand, without making use of some other than manual power. The in-

troduction of "triturations" and "abstracts" into the new Pharmacopœia is very likely to increase still more the demand for this class of preparations. Triturating machines that go by steam have, therefore, been introduced by some pharmacists.

THE "HAMMOND PRIZE" OF THE AMERICAN NEUROLOGICAL ASSOCIATION.—The American Neurological Association offers a prize of five hundred dollars, to be known as the "William A. Hammond Prize," and to be awarded at the meeting in June, 1884, to the author of the best essay on the "Functions of the Thalamus in Man." The conditions under which this prize is to be awarded are as follows:—The prize is open to competitors of all nationalities. The essays are to be based upon original observations and experiments on man and the lower animals. The competing essays must be written in the English, French, or German languages: if in the last, the manuscript is to be in the Italian handwriting. Essays are to be sent (postage prepaid) to the Secretary of the Prize Committee, Dr. E. C. Seguin, 41 West Twentieth Street, New York City, on or before February 1, 1884; each essay to be marked by a distinctive device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the author's visiting card. The successful essay will be the property of the Association, which will assume the care of its publication. Any intimation tending to reveal the authorship of any of the essays submitted, whether directly or indirectly conveyed to the Committee or to any member thereof, shall exclude the essay from competition. The award of the prize will be announced by the undersigned Committee; and will be publicly declared by the President of the Association at the meeting in June, 1884. The amount of the prize will be given to the successful competitor in gold coin of the United States, or, if he prefer it, in the shape of a gold medal bearing a suitable device and inscription. Signed, F. T. Miles, M.D., Baltimore; J. S. Jewell, M.D., Chicago; E. C. Seguin, M.D., New York.

IODIDE OF LITHIUM.—Iodide of lithium is said, by a writer in the *British Medical Journal*, to be the most useful of the lithium salts in the treatment of gout. Not only is it serviceable in well-developed cases, but also in the varieties of eczema and dyspepsia which are of gouty origin.

DR. RICHARD MEADE, who became so famous in the seventeenth century, made himself remarkable among other things as the doctor who fought a duel. It was with Woodward, who had not only attacked him in his writings but had insulted him in public. Matters came to a climax one day when they were leaving Gresham College, and Meade's patience gave way. He drew and called upon Woodward to defend himself. It is related that Meade succeeded in disarming Woodward and telling him to beg for his life. "Never, till I am your patient," was the reply.

A FAMOUS PRESCRIPTION FOR EPILEPSY in the eighteenth century was made from the *corvus epilepticus* or anti-epileptic crow. It is given by Ashtun in "Social Life in the Time of Queen Anne," as follows:

R. Of raven's flesh in powder..... ʒij.
Viper powder..... ʒj.
Native cinnamon..... ʒj.

Mix and make a subtil powder for two doses, to be given at night on going to bed.

LONGEVITY OF MEDICAL MEN.—A London paper notes that during the year 1882 twenty English medical men died at an age varying between seventy-eight and ninety-six.

DR. W. W. D. PARSONS, of Fultonville, N. Y., writes to say that he is not the gentleman to whom reference was made in the paragraph published in the issue of February 24th, on page 213.

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Original Lectures.

ON THE RELATIONS OF MICRO-ORGANISMS TO DIS- EASE.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE
ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSI-
CIANS AND SURGEONS, NEW YORK.

BY WILLIAM T. BELFIELD, M.D.,

LECTURER ON PATHOLOGY, AND ON GENITO-URINARY DISEASES (POST-GRADUATE
COURSE), RUSH MEDICAL COLLEGE, CHICAGO.

LECTURE III.—(CONTINUED).

THE numerous examinations of tuberculous tissues revealed occasionally bacteria, which the discoverers were but too willing to consider the cause of the disease; Klebs, Schüller, and Aufrecht severally announced but failed to demonstrate that the infective agent had been found and that it was a bacterium. The lack of evidence in support of their statements, as well as the reserve with which such assertions in general were received, combined to reduce to a minimum the attention bestowed upon them. Such was the state of affairs when Koch read before the Physiological Society of Berlin a paper whose contents were in forty-eight hours telegraphed over the world. Koch's statements are so familiar to all, that detailed repetition would be superfluous; they may be summarized in the assertion that the active agent in the induction and propagation of tuberculosis is a distinct species of bacterium, a bacillus; that tuberculosis does not occur without the presence of this organism; that conversely all those anatomical changes and only those should be called tuberculosis whose point of departure from the normal condition is the presence and vital activity of this bacillus; hence, general and local miliary tuberculosis, cheesy pneumonia and bronchitis certainly, fungus-joint granulations, scrofulous inflammation of lymph-glands probably, and the pearl disease of cattle, are etiologically identical. The point of chief interest is of course the assertion that tuberculosis and cheesy pneumonia, pulmonary consumption, are caused by the bacillus. The evidence in its favor is first the experimental work of Koch himself, and then the unanimous confirmation of those of his statements which have been already tested.

His experience with and knowledge of bacteria found in the animal body is by general consent admitted to be excelled by that of no other observer; his caution and conservatism and the accuracy of his methods are such that, although he has for eight years been constantly working and frequently writing on this subject, he has never as yet been detected in a single error of observation; his facilities and opportunities in the Imperial German Health Bureau are unexcelled. The confidence and good will of government and people alike—for Koch's is an official position, you know—would be destroyed by any ill-executed observations, or by any injudicious and untenable assertions in this, the most important and widely circulated of all his works. That Koch appreciated the situation is shown by his course in the matter: having discovered the bacilli in tuberculous tissue, he did not send an announcement to the Academy of Sciences nor blazon it through the medical press; he

kept it to himself, satisfied himself that this was a constant, not an occasional or accidental association; that the same bacteria were present in the spontaneous tuberculosis of animals—the hog, chicken, ape, guinea-pig, and rabbit; then he devised, by experimentation, a proper medium, *solid* of course, for cultivating the organisms outside of the animal body under constant microscopic supervision, comparing them with fresh bacilli from tuberculous tissues; satisfied himself again by personal experiment of the inoculability of tuberculosis; found that while vaccination of the rabbit or guinea-pig with fresh tuberculous matter induced the disease, inoculation with such material after lying in alcohol for a month or dry for two months, was impotent to cause the disease, and *contained no living bacilli*; found that the bacteria were often, *not always*, present in the sputum of tuberculous patients, but never, so far as examined, in that of others. Having thus made a preliminary investigation, Koch proceeded to the experimentum crucis with bacilli which had grown from the tuberculous tissue under his eyes; which were therefore proved to be the progeny of the original ones, not by the theory of probabilities, not simply by their identical size, shape, and chemical reaction, but by the fact that he had seen them proceed from the first as continuities of structure; which were seen under the microscope to be quite free from any foreign solid matter, bacterial or other; which were proven to be equally free from any foreign matter in solution because growing in successive cultures upon solid soil; which had been carried from the first to the eighth generation; which had been thus isolated from the original animal tissues three, four, five, even six months. With these isolated descendants of the bacilli found in tuberculous tissues, Koch inoculated numerous animals—using over two hundred altogether—not only the susceptible rabbits and guinea-pigs, but also cats, a dog, white rats which had resisted inoculation by injection and by feeding with tuberculous materials, and field mice. Inoculation was made in the skin, the abdomen, the eye. In every case tuberculosis and tubercle bacilli were found in the infected animal.

Having spent *two years* in the completion of this work, amid all the facilities of the imperial laboratory; having meanwhile permitted himself no public intimation of the same, Koch quietly announced his results at a regular meeting of a medical society, with as little ostentation as if he had merely appropriated a chapter from Ziemssen. One whose knowledge of bacteria and of disease is not such as to permit a technical appreciation of Koch's work, cannot help seeing in the unobtrusive, systematic, and undeviating work of two years, and in the modest announcement of the result, that Koch's work is not to be classed with that of Klebs, or Letzerich, or even Pasteur. I would call your attention to the fact that Koch's assertion embodies not a theory, but simply an ocular demonstration. If a man is seen to plunge a knife into the heart of another the killing is a fact, not a theory; if Koch saw tuberculosis invariably follow the introduction of isolated bacilli, the relation of cause and effect is a *fact*, not a theory. There is only one possible escape (I use this word intentionally out of regard for the prejudices of many friends) from the conclusion that the bacillus causes tuberculosis; and this forlorn hope is the possibility that Koch did not see what he says he saw—that he made some vital error of observation. This is of course possible, though if true it will be the first error

that the most searching scrutiny could ever detect in his observations; that it is improbable is evident.

If we accept Koch's observations as accurate, there is only one conclusion—that these bacilli cause tuberculosis. For here the conclusion and the observation are identical; this is not a deduction, but a demonstration.

And how shall it be decided that this work is or is not free from errors of observation? Certainly not by saying that it cannot be so; not by exhuming Niemeyer's buried argument that tuberculosis is not infectious; but simply and solely through the repetition, by competent observers, of the same work. Until such repetition shall detect serious errors of observation, Koch's work stands unchallenged—more accurate and complete investigation can scarcely be conceived. On the other hand, until such repetition shall confirm Koch's observations, we may justly decline to accept them unreservedly, on the ground that he *may* have made his first error in this his greatest effort.

While, however, Koch's main assertion, that the bacilli cause tuberculosis, can be competently criticised only by the few men who like himself have the time, facilities, and skill necessary to conduct such tedious and delicate experimental observations, yet some of the preliminary assertions fall within the range of a larger circle of critics, and have been already subjected to extensive investigation. The results are as yet unanimous in confirming the original assertions of Koch that the bacilli are to be found in the sputum from most though not all cases of pulmonary tuberculosis, and, what is quite as significant, have never been found in any other sputum.

Ehrlich, Balmer and Fräntzel, Guttman, d'Espine, Lichtheim, Fränkel, Ziehl, Heron, Gibbes, Green, West, Yeo, Whipple, Councilman, have already recorded their unanimous experience that while the bacilli are found in the sputum in at least a large majority of cases of pulmonary consumption and tuberculosis, they are not found in any other disease. Balmer and Fräntzel found them always in their one hundred and twenty cases, but never in bronchitis. Ziehl recognized them in nearly all of seventy-three cases, but never in thirty-four other cases, including acute and chronic bronchitis, acute fibrous pneumonia, gangrene of the lungs—indeed all pulmonary diseases that he had opportunity to examine. It should be remembered that Koch failed to find them in the sputum from a certain number of cases. In the tubercles of tuberculosis and in the cheesy matter of consumptive lungs the bacilli are usually present—not always, as Koch himself discovered. Whether their absence from certain tubercles is to be explained, as Koch suggests, by the death of the organisms and their consequent failure to absorb aniline colors, or whether some of these tubercles arise from other causes than the presence of these, may be perhaps an open question. Gibbes' experience—that the bacilli are present in only one reticular nodule out of ten, but in nearly all non-reticular tubercles—might, perhaps, support another explanation. Certainly the absence of the organisms from tuberculous tissue is the exception. On the other hand, the bacillus is never found in the body except in tuberculosis; the only suggestion to the contrary is the recent assertion of Koranyi that he found similar organisms in a case which he believed to be pulmonary syphilis, and not consumption.

Such, then, is the state of the case to-day: Koch's assertion of the association of the bacillus with tuberculosis—its presence in every case of the disease, its absence in all other morbid conditions—confirmed by all who have investigated; his assertion of the causal relation of the parasite to the process—based upon a demonstration unexcelled in the history of experimental science for accuracy, clearness, and completeness—as yet unchallenged.

The subject might be properly left here; but I deem it advisable to consider briefly two recent publications, not because they demand consideration by one familiar with

the facts, but because they may have influenced some who derive their information chiefly from American literature.

A few months ago there was heard a scream of exultation from a Western journal, soon echoed on many sides. The attention of press and public alike was attracted to the jubilant cry that Koch, bacillus, and bacteria were to be annihilated; that the "bacillary craze" of German pathologists; the absurd fancy that a small organism could harm a large one; the comical idea that an experienced mycologist should know more about bacteria than a practising physician; the barbarous doctrine that our loved ones could be subject to infectious diseases; all these and similar absurdities which pseudo-scientists had vainly attempted to foist upon our superior intelligence would be forever buried. The American eagle, that implacable devourer of microscopic poultry, would consent to leave for a brief time its favorite swamp at the "delta of the Mississippi," and by a single act of deglutition would teach our terrified friends, "the micro-pathologists," to "take their eyes from their mounted specimens," and engage in less disreputable pursuits. So ran the widely advertised programme. After weeks of joyous anticipation the appointed day arrived; a distinguished microscopist, whose skill in mycology had been amply indicated by his failure to detect the bacilli always present in leprosy tissue, appeared in the arena armed with the startling discovery that if caustic potash solution be added to fattily degenerated tissue, crystals of fatty acid appear! The announcement was greeted by the audience of assembled experts with rounds of applause—"Sic transit bacteria," etc. Again has free America repelled the assaults of effete Europe.

I had intended to offer some remarks upon this matter, suggested by the evident fact that Koch's bacillus and Schmidt's crystal were different objects; but criticism is no longer necessary. Dr. Whittaker has stated the case very clearly; Dr. Hunt has shown that the crystal polarizes light, while the bacillus does not; and I have received from Dr. Schmidt a letter which disarms criticism.

After reading his article, I sent him a slide of sputum containing the bacilli; in his reply he says, "From what I understand now the minute crystalline rods which I discovered are not identical with Koch's bacilli;" and later, "the failure with which I met in my attempts of staining the bacillus tuberculosis, appears to have been due to the worthless aniline oil which I have used." I interpret these sentences as a candid admission that the crystal and the bacillus are not identical, and shall therefore refrain from further remark. Such admission, by proving sincerity of purpose, transfers to his friends of the antibacterial "camp" the obloquy and chagrin consequent upon the blare of trumpets with which this publication was heralded; the mouse may be *per se* a highly respectable and by no means ridiculous animal, though its advent as the result of herculean efforts at parturition is said to be very absurd. This entire matter can hardly fail to teach far more effectually than lectures, that trustworthy investigations on this subject demand not only skill and experience in pathology, which Dr. Schmidt undoubtedly possesses, but also acquaintance with the special methods involved.

A paper called "The Bacillus Tuberculosis," by Dr. H. F. Formad, of Philadelphia (*Philadelphia Medical Times*, November 18, 1882, reprint), opens with the announcement that the author "will bring forward some points from researches of my own, which will check the acceptance of the doctrine of the parasitic origin of tuberculosis;" "my anatomical researches will also surely throw grave doubts upon the correctness of Koch's views on the etiology of tuberculosis" (p. 2). The author fails to discriminate between the bacillus and the infectiousness of tuberculosis, which is in this article, however, a matter of little consequence, except as an index to the general accuracy of the publication.

The original researches which are to destroy the

"parasitic theory" consist, curiously enough, in the time-honored demonstration that tuberculosis often occurs in certain animals (notably the rabbit and guinea-pig) after simple wounds, the irritation caused by glass, etc.; especially if the animals be carefully confined in a pathological laboratory where many others have died of this disease. As Dr. Formad has seen "more than one hundred rabbits, out of five or six hundred operated upon," die of tuberculosis, we may infer that in his laboratory there was no lack of tuberculous material for infection.

There is, however, one original feature in this work as reported by Dr. Formad. Actuated doubtless by a commendable high-tariff spirit of protection for American industry, while quoting copiously his own students, he resolutely ignores the work of Burdon-Sanderson, Cohnheim, and a dozen others who have, during the last fifteen years, performed the original experiments of which his own are repetitions; and neglects to state that Cohnheim and Fränkel found that while these experiments succeeded admirably in the Berlin laboratory where many animals had long been confined, no tuberculosis occurred in a subsequent repetition in a private dwelling. On the same principle, perhaps, he neglects to state that for such reasons as these, such experiments as his own were years ago abandoned to amateurs, while the battle for infectiousness was fought and won in the eye, the lung, and the intestine, as above stated. Perhaps Dr. Formad will kindly explain how he came to deny the infectiousness of tuberculosis merely on the strength of these long since abandoned experiments, without a solitary experiment, or even reference to an experiment, on the eye, etc.

Because in his experiments no tubercular matter was "intentionally or knowingly" introduced, he maintains that nothing could have entered; that the disease is therefore not specific nor infectious. Surgeons, then, intentionally and consciously inoculate their patients with pyæmic, diphtheritic, and erysipelatous material. It will not help Dr. Formad to deny, as a New York microscopist in the same dilemma has curiously done (*MEDICAL RECORD*, March 3, p. 247), that pyæmia is infectious. For in the *National Board of Health Bulletin*, Sup. No. 17, Formad asserts and attempts to prove the infectiousness of diphtheria, and says (p. 18): "A case may begin as one of sthenic pseudo-membranous croup, and end as one of adynamic diphtheria with blood-poisoning; and in cases of this character, not infrequently, *no exposure to contagion is discoverable*." ¹ Perhaps he will explain why the absence of intentional or conscious inoculation, even of discoverable exposure to contagion, is perfectly compatible with the infectiousness of diphtheria, and yet proves the non-infectiousness of tuberculosis. Formad says (p. 2): "I can positively prove that true tuberculosis may be produced without the bacilli in question." The only proof adduced for this important statement is the experiment with glass, etc., in which the disease occurs without any "conscious or intentional" introduction of the bacillus, and the *assumption* that the organisms were therefore absent; if, however, the parasites be nevertheless present in such cases, this assertion is evidently unwarranted. We are not informed on this point in the paper, although we may infer their presence from the following statement (p. 11): "Koch has discovered that tubercle-tissue is *always* infested by bacilli, and this is correct." ² To secure definite information, I addressed to Dr. Formad, some months ago, three several letters, enclosing stamps, requesting him to state, for incorporation in these lectures, whether he had examined these cases of tuberculosis following wounds, mechanical irritation, etc., to ascertain the presence or absence of the bacilli, and if so, with what result. To these letters I have received no reply. ³

As to the association of the bacilli with tuberculosis, Formad's limited observations seem to agree with Koch's statements. ¹

The one novelty—which I am charitably disposed to think explains the existence as well as the peculiar character of this paper—is a theory that the susceptibility to tuberculosis is inversely proportional to the width of lymph-spaces; whence (by a process of reasoning peculiar to the author) he makes the deduction that no etiological influence other than inflammation and narrow lymph-spaces is necessary to induce tuberculosis. It is useless to remind Dr. Formad of the induction of tuberculosis in the eye, lung, and intestine, since he ignores pathological work which does not emanate from himself or his pupils. But since by a singular coincidence the rabbit and guinea-pig—the animals exhibiting typical narrow lymph-spaces—are peculiarly susceptible, the dog and cat insusceptible to anthrax as well as to tuberculosis, I would suggest the possibility that the etiology of anthrax also may be found, not in a bacillus as the Europeans suppose, but in narrow lymph-spaces. ²

Dr. Formad promulgates the dogma (p. 3) "Scrofulous beings" (*i.e.*, those with narrow lymph-spaces) "can have no other than a tuberculous inflammation, although it may remain local and harmless." Are scrofulous beings, then, assured against syphilitic, erysipelatous, diphtheritic inflammations, or are these merely varieties of the tuberculous?

As yet the presence of the bacillus in sputum has possessed a confirmative rather than a diagnostic value, for in the cases in which it has been detected the diagnosis has been usually already assured by the physical signs. Whether or not the bacillus may be present in cases called chronic bronchitis, etc., where the symptoms and the family history beget a suspicion not yet supported by physical exploration, must be decided in the future. In this connection it may be proper to mention an instance which has fallen under my own observation. ³

A young gentleman of my acquaintance, in whose family history there is no record of consumption, but who had for months suffered from a persistent and annoying cough, requested me one day to examine a microscopic slide which he had prepared. The diagnosis was easy, tubercle bacilli in sputum. He then informed me that the sputum was his own. Physical exploration by one of our most experienced physicians revealed subsequently a circumscribed area of consolidation in the right lung.

Fränkel has always found the bacilli in laryngeal ulcers of tuberculous patients, but never in those of syphilitic or other individuals. Barrow found them in the urine from tuberculous kidneys in one case.

Not only the clinical, but also the anatomical investigation already reported, confirm Koch's statement that tuberculous tissue, whether occurring in miliary nodules or as cheesy masses, whether in lung, or liver, or spleen, peritoneum, or meninges, contain tubercle bacilli, and that no other tissue harbors them. Some, it is true, find a larger proportion than did Koch, of individual miliary tubercles, in which no bacilli can be detected; this is particularly true of Ziehl's examinations. Gibbes found the bacilli in reticular tubercle in only one nodule out of ten, in the non-reticular they were usually present. Koch was inclined to the belief that his failure to detect them was due to the fact that the organisms had lost their vitality, and hence their power of absorbing aniline dyes; and demonstrated instances in which a very imperfect staining of individual bacilli was visible. This explanation is certainly plausible, yet it is possible that tuberculosis, like individual tubercles, may be produced by any

hope that he may—he will perhaps state whether those letters were received; if so, whether he answered them; if he did not, why not.

¹ Paradox: "Tubercle tissue is always infested by bacilli," yet "true tuberculosis may be produced without" them.

² Dr. Formad will enlighten us, in subsequent "Pathological Studies," as to what he will permit us to call "true" tubercle, and announces that a student of his is incubating a cognate topic. Possibly we may yet learn what constitutes "true" pus; and how many spirits can stand on a needle-point.

³ I have recently learned from my friend Professor W. H. Welch, of New York, that two essentially similar cases are known to him.

¹ Italics mine.
² Koch, by the way, does not make this statement, which is, moreover, *not* correct, since Koch, Gibbes, Ziehl, Guttmann and others failed to detect the bacilli in a certain number of tubercles.

³ If Dr. Formad shall reply to these queries—and for many reasons I sincerely

one of several causes. The clinical picture exhibits many variations; the histological structure is not peculiar to tubercle. We have learned to distinguish trichinosis from typhoid fever; charbon symptomatique from charbon; actinomycosis from pyæmia and pulmonary consumption; indeed, Pflug observed in the lungs of a cow a miliary tuberculosis, and upon microscopic examination was surprised to find that the individual tubercles contained, not Koch's bacillus but the *actinomyces bovis*; this as yet solitary observation strengthens the suspicion that among the numerous agents whose presence excites the inflammation which results in tubercle formation, there may be other parasites than the bacillus of Koch; that there may be several diseases etiologically distinct, but anatomically so similar as to be included under the common name tuberculosis; the one characterized by the famous bacillus, others, possibly, by organisms yet to be discovered. In one instance, certainly, an analogy to this supposition has become a demonstrated fact. For thirty years it has been known that the disease called anthrax or charbon is characterized by the presence of a large bacillus; yet in some cases the site of inoculation was indicated not by a malignant pustule or carbuncle, but by a local necrosis with subcutaneous formation of gas. These cases were designated charbon symptomatique. Five years ago Bollinger discovered that the bacillus found in the so-called charbon symptomatique is another variety than the bacillus anthracis which characterizes the malignant pustule—distinguished by both morphological and physiological features. And now the two diseases are recognized as etiologically distinct, though anatomically and clinically almost identical. To-day we can say with Schottelius, that *one* infectious disease, one infectious *tuberculosis*, is characterized by the presence of Koch's bacillus, though there may be others, clinically and anatomically entitled to the same name, which future research may distinguish etiologically from *this* tuberculosis, just as charbon symptomatique has been distinguished from charbon. Indeed, some observers have already expressed the suspicion, based on their own investigations, that there is more than one bacillus tuberculosis.

The association of Koch's bacillus with tuberculous tissues, and its absence from other structures, is therefore demonstrated and acknowledged; and this fact, taken in connection with Koch's own demonstrations, constitutes an array of evidence which has induced numerous German, Austrian, and English pathologists to accept as a fact the vital activity of the bacillus as the starting-point of the disease. Among these is Billroth, whose acquiescence is notable not merely because of his eminence as pathologist and surgeon, but because his own elaborate researches upon bacteria, published in 1874 and still widely quoted, led him to the conclusion that these organisms appeared in human tissues as the result, and not as the cause of morbid processes. Billroth, like the German pathologists generally, is open to conviction.

Yet while we may have, probably have, found in this bacillus the object whose presence is followed by tuberculosis, we may not forget that the appearance of the disease implies not only the presence of this organism, but also the existence of animal tissues which permit the bacillus to exercise its vital functions. Many animals, even some rabbits, resist inoculation with the freshest tuberculous material. There is, in other words, a predisposition of the animal—an adaptation of his tissues favorable to the growth of this organism. The palm-tree cannot grow in Greenland; the oak does not flourish in the desert; the bacillus anthracis and the bacillus tuberculosis rarely grow in the body of a dog. And it may not be forgotten in the excitement over Koch's discovery, that there remains much to be done in determining the nature of this predisposition *of the animal soil to the growth of the tuberculous plant*. Thus far we are utterly in the dark. Dr. Formad thinks he discovers a ray of light issuing from certain narrow lymph-spaces.

If he will prove what he asserts, he will have made a valuable anatomical contribution; yet when we remember that rabbits and guinea-pigs are peculiarly susceptible not only to tuberculosis but also to anthrax, and that cats and dogs are as markedly insusceptible to the one disease as to the other, it becomes evident that there must be some factor in the common predisposition to both diseases alike, which is not visible in the field of the microscope.

Indeed, with all due honor to Koch, and admiration for the most brilliant of experimental researches, we must admit that the discovery of the bacillus has chiefly an anatomical value: it localizes in this organism the infectious principle which had long been known to exist; it enables us to distinguish—ante- and post-mortem—infectious tuberculosis from inflammation, tubercular or other, due to other causes; but it does not as yet explain the hereditary predisposition, nor why this infection occurs in one man and not in another exposed to the same influences.

A dozen questions should be considered in this connection—the etiological identity of scrofula, tuberculosis, and fungus joint granulations; the possible infection of the infant by the mother's breath and breast, by the application of a handkerchief to the child's nostrils, etc.

Yet time permits a reference, and that but brief, to one of the most important—the possibility of infection from tuberculous meat and milk. For the so-called pearl disease of cattle, while presenting certain histological differences—an excess of calcareous salts, ascribable to their vegetable food—from tuberculosis in man and other animals, would seem to have an identical etiology; since inoculation with minute pieces into the anterior chamber of the rabbit's eye gives precisely the same result—local and general tuberculosis—as is induced by the same quantity of human tuberculous tissue and by nothing else. The effects of introducing the two into the circulation are also identical. Indeed there now remain but few who are not satisfied of the etiological identity of the two processes, especially since Koch's bacillus is found to inhabit both tissues. Yet etiological identity does not prove the possibility of infecting the human subject with tuberculous meat and milk. For it is a principle that must be borne in mind—a principle which Pasteur, in his ideas of preventive vaccination seems to have forgotten, by the way—that a material which can infect a given animal when placed in the eye, may fail when introduced into the alimentary canal or even under the skin. Koch found, five years ago, that although a mouse is so susceptible to anthrax as to be a reliable reagent in testing the strength of anthrax material when introduced subcutaneously, yet all attempts to induce the disease in mice, as well as in rabbits, by feeding them with anthrax tissues or spores, were quite unsuccessful. Since anthrax bacilli grow best in a somewhat alkaline liquid, and not at all in one markedly acid, the explanation may lie in the general acidity of the gastric and intestinal secretions in the carnivora. But whatever the explanation the fact remains.

Many experiments have been made to determine the possibility of infecting animals by feeding them with tissues and milk from tuberculous cattle. Gerlach, Orth, Bollinger, Klebs, and Chauveau were almost invariably successful with herbivorous animals; but Colin, Günther, and Müller saw only negative results. Virchow, experimenting with pigs, achieved somewhat indecisive effects; and while not inclined to deny the identity of the two diseases, he thinks it not yet experimentally proven that tuberculosis can be induced in animals by feeding them with such meat and milk. While we may quite agree in this, yet when we consider the *probability* on anatomical and experimental evidence; when we remember the peculiar frequency of intestinal tuberculosis in infants, especially in those artificially nourished; when we think that thirty per cent. of certain herds of cattle are, according to Professor Law, demonstrably tuberculous; we may be inclined to dispense with further direct experimental evidence, and avoid such meat and milk.

Original Articles.

ROTHELN.

By D. N. KINSMAN, A.M., M.D.,

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IN November, 1882, there was an outbreak of rotheln, or "German measles," in the Ohio Institution for the Deaf and Dumb. In this institution there are four hundred and fifty inmates. The sexes are about equally divided, and their ages range from six to eighteen years.

The pupils occupy four dormitories, two on each side of the main building. In each of these dormitories there are ninety beds, and one hundred sleepers. Two large halls are used in addition for the temporary accommodation of those for whom there is no place in the regular sleeping-rooms, when the institution is crowded as at present.

These conditions are obviously most favorable for the rapid spread of any infectious disease. During the winter of 1873 and 1874, so far as I know, rotheln made its first appearance in Central Ohio, when it was generally prevalent in this region.

It is also quite clear that it was not generally recognized as a new disease by the physicians, for during the last nine years I have frequently met persons, laboring under an attack of true measles, who asserted that about that time they had measles, and they were then suffering from a second attack. Occasionally, since 1874, I have met small groups of cases of rotheln.

The source of the infection which acted upon the inmates of the institution is unknown. I know of no cases being reported in the city before this outbreak.

The school had been in session since September 15th, much too long a period for the incubation of the disease in any pupil who could have been infected during the summer vacation. Therefore I am led to believe the disease was brought to the institution by some one of the many visitors, from all parts of the State, who are daily seen there. The first case was sent to the hospital on the afternoon of November 19th. The patient was a girl of seventeen. She had an irregularly outlined papular eruption, resembling the exanthem of measles, except that it was of lighter hue and in larger patches. Her eyes were red and watery and quite sensitive to light. She had some difficulty in swallowing. The throat was red and the uvula and half arches covered with red puncta. There was a hacking cough, and she complained of tightness in the chest. Pulse, 100; temperature, 98.6°. The eruption extended over the whole body and the extremities, being most marked on the back.

She said she had suffered from frontal headache and nausea the day before.

Believing the case to be one of measles I gave orders for her isolation, although I could not understand why a case of measles with so extensive an exanthem should show so little constitutional disturbance.

On the morning of the 20th the temperature was 98.6°; pulse, 90. The eruption had subsided on face and neck so as to be barely perceptible, while it was yet distinct on the portions of the body covered with clothing. The congestion of the eyes and cough had subsided, and the patient declared herself well.

The nature of the case was now evident, and the progress of the epidemic was from this time carefully observed. Cases reported at the hospital as follows:

	Girls.	Boys.
November 19th.....	1	0
" 20th.....	1	12
" 21st.....	1	4
" 22d.....	2	15
" 23d.....	5	7
" 24th.....	6	2
" 25th.....	2	2
" 26th.....	2	4
" 29th.....	1	0

From the last mentioned date there was a subsidence of the epidemic until December 9th, when it again appeared among the girls, and during the following five days 27 had the disease, and on the 15th 1 boy, making a total of 48 girls and 47 boys, or 95 cases in all among the mutes.

In addition, the assistant matron, a lady near fifty years; an officer, male, aged thirty; two children of the superintendent, and the daughter of the matron, were attacked, so that the institution furnished just one hundred cases.

All of the patients but five being mutes, it was difficult to secure as complete a history of the prodromes as I could desire, and still more, to increase this difficulty, many of the pupils who were attacked had entered the school at the beginning of the term, and hence had a limited knowledge of sign language. From the fact that many were seized in the schoolroom and the eruption was the first symptom noticed, I conclude in quite a proportion of cases there were no prodromes whatever. In some cases there was frontal headache, nausea, and vomiting, with vertigo. The assistant matron suffered much from headache and vertigo for twenty-four hours previous to the eruption.

In all cases there was suffusion of the eyes and in some abundant lachrymation, so that the tears ran over the cheeks. There was also a hacking cough, but by no means as severe as in measles. In one case I observed an extensive eruption of urticaria, with headache and nausea on one day. This was succeeded by an eruption of rotheln on the following day, with a complete subsidence of urticaria. In some other cases I observed a general congestion and swelling of the skin of the face and neck for several hours before the appearance of the typical eruption.

The duration of the prodromic stage was in most cases twenty-four hours. The exanthem appeared first on the face and neck, and in from two to six hours would develop over the whole body. Sometimes the eruption was slightly or not at all marked on the body and extremities, being limited to the face and neck. In other respects the eruption was subject to great variations. In one group of cases the exanthem was fine and there was a general blush of the integument, as in scarlatina; indeed, the resemblance to that disease was so close that in the absence of other characteristic cases of rotheln I should have been obliged to regard them cases of mild scarlet fever.

In another group of cases the exanthem consisted of discrete papules, from one-eighth to one-half an inch in diameter, closely resembling measles. Again, these papules would coalesce in large irregular patches an inch in diameter. This was especially the case upon the face of a boy who had acne, and in two girls who had pustules upon their faces. It was curious to observe the rapid changes the skin would undergo.

A boy came into the hospital while I was making my morning visit, his eyes were suffused and his face was covered with an erythematous blush. During the hour I was examining the other patients, the characteristic exanthem appeared, and the congestion had marked itself off into circumscribed territories around the papules. In the evening the papules alone were visible, the intervening skin having assumed its natural appearance. A boy, aged seventeen, on the first day of the eruption, had the ordinary papules; on the second day, each papule was surmounted by a vesicle. Some of these vesicles were globose and the size of a small shot; on the third day the drying of the vesicles was advanced, and on the fourth day complete. In this case the eruption was confined to the face and neck, and the exposed surfaces of the hands and wrists. There was no eruption on the palmar surfaces. The eruption was in all cases elevated and rough to the finger, and exfoliated in small branny scales. The patients all complained of the itching. On the decline of the eruption I observed in three cases a

puffy condition of the integument of the forehead, and in two cases oedema of the ankles. The urine was examined for casts and albumen with negative result.

The throat symptoms in all my cases were mild, in no case did I observe false membranes or ulcerations. There was a little swelling of the glands of the neck in a few cases, and in the cases where this occurred it was confined to the glands around the angle of the jaws. The mucous membrane of the soft palate was, with the uvula and tonsils, slightly swollen and dotted over with a multitude of prominent points like "goose-flesh" of the skin. In some of the throats I noticed dark mottling of the swollen membranes, which appeared to be due to minute extravasations of blood. These spots remained after the decline of the other symptoms, and were observed as late as the fourth day.

The tongue was usually covered with a thin white fur through which the papillae projected as red points. As a usual thing, the appetite was good after the second day, and was in no way impaired in the patients who had no nausea. The bowels were not disturbed. Headache was not severe in most cases, and the pain seemed to be confined to the frontal region. There were six cases in which the pain might be called severe, and was associated with vomiting. A careful examination of the cases in which the cough was worse failed to show any thing wrong with the bronchial tubes. There was no expectoration attending the cough. The temperature in one case reached 103° . Six cases registered 101.5° . I find ten recorded at 99.5° , while many reached 99° , but the largest number showed 98.6° . Chilly sensations were complained of frequently, and were especially noticed in all the patients who could speak. The pulse was in one case 110; most of the cases ranged from 85 to 90, while many never exceeded 80. I recognized no special odor among these patients such as is described by some writers. The duration of the eruption was usually three days. There was not a case in which I could recognize it as late as the sixth day, even on the protected surfaces. There were no critical discharges. I saw no decided complications. One boy who had the exanthem on the 24th, on the 27th had a decided chill followed by a croupous pneumonia. All of the patients who could speak said their muscles were sore and painful on movement for some days after the decline of the eruption. In four cases the fingers and wrists remained swollen and painful for several days.

One child was confined to bed for a week after the disappearance of the exanthem. In her case, in addition to the above-mentioned joint affection, there was general muscular soreness, which caused extreme suffering when she moved or when pressure was made upon the muscles. The soreness was the greatest over the extensor surfaces.

The disease is unquestionably contagious. The contagion is not so active as that of measles. The number of pupils attacked was twenty-one per cent. of the whole. Only three adults suffered from the disease out of about fifty who were employed in the institution, showing thus a diminution of susceptibility with increasing years. Of the nutes who suffered, twenty traced their deafness to scarlatina. Many of them had had measles, but as this was not recorded as the cause of their deafness in any of these patients I could not obtain definite information on this point. All these patients recovered, which would seem to justify an absolutely favorable prognosis.

Evidently from what has been written on this disease by British authors it is not always the mild affection which has been observed in America.

J. Lewis Smith says "it resembles varicella in general mildness of symptoms, in the absence of dangerous complications or sequelae, and in the uniformly favorable prognosis, while its symptoms and history show its close alliance with measles and scarlet fever."

Palmer says: "As the disease is so slight and devoid

of serious consequences no particular medicinal treatment is required."

Hartshorne, in "Reynolds' System of Medicine," indicates "an absence of any fatal cases."

Aitken, however, in his "Science and Practice of Medicine," gives an account of the lesions seen in fatal cases, and describes a much more active and intense form of morbid action than has ever been reported by any American author. He says the prognosis requires to be as guarded as in scarlatina, for, like scarlatina, rubella is often an extremely rapid and fatal disorder." Indeed, the account he has given, as to the duration and gravity of the disease, would lead one to think he had in mind some anomalous forms of measles and scarlatina, or a true hybrid instead of rotheln, as we have observed it.

Furthermore, by comparing the accounts given by Smith and Hartshorne with my observations, variations in local epidemics can be observed.

CYSTO-ABDOMINALRAPHY.

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SURGEONS are not in accord regarding the best method of dealing with a supra-pubic incision of the bladder. With some the open method is invariably adopted, others as uniformly suture the vesical wound, and drop the viscus into the pelvic cavity to take care of itself. While both methods have shown good results, they are far from being as satisfactory as could be desired. This will probably be admitted by the most ardent advocate of either procedure. The choice of a third and, as it would seem, a very safe operation, comes to us in the suggestion to bring the bladder-wound in apposition and in union with the abdominal wound. This proposition dates back as far as 1716, Joh. Jacob Hoyt ("Unterricht von den tödtlichen wunden des ganzen menschlichen Leibes"), but so far as I know has never been practically carried out until recently by Dr. T. G. Thomas, of this city, who, in the course of a laparotomy, found it necessary to open the bladder in order to determine the upper limit of the viscus which was adherent to the tumor. After the removal of the cyst, the lips of the vesical incision were drawn up and clamped between those of the abdominal wound by means of silver sutures. A Sims sigmoid catheter was kept in the bladder. The sutures were removed on the tenth day, and at the end of three months the patient went home entirely well. As a single instance of success can never establish the safety or feasibility of an operation for general adoption, I sought further evidence in the following experiments, the results of which, I think, tend strongly to confirm our confidence in the practicability of what may be called "cysto-abdominalraphy." The first three experiments were made last winter at the American Veterinary College, the latter five by my former assistant, Dr. R. H. Harrison, of Lowell, Mass., to whom, also, I am indebted for the notes:

EXPERIMENT I.—Brown dog, partly setter; weight about 60 pounds; three years old. Etherized; supra-pubic incision of abdomen. Bladder opened on the end of a catheter, introduced through a previously made perineal incision to the extent of an inch, and the vesical lips brought together with the abdominal wound by means of silk sutures. Lister's dressing; catheter tied in the bladder through perineal incision. Next day, temperature, 104° F.; pulse, 120; respiration, 18. No appetite; considerable depression. Catheter removed thirty-six hours after operation. On the second day, temperature, 102° F.; pulse, 110; respiration, 18; drinks a little milk. From this time dog rapidly improved; sutures remained five days, but urine escaped through the abdominal wound. Granulations touched with nitrate of silver. On the fifteenth day, wound entirely closed; urine passes *per viam naturalem*; appetite

and spirits good. On the twenty-first day animal was killed, and the bladder was found to be firmly adherent to the anterior abdominal wall.

EXPERIMENT II.—Black Newfoundland bitch; weight, 50 pounds; aged four years. Operation same as in Experiment I. Dressings of oakum applied over abdomen. For six days temperature ranged from 102° to 106° F.; pulse, 100 to 145; respiration, 18 to 24. A subcutaneous extravasation of urine occurred, extending to the left mamma, which afterward sloughed, leaving a large granulating surface. The wounds, however, all healed, and on the thirty-second day the animal was killed, and the bladder was found adherent to the anterior wall of the abdomen.

EXPERIMENT III.—Poodle bitch; weight 20 pounds; two years old. Operation same as before. Sutures held for three days, after which healing by granulation. Dog seemed in good health and spirits throughout. Fistula closed completely in ten days. Killed on the twenty-first day; bladder found attached to the anterior abdominal wall.

EXPERIMENT IV.—A cross-bred setter bitch; four years old, and weighing 40 pounds; in poor condition at the time of operation. Was fasted for twenty-four hours, and operated upon under the carbolic spray. The operation was performed as in the previous cases. Four interrupted sutures of carbolized silk were used, and no dressing of any description applied; a harness was immediately put on, so that she could not bite the part, or tear the stitches away. Was then put in a dark place and left alone for twenty-four hours. When visited was somewhat stupid from the effects of the anæsthetic, and seemed unwilling to eat or drink. The pulse and temperature were normal, and the respiration a little below normal. The wound looked healthy; there was some inflammatory swelling, but no discharge of urine through the incision. As far as could be seen no urine had been passed; a catheter was carefully introduced, and about one and a half ounces of high-colored urine was withdrawn. Nothing was done to the wound except to spray it for a few minutes with carbolic solution. On the third day she drank a little beef soup, appeared quite in her usual spirits, and passed her urine at two different times. On the fifth day the stitches were removed, and she was given her freedom and a generous diet, together with gentle exercise. The wound has entirely healed by first intention, and there has been no escape of urine through the incision. Was allowed to run about the infirmary for a week, and was then destroyed. Autopsy showed firm adhesions between the bladder and the abdominal walls. The bladder was healthy, and showed slight thickening at the point of incision.

EXPERIMENT V.—A white bull bitch; six months old, and weighing 20 pounds; in good condition. She was prepared and operated upon as in the first case, and placed under the same conditions of quiet and fasting. The wound healed by first intention in the anterior two-thirds, the remaining third by granulation. The reason of this partial failure was due, most likely, to the suture being tied too tightly. There was no escape of urine from the wound at any time, the animal voiding her urine naturally. She was kept ten days after healing had taken place, and then destroyed. The autopsy showed firm adhesion of the viscus to the abdominal walls. The bladder itself was hypertrophied, enlarged, and flabby, but otherwise healthy.

EXPERIMENT VI.—A black and white cur dog; two years old; weight, 49 pounds; in good condition. Before opening the bladder a perineal incision was made to facilitate the introduction of a catheter, which was afterward retained in place by stitches taken in the surrounding skin. The abdominal incision healed by first intention. The perineal wound was nearly four weeks in closing, the urine constantly dribbling away, until healing took place. On post-mortem examination the bladder was found to be firmly united to the line of the abdominal incision. The

urethra was constricted to about one-half its natural size where it had been opened.

EXPERIMENT VII.—A hound; liver and white; seven or eight years old; weight, 49 pounds. The operation in this case was a repetition of the previous one, except no catheter was allowed to remain. Healing with first intention took place in the abdominal incision in four days. The perineal incision healed by granulation, and the urine, after the third day, escaped by its natural outlet. Adhesions were well established in this case and the bladder and urethra were healthy.

EXPERIMENT VIII.—A partly bred Gordon setter bitch; nine months old, and weighing 53 pounds; plethoric. This patient required an unusual amount of ether to effect anæsthesia, and during the operation artificial respiration had to be performed. The following day the temperature was elevated to 105° F.; pulse, 120; respiration, 60. There was much inflammatory swelling about the wound, with a slight discharge of urine. A catheter was introduced, but it gave rise to so much irritation that it was not allowed to remain. For more than a week the temperature was from 105° to 101° , the animal having no desire to eat, but showing intense thirst. A fistulous opening was present, through which the urine escaped continually. This remained until she was destroyed, twenty-five days after the operation. Autopsy showed adhesions more marked than in any of the other cases, and a fistulous tract, large enough to admit a silver probe, leading from the bladder to the surface.

The bladder in the dog is covered on all sides by peritoneum, hence our operations were intra-peritoneal. In Experiments I., II., and III. we did not succeed in getting union by first intention. After three or four days the sutures gave way, and healing went on by granulation, with escape of urine from the abdominal wound. Nevertheless, it was gratifying to note that adhesions preventing the escape of urine into the peritoneal cavity had already occurred thus early, and rapid closure of the fistulous tracts ensued. In Experiment V. two-thirds of the incision healed by first intention. In Experiments IV., VI., and VII. healing occurred throughout by first intention. In Experiment VIII. a fistulous tract remained, sufficient to admit a silver probe, and it is to be regretted that no attempt was made to close the same, which undoubtedly could have been effected without difficulty by the application of a suture. It may therefore be said that our experiments have been uniformly successful. In all the cases firm adhesions between bladder and anterior abdominal wall were found to exist. In the first two cases the dressings applied were practically useless, and in the subsequent experiments no dressings were used, the wound in each being occasionally irrigated with carbolized water. A catheter could be retained in only two of the dogs, and that with difficulty for but a short period. We observed that in nearly all the cases some hypertrophy of the bladder-walls was manifest, induced, no doubt, by the abnormal attachments of the viscus.

It is true that the peritoneum in the dog is very tolerant of injury, but not much more so than that of man, as abdominal surgery has long since demonstrated that the danger to life from injury to the peritoneum, so long as no decomposable or septic fluid escapes and remains in its cavity, is very slight indeed.

It is obvious also that the conditions of position, mode of life, etc., of the animals experimented upon are such as would militate against, rather than favor the success of such an operation, while in man, quiet, recumbent posture, constant drainage of bladder by catheter, Listerism, etc., are available factors which will contribute no little to the safe and rapid union and healing of a cysto-abdominalraphy.

A Boy describes the method of extracting a tooth in this way: "The doctor hitched fast to me, pulled his best, and just before it killed me the tooth came out."

INFUSION OF THE LICORICE BEAN (JEQUIRITY, ABRUS PRECATORIUS) IN THE TREATMENT OF INVETERATE PANNUS.¹

By EMIL GRUENING, M.D.,

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THERE are conditions of vascularity and infiltration of the cornea which resist every mode of treatment, remedial as well as operative. As a last resort in these desperate cases of trachomatous pannus, inoculation of the eye with blennorrhoeic or gonorrhoeic pus has been proposed, and in a number of cases successfully practised. The purulent inflammation of the conjunctiva following this mode of inoculation often destroys the granulations of the lids and clears the opaque cornea. In spite of such favorable results, the treatment of pannus by inoculation has not been generally adopted. Many surgeons are strongly opposed to it, and base their objections upon the following arguments: 1, the introduction of pus, especially gonorrhoeic pus, into the eye of man, is in itself a revolting procedure; 2, the ensuing ophthalmia often gives rise to diphtheritic infiltration, which may destroy the eye; 3, the patient may become infected with syphilitic virus from urethral chancre; or, 4, may become affected with gonorrhoeic arthritis.

This array of facts and possibilities is sufficiently potent to deter both the physician and the patient.

Quite recently de Wecker, of Paris, published an account of a new method of rapidly causing purulent, or rather croupous, ophthalmia in cases of inveterate pannus. This method is said to possess all the advantages of inoculation, but none of its repugnant and perilous features.

De Wecker experimented with an infusion of jequirity, or licorice bean, the seed of *abrus precatorius*, a shrub belonging to the order of Leguminosæ.

The infusion was prepared in accordance with a formula extensively used among the natives of Brazil. The formula reads as follows: Pulverize thirty-two beans, macerate them in five hundred grammes of cold water during twenty-four hours, then add five hundred grammes of hot water and filter immediately after cooling. Brushed upon the inner surface of the lids, instilled into the eye, or applied on linen compresses to the outer surface of the lids, this infusion produces, within a few days, a most decided croupous or purulent conjunctivitis, which, after the discontinuance of the irritating agent, rapidly subsides, leaving a previously trachomatous lid without any trace of granulation, and a previously opaque cornea without a vestige of infiltration and vascularity.

The gratifying results obtained by de Wecker in his cases of chronic granulation and corneal opacity induced me to employ the infusion in a few cases of inveterate pannus. Several years ago a friend had sent me from the West Indies a small quantity of the very pretty coral-like licorice bean, and as I was still in possession of the seeds, I ordered an infusion to be prepared according to the Brazilian formula given above. This infusion proved to be perfectly inert. My results were negative and are recorded as such in the Transactions of the New York Ophthalmological Society.

Inasmuch as these negative results might have been due to the age of the bean employed, I procured an infusion prepared of fresher seeds, and admitted, for the purpose of experimental study, two cases of granular lids and inveterate pannus into the eye wards of the Mount Sinai and the German Hospitals.

The first case was that of a little girl, ten years of age, who had suffered from trachomatous pannus for a number of years, without being benefited either by the perennial application of sulphate of copper or the operations of canthoplasty and peritomy.

The second case was that of a man, fifty-five years of age, who had been treated eight months with sulphate of copper in substance and the mitigated stick. His pannus was very dense, and he suffered greatly from photophobia.

The patients were treated in the following way: The infusion of licorice bean was freely applied by means of a camel's-hair brush upon the inner surface of the upper and lower lids three times daily. The application is painless. Compresses moistened with the infusion were placed over the eyes and kept in position day and night. This treatment was continued five days, during which time the man suffered from frontal headache, loss of appetite and sleep, while the child remained perfectly well, and neither of the patients exhibited any rise of temperature. With regard to the local changes observed in the course of the treatment, I may mention that during the first twenty-four hours no alteration was perceptible, but that on the third day the lids were found to be much swollen and their conjunctival surface covered with a yellowish-white membrane, which adhered firmly in the upper and but slightly in the lower lids. The cornea had become much more opaque through an increase of vascularity and infiltration. On the fifth day, when the treatment was discontinued, all the changes had become still more pronounced. I then ordered cold applications and instillation of a saturated solution of boracic acid, and, to my intense gratification, found that the improvement in the condition of the eyes, following the jequirity treatment, was so rapid and satisfactory that both patients could be discharged ten days later. The inner surface of their lids had become smooth and shining and the vascularization and infiltration of the cornea had completely disappeared.

These two cases fully corroborate the glowing account given by De Wecker of the action of jequirity upon inveterate pannus. The limited experience thus gained is most encouraging, and it seems probable that in this infusion of the licorice bean a specific has been found for a class of cases that hitherto resisted every mode of treatment. More experience, however, is needed. Gentlemen who have pertinent cases and wish to experiment with jequirity can procure the fresh bean or the infusion from Mr. Fingerhut, druggist, corner Twenty-eighth Street and Fourth Avenue, New York City.

ENCEPHALOID SIMULATING SUBCLAVIAN ANEURISM—LIGATURE OF RIGHT SUBCLAVIAN IN SECOND PART OF COURSE.

By HENRY E. JONES, M.D.,

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(Reported by F. B. EATON, M.D.)

SURGICAL literature, and especially periodic literature, has chronicled a few narratives illustrating the unusual difficulties involved in the differential diagnosis of aneurism when the existence of a tumor is suspected. No form of tumor presents so many diagnostic difficulties as encephaloid, and perhaps in no part of the body are these difficulties so great as in the posterior triangles of the neck.

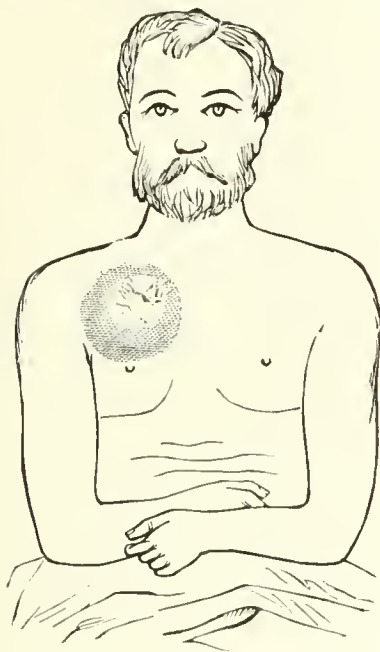
The following history and operation will attest these statements, as well as the unreliability of the history itself, so much depended upon as a means of diagnosis. Moreover, it will serve to emphasize the warnings so often repeated in the text-books, while it proves their limitations in practice:

K—, aged forty, an American backwoods farmer, consulted me October 15, 1882. He had been a hard worker, for the past five years, at wood chopping. A year ago he first felt pain in the right shoulder, and supposed it to be rheumatic. Two months ago he first noticed a lump had formed over the right collar-bone and attributed its appearance to lifting. It throbbed when first noticed, this throbbing being increased by fast walking and work. Four weeks ago he consulted two physicians, who said they heard a "bruit" and saw the lump pulsate, which pulsation was apparent to himself also. The last time it pulsated was three weeks ago, when, while fixing a fence, he suddenly felt something give

¹ Read before the New York State Medical Society, Albany, February 6, 1883.

way in the region of the tumor, and experienced such severe pain that he could not rest. Heat and rubbing allayed the pain somewhat. Family all healthy excepting an older sister, who, however, had no trouble of this nature.

The patient was a healthy, robust-looking subject, with a fine color and complexion, the very opposite of cachectic, the expression of the face being, however, a little drawn and anxious. The right clavicle was displaced upward, and behind and above it was a somewhat firm swelling, extending about two inches posteriorly to the clavicle. Below the clavicle, and occupying nearly the whole pectoral region of that side, was a round swelling, plainly continuous with that above the clavicle, measuring seven inches in diameter and extending from the inner border of the deltoid nearly to the sternum.



In the cut the tumor is too heavily shaded, and the right clavicle not elevated as it should be.

One or two subcutaneous veins were faintly seen over the centre of the convexity. It was soft and elastic to the touch, having a cystic feel, but there was no fluctuation, neither was there discoloration of the integument or enlargement of glands. The appearance of the swelling and venous injection gave me, at the first glance, the impression that here was an encephaloid, but learning that a *bruit* had been heard, and in consideration of the history, I advised perfect rest, in order that the diagnosis might more readily be ascertained. Accordingly he was put to bed and quiet maintained. The pain now increased, apparently as a result of the confinement. After ten days there was no marked change to be noticed in the tumor, only a slight enlargement and some flattening. Deep pressure over the second portion of the subclavian controlled the pulse, but caused no perceptible difference in the tumor.

The question of diagnosis now lay between a diffuse aneurism and a tumor; the presumption being, from the sudden disappearance of pulsation during exertion, that it was the former.

An operation was decided upon as the only course now open.

On the day of its performance the temperature was 101° . My purpose was to expose the subclavian in the second part of its course, and, throwing a ligature around it at a sufficient distance from the tumor to fulfil the Hunterian principle (leaving it untied), to explore the swelling by incision. My assistants, however, arrived so late and the operation proved so difficult from the cla-

vicular displacement that the winter twilight of this northern latitude was upon us by the time the ligature was around the artery. It was decided, therefore, to tie the artery, which was done directly behind the outer edge of the *scalenus anticus*. The ligature controlled the pulse perfectly, and the wound was closed by sutures and dressed antiseptically.

The tumor was then explored by plunging a hypodermic needle and syringe into the apex of the tumor and a small amount of half-clotted blood was withdrawn. The patient reacted well and collateral circulation was evidently soon established, as the arm remained warm. The temperature for three days remained uniformly at 101° , the only symptom of note being pain of some severity in the right side of the neck above the wound.

On the morning of the fourth day the temperature rose suddenly to 104° , and heavy sweating ensued. The case presented now all the symptoms of septicæmia, though the wound had been kept carefully cleansed, and the patient died on the night following the sixth day with a temperature of $107\frac{1}{2}^{\circ}$.

Autopsy.—Twelve hours after death.—Several of the sutures had cut through and pus had formed in the wound, burrowing a short distance up the side of the neck. An incision was made over the most prominent portion of the swelling, exposing the pectoralis major, which was cut and reflected. The pectoralis minor was found much stretched by the underlying prominence, but on dividing and reflecting it, it was found to have no connection with it. The tumor as now exposed was found to be a large encephaloid, lying freely within, and filling nearly the whole pectoral region, as well as a portion of the axilla, extending as far back as the anterior edge of the latissimus dorsi. Upward it extended under and above the clavicle, which was considerably displaced. Its upper and inner extremity touched the scalenus anticus, about one-third of its bulk being above the clavicular boundary line. In the vicinity of the wound the tumor had, as a result of the operation, sloughed considerably. The artery was found to be plastically occluded; the ligation correct and complete.

The tumor was dissected out completely, and on passing a catheter through the axillary end of the artery, the latter was found to pass through the substance of the tumor, while dissection proved the vessel not to be included in the morbid process. The most prominent portion of the mass which had been aspirated was found softened and full of black blood. The pleura and pulmonary tissue were normal.

Remarks.—A due consideration of the patient's history and symptoms, and of the position and attachments of the tumor will make it apparent that diagnostically this case is instructive as well as interesting.

To illustrate one remarkable simulation of aneurism which this tumor affords, it may be cited that in placing the ligature and clearing a space with the fingers for the aneurismal needle, the portion of the tumor touched had a "feel" precisely similar to that of a *sac* containing blood. But more particularly the case serves to demonstrate the unreliability of the so-called "scientific tests" of aneurism, as well as the tendency of the patient's own history to mislead. This patient was of unimpeachable honesty and intelligence. The tumor was in the course of a large artery when it first appeared. Two physicians, one known to myself as thoroughly competent, hear a "bruit," and see the pulsation; the latter ceases suddenly with the exact symptoms attending the formation of a diffuse aneurism. In addition there was neither cachexia nor glandular infection. My first opinion, partly intuitive, proved correct, while the careful application of systematic methods of diagnosis by myself, and by several very competent surgeons in consultation, only served to mislead. The negative result of aspiration by a fine needle hardly coincides with Gross' assertion of its value in such cases. He says (vol. i., p. 717, fifth ed.): "When no satisfactory decision can be arrived at, the

only resource is the insertion of a delicate exploring needle, which, while it can do no harm, if it be properly employed, will at once determine the diagnosis." Here the half-clotted blood withdrawn only obscured correct diagnosis.

Where the diagnosis remains doubtful it certainly seems wise to expose the artery, adjust the ligature untied, and then make an exploratory incision of the tumor.

Reports of Hospitals.

ST. FRANCIS HOSPITAL, NEW YORK.

SERVICE OF C. LELLMAN, M.D.,

(Reported by WILLIAM D. DIETZ, M.D., House Physician.)

CASES OF TYPHOID FEVER.

SINCE October 1st, the commencement of the writer's term as House Physician at St. Francis Hospital, there have been treated in the service of Dr. Lellman, thirty-one cases of abdominal typhus. A short epitome of the histories of some of these may prove of interest as illustrative of various manifestations of the malady. In six instances the disease terminated fatally; one patient being brought in moribund, and dying in short time.

CASE I.—*Typhoid fever—Pulmonary infarction—Pneumonia—Pulmonary abscess—Pyo-pneumothorax—Femoral embolism.*—Anton H—, aged nineteen, wig-maker. Initial chill, September 22d; admitted September 25th. The symptoms were of moderate intensity, and under expectant treatment the patient soon improved. On October 1st, the morning and evening temperatures were 99°; the diarrhoea had ceased, the bronchitis disappeared, and the patient complained merely of weakness. On the 7th, however, the morning temperature was 104°, and signs of an incipient pneumonia, involving posteriorly the lower portion of the left upper lobe, were present. The inflammatory process was regarded as of embolic origin, and embolism of other parts of the body was anticipated. On the 8th, a pulmonary hemorrhage took place, which recurred with less intensity on several subsequent days. A week later, sudden pain was experienced in the right inguinal region, extending from there along the course of the femoral artery; the limbs felt cold and numb, and the vessel imparted the sensation of a hard cord in Scarpa's triangle. An occasional feeble pulsation could be detected at Poupart's ligament, but below this point none. Meanwhile, the pneumonic process had extended, and had gone on to the formation of an abscess. The pleura was perforated, and pyo-pneumothorax established, to which the patient succumbed October 19, 1882.

CASE II.—*Typhoid fever—Catarrhal pneumonia—Femoral embolism.*—Max W—, aged twenty-six, miller. Initial chill, October 20th; admitted October 26th. The disease at first ran the course of an ordinary typhoid attack, exhibiting intermittent thermometric fluctuations in the fourth week. On November 18th, the morning temperature was 99°. Later in the day the patient complained of great pain in the right side, and presented signs of a beginning inflammatory process of the base of the right lung. On November 19th, the temperature was 103° in the morning, and 105° in the evening. The pneumonia extended until it involved the right lung below the middle of the fourth rib anteriorly, and the eighth posteriorly. In the course of this complication the patient complained of pain in the left groin and region of the femoral artery (December 10th). Pulsations in the vessels were found to be feeble and diminished in number at Poupart's ligament, and absent in Scarpa's triangle, in which situation the artery was rigid to the touch. The limb felt numb, and its temperature was lower than that of the other side. By December 24th, all pulmonary symptoms had disappeared, but collateral circulation had not yet

been perfectly established through the right lower extremity. January 24th: The patient has entirely recovered with the exception of a certain amount of swelling of the left lower extremity.

CASE III.—*Typhoid fever—Double catarrhal pneumonia—Otitis media.*—Annie H—, aged fifteen, domestic. Initial chill, November 27th. Eruption on the tenth day. The attack was a very severe one, and utterly prostrated the patient, an anæmic girl, in a short time. For quite a period she lay at the point of death, in a condition of stupor, low, muttering delirium, and extreme subsultus. December 21st: Temperature, 8.30 A.M., 98°; 7 P.M., 101°; 9 P.M., 105°. About 9 P.M. she had several marked chills, the first indications of a pneumonia which was to involve both lungs posteriorly from apex to base. By January 5th the right lung, and by January 17th, the left, had returned to their normal condition. An otitis media developed itself on January 1st, but yielded to treatment in a few days. February 1st. The patient has entirely recovered.

CASE IV.—*Typhoid fever—Intestinal hemorrhages—Paralytic dysphagia—Epistaxis—Otitis media.*—George E—, aged twenty, tailor. Initial chill, September 18th; admitted October 2d. A few days after admission the patient had several profuse intestinal hemorrhages, which jeopardized his life and served to increase an already existing anæmia. Six weeks later, after the subsidence of the typhoid symptoms proper, a paralytic dysphagia manifested itself, the patient speaking in a thick unintelligible, nasal voice, and complaining that he could not swallow unless lying down, and that ingested fluids occasionally passed out through the nostrils, or into the larynx. At the same time he suffered from epistaxis to such a degree as to necessitate the adoption of active measures for its prevention. As a result, possibly, of the entrance of ingesta into the unguarded Eustachian tube, an otitis media developed (December 14th), which gave rise to great pain and tenderness, hemicrania, profuse purulent discharge, and considerable elevation of temperature. On January 11th, deglutition was easier, speech more distinct, and the otitis had disappeared. The patient thereafter gained rapidly in weight, and by January 16th was without fever, and could talk and swallow as well as ever. He is now, February 1, 1883, entirely cured.

CASE V.—*Typhoid fever—Parotitis.*—W. F. G—, aged seventeen, clerk. Initial chill, October 11th; admitted October 23d. The course of the disease was quite a severe one. The intermittent stage was reached on November 6th. Two days later, however, the morning temperature was 105°; the patient experienced a chill of extraordinary severity, complained of pain and tenderness in the parotid region, and soon became delirious. Well marked swelling of the gland occurred, and in the evening the temperature rose to 106½°. On November 9th, the temperature in the morning was 104¾°, and in the evening 106°. On November 10th, it was 104½° and 106° respectively. The patient succumbed from exhaustion, at 10 P.M., November 10th.

CASE VI.—*Pneumotyphus.*—Ludwig J—, aged fifteen. The initial chill occurred on November 14th, and the characteristic eruption appeared on the fifth day. The evening temperature of the last six days of the first week was uniformly 105°. Throughout the course of the disease there was no diarrhoea, the bowels being rather inclined to constipation. The bronchial manifestations, on the other hand, were exceptionally severe, bronchitis occurring early, and soon associating itself with pulmonary collapse and intense hypostasis. By December 1st, all bronchial symptoms had subsided, and by the middle of the month the patient had entirely recovered.

CASE VII.—*Abortive typhoid.*—George O—, aged twenty-eight. Initial chill October 30th; admitted November 4th. The eruption and the early manifestations were those of the "normal" typhoid of Niemeyer; but the highest temperature observed, on the seventh day,

was 103 $\frac{3}{4}$ °. In the second week there was but a slight bronchitis, and the abdominal symptoms had entirely subsided; the highest temperature attained was 104°. In the beginning of the third week convalescence was established, and the patient went on to his final recovery without untoward accident. He left the hospital December 18th.

CASE VIII.—*Typhoid fever—Croupous pharyngotonsillitis.*—Robert B—, aged thirty-four, singer. Was taken sick on November 30th, and admitted December 16th. At the time of admission, the abdominal and bronchial symptoms had ceased, but the patient was utterly prostrated. A croupous exudation involved the pharynx, tonsils, the hard and the soft palate. In spite of energetic stimulation, the heart gradually gave out, and the patient died nine days after admission. The autopsy showed recent typhoid intestinal ulcerations.

Progress of Medical Science.

THE MORTALITY REFERABLE TO ALCOHOL.—At the end of a long and carefully prepared report recently drawn up by a committee of the Harveian Society, it is concluded that there is, upon the whole, reason to think that, in the metropolis, the mortality among any considerable group of intemperate persons will differ from that generally prevailing among adults in the following important particulars, viz.: a fourfold increase in the deaths from diseases of the liver and chylipoietic viscera; a twofold increase in the deaths from disease of the kidney, a decrease of half as much again in those from heart disease, a marked increase in those from pneumonia and pleurisy, a considerable increase and an earlier occurrence of those from disease of the central nervous system; a marked decrease in those from bronchitis, asthma, emphysema, and congestion of the lungs, a decrease nearly as great in those from phthisis, and a later occurrence, or at least termination, of the disease; a very large decrease of those from old age, with an increase of those referred to atrophy, debility, etc., and the addition of a considerable group referred in general terms to alcoholism or chronic alcoholism, or resulting from accidents.—*British Medical Journal*, February 3, 1883.

NOCTURNAL ENEURESIS, TREATED BY VOLTAIC ALTERNATIVES.—Dr. Althaus writes, *British Medical Journal*, February 3, 1883: "In June, 1882, I was consulted in the case of a boy, aged fifteen, who had suffered from incontinence of urine during sleep, ever since he was nine years of age. He had been treated with belladonna and other medicines without relief; and as he was about to enter a public school, where a continuance of this trouble might have been particularly annoying, the parents were very anxious that something more should be done. The boy's general health was good, but he was considered a nervous child, and highly sensitive. There were no ascarides, but he had a very long prepuce which could only with difficulty be retracted. There was, however, no suspicion of masturbation. Treatment by electricity having been recommended, I applied the middle-sized circular cathode over the region of the bladder, and the large oblong anode (five inches by two) to the lumbar portion of the spine. The current-strength 2.50 milli-amperes for five minutes at a time. As after a few such applications no material benefit appeared to have been gained, I then added fifty voltaic alternatives produced in the metallic circuit. The night after this was free from the usual annoyance, and the boy has made an apparently uninterrupted recovery." Dr. Althaus prefers this method of treatment to injections of nitrate of silver, as recommended by Sir Henry Thompson. He believes that belladonna is of value when eneuresis is distinctly caused by undue excitability of the bladder.

COMPOUND FRACTURE OF THE FEMUR, Erysipelas, PYÆMIA—AMPUTATION OF THE THIGH—SUBSEQUENT EXARTICULATION AT THE HIP—COMPLETE RECOVERY.—Barker describes a case under this title at great length. The patient was a rivetter, aged twenty-nine, who fell from a roof and fractured his femur. The case illustrates, in the first place, what is, however, unfortunately rare in experience, namely, the possibility of recovery from pyæmia, even in a patient weakened by a most severe injury, prolonged suppuration, and an attack of erysipelas. Secondly, it illustrates the feasibility in some cases of amputating with the best results through the thigh for compound fracture, leaving a second compound fracture in the neighborhood of the hip-joint to be treated otherwise later on, when the first amputation wound is healed. Thirdly, it shows that, in such a case, it is possible to exarticulate the whole of the remaining bone up to the hip-joint, without re-amputation through the soft parts, but through a moderate opening in the outer side of the stump.—*British Medical Journal*, February 3, 1883.

SALICYLATE OF SODA IN ACUTE ORCHITIS.—Dr. Henderson, of Shanghai, reports (*Lancet*, December 16, 1882) three cases of gonorrhœal epididymitis in which the symptoms were rapidly relieved by salicylate of soda. In using it, Dr. Henderson advises that only acute cases, i.e., those in which there is distinct rise of temperature, be selected. The dose should not be less than twenty grains, repeated every hour until at least three doses have been taken. Afterward the drug is to be given at longer intervals.

A NEW TREATMENT FOR GONORRHOEA.—A correspondent writes to the *Lancet* concerning what he considers a rational treatment of this common affection. He gives regularly five-grain doses of iodide of potassium, and full doses of cubeb in powder, every three hours. The cubeb in drachm doses he finds rarely fails to cut off the ailment rapidly, and the iodide, besides its solvent influence on the essential element of the powder, has a well recognized action on the various mucous surfaces.

ELECTRICITY IN INTERMITTENT FEVERS.—The treatment of intermittent fever by electricity in the Medical Clinic of Genoa, directed by Professor de Renzi, has given very good results (*Annali Univer. di Med.*). Electricity was first tried in the treatment of intermittents by Frank and Borsieri, afterward by Aldini, Cavallo, and Puccinotti, and lately, after having been neglected for a long time, by Bossi, of Rome, Sini, of Leghorn, and by Shipulski, Deparquet, etc. In De Renzi's hands it gave immediate and decisive results. He says that in the majority of cases intermittent fever can be cut short more promptly than by quinine. In nine cases he had five complete cures, one marked improvement, one slight, and two unsuccessful cases. He uses the constant and the faradic currents; the constant applied for five to fifteen minutes in ascending direction along the spinal column, the rheophores being placed over the two extremities of the medulla; the faradic of medium intensity for half an hour, the patient holding a rheophore in each hand. The faradic was more efficacious than the constant current.

FREQUENT TAPPING IN ASCITES.—Mr. Paterson, in the *Lancet*, December, 1882, mentions a case of cirrhosis of the liver in a woman, aged forty-two, in which he tapped the abdomen with a small canula thirty-nine times in eight months, drawing off altogether one hundred and ten gallons of fluid. The treatment, however, was only palliative.

THE THERAPEUTIC USE OF CLAY.—Dr. Saveljeff, of Vladimir, confirms the results published by Drs. D. T. Sokoloff (*London Med. Record*, April, 1882) and A. Masalitino (*Ibid.*, November, p. 452). Having followed the advice of Professor Botkin, he has since 1878 employed clay-cakes in about one hundred cases of cardiac organic

diseases, cardiac neuroses, and palpitations, of every kind, and invariably met with most remarkable success. He takes common red clay (instead of Sokoloff's sculptor's clay, or Masalitinoff's plaster of Paris), moistens it with water until a thick paste is formed, makes a cake of a palm's size and of a finger's thickness, and then applies it to the cardiac region. Pain disappears within eight to ten minutes, palpitation within ten to fifteen. A cake dries in feverish patients in two to three hours, otherwise in five, and then is to be changed. In conclusion the author states that the Vladimir peasants from time immemorial have employed red clay-cakes (all over the body) as a cooling remedy in febrile cases of every description.

THE SALICYLATES AND HEMORRHAGES IN TYPHOID FEVER.—In the *British Medical Journal* Dr. Fergusson calls attention to the increased frequency of hemorrhages, which he observed in typhoid fever patients treated by the salicylates. He raises the question whether these salts could favor the production of that accident. Dr. Fergusson's successor at an infirmary noticed similar results, following the use of the salicylate of soda. The latter gave ten to fifteen grains of the drug frequently, while Dr. Fergusson exhibited the salt in half-drachm or drachm doses at longer intervals. The question raised by Dr. Fergusson still remains an open one.

DISPLACEMENT OF THE HEART AND SYNCOPE IN PLEURISY.—Dr. Tchirkoff has undertaken a series of experiments on dogs in order to elucidate two points: first, the causes and mechanism of cardiac displacements; and second, the causes of syncope in patients suffering from exudative pleuritis. He has arrived at the following conclusions: 1. In all cases of pleuritic effusion, the first change in the position of the heart consists in a rotatory movement round the long axis from right to left, the apex invariably turning to the right. 2. This rotation depends upon the increased filling of the right side of the organ, in consequence of narrowing of the blood-current in the pulmonary artery. 3. With increase of the exudation and diminution of negative pressure within the corresponding pleura, the difference in pressure between the affected and healthy pleuræ finds its expression in a displacement of the heart toward the healthy side; the displacement to the right (*i.e.*, in cases of left-sided effusion) always being greater and developing more rapidly than that to the left. 4. The apex and the base are displaced simultaneously, but the former in a greater degree than the latter. 5. Positive pressure of an exudation acts only on the distended pericardium and mediastinum, but not at all on the heart itself. 6. Therefore, any extensive displacement of the heart, under the influence of sudden or forcible movements of a patient, cannot take place, for the force of pressure is not excited on the heart, but on various other very elastic structures. 7. In cases of very considerable pleuritic effusions, no rotation of the heart (from right to left) is usually observed; the organ may even appear rotated from left to right under the positive pressure produced by the exudation on the right side of the heart. 8. The sudden death of pleuritic patients cannot be caused by displacement of the heart and sudden compression of the inferior vena cava (as Bartels teaches); for neither experimental cardiac displacements nor a few minutes' compression of the vein in dogs could bring about any attack of syncope; besides, as it is already stated above, any extensive displacement of the heart in a pleuritic patient is impossible. 9. As the author's experiments show, a heart which is exhausted from accommodative work in a case of the pleuritic effusion may be easily and irrecoverably stopped by irritation of one of the vagus nerves; from this experimental fact he concludes that pleural inflammation spreading over the mediastinum may exhaust the heart through directly acting on the cardiac nerves, and so may produce an attack of syncope. According to the author, syncope may occur even in cases of scanty effusion, or after the opera-

tive removal of the fluid and after cessation of the compensating work of the heart. As one of the causes leading to exhaustion of the heart, the author points out an excessive quantity of carbonic oxide present in the blood of pleuritic patients. In conclusion, Dr. Tchirkoff recommends, while operating in empyema, to keep in view that an exhausted heart may be easily stopped in a reflex way, *e.g.*, in consequence of pain caused to the patient.—*London Medical Record*, February 15, 1883.

HYPODERMIC USE OF IODIDE OF POTASSIUM.—Dr. Gilles de la Tourette (*Le Progrès Médical*, January, 1883) draws attention to the hypodermic use of iodide of potassium. He found that it was possible to introduce a syringeful of a solution containing 7.5 grains of iodide of potassium, carefully neutralized, without causing any irritation. In twenty injections, only one caused a slight slough. Some burning pain was complained of, which was usually readily allayed by gentle friction with the palm of the hand. The drug was readily absorbed, and could be detected in the urine on the following day. He thinks the method may be of value where there is intolerance of the drug by the mouth, or in cerebral syphilis with coma and inability to swallow medicines.

CHAMOMILE TEA IN INFANTILE DIARRHŒA.—Dr. Elliot advocates the use of chamomile tea in the diarrhœa of young children (*Practitioner*, December, 1882). The dose, for infants under one year, is one-half to one drachm, and double that quantity for older children, given two or three times a day, or oftener. The rationale of the action is the power the drug possesses of subduing reflex excitability. This power belongs especially to the volatile oil contained in the flowers. A decapitated frog, previously fortified by a dose of chamomile oil, was not susceptible to the influence of strychnia, according to Grisan. He also calmed tetanic convulsions, due to strychnia, by the same oil.

ANEURISM OF THE BRACHIO-CEPHALIC TRUNK CURED BY INJECTIONS OF ERGOTIN.—The subject was one Raphael Beretti. A brother, fifty-four years of age, died of aneurism of the thoracic aorta, diagnosed thirty-four years before death; it gave him no trouble until the last few months of his life. Another brother died of chronic heart disease. In the subject of this history there was developed slowly and unnoticed a diffused true aneurism of the arch of the aorta, of the brachio-cephalic trunk, of the subclavian and right carotid; to this succeeded a false sacciform aneurism of the brachio-cephalic trunk. The cure appeared hopeless, but Dr. Angelini determined to try injections of ergotin, repeated twice a day for a week, then every two days, every three, every five, and so on for about three months. After four months, the aneurism was reduced to half its former size, being hard and firm, and the patient was able to resume work. Dr. Angelini comes to these conclusions: 1. Certain aneurisms, even of arteries of large calibre, of slow growth, can exist unobserved by the patient for many years. 2. Chronic diseases of the arteries, of the cardiac valves, and of the endocardium, have an hereditary predisposition, and are not always due to the abuse of stimulants. 3. His case encourages us to try hypodermic injections of ergotin in all such cases, as well as in aneurisms of small arteries.—*London Medical Record*, February 15, 1883.

INHALATION OF THE SPRAY OF IODOFORM AND TURPENTINE.—De Renzi and Rummo (*Gazz. Medica Ital.*) claim good results in phthisis and other diseases of the respiratory organs from inhalations of iodoform dissolved in turpentine. The patients were made to inhale twice a day for two hours, in a small room, the spray of iodoform and turpentine. The effects were more satisfactory than with any other mode of treatment. There was always prompt and considerable diminution of cough and expectoration: in bronchiectasis the fetid expectoration was completely deodorized. Physical signs diminish, the temperature falls, pulse and respiration are less fre-

quent. The secretion of urea is lessened in proportion to the fall of temperature. Iodoform given by inhalation is much more prompt in action than when taken by the stomach; it is an anæsthetic to the pulmonary vagus, and has an alterative and drying local action, which is aided by the turpentine. Its antiseptic action must also be taken into account.

SURGICAL DILATATION OF THE PYLORUS.—In an individual suffering from pyloric stenosis from a cicatrix, Professor Loreta, of Bologna, after having made an incision in the epigastrium, and opening the stomach, mechanically dilated the pylorus. The result was most successful, since, on the seventh day, the phenomena caused by the stenosis had disappeared, and the patient was going on well in every way.—*London Medical Record*, February 15, 1883.

SOME POINTS IN THE TREATMENT OF CARDIAC DISEASE.—From a number of carefully studied cases of heart disease, Dr. Finny (*Dublin Journal of Medical Science*, February, 1883) draws the following conclusions: 1. That too much dependence is not to be placed on the presence of the physical signs of mitral regurgitation as evidence of organic disease. 2. That such signs may be due to purely functional derangement and weakness of the heart, or to an altered condition of the blood. 3. That blood-murmurs produced in the heart and large vessels may be louder than the murmurs due to valvular lesions. 4. That the danger of valvular diseases is enormously increased by, if not directly due to, weakness of the cardiac walls. 5. That increased action and force of the ventricular contraction in the presence of valvular disease is not to be considered a disease, but rather a symptom of disease, and is directly proportionate to the amount of regurgitation or obstruction. 6. That mitral regurgitation is not to be considered in the light of a "safety-valve function" in cases of aortic obstruction, but as an element of increased danger to life. 7. That lowering treatment of the heart's force is rarely, if ever, required in disease of the organ. 8. That indications for treatment in diseases of the heart should be sought from the evidence of the condition of the muscle of the heart, and not that of the valves.

TWO HUNDRED AND EIGHT CONSECUTIVE CASES OF ABDOMINAL SECTION.—Mr. Lawson Tait gives the following analysis of his last series of operations occurring in the period from March 1 to December 31, 1881: Exploratory incisions, 13 cases with no deaths; incomplete operations, 8 cases, with 4 deaths. Operations for cystoma: one ovary, 36 cases; both ovaries, 28; par-ovarian cysts, 12; hydrosalpinx, 16; pyosalpinx, 20, or 112 cases, 3 deaths. Removal of uterine appendages: for myoma, 26 cases; for chronic ovaritis, 12; for menstrual epilepsy, 1, or 39 cases, 5 deaths. Hepatotomy for hydatids, 2 cases; hydatids of peritoneum, 2; cholecystotomy for gall-stone, 2; radical of hernia, 1; nephrotomy for hydatids, 1; nephrectomy, 1; intestinal obstruction, 1; solid tumors of ovary, 3; hysterectomy for myoma, 10; cysts of unknown origin, 1; tumors of omentum, 1; pelvic abscess opened and drained, 7; chronic peritonitis, 4, or 35 cases, 4 deaths. Total, 208 cases with 16 deaths. These operations were not performed under carbolic spray.—*British Medical Journal*.

CARDIAC GUMMATA.—An instance of this rare occurrence is reported in the *Lancet*. The patient was brought moribund to the hospital. He had seemed well until a fortnight previously, when he began to complain of faintness and pain in the præcordial region. On his way to his work he suddenly staggered and fell, and was unconscious till death. At the autopsy, the heart weighed thirteen and one-half ounces. The pericardium over the left ventricle was studded with pale yellowish-white elevations; there were also one or two over the right ventricle. The endocardium of the anterior wall of the left ventricle was studded with similar nodules. In the

septum was a mass of fibroid tissue extending into the muscular substance, which was permeated by tissue with gummatous characters. The smaller vessels were narrowed by thickening of the intima. The liver had a depressed fibroid scar in the right lobe. The spleen was congested, firm, and adherent to the parietes. The other organs were healthy.

MILK-DIET IN GRAVES' DISEASE.—Dr. Schnaubert speaks very favorably of the value of exclusive milk-diet in cases of exophthalmic goitre. In one of his patients, three weeks' treatment by milk restored digestion and general health, and so greatly improved all symptoms, that some weeks later the patient left the hospital relatively sound, and remained so nearly two years. At this time she returned with highly developed signs of the disease, and though the milk treatment again greatly relieved the patient's condition, she soon died. The necropsy showed hyperplasia in the cervical sympathetic ganglia, pigmentation of roots of the cervical nerves, and cerebro-spinal hyperæmia.—*London Medical Record*, February 15, 1883.

THE SIGNIFICANCE OF CHANGES IN THE PULMONARY EPITHELIUM.—Dr. Veraguth recently completed an investigation concerning the existence and pathological changes of the epithelium lining the pulmonary alveoli. By injecting weak solutions of nitrate of silver into the lung-tissue of healthy rabbits he was able to demonstrate the epithelial lining of the air-cells. This he found to vary in different parts of the lobules. In the terminal alveoli it was made up of small nucleated cells, of a rounded or polygonal shape, while in those air cells which branch from the sides of the bronchi similar corpuscles were collected into little groups surrounded by irregular surfaces of flat, structureless, and unnucleated cells. The composite membrane thus formed was joined directly to the lining of the bronchus.

Veraguth also injected the tracheæ of living rabbits with solutions of nitrate of silver (one-half to four per cent.) and killed the animals after intervals of from six to sixty hours. From observation of the various stages of pneumonia thus artificially produced, he concludes that the origin of fibrin in the croupous exudation is in the destruction of the flat epithelial cells just mentioned. From this he thinks it is fair to assume that in pneumonia of the human subject, the morbid agent, whether infectious or not, produces the same fibrinous degeneration of the unnucleated flat cells.—*Correspondenzblatt für Schweizer Aerzte*.

UNUSUAL MODES OF DISCHARGE OF PUS IN EMPYEMA.—Dr. Bouveret relates a number of cases of empyema in which the discharge of pus took place through unusual channels. He divides these rare cases into two classes. In the first category, the pus works its way into some of the neighboring organs. It may be discharged through the œsophagus, the stomach, the intestines, or the pelvis of the kidney. Or it may force itself into the cavity of the peritoneum or of the pericardium. Such occurrences are so extremely rare that they are seldom diagnosticated during life. In the second class, the pus perforates the posterior cul-de-sac of the pleura and appears in the posterior wall of the abdomen. In such cases the abscess may point in the groin, the lumbar region, the buttocks, or even in the thigh. The prognosis does not appear to be more grave than when spontaneous evacuation occurs through the chest-wall. In case serious general symptoms continue after the discharge of a migratory abscess, the author recommends that the pleural cavity be opened and washed out as in simple empyema.—*Journal de Médecine de Paris*, December 16, 1882.

QUAIN'S DICTIONARY—A WARNING.—On page 1181, article phthisis, the dose of picROTOXINE is given as grain $\frac{1}{6}$ when it should be grain $\frac{1}{60}$.

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THE CARDIAC MECHANISM AND THE DRUGS WHICH ACT UPON IT.

THE number of nervous centres in or connected with the cardiac muscles has been much multiplied of late years, and is now sufficiently confusing to the ordinary student. These centres have, however, for the mammalian heart in large part only a physiological existence, the exact anatomy not being determined.

The centres whose action is more generally brought out in practical therapeutics are, 1st, two sets of motor ganglia in the heart-muscle, (*a*) one of which (corresponding to Ludwig's ganglion) inhibits, (*b*) while the other (corresponding to Bidder's, to Remak's, and to Löwett's ganglia) excites contractions. In addition, we have the heart-muscle itself, which some drugs seem to act upon directly, either exciting or paralyzing it.

2d. These cardiac centres are connected with three regulating centres, placed in the medulla and upper part of the spinal cord: (*a*) The first of these is the cardio-inhibitory centre, situated in the medulla, communicating with the heart *via* the pneumogastric, and exercising a continually repressive influence upon the rapidity of the heart's beat. (*b*) The second centre is in the upper part of the spinal cord, and it sends weak accelerating impulses to the heart *via* the sympathetic. (*c*) The third is the vaso-motor centre, and it regulates the cardiac action only indirectly. Nerve-fibres pass from the heart to this centre (depressor fibres) which convey impulses depressing it; the blood-vessels dilate and the heart-beat is slowed.

The nervous mechanism of the heart is made up of a fusion of sympathetic and cerebro-spinal fibres and cells, a fact which complicates its study. It should be remembered, however, that the heart beats automatically, and gets most of its motive impulses from local stimuli.

Cardiac tonics, therefore, must act chiefly upon the intrinsic mechanism, stimulating this or that motor-centre according to the morbid conditions. In some cases, however, a medicine may apparently be a cardiac tonic when it really only affects the extrinsic mechanism.

M. Germain Sée has recently written a chapter on cardiac therapeutics in which he gives the following table showing the special action of different drugs on the heart.

	STIMULATION.	PARALYSIS.
Cardiac muscle.	Digitalin.	The same in the second period of action. §
	Iodine in small doses.	Emetin.
	Camphor.	Salts of copper, barium and potash.
	Caffeine.	Chloral in large doses.
		Scillaine.
Intra-cardiac muscular motor centres.		Saponine in its last period of action.
		Iodine in large doses.
Intra-cardiac inhibitory centres.	Muscarin.	Atropin.
		Fabarin.
		Spartine in large doses.
Intra-cardiac ramifications of the inhibitory filaments of the vagus nerve.	Nicotin.	Pilocarpin, second phase of action.
	Pilocarpin.	
	Calabar bean.	
Trunk of the vagus nerve.	Aconitin.	Spartin.
	Nepalin.	Nepalin, second phase of action.
Accelerator filaments of the great sympathetic.	Apomorphin.	Spartin.
Medullary cardio-inhibitory centres.	Digitalin.	Chloral.
Vaso-motor centres.	Bromide of potassium.	Croton-chloral.
		Hydrocyanic acid.

This list is by no means complete. Thus, to the stimulants of the cardiac muscle we must add one or more of the active principles of convallaria, and atropin should be included as a paralyzer of the entire inhibitory mechanism.

M. Sée's table, however, will show that the term "cardiac tonic" is a vague one, and it suggests one important consideration, which is, that in order to study scientifically and carefully the action of drugs on the heart, it is necessary to use the isolated active principles singly at first, and not crude preparations which contain a number of them.

THE SICK IN CASES OF FIRE IN APARTMENT HOUSES

THE recent burning of the Cambridge Flats, in this city, with its attendant loss of life, has called out many comments. One point, however, has been quite overlooked. Of the four persons who occupied the fourth story of the flats in question, the two who failed to escape were sick. The young lady had been suffering from peritonitis and had not yet been allowed to get up from her bed. The mother was a hemiplegic with late rigidity and hardly able to walk. It was owing to these facts more than any others that their lives were not saved.

If one would draw a moral, therefore, it should be that the so-called fire-proof flats should be provided with means for the escape of the sick. A paralytic cannot go down an ordinary fire-escape, and an exhausted fever patient in the upper story of some of our city flats would be almost at the mercy of any accidental conflagration. The precaution of having extra watchmen and extra help during sickness should at least be taken.

We would refer here also to another phase of the matter. It is well-known that many lives are lost simply through the panic occasioned by the fire. This panic could be averted in many cases if persons would only habituate and train their minds to associate the emergency of a fire with a certain definite plan of action. This, of course, would involve a knowledge of all the different modes of egress from the apartments and the house.

THE TREATMENT OF ACUTE RHEUMATISM.

FROM the results furnished by an analysis of a large number of cases of acute rheumatism, met in the primary attack, and treated in St. George's Hospital London, during 1877 and 1878, by Isambard Owen, M.D., as Medical Registrar, much valuable information is elicited as to the merits of the salicylate treatment. These cases, 210 in number, were all recorded under the personal supervision of Dr. Owen, and include all that occurred in the hospital during the years named with the exception of a few which were admitted in the Registrar's absence. The methods of treatment adopted, embraced (a) the salicylate of soda or ammonia in variable doses, alone and in combination with full doses of alkali; (b) the alkalies, or the same in combination with quinine; (c) iodide of potassium, alone or with alkali, bark, guaiacum, or sarsaparilla; and (d) varying treatment. Of those treated by the salicylate, in 85 cases the administration of the drug was commenced in doses amounting to 3 ij. or more in the twenty-four hours; in 52 cases, 3 ij., and in 19 cases, 3 iss. were given during the twenty-four hours. From several tabulated statistics, carefully prepared from these results, it is noticed that a tolerable uniformity exists as regards the average duration of pain and of pyrexia after the commencement of treatment (by salicylate), and that this duration is always independent of the character of the case and of its previous duration. A similar uniformity likewise prevails in the results of all modes of salicylate treatment, showing that the duration of the primary attack was unaffected by the amount of the initial doses of salicylate, or by the combination of full doses of alkali with the drug. A marked excess over these is, however, noted in those cases treated by full doses of alkali alone (or with quinine), the duration of the primary attack being twice as long as under the salicylate. Furthermore, a marked feature of the cases treated by salicylate, especially when administered in large initial doses, is the rapid subsidence of pain and fever, as compared with the more regular decline of these symptoms under other methods of treatment. Therefore, on the average, a duration of a certain number of days under salicylate involves much smaller amount of suffering than the same number of days under alkali.

With the different modes of salicylate treatment, also, the average residence in the hospital (including convalescence) is found to vary, being shorter in cases of low temperature. This total duration is further shown to be independent of the character of the case and of the previous duration, but is favorably influenced by the combination of full doses of alkali with salicylate, more particularly where the latter drug is given in medium dosage; large initial doses tending to prolong convalescence, and small doses showing hardly any greater advantage. And although the primary attack is shortened by the use of salicylate alone, yet the entire period of illness is not lessened by this means. If combined with alkali, however, the advantage gained at the onset is sustained throughout, and most markedly so when, under this plan, the salicylate is given in doses amounting to about 3 ij. in the twenty-four hours.

Regarding relapses, it appears that the tendency is practically the same under either salicylate or alkali, but

that the average duration of a relapse is twice as long, or more, under the former treatment. The combination of alkaline with salicylate treatment apparently exhibited no more effect in preventing a relapse than the salicylate alone. In these cases, however, the administration of salicylate was stopped shortly after the disappearance of pain and fever, hence this conclusion is questionable. Moreover, where salicylate alone was used, pyrexial attacks without pain occurred during convalescence in all cases treated with large initial doses.

The information which these cases offer in regard to the influence of salicylate on cardiac complications is of little or no value. As to the benefit derived from quinine in combination with this drug, the effect is found to be *nil*.

Regarding the use of iodide of potassium and alkali nothing of especial importance is developed. In a few instances this treatment proved efficacious after the total failure of salicylate, and *vice versa*.

From the above, therefore, it will be seen that of these several plans, that which offers the greatest aggregate of advantages is the combination of alkaline and salicylate treatment, the salicylate being given in doses equivalent, at the commencement, to 3 ij. in the twenty-four hours, and reduced as occasion requires.

STATE BOARDS OF MEDICAL EXAMINERS.

WE have always held that State Boards of Medical Examiners are the necessary means to the end of elevating professional standards and nullifying the pernicious effects of our present educational systems. There are, of course, objections to such an idea. These come principally from the smaller colleges, whose standards are low and the chances for whose students in passing an impartial board are comparatively few.

But opposition is not entirely confined to these schools. Many of the larger colleges, or at least such as graduate the largest classes, find it extremely difficult to settle upon any plan that will be practical, and therefore satisfactory to all concerned. There is a good reason for this. It is quite natural for the colleges, great and small, to guard jealously the power they possess to grant licences to practise, without the intervention of State authority. If any college corporation can consider itself the beginning and ending of the law in the matter of licensing, there is not much more for it to desire either in the way of educational influences or business prospects.

We can hardly expect that any school, under the circumstances, will be anxious for any change that may curtail such privileges. When the change comes, it will be the result of compulsion rather than choice. In the meantime general professional sentiment over the country is leaning strongly toward the necessity of the establishment of State Boards of Examiners.

The latest testimony in favor of reform in college examinations comes to us in the scholarly address of Dr. Thomas F. Wood, President of the Medical Society of North Carolina.¹ This gentleman informs us that North Carolina has had a board of medical examiners in successful operation for over twenty years, and as the result

¹Trans. Med. Society North Carolina. Concord, N. C., 1882.

of its workings the character of the profession has been elevated more than by any other means. Public opinion is so much in favor of a law that guarantees proper qualifications according to a fixed standard, that a young physician no sooner settles in any part of that State than the people begin to inquire if he has passed the board of medical examiners. The license of this board is the essential pre-requisite to holding any official medical position for county or State, or indeed to maintaining any professional standing whatever. During the past four years we are informed that candidates have been examined from twenty-three different schools. No preferences are given, no partiality shown. North Carolina has no medical college within its limits, and fortunately is entirely free to protect herself. The results have been everything that could be desired.

A WANT MUCH FELT!

A WESTERN medical journal, whose editors are also professors in a local medical college, claims very emphatically that our country has not medical colleges enough; "and, *it needs more*," says our contemporary, italicizing its disinterestedness and philosophy.

The same journal congratulates the profession upon the organization and success of a new college at Omaha, and of the probable establishment of another new college at Toledo.

We can add to the pleasure of our contemporary by informing it of a report that two new colleges have also been organized in Boston very recently, under the act incorporating manufacturing companies.

It cannot be expected that the great body of the profession feels the need of new medical schools quite so keenly as do those professors who are attached to them. Still the majority is not always in the right, and it may be that new medical colleges are just the things which our beloved country most needs, in order the better to round off its prosperity and accentuate its greatness.

For our part, however, if we could be convinced that legislative codes of ethics had efficacy, we should advocate one that made it not only an ethical offence but a medical crime, to establish cheap two-term schools, ostensibly for the convenience of the community, but really for the aggrandizement of local physicians. We shall gladly welcome and support any new medical college, Western or Eastern, which honestly undertakes the higher medical education. Such colleges are indeed needed; but to say any part of our country wants more of the ordinary kind of Cheap-John educational diploma-factories is a monstrous excursion from the limits of the actual.

THE SIGNIFICANCE OF THE BACILLUS TUBERCULOSIS.

IN the present expectant condition of the profession regarding the significance of the bacillus of tubercle, some experiments by Dr. Franz Ziehl, recently reported at the Heidelberg Medical Clinic, will be of interest.

This gentleman examined the sputa in seventy-three cases of phthisis, and found the bacillus in all instances but one. In some other cases, where a diagnosis of phthisis from physical signs was doubtful, the bacillus was also found. Dr. Ziehl's final conclusions are: First,

that as a rule, the bacillus will be found in the sputa of persons suffering from pulmonary phthisis, but that to this rule there are some exceptions. Second, that the presence of the tubercle bacillus can sometimes be of help in making a diagnosis in early and doubtful cases. Third, that the absence of the bacillus in the sputa will not permit one to exclude phthisis. Fourth, that the number and developmental condition of the bacillus do not furnish (as has been claimed) a basis for prognosis.

There is now considerable evidence, from various sources that the bacillus is less often found in tubercle tissue than in phthisical sputa. Especially is it difficult to find these parasites in the nodules of acute miliary tuberculosis.

A PHILANTHROPIST'S OPINION OF THE MEDICAL FACULTY.

IN the annual report of the American Society for the Prevention of Cruelty to Animals, for 1883, Mr. Bergh gives his views on vivisection, the New York Legislature, and the medical faculty, as follows: "That sum of all physiological villany, vivisection, which I again recommended to the consideration of that sapient State Congress which was characterized by a portion of the press as 'a mob,' has been remorselessly, and, at the bidding of a heartless and opinionated medical faculty, disrespectfully slaughtered as before!" Mr. Bergh may have some kindness of heart, at least for those who agree with him, but he is certainly deficient in common sense to claim that he is the only man on the jury entitled to an opinion. Hence the medical faculty still persist in being stubborn, and of course sentimental humanity suffers.

PRESERVING THE BODIES OF THE DEAD.

MUCH attention is being devoted just now to the best method of preserving the bodies of the dead. The novelty of cremation has somewhat worn away, and though the practice is increasing, it does not seem likely to become popular in the present generation.

The subject of embalming has been most energetically studied by various individuals, largely, we fear, because there is thought to be money in it. Injections and washes containing arsenic or chloride of zinc, form the basis of most of the more common preservative solutions. It has been recently stated that if organic substances are first steeped in an alcoholic solution of nitrate of silver, wiped dry, exposed to the action of hydrogen sulphide, or phosphide, and then immersed in the ordinary galvanoplastic bath, they will keep for an indefinite length of time.

A novel method of preserving dead bodies so that they will not injure the living, has been proposed by Dr. A. Mayer. He advises the use of glass cases, which, after the introduction of the corpse, are sealed and thus made perfectly air-tight. There are two holes in the case. Through one of them carbonic acid gas is forced until all the atmospheric air is driven out. Both holes are then closed. In this way bodies will remain preserved for a considerable time, while their final decomposition can do no harm by polluting the soil. It is not stated whether these coffins can be manufactured cheaply, or whether they would not be liable to become broken and thus valueless.

THE DEATH-CURRENT.

THE current of the Brush-Swan electric light has an electro-motive force of about two thousand volts. It is nearly such a current as would be produced by a battery of two thousand Daniell's cells. Its fatal effects have been shown in several instances already. This current has heretofore been used chiefly in out-door lighting, where the dangerous conductors are beyond reach. It is now proposed, however, to utilize the current in domestic lighting by means of storage-batteries. These batteries, which are contained in large boxes, will be placed in the various houses; they will then be regularly charged by the two thousand volt current, after which they will give off a harmless forty volt current to the house. By this process it is claimed that the terrific and deadly conductors of the principal circuit will be made harmless. It is quite evident, however, that during the time, each day, when the storage batteries are being fed the wires leading to them cannot be touched without dangerous or fatal consequences. It behooves those who have the care of public health, therefore, to watch the introduction of this storage system of lighting, and see that it is done under proper precautions.

In the Edison system of domestic lighting a current is employed of, it is claimed, one-twentieth the "intensity" of the Brush current, and of "lower pressure." The description is somewhat vague, but probably means that the current has a low potential. But assuming it is a current of one hundred volts only, it would still be a disagreeable thing to pass through a fellow-citizen, and it might be dangerous to children. In the introduction of domestic illumination by electricity, the dangers of fire, the danger to the eyes, and the danger to the person or even to life are to be borne in mind.

THE KENTUCKY STATE BOARD OF HEALTH.

THE attention of both the public and the profession has recently been directed to this organization by the secular and medical press of Louisville. The Board was by no means prepared by virtue of past services, efficiency, or judicious management of its affairs to stand criticism or comment, and hence has suffered. Indeed, to those members of the profession cultivating a laudable pride in professional work in behalf of the public, it may be said of the Board, as was said of the defendant in the celebrated Bardell-Pickwick law suit, "the subject presents but few attractions." It has been discovered that one member of the Board has never attended a meeting since the organization of the Board. Another member has not attended for a year or more, and the quarterly meetings of the Board failed for want of a quorum two or three times during the past year. The annual report of last year came out bristling with errors concerning the ordinary lessons of vital statistics, as well as in other matters relating to the public health. The major portion of the appropriation entrusted to the Board goes to the salary and office-rent of the secretary, which official has recently delivered two popular lectures on public health in the State. With this exception the Board has done nothing in the interests of the public health or sanitary science. Very naturally, a bill to increase the appropriation and powers of the Board failed at the last ses-

sion of the General Assembly. In consequence of recent comments and criticisms upon the inefficiency of this organization, a convention of county and local boards was called by the State Board to meet in Louisville on the 7th inst. This convention proved an utter failure. Only ten or fifteen persons were present, and not more than four or five of the one hundred and thirteen counties in the State were represented. The lack of co-operation and confidence thus evidenced by the profession of the State is much to be regretted. It is to be hoped that the Board may by earnest work demonstrate its efficiency, and thereby elevate the cause of sanitary science in the public esteem.

News of the Week.

MORTALITY FROM ABORTION.—A member of the N. E. Divorce Reform League, Mr. S. R. Dyke, states that over six thousand women die yearly in the United States from attempts to destroy unborn children.

A CREMATION SOCIETY IN CHICAGO.—A cremation society, with a capital of \$100,000, is to be formed in Chicago.

THREE DEATHS FROM CHLOROFORM have occurred in Baltimore since October, 1882.

DEATH IN THE DENTIST'S CHAIR.—The wife of a prominent physician of Portsmouth, Va., died March 9th from the effects of chloroform administered previous to the extraction of some of her teeth.

PASTEUR'S REPLY TO KOCH is a long one and somewhat discursive. He answers Koch's charge that he (Pasteur) presented nothing new to science at the Geneva Congress last summer, by citing his communication regarding the mode of attenuating virus and his discovery regarding the special septic effect of hydrophobic saliva.

He says that while in 1877 he (Pasteur) had acknowledged Koch's work upon anthrax, yet Koch himself had never referred to Pasteur's earlier studies in the organisms of fermentation, the diseases of the silkworm, etc. It was he (Pasteur) who made the first discoveries regarding the life histories of these minute organisms. To Koch's charge that pure cultures could not be obtained by the flask method, he states that all the important discoveries and cultivations of minute organisms had been made by this method until recently. He refers to some of Koch's statements as exhibiting "the impertinence of error," and said that "before Koch was born to science" pure cultures had been made and special disease organisms found by numerous experimenters to whom Koch himself was a debtor.

Koch's statements that the anthrax-vaccine is of doubtful value Pasteur characterizes as another impertinent error, and cites some recent statistics from the department of Eure-et-Loire to prove it.

MEDICAL DEPARTMENT UNIVERSITY OF LOUISVILLE.—The Commencement exercises of the Medical Department of the University of Louisville were held last week at Macanley's theatre. The class during the past session was a large one, though the number of graduates

was numerically smaller than that of last year, numbering only about seventy-five. The regular course at this institution now covers a period of six months, and the facilities for instruction, together with the clinical advantages, are in accordance with the advancing standard of medical education in this country. The address in behalf of the faculty this year was delivered by Professor Theophilus Parvin, and was thoroughly scholarly and instructive. This address we learn will be published in pamphlet form.

Both the Kentucky School of Medicine and the Hospital College of Medicine now hold their sessions in the spring and summer months, instead of in the winter as heretofore. The faculties of both these institutions include gentlemen of superior abilities as teachers of medicine, and their duties are discharged with energy and efficiency.

THE BILL TO ESTABLISH A BOARD OF HEALTH IN PENNSYLVANIA is said to have been killed for this session. The bill provided for a mixed board, with homœopaths and eclectics upon it. Opposition was met with, therefore, on the part of the regular profession. We fear that an "unmixed" board cannot be established as long as the atmosphere of Pennsylvania politics continues to be purified and invigorated by that homœopathic statesman, Don Cameron.

THE PSEUDO-BACILLI OF TUBERCULOSIS.—Dr. Schmidt acknowledges, in the February number of the *Chicago Medical Journal*, that the fat-crystals discovered by himself are not the bacilli of Koch. He thinks, however, that, like the true bacillus tuberculosis, the pseudo-bacillus, together with the fattily degenerated cells, with or without pigment, when found in the expectoration of the patient, may prove valuable in the diagnosis of the case; as their presence must certainly indicate grave lesions in the lungs. The particular quantity of fat found in the expectoration of the patient, which may be determined by treating it with the solution of caustic potassa, also may be of service, he thinks, in the diagnosis, as it will indicate the grade of fatty degeneration.

THE TWELFTH CONGRESS OF GERMAN SURGEONS meets in Berlin on April 4th, 5th, 6th, and 7th. The President, Baron von Langenbeck, will attend and preside.

THE SECOND GERMAN CONGRESS OF INTERNAL MEDICINE meets at Wiesbaden April 17th to 20th. There will be a debate upon the tubercle bacillus opened by Rühle and Lichtheim; also a debate upon diphtheria, and one upon the abortive treatment of infectious diseases.

THE TER-CENTENARY OF THE UNIVERSITY OF EDINBURGH will be celebrated in April next. Those acquainted with Edinburgh medical politics state that the glory of Edinburgh medicine and surgery has come from the extra-mural school and not from the University. The former school is said also to be two hundred years older than the latter.

ENGLISH AND AMERICAN MEDICAL STUDENTS.—The total number of first year's students in England, in 1882, was 635. There were 371 of these in the eleven London schools and 264 in the eight provincial schools. Thus England, from a population of 26,000,000, furnishes 635

students yearly, while the United States, from a population of 50,000,000, supplies about 3,500 or 4,000 students annually, or between five and six times as much. Among the four millions of people in the United States between the ages of sixteen and twenty, one in every 1,200 wants to be a doctor.

MODERN THEORIES AND TREATMENT OF PHTHISIS was the title of the Croonian Lectures recently delivered in London by Dr. J. E. Pollock.

THE BOSTON WATER BOARD has been discharged as incompetent to deal with the existing state of affairs.

THE COMMENCEMENT OF THE ALBANY MEDICAL COLLEGE was held at Albany, March 7th. The graduating class numbered fifty-two. Rev. E. N. Potter, D.D., delivered the address to the graduates, and Dr. W. D. Hasbrouck the valedictory.

THE ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE held its tenth annual meeting at Albany, March 7th.

A FASTING DOCTOR.—We are informed that a certain Dr. F. T. Cook, of Taylor, Texas, has been outdoing Tanner in the fasting line. On March 3d he had fasted for fifty-five days "with the exception of a pound of soda crackers, a small piece of Graham bread, and an occasional glass of sweet milk"—which are important exceptions certainly. It seems to be a disputed question whether the cause of the fast is a diseased stomach or an affection of the heart. A local paper states that "while the Doctor frankly admits being desperately in love with a certain little lady, still he holds that a man can love on an empty stomach quite as well as he can with one filled with all the luxuries of life."

IN THE CASE OF THE HOTEL BELLEVUE, at Seabright, N. J., recently tried, the jury failed to agree. The main question was whether the sanitary arrangements of the hotel were not so bad that typhoid fever was caused thereby. Most of the expert testimony given was to the effect that the fever had its origin in the hotel. The case will be tried again. It is a most interesting and important one.

SIR ERASMUS WILSON has accepted the position of President of the Egyptian Exploration Fund, and headed the subscription list with a donation of \$2,500.

THE ANNUAL COMMENCEMENT of the Medical School of the University of Maryland was held in Baltimore on March 15th.

THE COUNCILLORS OF THE MASSACHUSETTS MEDICAL SOCIETY have voted that Columbus Medical College be dropped from the list of medical colleges whose diplomas are recognized.

DENTAL SERVICE IN PUBLIC SCHOOLS.—The Municipal Council of Paris has arranged to have a periodical inspection of the teeth (as well as of the eyes and ears) of the pupils in the public schools.

THE PHYSIOLOGICAL PRIZE OF THE ACADEMIE DES SCIENCES has been awarded to M. Dastres.

THE ASSOCIATION OF FRENCH PHYSICIANS meets in Paris on April 1st and 2d. The association is a political one and will do no scientific work.

LOUISIANA STATE MEDICAL SOCIETY.—The next meeting of the Louisiana State Medical Society will be held at Shreveport, La., April 4, 1883.

AN "EXPOSITION GASTRONOMIQUE INTERNATIONALE" is soon to be organized in Paris.

PORRO'S OPERATION IN ITALY.—In a recent letter to the *Lancet*, Dr. C. Godson says that Porro's operation has been performed forty times in Italy, from May, 1876, to February, 1883. Fifteen women recovered, twenty-five died, and thirty-one children were saved.

COMMENCEMENT OF BELLEVUE HOSPITAL MEDICAL COLLEGE.—The annual Commencement of the Bellevue Hospital Medical College took place on the evening of March 14th, at Chickering Hall, and 166 students, comprising the graduating class, received their medical diplomas. The Rev. Dr. Samuel Burchard opened the exercises with a brief prayer. Professor Isaac E. Taylor, M.D., president of the faculty, conferred the degrees. Professor Samuel D. Gross, M.D., of Philadelphia, addressed the graduating class with words of good advice, and Dr. E. A. Morgan, of the graduating class, gave the valedictory.

DR. W. T. BELFIELD, of Chicago, during his visit to this city, has been the recipient of many marked attentions from our leading practitioners, who have been interested and edified by his admirable demonstrations of the different bacilli. We are pleased to announce that his course of lectures, now being published in *THE RECORD*, has given entire satisfaction to his audiences and has realized the best expectations of all who are interested in his line of study. We understand that during the coming week he proposes to accept an invitation to visit Philadelphia and exhibit his microscopic specimens and the different methods of preparing the same. We bespeak for him a cordial reception.

THE INOCULATION OF SCARLATINAL VIRUS AS A PROPHYLACTIC AGAINST SCARLET FEVER.—Dr. Stickler, of Orange, N. J., is making some investigations in the use of equine scarlatinal virus, to test its value as a prophylactic against human scarlet fever. The results will soon be published.

ASYLUM POISONING.—Professor Mallet, of the University of Virginia, has testified that the poison used with such fatal result in the Staunton Lunatic Asylum was aconitine. It is believed that the latter was dropped in the medicine-cups by one of the patients, but the whole affair is still involved in mystery.

ANOTHER ASYLUM TRAGEDY.—On March 10th, at Columbia, S. C., a lunatic in the asylum cut the straps which bound his hands and then attacked a fellow patient, striking him on the head with a heavy piece of wood, inflicting injuries which caused death.

TENEMENT HOUSE CIGARS.—Governor Cleveland has signed the bill prohibiting the manufacture of cigars in tenement houses.

COMMENCEMENT OF UNIVERSITY MEDICAL COLLEGE.—The forty-second annual commencement of the Medical Department of the University of the City of New York was held at the Academy of Music on Tuesday evening, March 13th. Professor Martin opened with

prayer. Ernest R. Birkins, M.D., of the graduating class, delivered a well-written valedictory, and was generously applauded for his effort. Rev. Dr. John Hall in his address to the graduates bade them bring to their life-work rules of honest, conscientious endeavor, to do their best at all times and treat their fellow men fairly, and they would meet with professional and pecuniary success. The prizes were awarded as follows: Gold medal to Robert George Bindrim; silver medal to A. J. Meuer; bronze medal to Frank S. Halsey. Henry P. Loomis, A.B., was awarded a prize of \$500 for the highest standing in the class, and Leroy W. Mubbard gained a prize of \$300 for having passed the best competitive examination in the seven general departments. The honor men are: H. P. Loomis, L. W. Hubbard, W. M. H. McEnroe, M. O. Bunn, F. D. Gray, E. Z. Brievo-gelle, R. E. Bell, E. Le Fevre, G. D. Gregor, O. C. Ludlow. The graduating class numbered one hundred and sixty-four.

Reviews and Notices.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE. By JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1883.

THE fourth edition of this popular guide-book deserves in all respects the favor which has already been bestowed upon the previous issues of the work. While completeness is not one of the aims of the author, his special object is fully accomplished, viz., to furnish short and precise directions for carrying out urinary analysis in such a way as to satisfy the needs of the practitioner.

THE FUNCTIONS AND DISORDERS OF THE REPRODUCTIVE ORGANS in Childhood, Youth, Adult Age, and Advanced Life, considered in their Physiological, Social, and Moral Relations. By WILLIAM ACTON, M.R.C.S., Late Surgeon to the Islington Dispensary, and formerly Externe to the Venereal Hospital, Paris, etc. Sixth Edition. 8vo, pp. 267. Philadelphia: P. Blakiston, Son & Co. 1883.

THIS little work, which has for so many years been the leading one of its kind on the subject, has just been issued by the Messrs. Blakiston as a sixth edition. The entire field of sexual hygiene and sexual diseases is thoroughly discussed in a calm and philosophic spirit. The general practitioner will find in this interesting volume a safe guide for the treatment of all the affections which belong directly or indirectly to the abuse of the sexual functions.

EARLY AID IN INJURIES AND ACCIDENTS. By DR. FRIEDRICH ESMARCH, Professor of Surgery at the University of Kiel, etc. Translated from the German by H. R. H. Princess Christian. Philadelphia: H. C. Lea's Son & Co. 1883.

IN five short and clear lectures Esmarch shows how non-medical persons may occasionally render great service, perhaps even save a life, in those accidents which are likely to happen at any moment. Popular explanations of medical matters often leave the mind of the lay reader beclouded with doubts and misgivings, or worse than this, may foster the illusive hope that a physician's counsel is needless. No such tendency is attributable to the present collection of essays, and hence the advice found in Esmarch's lectures, if properly heeded, can do no harm, while it may often lead to much good. Of course the physician is expected to be thoroughly fa-

miliar with all this little volume contains, and yet even he may here and there derive a practical hint from a perusal of its pages. Altogether, it is a creditable production, and has lost none of its usefulness in the work of translation.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Thirteenth and Fourteenth Annual Sessions, 1881-82. Omaha, Neb.

BESIDES the usual report of Society proceedings, the views of many of our Western brethren in the different departments of medicine and surgery are recorded in detail, together with some interesting remarks relative to Nebraska, on climate and its relation to disease, and to physical and mental culture.

QUIZ COMPENDS—A COMPEND OF OBSTETRICS. By HENRY G. LANDIS, A.M., M.D. With illustrations. Philadelphia: P. Blakiston, Son & Co.

IN this little book the author has furnished a series of quiz lessons in obstetrics on the system of question and answer. Throughout, while presenting the latest views, etc., he has endeavored to maintain a strict neutrality unbiased by the teachings of various authors. Students will no doubt find this a valuable aid.

A MANUAL OF HISTOLOGY. Edited and prepared by THOMAS E. SATTERTHWAITE, M.D., of New York, Professor of Histological and Pathological Anatomy in the New York Post-Graduate Medical College, etc., in association with Drs. T. DWIGHT, J. COLLINS WARREN, W. F. WHITNEY, C. J. BLAKE, and C. H. WILLIAMS, of Boston; Dr. J. HENRY SIMS, of Philadelphia; Dr. BENJ. F. WESTBROOK, of Brooklyn; and Drs. EDMUND C. WENDT, ABRAHAM MAYER, R. W. AMIDON, A. R. ROBINSON, W. R. BIRDSALL, D. B. DELAVAN, C. L. DANA, and W. H. PORTER, of New York City. Second edition, enlarged and revised, containing two hundred and two illustrations, with an Appendix. New York: W. Wood & Co. 1882.

A SECOND edition of Satterthwaite's manual has quickly followed the first issue. Indeed, the editor informs us that so little time elapsed between the publication of the first and the publishers' call for a second issue, that radical changes have not been introduced in the text. Nevertheless, certain essential alterations have been made, and two appendices have been added to the volume. The first of these is by Dr. W. R. Birdsall, and embodies recent discoveries made concerning the lymphatic system. Dr. E. C. Wendt is the author of the second appendix, which deals with the histology of the salivary glands. His views on several points connected with the subject are at variance with those of many observers. Thus he does not admit the correctness of Boll's statements with regard to the structure of the membrana propria. Boll and others, it will be remembered, describe it as composed of branching cells. Wendt holds that it is merely a nucleated connective-tissue membrane, with superimposed or underlying branching corpuscles, the latter never forming true constituent elements of the membrane in question. He also disputes the presence of capillary secreting ducts between the gland-cells; and further, he is of opinion that the latter are never normally destroyed in the process of secretion.

On the whole it may be said that Satterthwaite's manual worthily represents the histological knowledge of today, and it may be safely used as a guide-book by students and practitioners.

THE ILLUSTRATED JOURNAL OF MEDICINE AND SURGERY. Edited by GEO. HENRY FOX and FREDERICK STURGIS. New York: E. B. Treat & Co. 1883.

THE first number of the second volume of this admirable quarterly, is more than ordinarily filled with good things. It contains excellent articles, beautifully illustrated as follows: Dental Development, by Dr. William Hales, Jr.; Case of Palato-pharyngeal Sarcoma, by Dr. Johnson Eliot; Excision of the Shoulder-joint, by Randolph Wins-

low; Cases of Compound Complicated Hare-lip, by Dr. J. L. Little; Cysto-adenoma of the Thyroid Gland, by Dr. Charles Buckley; Secondary Myeloid Disease of the Pleura and Lung, by Dr. William Osler; Congenital Union of the Fingers, by Dr. J. H. Pooley; A Teratological Contribution, by Dr. George J. Engelmann, and an Apparatus for treating Fracture of the Patella, by Dr. J. S. Wight.

NERVE VIBRATION AND EXCITATION as Agents in the Treatment of Functional Disorder and Organic Disease. By J. MORTIMER GRANVILLE, M.D. London: J. & A. Churchill, New Burlington Street. 1883.

THE use of mechanical vibration in the treatment of various nervous disorders has been placed before the profession for several years. Dr. Granville, now for the first time, however, presents the subject in a complete form, stating the principles and results of the method. We are much impressed with the evident honesty and conscientiousness with which the author of this method puts forth its claims. He has been studying and experimenting with it now for nearly ten years, and he finally submits the facts and hypotheses to the judgment and trial of the medical profession.

Dr. Granville's theory is that the nerve-cell and nerve-fibre, when functioning, are in a state of vibration, the one in its matrix, the other in its partite sheath. In disease, the vibrations are disturbed, weakened, or destroyed. In a beginning sclerosis, for example, the nerve-cell has been prevented from normally vibrating, it atrophies from lack of exercise; in neuralgia, the vibrations passing along the nerve are abnormal in number or rhythm.

The object of treatment by mechanical vibrators is to exercise the cell, or supplant morbid vibrations with others that are either normal or harmonic with the normal.

To secure this, Dr. Granville has, after much experimentation, devised a clock-percuteur, and also a percuteur which goes by electricity, the latter giving much the better results. With these he has a large number of instruments for varying the character of the blow, e.g., discs, brushes, hammers, etc.

The author reports success with the use of his instrument in a large variety of *nervous* diseases: neuralgias, spinal sclerosis, neurasthenia, vaso-motor disturbances, constipation, etc. In some cases of idiocy the application of the percuteur has remarkably developed the intelligence.

Dr. Granville writes, on the whole, quite temperately as regards the new therapeutical method which he has fathered, yet he fails at times to conceal entirely the profound faith which he feels in the great results it will produce.

He applies his vibration theory very widely, and would make it enter very largely into the pathology of all functional nervous diseases.

It appears to us, and we believe it will to every reader, that too much is made of vibrations in physiology or pathology. It is supposed that these vibrations are of *cells* or their vital and organized elements, not of molecules. This is a difficult hypothesis to admit, yet it is not, of course, impossible. A point which is neglected, however, is that of the chemical or nutritive activities of the cells. These, in functional disease, are undoubtedly altered, and there must be more important and fundamental factors in disease than mere vibrations, which must, if they exist, depend upon them.

As for the practical part, there is no question that good results can be obtained by mechanical vibrations. The method has been employed in Paris by Boulet, and also in New York, with as yet no definite results.

CASTOR OIL AND GLYCERINE.—Dr. William Soper claims that glycerine increases the purgative power of castor oil when given with it. A preparation combining, but not mixing these two, is active in teaspoonful doses. —*Lancet*.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 277.)

CARDIAC DISEASE—THORACENTESIS—DEATH.

DR. VAN SANTVOORD presented specimens accompanied by the following history: They were removed from the body of a man forty years of age, who died in his wards in the Randalls Island Hospital on February 8th. He had obtained from the house-physician the following rather scanty history: The man served in the United States army up to 1876, and considered himself perfectly healthy. There was no history of syphilis or rheumatism. At that time, in consequence of a strain, as he believed, a swelling developed in the region of the left testicle, which has since remained without material change. Why he was discharged from the army was not known. His history since then could not be ascertained except that the disease from which he died had existed for some time. He was admitted into the hospital during the month of December, when there existed general anasarca except the face. There was evident hypertrophy of the heart, and the first sound was prolonged. There was fluid in both pleural cavities. The patient suffered from shortness of breath, and there was also found an oblong swelling over the left testicle. He remained in the hospital for some time and improved under rest and the use of digitalis. His liver was also enlarged, and it was said to have extended at one time as far down as the crest of the ilium. Dr. Van Santvoord saw him for the first time in January, and from that time up to February 7th no special change took place in his condition. Physical examination revealed hypertrophy of the heart, the apex beating in the sixth intercostal space and two inches outside of the nipple, reduplication of the first sound at the apex, and also a reduplication less marked of the second sound, heard at the apex but not at the base. There was, besides, marked pulsation in the epigastrium. There was also evidence of fluid in both pleural cavities, over which, on both sides, there was distinct bronchial breathing, although rather distant, bronchial whisper and diminished vocal resonance. A slight systolic murmur was heard over the apex, but it was not transmitted. The liver projected into the abdomen about two inches below the free border of the ribs. (Edema still existed. Dr. Van Santvoord aspirated the left side of the chest, and removed twenty-three ounces of fluid which was clear serum. The bronchial breathing disappeared. The normal respiratory murmur returned with a certain amount of friction sound. The patient bore the operation well, and he proceeded to aspirate the right side. After having drawn out thirteen ounces of fluid an accident occurred to the apparatus by which air entered the chest. Very soon the patient became distressed, the distress became urgent, and within ten minutes he was expectorating frothy material. There was tympanitic resonance over that side of the chest, and evidently considerable air had entered. An attempt was made to withdraw some of the air from the pleural cavity, but it was unsuccessful. The patient died of exhaustion at the end of twenty-four hours. At the autopsy the only thing noticed concerning the brain was that it was slightly firmer than usual. On puncturing the diaphragm through the abdomen air escaped from the thoracic cavity. The right lung was found collapsed and carnified, but no sign of an external opening into the lung was found. In the left lung there was commencing pneumonia in the lower lobe. The heart was markedly hypertrophied and dilated. The pericardium was markedly thickened, and seemed to be undergoing atheromatous change, especially along the line of the

coronary arteries, which were themselves apparently normal. A similar degeneration was found throughout the endocardium, especially on the right side. The valves were normal. The aorta was extensively atheromatous, with a certain amount of cheesy degeneration in the external coat. There was no aneurismal dilatation. The liver was enlarged and showed marked congestion of the central portion of the lobules. The kidneys were embedded in a mass of fibrous tissue one-third of an inch in thickness and perfectly symmetrical, and separated by a pultaceous cheesy layer. The kidneys were entirely normal. The tumor of the testicle was a cyst containing bloody fluid, the testis itself being not more than one-third the size of the opposite one. Microscopic examination of the muscular fibre of the heart showed no degeneration upon the left side, but exhibited a marked tendency to longitudinal splitting of the muscular fibres. On the right side the muscular fibres were in a condition of not very far advanced fatty degeneration. Why heart-failure should have developed was something not particularly explicable from the external examination.

THE ENTRANCE OF AIR INTO THE PLEURAL CAVITY, AND ITS SIGNIFICANCE.

DR. GERSTER asked what the immediate symptoms were after the entrance of air into the pleural cavity.

DR. VAN SANTVOORD said the patient complained within two or three minutes of great dyspnoea; his respiration became panting, and he passed into a state of semi-collapse with cold sweat, and within ten minutes began to cough, and expectorated a frothy, bloody serum.

DR. GERSTER said he asked the question because he thought the simple fact of air entering the pleural cavity in a healthy individual would not be sufficient to produce death. Doubtless, with the patient's bad general condition and his embarrassed circulation and respiration, this accident was the last straw that crushed the camel. Professor König recently removed an extensive tumor with the entire sternum, and in performing the operation opened both pleural cavities, and also opened the pericardium, and air entered each of these cavities. The patient suffered no marked inconvenience, and survived the operation, and made a good recovery.

DR. WATSON referred to a case in which air entered the pleural cavity after an operation for necrosis of the rib, and the patient died within forty-eight hours.

DR. GERSTER referred to the fact that of late years when the pleural cavity becomes filled with pus, an opening is frequently made for the purpose of evacuating it, and immediate bad consequences following the entrance of air rarely take place.

DR. VAN SANTVOORD remarked that in these cases very frequently the empyema is encapsulated.

DR. PUTNAM-JACOBI suggested that the explanation might be in the fact that the lung, in old cases of empyema, has been compressed for a considerable time, and that the shock, which is liable to occur when a comparatively healthy lung is involved by the entrance of air, is avoided.

DR. VAN SANTVOORD thought that the condition of the heart probably explained why death occurred so rapidly from collapse of one lung.

DR. J. LEWIS SMITH remarked that if the pleura is healthy, the admission of a moderate quantity of air did no special harm. In a number of cases in which he had performed paracentesis in children he had known air to enter the pleural cavity, but he had not known that it had produced any ill-effect; but, in one instance, a sharp-pointed needle was used, and the lung was penetrated in three places, and he had reason to think that air escaped from the lung into the pleural cavity.

ENDOCARDITIS—EMBOLIC PNEUMONIA.

DR. PUTNAM-JACOBI presented specimens removed from the body of a child thirteen years of age, who was seen in the out-door practice of the New York Infirmary. She saw it only once during life, and that on the twentieth

day of its sickness. The history was that it had had a febrile attack, which for the first five or six days was markedly intermittent in character, but during the last ten days had been continuous. It was, however, difficult to decide whether the intermittent temperature, varying from 105.5°F. to even sub-normal, 97.5°F. , was due to the type of the disease or to the antipyretic doses of quinine which were administered, and this circumstance contributed to embarrass the diagnosis. The child had had diarrhoea; there was some tympanites, and a moderate amount of hyperæsthesia over the entire abdomen. On the first day it was found that the heart was somewhat hypertrophied. A friction-sound had been heard during twenty-four hours over the left part of the pericardium, but not over the base. On the sixteenth day of the child's sickness a friction-sound was heard over the base of the left lung, which was followed by a certain amount of bronchial breathing in the same region. There was pain over the pericardium, and wandering pains through the limbs, which were readily relieved by the application of chloroform liniment. The temperature was 102°F. , the pulse 120, and the respiration 40. There was flapping of the nostrils, and when the patient sat up in bed she was extremely pale, although there was no lividity. There was no effusion into the pericardium on that day, the friction-sound had entirely disappeared, and only a systolic murmur at the apex could be recognized. There was no positive evidence of fluid in the pleural cavity. At the base of the left lung bronchial breathing could be heard mingled with some râles, and accompanied by dulness, but there was no bronchophony, and vocal resonance was not diminished. Examination of the right lung gave negative results; the abdominal hyperæsthesia continued, and also the diarrhoea. The pains in the limbs had subsided. The child had had an attack of rheumatism one year previous to present illness. The diagnosis was placed between a continued fever complicated with pneumonia, or a visceral rheumatism; *i.e.*, a rheumatism with very slight articular manifestations, but with acute endocarditis and pleuropneumonia. The diagnosis between these two conditions was rendered the more difficult by the enlargement of the liver and spleen. Twelve to fifteen hours after the examination the respiration rose to sixty, remaining so three days, but the condition of the child otherwise was not apparently changed until the end of the third day, when she sank into a comatose condition, and died a few hours later.

At the autopsy the pericardium was found to contain considerable citron-colored fluid. There was also fluid in both pleural cavities. Whether the fluid had been present in the left pleura at the time Dr. Putnam-Jacobi saw the patient, she was unable, for reasons stated, to decide. It certainly was not in the right. Notwithstanding the effusion into the pericardium, its internal surface presented no fibrinous exudation, was perfectly smooth, though somewhat injected. The external surface of the pericardium was covered with fibrinous material, in some places very thick. It adhered to the left pleura. At the base of the left lung, and at the extreme tip of the right lung, recent plastic exudation was found. The left lung was much compressed. In addition, over the lower third of the left lung, were found nodules of lobular pneumonia, which in places projected above the surface, were distinctly circumscribed, and were surrounded by zones of congestion. The right lung, with the exception of the extreme tip referred to, was healthy. The heart showed evidence of endocarditis in both ventricles, but it was difficult to distinguish how far it might be recent, and how far it might date from the rheumatic attack which had occurred the year previously. The mitral valves were very much thickened, and were insufficient, as shown by the water test. The tricuspid valves showed patches of recent injection, were very much thickened, and were covered with apparently recent deposits of fibrin. The liver was very much increased in size, but

otherwise appeared normal. The spleen was very large and soft, and looked very much like the spleen of typhoid fever. The intestines were examined carefully and with negative results. The kidneys were very large, the cortical substance was rather pale, but they had not been examined microscopically. The examination of the urine, during life, had been negative as to albumen. The march of the disease seemed to have been as follows: from either a fresh or from an old attack of endocarditis, particles of fibrin had been separated from the tricuspid valve, and passed into the lungs and set up an embolic pneumonia, which had been followed by secondary pleurisy. The external pericarditis was secondary to the pleurisy, and not, therefore, the direct manifestation of the rheumatic attack. The question why the liver and spleen should be so enlarged was not explained. The fact suggested a septic endocarditis, rather than rheumatic.

DR. VAN SANTVOORD remarked that the transmission of vocal fremitus through fluid in adults was not very exceptional, and therefore its presence could not be absolutely relied on to exclude pleurisy.

DR. PUTNAM-JACOBI remarked that this occurred much more frequently in children.

DR. J. LEWIS SMITH asked if it was not rare to find the lesions of endocarditis in the right ventricle.

DR. JACOBI replied that in this case lesions certainly did exist on the tricuspid valve, as well as on the mitral. She further remarked that if it had been positively decided in such a case that the endocarditis was due to rheumatism, it would be interesting to know whether treatment by salicylic acid would be likely to have exercised any special effect in preventing the effusion into the pericardium by means of its supposed action on the rheumatic materies morbi in the blood. Sibson, in "Reynolds' System of Medicine," attributed efficacy to the use of salicylic acid in the treatment of rheumatic heart disease. The patient in question was treated by stimulants internally and poultices over the pericardium.

TUBERCULAR LARYNGITIS—THE VALUE OF TRACHEOTOMY.

DR. BEVERLEY ROBINSON presented a specimen accompanied by the following history, furnished by Dr. Devlin, Senior Assistant at St. Luke's Hospital: Rachel B—, forty-seven years of age, married, and a native of the United States, was admitted October 25, 1882. There was no specific history, nor distinct evidence of hereditary tendency to phthisis. The patient began to lose flesh and strength about five years ago, but definite symptoms did not appear until three years ago when she had an attack of acute laryngitis accompanied by severe dyspnoea. Since then she has been subject to frequent attacks of laryngeal obstruction brought on by slight exposures to cold. Two years ago she became completely and permanently aphonic. There was no history of cough previous to the laryngeal symptoms. During the last six months paroxysms of dyspnoea have been frequent and very severe. Two months ago it was noticed that the dyspnoea was constant. There was no pain nor dysphagia. On admission she was weak, emaciated, had a cough with marked dyspnoea and laryngeal stridor, and was completely aphonic. The urine had a specific gravity of 1.022, and acid; otherwise negative. Physical examination of the chest revealed consolidation at both apices, particularly the left. Wheezing sounds were heard all over the chest.

November 1st.—Dr. Robinson examined the larynx, and found the epiglottis normal, the arytenoids and commissure thickened. In attempts at phonation an oval chink remained. There was marked inspiratory stridor, also heard during expiration slightly. The ventricular bands were very much thickened. The vocal cords were not satisfactorily abducted. The conclusion was reached that it was not a case of phthisical laryngitis. There was circumscribed dulness under the left clavicle, no dulness under the right, outside of this there was hyper-resonance. There was prolonged inspiration and expira-

tion on both sides. The heart-sounds were feeble but normal. Diagnosis, chronic bronchitis and emphysema, chronic laryngitis.

On November 2d the patient was examined by Dr. A. H. Smith, who diagnosticated tubercular laryngitis.

On November 10th the patient was examined by Dr. McBurney, who diagnosticated tubercular laryngitis.

On November 13th it was recorded that the patient had had several severe paroxysms of dyspnoea during the night.

On November 17th the dyspnoea had become quite urgent, and the patient's consent to tracheotomy was obtained. The operation was performed by the house physician, Dr. Charles Remsen, in the presence of Dr. Robinson, and the patient made a good recovery. For several days she was nourished by nutritive enemata. The patient breathed freely through the tracheal tube, the lower angle of the wound failed to unite, and ultimately, despite careful iodoform dressing, it burrowed downward to the sternal notch. During the entire time the patient was in the hospital there had been an evening rise of temperature varying from one to three degrees above the morning temperature, which was always above the normal. No change in the temperature curve was produced by the operation.

On November 25th the patient was examined by Dr. Leaming, who diagnosed fibroid phthisis with thickened pleura, especially over the upper lobes of both lungs.

On December 12th laryngeal examination showed the arytenoids not so inflamed as formerly, normal epiglottis, papillary condition of the inter-arytenoid commissure, and that the vocal cords did not separate well. Diarrhoea developed, which was diminished but not checked by medication. Dr. Lefferts examined the patient, and diagnosed tubercular laryngitis.

On January 10, 1883, the patient died quietly.

At the autopsy, made by Dr. Ferguson, the right lung was found bound down to the thoracic wall by adhesions over the upper lobe in the axillary line and posteriorly. The upper lobe was honeycombed with cavities, varying in size from that of a pin's head to a horse-chestnut. These cavities were surrounded by bands of connective tissue containing tubercles. The lower and middle lobes were congested and oedematous. Along the free border the lung was emphysematous. The left lung was firmly bound to the chest-wall by adhesions. In the upper lobe there were two large cavities, one as large as an English walnut, the other the size of a hen's egg, which communicated with each other, and contained cheesy pus. In the lower lobe were many miliary tubercles and circumscribed masses, yellowish in color and cheesy in character. Many of the bronchial tubes were thickened, and all the cavities communicated with bronchi. The small intestines contained ulcers which involved the mucous membrane, and in the peritoneum opposite were a large number of miliary tubercles. There was extensive ulceration in the cæcum and the ascending colon. The right ovary was the seat of cystic degeneration, the left ovary was atrophied. The other organs presented no noticeable gross appearances.

Larynx: There is an oval opening in the anterior wall of the trachea, median line, dividing the cricoid cartilage, the first ring of the trachea, and the intervening tissues. This opening admits a cylinder $\frac{3}{16}$ inch, in diameter. There are two small, irregular, superficial ulcers, one on either side of the median line, just external to the projections caused by the cartilages of Wrisburg and Santorini. The tissues in the neighborhood of these ulcers are oedematous. There is extensive and deep ulceration of the tissues covering the vocal cords. The arytenoid cartilages are exposed, their only point of attachment being that of the anterior processes to the true vocal cords. The left arytenoid cartilage is much smaller than the right. Examination with the microscope of sections from the neighborhood of the ulceration over the left false vocal cord, shows miliary tubercles, at the periphery

of which are large numbers of small round cells, small spindle-cells, and many giant-cells; their centres are granular. Sections from the lungs show large numbers of miliary tubercles with giant-cells at their periphery and in the tissues of the lung between the tubercles. There is increase in the fibrous tissue in their neighborhood, and similar round- and spindle-shaped cells to those described in the examination of larynx.

There is slight increase in the connective tissue of the kidney. The vessels are slightly thickened. The epithelium lining the straight tubules in places is pigmented.

There is dilatation of the radicals of the hepatic vein, and atrophy and pigment of the hepatic cells surrounding them, there is some fat in the periphery of the ascini. There are a few miliary tubercles in the liver.

Dr. Robinson remarked that he believed tubercular disease occurred relatively less frequently in this country than abroad; certainly in children. Further, it had been stated that laryngeal phthisis had been cured, but he believed that if any cases of so-called laryngeal phthisis had been cured, they were not true laryngeal phthisis. He thought that a positive opinion could not be formed safely concerning the nature of the disease affecting the larynx previous to post-mortem examination. These facts he thought should encourage the persistent use of local applications, for it is probable that the disease may be cured. Too much importance must not be attributed to mere ocular inspection with the laryngoscope. Concerning tracheotomy he regarded it as erroneous to state that the operation is objectionable, because patients suffer from the presence of the tube; for, in the great majority of cases the patients are benefited by the operation, and certainly it is an advantage rather than a disadvantage from the point of view of individual comfort. He also believed that the introduction of the tube was positively beneficial, because rest is thus afforded to the larynx, one of the most important means for effecting a cure, and that tracheotomy should be performed, if done at all, at a less advanced period than it is usually adopted.

GENERAL TUBERCULOSIS IN A CHILD.

DR. H. D. CHAPIN presented specimens of tuberculosis occurring in a child thirteen months old. It came into his service at the Out-door Department of Bellevue Hospital, November 4th, when the mother stated that the child had suffered since November 1st from vomiting and fever, and had had a slight cough for a week. The temperature was 103° F., and the pulse 150. The pupils were normal. He made a careful physical examination, and was unable to find any evidence of disease of the respiratory organs. The child lay in a kind of stupor. He examined it from time to time, suspecting bronchopneumonia, but it was impossible to diagnosticate it from physical signs. The temperature varied from 100° to 102° F. The child, under the use of cod-liver oil and iron, improved. It was then taken with inflammation and suppuration of the cervical glands, but the child recovered from this, and by December seemed to have made a complete recovery. It continued to improve until February 1, 1883, when the mother returned with it, saying that the child had been taken with vomiting and great restlessness, uttered sharp cries, and bored its head into the pillow. The pupils were normal, and also the temperature. Dr. Chapin again examined the lungs and found nothing. On February 9th the child was seized with convulsions of the left side of the body. There was internal strabismus of the right eye. The patient went on from day to day, and finally died in a convulsion. At the *autopsy* there were found tubercles in the lungs, in the spleen, and in the bronchial glands, which were also large and cheesy. There was a large cheesy nodule of the size of a walnut at the base of the lower lobe of the right lung. The brain was soft, and the ventricles were enormously distended with serum. Very minute

tubercles were found along the fissure of Sylvius. The other organs were normal.

DR. J. LEWIS SMITH had seen six cases in which cerebral symptoms had been produced by enlarged bronchial glands pressing upon the large veins, and thus interfering with the cerebral circulation to the extent of giving rise to serous transudation into the ventricles, and in which the brain was otherwise normal.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, February 22, 1883.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. F. A. BURRALL read a paper entitled

A DISEASE IN CHILDREN SOMETIMES MISTAKEN FOR MALARIA.

Children from one to two years old, sometimes older, suddenly or gradually, from their usual health, become indisposed, pale, perhaps faintly yellowish, have a dry and somewhat warmer skin than natural, irritable stomach, constipation, or scanty light-colored stools. This is the milder form which, if not arrested, tends to further development when the skin becomes decidedly yellow and dry, the pulse frequent, and the temperature elevated, with headache more or less severe, grating of the teeth, and perhaps delirium. The appetite is sometimes voracious, sometimes lost. The irritability of the stomach varies from nausea to persistent and sometimes apparently uncontrollable vomiting. Repeated chills usually occur. The urine contains abundance of urates. In some cases sore throat is present.

Among the causes assigned were, improper diet, check of perspiration, undue excitement of the nervous system, such as nervous excitement from over-playing, studying in poorly ventilated school-rooms, etc.

The essential nature of the condition was regarded as "acute blood-poisoning due to defective hepatic secretion." The indication was to promote excretion by the natural channels. Clinical experience had shown that this could be done by giving mercurials. In such cases, therefore, he recommended calomel, one-sixth to one-fourth of a grain every hour, placed on the tongue dry, until four or five doses have been taken or the bowels begin to act.

DR. J. C. PETERS said that he had seen many cases of the class mentioned by Dr. Burrall, and was aware of the good effects produced in them by mercury. Other remedies, however, might answer an equally good, perhaps better purpose, according to the experience, and a favorite combination with him was four parts of the tincture of aloes, United States Pharmacopœia, and one part fluid extract of licorice, and of this give one fourth or one-half or one drachm according to circumstance. Another remedy is the phosphate of soda.

He believed there was a class of mixed cases which did not always yield promptly to quinine, but by a combination with one of the remedies mentioned, the quinia acted more favorably than when given without an adjuvant.

DR. JOEL FOSTER had been familiar with the class of cases alluded to by Dr. Burrall and could corroborate the statement made concerning the good effects produced by calomel.

DR. A. C. POST said that much was heard concerning the frequency of malarial diseases in New York. He, however, had practised in this city for more than fifty years and did not remember that he had ever seen a case of typical fever and ague that had not been traced to exposure beyond the portion of the city where the paving and sewerage had been completed, or else in the country.

DR. HUBBARD referred to cases in which patients, who had never been out of the city, had suffered from true intermittent fever. There were two localities, namely, at the corner of Bedford and Carmine Streets and at the corner of Canal and Hudson Streets, in which such cases occurred not infrequently.

DR. SELL said that mercurials produced only temporary benefit, according to his experience in such cases, but when he had treated them with irosin, euonymin, and bicarbonate of soda combined and triturated into an impalpable powder, the good results obtained had been permanent.

DR. J. LEWIS SMITH mentioned several diseases liable to be mistaken for malarial fever in children, such as meningitis, tuberculosis in the upper part of the lung, typhoid fever, etc., etc.

DR. BEVERLEY LIVINGSTON then read a paper

ON THE VALUE OF BISMUTH IN THE TREATMENT OF ULCERATIVE STOMATITIS AND NOMA.

The communication was essentially a review of the subject, suggested by the paper recently published in THE MEDICAL RECORD by Dr. C. J. Macguire, and was based on the use of the remedy in the Nursery and Child's Hospital by Dr. E. L. Partridge in 1881 and 1882, and his own experience as Visiting Physician in the same institution. Concerning the diagnosis he thought the term noma should be reserved for those cases which end in perforating gangrene of the cheek, and that the differential diagnosis between it and ulcerative stomatitis could be made from the facts: 1, That the ulceration in one (noma) begins upon the cheek and upon the gums in the other; 2, that there is greater induration in noma than in ulcerative stomatitis, and the gangrene is very much more rapid in the progress, etc. Thirty-one cases had occurred in the hospital; twenty-three before bismuth was recommended and eight afterward. In all the cases in which bismuth was used, iron, quinine, and whiskey were given according to indications. The parts were cleansed with carbolic acid solution, cauterized with the solid stick of nitrate of silver and packed with bismuth. Three deaths occurred among the twenty-three patients treated before bismuth was used, and two in the eight cases which occurred afterward. In one case, bismuth failed and alum cured. One case progressed to true noma under the use of bismuth. According to his experience and from the history of the bismuth treatment in this hospital, he had more confidence in the thorough use of the solid stick of nitrate of silver followed by the application of alum, or probably better, alum combined with bismuth, than in bismuth alone, and was forced to the conclusion that bismuth is no more a specific for ulcerative stomatitis and noma than is pilocarpin for diphtheria.

DR. MACGUIRE remarked concerning diagnosis, that many of his cases were seen by other physicians, all of whom corroborated the diagnosis of cancrum oris, and that the cases were published some months after they occurred. The object in publishing them was to elicit a fair test of the remedy. His method of treatment was to clip away all the gangrenous tissue, thoroughly cleanse the tissue with permanganate of potash— $\frac{3}{j}$ to $\frac{3}{iv}$ —once a day, and then pack the ulcer with bismuth, which was applied every three hours. In all his cases there was no loss of teeth, no exfoliation of bone, and no further destruction of soft parts. The general treatment was the same as that used in Dr. Livingston's cases.

The Section then adjourned.

A CHILD BORN WITH TEETH.—Dr. Kochman of Strasburg relates the history of a primipara who gave birth at full term to a healthy child with the two lower internal incisors just beginning to protrude. These were out and well grown at the end of a week.—*Allgemeine Medicin Central Zeitung*.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

A STRIKING ILLUSTRATION OF THE INFLUENCE OF HEREDITY IN THE TRANSMISSION OF INSANITY—THE MOTHER OF THE EXECUTED MURDERER MENESCLOU—THE NEW SCHOOL OF MEDICINE—THE FRENCH OPHTHALMOLOGICAL SOCIETY—AN INTERNATIONAL EXCHANGE OF COLLEGE THESES—THE DISCUSSIONS OF KOCH AND PASTEUR—THE NOMINATION OF DR. RANVIER.

PARIS, February 23, 1883.

A VERY striking illustration of the influence of heredity in the transmission of disease, and particularly that of insanity, has just been witnessed in Paris in the following case. It may be remembered that about two years ago a young lad by the name of Menescloeu was guillotined for the murder of a little girl whom he had cut to pieces after having committed rape on her. Doubts were raised as to his sanity, but the experts who had examined him came to the conclusion that although the young culprit was evidently of weak intellect, yet he was intelligent enough to understand the enormity of his crime and that he was consequently responsible for what he had done. The counsel for the defence, however, insisted on the unsoundness of his mind, and during his confinement in prison he was closely watched, but beyond a little eccentricity of manner and occasional outbursts of passion nothing abnormal was observed in him. At the necropsy several important lesions were found in the brain, which the medical men who examined the body considered sufficient to cause great derangement of his intellectual faculties, and that, therefore, he was not cognizant of what he had done. It was, unfortunately, too late to have made the discovery, and it is no wonder that whenever cases of the kind occur a general outcry is raised against the profession and it is set forth as a good excuse by those who persistently plead for the abolition of capital punishment. I must say that the experts did not come out very brilliantly in this case, and what would tend to disprove their diagnosis is the fact that the mother of Menescloeu, who is forty-five years of age, has just been sent to a lunatic asylum, and it has been ascertained that the father of the latter died a lunatic and a brother of hers committed suicide. She is the subject of monomania, and of that form which the French alienists designate "délire de persecution."

The new School of Medicine, or rather the new addition to the old building, which was commenced about three years ago, seems to be making some advance, though very slowly, toward completion. A good deal of the scaffolding has been removed, and the front of the building presents a monumental aspect, the principal entrance of which is decorated with two allegorical figures—the one representing medicine and the other surgery. To make room for the additional building, several dwelling-houses had to be pulled down. Among them was one which bore the number 30, and which was occupied by the notorious Marat when he was stabbed by Charlotte Corday.

It has been proposed to establish a new school of Military Medicine in one of the larger cities of France, not including Paris, to replace that which the French lost by the annexation of Strasburg to Germany in the last war. The faculties of Montpellier, Bordeaux, and Lyons claimed the favor, but the Minister of War has decided for the last named city as being the most central, and possessing other advantages over the cities named.

A bust of the late Professor Bouillaud has been placed in the hall of the Academy of Sciences. It is now proposed to erect a statue by subscription to his memory, for which purpose a list for subscriptions is open at the

Academy of Medicine, and under the auspices of the President of the Medical Association of the Charente, the birth-place of this illustrious physician.

The Academy of Sciences has awarded the "prix Montyon" to Dr. Maillot for his interesting works on the continued forms of fever as they occur in tropical climates.

A new society, under the name of "Société Française d'Ophthalmologie," has just been formed in Paris, meetings of which are to be held annually, and the society is open to all those who speak the French language. It counts already a goodly number of members, among whom are to be found for the present, Belgians, Swiss, and Spaniards.

According to an agreement entered into between the French faculties and thirty foreign universities a regular exchange of theses and dissertations will be officially effected. The first exchange took place in December last.

You are aware of the discussion that has been carried on for some time between Professor Koch, of Berlin, and M. Pasteur, the eminent French biologist. The various communications made by the latter to the different learned bodies on the subject of microbes and the different kinds of virus, are to be put up in a condensed form for early publication.

Dr. Ranvier, the eminent histologist and professor at the College of France, has been nominated corresponding member of the Academy of Sciences of St. Petersburg.

MEDICAL LATIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: May I ask the privilege of an additional brief space in your valuable journal, for the purpose of replying to the communication of Mr. John A. Armstrong (MEDICAL RECORD, February 3, 1883), containing a criticism of my "rejoinder" (*Ibid.*, December 2, 1882) to his paper on "Medical Latin" (*Ibid.*, November 25, 1882). I am aware that the subject is one almost foreign to the purposes of this journal, and therefore do not intend to encumber your pages with any further communications on this subject.

Leaving aside, for the present, the minor points on which Mr. Armstrong and I differ, I will at once revert to the two main points at issue, namely:

First.—Whether such terms as *Carbonas*, *Sulphas*, etc., should be regarded as masculines or as feminines.

Second.—Whether *Rhus glabrum* or *Rhus glabra* is the correct pharmacopœial title to denote the fruit of the smooth sumach.

Concerning the first point, the reasons which convinced me that those nouns should be masculines—and which convinced, so far as I knew before Mr. Armstrong's communication, all others who had occasion to give an opinion on the subject—were pretty fully published in *New Remedies* (1882, p. 58). They were not quoted here, as I wished to save space, and they will be merely outlined even now, since it may be presumed that those who are sufficiently interested in the argument will consult the article quoted.

Mr. Armstrong, having read the paper, states "that it refutes itself," and "that it presents no arguments," etc. I fail to see, however, how he arrives at this conclusion.

My argument is, in brief, the following: Such modern Latin terms as *Carbonas*, etc., should follow the analogy of true Latin nouns of similar termination, so far as the genius of the language permits.

Now, we find two classes of such nouns (having *-itis* in the genitive¹), namely: first, the large group of nouns

¹ Mr. Armstrong adds a note, on page 139, second column, in which he informs us that "*Genitivus* is formed from *genitum*, supine of *gigno*. The Greek name is γενική πτωσις" (*sic*). This is probably meant as a criticism of my spelling "genitive" in my last paper (where it is once printed "genitive" by oversight). But the form "genitivus" is now preferred by the best authorities (Neue, Kruger, Halm, Keil, etc.), as being authenticated by the best manuscripts, notwithstanding the supine *genitum* and the Greek γενική πτωσις.

in *-tas*, *-tātis*, which denote a quality or property, that is, an abstract idea. These nouns are feminines, without exception, in Latin as well as in the cognate or derivative languages. Since the technical terms *Carbonas*, etc., evidently do not belong to this class, neither having the characteristic secondary noun-suffix (*-tātis*), nor denoting any abstract idea, we must look elsewhere for an analogy.¹

The second group of nouns in *-as*, *-ātis*, are those which were originally adjectives (patronymic, geographical, etc.), and which have a gender corresponding to the idea or noun understood.

Mr. Armstrong does not accept the view that *Carbonas*, etc., should be classed here, because he thinks that these modern terms are pure nouns which have never been used as adjectives, and which do not require a supplementary noun in order to be understood.

Now, I never meant to assert that *we*, who use these terms constantly, are compelled mentally to supply a noun, such as *sal* (salt), in order to understand them. In fact, I consider them to be good substantives, just as Mr. Armstrong does. But the case was different with those who *invented* the terms and introduced them into literature. Chemists had previously been in the habit of denominating salts (among other methods) by such terms as *sal phosphoreus magnesiæ*, *sal acetosus argenti*, etc.² The reformers of nomenclature substituted a single term for the *sal phosphoreus*, namely, *phosphas*, and *acetas* for *sal acetosum*, etc. And they used these new terms as masculines, simply because the idea of *sal* still floated before their minds. Other writers even used those terms as neuters, since they may have been accustomed to use the Latin noun *sal* as neuter.³

While such a process of mental supplementation was quite natural to those who first used these terms, who had been long accustomed to use the older method, this process is not at all necessary nor likely to take place in the minds of those who learn chemical terms in our day. We regard the latter now as true nouns, denoting concrete things, and we require no mental supplement to understand them. This, however, does not invalidate the history of the origin of the terms, nor their claim to be regarded as masculines, since we know precisely how they came to be formed, and since we can readily follow the train of thought of those who designed them.

Mr. Armstrong writes: "The 'translators,' desirous of names as homophonous as possible to the original substantives, had warrant, most assuredly, in the examples of *anas* for *anitis*, and *satis* for *satietas*, in writing *acetas* or *acetitas*."⁴

Now, I venture to say that the "translators" (of the London Pharmacopœia, 1809) never thought of those two solitary words, but that they merely followed the usual routine of grammars, or that they struck, for themselves, a mental balance of the Latin nouns in *-as*, *-ātis*

(irrespective whether a *t* precedes this termination or not), and having, as they thought, found an overwhelming majority on the feminine side, selected this gender.

And I further venture to assert that *acetas* does not stand for *acetitas* any more than *sulphas* stands for *sulphitas*, or *nitras* for *nitritas*. *Acetitas*, etc., can only mean "the condition of being an acetate," "the acetate-ship," an abstract idea; its employment to mean a concrete substance would be utterly foreign to the genius of the language.

That the similar terms in *-is*, *-ītis*, must follow the analogy of the terms in *-as*, *-ātis*, requires no argument, because the implied idea in both cases is the same, and there are ample analogies for their use as masculines in Latin.⁵

An additional support for my view (and that of others) of the gender of these technical terms is offered by several modern languages which have adopted them, and in which they are either *masculines* or *neuters*, according to the gender of the word meaning "salt." So in German, where *Salz* is neuter, we say: "Das Sulfat," "Das Nitrat." In French and Italian, where the words for "salt" are masculine, we have: "le sulfate," and "il solfato."⁶

With regard to *Rhus*, I have nothing to add to my argument that the botanical name of the *plant* should denote the *part* of the plant understood in the Pharmacopœia.

So far as relates to the gender of *rhus*, Mr. Armstrong truly says that the authorities differ. There are examples for *rhus* (as tree), both masculine and feminine. Concerning the passage from Celsus, Mr. Armstrong implies that I *prefer* the reading which makes it masculine. But I do not need to prefer any, since the manuscripts and editions, so far as I know, offer no other, and neither the differing genders of *rhus* (as tree), nor the fact that *rhus* (as seed) *does* occur as neuter (besides feminine), can disprove my argument in favor of *Rhus glabra* as pharmacopœial title. Mr. Armstrong wants *Rhus glabrum*, and he wants this translated, not "the glabrous fruit of *Rhus*," but "the fruit of the glabrous *Rhus*." If this translation is admissible, then *malum aureum* might with equal right be translated "the fruit of the golden apple-tree."

As to the declension of *rhus*, I am aware that many forms occur in different authors, and the list given by myself and by Mr. Armstrong could possibly be still further increased.⁷

It is conceded, as I already stated in my last paper, that the Greek *ῥῖος* may be declined either in the second or the third declension. In *Latin*, however, *rhus* is restricted to the third declension. The accusative is either *rhun*, *rhoa*, or *rhum* (occurs only once). *Rhūn* is the Romanized Greek form *ῥῖον* (though it might also be the contracted form of the accusative of the second (attic) Greek declension). Mr. Armstrong finds it singular that I should regard *rhum* as an accusative of the third declension. I have done so and do so still, first, because the other forms of the *regular* Latin second declension (gen. *rhi*, dat. *rho*) are missing, and second, because I regard *rhum* as a Latinized accusative, contracted from *rhū-em*, just as we find the genitive form *rhūis* (see note to my last paper), which is contracted from *rhū-is* (for *rho-is*).⁸

¹ In my paper, in *New Remedies*, I quoted *lis, litis*, as the only true Latin noun in *-is, -ītis*. Mr. Armstrong quotes another *Dis, Ditis*, which I omitted, as it is a contracted form. The adjective *dis* (for *dices*) has no bearing on the argument.

² In Spanish, we have "el sulfato" as masculine, although *sal* is feminine. But the Spanish chemical nomenclature is based on the French.

³ I believe to be correct in assuming that the misplaced or missing accents in some of the Greek forms quoted in Mr. Armstrong's paper, are merely oversights of the proof-reader. But to the same category belongs the *Palladius Martialis* (in my copy it was *Mirt.*), in the note to my last paper, which Mr. Armstrong draws special attention to. I have handled my own copy of *Palladius* often enough to be aware of his name. The mistake arose from a transposed correction made in the preceding line, where the name *Gargilius Martialis* appears.

⁴ I do not regard *rhūis* as the Greek contracted genitive *ῥῖος*, because the contraction in this case is regarded generally as inadmissible. See Kühner, *Ausführliche Gram. d. Griech. Sprache*, I, 349, Anm. 2.

¹ The circumstance that the term *Acetas* apparently belongs to this class does not interfere with the argument, since the *t* (as Mr. Armstrong himself acknowledges) does not belong to the termination.

On the other hand, the noun *acetas*, which Mr. Armstrong draws to the second group in *-as, -ātis* (since he regards the *t* as belonging to the root), really belongs to the first class. The root is *acē* (belonging to Sanskrit *indh*, Greek *ἰδν* (*αἰδν* *αἰδν-ῖος*, etc.), Lat. *acē* (*acē-es, acē-tas* (for *acē-tā*) etc.), and the termination is *-tas, -tātis*. Compare Vanicek, *Griechisch-Lateinisches Etymologisches Wörterbuch*, Leipzig, 1877, I, 85, and the authorities quoted on p. 86.

² Also *sal phosphoreum, sal acetosum*, etc.

³ *Sal* occurs both as masculine and as neuter. See Neue, *Formellehre d. Lat. Sprache*, I, 697-698.

⁴ In my paper, in *New Remedies*, I stated that *anas, anātis* ("old womanhood") formed an apparent exception, inasmuch as it was a *feminine* not ending in *-tas*. My explanation, that it was contracted from a word in *-tas* (just like *satis*), quoted by Mr. Armstrong), is, in my opinion, sufficient to bar its use as an argument against me. I also mentioned, as "the only true Latin noun in *-as, -ātis*," the word *anas* (*anātis*), the duck. Mr. Armstrong remarks to this: "No philologist would so characterize it. It is a metathesis of *ῥῖσσα*; theme *ῥεω*, whence Latin *no*, to swim, etc." In reply to this I can only say that I trust there is no philologist who would assert that the Romans coined the word *anas* after the Greek *ῥῖσσα*, or that they derived the word (and idea) for swimming from the Greeks. There are thousands of good Latin and good Greek words which are derived from a *common form* in the mother-language. There are others again which can be shown to have been borrowed or been transplanted by commercial, military, or migratory expeditions and the like. I consider the etymological connection between *anas, ῥῖσσα, ῥεω*, no (old high German *anut*, Anglo-Saxon *enad*, Luth. *antis*, etc.) as well established, but I also consider the duck (with *Hehn*, *Kulturpflanzen und Hausthiere*, 2te Aufl., Berlin, 1877, p. 323) to be a native of Italy as well as of Greece.

There is, of course, no objection to regard *rhum* as the accusative singular of the second declension. Yet I prefer the former view and think I have sufficient authority for doing so.¹

CHARLES RICE, Ph.D.

NEW YORK, February 25, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 3, 1883, to March 10, 1883.

BROWN, HARVEY E., Major and Surgeon. To be temporarily assigned to duty at Mount Vernon Barracks, Ala., during the absence on leave of Captain T. A. Cunningham, Assistant Surgeon. S. O. 17, par. 2, Department of the South, March 6, 1883.

CALDWELL, D. G., Captain and Assistant Surgeon. To be relieved from duty at Fort Fred. Steele, Wyo., and will report in person to the Commanding Officer at Fort Laramie, Wyo., for assignment to duty at that post. S. O. 23, Department of the Platte, February 27, 1883.

HOPKINS, WM. E., First Lieutenant and Assistant Surgeon. The leave of absence granted December 28, 1882, is extended two months. S. O. 56, par. 5, A. G. O., March 9, 1883.

PAULDING, H. O., Captain and Assistant Surgeon. The leave of absence granted in S. O. 11, Department of the Platte, January 27, 1883, is extended twenty days. S. O. 23, Military Division of the Missouri, March 2, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 10, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 3, 1883	0	8	69	6	100	49	3	0
March 10, 1883	0	13	108	4	109	40	0	0

A DINNER TO OLIVER WENDELL HOLMES.—As an expression of appreciation of the honor Dr. Oliver Wendell Holmes has won for American medical and general literature during the past forty years, a complimentary dinner is to be given to him at Delmonico's, April 12th, by the medical profession of this city.

Dr. T. Gaillard Thomas is chairman of a committee of thirty representative men of all the different interests and sections of the profession, which insures a perfect success, not only as to numbers, but as regards the entertainment in all respects, as the gentlemen who are to respond to the toasts are the most distinguished in their respective professions for their eloquence and wit on such public occasions. The tickets for the dinner are to

be ten dollars, and those wishing to secure them should apply to either of the following gentlemen: Drs. E. G. Loring, F. R. Sturgis, John G. Curtis, George G. Wheelock, Paul F. Mundé, the committee who have this in charge. Tickets cannot be obtained after April 1st, and to prevent disappointment it is absolutely necessary to apply as early as possible, as the number who wish to be at the dinner is likely to exceed the capacity of the dining-hall.

NEW PORTABLE TESTS FOR ALBUMEN.—Dr. Pavy has devised some ferrocyanic pellets, which are portable and keep well, and which furnish, it is claimed, a very delicate test for albumen.

Dr. G. Oliver has prepared test-papers saturated with various reagents, more sensitive than heat or nitric acid to albumen, extremely portable, but little liable to deterioration from exposure to the air, and quite devoid of the corrosiveness which interferes with the portability of nitric acid. The papers were saturated with potassium-mercuric iodide, potassium ferrocyanide, potassium-mercurio-iodo-cyanide, sodium tungstate, and picric acid; and all gave sensitive reactions with slightly albuminous urine.

The above preparations seem to be useful, but we fear that heat and nitric acid will still remain popular, because these latter furnish some idea of quantitative change.

DEATH OF PROFESSOR SIGMUND.—Professor Sigmund, of Padua, recently died at the age of seventy-three. For twenty-four years he conducted the clinic for syphilis at Vienna, being associated with Hebra. He is best remembered, perhaps, on account of his having associated a particular gland in the arm (known as Sigmund's gland) with the diagnosis of syphilis.

GRAND TRUNK RAILROAD SCHEDULE OF SURGICAL CHARGES.—Our Canadian brethren are justly exercised over the schedule of charges drawn up by the Grand Trunk Railroad for its surgeons. The fees for a day visit are \$1; night visit, \$2; office consultation, 50 cents; surgical dressing, \$1; amputation of foot, \$20; leg, \$25; thigh, \$50. It seems a good deal like robbery when a rich corporation refuses to pay a poor doctor but \$20 for, we will say, a Syme's operation with subsequent treatment.

THE ST. JOSEPH MEDICAL HERALD is a new medical monthly. It is unusually well edited.

THE LATE DR. ALEXANDER MING FISHER.—At a meeting of the Medical Staff of the Northern Dispensary, held February 26, 1883, the following action was taken:

Whereas, We have with deep feelings of regret learned of the death of Dr. Alexander Ming Fisher, in Cologne, Germany, on the 12th inst.; therefore,

Resolved, That in the death of Dr. Fisher we feel that the dispensary has lost an efficient physician, the members of the staff a valued friend and courteous co-worker, and the community an esteemed and worthy gentleman.

Resolved, That these resolutions be published in THE MEDICAL RECORD, and that a copy of them be transmitted to the family of the deceased.

ISAIAH F. PRAY, Chairman.

NELSON H. HENRY, Secretary.

SUIT AGAINST A MEDICAL COLLEGE.—An important decision was rendered recently against the United States Medical College, a so-called eclectic institution of this city. In April last the Attorney-General began a suit in the Supreme Court to set aside its incorporation. The officers of the college demurred to the complaint, but before argument could be heard the Legislature amended the general act of 1848 by providing that scientific and literary colleges and universities that had reported their organizations to the Regents of the State University within two years prior to the passage of the amendment

¹ There are analogies for the above, for instance, among Greek words in *ys*, such as *Ity*s (gen. *Ityas*), which has in the acc. either *Ity*n (the regular Greek form, Verg. Aen., 9, 574; Ovid. Metam., 6, 652) or *Ity*m (Prop. 4 (3), 10, 10). *Haly*n (Cic. de divin. 2, 56, 115; Liv., 38, 16, 13), or *Haly*m (Verg. Aen., 9, 765). The forms *rhu*-m, *Ity*-m, *Haly*-m, etc., might also be supposed to be formed without the binding vowel *e*, and subsequent contraction; I think, however, that a contraction took place, for I find the open form *Imity-em* (Plin. hist. nat., 6, 7, 7). "*Rhum*" being the only instance occurring where an accusative in *um* was possible, of course no further examples of this form can be quoted.

should be declared legally incorporated. The demurrer was then withdrawn and an answer was put in asserting that the United States Medical College had been legalized. Judge Van Vorst decided on March 7th, in Supreme Court, Special Term, that the amendment did not legalize the college, for the reason that it had been decided by a General Term of the Supreme Court that words in an amendment passed in 1870 to the act of 1848, similar to those in the amendment of 1882, which define the institutions to be legalized by it, do not include medical colleges in their meaning.

THE NEW YORK MICROSCOPICAL SOCIETY held its annual meeting in this city on March 8th. The President, Mr. Benjamin Braham, delivered an address. An exhibition of microscopical objects was given by the members, fifty or sixty microscopes being used. The circulation in fish and frogs was shown and the bacillus tuberculosis. The exhibition was highly creditable to the Society.

THE OFFICE OF STATE COMMISSIONER IN LUNACY was abolished in the Appropriation Bill as passed by the New York State Legislature. It was stated that the State Board of Charities could do the work as well. We never had great confidence in the utility of a single lunacy commissioner, but to abolish the office without substituting something in its place is a step backward.

ANOTHER CREMATION.—The late Mr. Henry Seybert, of Philadelphia, was cremated at Washington, Pa., on March 7th. This is the seventeenth cremation at this place. Mr. Seybert left \$60,000 to the University of Pennsylvania. It is stipulated that an impartial investigation of modern spiritualism be made. The sum of \$1,000 or \$5,000 was given to nearly every charitable or educational institution in the city.

APPROPRIATIONS FOR STATE MEDICAL CHARITIES.—The Supply Bill was reported to the New York Legislature on March 7th. It includes the following items: New York Idiot Asylum, \$10,000; Binghamton Asylum, \$36,230; Auburn Insane Asylum, \$6,500; Seamen's Retreat, \$1,244.35; Willard Asylum, \$3,000; Buffalo Insane Asylum, \$18,300; State Homeopathic Asylum, \$12,200; Commissioners in Lunacy, \$300; Disbursing State school tax, \$25,000; American Museum of Natural History, New York, for departmental instruction to school-teachers, \$12,000; Quarantine Commissioners, \$1,500; State Board of Health to prevent adulteration and sale of food and drugs, \$10,000; State Board of Health to enforce law regulating sale of illuminating oils, \$3,500; State Board of Audit, \$18,777.71.

ALCOHOL AND THE STOMACH DIGESTION.—Man is a carnivorous animal, according to Lewin, and should eat flesh as much as possible. He should not drink alcohol, since that hinders flesh digestion. Dujardin-Beaumetz, however, takes the opposite view, and thinks that wine may be taken with meat, since, as Richet shows, it increases the acidity of the gastric juice. Vulpian and Mourrut found that alcohol in excess hindered digestion. Levin and Petit de Sèmerie found the same as a result of experiments on dogs. Three dogs were fed with 200 grammes of flesh: dogs 1 and 2 received also 25 grammes of brandy; dog 3 received 75 grammes of the same. In No. 3 there was no digestion; in No. 1 and 2 it was unimpaired. Fleischer has obtained similar results.

THE TREATMENT OF SCALP WOUNDS.—Dr. W. S. Parker, of Piqua, Ohio, writes: "An article on scalp wounds in the last number (February 24th) of THE RECORD, prompts me to communicate a simple device I have used for the last twenty years in such cases. After cleansing the wound thoroughly, all hemorrhage being suppressed, bathe the parts freely with balsam Pern, a time-honored, but none the less valuable antiseptic. Then, presupposing its existence, comb up along the edges of the wound, and exactly opposite, for the space of say half

an inch, the hair, which twist into a thread and tie with a *single* turn, drawing the edges of the wound gently but firmly together. Having previously laid a well waxed ligature beneath the hair and parallel with the wound, tie with the thread the single loop of hair, employing a surgeon's knot. Repeat the process, *i.e.*, another single loop and surgeon's knot, and you have a fixed dressing. The coaptation of the flaps is necessarily perfect. I have not hesitated to use sutures when necessary, owing to the absence of hair or its being too short, or from loss of tissue, and in my entire experience have had but one case of erysipelas following their use, which seems to bear out Professor Gross' teaching of the harmlessness of sutures in the scalp."

CHLORAL HYDRATE AND BROMIDE OF POTASSIUM IN DELIRIUM TREMENS.—Dr. W. Washburn, of this city, mentions a plan of administration by which these remedies have proven effectual, when other means as well as large doses of chloral had signally failed. He advises, first, that the bowels be thoroughly moved with croton oil, following which, from a solution of chloral hydrate, gr. ij., ʒj., and potassium bromide, gr. v., ʒj., he administers four drachms as the first dose. At the expiration of twenty minutes or half an hour, a second dose of one drachm is given, and repeated every fifteen minutes until sleep is produced. From this method of administration it is claimed that a quiet and refreshing sleep is induced usually after the second dose, and, in his experience, nothing has given such speedy and excellent results in the treatment of these cases.

THE TONGUE UNDER THE MICROSCOPE.—Dr. G. P. Hachenberg, of Austin, Texas, has been making a series of microscopical examinations of the tongue, with a view to establishing the diagnostic value of its appearance, not only in disease of the liver and alimentary canal, but also in lesions of the respiratory organs, in the cachexiæ, etc. To this end he invites the attention and co-operation of the profession, and proposes to utilize the material received in a treatise on this subject. All reports will be duly accredited by him.

ANATOMICAL TECHNOLOGY.—In the review of this work, published in THE RECORD of February 10th, the word "dorsiverting" is quoted when the text says "ventrigructing," and the author writes us that it should be "dorsiverting."

IODINE AND BLISTERS IN TABES MESENTERICA.—In tabes mesenterica, Dr. Bouchut, of the Children's Hospital, recommends the application of blisters, or the tincture of iodine, upon the abdomen. If ascites be present, tapping should be employed without hesitation. The *régime* to be followed should be very severe—beef-tea, eggs, raw milk, and claret. If diarrhœa be present, enemas of borax, one drachm each time, should be given, and three or four teaspoonfuls of glycerine in the day, by the mouth. Bismuth, or phosphate of lime, would be very useful. Your correspondent tried this treatment in an apparently hopeless case, and a rapid recovery ensued. The disease was far advanced, and the child was abandoned by its ordinary medical attendant.—*Medical Press and Circular*.

THE MINNESOTA COLLEGE HOSPITAL held its Annual Commencement in Minneapolis March 1, 1883.

A BILL TO REGULATE THE PRACTICE OF MEDICINE in Minnesota has been introduced into the State Legislature. The *Northwestern Lancet* approves the bill in the main, and urges its passage.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF NASHVILLE held its annual Commencement last week, graduating a class of 125.

BEQUESTS TO LONDON HOSPITALS.—Seven London hospitals have recently received bequests of \$25,000 each from Mr. George Tierney, recently deceased.

The Medical Record

A Weekly Journal of Medicine and Surgery

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NEW YORK, MARCH 24, 1883

Whole No. 646

Original Lectures.

ON THE RELATIONS OF MICRO-ORGANISMS TO DIS- EASE.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE
ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSI-
CIANS AND SURGEONS, NEW YORK.

By WILLIAM T. BELFIELD, M.D.,

LECTURER ON PATHOLOGY, AND ON GENITO-URINARY DISEASES (POST-GRADUATE
COURSE), RUSH MEDICAL COLLEGE, CHICAGO.

LECTURE IV.

IN this discussion I have referred to various bacteria as distinguished into species by essential differences of form and function. In these latter days it has become fashionable to speak of these minute organisms as transient modifications, due to incidents of their environment, of one and the same organism. Nägeli, indeed, would include not only bacteria, but also some of the higher fungi in this hypothesis. As this seems as yet a speculation, based not so much upon direct demonstration, as upon deductions, it will not require discussion here.

An essential element of this theory, however, the so-called accommodative cultivation of bacteria, seems to be supported by certain experimental evidence. This assumes that the physiological characteristics may be modified by contact with unusual influences—by a change of environment, in other words—as to render the descendants of a given bacterium which is capable of successful contest with the living animal tissues impotent to maintain such combat; and conversely to confer upon a previously harmless bacterial species the power to invade and destroy a living animal. This hypothesis is so fascinating, the solution of many difficult problems is rendered thereby so simple, the reconciliation of conflicting observations and opinions becomes so easy, that every man becomes at once his own bacteriologist. Diphtheria, on this hypothesis, is not due to a specific bacterium, but to some of those usually guileless organisms which ordinarily inhabit the healthy throat, incapable of harm; but which, excited into unusual and perverse activity by unknown influences of atmosphere, etc., invade the body with disastrous results. The application of this assumed principle is evidently limited only by the fancy and ingenuity of the individual; we have been already amply entertained by theories ascribing typhoid fever to the hypothetical tonic influence of sewer-gas upon the bacteria inhabiting the alimentary canal, etc.

The evidence in support of this hypothesis consists of deductions by analogy and of experimental observations. Since the life of an organism is the resultant of many forces, it is *a priori* evident that a modification of one or more of these forces may be followed by a change of the resultant life. In the higher plants and animals we have abundant evidence to this effect; the domestic pigeon and the dahlia are examples rendered familiar to us by Darwin. Such modifications, it is true, require time; but in biology time is measured by generations, not by years; and since from one bacterium a second may be produced in thirty to sixty minutes, it is evident that a day may induce in these organisms the effects of a thou-

sand years in man. The evidence by analogy with higher organisms supports then the theory in question.

This same principle—modification of function by changes of environment—which Grawitz and Buchner had vainly attempted to demonstrate, seems to have been demonstrated by Pasteur in his studies upon protective vaccination. He asserts that the microbes which he regards as the morbid agents in chicken-cholera can be deprived of their virulence by successive cultures in contact with air; so that a given quantity of such culture fluid causes effects far less severe than the same quantity before such modification. Pasteur subsequently applied the same principle to the mitigation of anthrax virus; indeed the list has been still further extended by himself and others. Since in all these cases the same general principle is illustrated, it will suffice for our present purpose to consider the mitigation of anthrax virus for the preventive vaccination of sheep.

Pasteur's theory is this: the anthrax rods, as found in the blood of an animal dead of the disease, when placed in a suitable liquid maintained at a temperature of 42–43° C. grow as usual into threads, but do not produce spores. After a certain time their vitality is lost; when transferred to another flask, kept under the same conditions, they do not grow nor reproduce. But at any time previous to this final extinction of vitality, the bacilli still exhibit life, though their ability to invade a living animal, *i.e.*, their malignancy, is diminished. There occurs, indeed, a gradual *diminuendo* of malignancy, their morbid effect upon an animal decreasing with the prolongation of their exposure to these conditions, high temperature and exclusion of oxygen, until finally both life and malignancy are extinguished. Pasteur found that after eight days the bacilli had lost their fatal power to destroy rabbits, guinea-pigs, and sheep, though these animals are peculiarly susceptible to this virus. He claims that he has thus mitigated the virulence of these bacteria, has induced a modification of function.

As to the accuracy of Pasteur's observation in this case there can be no doubt; the vaccination of thousands of animals has already proven that the mortality induced by such anthrax cultures is much less than that following the usual inoculations with fresh virus. But his explanation, that the decrease of malignancy is due to modification of physiological function, is a by no means necessary conclusion, since precisely the same results can be and have been secured, under circumstances which preclude the possibility of a transmissible physiological modification.

First among these methods is simple dilution. It has been long since and often demonstrated that the effect induced by the incorporation of these virulent organisms into an animal depends, *ceteris paribus*, upon the number introduced. Chauveau found that sheep which had survived injections of fifty to six hundred anthrax bacilli died after subsequent injections of one thousand bacilli each. Oemler had previously made analogous observations upon horses; Löffler upon rats; it is indeed an accepted principle that the effect of inoculation increases with the number of injected bacilli. The somewhat general impression that quantity exerts no influence upon the result, except as to time, may be true when the effect is manifested upon an inert, unorganized mass, but not in the case of a living animal.

Diminution of malignancy can be secured in other ways also, which seem to accomplish practically the same result, dilution of the virus. Nocard and Mollereau found

that anthrax virus is attenuated by simply mixing it with twice its volume of oxygenated water under pressure. Four hours' contact produces Pasteur's premier vaccin (for the guinea-pig), ninety minutes' exposure the second. Chauveau makes the premier vaccin by exposing anthrax blood to a temperature of 50° C. for fifteen minutes; and the second vaccin by the same exposure for nine to ten minutes. Since oxygen under pressure, as well as a high temperature, destroys the anthrax bacilli, it would seem that these methods accomplished merely a dilution of the virus by killing a certain number of the contained organisms; for in the brief time required in these experiments a physiological modification seems scarcely possible.

According to a communication presented by Bouley to the French Academy of Medicine, Peuch discovered that the effects of tag-sore virus (variola in sheep) decreased by simple dilution with distilled water.

* In the case of chicken cholera also, the characteristic organisms of which have been "modified" by Pasteur through a long and interesting process, there is reason to suppose that this modification may be simply a dilution. For vaccination against the disease has been successfully practised by simply introducing into the animal a piece of blotting-paper on which the blood of an infected animal has dried. The bacteria in dried anthrax blood die in a few weeks, but those still living at a given moment exhibit their original functions if transferred to a proper soil, and it seems probable that the diminished virulence of dried chicken cholera blood is due to the death of some of the contained organisms rather than to a physiological modification. This belief is strengthened by a letter recently received from Dr. D. E. Salmon, of Ashville, N. C., in which he says: "I have vaccinated fowls experimentally, both by Pasteur's method and by a method of my own. My method is simply inoculation with a very diluted virus; when sufficiently diluted it produces only a very circumscribed, local irritation that does not affect the general health in the least. One or a dozen germs of this fatal disease may be introduced in the tissues and are unable to produce any effect whatever. Twenty, fifty, or a hundred, according to the susceptibility of the fowl, will produce a slight local irritation. Pasteur's method requires five to nine months to attenuate the virus; by mine it is accomplished in as many minutes."

The effect can be secured, therefore, by simple dilution of anthrax or chicken cholera virus, as well as by Pasteur's cultures, and there are other reasons for suspecting that his mysterious method for the mitigation of bacterial virulence is practically a dilution of the culture, or rather, of the contained bacteria. If Pasteur would demonstrate that his tamed bacilli transmit their tameness to subsequent generations, the question would be finally settled; he asserts, indeed, that he has observed such transmission "in a few cultures," but gives no particulars, while the extensive vaccinations already performed on sheep prove that even his first (weak) vaccin sometimes kills an animal. It is but just to state that Koch has recently expressed his conviction that a genuine physiological modification does occur in Pasteur's cultures; whether this conviction is based upon personal observation or not does not appear.¹

Although proper functional activity may doubtless decrease susceptibility to infectious diseases, whether of bacterial or of still unelucidated origin, it is evident in our daily observation that such activity does not necessarily confer immunity. At present but two avenues to such acquisition are known, a natural attack, and the artificial induction of the disease in mitigated form. The immunity secured by one attack of variola, scarlatina, measles, whooping-cough, etc., and by artificial inoculation with variola, as was formerly extensively practised, prompted experimentation in regard to other diseases. In-

oculation of cattle with material from animals dead of infectious pleuro-pneumonia—lung plague—was begun in Holland in 1852, and soon extended to Germany and Russia. In Saxony the mortality, previously twenty-five to thirty per cent. of the herds, became ten, six, two, even one per cent. At the Cape of Good Hope, where seventy to eighty per cent. of the cattle died of this infection, the disease almost vanished after inoculation was extensively practised. The tag-sore of sheep was always robbed of many victims by artificial inoculation. But of the diseases of whose parasitic origin we have conclusive or strong presumptive evidence, every one may occur more than once in the same subject. It is evident therefore, first, that immunity against an infectious disease, in the ordinary sense of the term, implies not necessarily the absence, but merely a relatively slight degree of susceptibility; second, that the question must be studied as to each disease independently of all others.

Although the question of protective vaccination has been experimentally studied as to anthrax, charbon symptomatique, chicken cholera, septicæmia, by Chauveau, Toussaint, Semmer, Colin, and Rosenberger, yet the results are so closely associated with Pasteur's name and with anthrax that I shall omit extended reference to the pioneer workers and works, and consider as the most favorable example, the well-known experimentation in protecting sheep against anthrax by inoculation with the cultivated bacilli. This method of Pasteur, I might say, is the first one which has afforded results at all satisfactory; and the principle differs from that employed in lung-plague, tag-sore, etc., in that the artificially cultivated organisms isolated from the accompanying animal tissues are employed—a new departure therefore.

In considering this subject, with which Koch's name is almost as closely associated as Pasteur's, it is advisable again to remember that this is a question of facts and not of individuals; that to us Gaul and Teuton are alike friends, as we fortunately keep no watch on the Rhine, that neither Pasteur's brilliant work on fermentation, nor Koch's services on anthrax and tuberculosis; neither the unreasoning enthusiasm of the French for Pasteur, nor the intelligent confidence of the Germans in Koch; neither the grandiose egotism and artful dodging of the former, nor the apparent personal rancor of the latter; none of these may obscure our vision in estimating the value of present evidence.

Pasteur's theory may be briefly stated as follows: Since anthrax does not recur in the same individual, immunity against it as against other infectious diseases may be secured by one attack; the same effect may be obtained as in the variola of the human subject, by a harmless inoculation with the specific virus after exposure to unusual influences whereby its effect upon the animal is diminished.

To this theory Koch remarks that although some of the infectious diseases occur in the same animal but once, as a rule, yet no immunity is secured from others by the first attack; and adduces erysipelas, the septic diseases, gonorrhœa, intermittent fever, and recurrent fever, as examples familiar to all; the last-named is especially interesting, because it is invariably associated with a specific bacterial form—the spirochaete of Obermeier—though final proof of the causal relation of the parasite has not yet been furnished. But more than that: Koch points out, by the records of Prussian veterinary surgeons, that anthrax itself not infrequently occurs twice in the same individual; instances Oemler, who experimented on about one hundred animals years before Pasteur began to work upon the subject; and who saw horses, for instance, exhibit all the symptoms of anthrax once, twice, even eight times—at intervals of weeks or months, after inoculation with anthrax material; quotes Jarnowsky, who saw the disease occur among fifty human patients, twice in one at an interval of two years; three times in another at intervals of two and three years. Löffler found that of 52 rats which were inoculated at intervals of some

¹ I have not succeeded in procuring Koch's monograph; the above statement is taken from reviews of it in French and German journals, the *Deutsche Med. Wochenschrift*, and the *Revue Scientifique*, especially.

days or weeks, with the fresh virus, 30 survived the first, 23 the second, 13 the third, 3 the fourth, and 1 the fifth and sixth inoculation. Koch reminds Pasteur, therefore, that even though an animal survive a virulent inoculation he is not thereby secure against subsequent infection with anthrax. Further, Koch calls attention to the fact—proven by himself and others—that immunity against subcutaneous inoculation is not necessarily synonymous with immunity against infection through mucous membranes, especially of the alimentary canal; although Koch admits that as the fact had been proven only for horses, dogs, mice, rats, and rabbits, it might be otherwise with regard to sheep, with which he had not at that time experimented.

Such were the considerations advanced on either side.

Pasteur's theory was soon extensively tested—in Prussia and Hungary the experiment was superintended by an official commission of medical officers of the government. The proceeding has been usually the same. Pasteur vaccinates first with a weak virus, two weeks later with a stronger one, and after two further weeks, the animal is considered protected; and those thus protected, as well as others not vaccinated, are inoculated with material fresh from an animal dead of anthrax. At the end of the experiment in Hungary, fourteen per cent. of the protected animals were dead—mostly in consequence of the second protective vaccination; ninety-four per cent. of the non-vaccinated died. In Prussia the result was more favorable: 3 out of 25 sheep (twelve per cent.) died after the second protective vaccination. After the final inoculation with fresh blood, all of the non-vaccinated, but not one of the vaccinated, died. Pasteur thus demonstrated that sheep at least may acquire increased power of resistance to subcutaneous inoculation with anthrax; but he demonstrated at the same time that his protective vaccination destroyed almost as large a per cent. of animals as usually die from spontaneous infection in the pasture. Since that time Pasteur seems to have employed less virulent material, for according to accounts in French journals the mortality from the protective vaccination has been often only three, two, one, or even less per cent. But as Koch very properly observes, the ability of an animal to withstand a mild inoculation is not the question at issue, for that has been long known; their subsequent power to resist virulent material is the mooted point. The effect of Pasteur's own virus seems by no means uniform, since Duclaux, his assistant, who probably had virus of the proper attenuation, lost 20 out of 80 sheep in one flock during the two weeks after protective vaccination, and 11 out of 60 in another; yet in a third flock of the same race he lost only 1 out of 50. In the session of the Paris Veterinary Society, June 8, 1882, it was announced by Weber that 23 out of 993 sheep (2.3 per cent.) had succumbed to the preventive inoculation; at a later session Mathieu reported 29 deaths among 896 vaccinations (3.2 per cent.). At Salz-dahlum 2 of 82 sheep died of anthrax after the second vaccination; in Kapuwar 5 of 50, and in Packisch (as already stated) 3 out of 25. Oemler lost 26 among 703 (3.7 per cent.). Dr. Klein recently called the attention of the British Government to the fact that Pasteur's vaccine virus was on sale in England; that he (Klein) had found that even the first and weaker virus could kill animals, having himself lost two sheep by such vaccination. Pasteur replies that Klein must have allowed other bacteria to invade the anthrax liquid.

From these accounts it would appear that Pasteur's preventive inoculation is a somewhat perilous performance, since even when performed by his own assistants it has killed 10, 12, even 25 per cent. of the vaccinated animals. Yet Pasteur recently stated that of nearly eighty thousand sheep vaccinated in France during the past year or two, none had died of the preventive inoculation.

And now for the second question: Does Pasteur's vaccination protect the sheep which survive it against anthrax? Against subcutaneous inoculation it certainly

does for some weeks, as demonstrated in Prussia and Hungary; how long this protection endures and—more important still economically—whether it protects against infection through the mouth and alimentary canal, the usual mode of infection in the spontaneous anthrax of the pastures—these questions are not yet decisively answered. Yet we have already some data, collected largely by Pasteur on the one side, and by Koch on the other. Boutet reports that in the department Enre-et-Loire (where anthrax is especially prevalent, according to Pasteur) the general mortality last year was three per cent.; while of 79,392 vaccinated animals only .7 per cent. died; one herd of 2,308 vaccinated sheep lost only 8, less than .4 per cent.; another of 1,659 unvaccinated animals exposed to the same conditions lost 60 (3.6 per cent.). Nocard vaccinated in August, 1881, 380 sheep, reserving 140 for comparison; during the following five months 4 of the former and 15 of the latter died of spontaneous anthrax. According to these reports, therefore, the mortality of the vaccinated is only about one-tenth that of the unvaccinated animals, though it must be remembered that this does not include the mortality from the vaccination itself.

Other results are decidedly less favorable. Of 266 sheep vaccinated in Packisch last spring by Pasteur's assistant, Thuillier, there died between May and November, of spontaneous anthrax, 4; of 243 unvaccinated kept for comparison, 8. Cagny reported to the Paris Veterinary Society the following observation: In 1881, 20 sheep were vaccinated *à la* Pasteur; in February, 1882, 10 more. They belonged to a herd of 250, 2 of which died of spontaneous anthrax in May and June, 1882; it was therefore deemed advisable to revaccinate, which was done in July with Pasteur's stronger virus. Of the 20 animals vaccinated in 1881, none died of this inoculation; but of the 10 vaccinated only five months previously, *nine died*; of 4 non-vaccinated animals inoculated for comparison at the same time, 3 died. Koch vaccinated 8 sheep after Pasteur's method, and then inoculated them with virulent material; one died. The remaining 7 had therefore been inoculated with anthrax three times. Twelve days later material containing anthrax spores was mixed with their food; 2 of the 7 died of anthrax.

A review of the evidence already adduced indicates that although Pasteur's theory has been demolished beyond repair, yet he has established the fact that the susceptibility of sheep to anthrax can be diminished by vaccination with the cultivated bacilli. From the economic standpoint the value of this measure is still debatable, though the aspect of the question has certainly improved since 1881, when the Hungarian medical commission, after inspecting Pasteur's experiment, advised their government not only to withhold its official sanction, but also to forbid all private experimentation. Nocard and Mollereau claim to have secured immunity of guinea-pigs by their method with oxygenated water; Chauveau with heated anthrax blood. If these claims be substantiated we may hope that simple dilution may furnish a virus which shall protect against other diseases as well as against anthrax. At any rate, Pasteur has established a principle, and it is to be hoped will be merely stimulated by the present unsatisfactory results to future and more successful efforts for its application.

Having thus sketched the present state of knowledge as to the agency of micro-organisms in the induction of disease, I may be permitted to consider briefly certain deductions therefrom, collectively known as the germ theory. I would emphasize the remark that the facts already summarized are not to be confounded with the speculations in which it may please one or another of us to indulge. Ocular demonstration removes a chain of events from the realm of speculation to the domain of fact; hence the germ theory has no longer jurisdiction over anthrax at least. A possible future demonstration that small-pox, syphilis, etc., are not caused by micro-organisms would be disastrous to the germ theory, but

could not change the facts already established as to the morbid agency of the bacillus anthracis.

The germ theory supposes, if I understand it aright, that all infectious diseases are caused by the vital activity of parasitic organisms. In support of this theory there is certainly strong presumptive evidence: the stage of incubation; the unlimited reproductive power of the virus; the cyclical course and self-limitation of the disease. The stage of incubation can be explained by the assumption of no unorganized virus; all mere chemical compounds with which we are acquainted, even the ferments ptyalin and pepsin, begin to manifest the characteristic effects as soon as absorption has occurred.

Panum found that even boiled putrid materials, *i.e.*, the products of bacterial activity, though inducing the other features of septicæmia, failed to exhibit this characteristic incubation. By assuming an organism as the infecting agent this phenomenon becomes intelligible: the stage of incubation is then the period during which the induced organisms are multiplying. In this way, too, the various durations of the incubative stage characteristic of the different diseases become intelligible. We cannot conceive that one chemical poison should require two to four days for the manifestation of its constitutional effects, as in scarlet fever, another forty days, as in syphilis; but we know that different micro-organisms multiply with different degrees of rapidity. A micrococcus may produce a second in thirty minutes; the bacillus anthracis may accomplish its entire vital cycle in twenty-four hours; the bacillus tuberculosis seems to require days. The unlimited reproductive power of the virus, characteristic of many infectious diseases, cannot be attributed to an unorganized poison or even organic ferment. A drop of blood from an animal poisoned with opium or strychnine exhibits only the power of the diluted poison. A drop of vaccine lymph, of variolous or gonorrhœal pus induces, in successive generations, unlimited quantities of identical materials. This effect cannot be justly ascribed even to any physiological unorganized ferment—a favorite refuge of those who are determined to deny to bacteria any influence whatever. Ptyalin can, it is true, convert into grape-sugar many times its bulk of starch, and the ptyalin is not thereby diminished in quantity; but it is not increased. No more perfect illustration of this principle can be furnished than an experiment of Rosenberger, which has especial value because this observer would assign to bacteria a subordinate rôle in morbid processes. He found that the boiled blood and tissues of septic animals—proven to contain no living bacteria—induced septicæmia as certainly as the same blood unboiled. He then placed in one of two flasks containing identical culture-liquids a few drops of the boiled blood, and in the other the same quantity of unboiled blood. Two days later every drop out of the latter flask conveyed septic infection, while large quantities from the former induced no reaction; every drop of the septic fluid was swarming with bacteria; in the other flask there were no organisms.

The virus of an infectious disease must then be something capable of reproduction, and this power is the peculiar characteristic of an organism. No unorganized poison, acid, salt, alkaloid, ferment is at present known which is capable of manifesting the phenomena shown by the virus of syphilis, variola, scarlatina, etc.

Turning to diseases whose parasitic origin is already demonstrated, we find all the characteristics of the infectious diseases exquisitely exemplified. Anthrax is marked by a stage of incubation—twelve to seventy hours—during which the bacilli multiply and effect access to the blood; the onset of constitutional disturbance is marked by the presence of numerous bacteria; with the death and disappearance of these, convalescence begins; the disease is eminently communicable by contact and yet may occur also sporadically and epidemically.

And this leads me to mention a fact often urged as an objection to the parasite theory: that many infectious

diseases are intimately associated with climate, soil, and topographical features, indeed indigenous to certain districts. This is, in fact, strongly favorable to the germ theory. Many plants and animals of larger growth have decidedly limited habitats; botanists and zoölogists have long since informed us that this same principle applies to microscopic organisms, including fungi; shall bacteria then, a family of fungi, be exceptions to the general rule? As to anthrax, the case is answered; the disease is endemic in certain districts, that is, the bacilli grow outside of the animal body only in these districts. Koch has recently endeavored to elucidate the reasons for this. He ascertained that the growth of the anthrax bacilli requires moisture and a temperature of 15° C. It is evident, therefore, why anthrax is not endemic in districts whose surface temperature fails to reach this point. Koch further ascertained, from the official reports of Prussian veterinary surgeons, that after the overflow of rivers and lakes an outbreak of anthrax had been frequently observed in cattle pasturing at certain points along the banks. He found by experiment that the bacilli flourish in infusions of various grasses, grains, and vegetables. Hay infusion is usually a poor soil, because of acid reaction; when rendered neutral or slightly alkaline, the bacilli grow in it luxuriantly; but it had been long before stated by German and French observers that the anthrax districts usually had a calcareous soil. Hence he conjectures that in such districts the alkalinity due to the lime may render even hay a soil favorable to the anthrax parasite; that it may usually grow on decaying plants in such districts. That anthrax is especially prevalent in autumn seems to result in part at least from the fact that these bacilli, like many other fungi, grow only on dead plants. It might be interesting to review for comparison with anthrax the facts which establish the association of various infectious diseases—cholera, yellow fever, the malarial fevers, for example—with local influences of soil and temperature; the origin of typhoid fever in particular wells and springs, as has been conclusively established by observations upon the German and Austrian soldiery. Yet such discussion would transcend my time and my province, since I have attempted to portray what has been, not what remains to be accomplished.

Certain popular arguments against the morbid agency of bacteria are worthy of consideration perhaps, though not because of their intrinsic weight. To some it is incredible that bacteria should harm us, since we live in health though surrounded by them—eating, drinking, and breathing them. If it be remembered, however, that the name bacteria is merely a convenience for designating organisms of widely different functions, this argument seems less formidable. On the same principle it might be asserted that all mammalia are harmless because we come into daily contact with sheep, cattle, horses without injury. The diversity in function, food, etc., among the microscopic beings is not less marked than among the larger organisms: there are bacteria, and bacteria. It is surprising that Mr. Cheyne, in his admirable work on antiseptic surgery, falls into a similar error. He admits that bacteria are not infrequently found under Mr. Lister's own dressings; that sometimes the course of the wound appears thereby unaffected, while at other times he thinks he has observed that the wounds heal less kindly. He consoles himself, however, with the reflection that these are "only micrococci." He seems to forget that several species of micrococci are distinguishable in form, size, color, and function from one another and from all others. The fact that certain micrococci found during different diseases are morphologically indistinguishable from others found under Mr. Lister's dressings, does not justify the assumption that all are functionally identical. If Mr. Cheyne were requested to swallow some pills, he would probably inquire as to their contents before complying, and would not be satisfied with the assurance

that they were "only pills." Yet we have every reason for asserting that the minute globules known collectively as micrococci present differences as great as the larger globules designated, for convenience, pills. When we reflect that the active agents in the induction of pyæmia are micrococci; that the organisms found in malignant diphtheria are micrococci, we must protest against Mr. Cheyne's promiscuous ascription of benign qualities to any tribe of bacteria, even if "only micrococci." There are micrococci and micrococci.

Again, it is said, how is it possible for recovery to occur from a disease caused by bacteria? What stops their growth? So far as I am aware, this question has not been decisively answered. Several facts suggest that the products of their own vital activity arrest further development. Analogous facts have been demonstrated: the mucor racemosus ceases to grow in a liquid when the alcohol produced by its own vital action exceeds a certain percentage, though there may still remain fermentable sugar in abundance. During putrefaction there are produced numerous compounds, of which one at least, carbolic acid, arrests, even in small quantities, further development of putrefactive bacteria. Brieger has recently shown that the infectious diseases proven clinically and experimentally to be caused by putrid infection—pyæmia, diphtheria, erysipelas—are distinguished by the excretion in the urine of excessive quantities of carbolic acid; while in other diseases exhibiting equally intense fever and constitutional disturbance—acute rheumatism and variola, for example—the amount of this acid in the urine is normal or subnormal. Hence the conjecture that the bacteria are both bane and antidote. Yet a failure to explain the phenomena satisfactorily does not, of course, impair the stability of the fact. The bacilli of anthrax are observed to become, in the living animal, pale, of uneven outline, incapable of absorbing staining fluids; in short, they are dead. With their death the convalescence of the host begins, as a rule.

It should be remembered that other parasites than bacteria may cause disease, some of them, perhaps, overlooked in the universal hunt after bacteria. Koch calls attention to Woronin's discovery that a disease of cabbages is caused by an amœboid parasite, which enters the root of the plant and becomes almost indistinguishable from the proper vegetable cells; and suggests the possibility that some of the amœboid bodies known as white blood-corpuscles in animals may be intruding organisms, especially since Ehrlich has shown that different leucocytes exhibit various reactions to staining agents. Five years ago it was discovered that a mould-fungus, the actinomyces, induces fatal disease of man and other animals; Wittich found organisms, which he calls spirilla, in the blood of apparently healthy gophers; Koch found numerous organisms (monads) in the blood of five gophers that had died without other discoverable cause. A new filaria has been recently discovered in the human subject by Bastian, and similar discoveries are reported in the camel and the hog.

There is probably no one among us who doubts that the trichina spiralis can and does induce in the human subject a serious, even fatal disease; yet the evidence as yet adduced is merely the association of the worm with the morbid condition, for no one, so far as I am aware, has ever induced the disease by introduction of the isolated worms. Yet the same men who assert the pathogenetic influence of the trichina, contemptuously reject the idea that leprosy, tuberculosis, recurrent fever, and pyæmia are caused by bacteria, although the evidence—constant association of the parasite with the morbid condition, applies to all cases. Indeed, the weight of evidence is decidedly in favor of the bacteria; for the trichina is found not only in the subjects of trichinosis, but also in many individuals who have never been suspected of harboring the worm. It is not extremely seldom that trichinae are found in the bodies of patients who

have died of acute disease, wounds, accidents, etc.; indeed, an examination of several thousand consecutive cadavers in German hospitals, some years ago, revealed trichinae in over two per cent., without regard to the cause of death. It might, therefore be argued that the presence of the worm is a mere accident—an epiphenomenon, observed in healthy as well as in diseased conditions. The bacilli of leprosy, on the other hand, are found *only* in patients suffering from this disease. I would not express any doubt, by this comparison, of the morbid agency of the trichina, but would merely call attention to the fact that for this belief we have really no more conclusive evidence than we have for accepting the pathogenetic influence of bacteria in leprosy and in several other diseases. Yet it will doubtless be years before some of us realize the fact that in this unreasoning and prejudiced opposition to demonstrated facts, we are playing the unenviable rôle of the cow to the locomotive of advancing science. George Stephenson's prophecy—that the result of such collision would be "bad for the cow"—has been often fulfilled; neither horned cattle nor pseudo-bacilli have materially retarded the progress of science. The improvement of means and methods for minute investigation has ever been and must still be followed by further advance into the realm of the minute, whose boundaries doubtless stretch far beyond the present means of optical exploration. After centuries of controversy the intestinal worms banished the "vermicular diathesis;" the acarus scabiei conquered the "itch cachexia;" the step from the acarus to the bacillus tuberculosis is not quantitatively greater than from the tape-worm to the acarus; each is merely the measure of successive improvements in means for minute observation. Yet the same spirit which nurses the vermicular and itch diatheses, will doubtless for years see in bacteria only fibrin threads and fat crystals; and will cling with heroic devotion to the tubercular diathesis, to "micronecrosis," and to narrow lymph-spaces.

When we glance over the progress of the last few years; when we consider the life-saving revolution in surgical methods; when we regard the enhancement, indeed the very salvation of enormous economic interests by the eradication of the bacterial disease of silkworms, without mentioning preventive vaccination against anthrax and chicken-cholera, we may search in vain the records of other departments of science during the same period for discoveries which have secured direct personal and pecuniary advantages comparable to those derived from our present incomplete knowledge of the relations of micro-organisms to disease. And when we consider the problems already half solved, the questions to whose solution the way appears open through the same methods already successfully applied to anthrax and tuberculosis, we may hope for results to which present knowledge shall seem a mere introduction. But these results can be secured only by earnest, skilful, continuous experimental investigation, which is practically impossible without pecuniary support. In France and Germany such support is liberally supplied by the government; in the United States, where human life is certainly as valuable as there; where live-stock interests are already greater than in these countries combined, and must multiply many fold in the immediate future; where a single infectious disease of cattle has caused the loss of \$20,000,000 in one year, and a single disease of hogs the destruction of \$30,000,000 in the same time; where infectious diseases are so prevalent among live stock that the fear of infection has closed European markets against American meat and cattle—the government of this great commonwealth, which advances enormous sums for local river and harbor improvements; which sends expensive commissions over the world to observe the transit of Venus or of the moon; to find an open Polar sea; and engages in other undertakings of purely scientific interest, has not yet made one judicious, systematic, liberally supported inquiry into the possibility of acquiring protection

against pleuro-pneumonia, hog-cholera, and other devourers of the national wealth. A glance at the Imperial German Health Bureau and its work during the last four years, and a mental comparison of the pecuniary resources of Germany with those of the United States, inspire the hope that we shall not always lag so far behind in matters which appeal to the tenderest spot of the American anatomy—the pocket.

In concluding these lectures, Mr. President and gentlemen, I shall offer no apology for their fragmentary character, since I would not call attention to defects already amply apparent. Yet I venture to hope that one merit may be accorded them—that they constitute an impartial and unpartisan attempt to portray the present status of this vexed question. And this I hope, not on personal grounds, but because a suspicion of insincerity in the portrayal would retard acquiescence in what I must and do regard as truth.

If these lectures shall serve as a vehicle for conveying to the busy practitioner facts which he has not time to seek amid the mass of current literature; shall contribute, however little, to the more general discrimination between theories and facts, between observations and deductions, between assertions and demonstrations; shall tend to confirm the belief that much may be hoped for, though perhaps but little is already completed in this direction—their object will be accomplished, and your lecturer will hope that he was not inexcusably presumptuous in consenting to appear upon a platform which has been honored by a Bartholow and by a Dalton.

APPENDIX.

The following cuts are copied from some of the twenty-eight photomicrographs exhibited at the lectures. It has been deemed advisable to print them here with the briefest possible summary of the remarks which accompanied their exhibition.

In erysipelas the lymph-spaces just at and in front of

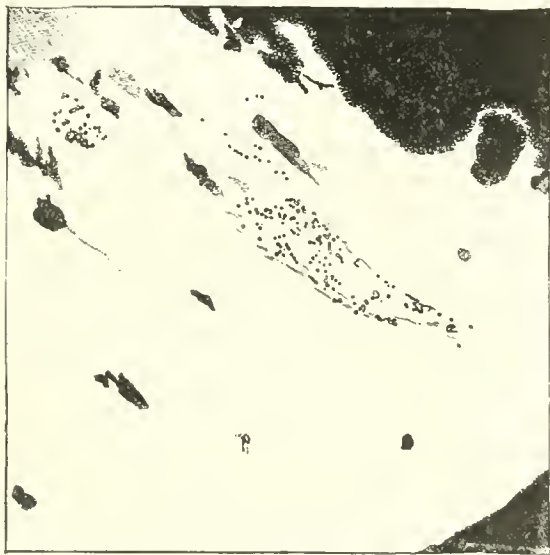


Fig. 9.—Skin excised, *intra vitam*, from a case of erysipelas; micrococci in lymph-vessel, $\times 700$. (Koch.)

the advancing edge of the inflamed area contain micrococci. These organisms have been isolated by cultivation on solid media (Koch's method) by Fehleisen. He reports the successful induction of erysipelas by inoculation with the micrococci thus isolated, in eight rabbits and in one human patient.

Recurrent or relapsing fever is characterized by the presence of Obermeier's spirillum in the blood.

As yet no successful inoculation with the isolated spirilla has been reported.

A short, thick bacillus is found post-mortem in the

liver, kidney, spleen, and lymph-glands in the majority of cases of typhoid fever (Eberth, Koch, Friedländer); and larger bacilli in the vicinity of the intestinal ulcers (Klebs). Maragliano asserts the presence of both varieties in blood drawn by a hypodermic syringe from the spleen in fifteen cases (*intra vitam*). It would seem,



Fig. 10.—Spirochaete of Obermeier and human blood-corpuscles, $\times 700$. (Koch.)

however, that he protests too much; for even post-mortem only Eberth's, never Klebs' bacilli, are found in the spleen.

In croupous pneumonia small bacteria have been found at the edge of the advancing inflammation (like the micrococci in erysipelas); also in some internal organs. The same bacteria have been found in the lung immediately post-mortem, and even *intra vitam*.

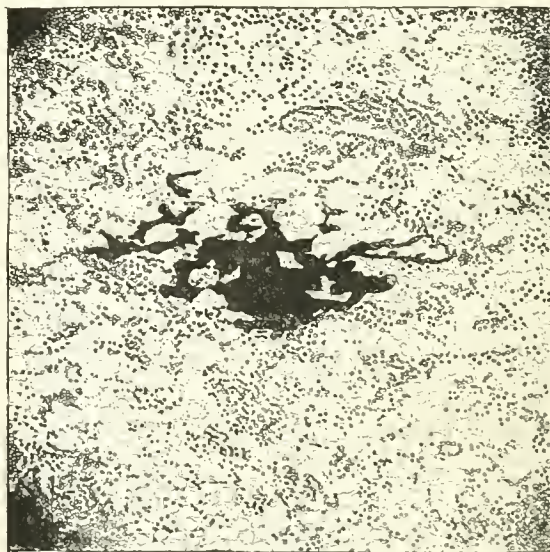


Fig. 11.—Kidney, typhoid fever; masses of bacilli in intertubular capillaries, $\times 100$. (Koch.)

Endocarditis ulcerosa seems to be one of the forms of pyæmia, sometimes of spontaneous (*i.e.*, undiscovered) origin.

The internal organs as well as the cutaneous tubercles of patients afflicted with leprosy contain a distinct bacterium—the bacillus lepræ. Attempts to induce the disease in the lower animals by inoculation with the isolated bacilli as well as with leprosy tissue, have not as yet been successful.

Frisch, of Vienna, has found a characteristic short, thick bacillus in every case of rhinoscleroma (twelve in

number) which he has had opportunity to examine. Pieces were excised from the nose or mouth *intra vitam*; the bacilli occur, like those of leprosy, in the large cells characteristic of the tissue. Frisch cultivated these organisms on solid media, after Koch; but was unsuccessful in attempts to induce the disease in rabbits. It must be remembered that man is the only animal known to suffer from rhinoscleroma and from leprosy.

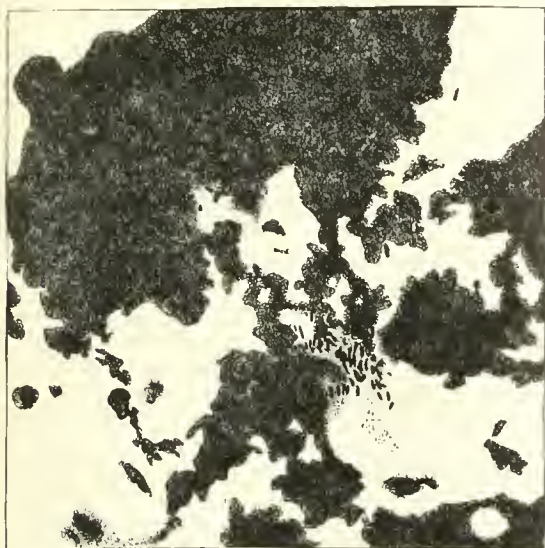


Fig. 12.—Edge of bacterial colony in the liver from typhoid fever; the individual bacilli are seen, $\times 700$. (Koch.)

Klebs and Crudeli assert the induction of malarial fever in rabbits through the agency of a bacterium—the bacillus malariae. Dr. Sternberg, U. S. A., has made a critical and experimental review of this work, from which he concludes: "The evidence upon which Klebs and Crudeli have based the claim of the discovery of a bacillus malariae cannot be accepted as sufficient," and "their conclusions are shown not to be well-founded."



Fig. 13.—Intertubular capillary of kidney containing bacteria; from a case of croupous pneumonia, $\times 700$. (Koch.)

Such is the general opinion, so far as I have been able to ascertain, among those familiar with this department of investigation. Bacteria said to be identical with these have been found in the blood of patients suffering from malarial fever, and by Ziehl in one individual who had no symptoms nor history of intermittent fever, but was suffering from diabetes. In three of Ziehl's four cases, the bacilli disappeared from the blood after the administration of quinine for several days.

Bacteria of various kinds have been seen in syphilitic tissues, post-mortem, by different observers. Quite recently Birch-Hirschfeld announced the discovery of micrococci in twelve gummata, post-mortem; in three condylomata, one chancre, and one cutaneous papule excised during life. Morison, using aniline staining and Abbé illuminator, found bacilli in chancres and other syphilitic tissues—the same variety being present in all.



Fig. 14.—Incipient abscess formation around a vessel occluded by a micrococcus colony. Heart-muscle, endocarditis ulcerosa, $\times 100$. (Koch.)

The contents of variolous pustules, like other pus often contains micrococci. No trustworthy observation of the presence of bacteria in the blood during this disease has been recorded. Ehrlich has sought them in vain even in hemorrhagic small-pox. Post-mortem they are sometimes found in the tissues.

In diphtheria micrococci are often found not only in the local necrotic tissue, but also in internal organs and in the blood. In scarlatina no reliable affirmative observations have been made, so far as I am aware. But

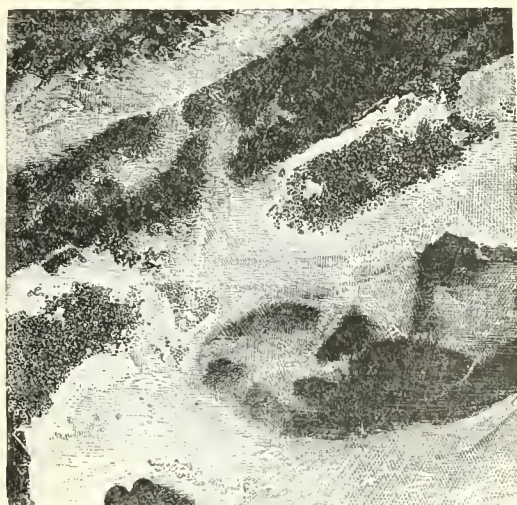


Fig. 15.—Micrococci in renal capillary, small-pox, $\times 700$. (Koch.)

since diphtheria, scarlatina, and erysipelas must be classed according to clinical, experimental, and chemical (Brieger) evidence with the putrid diseases, the evidence in favor of the bacterial origin of septicaemia and pyemia suggests analogous etiological influences for these diseases also.

Schütz and Löffler have recently reported the induction of glanders in rabbits and in two horses by inoculation with bacilli isolated by cultivation from animals suffering from this disease.

Cuts of the *trichina spiralis* and of the *filaria sanguinis* are added as an illustration of the fact that morphological similarity does not prove physiological identity. These two nematode worms are, of course, easily distinguishable by the difference in size; yet structurally they are, in the larval state as here repre-



Fig. 16.—*Trichina spiralis*, $\times 50$. (Oliver.)

sented, quite similar. Yet the one is found coiled in the voluntary muscles, its migration from the intestine often causing symptoms simulating typhoid fever; the *filaria*, on the other hand, circulates with the blood (by night only, as a rule), and is associated with one of several



Fig. 17.—*Filaria sanguinis hominis* in human blood, $\times 280$. (In this case from twenty-five to one hundred worms were found in every drop of blood between six P.M., and five A.M.)

morbid states—chyluria, lymph-scrotum, sometimes ending in pyæmia (as in the case which I was fortunate enough to observe in the London Hospital). In some cases its presence seems to cause no abnormal symptoms.



Fig. 18.—*Filaria*, dried and stained to show the sheath (compare Fig. 16).

One of the most interesting of recent observations is that of Brieger and Ehrlich (*Berliner Klin. Wochenschrift*, 44, 1882), in which they report two cases of Koch's "malignant oedema" in human subjects suffering from typhoid fever. The bacillus characteristic of this affection is widely distributed, being often found in or-

dinary garden earth, and frequently appearing in animal bodies a few hours after death; in these two cases the organisms seem to have been introduced by subcutaneous injections of musk. Koch and Pasteur have induced the disease in mice and rabbits by inoculation with earth and with the isolated bacilli; and the morbid condition which often appears spontaneously in cattle, termed charbon symptomatique, or Rauschbrand, seems to be the same disease; but this is, I believe, the first instance in which the bacterium has been demonstrated in the human subject of the disease.

Original Articles.

EQUINE SCARLATINAL VIRUS AS A PROPHYLACTIC AGAINST HUMAN SCARLATINA.

By J. W. STICKLER, M.D.,

ORANGE, N. J.

IN the endeavor to discover in the lower animals an agent possessed of a power to so affect the human tissues when implanted in them as to render them insusceptible of certain contagious diseases, it is necessary to determine that such an agent represent in a more or less modified form a morbid principle giving rise to a disease in man similar to the one of which this modified microzyme is the exciting cause in the lower order of animal life. The investigations of Cheveau¹ have proven that the contagium particles of small-pox have their counterpart in the active contagious poison of cow-pox, and that the two diseases, although different in degree of intensity, are identical as regards their nature. To prove their identity he inoculated a cow with some variolous matter. There resulted a papule at the point of puncture, unaccompanied with any marked constitutional disturbance, from which he collected some lymph. With this he inoculated a child, getting as a result a vesicle in every respect similar to the vesicle of cow-pox, and this was followed by a general eruption similar to, but milder than what follows a direct inoculation with human small-pox virus. He also failed to produce variolous papules on cows which had already been vaccinated. On the contrary, cows which had neither been vaccinated nor had cow-pox were readily variolated, subsequent vaccination having no effect, proving that immunity had been secured.

Jenner believed in the identity of these two diseases, and that they originated in the "grease" of the horse. If, then, these two diseases, so different in intensity, are due to the same morbid poison, it seems highly probable that the conditions of the tissues, in the case of the cow, exerted constantly a modifying effect upon the poison, while in man the fertility of the disease was not lessened. The fact stands, then, that variola passes through a very modified course in the cow, and probably if the variola were passed from one cow to another for several generations, the modification produced would be still greater. This is rendered more probable by some of the modifications produced on races by crossing. "Lord Orford," says Mr. Darwin, "crossed his famous stud of greyhounds once with the bulldog," which breed was chosen from being deficient in scenting power and from having what was wanted, courage and perseverance. In the course of six or seven generations all traces of the external form of the bulldog were eliminated, but courage and perseverance remained. In this instance the most marked effect was produced in the first cross; but from repeated breeding with the greyhound, one character after another was lost, and only one or two remained permanent. Similarly with regard to the variola, it is probable that the greatest effect would be produced by the first inoculation, and that by subsequent inoculations from cow to cow some characteristics would be lost until

¹ Twelfth Report of the Medical Officer of Privy Council: Dr. Sanderson's Essay, p. 237.

finally a modified pox would be produced which would become natural to the cow.¹

But it has not been necessary to institute a series of experiments to produce a form of variola of the desired type, this result having been reached without any effort on the part of science, and suddenly brought to light by comparatively recent discovery. It remains to ascertain if the same result has not obtained in the case of scarlatina. Thomas² states that it is believed that animals may be affected with a disease corresponding to scarlatina in man. Zurn says that Spinola has observed it in the horse. Williams³ believes in the existence of such a disease in the horse, and gives the following description of its most common forms: First, scarlatina simplex. On the third or fourth day, or even as late as the sixth, after the commencement of epizootic catarrh, the animal is seen to be covered with blotches upon the face, neck, body, and extremities. The blotches elevate the hair, but in many places there is scarcely any elevation of the skin, for if the hand be passed lightly over the apparent swellings, the skin is felt to be but little altered. In other parts of the body, particularly upon the inner aspect of the thighs, actual elevations of the skin in the form of rounded pimples can be seen and felt. The nasal membrane will be covered with scarlet spots of variable size, and there will be a discharge from the nostril of at first a thin serous mucus, which afterward becomes yellow or yellowish brown. The limbs are generally swollen, and the animal stiff in consequence. In some instances no eruption is present, and the only evidence of scarlatina is found in the Schneiderian membrane, and, perhaps, the membrane of only one nostril will be covered with minute scarlet spots.

Soreness of the throat is almost a constant symptom, and if it has preceded the rash, it will in all probability be more or less increased; but it by no means follows that soreness of the throat will appear concomitant with the rash. In a few days the rash and scarlet spots begin to disappear, and on the rash declining, some desquamation of the cuticle takes place, the skin becoming scurfy and the coat remaining dirty for some time. In scarlatina angiosa he states that, in addition to the symptoms already given, there are the following: swellings upon the body and face, petechial spots of a purple hue upon the nasal mucous membrane more intense, severe sore throat, enlargement of lymphatics about the neck, elevation of temperature, acceleration of pulse, rapid breathing, scanty urine, constipated bowels, but no renal dropsy or albuminuria as in the human being.

If, then, this be a true scarlatina and identical with human scarlatina, may it not manifest itself in a modified form when grafted onto the human tissues? To determine, if possible, whether this be true or not. I performed the following experiments: The "nasal mucus" kindly sent me by Professor Williams, of Edinburgh, with which I made the inoculations, I examined microscopically and discovered that it presented the appearance shown in Fig. 1. The large polygonal cells were quite abundant, and scattered about the field were many minute glistening granules, yellow in color, strongly refracting the light. Besides these granules there were larger spherical bodies, about one-third the size of pus corpuscles, and slightly granular. Larger corpuscles, granular, and about as large as pus corpuscles, were quite numerous. Of this fluid I injected with the hypodermic syringe into the subcutaneous tissue of four rabbits and one dog, about six minims, getting as a result within forty-eight hours a confluent eruption, scarlet in color, which existed about four days. After its disappearance there was slight furfuraceous exfoliation. The temperature during the time the eruption was out, ranged between 100° F. and 102° F. Appetite was poor and the animals were disposed to keep very quiet. On the

third and fourth days the dog had a thin mucous discharge from the nostrils while the rabbits had merely a slight redness of the mucous membrane of the nose. There was an enlargement of the lymphatics nearest the point of puncture. A complete return to the normal condition was reached by the eighth day. Microscopic examination of the blood from day to day showed an increase in the number of leucocytes, and on the third

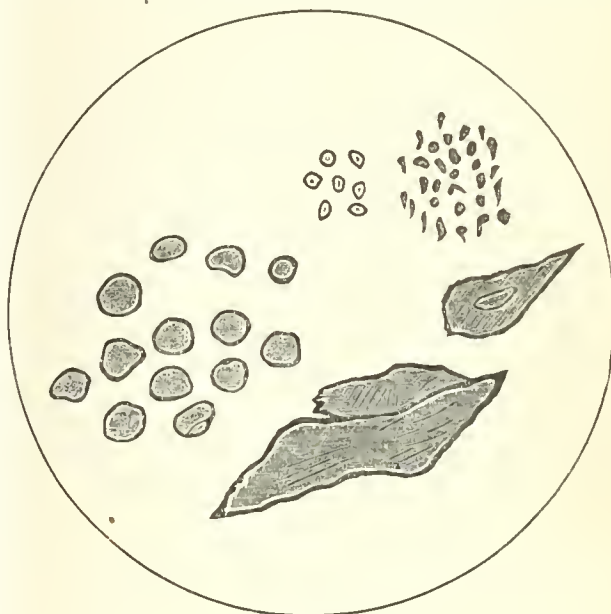


Fig. 1.

day small round granules could be seen, bright in appearance, of a pale red color, and adherent to the circumference of the white corpuscles as seen in Fig. 2. On the sixth day these granules could not be found. I next injected under the skin of these animals several drops of human scarlatinal blood taken from the arm of a boy who had at the time a bright confluent eruption

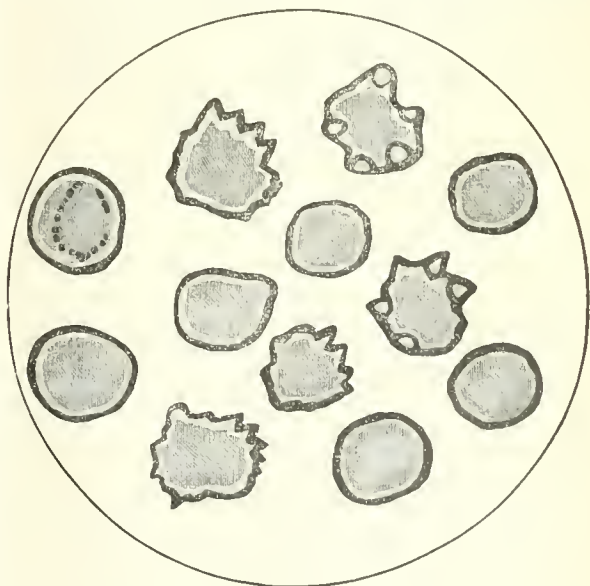


Fig. 2.

over both arms, chest, and neck. There was not subsequently any local or general disturbance.

To determine the worth of such experiments, it must be ascertained if the scarlatinal poison resides in the blood. The investigations of Coze and Feltz throw light on this point. They introduced a small quantity of blood under the skin of sixty-six rabbits; of these sixty-two died in the course of from eighteen hours to fourteen days, having had high temperature, then diarrhoea and emaciation, and

¹ Ross: The Graft Theory of Disease, p. 121.

² Ziemssen, vol. ii., p. 166.

³ Williams: Principles and Practice of Veterinary Medicine, p. 376. J

the remaining four only recovered after an intense fever. Reiss injected a few drops of blood taken from the arm of a patient dying of scarlatina under the skin of the back of a rabbit, causing its death in twenty-four hours. Further inoculations with this rabbit's blood gave rise to identical results. It seems probable, therefore, that the blood does contain the contagium particles of this disease, and that it is capable of producing a specific effect when implanted on foreign soil.

I next vaccinated twelve patients who had never had scarlatina, with the following results:

CASE I.—Leopold W—, aged seven. Patient of Dr. Carl Büttner, of Orange, who submitted him for vaccination. Vaccinated in right thigh with equine virus. Twenty-four hours later there appeared a punctate redness about the point of puncture. Lymphatics in right groin enlarged. Temperature, 99° F. No general disturbance. By the third day eruption had extended so as to cover a space about as large as palm of hand. On drawing a pair of blunt-pointed scissors across the skin a distinct white line was left, which remained about one minute. The red punctate appearance had disappeared by the sixth day and was immediately followed by desquamation of the epidermis, the period of exfoliation lasting about one week. Slight induration at point of puncture after desquamation. I then injected into the left thigh a few drops of scarlatinal blood, having microscopically such an appearance as is seen in Fig. 3. This



Fig. 3.

blood was kindly furnished by Dr. J. W. Andrews, of Newark, N. J. The blood-globules were crowded together in such a manner as to make some of their number appear oblong, while to their surface there were many small round or oval red globules attached. Besides these there were a few masses of matter without definite outline, looking something like mucin. A specimen of human scarlatinal blood given me by Dr. George Bayles, of Orange, had the same characteristic appearance. The injection of this blood had no effect locally or constitutionally.

CASE II.—Barney F—, aged eleven. Vaccinated with equine virus in right arm. Same local changes as in preceding case. No constitutional disturbance. Injection of human scarlatinal blood into opposite arm produced no effect.

CASE III.—Kate F—, aged eight. Vaccinated with equine virus in right arm. Punctate redness not very extensive, but well marked. White tracings distinct on second day. Desquamation beginning on fifth day. Subsequent inoculation with human scarlatinal blood without effect.

CASE IV.—Edward F—, aged six. Vaccinated with equine virus in right arm. Twenty-four hours later, there appeared an intense redness with bright red spots scattered here and there. On drawing the finger-nail across the skin, a white line was left. Duration of eruption about four days. Desquamation complete. No effect produced subsequently by injection into opposite arm of human scarlatinal blood.

CASE V.—Michael F—, aged twelve. Vaccinated in right arm with equine virus. Area of eruption greater than in any preceding case. Lymphatics more decidedly enlarged. Slight pyrexia. Cuticle exfoliated in quite large flakes. Inoculation in left arm with human blood had no effect.

CASE VI.—Kate C—, aged thirteen. Vaccinated with equine virus in right arm. Eruption not very decided, although apparent, and on the second day the white tracings were easily made. Furfuraceous desquamation. No effect produced afterward by inoculation with human blood.

CASE VII.—Daniel C—, aged ten. Vaccinated in right arm with equine virus. Confluent redness, dotted at irregular intervals with fine bright red points. Second day white tracings, and after disappearance of eruption, the epidermis desquamated. No symptoms produced subsequently by injection of human scarlatinal blood into left arm.

CASE VIII.—James C—, aged seven. Vaccinated right arm with equine virus. Same local changes as mentioned in preceding case. Inoculation with human scarlatinal blood without effect.

CASE IX.—John C—, aged seventeen. Vaccinated in right arm with equine virus. Area of eruption about as large as hand. Small bright red points quite numerous. White tracings very marked. Inoculation afterward with human scarlatinal blood had no effect.

CASE X.—Wm. H—, aged five. Vaccinated in right arm with equine virus. Eruption, white tracings and desquamation all well marked. No effect followed injection of human scarlatinal blood.

CASE XI.—Martin H—, aged eight. Vaccinated in right arm with equine virus. The eruption during the second and third days was quite intense, with enlargement of axillary lymphatics. Redness disappeared momentarily on pressure. Desquamation in small scales. Inoculation with human scarlatinal blood without effect.

CASE XII.—Catherine D—, aged twenty-five. Vaccinated in right arm with equine virus. Redness developed in about twenty-four hours, was intense and punctate. White tracings distinct. Furfuraceous exfoliation beginning on the seventh day. No effect produced by injection into opposite arm of human scarlatinal blood. An examination of the blood during the time the eruption was out showed the red globules to be larger than those seen in normal specimens, crowded together edgewise, and occasionally having attached to their borders small, round, shining bodies as seen in Fig. 4.

The points of interest elicited in these twelve cases are:

First.—The safety in using subcutaneously the virus obtained directly from the horse.

Second.—That when this virus is implanted in the human tissues, there follows a local eruption similar to that seen in mild cases of scarlatina.

Third.—The system appears to be protected against the action of the human scarlatinal poison after vaccination with the equine virus.

May it not be possible, then, that the scarlatinal poison has undergone such modification in the tissues of the horse as to have reached a degree of fertility which renders it, when grafted onto the human tissues, prophylactic against the more malignant form of scarlatina as developed spontaneously in man? Ross makes the following statement: "The disease (scarlatina) may be grafted upon some of the lower animals and by transmission through the same species for a few generations a modi-

fied form may be obtained, which, when grafted upon man will produce a disease so mild as to be entirely innocuous, and yet afford a sufficient protection against the natural variety." But may not equine scarlatina be to human scarlatina, because of modifications already wrought, what cow-pox is to small-pox, in consequence

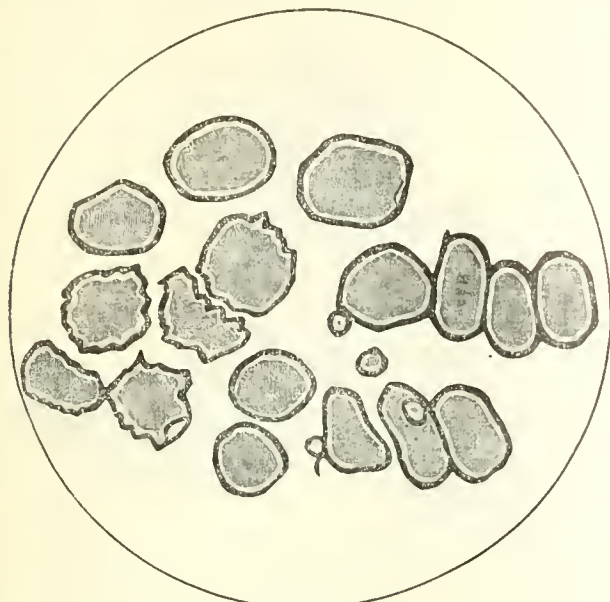


Fig. 4.

of some change in its fertility brought about long ago? Whether this be true or not, the investigations which I have thus far made seem to possess some points of special interest, and I therefore submit them to the consideration of the profession, and from time to time, as I am enabled to continue these experiments I shall report the results in the hope that they will confirm those already given.

A CASE OF DALTONISM AFFECTING ONE EYE.

By R. W. SHUFELDT,
CAPTAIN MEDICAL DEPARTMENT, U.S.A.

JACKSON BARRACKS, New Orleans, at the present writing, is garrisoned by two batteries of U. S. Artillery. From time to time it becomes necessary to recruit this force from such material as presents itself, and my duty as one of the attending surgeons stationed here is to conduct the physical examination of these men.

In the case of each subject the examination of the eyes is invariably completed by submitting him to the test for color-blindness, using for this purpose the Berlin worsteds, and following the method as prescribed by Professor Holmgren.

Since the middle of last October some thirty recruits have been examined. Of this number three were completely color-blind, one momentarily red-blind, exhibiting like symptoms with such cases as described by Dr. Jeffries, and the subject of this article.

On December 12th last, W. S— (white) was physically examined by me as prescribed by the regulations of the service. He was twenty-one years of age; born in England of healthy parents. No history of syphilis or other disease; had never received any bodily injury, and, in fact, his general examination was satisfactory. He was next required to read the number of spots on the test-cards at twenty feet. This he promptly did with both eyes open, and equally well with his right eye, but upon closing this the left one was discovered to be markedly myopic. This defect disqualified him as a recruit. Still, never allowing an opportunity slip to examine into a candidate's sense of color-perception, I directed him to step up to the table where the worsteds

were spread out. With both eyes open he, without trouble or hesitation, picked out series of purples and greens to match the test-shade, but exhibited a good deal of uncertainty when called upon to do the same for the reds, the test-color being a bright red-lead shade. The worsteds being again mixed up, he successfully chose the purple and green shades with either eye, one or the other being closed, and the reds with his right eye, the left one being closed. Mixing up the worsteds once more, and firmly shutting his right eye, he was asked to pick out the red shades. This he essayed to do by first selecting a pale shade of brown, placing it one side, and, with considerable hesitation of manner, he proceeded in the same way until he had laid aside a full series of brown shades from dark to a light ochre. It was amusing to see his confusion when I suddenly released his right eye, as the lids were kept together by my finger, and quickly closing his left, allowed him to see what he had done.

The experiment was tried several times, the worsteds being thoroughly mixed up each time, before he was completely convinced that he had some defective color-sense in one eye that he could demonstrate himself with the opposite and sound one. Not having the opportunity then, I exacted a promise from him to return next day, upon which occasion I proposed to make a complete record of his case, but he never returned, and this is all I can ever be able to offer illustrating this singular and interesting condition.

TWO CASES OF INJURY TO THE CARDIAC VALVES FROM SUDDEN VIOLENCE.

By WM. L. AXFORD, M.D.,

CHICAGO, ILL.

INJURIES to the valves of the heart are of so rare occurrence that the two cases which have come under my observation during the past two years seem well worthy of report.

The literature of the subject is extremely meagre, and, in the limited amount to which I have access, I have been able to find very little more than a mere mention of the fact that such accidents do occur. Dr. C. Hilton Fagge ("Diseases of the Valves of the Heart," in "Reynolds' System of Medicine") briefly discusses this subject.

Corvisart was the first to point out that this injury was possible and that it could be caused by muscular effort. Dr. Peacock in 1865 had collected seventeen cases, four coming under his own observation. These were all cases where the previous condition of the patient had been good, with no history of rheumatism or suspicion of previous cardiac disease. The valves injured were as follows: aortic valves, ten times; mitral, four times; tricuspid, three times.

The two cases which I wish to report seem to be worthy of classification with those of Dr. Peacock, since both patients were young, both had previously enjoyed good health, both were able to perform severe manual labor before the accident.

To Dr. C. A. Babcock, of Detroit, in whose practice the first case occurred, I am indebted for the particulars as well as for permission to report it.

CASE I.—J. G—, aged sixteen, well developed. While carrying a heavy weight made a sudden and severe muscular effort. Soon complained of considerable pain in the centre of the sternum, also of an uncomfortable feeling in the left arm. Expectored some blood, short dry cough. Before coming under Dr. Babcock's care he had been treated for dyspepsia. His condition then was as follows: Pulse, 100; temperature, $97\frac{1}{2}^{\circ}$; respiration, 26; irregular. Skin had peculiar brown hue. Complained of a dull rumbling sound in his ears. Urine loaded with urates. Auscultation revealed an aortic regurgitant murmur, partially obscuring and following the second sound of the heart. After treatment for some time the subjective symptoms disappeared but the mur-

mur was still to be heard. He was seen by Professor Palmer, of the University of Michigan, who confirmed Dr. Babcock's diagnosis of rupture of an aortic valve. Here it was my good fortune to see the case. At the present time the boy is able to earn his living as a book-keeper, but is unable to do manual labor.

The second case was presented by Dr. Robert Johnston, of Milford, Mich., before a local society with the following history:

CASE II.—A. M—, aged fifteen. Previous history good. No rheumatism before his present trouble occurred. Was cultivating when his horses became suddenly frightened. To regain control of his team he was obliged to make a violent muscular effort. His feet sank deeply into the soft ground and one was so injured that an abscess formed in the plantar surface. He was very much fatigued by his exertions, he immediately felt pain in the region of the heart, and says he could not get his breath for several days. On several occasions when he became excited or attempted any muscular effort dangerous symptoms followed, syncope and a sense of impending suffocation. He was treated by various local physicians, and at some time during this period was said to have had "subacute rheumatism affecting the large joints, the back, and many of the lesser joints." Exactly what the nature of this complaint was I am unable to determine. He finally fell into the hands of Dr. Johnston, who first recognized the true nature of his trouble, and by the use of digitalis was able to relieve his symptoms to a considerable extent.

He is able to be about but cannot make any physical exertion beyond what is absolutely necessary, and is obliged to be very careful in his habits.

All were agreed that the physical signs were those of mitral regurgitation, but the question of etiology elicited considerable discussion. With the previous case fresh in my memory, taking into consideration the history of the present case, I had no hesitation in pronouncing it a case of rupture of a mitral valve. Some present were inclined to the theory that the obscure rheumatic trouble was the important etiological factor, but the patient says that all his subjective symptoms dated from the moment of the accident.

That a careful physical examination was not immediately made is to be regretted, nevertheless it seems to me clear enough that this case can be safely classed with the one first mentioned as an example of injuries to the cardiac valves from violent muscular efforts.

MONSTROSITY OF A HAND.

By DAVIS HALDERMAN, M.D.,

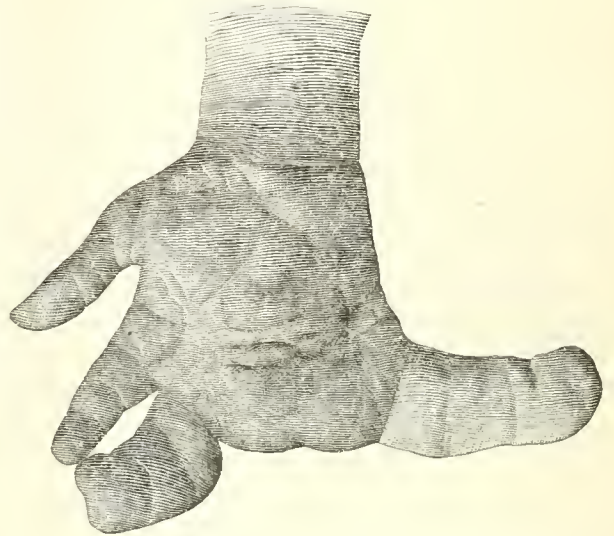
PROFESSOR OF SURGERY, STARLING MEDICAL COLLEGE, COLUMBUS, OHIO.

THE subject of this strange anomaly was a male, forty-three years of age, a native of Bavaria, in Germany.

The account he gave of his deformity, as gathered from his parents, was to the effect of his having been born with his right ring finger as "big (?) as a man's;" and that, because of its unsightly character, it was amputated by a surgeon when he was but nineteen weeks old; whereupon the middle and little fingers, together with their part of the carpus and metacarpus, which, up to this time, were all of natural size, now took to growing much faster than the rest of the hand, and this growth, he further states, was kept up until his thirtieth year, when said parts had attained their present magnitudes, which were as follows: The little finger was $4\frac{5}{8}$ inches long, and $5\frac{1}{4}$ inches in circumference at its first, and $4\frac{3}{8}$ at its second phalanx, and nearly the same at its last. It was completely ankylosed in a straight position at its phalangeal articulations, and allowed but a moderate degree of passive motion at its metacarpal junction, from which latter it stood off at right angles with the axis of the hand in a ghastly and repulsive manner. Its encumbrance, to say nothing of its uselessness, may be judged

of from the fact that the distance from its tip to the end of the thumb, when the hand lay at rest upon its palm, was $11\frac{1}{2}$ inches. The same finger of the opposite side was only $3\frac{1}{2}$ inches long, and otherwise of normal proportions, as were also the rest of the digits of this hand.

The malformed middle finger measured $5\frac{1}{2}$ inches in



length by $5\frac{1}{2}$ in its greater, and $4\frac{1}{4}$ in its lesser circumference; but it was considerably constricted at its base. It occupied a uniformly lateral curved position, and was semiflexed; the former, which was considerable, and toward the radial side, was due, evidently, to the preponderance of the morbid growth on its ulnar aspect, thus forcing the finger round upon itself in the opposite direction, similar to what takes place in the distortion



outward (hallux valgus), sometimes, of the great toe, from hypertrophy of the bony factor of its metatarso-phalangeal joint on the inner side alone. Save at its metacarpal junction, this digit, too, was completely ankylosed, and looked more like a vast claw than a human finger. It, also, was worthless, except a sort of hook-like purpose that it served.

The metacarpal region of this hand, exclusive of the thumb part, measured eleven inches round; but its pre-natural size was confined to the three inner ranges. It was made up of bone and soft parts in their relative proportions; the latter, which seemed to consist largely of adipose tissue, formed a vast, cushion-like eminence at this place, in striking contrast with the thenar side, whose group of muscles was almost completely atrophied, leaving quite a pit, instead of the prominence that normally characterizes it. This, it was stated, took place along between the nineteenth and twentieth years, and it, of course, left the thumb in a greatly enfeebled condition. No exciting cause could be assigned for it.

A similar measurement of the opposite metacarpus gave only eight and one-half inches.

The cicatrix left from the removal of said ring finger was of linear shape, extended in an antero-posterior direction, and was two and one-half inches long, showing, therefore, that it must have grown *pari passu* with the growth of the malformation, verifying thus the old adage, that a scar in childhood, as long as the little finger, will be so still in adult life; and moreover, that it holds as well in morbid as in natural growths.

A no less interesting feature of this case was the discrepancy that existed in the lengths and magnitudes of the upper extremities above the wrists, as the following comparative measurement will show:

TABLE OF COMPARATIVE MEASUREMENTS OF UPPER EXTREMITIES.

	Anomalous side.	Sound side.	Difference.
	Inches.	Inches.	Inches.
Acromion process to head of ulna	20	21½	1½
Acromion process to external epicondyle of humerus	11½	12½	1
External epicondyle of humerus to head of ulna	8½	9½	1
Circumference of forearm at smallest part near wrist	8½	7	1½
Circumference of forearm at muscular part near elbow	11½	9½	2
Circumference of upper arm	9½	9½	0

This preponderance in the size of the forearm was confined to its inner side, and was made up of bone and muscle in their relative proportion, the latter being finely developed, and free from adipose. The ulna, as compared with its fellow upon the opposite side, and with its associate radius, was truly massive. The prominence of its subcutaneous portion, especially its head, as viewed from behind, was so striking as at first sight to be strongly suggestive of luxation of this end of the bone backward upon the radius. Its olecranon process, too, was preternaturally salient, and gave to the elbow a distorted contour.

The man declared this forearm to be the stronger, which, judging from the above, was doubtless true, despite the crippled condition of the hand.

From the foregoing it will be seen (1) that the anomalous growth above the wrist was of thickness only, not of length; (2) that the latter, on the contrary, fell even below the normal, (3) but that it was more than made up in the hand, taking the elongated little finger as a guide, to say nothing about the inner carpal and metacarpal ranges, which, it might have been observed, were also somewhat lengthened; (4) that this growth in thickness took its rise in the olecranon process, (5) and in travelling down kept to its ulnar side, until the hand was reached, (6) when it overstepped the bounds recognized in the correlation of the different parts of the latter and the forearm, the middle finger, belonging as it does to the radial side, being included in the enlargement, though not to the same degree on both sides; and again, (7) that the digital distortions followed the lines of abduction until the hand became spread out like a vast paw, or, as remarked by one, "like the foot of a large ostrich."

The man was otherwise sound. He was of medium size, well built, and of average intellectual endowment.

Notwithstanding crippled as it was in its individual members, except the index finger, which alone was sound, the hand as a whole was of considerable use, the man being enabled, as a common laborer, to gain a livelihood for himself and family; and it is worthy of note that he has six children, normal in all their parts. Nor could any irregularity be traced in his genealogy or maternal impressions during his gestation.

The occasion of his coming to our notice was a slight frost-bite of the monster small finger, on account of which, and of its being useless anyhow, he desired it amputated, which was accordingly done, drawings, casts, etc., of it having been previously secured.

Many queries naturally arise in connection with this case. It would be interesting to know (1) what, primarily, determined the nutritive activity that was evidently at the bottom of it; (2) why, in the forearm, it was confined to the ulnar side, but at the same time was exercised in one direction only, and fell short in the other; (3) while in the hand, it extended abnormally in all, (4) why the process should have been maintained for so many years, and meantime been deficient in another part of the same hand, and (5) what, if any, influence the removal of said ring finger had on the subsequent growth, etc.

The circumstance that the area of hypertrophy corresponded with the distribution of the ulnar nerve, points to it as an agency in the trophic action. Still, it does not answer the question as to the *fons et origo* of this queer development, and of its eccentric course; its falling short of the normal here, and going beyond it there; and finally, that in the same part it should be in excess in one direction, and deficient in the other.

As showing the nutritive activity even at this age, it may be observed that the hemorrhage from the digital artery of the enlarged little finger, at its amputation, was as free as ordinarily takes place from the dorsalis pedis.

It may be further mentioned that the fatty tissue here, too, was in excess; the bones, also, were very large; but the muscular element was poorly represented, as might be expected, from its non use.

Progress of Medical Science.

THE BACILLUS TUBERCULOSIS IN THE URINE.—Dr. Victor Babes, of Buda-Pesth, Hungary, found the bacillus of Koch in the pus-corpuscles of the urine of two persons during life, where post-mortem examinations revealed tubercular disease of the kidneys and bladder. In a third case, where no abnormality could be made out in the lungs, but where Professor Verneuil, of Paris, nevertheless suspected tubercular disease of the urinary apparatus, Dr. Babes examined the urine and found the bacillus. No autopsy has as yet been made in the last case.—*Orvosi Hetilap*, February 18, 1883.

MUCOUS POLYPUS OF BLADDER IN A CHILD.—At a meeting of the London Pathological Society Dr. Shattuck exhibited a growth which came from the bladder of a girl, and exactly resembled a nasal mucous polypus in its histological characters. A long process occupied the urethra. The pelves of the kidneys were dilated, but the renal substance was healthy. The case was a fit one for surgical treatment, but unfortunately the patient died from exhaustion before an operation could be performed.—*British Medical Journal*.

CYSTINURIA.—Dr. Mader relates the case of a woman, thirty-two years of age, who was seized with a chill, vomiting, and pain in the right hypochondrium after exposure to cold. Nine days later the urine contained a quantity of pus streaked with blood, and gave forth the odor of sulphuretted hydrogen. Microscopical examination revealed the presence of a few beautifully formed crystals of cystine. No calculi were passed at any time, except on one day when a small mass of cystine the size of a poppy-seed was discovered. The pus and the cystine gradually disappeared, and the patient was cured in about six weeks. Dr. Mader supposes that the case was one of renal abscess, possibly caused by the little mass of cystine crystals subsequently discovered in the urine.—*Ber. Rudolph-Stift., Wien*, 1882.

TREPHINING FOR INTRACRANIAL ABSCESS.—Dr. Kilgarriff exhibited a patient before the Academy of Medicine of Ireland on whom he had performed trephining, on account of an abscess resulting from a fall in the hunting field. The patient was unconscious for two hours after the accident. At the end of a fortnight he was removed to Dublin, suffering much from pain over the upper part of the occipital bone on the right side, and also much gastric irritability and general debility. Any motion, such as driving, intensified the pain, and caused nausea. On examination, a shallow depression of the size of a florin, bounded by a well-defined margin, was found at the situation where he complained of the pain. The diagnosis of fracture, with the subsequent formation of an abscess within the cranium at the seat of the lesion, was made. An exploratory incision was made down to the bone, and a small purulent collection was opened. On exploring the bone, a small circular opening through the skull, about two lines in diameter, was discovered. Through this opening, situated on the upper part of the occipital bone, some purulent matter oozed. A circular piece of bone was removed with the trephine, to provide free exit for the pus. An abscess-cavity, from which almost half an ounce of pus welled up, was opened. The inner surface of the piece of bone removed was deeply eroded. The cavity of the abscess was washed out with a weak solution of carbolic acid. Subsequently, the patient experienced an attack of erysipelas of the head and neck, from which, however, he recovered; and nothing further occurred to interrupt the progress of complete recovery.—*British Medical Journal*.

LYMPHOSARCOMA INVADING THE DUODENUM.—Dr. Norman Moore, at a meeting of the London Pathological Society, showed a lymphosarcomatous growth originating in the lumbar glands. They were greatly enlarged, and the mesenteric glands to a less degree. The duodenal wall was greatly thickened, and the mucous surface ulcerated. There were no other infiltrations. The specimen was from a woman, aged forty-one. During life an irregular ovoid tumor was felt in the epigastric region. The greater part of it was dull on percussion; a lesser part was slightly resonant. The dull part was where the duodenum was most thickened by infiltration. The resonant part was where it was dilated. There was no intestine in front of the tumor. The duration of illness was eight months. A pulsation in the abdomen was first noticed, then vomiting after food, and the abdominal tumor.—*British Medical Journal*.

NERVOUS DYSPHAGIA.—A man, thirty years of age, had suffered from childhood with extreme nervousness. He stated that he had always had more or less difficulty in swallowing. But six years ago, in attempting to swallow a piece of meat, he was seized with a severe attack of suffocation. This was repeated a few years later, upon eating a soft-boiled egg. The patient was very excitable, becoming greatly agitated from slight causes. He complained also of a feeling of weakness. The act of deglutition, besides the expression of anxiety, was seen to be accompanied by a general trembling of the entire body. At times there were hypochondriacal delusions. Bromide of potassium, galvanization, the cold douche, and other remedies were tried unsuccessfully. If the patient could be engaged in conversation while eating, the act of swallowing became much more easy. Attempts to introduce a stomach pump, were followed by very great excitement and distress. The patient was finally discharged unimproved.—*Ber. Rudolph-Stift., Wien, 1882*.

THE CAUSATION OF PAIN IN THE LEFT SIDE.—At a recent meeting of the Academy of Medicine, in Ireland, Dr. Beatty read a paper on this subject, drawing special attention to a form not sufficiently recognized, which was due to fecal accumulation, and removed by getting rid of the accumulation. The pain was felt over the lower few ribs on the left side, was associated with extreme

tenderness on pressure upward of the tenth or eleventh rib, scarcely any pain being felt on pressure of these ribs downward, and was relieved when the side was pressed inward with the flat of the hand. He explained its occurrence by the drag of a loaded colon on the pleuro-colic ligament, this constant drag setting up a state of extreme irritability in the nerves of that ligament, so that a painful impression was carried upward along the left lesser splanchnic nerve to the spinal cord, and was transferred, by the law of irradiation of sensations, to the tenth and eleventh intercostal nerves. In the discussion which followed, Dr. Smith said the pleuro-colic fold had not received the attention it deserved. It certainly was of considerable importance in the investigation of abdominal disease. Dr. Beatty's arguments were valid as explaining certain kinds of left-side pain, but did not explain all kinds. Dr. Beatty replied that he did not wish it to be understood that he considered left-side pain was caused in every instance by fecal accumulation, but only in cases presenting the symptoms he had mentioned.—*British Medical Journal*.

TUBERCULOUS NODULE IN THE LUMBAR ENLARGEMENT OF THE CORD.—A coachman, thirty-nine years of age, was admitted to hospital suffering from advanced pulmonary tuberculosis. Eight weeks before admission he had experienced considerable pain in the feet, radiating into the toes and up each side of the leg. There was no ataxia. The spinal symptoms continued to increase. There were retention of urine and involuntary passage of feces, progressive anaesthesia and analgesia, and finally complete paraplegia. The tendon and skin reflexes were abolished. There was a painless effusion into both knees and ankles. Death finally ensued upon symptoms of peritonitis. At the autopsy there was found to be pulmonary, laryngeal, and intestinal tuberculosis with perforation of the bowel. In the lumbar enlargement of the spinal cord, a little to the left of the centre, was found a caseous nodule the size of a bean, surrounded by an area of softening in the medulla.—*Ber. Rudolph-Stift., Wien, 1882*.

HYDATID OF THE BRAIN.—Dr. Hawkins, in the *Australasian Medical Gazette*, reports a case of hydatid of the brain. The patient was a youth, eighteen years of age. He had an epileptic fit on March 25th, but was soon well again. Dr. Hawkins first saw the patient on April 11th. He was then sitting up, complaining of severe pain at the back of the head, a fulness about the throat, and he had a very marked squint—no fever, no vomiting. He said he felt as if another fit were coming on. He was ordered a purge and large doses of bromide, and was to be seen the following day. The doctor, however, received a message to the effect that the boy was much better, would not trouble him to call, but would come and see him himself. He did not appear as promised, but two days later a message came to say he was dead. It appeared that, feeling so much better on the day before—the pain and the squint having both left him—he went out to spend the evening with some friends. He was observed to be in excellent spirits, and thoroughly enjoyed himself, but it was said he did not touch any stimulant. The next morning he was about to get up as usual, but not feeling very well, determined to lie in bed. He complained of a slight return of the pain in the head, but was able to converse until noon, when he quietly turned round in his bed and died, having asked for a drink five minutes before. Prior to the date first mentioned (March 25th) he had never had an epileptic seizure, but on two occasions, at intervals of a year or more, had complained of fainting attacks. He also suffered occasionally from what he considered to be bilious headaches. He was a hard-working lad, engaged in a butcher's establishment, not deficient in intelligence, could draw, play the harmonium, and had a good memory. He had been brought up in Sidney since the age of two years, but his early infancy was passed in Queensland, where the drink-

ing water used by the family was obtained from an open creek through which, at certain seasons of the year, there was considerable traffic of sheep and dogs. The following was noted at the autopsy: skull larger on right side than on left. Calvaria very thin—almost transparent in places—showing plainly marks of convolutions on the right side. Dura mater normal, subarachnoid fluid absent, from the convolutions being so closely pressed together. At the back of the right posterior lobe the nerve-tissue had given way, and from it was seen protruding a transparent bladder distended with fluid. The brain was carefully removed, and the hydatid cyst (for such it proved to be) was found embedded in the substance of the brain tissue, without occupying the lateral ventricle.

ANATOMICAL CHANGES IN BRIGHT'S DISEASE.—From a series of articles in the *Archives Générales de Médecine* Dr. Brault feels justified in formulating the following propositions: 1. The group of symptoms understood by the name of Bright's disease corresponds with a variety of renal changes, acute, subacute, and chronic, which may be either inflammatory or degenerative. 2. These various renal changes may be due to several causes, or one cause may give rise to different forms of the disease. 3. The first cause of the lesions is probably a chemical alteration in the blood, the nature of which is to be determined in each case. 4. To find expression in clinical signs, the anatomical lesions must be situated in the glomeruli and the lining of the convoluted tubules. 5. The only clinical expression of the renal lesions is albuminuria. This point, however, is still questioned by some writers. 6. The other lesions of the kidney (increase or diminution or contraction of the connective tissue, disseminated fatty degeneration, etc.) which determine the physiognomy or gross appearance of the gland, find no clinical expression. 7. The symptoms, other than albuminuria, of the different forms of nephritis depend upon the retention of excrementitious matters in the blood. 8. This retention is due to an anatomical change, producing a disturbance of function in the secreting portion of the kidney. The anatomical changes upon which this functional trouble depends are numerous, such as acute or chronic fatty degeneration, transformation of columnar into flat epithelium, and finally atrophy and progressive disappearance of this epithelium. The latter is seen in interstitial nephritis of vascular origin.

GOUTY TUMOR OF PENIS.—At a recent meeting of the Glasgow Medico-Chirurgical Society (*Glasgow Medical Journal*), Dr. H. C. Cameron related a case in which there was a hard little tumor of gouty origin situated between the dorsal and right lateral aspects of the penis, about an inch from the pubes. It caused no pain except during erection, when there was always severe pain in the part, and the penis became distorted and bent at a sharp angle. He had seen one other similar case.

EXPLORATION OF THE BLADDER BY PERINEAL SECTION OF THE URETHRA.—Sir Henry Thompson, at a meeting of the Royal Medical and Chirurgical Society, read a paper on an operation for exploring the bladder by perineal section of the urethra, and for removing vesical tumor, impacted calculus, etc. The author considered this a new method of investigating obscure diseases of the bladder, which promised to be valuable in certain conditions, occasionally met with. Every one sometimes met with a case in which the symptoms of vesical disease were severe and obstinate, and although very careful examination had been made, he was unable to arrive at a rational diagnosis. The occurrence was doubtless not a common one; in the great majority of cases carefully made observations demonstrated the nature and seat of the disease. But for the exceptional instances, always important—cases generally marked by frequent or persisting hæmaturia of some standing, manifestly not renal, and without local sign of cancerous tumor—he proposed to take decided action, and to submit, further, that such action should not be unduly postponed.

The essential step in the method proposed was to examine the entire internal surface of the bladder with the finger, by which means we could recognize the presence of any tumor, large or small, the existence of encysted calculus, etc. The method of doing this was illustrated, and shown to be a proceeding simple and easy of performance, and at the same time one which involved little if any danger to life. It consisted in making a small opening from the raphe of the perineum to the membranous urethra, which was opened on a grooved staff just enough to admit the left index-finger to enter the canal and to be pushed on to the neck of the bladder. Provided the anæsthesia of the patient was so complete that the abdominal muscles were perfectly relaxed, every portion of the internal surface of the bladder might be brought consecutively by supra-pubic pressure into close contact with the tip of the finger, and any deviation from the natural condition, however slight, could be noted. The operation was an external urethrotomy only, and involved neither the prostate nor the bladder. The application of the proceeding not only to diagnosis but subsequently to treatment was then discussed. It was shown to offer facility for the removal of tumor, impacted calculus, etc. Seven or eight cases in which the operation had been performed were cited, and several specimens of tumor were exhibited which had been removed by the author. These latter were examples of a disease which is inevitably fatal unless removed by operation. Great care was necessary in examining the state of the patients before having recourse to operation. The two conditions, the absence of which were so important to be assured of before interfering, were renal disease and cancer. Hæmaturia from either of these sources of course absolutely contra-indicated an operation.—*Lancet*, January 27, 1883.

VENESECTION TO PREVENT PREMATURE BIRTH.—Dr. Mayo writes to the *Australasian Medical Gazette* to the effect that he has found phlebotomy an efficient preventive of premature births. He recommends that from three to four ounces of blood be abstracted soon after the first indication of quickening. For fifty years he has resorted to this practice with good success. And he adds that he bleeds indiscriminately both robust and delicate women.

TRAUMATIC PNEUMONIA.—Dr. Mader relates the case of a laborer, fifty-eight years of age, who fell from quite a height, striking upon the chest. Ten days after the accident he entered the hospital suffering from severe pain in the epigastrium and right hypochondrium. The liver was enlarged and exceedingly tender. There were also marked signs of pneumonia of the right lung, dullness on percussion, bronchial respiration, and bloody sputa. The disease ran the ordinary course of an idiopathic pneumonia, resulting in complete recovery.—*Ber. Rudolph-Stift.*, Wien, 1882.

ANTAGONISM BETWEEN SYPHILIS AND VACCINIA.—Dr. Polin inclines to the belief (*Annales de Dermatologie et de Syphiligraphie*) that there is an antagonism between the vaccine virus and that of syphilis. He was led to this view by the results of some vaccinations performed by him in Algeria. Of 471 children the vaccination was successful in 410, all of whom were free from any syphilitic taint. Of the 61 children in whom the inoculation did not succeed, 48 presented indubitable evidences of syphilis.

ACUTE INFLAMMATION OF THE INTERNAL EAR.—Dr. Voltolini calls attention, in a monograph published in Breslau, 1882, to the frequency of acute inflammation of the labyrinth (*otitis labyrinthica s. intima*) in young children. He states that it is usually mistaken for epidemic cerebro-spinal meningitis, but that it differs from that disease in its origin, symptoms, and sequelæ. He proposes to give it a place among the diseases of childhood, and argues at length against Politzer and others who deny its existence.

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CHANGES IN THE RENAL GANGLIA AND BRIGHT'S DISEASE.

DR. SAUNDBY, in the *British Medical Journal*, January 13, 1883, confirms the observations made by Drs. Da Costa and Longstreth, concerning the altered state of the renal ganglia in Bright's disease. But whereas the latter are disposed to regard the neural change as the primary and causative one, Dr. Saundby asserts that the ganglionic nerve-cells are only secondarily affected. Moreover, while the nature of the nerve-change was described by Da Costa and Longstreth as identical with fatty degeneration, Dr. Saundby affirms the process to be one of pigmentary metamorphosis merely. Thus, although admitting the accuracy of their observations, he dissents from the conclusions which they have arrived at. Indeed, he is certainly right in asking why they regard the ganglionic changes as causative factors, more especially in the production of the contracting kidney, since similar nerve alterations are found as well in all the other types of Bright's disease. To quote Saundby's own words, he says:

"I think we cannot escape from the conclusion that the ganglionic lesions stand in the same relation to all the forms of Bright's disease. There is nothing to suggest that they are more likely to be primary in one form than in another; so that, if we hesitate to regard acute Bright's disease as primarily a disease of the renal ganglia, any objections which weigh with us in this case should hold good in all. It may be thought that the insidious mode of origin of the contracting kidney makes it a fairer field for speculation than the other forms of Bright's disease; but I would earnestly protest against the assumption that the obscurity of a problem justifies the introduction of crude hypotheses resting on ambitious facts and doubtful analogies. A moment's reflection, moreover, will assure us that we really know no more of the actual mode in which the kidney is affected by, for example, the poison of scarlatina, than we do of that of gout."

But the question of most moment is whether the nerve-changes, about the actual occurrence of which there appears to be no longer any doubt, are primary or secondary. And the answer to this question has not yet been a satisfactory one. Here, as elsewhere, we should remember that the association of pathological processes does not prove the existence of a causal relationship between them. Dr. Saundby very aptly calls to mind that quite

similar nerve-changes have been described in other more or less obscure diseases. Thus Marcacci has found them in diffuse eczema; Brigidi has described them in pseudo-hypertrophic muscular paralysis and pernicious anæmia; Morselli has noted their occurrence in glio-sarcoma of the brain; Ponicaré in general paralysis of the insane; Pio Foa in cholera. They have also been seen in connection with diabetes mellitus. Moreover, Giovanni, as long ago as 1876, had found cellular infiltration of the sympathetic ganglia in a great variety of visceral and general diseases. The evident inference is that structural changes of organs are commonly accompanied with demonstrable signs of irritation in the ganglia.

Reasoning from analogy, we may therefore assume that the ganglionic lesions of Bright's disease are the results or concomitants of the renal alterations. At any rate, our present knowledge does not justify the assumption that they are in any sense the forerunners of that malady.

This statement is by no means intended to discourage a new line of research. On the contrary, it should stimulate us to further labor in a promising field of pathological inquiry.

DISEASES OF THE FALLOPIAN TUBES.

DR. THOMAS SAVAGE directs attention in the *Birmingham Medical Review*, January, 1883, to the comparative frequency of pyosalpinx as a cause of recurrent attacks of pelvic inflammation. He believes that many cases of supposed pelvic cellulitis hitherto regarded as incurable really come under the head of inflammation of the Fallopian tubes. Such cases he holds to be often curable by operation. Among other causes, he thinks that gonorrhœa may play an important part in the production of Fallopian tube diseases, and in this respect he agrees fully with Dr. Noeggerath, of whose previous publications he seems, however, quite ignorant. The first effect of inflammation seems to be to seal up both ends of the oviduct, giving rise subsequently to an accumulation of serum or pus. In cases of hydrosalpinx the fluid may be absorbed, but this result, Savage thinks, is seldom, if ever, obtained when pus is present. Now, in all such cases temporizing is not only useless, but positively harmful.

The diagnosis of disease of the Fallopian tube is, to some extent, presumptive. There will be found a small tumor in the position of the tube on one or both sides of the uterus, or, if larger, it may be felt almost wholly in Douglas' space. In the acute forms the parts around the uterus may be felt to be boggy, with more or less fixation of that organ. In the more chronic forms, the uterus may be quite free and mobile. In some cases there is nothing to be felt in the pelvis, and the diagnosis is based upon the presence of more or less constant pain and recurring attacks of inflammation. In performing abdominal section for the removal of these tumors, the author recommends that the incision be about two inches in length, or just large enough to admit two fingers. If the tumor be too large to permit of its extraction through this short opening, it is a good plan to aspirate it. If any fluid escape into the abdominal cavity, it is not necessary to wash out the pelvis, but dry sponging should be thoroughly practised. If no pus or blood

have escaped into the peritoneal cavity, the wound should be closed completely, otherwise a glass drainage-tube is to be inserted. Both Fallopian tubes should be removed, even though one be apparently healthy, as the probability is that the normal one would sooner or later become affected in the same way as its fellow. Dr. Savage formerly insisted strongly upon the use of the spray in all abdominal operations. But he has now discontinued its use, believing that increased operative experience and extreme cleanliness are the two main factors which contribute to successful practice.

THE HYGIENIC TREATMENT OF ALBUMINURIA.

THE treatment of chronic Bright's disease by medicines alone has not hitherto been very satisfactory. Witness, for instance, the long list of drugs that have all had their day of popularity, only sooner or later to be consigned to oblivion. Ever since the publication of his well-known treatise, Senator's name is prominently coupled with modern notions concerning albuminuria, which must ever remain one of the most significant symptoms of renal disease. His monograph on this subject is still one of the most elaborate and carefully prepared essays extant. At a recent meeting of the Berliner Med. Gesellschaft, he again took up the subject of albuminuria, more especially as regards the hygienic management of patients suffering from the various forms of Bright's disease.

He urged upon his hearers the great necessity of attention to the details of diet and hygiene in the management of this affection. In this connection he also called attention to the improvements in the condition of subjects of Bright's disease so often seen to follow their admission to hospital. Senator had noticed this amelioration even in cases in which the medical treatment remained precisely the same as that previously followed without effect. And he attributed the improvement solely to the more favorable hygienic surroundings of such patients following their admission to a hospital.

We all know that transient albuminuria is frequently seen even in healthy individuals during the digestion of a full meal. Now, in view of this fact, Senator advises that patients with Bright's disease should never eat heartily at any one time, but should rather take nourishment in smaller quantities at more frequent intervals. In regard to the quality of food taken, he recommends that it be, as far as possible, non-albuminous. Eggs should under no circumstances be allowed. Of meats, those should be given the preference which contain the smallest proportion of albumen, such as veal and poultry. Fish should also enter largely into the dietary. A liberal use of vegetables, with the exception of the leguminous ones, is advised. The popular milk diet is likewise recommended as exhibiting a minimum of albumen. But as milk is also deficient in the carbo-hydrates, Senator allows with it a small quantity of bread, meal, or wheaten grits.

The functions of the skin should be most carefully attended to. A moderate perspiration is to be almost constantly maintained, and to effect this with the least danger to the patient, the speaker advised a more or less prolonged confinement to the bed. This was also recommended on the ground of restraining muscular movements. It was stated that an increase in the amount of

albumen excreted always followed upon muscular exertion. Consequently all active exercise should be forbidden. And if fresh air were deemed necessary it should be taken in a carriage, the patient being well wrapped up to guard against the danger of catching cold.

Senator does not claim that chronic albuminuria can be cured in this way, but he states that he has brought about a marked amelioration of the symptoms through strict attention to the minutiae of the hygienic and dietetic treatment, here briefly outlined. It is questionable, however, how far the subjects of nephritis in the earlier stages would carry out the strict and to them tiresome details of treatment as laid down by the speaker in his interesting address. Such patients are sick, to be sure, but they are not always sufferers. Pain is, after all, the most persuasive reminder of the physician's injunctions. When this is absent or insignificant, his advice is too often neglected, even by the otherwise prudent and intelligent.

As regards the more advanced cases, a cure is, of course, out of the question. Nevertheless, Senator's method may prove of great value in prolonging life, and ensuring a more comfortable existence. Results certainly that the profession will never belittle or despise.

CEPHALIC AUSCULTATION IN MENTAL DISEASE.

DR. ADRIANI (*Journal de Méd. et de Chir. Pratiques*, February, 1883) has been conducting a series of investigations upon the transmissibility of the voice to the occiput, with a view to determine its value as a sign of mental disease. The patient should speak in a low tone while the ear of the auscultator is applied to the occiput. He found that in a number of cases of mental disease the voice-sounds were exaggerated or weakened, amphoric, indistinct, or absent. In healthy individuals they were seldom exaggerated or weakened, and never amphoric or indistinct. He thinks that the sound of the voice is transmitted by the cranial bones and not by the brain substance. The latter, however, influences the sound, and it is probably to the difference in its density that the various modifications of the voice-sounds are due. According to Crichton Browne the density of the brain varies in the different forms of mental disease, and hence Adriani sees ground to hope that cephalic auscultation may become of value in the diagnosis of these diseases.

THE CURABILITY OF TYPHOID FEVER IN THE PRODROMAL STAGE.

At a recent meeting of the Academy of Medicine of Paris (*Bulletin de l'Académie*, January 14, 1883) Dr. Jules Guérin maintained the existence of mild and abortive forms of typhoid fever. The modified typhoid presents symptoms similar to those of the prodromal stage of the disease as usually described, yet is not to be confounded with the prodromal stage. In each case the symptoms observed are the first manifestations of the specific poison. The difference, however, lies in this, that in the one the disease is arrested at this stage owing to an insufficient dose of the virus, in the other the symptoms are due to the first weak efforts of a large dose, and will increase in severity unless the virus be destroyed.

The author thought that the action of the fever-poison might be compared to the action of such a poison, *e.g.*, as arsenic. When a dose of arsenic was taken it produced first, by virtue of its presence in the stomach, a certain local action; but presently, if it was not expelled or neutralized, it became absorbed and gave rise to a general action. So the poison of typhoid fever, when it entered the body, produced a primary local action, and then, becoming absorbed, gave rise to the characteristic train of general symptoms. The poison might be introduced primarily into the lungs through the respiratory passages, into the nervous system by absorption through the skin, or directly into the intestinal tract; and before it became absorbed into the general system it produced in these organs a certain local action, giving rise to symptoms which were truly prodromal. The prodromal symptoms would thus indicate the local action of the fever-poison before its absorption. Guérin further claimed that it was possible in this prodromal stage to eliminate the poison and thus cut short the disease. His plan of treatment was based upon this belief, and consisted in the administration of purgatives or emetics, according as the intestinal or gastric symptoms predominated, at the very earliest possible moment. He then gave charcoal, and continued the administration of evacuates and disinfectants on alternate days, until the patient was cured. Dr. Guérin made the rather broad assertion that, during several years in which he had pursued this plan, he had never had a case terminate fatally.

The author's reasonings seem plausible enough; nevertheless when he asserts the invariable curability of typhoid in its prodromal stage there is room for doubting the accuracy of his diagnostic powers. We have elsewhere heard the question put whether quinine might not avert impending typhoid. But in that instance also, although there seemed abundant evidence to justify an affirmative answer, the question was rightly considered to be still an open one. And so while Guérin's claims certainly deserve to be noticed, we do not feel disposed to accept them as the unquestionable proof of the curability of typhoid fever in the prodromal stage.

THE NEW AQUEDUCT BILL.

Now that a new aqueduct is considered necessary by the politicians at Albany, it is quite important that the expenses for the same should be reduced to a consistent minimum. It will be quite difficult, it is true, to take the huge job entirely from the hands of some of the interested workers. Every movement in that direction, however, deserves the support of tax-payers and the public at large. The new water bill from the anti-Ring association of tax-payers of the city has some very commendable features in it, looking toward the reduction of expenses and the checking of political jobbery. Although the provision for a commission of seven citizens, to be appointed by the Mayor, representing the different senatorial districts of the city, is a wise one in itself, it does not by any means prevent the appointment of incompetent, but influential politicians to such an office. Still, such appointment must necessarily be trusted to His Honor the Mayor. The best safeguard against incompetency on the part of members of the proposed

commission will be guaranteed by their fitness to continue investigations concerning the water supply, and within a given period to present a report, which shall be open to public criticism for a reasonable period. This at least insures, to a certain extent, fair play to all such as are interested in seeing that the work is done properly.

THE NATIONAL BOARD OF HEALTH I

THE lack of support given to this organization by the last Congress is still a matter of warm discussion among our sanitary confrères. Much that was said against the Board in Congress was rhetorical drivel, of which the country should be ashamed. It is very evident, however, that Congress and the commercial interests of the country have not yet been brought to see that preventive medicine as carried out by a national body will be useful and economical. Such being the case, the medical profession is not called upon to start a propaganda in the matter. Another epidemic will be more potent in this direction than tomes of arguments. We believe that a sentiment in favor of a national health organization will again be developed, and that it is only a question of time.

TRICHINA SPIRALIS AND GERMANY.

THE trichina spiralis seems likely to be the cause of international difficulties. The German Government has prohibited the introduction of American pork on the ground that it is infested with trichinæ and therefore dangerous to health. There has not been sufficient examination as yet to determine the exact relative merits of German and American pork, as regards freedom from trichinæ. It seems, however, that the American article is affected to a slightly larger extent than that of Europe. On the other hand, there has as yet been no well authenticated case in which trichinosis in Germany was produced from eating pork imported from America. The prohibition is, we believe, a political rather than a sanitary measure. It is understood that Secretary Frelinghuysen has taken the matter in hand, and if he fails to secure a repeal of the prohibition, will lay the matter before Congress.

THE NEW HOSPITALS FOR CONTAGIOUS DISEASES.

THE hospital for contagious diseases on North Brothers' Island, has been completed and delivered to the sanitary authorities. It has cost \$66,900. A submarine cable of three wires to cost \$900 will soon be laid to Port Morris, when there will be direct telegraph communication between the island and Sanitary Headquarters. In the summer a strong steamboat, to cost \$30,000, will be built to transport patients and employes to and from the hospital. A contract will be awarded to fill in a marsh on the island and build a sea-wall, this will cost \$5,000. Specifications and plans are preparing and bids will be advertised for an administration building to cost \$15,000; a boiler-house and laundry to cost \$15,000; a kitchen building to cost \$8,000; steam-heating apparatus to cost \$10,000, and corridors to connect all the buildings with the hospital to cost \$3,000. The sanitary authorities will also soon advertise for proposals to build, at a cost of \$50,000, the hospital for children sick with contagious diseases at the foot of East Sixteenth Street.

News of the Week.

DEATH OF BARON JULES CLOQUET.—Baron Cloquet, one of the oldest medical men in France, died on February 23d at the age of ninety-four. He was the author of several works on anatomy and surgery. For thirty years his anatomy was a standard work.

A MICRO-ORGANISM FOR YELLOW FEVER.—Peronospora Lutea is the title of the micro-organism which Dr. Carmona del Valle believes to be characteristic of yellow fever. The germs of this cryptogerm are always to be found in the excretions and in the fluids and secretions. Animals inoculated with it show febrile symptoms. After recovery they are not affected by a second inoculation.

THE GRADUATING CLASS at the Miami Medical College numbered forty-one.

THE MICROCOCCUS OF CEREBRO-SPINAL MENINGITIS.—At a meeting of the Berlin Society for Internal Medicine, February 10th, Professor Leyden demonstrated the presence of micrococci in cerebro-spinal meningitis. He referred to the fact that these organisms had been discovered in this disease by Klebs and Ebert. Leyden found them in traumatic meningitis also. He distinguished them from decomposition organisms by their less rapid movement and their shape. He thought that with the present evidence there was no doubt that cerebro-spinal meningitis was a parasitic disease.

IS IT SCIENCE, OR SNOBBERY, OR ONLY GOSSIP?—Our British journalists write that "the auspicious result of the accouchement of H. R. H. the Duchess of Albany, is a source of great pleasure and congratulation. . . . Prior to the happy event there had been some natural anxiety among the many friends of etc., etc." This all sounds very strange in American ears, but American physicians do not have to act as medical valets to a particular class.

THE DETROIT MEDICAL COLLEGE held its annual commencement on February 28th, and graduated thirteen students.

THE MICHIGAN COLLEGE OF MEDICINE held its annual commencement on March 5th, graduating a class of twenty-eight.

THE COLUMBIA VETERINARY COLLEGE AND SCHOOL OF COMPARATIVE MEDICINE, holds its annual Commencement on March 29th.

THE BUFFALO MEDICAL COLLEGE at its last Commencement graduated fifty-seven students. The Faculty has accepted the resignation of Prof. Charles A. Doremus as Professor of Chemistry and Toxicology. Dr. R. A. Witthaus was elected to the vacant chair.

MORE COMMENCEMENTS.—The seventy-sixth Commencement of the Medical Department of the University of Maryland took place, March 15th, at Baltimore. Eighty-seven graduates received diplomas as doctors of medicine and thirty-four as dental surgeons. The annual Commencement of the Woman's Medical College of Pennsylvania was held March 15th. The degree of M.D. was conferred upon thirty-five women.

RETIREMENT OF PROFESSOR MULHERON.—Professor J. J. Mulheron, who has held the Chair of Medicine in the Michigan College of Medicine, recently retired. At the close of his last session the students of the college presented him with a handsomely engrossed address, expressing warm sentiments of regret at the retirement of their teacher, and of acknowledgment of his work. We congratulate the able editor of the *Medical Age* on the fact that he is appreciated.

THE NEXT MEETING OF THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY will be held at Jackson, Miss., beginning on Tuesday, April 3d, proximo. In view of recent action, legislative and judicial, affecting the sanitary interests of territory not embraced in the Council, in common with the Valley proper, invitations are extended to prominent sanitarians and health officials in the South Atlantic and Gulf States. John H. Raugh, M.D., the Secretary (Springfield, Ill.), should be promptly advised by all accepting invitation.

DEATH OF A LEPROUS PATIENT AT SALEM, MASSACHUSETTS.—Charles D. Erby, a leprous patient at the Salem (Mass.) Almshouse, who contracted the disease in the Sandwich Islands, and whose case has excited much apprehension, died there March 19th.

FIRST REPORT UNDER THE NEW RULE FOR RAILROADS.—The Railroad Commissioners of the State of New York have adopted a requirement to the effect that whenever an accident of any kind occurs on any railroad in the State, the particulars shall be at once telegraphed to them. The first report of the kind was transmitted March 19th, by the New York Central & Hudson River Railroad authorities. Their fast train, which left New York at half-past ten that morning, struck a man south of Yonkers, who was walking on the track. He was found by the side of the track with his right arm and side badly injured, but no bones were broken.

A NEW WATER BILL.—A meeting of representatives from various reform and anti-ring associations was held at the headquarters of the Central Taxpayers' Association on the evening of March 19th. The organizations represented were the New York County Anti-Monopoly League, the Council of Reform, the West Side Association, and the Taxpayers' Central Association. The object of the meeting was to consider the new Water bill, which has been prepared in accordance with the report of the Water Committee. Its principal features are to have the work on the new aqueduct done under the direction of a commission of seven members, one from each Senatorial district, to be appointed by the Mayor, to limit the total cost of increasing the water supply to \$20,000,000, which sum is to include the entire expense of getting land for "right of way," etc. Other provisions of the bill are that there shall be further investigation of the water problem by the commissioners when appointed; that they shall make their report within three months and exhibit the said report for public inspection for one month, and shall also give the citizens a hearing in regard to it, make any necessary modifications and complete the report within one month. The bill will also contain the usual provisions for securing the necessary land by agreement instead of by process of law, arbitration, condemnation, etc.

PROFESSOR ARLT has been given the cross of the order of Francis Joseph in recognition of his long services as a teacher and worker in the Vienna Medical Faculty.

A TRAINING SCHOOL FOR NURSES has been organized in connection with the Cincinnati College of Medicine and Surgery. The first term begins on March 26th.

CANDID CRITICISM ON THE NEW CODE.—In the midst of the flood of vituperation, the charges of dishonesty, greed, avarice, and trickery which have been made against the profession of New York in the name of the Code, it is due that there be an acknowledgment of the candor and fairness shown by the *Weekly Medical Review* and the *Medical Age*. These journals have taken the pains to let their readers see that there are at least two sides to the question.

THE KENTUCKY STATE MEDICAL SOCIETY meets at Louisville on April 4th. Dr. L. S. McMurtry, Secretary.

THE BILL TO CREATE A STATE BOARD OF EXAMINERS.—As widespread as has been the interest excited by the State Society on the position it assumed a year ago on the subject of Medical Ethics, in our opinion, says the *Buffalo Medical and Surgical Journal*, the most vital question presented for the consideration of the society was the recommendation of a bill for the creation of a State Board of Examiners. The proposed bill came before the society in the report of the committee on legislation, and was evidently prepared with great care. It sets forth: 1, what it means to be a practising physician in this State; 2, that after some future time (December, 1883) a person shall not have the right to practise medicine in this State unless licensed by the State Board of Examiners; 3, that candidates for license to practise medicine may select to be examined in any of the schools of practice represented by the incorporated State medical societies; 4, that the records of the examinations upon which licenses are granted shall remain a part of the archives of the University of the State; 5, it repeals all acts or parts of acts authorizing medical colleges or other corporations to grant degrees which shall be licenses to practise medicine.

THE MORPHINE FIEND.—Our readers in the city are warned against a certain woman who is at present visiting physicians' offices and asking for a hypodermic injection of morphine. Her plan is generally to appear to be suffering intensely from neuralgia and to be in a state of pitiable weakness and depression therefrom. She claims to have been sent by some one who has highly recommended the particular medical victim on whom she is calling. After securing a hypodermic injection, she inquires for the toilet room, and having disembarrassed her bladder, she waits a while and then demands another injection. If this is denied her, she sits down refusing to leave, and refusing to pay, claiming that she has not been treated properly. In one case she declared she would stay all night, greatly to the horror of her modest bachelor attendant. The woman in question is about thirty-five years old, and is tolerably well dressed, though rather dirty. She claims to be a little deaf. Quite a number of physicians have already been annoyed and imposed upon by her.

THE NEW YORK COLLEGE OF PHARMACY ALUMNI.—The twelfth annual meeting of the College of Pharmacy Alumni Association was held March 16th, in the college. The following officers were chosen for the ensuing year: *President*, George Inness; *Vice-Presidents*, Charles F. Hubner, A. G. Cook, and Frank Hay; *Secretary*, Frederick Hohenthal; *Treasurer*, L. M. Royce, and *Registrar*, John Oehler. An exhibition was given in honor of the graduating class of '83.

A SCHOOL OF SANITARY ENGINEERING is to be established in connection with Columbia College.

TRAFFIC IN PAUPER BODIES IN MASSACHUSETTS.—Governor Butler has charged that a traffic in pauper bodies has been going on in Massachusetts for many years. It has been recently stated that of 2,800 deaths in ten years 580 bodies were delivered to the medical colleges, according to law. There is no record of the disposition of the remainder. They are supposed to be buried in Potter's field, but it is alleged that some of the graves contain no bodies. Charges have been made that bodies were preserved in a pickling fluid and sent to distant points in kerosene barrels. Country medical colleges, it is well known, are generally supplied from the cities in this way. These colleges need the "material" in question, and under proper restrictions should be allowed to have it.

THE LATE PREMIER GORTSCHAKOFF.—An examination of the intestines of the late Premier Gortschakoff has shown the presence of phosphorus in them. It is suspected that he was poisoned.

DEATH OF DR. C. HENRY KING.—Dr. C. Henry King, School Commissioner of Richmond County and Physician-in-Chief of Sailors' Snug Harbor, died at Quarantine Station, Staten Island, March 18th, of pneumonia. Dr. King was for a long time Physician-in-Chief of the Seamen's Retreat Hospital. He was well known for his energetic advocacy of the physical examination of seamen before shipment.

THE BODIES OF MURDERERS AND THE PREVENTION OF PUBLIC FUNERALS.—The Connecticut Legislature recently passed a bill directing sheriffs to cause the body of any executed criminal to be quietly and decently buried at an expense to the State not exceeding twenty dollars. The sheriff may deliver the body to relatives, still retaining exclusive direction of the funeral, or he may at his discretion refuse to deliver it where there is a prospect of an extravagant and disgraceful exhibition. There is a prospect that some legislation upon this matter will be undertaken by the New York Legislature.

WELL-WATER SUPPLY OF BROOKLYN.—The health authorities of Brooklyn have condemned a large number of wells as containing water unfit to drink.

THE WILL OF SIR THOMAS WATSON.—Our London correspondent writes that Sir Thomas Watson's will has been proved. The personalty alone amounts to more than £164,000. With the exception of a few legacies, this sum is divided between his son and his daughter. Large fortunes—whether acquired by practice or inheritance—are not common amongst medical men in Great Britain. The above amount is certainly large, even for a court physician with an extensive practice and world-wide reputation.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 15, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE REGULATION AND REPRESSION OF PROSTITUTION.

DR. F. R. STURGIS read a paper on the above subject, in which he made the preliminary statement that although the problem had for a long time been under discussion in different countries, it was yet far from solution. He then discussed the question under three heads: first, the causes of prostitution; second, the necessity of regulating the evil; and third, the results obtained by legislative action in this direction.

With regard to the causes, he had derived his information from three sources—French, English, and American—and after reviewing at some length the works of Sanger, Acton, and others, it was found that all these writers had reached the practical conclusion that man is the aggressive party and is primarily responsible for the existence of the evil.

The next most prominent cause is the desire which women have for dress and luxury, not only for themselves, but for the purpose of attracting and pleasing the opposite sex. The desire for luxury exerts a more potent influence in the higher than in the lower classes. In this country, except among the foreign born, the use of intoxicating drinks enters much less frequently as an assignable cause than in any other country except England.

Another cause to which special attention was directed was the promiscuous herding of people in tenement-houses and the absence of home influence.

The necessity for regulating the evil became especially apparent when its consequences, as shown by communication and propagation of venereal diseases were studied. It was estimated from a calculation based upon Parisian statistics that in the present population of the city of New York there are in round numbers eleven thousand prostitutes; that annually there appear for treatment of venereal diseases in the various public institutions of the city about twelve thousand patients; that in both public and private practice there are probably sixty thousand persons who are being treated for venereal diseases, and that of this number there are probably forty-five or fifty thousand who are syphilitic. When the additional fact is taken into consideration that probably from a third to a half of the syphilitics are really capable of conveying the disease, the necessity for regulating the evil at once became apparent. The women who are most dangerous, so far as syphilis is concerned, are not the old prostitutes who have plied their vocation for years, but the young girls who come upon the town and fall to the lot of the so-called better classes rather than the working-men or the class even lower than those, and this fact, in great part at least, accounts for the larger proportion of cases in which the initial lesion of syphilis, or the chancre, is met with in private practice. It is important that this fact should be recognized among physicians, for the initial sore of syphilis is frequently so slight as not to attract any attention, and the malady goes on unchecked until syphilis is carried into families. The old prostitute has passed beyond the condition most favorable for the propagation of syphilis, while the young woman, who is most attractive, has the disease in its stages most favorable for contamination. The real danger, then, is not so much for the persons who receive the syphilis, because, if then recognized, it is very amenable to treatment, but the penalty falls in full force upon those to whom the disease is transmitted.

Dr. Sturgis then discussed at some length the obstacles met with in all attempts to restrict the evil, such as the natural repugnance of the question, the tender re-

gard for the rights of the subject, and the somewhat prevalent belief that the evil is one which should not be interfered with, but that those who contract the diseases incident thereto should be allowed to suffer, etc.

With reference to results obtained by legislative action in this direction, special reference was made to the decided benefit which had followed the enactment of the English regulations. At the same time it must not be overlooked that if the disease could be confined to house prostitutes, there would be much greater hope of restriction than at present exists. The great difficulty, however, existed in the inability to restrain or check clandestine prostitution. In Paris it is estimated that there is only one inscribed woman to six illegal prostitutes; that is, that the number of those engaged in clandestine prostitution is nearly six times as great as of those who follow it as a business, register, and submit to examination. The French writers on this subject, while admitting the value which is obtained by regulating it, at the same time confess the danger of driving inscribed women into clandestine prostitution, or at least increasing the number of clandestine prostitutes.

The conclusions reached by the speaker were that among the better classes it was impossible to repress prostitution; that at the present time the only hope existed in the ability to regulate it among the lower classes who were found diseased, by sending such persons to hospitals, where they could be compelled to remain until they were either absolutely cured or rendered the least possible innocuous. Any attempt, however, to check the evil must be done without sentiment. If the question became one of mere repression or control, all attempts at repression would be absolute failures; but if an effort were merely made to regulate it, he believed that its regulation could be as easily accomplished in the city of New York as it has been in London and in some other large cities, where most of the women were well known to the police, whether in or out of houses.

Dr. Sturgis then presented an interesting question, namely, the effect which inscription has toward depopulating a country, a fact to which a French writer had directed especial attention. No such result, however, need be feared in this country.

In conclusion he directed attention to the rules laid down at the International Statistical Congress held at St. Petersburg with reference to investigations concerning the existence of syphilis.

The PRESIDENT remarked that no laws were of effect which were in advance of public opinion or were not sustained by public opinion, and that it frequently occurred that laws which had been enacted that were not sustained by public opinion had produced most disastrous results. That there was a moral, social, and political aspect of the question under consideration was apparent. That there was also a legal aspect was equally apparent, and in order that it might be properly presented he had invited Judge JOHN R. BRADY, of the Supreme Court, to be present and participate in the discussion, and he then introduced the honored guest to the Academy, who first referred to the study of this subject as presented by certain English writers, and in all of their articles one remarkable feature was noticeable, viz., that none of them had reached any conclusion. The Judge, from his general consideration of the subject, thought that the better opinion of the community at large seemed to be in favor of legislative enactment, yet he doubted very much indeed whether such enactments could be secured at the present time. The judiciary had always been arrayed against prostitution in any form, and just here he took issue with Dr. Sturgis, and said that a woman has not control over her own body; that, according to the law of the State of New York, she can be arrested as a vagrant and sent to the penitentiary if it can be proven that she is without other support than that derived from prostitution. The difficulty, however, in enforcing all existing laws with reference to prostitution was the migratory character of

the persons engaged; that is, when routed from one street they would migrate to another, and so move on to different points, and thus manage to evade the law. With reference to clandestine prostitution, it seemed impossible to reach it in any way. His conclusion was that no reform can ever be accomplished except through the instrumentality of the medical profession; that if the efforts of medical men were sufficiently persistent to give rise to the proper sentiment in the community, all the social and intellectual objections which had heretofore been raised against interference with this evil might be waived, and the people might say we will abide by your opinions concerning this known evil, and will unite with you in all reasonable efforts for either its regulation or its repression. Until such a sentiment can be created all efforts at securing legislative enactment would very probably be unavailing.

DR. STURGIS then read a letter received from Dr. A. P. Gihon, of the United States Navy, expressing his great regret at being unable, on account of extreme sickness in his family, to be present and participate in the discussion, and also expressing the view that the question under consideration was one which must be met by physicians and looked squarely in the face, and that whatever relief should come to the community must come very largely through the united efforts of the medical profession.

DR. L. WEBER remarked that three modes of dealing with the question of prostitution had been put into application in various countries. First, to do nothing concerning the evil; second, to adopt the policy of repression, which had been applied in Rome, Spain, Bavaria, and Austria; and, third, to recognize the evil and attempt forcible regulation. All of these methods had proved failures. He believed that the evils of prostitution could be best restricted by turning attention directly toward the means best adapted to diminish the propagation of syphilis. First, syphilis must be recognized; second, it must be treated with energy; third, greater hospital facilities than now exist should be afforded for the treatment of syphilitic persons.

DR. R. W. TAYLOR believed that so far as legislation is concerned no benefit would be derived in that direction from efforts to restrict the evil or its consequences. Reform, if any, must come from two sources: First, in a manufactured sentiment, which had already been alluded to by Judge Brady, and which must come largely through the medical profession; second, in the better education of the profession itself concerning venereal disease in all its phases. The profession should to a man be educated up to a point of being able to recognize syphilis under whatever phase it might appear. Gonorrhœa and chancroid are of such common occurrence that they might be said to be endemic, even in polite society, and the difficulties in the way of their recognition were manifestly less than concerning syphilis. He believed if the fact was thoroughly understood that syphilis is eminently a curable disease, and if every medical man was able to recognize the disease in all its phases, that the evil consequences attending its existence and its propagation might be very largely restricted, and, so far, one of the necessities of restricting prostitution could be met.

The discussion was closed by Dr. Sturgis, who referred to the great difficulty in educating the people up to the point of regulation or repression of the evil.

The Secretary then read a letter from Dr. Willard Parker, gratefully acknowledging the kind expression of sympathy extended to him by the President of the Academy in his inaugural address, and conveyed by the Committee, consisting of Drs. Detmold, Adams, and Hubbard.

The Academy then adjourned.

THE USE OF THE OPHTHALMOSCOPE.—Nothnagel says that no physician should be allowed to practice who does not know how to use the ophthalmoscope.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. BEVERLEY LIVINGSTON presented specimens with the following history:

DOUBLE HYDRONEPHROSIS DUE TO ABNORMAL BENDING OF THE URETERS—SUPPURATIVE DISEASE OF THE KNEE-JOINT—ABSCESS OF THE LIVER.

"Thomas M— was delivered by forceps in the Nursery and Child's Hospital September 29, 1882, of a healthy mother, and the mother and child did well. nothing being noticed until November 1st, when the nurse reported that the child's left knee was swollen, red, and painful, and that she thought the mother had turned over on the child in her sleep and so injured it, but the mother claimed the knee had been swollen since birth. On examination the knee-joint presented the signs of an acute inflammation, being red, swollen, and painful on pressure, and the femur seemed to be dislocated inward, also the lower end of the femur and the upper end of the tibia seemed enlarged. Fluctuation was very apparent, and this tumor evidently communicated with one in the lower and outer part of the thigh. An opening was made, a quantity of pus let out, and a drainage-tube inserted. Dead bone was found at the bottom of the cavity. The limb was dressed once a day. The temperature was normal before the operation, but it went up to 102° to 103° F. afterward, with a rapid pulse, and in five days (November 6th) the child died, having had vomiting and diarrhœa for the last two days of its life.

"The autopsy was made November 7, 1882. The body was emaciated, there was an opening on the under and outer surface of the left thigh just above the knee-joint; the knee was enlarged and the femur seemed to be dislocated inward. On dissection the abscess was found to extend upward on the under and outer part of the thigh more than half the length of the femur, and in it a piece of drainage-tube was found. This abscess communicated with the knee-joint. The external condyle was necrosed and thus allowed the femur to slip inward. On section the shaft of the femur was found to consist of two layers of bone, the outer being of a different structure from the inner, denser and showing striations in the opposite direction, and was evidently due to the inflammation of the periosteum. Also there seemed to be a line between the normal shaft of the bone and this outer layer. The lines of ossification at the end of the femur were normal and the ossification of the other bones was also normal. The lungs showed catarrhal pneumonia in the posterior part of both. The heart was normal. The liver contained two abscesses in the middle of the right lobe, about three-fourths of an inch in diameter. The spleen was normal. Kidneys: They were both removed before they were examined. The right one was opened and the pelvis found to be considerably dilated, with atrophy of the pyramids, only the cortex remaining. The left was in the same condition. The pelvis of both kidneys contained a small quantity of urine, no renal calculi could be found. The part of the ureters that had been left in the body was normal in size and entered the bladder naturally, and the bladder was normal as well as the urethra. The cause of the hydronephrosis seemed to be the bending of the ureters twice on themselves. On the left side there was also constriction at the second curve."

DR. ROBERT NEWMAN presented a specimen of

CARCINOMA OF THE RECTUM,

accompanied by the following history: Mrs. S. D—, aged fifty-six; widow; three miscarriages; no living children; menstruated at fifteen; regular throughout until menopause.

Family history.—Father died at age of seventy-eight—cause, dropsy; mother died at age of seventy-two—cause,

senile asthenia. Had four brothers and four sisters, of which one brother and one sister died in childhood (seven and nine years of age). The rest are living and well.

Personal history.—The patient had most of the diseases of childhood. At twenty years of age she had a severe attack of dysentery, which came on after a miscarriage and lasted nine weeks. Since that time she was troubled with more or less dysentery every summer. Three years ago she was attacked by erysipelas of the face and head which lasted two months. One year ago she had an attack of spasmodic asthma, from which she suffered for about two months. The present complaint showed itself about two years ago, with pain in lower part of abdomen, and occasional bloody stools and the passage of "flesh-like" matter from the bowel, which had a very bad odor, her underclothing also was continually stained by matter. This lasted about one year. In August last she first noticed a lump at the anus, of about the size of a chestnut, which rapidly enlarged, was exquisitely painful, especially during the act of defecation, and a larger amount of bloody, bad-smelling matter was continually discharging from the bowel. One night in bed she felt the sensation at the anus as if a pin concealed in the bed-clothing had pierced her. On feeling with her hand, she discovered what she thought to be the point of a needle protruding partially at the side of the anus; pulling it out, however, and looking at it, she discovered the offending article to be a sharply pointed fish-bone, about one inch in length. She thinks it was a part of the backbone of a cod. This happened on New Year's day last.

January 8th.—Patient first presented herself at the Northwestern Dispensary, complaining of piles, with passage of blood and a continuous discharge of matter, constipation, etc. An examination was refused by the patient at the time, but a promise was given to return and allow it. Was given a powder to do away with her constipation.

January 10th.—Patient presented herself for examination, though she thought the powder had given her some relief. Examination revealed a tumor protruding from the bowel of about half the size of a hen's egg, which had at a superficial glance, somewhat the look of a bunch of protruding hemorrhoids, beginning superficially to ulcerate. To the touch, however, the tumor had a peculiarly hard feel, and digital examination revealed that for about three inches (in fact as high as the finger could reach) the rectum was constricted and band-like rugæ, hard as cicatricial tissue, were felt in every direction. This peculiar hardness and ready bleeding of the protruded mass (which also involved quite a considerable portion of the ring of the anus) coupled with the age of the patient and peculiar haggard and distressed look, led to the diagnosis of carcinoma of the rectum. As the woman was perfectly willing to undergo an operation for the relief of her distressing symptoms, and the facilities of the dispensary did not allow of the operation being performed at the latter place, arrangements were made to operate at her own residence with the galvano-cautery.

Operation. January 27, 1883, by galvano-cautery knife, assisted by Drs. G. Meier and Bassett.

The operation was performed for two reasons: first, to give relief to the patient because the growth had occluded the rectum; and, second, to determine the nature of the disease. The operation was performed with the galvano-cautery, the growth being pierced with a double thread, which placed it under the control of the operator. Dr. Newman preferred this method to seizing the tumor with the forceps or other instruments, for the reason that in this way hemorrhage was avoided, as these growths are sometimes very brittle and very vascular. The result of the operation had been that the outside appearance was very much improved, but that the growths above in the rectum had become aggravated. The specimen was referred to the Committee on Microscopy.

CARCINOMA OF THE BREAST.

DR. NEWMAN also presented a specimen with the following history: On February 18, 1882, he presented to the Society, in behalf of Dr. Rodenstein, a specimen which he supposed was one of carcinoma of the breast. It was referred to the Committee on Microscopy, which reported in April, 1882, that the specimen consisted simply of inflammatory tissue, that it contained no true glandular tissue, and exhibited nothing which suggested the existence of malignant disease. In less than a year, however, the disease returned. The original tumor was in the left breast, involving the gland itself. The nodule which reappeared was not in the cicatricial tissue, but closely above it and a little toward the axilla. It was removed on January 16, 1883, by Dr. Rodenstein, Dr. Newman assisting. The specimen was referred to the Committee on Microscopy.

DR. WYETH asked Dr. Newman what relation he supposed the fish-bone had to the carcinoma of the rectum in his first case.

DR. NEWMAN believed that it was the exciting cause, and further, that most carcinomatous growths could be referred to actual injury of some kind. He did not accept, to very much extent, the theory of inheritance, and believed that cancer was in most instances caused by some local irritation or injury.

WAXY DEGENERATION OF THE PLACENTA.

DR. TAUSZKY presented a specimen with the following history: A primiparous woman, twenty-one years of age, had a miscarriage on May 22, 1882. She again became pregnant, and under his care exercised all possible precautions to prevent a second abortion or miscarriage, but despite all means employed, premature labor came on at the end of the eighth month, and after a few hours the woman gave birth to a child which, although very feeble, was still living. Dr. Tauszky was unable to find any cause for the premature labor, unless it existed in the condition of the placenta, in which he found certain changes. There were nodules of different sizes, yellowish and grayish in appearance on the decidua surface, but none upon the amniotic surface. These nodules varied in size, from that of a pea to a walnut, and were very numerous. The placenta presented the gross appearances of what is ordinarily known as fatty degeneration. He remembered that Dr. Green, in Dr. Heitzman's laboratory, had examined several of these specimens, and reached the conclusion that they were the seat of waxy instead of fatty degeneration, and he presented the specimen on that account. He was unable to find any disease whatever which could explain the occurrence of the change in the placenta, or the premature birth. Another point of interest was the fact, that on July 8th, after the occurrence of the miscarriage in May, the woman thought that she conceived, and she had not menstruated after the occurrence of the miscarriage. Dr. Tauszky believed that this case was evidence in support of the opinion which he had long entertained, that menstruation and ovulation are independent of each other entirely. The specimen was referred to the Committee on Microscopy.

MEDULLARY CANCER OF THE STOMACH—PATIENT WITH GOOD APPETITE.

DR. HEINEMAN presented a specimen accompanied by the following history. An interesting feature in the clinical history of the case was the fact that the patient continued to have so good an appetite up to one or two days previous to his death.

"Vogel B.—, sixty-three years of age; Austrian; single, and without occupation, was admitted to Mount Sinai Hospital, January 21, 1883. His family history was negative. There was no history of alcohol, rheumatism, or syphilis. The patient was well up to two years ago, when he began to have epigastric pain, increased after eating. The pain has increased in severity, and referred to the vertebral column for a time, and has been severe

enough to keep him from sleeping. He has never vomited and his appetite has remained good.

For six months he has passed a large quantity of urine. Upon admission, patient was poorly nourished, and jaundiced. His appetite was good, but he took very little food because of the pain it caused. The bowels were constipated. On examination a hard resisting mass was felt in the epigastric region, reaching in the median line down to within a half inch of the umbilicus, and extending on the left side to the free border of the ribs. The urine had a specific gravity of 1.022, was acid, contained thirty-three per cent. of albumen, and the quantity passed was thirty-eight ounces in twenty-four hours.

After admission the pain increased, but was subdued with morphine, and without vomiting the patient rapidly lost strength and died February 16, 1883.

Autopsy.—The brain was not examined. The heart contained post-mortem clots. The mitral valves were thickened. The lungs were congested and oedematous. The stomach: The mucous membrane throughout the posterior and lower half of the anterior walls of the greater and lesser curvatures from the cardiac to the pyloric extremities, was replaced by irregular, flattened, projecting (cauliflower) cancerous masses, which involved the entire thickness of the stomach, had ulcerated through the peritoneal coat in numerous places, projecting beyond, and at these situations had constructed adhesions with the surrounding viscera, thus preventing extravasation of stomach contents. The pancreas was also involved to a considerable extent by continuity of growth. The liver contained a few very small secondary nodules in the right lobe; the left lobe being invaded by continuity of the cancerous growth from the stomach. The kidneys presented the lesions of chronic diffuse nephritis, being increased in size and containing numerous small cysts. The spleen was considerably increased in size.

DR. WENDT referred to a similar case which came under his observation, in which almost the entire cavity of the stomach was occupied by the cancerous growth, and in that instance the singular feature was that the patient had a good appetite up to within two weeks of his death, and was able to take a very large amount of food, a fact difficult to be explained by the size of the cavity found at the autopsy. Vomiting occurred for only about one week before the patient's death, and yet the cancer was present probably a year previously.

(To be continued.)

ASAFOETIDA IN THE TREATMENT OF ABORTION.—In the *Journal de Médecine de Paris* of December 16, 1882, are collected the results obtained by several observers in the prevention of abortion and premature labor by asafœtida. Dr. Laferla, acting upon the theory that the death of the fœtus was owing to an asthenic condition of the uterus, administered the drug in a number of instances. In nearly ninety per cent. of the cases so treated, the patients (who had aborted from two to five times in former pregnancies) went on to full term. Drs. Giordano and Carzani announce equally favorable results, though the number of their cases was smaller. The latter prescribes the drug in pill form in doses of one and a half grain twice a day, gradually increased to twelve grains per diem. Dr. Gourgnès recommends the administration of asafœtida, in emulsion with the yolk of an egg, by the rectum.

THE BROMIDE OF ARSENIC IN DIABETES.—Dr. Békai, of Buda-Pesth, reports two cases of diabetes in which Clemens' liquor arsenici bromati was used. In the first case, after eleven days' use of the drug, together with an animal diet, the sugar disappeared from the urine. Upon leaving off the treatment, one per cent. of sugar appeared again, but disappeared upon renewal of treatment. In the second case the results were not quite so good.—*Wiener Med. Blätter.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE LONDON COLLEGE OF PHYSICIANS AND MEDICAL ADVERTISING—THE LONDON HOSPITAL AND MEDICAL COLLEGE—PAPERS ON SCURVY AT THE MEDICO-CHIRURGICAL SOCIETY.

LONDON, March 3, 1883.

IN my last letter I referred to the position taken up by the London College of Physicians toward professional advertising in the lay press. The question has now assumed a somewhat different phase. The college has condemned one of its fellows for advertising a lunatic asylum—not in lay journals, but in *strictly professional media*. With a lamb-like docility the fellow in question has submitted and engaged to desist from such objectionable practices in future. The college will doubtless next require its fellows and members to desist from the use of door-plates and to have their names removed from the "Medical Directory." Publicity even of the most respectable kind is apparently objectionable to the sages of Pall Mall. That is, of course, as regards other people, for the officials have no objection whatever to being advertised themselves.

Dr. Mathews Duncan's lectures on "The Sterility of Women" have been recently advertised in a prominent place in *The Times*. What useful purpose can this serve? Only medical men are admitted to hear the lectures at the College of Physicians. This immodest proceeding may perhaps bring a few patients to Dr. Duncan, especially when bulletins signed by him and faithfully chronicling the progress of the Duchess of Albany's accouchement are being simultaneously published in the daily papers. This, however, is venial—nay, even commendable—compared to the advertising of a lunatic asylum in a medical journal!

Such is the stand made by the London College of Physicians. It is scarcely conceivable that a public body, of which Sir William Jenner is the head, should be so unreasonable and inconsistent. The college, however, has never studied the interests of the profession at large. Many of its members have been excluded from the fellowship, not because they are not worthy of it, but for private and personal prejudices. On the contrary, many have been elected who have little or nothing to recommend them except large fortunes or perhaps friends on the council.

The college is, in fact, a club, and that of a very close kind. A letter has lately appeared in *The Lancet*, suggesting that it should be turned into a *bona fide* club and refreshments served. No doubt the Mrs. Grundies of Pall Mall have been holding up their hands in pious horror at this proposal. Yet, if not, why not?

The London Hospital is about to erect a building to serve as a residential college for its students. When erected, this will doubtless prove a considerable attraction to many intending students, as the neighborhood of the hospital is not a nice one wherein to live in lodgings. It is a strange fact that although we have eleven Schools of Medicine in London, only two of them, viz., Kings College and St. Bartholomew's Hospitals, have, I believe, any residential chambers in connection with them.

At the last meeting of the Medico-Chirurgical Society two interesting papers were read by Mr. W. H. Neale and Dr. Hale White, respectively, on scurvy. Mr. Neale (surgeon to the late Eira Arctic expedition) contended that lime-juice may be dispensed with if fresh meat can be obtained. He recommended that the crews in Arctic expeditions should pass the winter in huts on shore rather than on board ship. For food a good deal of fresh flesh meat was desirable. This should be stewed and the blood of the animals should be added to the stew. Preserved vegetables should be mixed with every meal—

not because they possessed any special antiscorbutic properties, but to assist the digestion of the meat.

Dr. White read the notes of a case of scurvy with retinal hemorrhages and dilatation of the heart. Dr. White said there was no previous record of such a condition of the heart in scurvy. The patient had previously suffered from dysentery, which Dr. White considered aggravated the scurvy, the severity of the latter being evidenced by the marked blood-changes.

An interesting discussion followed, in which several veteran naval surgeons with Arctic experience took part. Many of these corroborated Mr. Neale in his statements as to the value of fresh meat.

INEBRIETY AND THE TEETH.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a paragraph with this heading you refer to the experience of a clergyman, who thinks he has seen less drunkenness in cases where the teeth have been treated and properly cared for.

This is the recognition of a fact which appears very often in the history of cases of inebriety, namely, the presence of distinct physical causes which are both exciting and predisposing in every case. As, for instance, a man of eminence will invariably drink to intoxication, after a hearty dinner at midnight. Avoiding this, he is abstinent and can fully control himself. A business man never uses spirits to excess, except when he sits up all night or travels by rail. After this exposure he is powerless to stop short of profound intoxication. With proper rest every night he can be a thorough temperance man. A broker was forced to retire from business because of excessive use of spirits. He was able to fully abstain as a manufacturer in a quiet town. Every time he went back to Wall Street, even for a few hours, he drank, although not tempted in any way more than others.

In the *Journal of Inebriety*, vol. ii., Dr. Harman, of Ohio, reports a case of a pronounced inebriate who recovered, and remained a sober man ever after, dating from the expulsion of a tape-worm. An officer in the late war, who was considered a chronic inebriate, dating from a wound of the tibia, recovered immediately after the removal of some dead bone and the healing of the wound. He had tried repeatedly before to abstain, but failed. The recovery after the operation was in circumstances more adverse than ever before. The late Dr. March, of Albany, trephined the skull of a man who had drank to great excess, from the time of an injury by a fall on the head. The man recovered and never used spirits after, for a period of eight years, up to his death.

In an article in the *Chicago Medical Journal* for November, 1881, I have stated many of these singular cases, where injury and irritation of any part of the body may react by some unknown law and develop inebriety. In many of the cases which come under my care there is often apparently very insignificant states of the body, which are found to be prominent in the causation—sources of irritation and exhaustion, neuralgias, nutrient disturbances, and local derangements of almost every description, the removal of which is followed by a rapid cessation of the desire for drink, and the cure of inebriety.

The teeth may very naturally be sources of irritation, which, if it does not cause inebriety, will most naturally keep up the irritation which provokes a continuance of this disorder.

In the majority of these cases a special diathesis may be the favoring soil, which will develop inebriety from the slightest causes. A neurasthenic state and general nerve instability, for which alcohol is a most seductive sedative, and inebriety follows with great certainty.

It is only a rational expectation to find that decayed teeth was an exciting cause, and inebriety would be more manageable when this source of irritation was removed. Recovery cannot be expected until all sources of irrita-

tion can be more or less removed. The clergyman who insisted on the care and treatment of the teeth in inebriety as a part of the treatment, was following the teachings of the most advanced science of to-day. If, in addition, nutrition, surroundings, and the removal of all exciting causes was made a part of the treatment, recovery would be the rule and failure the exception. Inebriety is always the result of physical conditions, whether understood or not. The sooner this is recognized and practical treatment based on it, the whole subject will be raised from the realm of superstition and quackery.

The curability of inebriety by physical means and remedies is as practical and real as that of any other disorder. What is wanted is a thorough study of the subject from the standpoint of science, above all theories and dogmas of to-day.

T. O. CROTHERS, M.D.

HARTFORD, CONN.

New Instruments.

A NEW

ADJUSTABLE UNIVERSAL JOINT OR COMPOUND RACKET,

AND ITS RELATIONS TO SURGICAL MECHANICS.

By CHARLES F. STILLMAN, M.D.,

ADJUNCT PROFESSOR OF ORTHOPEDIC SURGERY IN THE NEW YORK POLYCLINIC.

In surgical mechanics we have often been at a loss for a compact joint-racket which would admit of movement in several directions at the same time, or movement in one or two directions and fixation in the others, or an adjustable fixation in all. The racket which is depicted in Fig. A, 1, 2, and 3, is the result of my study to supply

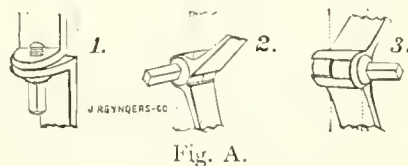


Fig. A.

this want. It is simple and compact, and will admit of motion or fixation at any angle. In its modifications it affords us a means for controlling every twist and deformity to which the human frame is subject, so far as they can be overcome by mechanical methods. This may seem a broad ground to assume, but a few moments' attention to the matter will afford proof of the assertion.

Is there any position of a limb or joint which a ball and socket-joint cannot be made to assume? It is a universal joint, and of course is movable and, if provided with a clamp, adjustable in any direction. A universal movement, so far as its relation to the mechanism of the human frame is concerned, consists of abduction and adduction, flexion or extension and rotation (or, in other words, eversion and inversion).

These comprise the sum total of directions in the movement, and are attainable by the ball and socket-joint.

But suppose we desire to allow motion in any two of these directions and prevent it in the third. This the ball and socket-joint does not allow us to do, its action is either to prevent all or allow all.

It is then of paramount importance to possess a racket or regulating clamp, which will allow one movement to be prevented and the other two allowed, or two prevented and one allowed, or all three prevented or all three allowed, in other words, to possess complete control of movement in all directions.

By placing the racket, just shown, in three different directions, we obtain this complete control, and by placing them opposite a joint, we obtain mechanical control

of the joint; by placing them along the course of a limb we obtain control of the twists and bends of the limb (if controllable); and placed along the trunk or any other part of the body, gives us control of the part, provided, of course, that the attachments of the splint in which the rackets are introduced conform to the proper mechanical laws governing such attachments.

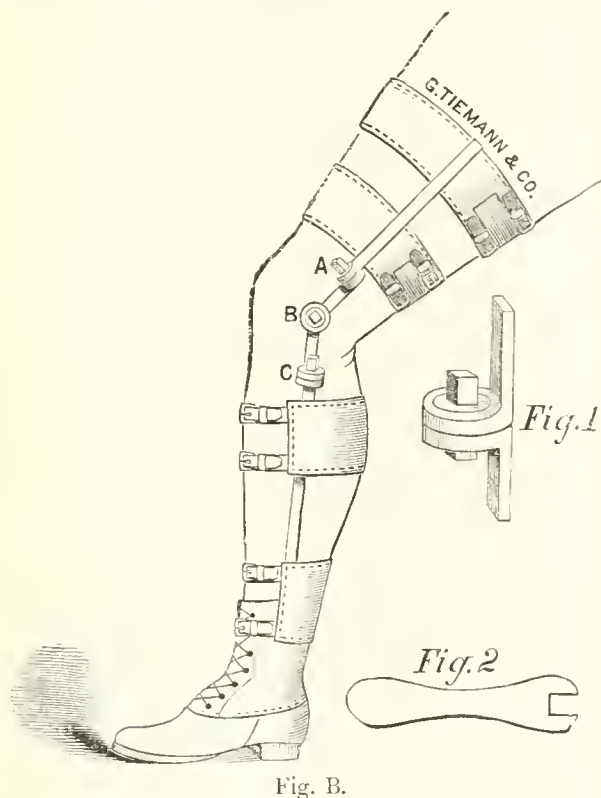


Fig. B.

Fig. B shows how these movements may be applied to a splint for the knee, so far as indicating the relative directions in which the rackets are placed to produce the universal joint; A indicating the position in which the racket is placed to produce movable or immovable abduction or adduction; B, indicating the racket for flexion, and C for rotation. The rackets are operated by a simple wrench which either tightens or loosens them as desired, and they can be readily and inexpensively inserted into any form of apparatus, and the elaboration of this racket into its various applications, which will be fully explained in the future, constitutes in part the ground-work of an improved system of treatment for deformities and diseases of joints.

VENTRAL HERNIA.—Dr. Jordan reports (*Birmingham Medical Review*, February, 1883) a somewhat remarkable case of true and strangulated ventral hernia. The patient was a lady, of previously good health, who, when first seen by Dr. Jordan, had had symptoms of intestinal obstruction for forty-eight hours. All the ordinary sites of hernia were in a natural state. Nothing like hernia was anywhere visible or to be felt, but when the abdominal surface was examined, the lady complained of a tender spot between the umbilicus and the groin—well removed from the inguinal canal. On closer examination a certain fulness was found, not visible to the eye, but clearly different from the corresponding spot on the other side of the middle line. It was decided that he should operate, and there was found a very flat hernial sac containing some eight inches of bowel, the neck of the sac apparently passing through the lower part of the linea semi-lunaris below and to the right of the navel. The lady made a favorable recovery. The dressing at first was a soft new sponge kept constantly moist with a solution of carbolic acid in water and glycerine.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 10, 1883, to March 17, 1883.

BROWN, HARVEY E., Major and Surgeon. Temporarily assigned to duty at Mount Vernon Barracks, Alabama, during the absence on leave of Captain T. A. Cunningham. S. O. 17, par. 2, Department of the South, March 6, 1883.

WILLIAMS, J. W., Major and Surgeon. Upon being relieved from duty at Fort Cœur d'Alène, Idaho, will proceed to Fort Walla Walla, Washington Territory, and report for duty as medical officer of that post. S. O. 24, par. 5, Department of the Columbia, March 1, 1883.

CUNNINGHAM, T. A., Captain and Surgeon. Granted leave of absence for twenty days, to take effect from the 21st instant. S. O. 17, par. 1, Department of the South, March 6, 1883.

HEIZMANN, CHAS. L., Captain and Surgeon. To be relieved from duty in the Department of the South, and assigned to duty at Columbus Barracks, Ohio. S. O. 58, par. 8, A. G. O., March 12, 1883.

TAYLOR, B. D., Captain and Assistant Surgeon. To be relieved from duty at Fort Ringgold, Texas, and will so soon as able report to the Commanding Officer, Fort Clark, Texas, for duty. S. O. 25, par. 6, Department of Texas, March 9, 1883.

WOOD, MARSHALL, Captain and Surgeon. Is assigned to duty at Fort Cœur d'Alène, Idaho. S. O. 24, par. 5, Department of the Columbia, March 1, 1883.

BRECHEMIN, LOUIS, First Lieutenant and Assistant Surgeon. To proceed to Fort Brady, Michigan, and report to the Commanding Officer for duty at that post. S. O. 41, par. 1, Department of the South, March 14, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 17, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 10, 1883	0	13	108	4	109	40	0	0
March 17, 1883	0	11	111	4	96	50	2	0

THE RECOGNITION OF MICROCOCCI.—We have received from Dr. Rollin R. Gregg, of Buffalo, a lengthy article on this subject, in answer to the last one by Dr. Geo. A. Sternberg, in which it is reasserted with emphasis that the bacterists never have made proper allowance for the granules and fibrils of fibrin in and about diphtheritic exudations; and in which it is claimed that besides said forms of fibrin there are thousands upon thousands of the granules of decolorized and broken blood-corpuscles, mingled in said exudation, which are also very similar in appearance to micrococci; but which have never before received the slightest recognition. This subject, however, has not that general interest of more practical questions, and because of this and the crowded state of our columns, we cannot spare the space to Dr. Gregg's communication.

MORE ABOUT BORO-GLYCERIDE.—Additional experiments, as communicated to the French Academy of Sciences, appear to show the effective value of M. Le Bon's new antiseptics, the glyceroborates of calcium and sodium. Both of these compounds prove to possess the important advantages of being very soluble, destitute of odor and free from all toxic action; when exposed to the air they both deliquesce with great rapidity, absorbing from the air an equivalent weight of moisture. Both alcohol and water dissolve twice their own weight of the solution. The most effective, in a therapeutic point of view, appears to be the calcic salt; it is said to be absolutely innocuous, and can be applied in strong solution to so delicate an organ as the eye without bad results. In a hygienic sense, both can be employed with advantage as disinfectants, and it is believed that both of the salts will also prove very useful as antiseptics in dressing wounds.

MEDICAL MISSIONARIES.—The Rev. Dr. J. M. Scudder, of Vellore, India, wishes that every missionary in that land were a medical man, and urges the home societies not to send out any workers who have not, at least, a slight knowledge of medicine. He visited two towns for several years in succession without gaining the least hold, apparently, upon the people, when a slight surgical service on his part opened both their hearts and homes. It also opened his eyes to the value of medical knowledge.

THE DANGERS OF CONVALLARIA MAIALIS.—Dr. F. B. Robinson, of Grand Rapids, Wis., reports to us the results of some experiments with the fluid extract of convallaria upon two five-months kittens. Hypodermic injections of fifteen drops in one case and eight drops in the other caused death. Dr. Robinson argues that therefore the drug is dangerous to man—which is hardly a logical inference.

A MOTH IN THE EAR.—Dr. Howard Jones, of Circleville, Ohio, relates the following somewhat dramatic case, *a propos* of foreign bodies in the auditory meatus: "Two gentlemen were walking leisurely down the street a quiet evening in July, after the street lamps had been lighted, one of them wearing a white straw hat. As they came near a gas-post, an insect flying rapidly, struck the straw hat of No. 1, and carromed directly into the right external meatus of No. 2. The gentleman clapped his hand to his ear and screamed with pain. He entered the nearest dwelling, where I found him a few moments later, greatly excited and suffering intensely. The lady of the house had attempted to pour milk into the ear, but could not succeed. Upon examination I discovered the external canal completely plugged with a dirty gray body, which when touched, the patient said, scratched terribly. The blades of a pair of small forceps were at once carefully inserted upon either side and then closed upon the object. By careful pulling, it was gradually withdrawn, and proved to be a gray-and-white moth, something over an inch in length, and so large in diameter that it fitted tightly into the canal."

DEATH OF DR. JOHN H. SAUNDERS.—Dr. Saunders, of Belfast, Me., died at his home on February 24th, at the age of sixty-two. He was a graduate of the New York University Medical College. He had attained a wide reputation as a physician, and was highly esteemed by every one.

ANATOMICAL AND PHYSIOLOGICAL STUDY IN EUROPE AND AMERICA.—A writer in the *Journal of Comparative Medicine*, says: "Among somewhat over three hundred contributions to anatomy and physiology made during the past year, I find the authors distributed as follows: Germans, 160; French, 70; British, 26; Italian, 24; American, 14; Scandinavian, 13; Russian, 6. Among the contributors to physiology, America ranks as one of the last. It will be seen that over half of all the work has been done in Germany.

HOW TO PURIFY THE AIR OF THE SICK-ROOM.—An article on the above subject contained in the *Sanitarian*, March 1, 1883, concludes as follows: "1. To purify the air in the sick-room, place in the bed a small basket or other porous article, containing wood charcoal, for the purpose of absorbing the foul air which, if diffused throughout the surrounding atmosphere, would be constantly returned to the lungs and cause the patient to die of auto-infection. 2. In a sick-room in which infants are sleeping, it is necessary to put a box or basket containing a piece of quick-lime and some wood charcoal, for the purpose of fixing the carbonic acid exhaled from the lungs, and of absorbing all the foul air generated in the system, and given off by exhalation from the skin or otherwise."

A BUSY DOCTOR sent in a certificate of death, the other day, and accidentally signed his name in the space for "cause of death." The registrar says he wishes the profession would be as accurate generally.

PHYSICIANS' PRESCRIPTIONS.—In France it has recently been decided that pharmacists who furnish poisonous medicines on physicians' prescriptions must register the prescription, and also the name of the person to whom the medicine is dispensed. Against this latter regulation serious objection is made, as persons suffering from venereal diseases sometimes do not desire to have such semi-publicity given to their troubles.

MONTHLY ENGAGEMENT CARDS, which may be made useful to the physician, are published by George B. Hurd & Co., of this city. These cards are printed on both sides; the one spaced for recording engagements for three weeks, and the other, one week, and a summary for the month, and are contained in neat Russia, plush, and calf frames.

THE STRUGGLE FOR A LIVING.—We quote the following from a presidential address to the Maine Medical Association by the late William Warren Greene, M.D.:

"Witness the large number of doctors in every city struggling for a mere existence, and see how few out of the whole number really do the work. See how in almost every country village a full practice for one or two good men is piece-mealed by sharp and often acrimonious competition to the detriment of all.

"It would seem that in a calling so high, so noble, so sacred, men fit for such ministry should be sought for; but the great question of the young graduate is not 'Who wants me?' but 'Who will employ me?' not 'Who needs me?' but 'Where can I get a living?' In the case of four physicians dying, each in a country village, during the last year, I am credibly informed that in one instance two, in another three, in the third five, and in the fourth case seven new men came to look the field over within ten days after the doctors' death, sometimes before the burial. In one case two attended the funeral, and in another the widow had three letters from aspirants for the vacant place while the dead body of her husband still lay in the house.

"It is a hackneyed saying, with which too many ears are tickled, that 'there is always room for good men.' Applied to the present condition of our profession it is false. Were only good men and the best men admitted it would undoubtedly be true. But all over the land, in city and country, are well-educated, cultured gentlemen, honest and loyal, striving in vain to secure a competence—yes, a bare living even—and too often is disappointment mingled with shame and mortification at the success of ignorant and unprincipled rivals. I have said that the evil results of this excess in numbers are manifold. It leads to over-practice and to bad practice. The man who is hard pushed, who has few patients and needs more, is tempted to make much of little; to magnify the importance of his cases, both in his own mind and to his patrons: to make uncalled-for visits, and to give too

much medicine ; and unnecessary medication soon ceases to be rational. Patients are injured in mind and body. The community is injured by teaching the people to attach undue importance to trivial diseases, and to overestimate the value of treatment therein. Legitimate, honest practice suffers in reputation ; money is obtained under false pretences."

MEDICAL STUDENTS IN ENGLAND.—The number of medical students officially registered in Great Britain during the year 1882 was, we find, 1,862 ; of these, 1,064 were registered in England, 585 in Scotland, and 424 in Ireland. These numbers are considerably less than those registered as in course of study during either of the three preceding years, the falling off being exclusively in England and Ireland. Two hundred and fourteen fewer students were registered this year in England than last, and one hundred and sixteen fewer students in Ireland. There was no falling off in Scotland.

THE EFFECT OF WORKING IN TOBACCO FACTORIES UPON MENSTRUATION, PREGNANCY, AND LACTATION.—Since it has been observed that tobacco, and especially nicotine, increases the peristaltic movements of the intestines, some have supposed that it would have a similar effect in stimulating the muscular fibres of the uterus. So much has been said on this subject that the French Minister of Finance requested certain physicians to report as to the health of women employed in various tobacco manufacturing houses. These reports have now been received, and the writers are unanimous in concluding that no evil effects upon the sexual organs can be ascribed to the tobacco. The abortions recorded, the deaths of infants registered, and the anomalies of menstruation noticed amongst women employed in tobacco works could be accounted for by causes outside of their employment.—*Lancet*.

HOMŒOPATHY IN ENGLAND.—A homœopathic directory has recently been published in Great Britain. According to its pages there are 260 practitioners of this class in Great Britain and Ireland, four only being in the latter country. As there are 19,947 regular physicians, the ratio of homœopaths to regulars is for England and Wales 1 to 64 ; for Scotland, 1 to 170 ; and for Ireland, 1 to 609. Most of the homœopaths are in large towns ; thus London has 85, and Liverpool 11. The contrast between the condition of things, as shown above, in England and in this country appears to be considerable. It is claimed that there are about 6,000 homœopaths, so called, in the United States, giving a ratio to regular practitioners of about 1 to 10.

A MODEST FRIEND TO HUMANITY AND THE MEDICAL SOCIETY OF NEW YORK.—A letter has strayed into our hands addressed "To the Medical Society of New York." The author writes : "Sirs I adress to inform you after all the artful efforts of our smartest men i have selected 9 ingrediences of the vegetations of the Earth to Cure all Manner of Blood Deseases scrofula it never fails in no form or stage privat Deseases of all kinds olde sores or Cifulis and Catarrh of the head or any Desease Caused by impurity of the Blood it also renovates the Stomac bowels and liver Beyornt anything ever got up and Can be established as the greatest Medicen nowe in the world. . . . Now a reasonable salery will make this great matter known to the Society

"addres Dr. ———,

"Henry Co. Ky."

THE HUNTERIAN ORATION was delivered on February 14th by Mr. Spencer Wells. The orator began with the following interesting account of the origin and purpose of the endowment : "Just seventy years ago, Matthew Baillie and Everard Home, being, to use their own words, 'desirous of showing a lasting mark of respect to the memory of the late Mr. John Hunter, which shall at the same

time express the very high sense they entertain of the very liberal conduct of the Royal College of Surgeons, in supporting and preserving the Hunterian Collection,' agreed with Sir William Blizard and Mr. Cline to endow an 'annual oration, to be called the Hunterian Oration, which shall be read or delivered in the theatre of the said college on the fourteenth day of February in each and every year (being the birthday of John Hunter).' They devised that such oration 'shall be expressive of the merits in comparative anatomy, physiology, and surgery, not only of the said Mr. Hunter, but also of all such persons as are or shall be from time to time deceased, whose labors have contributed to the improvement or extension of chiralurgical science.' After the first oration in 1814, one was delivered every year until 1849. Since that year it has been biennial." Mr. Spencer Wells passed in review the history and work of various deceased members of the Royal College of Surgeons, including Gulliver, Critchett, Soelberg Wells, Clover, and others.

A PLEASANT MINERAL WATER.—The French have a seductive way of putting things. Twenty-six years ago the late Dr. Amédée Latour, writing of a still popular French mineral water, said : "It is the good God who created the waters of Saint-Galmier, but it was an intelligent man, M. Badoit, who discovered them, and two wide-awake physicians who made their fortunes out of them. . . . The water of Saint-Galmier," continues Latour, "is the amiable companion of the student, the useful ally of the enteralgic, the intimate friend of every lady afflicted with 'vapors' or threatened with corpulence, and the inestimable benefactor of the gourmet and dyspeptic."

THE CLIMATE OF SANTA BARBARA AS COMPARED WITH THAT OF THE MEDITERRANEAN COAST.—The following careful and impartial account of the climate of Santa Barbara, written by a correspondent of *The Tribune*, may be of service to our readers, since such contradictory opinions are given regarding this health resort : "The good days at Santa Barbara are among the most delightful in the world ; and there are few days here in winter when the most delicate invalid may not stay out of doors as long as he has the strength to walk or to ride. The ordinary temperature is from five to ten degrees higher than that of Mentone ; the air is soft and genial ; the dampness of the ocean is hardly perceptible in the upper part of the town, and I know of no seaside place, except on the Riviera which is upon the whole so dry. Santa Barbara, moreover, is free from serious drawbacks which impair the value of all the Mediterranean health resorts—such as the bad company, the bad smells, and the violent contrasts of temperature between sun and shade, the open country and the narrow streets.

"On the other hand the California town has its faults. A raw wind, loaded with chilly moisture, does sometimes blow in from the sea. Fogs are not uncommon. Sudden changes of temperature are frequent and vexatious. Rain occurs only between April and December. Occasionally there are cold and blustering days, like those of March in the East."

SYPHILITIC SYNOVITIS.—Dr. Mracek states that this rare affection is observed among the secondary phenomena of the syphilitic infection. It may attack one or several joints, the knee and the ankle being most frequently invaded. If the patient has already suffered from an arthritis, the same joint will be affected by the specific disease. A recent synovitis of this kind is readily amenable to anti-syphilitic treatment, but later its cure is more difficult, and joint-motion is usually compromised. Relapses are frequent. Local treatment consists in immobilization of the joint with massage, when the affection has become chronic. The author also recommends painting with iodine, compression, and in some cases application of ice to the articulation.—*Annales de Dermatologie et de Syphiligraphie*, December 25, 1882.

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ON VARIOLA.

ITS DEFINITION, HISTORY, CAUSE, VARIETIES, PROGNOSIS, AND TREATMENT.

By J. N. McCHESNEY, M.D.,

LATE ONE OF THE ATTENDING PHYSICIANS TO THE HOSPITAL FOR CONTAGIOUS DISEASES OF THE CITY OF NEW YORK.

Definition and History.—Variola, or small-pox, is a febrile, eruptive, infectious, and contagious, disease, depending upon a specific, morbid poison, the symptoms of which, after a period of incubation of from twelve to fourteen days, result in an eruption on the surface of the body, which passes through the regular stages of macule, papule, vesicle, pustule, and desiccation, terminating with desquamation.

An exhaustive review of the history of variola would far exceed both the purpose and limit of this article.

Although much time and careful research have been expended in trying to discover the origin of the disease, all efforts have thus far been without definite success. According to the most authentic account, the disease originated, about A.D. 544, in Egypt, whence it spread to Constantinople. In 569 it made its appearance in the Abyssinian army, then besieging Mecca, with such virulence as to compel the abandonment of the siege. During the latter part of the sixth and the whole of the seventh centuries it raged in Egypt and spread into Asia and Africa. It was introduced into Europe by the Saracens upon their invasions of Spain, Sicily, Italy, and France, and gradually extended northward, reaching Saxony, Switzerland, and England in the latter part of the ninth or first of the tenth century. The Spaniards transported the infection to St. Domingo and Cuba about 1520. It was carried to Mexico in 1527, where it raged with great virulence, destroying millions of the inhabitants. Thence the disease rapidly extended over the whole of the Western hemisphere.

Etiology.—Variola spreads by contagion, and cases of supposed spontaneous origin can always, with proper care, be traced to a person who has suffered from a recent attack, or to infected articles.

The morbid principle is contained both in the pustules and in the emanations from the body of a patient suffering from the disease. It is contagious from the beginning of the stage of invasion until the last trace of the desquamative process has passed away.

The infection is contained in the breath, which has been known to convey the disease before the eruption had made its appearance, and it has been communicated both by the virus and the emanations of a dead body. A case¹ has been recorded in which the contagion was communicated from a dead body, though death had taken place before the development of the eruption. "The patient, a medical student, died suddenly in this city, the chief symptoms being gastric with great exhaustion. At the autopsy a few petechiæ were observed on the body. The coffin was taken home to a New England village for burial, and at the funeral some of the relatives opened it to look at the face. Eight of the number present were attacked with small-pox. No

other persons in the neighborhood contracted the disease." In a Western medical college, a year or more ago, a number of students contracted it from a body which was being dissected. A very slight exposure is often sufficient for acquiring the disease. We have met with one or two cases in which there was every reason to believe that the contagion was acquired while riding in the street cars. Many patients are unable to give any history of exposure. The disease is communicable in all of its stages, but the pustular and desquamative stages are most dangerous. Exposure to the same case may give rise in one instance to a mild, and in another to a severe form of the disease; and exposure to the mildest form of small-pox (commonly known as varioloid) may give rise to the worst variety.

No age is exempt from it; we have met with it in a child of three weeks, and in a patient of seventy-nine years. In some instances the disease has been contracted before birth and nearly the whole period of incubation passed in utero, the eruption making its appearance on the child when it was four or five days old. The child may be born with the eruption on its body, or presenting evidences of having passed through an attack in utero. Authentic cases are on record in which the disease has been communicated to the fœtus without the mother passing through a regular attack; these cases may be explained by the fact that the mother had that form of the disease in which there is no eruption—variola sine variolis. As a rule, every individual is more or less susceptible to the contagion of variola. Rare instances are met with in which persons, unprotected by either inoculation or vaccination, though constantly exposed, escape the disease. A physician friend of the writer, who has never been successfully vaccinated, though repeated attempts have been made, has escaped, notwithstanding constant exposure to every variety of the disease under almost every circumstance; and though he has made autopsies on the worst cases which had died in the suppurative stage, and has even received wounds of the finger while thus engaged, no symptoms beyond a little septic trouble have ever been manifested. This can only be ascribed to a peculiar idiosyncrasy as yet unexplained.

Though uterine life does not exclude the danger of infection, the fœtus is less liable than the child under two years of age.

The existence of chronic diseases affords no protection against the contagion of variola, though patients, while in the active stages of the other eruptive fevers, appear to escape infection.

The dark-skinned races are regarded as peculiarly susceptible, and the mortality among the negro and the Indian races is very great. In 1881, in the New York Hospital for contagious diseases, the mortality among the negroes was ten per cent. greater than among whites.

The general opinion is that small-pox prevails to a greater degree in winter than in any other season of the year. Cold weather, by keeping a larger number of people within doors and the avenues to ventilation closed, doubtless does contribute to the spread of the disease, but the records of small-pox hospitals show that a larger number of patients are admitted in May than in any other month of the year. When the disease has begun to prevail it continues throughout the year uninfluenced by winter or summer.

As a rule, one attack renders an individual insusceptible for the remainder of his life. To this rule, however,

¹ Dickson, in American Journal of the Medical Sciences, July, 1862.

there are occasional exceptions. We have met with two cases in which there was a second attack.

Inoculation does not always give perfect immunity; we have seen one case that gave a history and presented the scars of inoculation. The form of small-pox was very mild.

The poison is readily conveyed by clothing and other articles worn and used by a patient, and the contagion may be retained in them for an indefinite period. We recall an instance where the disease was conveyed to a shoemaker who repaired the soles of a pair of shoes which had been worn by an attendant about a room occupied by a patient desquamating from small-pox. Infected clothing which has been buried (a popular method in country districts of disposing of the clothing and bedding of persons who have suffered from variola) has been resurrected and become the starting-point of epidemics. Healthy persons who have been sufficiently exposed may carry the contagion in their clothing and infect others, though they themselves escape.

Varieties.—Six varieties of variola are generally described: 1, Variola discreta, when the pocks stand distinct and separate from each other; 2, variola semi-confluent, when there is partial coalescence of the eruption; 3, variola confluent, when the pustules run into each other; 4, variola hemorrhagica, nigra, or black small-pox, when the vesicles are filled with red blood-corpuscles; 5, variola corymbosa, when the eruption is arranged in bunches or clusters; 6, variola anomala, when it occurs complicated with other diseases, or presenting unusual symptoms.

A mild form of the disease occurring in persons previously vaccinated is commonly described under the term of varioloid. The name is one which should be discarded. Its use has been the source of much confusion and great injury on account of the popular opinion that varioloid is not dangerous. This is probably true in respect to the patient himself, but fatally false in regard to the community in which he is permitted to go at large. We remember hearing a physician of considerable practice in this city say that he met with many cases of varioloid but did not consider them of sufficient importance to report to the health authorities, and that, too, when small-pox was epidemic. That the laity should consider varioloid harmless is not to be wondered at when we hear such expressions from members of the profession. Mild cases of variola, without regard to previous vaccination, should be classed as discrete small-pox. In mild forms, while there is little or no danger to the patient himself, he is more dangerous to the community in which he lives than a patient confined to his bed with the worst form of the disease, since, as frequently happens, no significance is attached to the mild symptoms that occasionally precede the eruption, or the eruption itself may be so scant as to fail to attract his attention, or the notice of those about him. This is often the source of the unexplained appearance of the disease in isolated localities. The epidemic through which this city has just passed was introduced in the person of an engineer who came from a neighboring city where small-pox was prevailing, during the incubative stage of the disease. His attack was so mild that he did not leave his engine-room or quit his work, yet, as a result of this, several cases appeared among his fellow-workmen and among the servants of his boarding-house, two of whom absconded to the lower part of the city, whence the disease began to spread.

Stages.—The course of variola is divided into four stages: 1, Incubation; lasting from the date of the reception of the poison till the initiatory chill, fever, and other symptoms, generally twelve to fourteen days; 2, invasion, or primary fever, lasting from the first general disturbance to the appearance of the eruption, about two to four days; 3, eruptive, or stage of maturation, lasting about nine days; 4, suppurative stage, secondary fever, desiccation, and desquamation, which is of variable duration.

These stages may be shorter or more prolonged under certain circumstances, notably shortened and modified after vaccination.

Incubation.—During the period of incubation there are no manifestations of the approach of the disease; the patient is as well as usual and able to attend to his work. In some exceptional instances there may be a certain feeling of uneasiness or foreboding of the approach of sickness.

Invasion.—The stage of invasion is generally ushered in by a well-pronounced chill, or there may be a series of chills, followed by high temperature, 103–104°, which may, before the eruption appears, reach 106° F. The pulse is full and hard, varying from 110 to 120; respiration is usually increased in frequency; there is great prostration, and the patient staggers if he attempts to walk; the skin may be hot and dry, or bathed in profuse perspiration, which continues throughout the stage. There is great thirst; the lips are parched, the tongue coated with heavy, yellowish white fur, and the breath is fetid; complete anorexia exists; nausea and vomiting are often the most distressing and persistent symptoms. The bowels are in most cases constipated, though diarrhoea is present now and then—most frequently in children. Intense headache is a constant symptom, and continues throughout the stage with more or less severity; the pain is referred to the whole of the head, or may be limited to the frontal region. Intense pain in the lumbar and sacral regions is one of the most striking symptoms. This, in conjunction with nausea and vomiting, is almost invariably present in the initial stage. It is so severe in character that patients almost always complain of it; it appears at the beginning of the stage and continues with unabated severity until the eruption is established. Patients are frequently very restless and are often unable to sleep. Delirium is sometimes present. Convulsions are of frequent occurrence in children. Coma is said to occur, but we have not seen it. Redness and swelling of the pharynx, with pain on deglutition occur in some cases; injection of the conjunctivæ, with lachrymation, is sometimes present; slight cough, with little or no expectoration, is occasionally met with.

Not unfrequently a general erythematous condition of the skin, lasting twenty-four or forty-eight hours, precedes the appearance of the eruption and may be so intense as to lead to mistaking the disease for scarlatina. This, it is generally thought, is followed by a mild eruption, but such has not been our experience. In a number of cases we have seen this condition followed by the hemorrhagic type.

As a rule, if the symptoms of this stage be mild and protracted beyond the usual duration, the eruption will be scant; if, on the contrary, they be of great intensity, a severe type of the disease may be expected. Occasionally the mildest attacks are preceded by prodroma of great intensity, and we have met with cases in which this stage was marked by symptoms of unusual severity, protracted for four days, which have ended without the appearance of the eruption.

The most significant symptoms of the initial stage are the acute pain in the small of the back, the obstinate nausea and vomiting; and when it is known that there has been exposure to contagion, these go far to prove that the person is about to be the subject of an attack of variola.

Stage of eruption.—The eruption of variola makes its appearance on the third day—or after forty-eight hours, and is first noticed about the alæ of the nose, corners of the mouth, and the chin. It appears about the same time on the fronts of the wrists; next on the trunk and arms, and last on the legs and feet. It is first seen as small red spots or macules, which rapidly become elevated and hard, forming papules; these are small, rounded, and have a peculiar hardened feeling, likened to a shot under the skin. On the face the eruption is usually much

more abundant than on the body, frequently being confluent there while it is discrete on the body. If it be confluent there will be a general redness and granular-looking swelling of the face, particularly of the forehead. A tendency to arrangement in groups of threes and fives is sometimes observed, best seen on the arms and back of the trunk.

The eruption makes its appearance sooner and in greater abundance, in the neighborhood of recent wounds, or where there has been any irritation of the skin. One patient that we remember had received a recent abrasion extending from above the elbow to the wrist; the eruption was first noticed extending along both sides of this, and in greater abundance than elsewhere. We have seen several instances in which the application of kerosene oil around the neck for the sore throat had brought out the papules in great abundance; the application of mustard poultices produces the same effect. We recall one case, in a woman recently confined, on whom the eruption made its appearance in great profusion over that portion of the body covered by the binder, several hours before it was seen elsewhere.

About the same time the eruption appears on the skin it may be observed on the soft palate, pharynx, inside of the lips and cheeks, and on the tongue. Here it appears as small, round, opaque spots, which do not form vesicles and pustules. Points of eruption also occur on the conjunctiva. When the eruption is abundant in the mouth it increases the flow of saliva; in the fauces it causes difficulty in swallowing; in the air-passages it occasions cough and hoarseness; on the conjunctiva it increases the secretion of tears, and gives rise to conjunctivitis and to photophobia.

Vesicular stage.—Twenty four hours after the first appearance of the eruption a clear fluid makes its appearance in the papules, which now become vesicles. These enlarge until they attain the size of a small pea. Just before the vesicles become fully distended there is a cup-shaped depression in their centre, which is known as umbilication and constitutes a sign of diagnostic importance. Umbilication does not appear in every vesicle; it is not found in those of the palms of the hands and soles of the feet. This appearance has been attributed to the presence of bands, passing from the centre of the roof to the floor of the vesicle, which hold down the centre while the sides of the vesicle are distended by the accumulation of serum.

When the eruption is well established, there is an amelioration or subsidence of all the distressing symptoms of the initiatory stage. The temperature falls to near the normal, a sign of great diagnostic value; the nausea and vomiting cease; the lumbar pains disappear; the appetite returns; the patient gets up, says he feels well and often expresses a desire to go about his daily avocation. In the severer types of the disease these changes are less marked, and the discomfort may be only slightly, if at all, modified.

From the fifth to the seventh day the vesicles become fully distended; they lose their umbilicated appearance; there is an opaque ring at the circumference, inside this a clear ring with an opaque spot in the centre; their contents gradually change, first becoming opalescent, then turbid, and finally purulent. These changes occupy about two days, and the suppurative stage is thus established at about the eighth or ninth day of the disease, and the sixth of the eruption.

The changes which take place in the eruption occur in the order in which it makes its appearance, so that it may be seen in one stage on the face and arms, and in another and earlier stage on the legs and feet.

The skin surrounding the bases of the pustules is red and swollen, forming what is termed the areola. The tissues of the head and face become greatly swollen; the oedema of the eyelids is often so great as to close the eyes; the features are obliterated, and the patient becomes wholly unrecognizable. The presence of

pustules on the scalp causes considerable swelling, so that pressure upon that part occasions severe pain. The swelling of the pocks in the palms of the hands, especially on the finger-tips and in the soles of the feet gives rise to agonizing pain, not unlike that of paronychia. This pain is due to the resistance which the toughened and thickened skin of those parts offers to distention, and to the pressure upon the terminal nerves.

With the stage of suppuration the fever returns and reaches 103° to 104° , and may continue for four or five days in cases of ordinary severity. This elevation is called the suppurative or secondary fever. The pulse becomes frequent, and there is a return of the general discomfort of the initial stage. Delirium is frequent and, though it may be passive, is sometimes so active as to necessitate restraint. The throat symptoms are intensified; swallowing becomes painful and difficult; the nose becomes stopped; there is a hoarse cough, and the voice is frequently inaudible. Diarrhoea is occasionally present and is always to be considered an unfavorable symptom.

Desiccation.—Desiccation begins usually about the twelfth day. Some of the pustules rupture from over distention; their contents escape and dry into yellow crusts. Others dry up and form brownish scabs. In the palms of the hands and soles of the feet, where the cuticle is thicker, the pustules dry down into hard, brownish spots, which are the last to disappear and frequently retain some of their contents after desquamation is well advanced on all other parts of the body. We have frequently found persons going about with these hard brown spots in their palms and soles, and contagion is undoubtedly spread by them.

The scabs fall off, leaving darkly pigmented cicatrices, the number being in proportion to the amount and severity of the eruption. The whole body may be covered with these stained spots, but the face generally suffers most. This staining gradually fades out and, if the destruction of tissue has not been very great, the scars become less and less noticeable. Where there has been much ulceration, as is common on the face, the pitting is deep and permanent. Six to ten days is the usual duration of the stage of desquamation.

In some cases when the ulceration about the cheeks and alæ of the nose has been deep the scabs show a tendency to adhere longer than in other situations, and by confining the pus increase the ulceration. When they are removed the surface presents a worm-eaten appearance which continues for some time after recovery, but finally disappears almost entirely.

As desiccation and desquamation proceed the fever becomes less and other symptoms disappear; appetite returns, the patient begins to improve and goes on to convalescence.

Complications, particularly erysipelas and furuncles, are most apt to occur during the stage of desiccation. These prolong convalescence, and not unfrequently bring about a fatal termination when all danger from the small-pox is passed.

The symptoms above described are those that occur in natural or unmodified variola, and usually extend over a period of seventeen to twenty-one days.

In modified small-pox, commonly called varioloid, the symptoms and course of the different stages are very irregular, and the duration of the stages, as a rule, is very much shortened. The appearance of the eruption is occasionally delayed to the fourth day. It is not unusual to see the eruption abort in the various stages. A few of the vari are arrested in the papular and vesicular stages, others develop and reach maturation in a shorter time than usual, desiccation takes place early, desquamation is rapid, and the scabs fall off, leaving little or no pitting. The stage of invasion in some cases of modified small-pox is attended with the severest symptoms, yet the eruption that follows is slight and of short duration. In these cases there is little or no suppuration, consequently there is no secondary or suppurative fever.

Variola semiconfluens.—In semiconfluent small-pox there are patches of coalescing pustules on different parts of the body. The symptoms and course are those described in the natural variety, perhaps a little more intense. It is the next simplest form to the discrete variety and is generally not attended with any great danger to life, except in children, or from some complication, as erysipelas, pneumonia, pleurisy, etc.

Variola confluens.—This is the form of the disease in which the pustules coalesce over the whole surface of the body. The symptoms preceding the eruption are greatly intensified, and their severity indicates that the attack is to be of the worst nature. Beginning with a pronounced chill, or there may be several chills, the temperature is high, 104° to 106° ; the pulse is rapid; the headache and lumbar pains are of unusual intensity; the nausea and vomiting are distressing and persistent; the patient is wakeful and intensely restless; there is tremulousness of the hands and lips; delirium is almost always present, and is active, violent, and often maniacal in character. The patient cannot be kept in bed, but is constantly trying to escape from some imaginary pursuer, who he fancies is trying to injure him. Under these delusions we have known patients to jump from windows and receive fatal injuries. Occasionally there is a tendency to do themselves injury, and patients have committed suicide while in this state. Such cases require close, unremitting watchfulness, and often it is necessary to use the straight-jacket or to strap them to their beds to prevent accident.

In this variety the eruption makes its appearance sometimes as early as the second day, and develops far more rapidly than in ordinary cases. The papules are so numerous and close together as to cause a general redness and granular swelling of the forehead, face, and arms; they spread rapidly over the whole body. The swelling about the head and face is very great, closing the eyes and often disfiguring the patient beyond recognition. There is general coalescence of the pustules, so that the eruption is one mass; the cuticle on the forehead, backs of the forearms, wrists and hands is completely raised from the subjacent tissues, forming large bullæ; frequently these burst or are broken, leaving large raw surfaces which exude bloody serum. The eruption is equally abundant on the mucous membrane of the nose, mouth, pharynx, œsophagus and larynx, and extends into the trachea. The tongue becomes inflamed and greatly swollen, so much so in three cases under our care as to fill the mouth and render asphyxia imminent. A viscid, sticky secretion is formed in the mouth and throat, which is expelled with great difficulty, and occasions the patient much annoyance. He complains of sore throat and great difficulty of swallowing; cough is excited by attempts to take food, and fluids often regurgitate through the nose. There is a hoarse cough; the voice is a harsh whisper, or becomes entirely inaudible. The swelling of the air-passages, together with the accumulation of this viscid secretion, frequently renders respiration exceedingly difficult, and at times impossible. The proper aëration of the blood is thus interfered with; the surface becomes livid; the eruption turns a dull purplish hue; there is great prostration; the delirium changes to the low muttering kind, and death usually ensues.

In some cases of confluent small-pox the pustules do not fill out but remain flat, and present a dirty white, pasty appearance. Cases with this flat confluent eruption almost invariably terminate in death.

Confluent variola causes the greatest number of deaths among the unvaccinated—death being due to the extensive suppuration.

Variola corymbosa.—The eruption in this variety of small-pox is arranged in bunches or clusters, and takes its name from the fancied resemblance to a cluster of ivy-berries. It is a rare and usually very fatal form of the disease. There were only two or three cases admitted to the Riverside Hospital during the years 1881 and 1882,

all of whom died. In the London Hospital, in a period of thirty years, there were 104 cases of this variety; 29 were unvaccinated, 13 of whom died, or forty-four per cent.; 74 had been vaccinated, 32 of whom died; 1 had been inoculated and died; 2 died of complications; which gives a mortality of forty-one per cent. in the vaccinated.

Variola hemorrhagica, commonly known as the "black pox," is that variety in which the vesicles become filled with red blood-corpuscles. From the beginning the symptoms are very intense; the patient frequently succumbs from the intensity of blood poisoning before the true nature of the disease is determined, or even suspected. Many cases of this nature occur in inland towns, and, being unrecognized, are the cause of serious epidemics. In the fall of 1881, in a village of an adjoining State, a peculiar fever occurred in the person of a lady resident of that place. The diagnosis of typho-malarial fever was made. The disease proved very malignant, and death occurred in five days from the beginning of her illness. A public funeral was held which was largely attended. In due time a brother of the deceased, who had nursed her, was similarly attacked and the same diagnosis made. This case was seen before its termination by an eminent physician of this city and the diagnosis of hemorrhagic small-pox made. Death occurred at the end of a week. From these a number of cases of small-pox, of different varieties, developed, and the disease assumed epidemic proportions.

Of this form of variola there are two types. In one, the hemorrhages take place into the pocks after the vesicles are developed; in the other, the eruption is petechial from the start.

In petechial hemorrhagic small-pox the stage of invasion is of great intensity, and the eruption not unfrequently makes its appearance on the second day, but is slowly developed. From the soft nature of the spots and their bright red color they are often mistaken for measles. Unlike the eruption in the other varieties of the disease, the macules do not change to papules. There may be a slight elevation above the surrounding surface, but there is an absence of that hard, shotty feeling so characteristic of the papules in other forms. The spots are first seen about the lips and chin. Frequently they appear earlier and are better defined about the axillary folds, on the fronts of the elbows, the sides of the abdomen, and the inner face of the thighs where the skin is whiter and thinner. They vary in size from that of a millet-seed to two or three lines in breadth. At first they are a bright-red, clarety color, then become purplish, and subsequently a deep blue. They are slightly raised above the surface, and pressure does not efface them, even momentarily. This type of hemorrhagic variola usually terminates fatally in less than a week.

In the other type of hemorrhagic small-pox the vesicle is filled with bloody serum. Umbilication is present, but requires closer observation to detect than in the ordinary vesicle. Bullæ of different sizes filled with bloody serum are frequently observed at various places. The blood in the vesicles undergoes further change, becoming darker, almost black; hence the name "black small-pox."

Simultaneously with the appearance and development of the eruption hemorrhages occur from all of the mucous surfaces. Epistaxis, which is frequently difficult to control, is one of the earlier symptoms. The gums bleed; there are hemorrhagic spots on the soft palate; the expectoration is abundant and tinged with blood, or occasionally composed of pure blood. There may be vomiting of blood. The conjunctivæ are intensely congested, and often the effusion of blood beneath the conjunctiva is so great as to raise it above the cornea. Blood is also found in the urine and in the discharges from the bowels. In the female the menstrual flow is brought on, and is very profuse. If pregnancy exist, abortion takes place early, and the child is usually dead. Prostration is marked; the pulse rapid and weak; respiration shallow and imperfectly performed; the temperature is only

moderately high, and, if the hemorrhages have been prolonged, may fall below normal before death.

The mind is often clear to the end; the patient hopeful and unconscious of the nearness of death. In one case we recall telling the patient that if he had any messages for his family, or any requests to make, he had better attend to them at once. He seemed surprised, and said, "You don't think I will die, do you, doctor?" and it was with difficulty that he was convinced of the short time he had to live. This was about 2 P.M. Death occurred at five o'clock.

Delirium, if it occur, is of the low muttering kind; there is twitching of the fingers and picking of the bed-clothing; the lips are cracked; the teeth and gums covered with dark-brown sordes; the tongue dries into a blackened mass with deep fissures, and cannot be protruded; deglutition becomes impossible. Death commonly occurs about the fifth day of the eruption.

This description applies to the confluent variety of hemorrhagic small-pox. The eruption may be discrete, under which circumstance recovery not infrequently takes place. The semi-confluent eruption increases the danger.

Blood is often seen in the pustules on the feet and legs in those patients who leave their beds or keep their feet dependent. This is due to mechanical rather than other causes, and does not constitute any form of hemorrhagic variola. The following are illustrative cases:

CASE I.—*Confluent hemorrhagic small-pox*.—Henry W.—; aged fifty; Germany; orderly at this hospital. July 5th complained of a tired feeling; arms and legs felt heavy. In the evening had a chill lasting a few moments; appetite much impaired, but no nausea.

July 6th.—The symptoms of yesterday more intense; appetite entirely lost; pains in head, small of back, and extremities; sleep fair.

July 7th, A.M.—More chills; pains continue; sense of weight in epigastrium; some fever; no nausea, no epistaxis; constipated. P.M.—A macular eruption in scanty amount on various parts of body; maculae small; gives history of imperfect vaccination.

July 8th, 10 A.M.—Pulse, 108; temperature, 103°; respiration, 38. Eruption becoming papular. 5 P.M.—Pulse, 112; temperature, 104.2°; respiration, 38. 6 P.M.—Pulse, 100; temperature, 104°; respiration, 28.

July 9th, 8.30 A.M.—Pulse, 92; temperature, 101.3°; respiration, 22. 5 P.M.—Pulse, 104; temperature, 104.2°; respiration, 26. Appetite better, sleep better; headache not constant, and not nearly so intense; general feeling much more comfortable. The eruption increased somewhat in amount. A very few vesicles may be seen.

July 10th, 9.30 A.M.—Pulse, 90; temperature, 102.3°; respiration, 26. Eruption slowly increasing; number of vesicles greater, but they are still few, with here and there one which is umbilicated. Constipation relieved with salines. 5 P.M.—Pulse, 88; temperature, 102°; respiration, 26.

July 11th, 11 A.M.—Temperature, 99°.

July 12th, 9 A.M.—Pulse, 80; temperature, 100°; respiration, 20. A marked increase in the amount of the eruption during the last thirty-six hours, so that now it is very abundant. The color of the areolæ of the spots much deeper. The eruption more generally vesicular; on the face it is pustular, and there and on portions of the body elsewhere it is becoming confluent. The cheeks and lower lids, the nose and the upper lip are swollen considerably; complains of a throbbing, band-like feeling across the nose; skin sensitive generally; a number of vesicles on mucous membrane of mouth; no difficulty in deglutition or respiration, except a feeling of slight constriction around the chest; a slight coryza. No vesicles noticed on conjunctivæ, but there is some congestion and photophobia. Appetite good; sleep broken. 5 P.M.—Pulse, 92; temperature, 100.3°; respiration, 24.

July 13th, 9 A.M.—Pulse, 110; temperature, 100.3°; respiration, 20. 5 P.M.—Pulse, 108; temperature, 101°; respiration, 21.

July 14th, 9 A.M.—Pulse, 115; temperature, 100.3°; respiration, 22. 5 P.M.—Pulse, 127; temperature, 102°; respiration, 29.

July 15th, 9 A.M.—Pulse, 120; temperature, 101.2°; respiration, 24. 5.30 P.M.—Pulse, 128; temperature, 103°; respiration, 24. Suppuration progressing over the whole surface; hemorrhages have occurred into a number of pustules, especially on hands and forearms and legs; no large hemorrhagic spots. Appetite continues fair; sleep poor. Is a little delirious at night.

July 16th, 9 A.M.—Pulse, 118; temperature, 102.1°; respiration, 24. 5 P.M.—Pulse, 124; temperature, 104.3°; respiration, 28.

July 17th, 8.30 A.M.—Pulse, 112; temperature, 101.5°; respiration, 24. 7.15 P.M.—Pulse, 120; temperature, 104.2°; respiration, 28.

July 18th, 8.30 A.M.—Pulse, 112; temperature, 103.1°; respiration, 24. 6.15 P.M.—Pulse, 112; temperature, 102.3°; respiration, 24.

July 19th, 9 A.M.—Pulse, 107; temperature, 100.3°; respiration, 24. Has diarrhoea. Desiccating. 5 P.M.—Pulse, 112; temperature, 102.5°; respiration, 29.

July 20th, 9.30 A.M.—Pulse, 104; temperature, 101.3°; respiration, 24. 7 P.M.—Pulse, 112; temperature, 102.3°; respiration, 28. Diarrhoea checked; oedematous swelling of feet and legs; large bullæ of sanguinolent fluid on feet and legs, and smaller ones on arms. Urine of normal quantity and free from albumen. Larvæ up to a third of an inch in length in ears and under scabs on face.

July 21st, 9.30 A.M.—Pulse, 104; temperature, 101.1°; respiration, 25. 5.15 P.M.—Pulse, 108; temperature, 101.3°; respiration, 28.

July 22d, 11 A.M.—Pulse, 108; temperature, 99.1°; respiration, 24. 5.30 P.M.—Pulse, 118; temperature, 103°; respiration, 27. Desiccation far advanced everywhere, except on face, where suppuration is still active.

July 23d, 9.30 A.M.—Pulse, 104; temperature, 98.5°; respiration, 24. 5.30 P.M.—Pulse, 114; temperature, 102°; respiration, 28.

July 24th, 9 A.M.—Pulse, 104; temperature, 100°; respiration, 24. 5 P.M.—Pulse, 100; temperature, 100.3°; respiration, 24. Suppuration ceased on face.

July 25th, 10 A.M.—Pulse, 104; temperature, 99.1°; respiration, 22. 5.30 P.M.—Pulse, 112; temperature, 101.5°; respiration, 24. The oedema of lower extremities somewhat diminished. Is improving rapidly.

July 26th, 9 A.M.—Pulse, 100; temperature, 99.2°; respiration, 24. 5 P.M.—Pulse, 100; temperature, 100.5°; respiration, 24.

July 27th, 10 A.M.—Pulse, 106; temperature, 101.5°; respiration, 26. 5.30 P.M.—Pulse, 100; temperature, 101.4°; respiration, 26.

July 28th, 8.30 P.M.—Pulse, 92; temperature, 99; respiration, 20.

July 29th, 9.30 P.M.—Pulse, 100; temperature, 98.5°; respiration, 20.

August.—An abscess in the site of an old wound in the back between the shoulders, opened and several drachms of pus evacuated.

August 20th.—Desiccation progressing very slowly in face, elsewhere desquamation is about completed.

October 6th.—Desquamation now completed. The pitting is very extensive on the face; on other parts there is none at all. Discharged cured.

CASE II.—*Confluent hemorrhagic small-pox*.—John P. R.—; aged twenty-seven; United States; butcher; arrived at New York, July 23d, per S. S. De Ruyster from Antwerp. Admitted 7.30 A.M., July 24th. No history of sickness previous to admission obtained from patient.

July 24th, 8 A.M.—Pulse, 96; temperature, 99.2°; respiration, 17. Everywhere on the surface of the patient's body, is a very abundant vesicular eruption, which for the most part is discrete, though upon the face, backs of hands, and in spots elsewhere it is confluent. That on

the face and dorsal surface of the hands has the appearance of a superficial blister, and is but slightly raised. Where the eruption is discrete the vesicles are small and the inflammation around their bases shows only a pale pink color. Many of the vesicles are umbilicated. The tongue and buccal mucous membrane also show a similar discrete eruption. Pulse is quick, thready, and strikes with considerable force. Patient is stupid and not able to give an intelligent account of his illness. 5 P.M.—Pulse, 100; temperature, 100.3°; respiration, 22.

July 25th, 8 A.M.—Pulse, 104; temperature, 101°; respiration, 22. In a stupor day and night, and at times attempts to leave the bed. Offers no objection to the administration of his food. Pulse weaker and still thready. 5 P.M.—Pulse, 124; temperature, 104.2°; respiration, 30.

July 26th, 8 A.M.—Pulse, 120; temperature, 103°; respiration, 25. 5 P.M.—Pulse, 136; temperature, 106.2°; respiration, 35. The eruption, especially on the legs and forearms, now has a purplish look. On the fingers are a few hemorrhagic spots of small areas. Sponged with cold water. 7.30 P.M.—Temperature, 106.2°. Placed patient on Kibbee cot, and two pailfuls of cold water used. After the bath the record of the pulse, temperature, and respiration was. 8 P.M.—Pulse, 96; temperature, 98.2°; respiration, 20. Mind clear. Pulse strong, and no longer thready. Skin warm, but patient feels chilly. Has been constipated since admission, relieved by enema. 10 P.M.—Pulse, 107; temperature, 100°.

July 27th, 8 A.M.—Pulse, 108; temperature, 102½°; respiration, 20. 3 P.M.—Pulse, 128; temperature, 105°; respiration, 36. Pulse feeble and thready. Kibbee cot. After bath: pulse, 100; temperature, 99°. 5 P.M.—Pulse, 104; temperature, 101.1°; respiration, 27. 7 P.M.—Pulse, 120; temperature, 103.3°; respiration, 30. Kibbee cot; after bath, pulse, 100; temperature, 99.3°.

July 28th, 8 A.M.—Pulse, 108; temperature, 101.1°; respiration, 23. 5 P.M.—Pulse, 108; temperature, 101.2°; respiration, 31.

July 29th, 8 A.M.—Pulse, 108; temperature, 99.3°; respiration, 29. 2.30 P.M.—Pulse, 120; temperature, 101°; respiration, 39. 5 P.M.—Pulse, 120; temperature, 101.3°; respiration, 43. Died about 7 P.M., July 29th.

(To be continued.)

GREAT MEN AND SMALL HEADS.—"It is usually supposed," says the *Athenæum*, "that men of great intellectual powers have large and massive heads. But this theory, which Dr. Gilbert, physician to Queen Elizabeth, was the first to suggest, is not borne out by facts. An examination of busts, pictures, medallions, intaglios, etc., of the world's famous celebrities almost tends the other way. In the earlier paintings, it is true, men are distinguished by their large heads, but this is attributable to the painters, who agreed with the general opinion, and wished to flatter their sitters. A receding forehead is mostly condemned. Nevertheless, this feature is found in Alexander the Great, and, to a lesser degree in Julius Cæsar. The head of Frederick the Great receded dreadfully. Other great men have had positively small heads. Lord Byron's was 'remarkably small,' as were those of Lord Bacon and Cosmo di Medici. Men of genius of ancient times have only what may be called an ordinary or every-day forehead, and Herodotus, Alcibiades, Plato, Aristotle, and Epicurus, among many others, are mentioned as instances. Some are even low-browed, as Burton, the author of 'The Anatomy of Melancholy,' Sir Thomas Browne, and Dürer. The average forehead of the Greek sculptures in the frieze from the Parthenon is, we are told, 'lower, if anything, than what is seen in modern foreheads.' The gods themselves are represented with 'ordinary, if not low, brows.' Thus it appears that the popular notion on the matter is erroneous, and that there may be great men without big heads."

GLIO-SARCOMA OF THE CEREBELLUM OCCURRING IN A CHILD FOUR AND ONE-HALF YEARS OF AGE.

By L. EMMETT HOLT, A.M., M.D.,

NEW YORK.

LIZZIE B.—came under observation at the Northwestern Dispensary, December 11, 1882. She was carried in by her mother; she having been unable to walk alone for one month. It was stated that the child had not been well since the summer, the first thing noticed being a listlessness and an indisposition to any exertion. Later, fever came on, at first regularly every other day, but without any noticeable chill or sweating. She vomited frequently. Severe neuralgic pains in the forehead, the epigastrium, and the extremities were often complained of. There was complete anorexia, and after a little the bowels became obstinately constipated. Occasional rigidity of the muscles of the back of the neck had been seen, which had been accompanied by pain in this region. The gait was first noticed to be peculiar about three months before she came to the dispensary. She had difficulty in going up and down stairs at first, and was seen to stagger as she walked. This gradually became more pronounced and the mother said "she walked like one drunk." Thus she became at last almost helpless. There had been a general and steady decline in strength and flesh. Of late, the pains at the epigastrium and the extremities had somewhat abated and she complained only of severe occipital pains and of a soreness about the neck or throat. There had been lately no tendency to periodicity in the symptoms. She had had measles and scarlatina about two years before, and though diphtheria was carefully sought no history of this could be obtained.

On examination the patient was found very pale and anæmic, with a heavily furred tongue and a fetid breath. She was unable to stand without considerable assistance. When supported on either side, she walked with great difficulty, constantly crying for fear of falling. The body was balanced awkwardly, rocking to and fro. As she sat upon the mother's lap she was found to be able to execute all the usual movements with the lower and the upper extremities well, though it seemed with a little diminished power, exactly how much it was difficult to say from the age of the patient. The muscles were all rather flabby to the feel, but no comparative atrophy was present. Reflex sensibility of the soles was normal. There was no exaggeration of the patellar reflexes. Handling of the muscles produced so much pain she cried out. No facial or ocular paralysis. The pupils were normal and responded to light well. The tongue was protruded without difficulty. The mind was unaffected. Nothing abnormal was found on examination of the throat, heart, or lungs. The spleen was much enlarged, its vertical dulness measuring four and one-half inches in the posterior axillary line. The head was drawn backward, and the muscles of the neck showed a little rigidity, this could, however, be readily overcome.

There seemed to be no doubt regarding the existence of chronic malarial poisoning; but whether all the symptoms could be referred to that source was the question. This view was taken as a working hypothesis from the following grounds: 1, the history of a fever which at the outset came on periodically; 2, the marked splenic enlargement; 3, the great muscular soreness; 4, the incomplete character of the paralysis.

Quinine sulph. was ordered, gr. xx. per diem.

On December 16th, my friends Drs. V. P. Gibney and L. Putzel saw the case with me, and a more thorough examination was made than hitherto, demonstrating the fact to the satisfaction of all, of the existence of a very marked degree of ataxia in both upper and lower extremities. In putting out the hand to grasp anything, a slow oscillatory movement from side to side took place before the object was seized. A similar thing was noticed when she raised the foot to touch anything. In

walking, when supported a little, she lifted the feet well from the floor, but put them down in an uncertain way. When she stood, the body swayed from side to side without any especial tendency to fall in any direction. She could button and unbutton the clothes, though with some difficulty. There was nothing spasmodic about the movements, and closing the eyes did not appear to make any difference in them. Her general condition had improved very perceptibly under the quinine, and she seemed to have a little more power in the limbs. In fact, grave doubts were expressed as to whether there was any actual paralysis present, the ataxia being considered a sufficient explanation of the inability to walk alone. The different muscular groups were examined electrically, and good responses obtained to a mild faradic current. The disease was still regarded as a malarial neurosis, and it was decided to continue quinine, especially as the child was improving under its use.

The improvement continued for about a week, and then, despite the use of the drug, she grew steadily worse. The bowels, which had yielded to mild laxatives before, again became obstinately constipated; she vomited four or five times a day; she took no food to speak of; once, for twenty-four hours, retention of urine took place. She complained much of severe occipital pains, and sometimes for days together the head would be drawn back into the pillow. Pain about the front of the neck or throat—it could not be determined which—troubled her much, and nothing to explain it could be found. She became very irritable in disposition, though not drowsy. She could move the hands and feet freely, but when laid upon the sofa was unable to change her position.

The temperature had never been above $100\frac{1}{2}^{\circ}$ (rectal), and reached that point only once. The diagnosis of malaria was now given up, and it was thought to be most likely basilar meningitis. The quinine was now discontinued, and the treatment was mainly symptomatic. There was no irregularity of pulse or respiration noticed at any time. A few days before my last examination, which was on January 3, 1883, she was said to have had at times difficulty in "getting out what she wanted to say"—as the mother expressed it. When I saw her she seemed bright, responded intelligently to questions, though the speech seemed to be a little thick. The tongue was protruded normally. No paralysis of face or eye muscles. The pupils were normal and responded to light. The head was drawn in marked opisthotonos, though the muscles of the neck were not rigid. Deglutition had seemed a little interfered with lately. The special senses were not critically tested, though they seemed normal. The ataxia was still present. The diagnosis of tumor was now made quite positively. The child seemed in no immediate danger, but about noon the following day she called for water, drank with avidity, became cyanotic and died quite suddenly, never having had any convulsive movements at any time. The whole duration of the disease, reckoning from the first disturbances in locomotion noticed, was a little less than four months.

Autopsy, made twenty hours after death. Rigor mortis well marked. Nothing abnormal was found in the thoracic organs. Spleen was normal in size but rather firmer than natural. Liver was slightly congested. Right kidney about twice the size of the left, though neither gave any gross evidences of disease.

On removing the calvarium, the dura was seen to be tense and bulging. No evidence of pachymeningitis. As the brain was being removed quite a quantity of clear serum escaped, estimated to be about three ounces. This seemed to come from the ventricles, through the aqueduct of Sylvius principally. The meninges were much congested, but showed no evidence of inflammation or extravasations. On the inferior surface of the cerebellum was a new growth about the size of a hen's egg. It measured two and a half inches antero-posteriorly and one and a half transversely. It occupied nearly the me-

dian line of the cerebellum, projecting posteriorly a little beyond that structure.¹

The specimen was examined by Prof. Wm. H. Welch, who kindly furnished me with the following report: "The tumor occupies the situation of the inferior vermiform process of the cerebellum. It is soft in consistency and bears a considerable resemblance to the normal brain substance, but is redder in color. The shape of the new

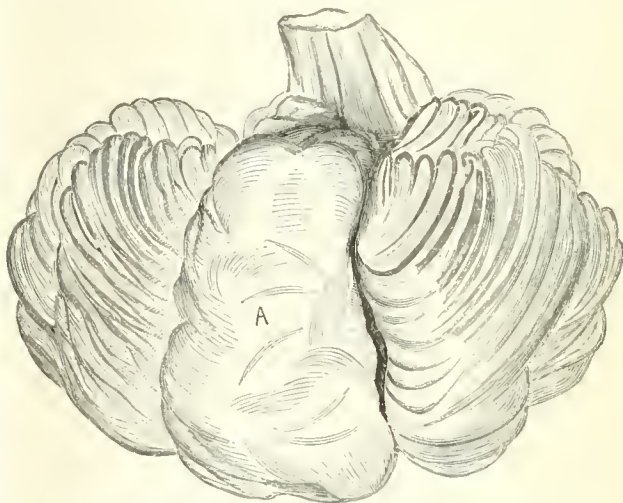


Fig. 1.—Inferior surface of the cerebellum; A is the tumor mass.

growth is much like that of the inferior vermiform process, but it is about two or three times larger in size. It has encroached somewhat upon the lateral lobes of the cerebellum, which in the rest of their extent appear normal, as does likewise the superior vermiform process. The ventricles of the brain, particularly the fourth ventricle, are considerably dilated, manifestly by the encroachment of the tumor upon the fourth ventricle.

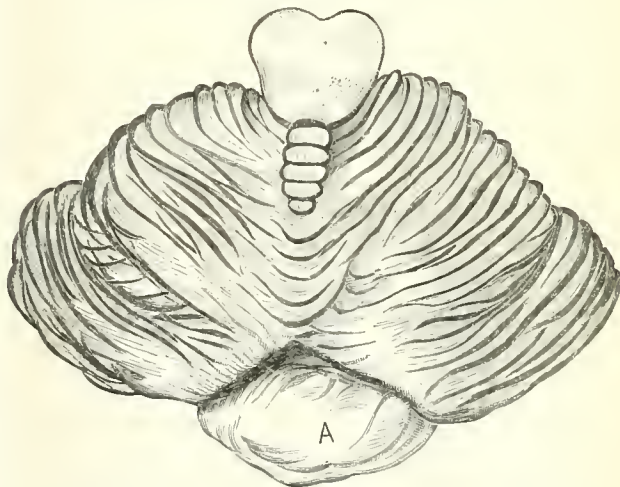


Fig. 2.—Superior surface of the cerebellum; A is the projecting tumor.

"Microscopically, the tumor is a glio-sarcoma. It is composed of a mass of cells, predominantly round cells, in a finely granular and finely fibrillated matrix. The growth is rich in blood-vessels."

Remarks.—The study of cerebellar disease has, within the past few years, received a valuable contribution from Nothnagel.² The view which he takes seems to me to be able to reconcile many of the hitherto contradictory facts relating to this subject. As my own case corroborates them fully, I will briefly state his conclusions:

First.—Lesions confined to the lateral lobes of the cerebellum are not at present diagnosticable.

Second.—Destructive lesions involving the central lobe, or the vermiform process, are accompanied by muscular

¹ The drawings of the tumor were made by my friend Dr. Frank W. Olds.

² Topische Diagnostik der Gehirnkrankheiten—Art. Cerebellum.

inco-ordination; but this is the only symptom which is diagnostic.

Third.—The inco-ordination from a lesion of the vermiform process is sufficiently characteristic to be distinguished in most, if not all cases, from that of posterior spinal sclerosis. Its peculiarities are a swaying movement of the body in walking, the legs widely separated, the feet raised but slightly, a staggering, a rocking to and fro, and finally falling in any direction. Closing the eyes may or may not increase the difficulty. The spasmodic character of the movements is usually wanting. The group of symptoms so closely simulates those of alcoholic intoxication, that one of Nothnagel's patients was several times locked up by the police for drunkenness.

Fourth.—Vertigo is often an early symptom, and may be the first noticed, but is of no diagnostic importance unless associated with inco-ordination.

Fifth.—The optic is more frequently involved than the other nerves of special sense.

Sixth.—Vomiting is wanting in the stationary and degenerative lesions, but is a common symptom in abscess, hemorrhage, and tumor.

Seventh.—In many cases, especially of tumor, we have occipital neuralgia as a prominent symptom.

The following are occasionally seen, but are accidental, and are to be considered as rather against, than in favor of cerebellar disease: Paraplegia or hemiplegia; paralysis of one-half of the tongue, though disturbances of speech are more frequent; dysphagia, epileptiform attacks, and disturbances of the other special senses.

One point of practical value which this case teaches, is that we should not be too ready to attribute obscure nervous symptoms to malarial poisoning, even in patients in whom indubitable evidences of such poisoning exists; and that a failure of full doses of quinine to affect the symptoms should lead to a careful examination for organic disease of the nerve-centres.

200 WEST FIFTY-SECOND STREET.

LUNATICS AT LARGE 'S. SANE PERSONS IN LUNATIC ASYLUMS.

By N. ROE BRADNER, A.M., M.D.,

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In a weekly journal I read, recently, an article entitled "Lunatics at Large," which, although intended as public gossip or general information, contains so much that is of real importance and especially interesting to the profession that I feel prompted to take up the cue, and beg for a few moments the indulgence of the readers of THE MEDICAL RECORD.

It begins as follows: "The number of embryo lunatics at large in this city (New York) is appalling, and continual outbreaks of insanity that we are treated to, such as the mad Frenchman who recently stabbed a dozen helpless women on Fourteenth Street has not resulted in any attempt by the authorities to suppress the lunatics at large." Proceeding it declares with lamentable truth that "people seem to think that an insane person is not dangerous until he or she commits some deed of actual violence;" and if the writer can disabuse his readers of this erroneous and dangerous belief, he will feel that he has accomplished quite as much good as can be expected to result from any one magazine article.

The writer in the journal referred to relates how a lady, who had taken an aversion to pie, screamed with violent excitement when her eye fell upon the offending dish which her son had ordered for the family table, and seizing a carving-knife she chased the young man with great energy and desperation. "But the family say she is not crazy, only eccentric." And of her mother it is related that she is an old lady of three score and ten, and eccentric too, having been discovered one winter's night, on a public street, a considerable distance from home, "shiv-

ering in her night-dress." Again we read: "Only a day or two ago a man came into my office who, if not a raging lunatic, was so near being one that I did not enjoy his visit at all. His hair was half a foot longer than Oscar Wilde's, and hung in beautiful chestnut ringlets down his back; his beard and moustache were long and gray mixed, and he wore a pair of large round spectacles with heavy rims. On his head he wore a black sombrero, and under his arm carried a portfolio." He was further described as a man whose looks would decide a jury of physicians against his sanity, and as follows: "I see this man constantly on the street and expect nothing else than to find some of these days he will become violent and treat us to a massacre in true lunatic style."

Let us now for a moment look at the converse, and each one for himself recount the number of graphic reports of sane persons having been incarcerated in lunatic asylums we have read in the daily papers within the last month. Indeed, the public press almost without exception seems to seize with the fondest avidity, and magnifying to the greatest exaggeration, every case of alleged illegal or improper hospital commitment that is made public by means of the writ of *habeas corpus*. It is, therefore, not surprising that the numerous discharges that have been recently so effected from insane asylums, especially in New York, have produced much sensation among those who believe all they see in the papers; indeed the profound thinker may well be startled when one day he reads that the community is thronged by dangerous lunatics at large, only awaiting a hazard impulse and axe to brain whoever happens to run counter to him, and is the next day informed through the same medium that another, and numerous other sane persons have been discovered incarcerated in lunatic asylums, where are depicted dungeons and horrors that nearly make his hair stand on end; attended by a little hint or history of how they had been kidnapped from homes they alone could make happy. Otherwise how their personal fortune had prompted and conspiracy effected their capture and imprisonment—the conspirators being heartless relatives, unprincipled physicians, and a straw judiciary. It is not my intention to assert on the one hand that sane men may not be unjustly declared insane, and thus deprived of their liberty; nor yet deny that insane and dangerously insane persons do mingle in society that does not yet even dream of the imminent tragedy that may so quickly throw it in consternation. It is true that a great smoke indicates some fire, but I have been intimately acquainted with all the circumstances of some of the lunacy cases that have become sensational and am well aware that they have been made so chiefly by reason of the color given by the reporter who wished to interest his readers. But while the public has been startled, the friends of the patient alarmed, and the hospital authorities annoyed by these sensational newspaper articles, it is not therein that exists the greater evil to which, in this article, I can but briefly, but will pointedly and plainly call your attention. The arrogant presumption of ignorance, if not intemperance, whom chance or political cunning may have elevated to the woolsock—when he ignores philosophy and experience—commanding the doors of asylums to be opened, and those sent abroad who are declared insane by those who are most experienced in insanity, and whose unrestrained liberty may be dangerous to human life, is truly appalling. We have no respect for him who would look down from that exalted position to insult Dr. Kirkbride—if not indeed the whole medical profession—with the strong hint that if he were only clothed with a little greater authority the tables would be turned and the whole crowd of us consigned to the lunatic asylum.

Some months ago a female patient in the Pennsylvania Hospital for the Insane applied to the Court of Common Pleas, through writ of *habeas corpus*, for her discharge. She had been regularly committed by forms and process as provided by existing law of the State of Pennsylvania,

including the sworn statement of Drs. D. F. Woods and Thomas G. Morton that the girl was insane and a proper subject for the hospital. Dr. Kirkbride, the Physician-in-Chief, and who has been so since the foundation of this branch of the hospital, over forty years ago, testified that she had in some measure recovered, and suggested that she might, with propriety, leave the hospital, if she could go where she could be pleasantly and properly surrounded, which he knew would not be the case if she was returned to her father's house, where existed domestic infelicity that he knew would be detrimental to her peace of mind. At this point the August looked down and sneeringly asked the doctor, who had given his exclusive attention to the subject of insanity since before that judge was born, if that was why she was sent to the asylum.

The doctor mildly replied that she was sent to the asylum because she was insane. But what are we to expect toward reform, whether of sane persons in asylums, or lunatics at large, at a tribunal where one of the best, if not, indeed, the best American authority concerning a certain disease, is thus publicly insulted at the bar of justice, and by him of the robes. Because, forsooth, in the goodness of his heart he suggests that a convalescent patient should not be yet exposed to the noxious atmosphere that caused her disease. In another case, where one of our most excellent judges sat to hear the evidence of insanity of a patient who demanded his discharge from the restraint his physicians advised, his Honor consented to take that responsibility—a step, I will venture to say, he has ever regretted, for the patient being deprived of the protection the restraint of the hospital afforded him, immediately destroyed himself. I would convey the idea, then, that to discriminate between sanity and insanity, or those who should or should not be therefore deprived of their liberty, requires not only a *sober* desire to be just, but peculiar skill that can only be acquired by experience.

I may be permitted to illustrate more forcibly by two cases within the scope of my own practice: Colonel S—, aged fifty, a Philadelphia gentleman, who had, until within a few months, enjoyed good health, and was known as the life of his large circle of friends, became, by degrees, dyspeptic, melancholy, and suicidal. His friends placed him in close confinement, and when he, by my order, was closely watched by day and night, that he might not destroy himself, he refused all food until he was in a starving condition.

He seemed to have formed some attachment to me, and I discovered that he valued the principle of truth more highly than happiness or life. Acting upon this information, I made the following bold agreement with him, to which he became a party after much hesitation and pressure: 1, He was to go with me directly and partake of dinner; 2, he was, thereafter, to eat his meals regularly; 3, his meals were to be served in his room; 4, his attendants were to cease to watch him, and he was to be at full liberty, except that he was not to go beyond certain specified limits; 5, this contract was to continue for three weeks and then terminate.

He was a splendid specimen of mankind; of handsome face and form, six feet two inches in height, and in health weighed full two hundred pounds, but at the time of this agreement his weight had been reduced by at least fifty pounds, and by his long fasting he was too weak to walk, except by the help of a cane which he borrowed of me. This singular contract was kept *in toto*, religiously and faithfully. It is now, indeed, to me interesting in the extreme to remember that first meal he ate at my table. He soon after became cheerful—happy, indeed; he was abroad each morning by five o'clock, and was at all times at his liberty.

During the three weeks so spent he regained his strength and a considerable part of the flesh he had lost during his fast, and the pleasure of his daily visits to me is never to be forgotten.

The day previous to that terminating our contract, he came and reminded me of the fact, but circumstances over which neither he nor I had control prevented its renewal. Returning to me on the following day to return my cane and bid me good-bye, he presented the picture of health, and there can be no doubt that any judge deciding such a question on the result of his own personal examination, without the opinion of a physician, and one indeed well experienced in mental diseases, would have pronounced it a shocking outrage to restrain such a man of his liberty. He left our care and we saw him no more forever! His poor lifeless body was afterward found suspended by the neck.

The second case to which I referred is related as follows: A few years ago I was sitting in the private office of a chemist of this city, and although I could not see what was transpiring in the front office, I could distinctly hear. Presently some person entered and began conversation with the clerk, and inadvertently, almost unconsciously, I became interested. The voice forsooth was that of one of my friends and near neighbors, whose sanity had never been questioned, while its statements and arguments were those of a madman. Within one minute, and without seeing this man, I discovered him to be insane, with delusions of the most dangerous character. He had brought several articles of food and a fly, that he said he had taken from his tea, all of which he wished the chemist to analyze, confidently expressing his conviction that his friends were all down on him and wished to destroy his life by means of poison. I knew the physician of the family and immediately informed him of my apprehension. Within a day or two I was consulted as to treatment, and becoming familiar with the circumstances and history, advised his immediate restraint, and he was accordingly placed in a hospital for the insane, where his disease never abated but progressed so rapidly that he died a maniac within a month.

This case, I think, furnishes a forcible illustration of the importance and necessity of experience in determining as to the sanity or insanity of any individual. This gentleman was in the early stage of a form of mental disease most dangerous to the lives of those around him, while the external manifestations were not such as to be recognized, except by those who had previously become acquainted with its symptoms and course.

Between him and the long-haired eccentric described in the early part of this paper, at least ten to one, excepting medical experts, would judge the former to be the more dangerous, while, as I have already said, I consider the latter gentleman was one of the most dangerous of all men to be at large. And now my task would be more than half undone if I did not impress upon the reader and make clear the truth and reason of this which is so simply done.

Self-preservation is the first law of man, and any one is justifiable in causing the death of another, if this be the only means of preventing his own murder. When reason then is dethroned, displaced by delusion, the lunatic believing another, or a score of others, even his nearest friends, are endeavoring and conspiring to kill him, his impulse is to anticipate their attack and slay those, always the most innocent persons, whom his obscure disease leads him to suspect.

2038 RACE STREET.

HYPERIDROSIS OF THE HANDS AND FEET.—Naphthol has been recommended (*Druggist*) as an effective remedy against excessive sweating of the palms, foot-soles, and axillar. These places should be moistened once or twice daily with a mixture of naphthol 5 parts, glycerine 10 parts, and alcohol 100 parts, and afterward dusted, either with pure starch or with a mixture of naphthol 2 parts, starch 100 parts. In case of sweating feet, small pellets of antiseptic cotton should be dipped in the powder and placed between the toes.

THE TREATMENT OF OVARITIS.

By HORATIO R. BIGELOW, M.D.,

WASHINGTON, D. C.

I KNOW of no pathological condition involving the female sexual apparatus which is so unsatisfactory in its treatment, so discouraging to the physician, and so hopeless to the patient, as is oöphoritis. Were absolute rest of ovaries and Fallopian tubes possible, and were it equally possible to reach interstitial and peri-oöphoritis by deep massage, we might expect much from expectant treatment. But participating directly or indirectly, as they do, in every functional change, being subjectively and objectively factors in all mental operations, the ovaries cease to be active only with the cessation of life itself. Equally energetic are the tubes, suffering from transmitted influence, from intrinsic disease, or engaged in the retrogressive metamorphosis and healing process of menstruation. There is no period of physiological rest. The tubes, until the menopause, are either preparing for the catamenia, or are engaged in recovering from the shock. Whether menstruation be a mere expression of ovulation, or whether it depend upon "the exfoliation of the outermost layers of the proliferated mucous membrane of the uterus," or whether it be an especial prerogative of the Fallopian tubes, the direct effect and the transmitted influence are felt along the entire uterine track. The congested ovary, the hemorrhagic tube, in active operation itself and participating by contiguity of structure with the ovary, and the utricular glands of the uterus, are all sympathizing in a physiological event, which may easily be rendered pathological by a want of integrity in the faithful functioning of any part engaged. A past history of constant suffering, of neuralgic aches, painful defecation, a tearing sensation in the ovary, dysmenorrhœa, pains in the back and loins and down the thigh, despondency, dyspepsia and melancholia, a present history of a life miserable and bedridden, and a future which does not bear contemplation, these are common incidents written in the pages of the life history of those who address themselves to the gynecologist for the relief of an oöphoritis. Any chance that offers the slightest hope of respite is eagerly seized. Abdominal section and the removal of the uterine appendages is stripped of terror, and the patient joyously submits to anything that will bring future sunshine. Uteri retroverted or in any way misplaced are supported by pessaries, lacerations are sewed up, vegetations of the endometrium are removed with the curette, cervices are depleted, tonics are administered, but the patient finds no surcease from her suffering. The recurrent peritonitis, or the pains simulating a peritonitis, due to a salpingitis with pus formation in the tube, or to an inflammation or degeneration of the ovary, come around with discouraging regularity and persistency. With as constantly recurring a disregard of the ovary, the seat of the disorder is again relegated to the uterus, the endometrium is again and again medicated, another pessary is applied, the recurrent abdominal inflammation is variously attributed to an old pelvic inflammation, to sympathy, or to a pathological condition within the uterus, and thus and so the woman fades away, carrying along with her the reputation of the physician and the silent evidences of his lack of discrimination.

I do not believe that the cause of this long and varying train of symptoms is ever to be found within the uterus, however misplaced it may be, or in however great a degree its mucous membrane has degenerated. Displaced uteri, lacerations of the cervix, endometritis, endocervicitis, and metritis, have a symptomatology in which, while many symptoms are common to each, other and characteristic ones are sure guides in the location of the difficulty. Neither do I believe that any good results can possibly obtain if the secondary conditions are allowed to obscure the primary. The intercurrent dysmenorrhœa accompanying an oöphoritis, being a mere expression of

deranged ovarian function, will not yield to uterine medication, neither will the dysmenorrhœa, associated with a dislocated uterus, yield to the replacement of that organ, provided there be inflammation or degeneration of the ovary. Misplaced uteri are never accompanied by the same alarming series of symptoms. The inconveniences thus occasioned, in uncomplicated cases, yield readily to pessaries, or to medicated tampons. But it so happens, that oöphoritis is most frequently found in connection with some derangement of the uterus, sufficiently well marked to lead up to the belief that this, of itself, is the *fons et origo* of the patient's illness.

The groin pain, the melancholia and dyspepsia are attributable to the retroverted uterus, and will yield, so it is hoped, to the properly adjusted pessary. The great mischief of the pessary is found in the ease with which it is applied, and in the marvellous and oftentimes imaginative good which it is alleged will follow upon its introduction. Pessaries are only *exceptionally* beneficial. The majority of cases do better without them, and get well faster and with a greater assurance of permanency with medicated tampons. The indiscriminate use of the pessary, and its not infrequent mal-adjustment, are the exciting causes of serious disease. He is a wise man in his generation who, recognizing an oöphoritis, will allow the uterus, no matter however greatly misplaced it may be, to remain just as he happens to find it, and will address himself to the ovary alone; who will assure his patient by a cheerful manner, and will explain to her what he hopes to achieve in the administration of certain remedies. He will much more surely attain his end and the confidence of the woman, by declining to interfere needlessly, by vaginal examination, or by constant attempts to replace the uterus, which only shock her nervous system, and exaggerate the mental disturbance always present. Relieve your patient first of her intolerable suffering and despondency, thus winning her sincere regard, and there will be time enough left to rectify the other matters.

But how shall we relieve the suffering? I protest that I have carried this matter about with me, as a burden, of which I have been unable to disembarass myself by night or day. A case in my own family, so hydra-headed in its ever-changing symptoms, so irresponsible to treatment, so painful to witness, has invested me with a deep sense of a physician's responsibility in such instances, and with a very painful conviction of my own ignorance. The intense desire to relieve, with complete inability to do so, is a species of punishment about as painful as any that one can undergo. This case has made a more enduring impression because of its association with a retroverted uterus, with a subacute pelvic inflammation, and with the recurring abdominal pain and nausea. I have already so fully described it that I may merely add, that the pain in the *right* ovary is constant, and sometimes conveys the impression of dragging; the ovary is enlarged and tender, menstruation is insufficient in quantity and attended with much distress, and there is a general condition of great malaise. No local treatment of the uterus, whether of replacement or of internal medication, has given the slightest relief. Absolute rest, electricity, massage, and full feeding, have accomplished something, but the least departure from so strict a regimen sets up the old train of symptoms. Ergot with bromide of potassium, chloride of gold and sodium, the alternative treatment with mercury, and counter-irritation have all been equally unavailing, though a fair and honest trial was given to each. The fact seems to me to be clearly demonstrated that the uterine displacement has nothing to do with the distressing symptoms; that the retroversion and oöphoritis are entirely distinct maladies, each characterized by peculiar phenomena and each calling for separate treatment. While it may be an error to postpone an operation for the removal of the uterine appendages until the patient is worn out with her sufferings, it is a very natural timidity to

shrink from assuming so grave a responsibility, especially in the case of those within the home circle.

At the suggestion of Dr. P. J. Murphy, of this city, I have been induced to make a trial of rectal suppositories of one-quarter of a grain of *iodoform*, combined with a small quantity of the alcoholic extract of *belladonna*, one of these to be used three times a day. In three instances under my own observation, including the case referred to, these suppositories have given me more satisfying results and better grounded hopes of future alleviation than anything else that I know of. Absence from the marital embrace, with proper hygienic and dietetic rules, must be enforced rigidly. The alleviative and sedative properties of *iodoform* are well known, and in no other disease are its properties brought out so clearly.

BORO-CITRATE OF MAGNESIA FOR PHOSPHATIC INCRUSTATION OF URETHRA AFTER LITHOTOMY.

By S. S. KAHN, M.D.,

SAN FRANCISCO, CAL.

PATRICK R—, aged four years and six months, became a patient of mine on May 8th last. The symptoms of his affection, as described by his mother, were severe pain on micturition, with occasional stoppage of the stream, when his agony would be intense. When he was but nine months old the symptoms first began, and had continued uninterruptedly ever since. A number of physicians had at different times been consulted, none of whom seemed to recognize the true nature of the disease. At no time had any vesical examination ever been made.

In appearance the child was pale and somewhat emaciated. The prepuce was long from constant rubbing. A small-sized silver catheter introduced into the bladder almost immediately detected the stone. It lay to the left of the median line, was not movable, and seemed approximately to be about an inch in diameter.

Careful inquiry into the history of the case presented no ascribable cause. The father of the child was of very dissipated habits. The mother was stout and robust. They had had in all eight children, of whom but three were living. The eldest of these was of a strumous tendency, I having removed, a week or two previous, two lymphatic tumors from the neck. Those of the children who died showed the same tendency.

On May 12th I performed a median lithotomy, without any accident, and with but little trouble dilating the urethra and neck of the bladder. My finger in the bladder detected the stone, which was rough and knobbed, adherent to the vesical wall; the separation was easy. After some delay I succeeded in engaging it in the grasp of the forceps, and extracting it through the perineal opening. Hemorrhage during the operation was slight. After the extraction of the calculus the bladder was carefully searched, but no other stone or fragment discovered. Before leaving the patient the bladder was thoroughly washed with a weak solution of carbolic acid.

The stone had the knobbed appearance of a mulberry calculus, but on examination it was found to be phosphatic in character, with a small lithic acid nucleus. It was of an irregular cylindrical shape, about one inch in length and five-eighths of an inch in diameter. Its weight was one hundred grains.

Reaction after the operation was excellent. There was very little fever, and within two days it began to regain control over the bladder. On the third day some few drops of urine emerged from the meatus. On the fifth day fully half passed through the urethra, and it could retain water for two or three hours at a time. During all this time the perineal wound was repeatedly irrigated with a two per cent. solution of carbolic acid.

Sixteen days after the operation the patient was up

and about, the wound in the perineum had entirely healed, and urine passed through the urethra freely and without pain.

Four days later the boy was brought to my office in terrible agony, suffering from complete retention of urine. I immediately administered chloroform, for the child struggled too violently to admit of a careful examination otherwise. The penis was erect and much swollen. All along the track of the urethra could be felt little hard nodules. The endeavor to introduce a silver catheter into the bladder was unsuccessful. Even an elastic catheter could not penetrate beyond the beginning of the scrotal portion of the canal, where the largest concretion was located. The wall of the urethra was unevenly coated with this gritty deposit up to within three-fourths of an inch from the meatus. It was firmly adherent and could only with difficulty be scraped off.

Examining the perineal wound, I found that there was still a very small fistula left, through which I introduced a probe, which finally passed into the bladder. By moving this about the size of the fistula was enlarged, and when the probe was withdrawn, there was a copious flow of urine. During the passage of the probe through the prostatic urethra, the same gritty sensations were detected as before described. A hard-rubber catheter was then introduced into the bladder, tied in, and the patient sent home to return the next morning, when I proposed taking measures to relieve the obstruction.

The following day the child was again chloroformed. During the previous night the catheter had slipped out of the perineal opening, but it was easy to reinsert it. This I did, and injected through the catheter about two ounces of a one per cent. solution of the boro-citrate of magnesia. This I also injected into the meatus, but it did not penetrate far. I removed the catheter, as the fistula was sufficiently patent to allow of a free escape of the urine. I ordered the internal administration of a teaspoonful of this solution every hour. About eight hours after this procedure the child, in attempting to pass water, after a great effort accompanied with intense pain, passed through the urethra a quantity of this calculus material, about the size and double the thickness of a five-cent piece. Its consistency was like putty. Immediately after this the flow of urine was comparatively easy, although still attended with pain. His condition, however, was much relieved, and he slept soundly and well.

At the next visit the introduction of a silver catheter into the bladder was an easy task. Deep in the urethra there were still gritty points to be felt, but the pendulous urethra seemed clear, the perineal opening had again closed up. The bladder was once more injected through the silver catheter, and the internal administration of the drug continued. That night he passed a piece about the size and shape of a small bean. Subsequent examination revealed the fact that the canal was now free throughout its entire extent; the urine was clear, passed freely, and without the slightest pain. After this there was no further trouble, the child continued to take the medicine internally, but there were no further evidences of phosphatic deposit. It is now fully eight months since this complication occurred, but there has been no relapse and the patient has gained both health and strength.

It was not for the purpose of presenting the operation itself that this article was written, but to point out the oddity and the rarity of the complication that resulted. A careful search through the literature of the subject presents the most meagre details. The surgical authorities in common practical use make absolutely no mention of it. One German work refers to the possibility of the occurrence of incrustation of the urethra after operations for stone, but that it is very rare; and then dismisses the subject without one word as to prognosis or treatment.

Sir Henry Thompson speaks of an incrustation of the perineal wound, and this when slight to be treated with

hip baths or washing with a warm acidulated solution. Once or twice he has found it so thickly deposited that he was compelled to remove it with the forceps. In one case only it coated the whole track of the wound from the perineum to the neck of the bladder itself, and was crushed by him before the end of the fourth week. The wound was four months in healing. In my case, with the solvent or softening agent employed, the urethral tract was cleared in two days, the perineal wound closed up again the following day, and no further trouble ensued. A comparison of the two cases, methods of treatment, and results, is both interesting and instructive.

The possibility of dissolving urinary concretions within the living passages is a question of practical interest, especially as to the possibility of affecting renal calculi. Upon this subject many investigations have been made and varying opinions expressed by Mevet, Civiale, Rees, Roberts, and many others. In an exhaustive review of the subject, published in the "Medico-Chirurgical Transactions" of London, vol. xiii., 1865, Roberts enunciates the principles upon which the solvent treatment of stone should be carried out, declaring that while no new solvent agent had been discovered, they had arrived at a better application of treatment which had long been known in principle, but which had forfeited the confidence of the profession by the faulty manner in which it had been carried out, and its employment in cases where it was sure to fail. In the lithic acid diathesis, the alkaline treatment is emphatically recommended, particularly in limiting the size of the stone when once formed.

Dr. Koehler, in the *Berliner Klinische Wochenschrift*, No. 44, 1879, recommended the boro-citrate of magnesia, and asserted it to be very effective in the dissolution of stone in the bladder and kidneys, as well as in the treatment of catarrh of the bladder. He states that he has left a piece of uric acid calculus in the solution of the boro-citrate of magnesia, and found it broken up at the end of eight days. Reference is made to its use, in 1868, by Bacher, whose formula for the preparation of this salt is given in Hager's "Handbuch der Pharmaceutischen Praxis" as follows: Calcined magnesia, 30 grms.; boric acid, 100 grms.; distilled water, 10 grms. To this mixture is to be added 30 grms. of hydrochloric acid, C. P., and then sufficient alcohol to make it into a fluid paste, and to this add 60 grms. of citric acid. After the alcohol evaporates, this is to be pulverized. For use a one per cent. solution is to be prescribed and freely administered.

EXTIRPATION OF CANCER OF THE FACE, INVOLVING INFERIOR MAXILLARY BONE, FLOOR OF THE MOUTH (RIGHT SIDE), SUBMAXILLARY AND PAROTID GLANDS.

By G. WACKERHAGEN, M.D.,
BROOKLYN, N. Y.

PATRICK S—, fifty-five years of age; farmer; born in Ireland, consulted me on the 6th of December last in reference to a tumor situated over the middle of the right lower jaw. He was suffering great pain from the growth, but otherwise seemed to be in good health, excepting that he had a very feeble pulse. He appeared to be anxious that some operation should be performed, as the tumor was rapidly increasing in size, and he found great difficulty in taking nourishment.

Upon examination I found the most prominent portion of the growth circular in shape, and about one and a half inch in diameter, with ulcerated surface. The remainder involved the inferior maxillary bone, right floor of the mouth, and the submaxillary and parotid glands.

After explaining to him the danger attending so formidable an operation, and the probability of its return, I told him that I would consult with his physician, Dr. Alex. J. Rooney, which I did on the following day.

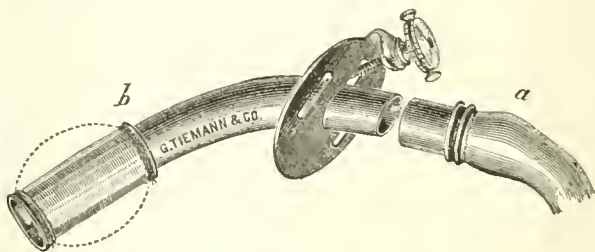
Dr. Rooney informed me that he had known the patient

several years, and that his general health had always been good. Three years ago he had attended him in an attack of double pneumonia; and two years ago he had removed an epithelial growth from his lower lip, when the wound healed readily. Last April Mr. Smith consulted him about a small tumor situated in the soft parts over the right lower jaw, which was well defined and movable. Upon examining the jaw, he discovered a decayed tooth, which he directed should be removed, and the tumor painted with tincture of iodine. Under this treatment the tumor disappeared, and did not return until about two months prior to his consulting me, when it commenced to grow rapidly, involving the surrounding tissues in all directions.

On December 7th I visited the patient at his home in New Utrecht, and finding him still anxious for relief, determined to operate on the following day. The gentlemen present and assisting at the operation were Drs. Spier, N. Ford, Rooney, and Silberman. Careful examination of the heart detected no organic trouble, though the pulse was remarkably feeble, but it improved during the administration of ether.

After placing a ligature upon the common carotid artery and internal jugular vein, I extended the incision upward around the lower portion of the tumor to the lower border of the inferior maxilla, following the lower border of this bone to its symphysis, and dividing the lower lip by a vertical incision. Commencing again at a point anterior to the tumor, the incision was carried above and around the upper and posterior portion, to the lower border of the jaw; thence around the angle and posterior border of the ramus, half-way to the condyle. The incision was then continued around the posterior and lower border of the tumor, to the point where I first started. The tumor was then detached from the inferior maxillary bone, which was found to be extensively involved.

The hemorrhage being quite profuse, in spite of the previous ligation, it was considered advisable at this point to perform tracheotomy, and continue the anæsthetic through a tampon. The instrument devised by Dr. A. Gerster was used for this purpose, and it worked admirably and proved a great convenience. It would seem impossible to improve upon this instrument, and for the information of those who may not have seen it, the accompanying illustration is introduced.



The diseased portion of the lower jaw was now removed by sawing and cutting through near the symphysis and at the angle. Following this the floor of the mouth (right side) including the submaxillary glands, and finally the parotid gland, with all connecting diseased tissue, were thoroughly removed. After the application of carbolic acid solution to the wound, the skin was drawn over and united, with only slight tension.

The patient speedily rallied from the operation, and on the third day was able to sit up. There were no unpleasant symptoms from the ligation of the vessels. The temperature did not reach above 101°, but the pulse was very feeble, and about 100. The nourishment consisted of beef tea, brandy, milk and eggs. On the fourth day he refused the quinine and stimulants, and the attendants stated that it was with great difficulty he could be prevailed upon to take any nourishment. By the ninth day he refused all food, and I passed a tube into the stomach and injected some beef-tea and brandy. The patient resisted so much that it became necessary to have him

held by the attendants. After this he took nourishment willingly, and in considerable quantity, until the twentieth day, when hemorrhage took place from the wound, the patient losing about a pint of blood before it was discovered. Styptic cotton was applied by one of the attendants, and a compress placed over the wound. Upon removing the compress next morning, I could not discover the origin of the hemorrhage. After my departure the patient again refused nourishment.

About a week after the operation, the integument covering the wound commenced to slough, so that the wound was entirely uncovered. The tracheal incision also refused to heal. During the entire period, there seemed to be scarcely any disposition toward granulation or healing; and the patient becoming more and more exhausted, died on January 1st, twenty-five days after the operation. The dressings consisted of carbolized oil, iodine, iodoform, and nitric acid solution, but they seemed to have little effect in promoting the healing process. Friends would not permit post mortem examination.

188 STATE STREET, BROOKLYN, February 7, 1883.

ON DR. SQUIBB'S RESOLUTIONS TO ABOLISH THE CODE OF ETHICS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.¹

By C. R. AGNEW, M.D.,

NEW YORK.

IF I understand the question before us, it is whether we will report for or against Dr. Squibb's resolutions, a question substantially presented, also, in the resolution of Dr. Gouley, "That when the Committee rises it shall report in favor of repealing the new code enacted by this Society in 1882."

I rise to oppose these resolutions and all similar ones, and to urge that when the Committee of the Whole rises to report to the Society, its report shall be against the repeal of the existing code.

A year ago, after mature deliberation and a free discussion, this Society, by more than a two-thirds vote, and in the exercise of its indisputable right, amended its by-laws so as to make them consistent with the laws of the State and public policy. It is true that various attempts have been made to promulgate the error that said action was hasty, imperfectly considered, and that a few "ambitious," "mercenary," and, not to say, unscrupulous members of the Society had brought it about; that "specialists" had been accomplishing their nefarious purposes through the force of ill-timed and badly directed energy. Such gratuitous allegations, however, have not stood for a moment the crucial tests of legitimate criticism or investigation, and may therefore be dismissed as unworthy of even this brief animadversion, much less the serious consideration of the medical profession of the country. In view of them one has only to recall a little history, and to draw comfort from its evidences of the triumph, even though it be sometimes slow, of liberty of conscience over prejudice, misrepresentation, and intolerance. Revisers, all down the pages of history, have had to endure hardship, and the only way for those who are called upon to do the work of revising is to live above the low level of the fear of their fellow-men, and not to be confused, diverted, or intimidated, even though the torch of persecution be brandished in their faces by those who assume to be the moral lights of the world, and the appointed guardians of its best interests.

"Zeal to promote the common good, whether it be by devising anything ourselves, or revising that which hath been labored by others, deserveth certainly much respect and esteem, but yet findeth but cold entertainment in the world. It is welcomed with suspicion instead of love, and with emulation instead of thanks, and if there be any hole left for cavil to enter (and cavil, if it do not

find a hole, will make it), it is sure to be misconstrued and in danger to become condemned. This will easily be granted by as many as know history, or have any experience. For, was there ever anything projected that savored in any way of newness or renewing, but the same endured many a storm of gainsaying and opposition?"

The revisers who unanimously reported the by-law, or code of 1882, framed it to be consistent with the Statutes of the State, especially the law of 1880. This Society adopted the Code by a very large vote without even a verbal amendment, after hours of animated discussion. Under this code or by-law, the medical profession of the State has prospered for a year, and might have gone on doing so for years to come, if it had not been for an agitation fomented by parties living outside of the limits of the State, largely aided, and no doubt on conscientious grounds, by the mover of the resolutions published and widely circulated in the "Ephemeris." The legitimate course would have been to have moved either to give up the charter of the Society, or to amend the State Statute of 1880.

It may be well for us to consider for a moment our position as a Society in relation to the State.

Whence do we get the right to be here in session? Indisputably through our charter from the State. No one but a legally qualified medical man has a right to be a member of this Society. It is nothing to the point to say that the diploma, or certified right to practise, comes from a medical school, and not directly from the State. In this State the law undertakes to regulate, by charter or otherwise, the powers which confer the right to practise, and the method is easy by which you may hold all who attempt to practise within the limits of the State to a strict legal accountability. It is true that this statute of 1880 regulating the practice of medicine is not all that it should be. It is not perfect, nor are the men who acquire rights under it. But it will be amended just as soon as the members of the medical profession cease to legislate for themselves in proscriptive codes, and join other public spirited citizens in inducing legislators to protect the people, as far as practicable, against medical incompetency. Whence do we, as a society, get the right to make medical codes and other by-laws? From the State through our charter. The New York State Statute of 1880 says, "Section 5. The degree of Doctor of Medicine lawfully conferred by any incorporated Medical College or University in this State shall be a license to practise physic and surgery within the State after the person to whom it is granted shall have complied with Section 2 of this act." Section 2 referred to, provides for registry in the County Clerk's office before commencing to practise, etc. Section 4 provides for the indorsing of the diplomas of persons coming to the State to practise, from without the State, by an incorporated university, medical college, or medical school, etc.

The revised Statutes of New York especially provide that every corporation, as such, has power "to make by-laws not inconsistent with any existing law for the management of its property, *the regulation of its affairs*, etc." And in accordance with this provision of the Statutes, the Medical Society of the State of New York has the right to make by-laws not inconsistent with the laws of the State. Kent says, "These corporate powers of legislation must be exercised reasonably, and in sound discretion, and strictly within the limits of the charter, and in perfect subordination to the constitution and general laws of the land and the rights dependent thereon." If you look at your charter you will find that whatever quality your by-laws, or codes, may have, they must, to be legal, and to have binding force upon your members, and punitive power, be "not inconsistent with the laws of the State."

Now, Mr. President, I put it to this society, are we prepared, even under the leadership of the eminent members, I do not call them conspirators, who have been sowing seeds of discord all through the year in the profes-

¹ Remarks made before the Medical Society of the State of New York, in Committee of the Whole, at its Annual Meeting, February 7, 1883.

sion and in this meeting, to array ourselves against the letter of the law and the policy of the State? Or, are we prepared to adopt the resolution to rise and report to the society to repeal the new code? Report to repeal the new code if you please. There is not much in the new code that I strongly desire to see retained. I am quite ready to abolish all but one or two clauses of it. I do wish, however, especially to see the clause retained which binds us all to acknowledge the public necessity for a "legally qualified practitioner." "Members of the Medical Society of the State of New York and of medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine." It is permissive, not mandatory. I wish to see the profession united to contend for that and to secure a higher and better standard of legal qualification.

Having a safe basis, and one on which legislators and the public are willing to aid us, we may as speedily as possible raise the standard of medical education, and express in amendments to the laws regulating the practice of medicine, a higher and higher ideal, and force schools and legislators to apply higher standards of fitness for practice. What I am opposed to here is the declared or implied purpose of the movers of both resolutions, namely: to re-enact the old code, and to throw on the profession, powerless to do the work, what belongs to medical schools and legislators.

One great defect in that old code was that it had come, in the process of time and growth of legislation, to be inconsistent with public policy in our State, and with its statutes. Would it not be grossly opposed to public policy and the letter of the law of the State to attempt, by any code or by-law of our making, to strip a fellow-citizen of a right which the State had conferred upon him: a right identical with that in the exercise of which we are authorized to be here to-night as duly qualified medical men?

The man whom the State has enfranchised this society cannot disfranchise. The medical man whom the State has pronounced to be a legally qualified practitioner, this chartered State Society cannot disfranchise, however much we may despise him or refrain from social communion or fellowship with him. We cannot discipline a member of our society if his conduct is in conformity with the law of the State.

Pass Dr. Squibb's or Dr. Gouley's resolutions, attempt by your vote to re-enact the old code, and you take action which will certainly be decided to be against public policy, and your action in making the by-law proposed inconsistent with the laws of the State. I here quote from a paper by Prof. D. R. Jaques, Professor of Municipal Law, University of New York:

"What is the Code of Ethics? What is the power of the State Society to enact one, or to legislate on any subject? What are the relations of the County Society to the State Society?"

"The State Society and each county society are *distinct corporations*, each with power to acquire and hold property; each with an organization of its own. The State Society is composed of certain permanent members, whom it selects in a certain proportion to the other members, and of members elected periodically. The act of 1813 speaks of them as members, not *delegates*. The State Society is not so much a representative body as a distinct and corporate board of control. The suggestion that the members elected by the county societies must vote as *instructed* by them is untenable. A doubtful principle in any case, it would convert the State Society into a *federal* organization, and would, in effect, require the members to vote *by counties*. In this way rules might be adopted which were disapproved by a large majority of the practitioners of the whole State belonging to the county societies. Moreover, who, it may be asked, are to instruct the *permanent* members?"

¹ See case of The State and relator Gray against Medical Society of the County of Erie, 24 Barbour.

"*Instruction* makes the delegate a mere messenger to carry the conclusions of the County to the State Society; but the members of the State Society are corporators of a distinct body, and go to its meetings to form, receive, and adopt conclusions as the result of views gathered from all sections.

"But the Statutes are conclusive on this point. They require that, in *all* cases, the rules and regulations of the county medical societies shall receive the *sanction of the State medical societies*, and the act of 1866 (chap. 445) applies this restriction to the homœopathic county societies as well. Now, if the county societies may instruct the members they send to the State Society, a majority of the counties could always control the State Society, which would be its mere creature and mouthpiece; whereas the act of 1813, in terms declares that the 'by-laws, rules and regulations' of the county societies shall not be 'repugnant' to those of the State Society.

"The rules of the Code of Ethics are *by laws*. Their force and effect are the force and effect they have as *by-laws*. The authority to adopt the old rule and the new rule of consultations must be found in the power given by statute to adopt by-laws and rules. The act of 1813 and the act of 1866 are explicit in requiring that the by-laws, rules and regulations of the State Society shall not be 'inconsistent' with the *laws of the State*. There may be an '*inconsistency*' which is not a direct violation of the law; but it is believed that the old rule is contrary to both the spirit and letter of the law, as it is contrary to the dictates of a broad and true humanity and the interests of medical science.

"It is not consistent with the *letter* of the Statutes which prescribe the qualifications of practitioners. It says, in effect, that the employment of physicians whom the law has sent into the community and pronounced qualified, thereby inducing the ignorant and the unwary to entrust them with their lives, shall be punished by deprivation of all benefit from the counsels of enlightened physicians. Will the law allow patients to be *punished* for employing those the law pronounces qualified?"

"But there is another consideration equally serious: The rule in question is the action of an organized body of men. It is the act of combination. The men thus combining are considered by many—and consider themselves—the most competent practitioners, the *only* fully qualified practitioners of the State. By adopting this rule, they *combine* to deprive the community of the best advice to be had in cases of sickness. Such a combination is against common law, and the provisions of the statute as well (Penal Code, Section 168). It is a conspiracy against the public health."

What are we to do then, Mr. President? For the present keep the code as it is. After we shall have defeated the attempts in this Society to lead us to rebel against public policy and the law of the State by re-enacting the old code, it will be time enough to say what we may do to amend the existing code. We shall be ready for that question in due season. We have not lowered our flag to any "ism," nor do we propose to.

"There is probably no one thing which man, considered collectively, grants less willingly to his fellow-man than liberty. Nine-tenths of all the wars which have desolated the earth, and no small part of all the ills that have afflicted humanity since the race began, have been due to a denial on the one hand, and an attempt to gain possession on the other, of those attributes of freedom which modern thought is coming to regard as among the inborn, inherent, and inalienable rights of every individual. And still the struggle goes on. Liberty of the person, liberty of belief and worship, liberty of speech and press, and liberty to have a voice in the choice of rulers and forms of government." I would also add liberty of medical consultations, "are still privileges denied to no small part of mankind; and any extension of liberty in these respects, in the future as in the past, will probably be conditioned upon long-continued, desperate

efforts and upon the payment in blood treasure, and suffering of large price. D. A. WELLS."

Charles O'Connor, the great jurist, in a recent letter to your speaker says, the "general doctrine of emancipation from every unnecessary restraint upon individual liberty in action or pursuit which forms the basis of the argument" (referring to the speaker's "Limits of Medical Ethics"), "has long had me for a disciple."

After we shall have defeated the attempts to re-enact the old code, let us return to our counties determined to carry into effect the laws we have against illegal practitioners, and to make the laws better. How many counties, represented here, have done their duty in this matter? New York County has endeavored strenuously to do its duty. Twenty-seven illegal practitioners have been arraigned in New York City during the past year, and twenty-five of the number have been convicted and punished. And at this moment charges are being pressed against a medical college there with good prospect of convicting its managers of illegal methods of granting diplomas.

But the question is pertinent, What are we doing individually for higher medical education? How many public-spirited men have we attempted to enlist in the cause of medical education in our respective counties? How much have we done to advance the interests of our Medical Alma Mater to give it the means to make its diplomas more valuable? How much have we done individually to change the character of proprietary medical schools, and to secure for them adequate funds and a more thorough and severe curriculum?

When we shall have begun even to consider honestly these and kindred questions, we will soon see the standard of medical education and of the legally qualified doctor rise, and the petty questions of schools and "isms" will, like other ephemeral issues, vanish or become despicable.

As regards error in medicine, what Thomas Jefferson said in another field is indisputably true here also. "Error of opinion ceases to be dangerous when reason is left to combat it." Leave members of a liberal profession free to go as advocates of the truth wherever called, and only restrained by the rules of common decency, legality, and prudence, and error will be less arrogant and dominant, and the dupes of error less numerous and more quickly rescued.

Progress of Medical Science.

THE TREATMENT OF PELVIC ABSCESS.—Dr. Tait treats this troublesome affection in the following way: He makes an abdominal incision, opens and empties the abscess, stitches the two wounds together, and secures drainage of the abscess cavity. The result has been most satisfactory, as twenty-two of his twenty-four cases were completely cured, and another is nearly well and improving, while in only one did the wound fail to heal, and the patient died of phthisis pulmonum, which was suspected when the operation was performed. Under the old methods of treatment, he says that more than one-half the cases were not cured, but either died or led an invalid life by reason of suppurating sinuses.—*British Medical Journal*, February 17, 1883.

TRANSFUSION OF PURE WATER.—Dr. Coates (*London Lancet*) reports a case of transfusion of pure water, warmed to the proper degree. The patient was a primipara, twenty-seven years of age. The cause of collapse was an alarming hemorrhage on the ninth day after childbirth. Some twenty-two ounces of water were allowed to enter the median cephalic vein through a Jennings siphon. The result was striking, and convalescence speedy.

CONGENITAL SARCOMA OF THE LOWER JAW.—Dr. Arkövy narrates the case of an infant, which was born with

a tumor of the lower jaw. The growth was about the size of a walnut, and on microscopical examination proved to be a large-celled sarcoma. Congenital neoplasms of this kind are known to be exceedingly rare. Thus Holmes's "Surgical Diseases of Children" mentions only two similar cases.—*Orvosi Hetilap*, February 4, 1883.

IMPREGNATION BEFORE THE MENSTRUAL EPOCH.—Mrs. P. J.—, born March 10, 1842, married December 24, 1854, making her age at marriage twelve years, nine months, and fourteen days. Was fully developed, but breasts were small and she had never menstruated. On the 9th of September following she was delivered of a well-developed child; time of gestation eight months and fifteen days. One month after delivery she menstruated for the first time, which lasted seven days.

Menstrual function was absent from this time until after the birth of the second child, which was born October 16, 1856, one year, one month, and seven days after that of the first.

From this date menstruation has been regular until about fifteen months ago, when it suddenly ceased and has not since returned. Her general health has been good. She was married three times and had five children. In 1862 had a miscarriage. At no time was the menstrual flow profuse.—*N. O. Med. and Surg. Jour.*

MULTIPLE LYMPHADENOMA OF THE CONJUNCTIVA.—Dr. Goldzieher, of Buda-Pesth, Hungary, who some time ago described a case of lymphadenoma of the conjunctiva (see *MEDICAL RECORD*, February 10, 1883), at a recent meeting of the Medical Society of Buda-Pesth, showed a patient, aged twenty-six, from whose left eye he had removed a portion of the ocular conjunctiva, including several milium nodules. Some of these were yellow, others grayish and translucent. Under the microscope they exhibited the structure of lymph-follicles with giant cells, but did not show Koch's bacilli. The wound healed kindly, but soon afterward a recurrence of the disease took place. Goldzieher is inclined to think that those cases which have been recorded as tuberculosis of the conjunctiva with caseous degeneration, were, like the present one, cases of lymphadenoma.—*Orvosi Hetilap*, February 4, 1883.

GASTRO-ENTEROSTOMY.—Dr. Fischer, of Strasburg, describes, in the *Deutsche Zeitschrift für Chirurgie*, a remarkable abdominal operation. In 1881 Freund removed a fibroid uterus from a woman, aged thirty. Last May this unfortunate patient, who appears to have been predestined to be a victim to abdominal disease, was found, by Dr. Fischer, to be suffering, according to his diagnosis, from carcinoma of the pylorus. Lücke determined to attempt resection of that part of the alimentary canal. From May 13, 1882, to May 25, the stomach was washed out every day, and on the 25th, after an enema had also been administered, the operation was commenced, without spray. The parts were exposed by a free incision, but resection was found to be impracticable, owing to extensive adhesions between the pylorus and the neighboring structures, especially the pancreas. The pylorus was therefore laid open and the aperture united to the abdominal wound, as in gastrostomy. The opening left in the wound was dressed with iodoform, and covered in with thymol-gauze. After the operation the patient did well; the temperature rose but little above normal, and she was discharged in thirty-seven days. Since then she has enjoyed very fair health, being free from attacks of vomiting, and can easily digest light, nutritious food.—*British Medical Journal*.

THE CLINICAL SOCIETY OF LONDON has appointed a committee for the purpose of inquiring into the results of the treatment of spina biida by injection. Circulars have been printed and sent to all the registered members of the profession in the British Islands.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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STATE EXAMINATIONS IN GREAT BRITAIN.

THE chief subject of medical interest in Great Britain is the proposed new Medical Act, which is expected to come before Parliament for a second reading in the course of the next few days.

The pretty general opinion in London seems to be that the act is a good one. How the different licensing bodies of the United Kingdom will receive it is another matter.

Practically, the new bill, if it should pass and become law, will supersede most of the nineteen examining bodies now in existence. It is proposed to hold a State examination in each of the three divisions of the United Kingdom, and to admit no one to the register until he has passed this examination. By this means all students will be compelled to pass an examination in surgery, obstetrics, and medicine before being admitted to practice. Until a few years ago, the College of Surgeons did not examine in obstetrics for its membership examination, but only required a certificate of attendance on ten cases of labor. Their examinations have lately been extended, but even now there is no *clinical* examination in medicine, and no examinations at all in forensic medicine or chemistry, although courses of lectures must have been attended in these subjects.

Similarly, the Society of Apothecaries holds no examination in surgery, though lately the examiners in medicine have wandered somewhat into the region of surgery in their questions. The examination in anatomy is chiefly confined to regional anatomy, and does not comprise examinations on dissections. These anomalies will, it is to be expected, soon disappear.

All the British examining bodies require four years to be spent in study, of which period *at least* three winter sessions (of six months each), and two summer sessions (of three months each), must be passed at a medical school.

The examinations for the M.R.C.S. and L.S.A. are both of them sufficiently stringent so far as they go. The defect has consisted in granting a diploma which practically allows practice in all branches without examining in all.

The new act will also create a reformed Medical Council to which will be handed over the funds accumulated by the present one. It is to be hoped that the new council will do more useful work for the profession than

the present one has done. Most of its income has been devoted to salarizing the members, who hold an annual sitting which begins and ends in—talk! The present council has little power, and has made itself the laughing-stock of our professional cousins.

PNEUMONIA IN NEW YORK AND ITS TREATMENT.

CONSIDERABLE has been said of late regarding an alleged unusual prevalence of pneumonia in New York, and some attempts have been made to create a sensation over the matter. As will be seen by the accompanying table the mortality from pneumonia during the past few months has been somewhat greater than it was a year ago. For example: in the month of March, 1882, the weekly mortality from this cause varied between 97 and 111; in the corresponding month of the present year it has ranged between 110 and 128. For the two preceding months of 1883 the weekly mortality has also been greater. We must infer, therefore, that there is either more pneumonia at present than usual or it is of a more malignant type. At the same time the number of cases cannot be very excessive—certainly not enough so to cause alarm. A somewhat vague estimate of the number of cases occurring weekly might be made, based upon the probable per cent. of deaths from pneumonia. This per cent. varies between 2 and 33, but perhaps a mortality ratio of 15 per 100 would not be far out of the way. This would make the weekly number of cases at present about eight hundred.

WEEK ENDING—	MORTALITY FROM—		
	Pneumonia.	Bronchitis.	Phthisis.
March 24, 1883	128	38	121
“ 17, “	118	35	127
“ 10, “	111	40	112
“ 3, “	110	45	92
February 24, 1883	94	36	118
“ 17, “	99	29	119
“ 10, “	71	25	119
“ 3, “	85	40	87
January 27, “	72	31	111
“ 20, “	74	37	102
“ 13, “	92	33	120
“ 6, “	78	31	89
December 30, 1882	75	38	103
“ 23, “	84	30	92
“ 16, “	80	29	103
“ 9, “	82	35	106
“ 2, “	69	31	....
For the month of November,....	40-50	....	....
“ “ “ October	36-51	....	....

WEEK ENDING—	MORTALITY FROM—	
	Pneumonia.	Phthisis.
March 25, 1882	101	97
“ 18, “	93	104
“ 11, “	107	109
“ 4, “	98	111
February 25, 1882	84	100
“ 18, “	103	120
“ 11, “	92	117
“ 4, “	81	96
January 28, “	82	102
“ 21, “	92	111
“ 14, “	93	99
“ 7, “	82	94
December 31, 1881	104	107

Along with the increase in mortality from pneumonia there has been a slight increase in the mortality from phthisis, while that from bronchitis is not greater than it was a year ago. Despite the slight increase shown above, the mortality rate of the city is considerably lower than it was in the winter of 1881-82. It now ranges between 25 and 30 per 1,000, the number of deaths for the week ending March 25th being 763. During the month of March, 1882, the mortality reached as high as 814 per week, the increase being due to an excessive prevalence of zymotic diseases.

In the management of pneumonia, New York physicians, in accordance with the prevalent American teachings, adopt the principle that there is no *special* treatment for the disease. In most cases, rest, pure air, careful attention to nourishment, and, toward the close, some stimulants, are generally all that is resorted to. A little morphine, or a hypnotic, and some external applications are often used. Cold water applications are, we believe, very universally condemned—as they should be. Tartar emetic, iodide of potash, bleeding, and even quinine, are special drugs whose regular use is now generally abandoned. Some physicians give aconite or veratrum at the beginning of the attack. The administration of sedative doses of calomel, toward the close of the fever's course, is a practice that is creeping into fashion. The results are sometimes brilliant, but not rarely are disappointing. Cardiac stimulants, cupping, bleeding, inhalations of oxygen, etc., are measures that have to be employed to relieve the dyspnea, exhaustion, and threatened heart-failure in serious cases.

THE PHYSICIAN AND HIS PROFESSIONAL SECRETS.

A SUIT involving the old question whether information obtained by a physician from a patient, orally or by observation, must be disclosed on the witness stand, has recently been tried before the Supreme Court of Missouri. The law in that State declares that a physician "shall be incompetent to testify concerning any information acquired by him from any patient whom he may be attending in a professional character, and which information was necessary to enable him to prescribe as a physician or operate as a surgeon." The court held in the case in question that it will not do, while the mouth of a physician is closed as to the talk of his patient, to open it as to knowledge acquired from his own diagnosis of the case.

It thus sustained the law and the principle underlying it, and the decision is an important one.

The law in the State of New York is very much like that in Missouri. In England, however, the highest legal authorities have decided that medical men enjoy no special privilege with regard to secrets of a professional nature.

Although this view may have a great weight of legal argument in its favor, it is not the one which the medical profession or the leading medical jurists advocate, and we are gratified to find that the medical, and as we believe, higher position, is gaining strength.

The single weak point in the laws of Missouri and of some other States, regarding this position, is that they do not sufficiently insure to citizens a high status for these medical men who are thus privileged to keep back evidence.

FALLING FROM GREAT HEIGHTS.

It has been asserted that a man falling from a great height dies before he reaches the ground, and we recently noticed this question discussed in a public journal.

The experience of an aeronautical party in the balloon Owl, which made a very rapid descent, during the fall of last year, at Dunmow, Essex, England, throws some light on this disputed subject.

The voyage being limited to time by the conditions of the contest in which the party in the car were engaged, a rapid descent became necessary. The valve was twice opened, and volumes of gas rushed out. The balloon fell plumb 1,300 feet in one minute and a quarter. They came to the ground with a thud which sent one of the occupants of the car limping for six weeks afterward, but none of his other three companions suffered from the severe bone-shaking. It is interesting to know that their breathing was not in the slightest degree affected by this rapid falling through the air. All appeared to be perfectly conscious, and as calm as men might be who had reason to fear that their next second might have been an eternal one.

We understand it is on record that one aeronaut fell from a car, a distance of sixty feet into a ploughed field, without loss of consciousness.

A WORD TO OUR STATE MEDICAL SOCIETIES.

WE have before us a large number of the "Transactions" of State Medical Societies. They are most suggestive volumes, like all things which are truly American. But perhaps the thing most strongly presented, after turning some of the pages, is the query whether or not our State Societies have any function as scientific medical bodies. It has been, we know, the fashion to decry State medical work, but unfortunately this fashion has had a solid basis, and criticism is still sadly needed. And as this work for the present year will soon begin, we may very properly assume the task of gentle criticism now.

One of the great needs of the societies in question has been efficient and experienced officers who understand what to do in order to get work out of a medical organization. All societies should have a practically, permanent executive officer, who should generally be the secretary. This officer, if supplied with a little money and a good deal of intelligent energy, could arrange definite programmes of scientific work, could solicit papers from men who know how to write, and could pre-arrange discussions. For experience has as yet failed to teach our brethren who attend State societies that the medical work is not actually done at the annual meetings, nor is it expected to be done. This work is to be finished before the sessions and simply reported on at the time of meeting. Experience has also failed to teach society managers that even debates are rarely satisfactory and useful unless some previous thought has been specially given to the subject in hand. All these things a good officer could and should attend to.

The practice has been growing in some societies of having special reports upon various branches of medicine. These reports are merely summaries, taken from medical journals, and contain no originality. They are a form of literary work which should not be presented at

meetings of medical societies. The same reports and better ones are found in a dozen medical periodicals, and it is first-hand work which such large bodies, as our State medical organizations are, should call out.

With a competent executive to arrange for real work, a society may, with a clear conscience, indulge in social relaxations. We believe in the usefulness of this feature, promoting, as it does, mutual acquaintance and good-fellowship. Happily our societies are already quite beyond the need of criticism or advice in their provisions for this part of the proceedings.

We trust that the presidents of our State societies, who will now so soon be delivering their "inaugurals" and "annuals," will temper their eloquence with some practical suggestions. We have heard quite enough, for example, in annual addresses of the scope and beneficence of "preventive medicine." We respectfully request that this topic, which has been the mainstay of presidential eloquence for several years, be allowed a temporary repose. Let the presidents urge the adoption of systematic methods of work, the securing more and better papers, the encouragement of critical discussion. In this way there may in time be some good work done and good volumes published. At present the majority of State Medical "Transactions" are worth little more than the paper on which they are printed.

THE ABSTRACTS.

THIS class of powdered drugs introduced in the new Pharmacopoeia, claims some attention from physicians. It is introduced, we are told, in order "to supply a demand for dry-powdered extracts." These abstracts are just twice the strength of the crude drug, or about twice the strength of the fluid extracts.

The chief objection to them is, according to *Ephemeris*, that they require a troublesome, expensive, and hurtful process to effect a little in the way of concentration, condensation, and convenience.

In order to have them of uniform strength, many are made much weaker than they might have been, and are consequently bulky and inconvenient.

A list of eleven drugs is given of which abstracts are made. For the information of our readers we append the list: Valerian, podophyllin, nux vomica, jalap, ignatia, hyoscyamus, digitalis, belladonna, aconite, senega, conii.

In an analysis and description of these drugs given by the authority above quoted, we are told that there are only two of them, conium and senega, which have any especial advantage over the crude drug or extracts.

UTERINE DYSPEPSIA.

In an article upon this subject in the *Prager Medicinische Wochenschrift*, December 20, 1882, Dr. E. H. Kisch remarks upon the relationship existing in health between the stomach and the uterus. He states that while normally the reaction of the stomach becomes neutral in five to seven hours after a meal, during menstruation it remains constantly acid. Not all affections of the female sexual organs give rise to dyspepsia, but only those of the uterus itself, and of these may be excluded all superficial erosions and affections of the mucous mem-

brane, thus leaving as causes only the structural changes of the organ, versions, flexions, subinvolution, deep follicular and cancerous ulcerations, and similar conditions. The most frequent cause of digestive disturbance he finds to be retroflexion. The symptoms vary much in intensity, sometimes, however, they assume a most threatening severity. The appetite is capricious, the tongue is but slightly coated. There is often pain in the epigastrium, with sour eructations and heartburn. Sometimes there is vomiting after each meal, together with constipation and flatulence.

Sympathetic disturbances are common, such as palpitation of the heart, neuralgia, melancholia, etc. The affection is to be distinguished from gastric catarrh, ulcer of the stomach, and simple nervous dyspepsia. This is to be determined by attention to the symptoms peculiar to each of these conditions, but especially, and sometimes only, by the results of treatment. With the improvement in the affection of the uterus the dyspeptic symptoms subside. Hence all curative efforts are to be directed especially against the abnormal condition of the uterus. Certain mineral waters are often of great value, especially those containing sulphate of sodium. The author concludes by urging the necessity of a uterine examination in all cases of obstinate dyspepsia occurring in females.

A STATE CHEMIST.

FOLLOWING the example of some European countries, it has been recommended to the Medico-Legal Society that the State of New York create the office of a State chemist. The person holding this office is to have charge of a laboratory suitably furnished. His duties should be to make proper and careful analyses in all cases of poisoning, etc., where such analyses are needed. In this way the State and the accused would be sure of having examinations made by experts who were non-partisan and competent.

The idea at once arises that, under our present political system, the officer thus appointed might very likely be more of a "statesman" than a chemist. If we are to have a State chemist also, why not a State expert in insanity and other branches? The scheme appears to have no inherent objections, but it would be difficult to carry it out satisfactorily.

THE ELECTION OF NEW YORK COUNTY DELEGATES.

THREE new delegates were elected at the meeting of the County Medical Society, March 26th. The occasion was taken to bring up again the question of codes. The three delegates, elected by a vote of 94 to 71, represent the old code element. This result was saluted as a great victory. We trust that those who so announce it will have the fairness to add some of the accompanying facts. The vote was obtained by means of systematic canvassing and a preliminary caucus. Printed ballots were supplied and all the machinery for securing the desired end was put in action. The other side, which has already polled twice the number of votes cast at the last meeting, was taken by surprise and made little preparation for so vigorous a campaign.

The result will have the effect of silencing those who

have been charging the new code and no-code party with using political methods and of packing meetings.

So far as this election goes, the vote of the State Medical Society remains substantially unchanged, being made by it 102 to 106.

It is a noticeable fact that out of the 2,500 physicians in the city, and 900 in the County Society, only about 200 can be wrought up to enough interest in the code to vote upon it.

We are glad to observe that the battle in the city here is still in the main a good-natured one and it should be kept so. We have plenty of mud thrown in from outside.

SPINA'S ATTACK ON KOCH.

DR. ARNOLD SPINA, of Vienna, one of Professor Stricker's assistants, has published a brochure in which he strongly attacks some of the claims made by Koch. Dr. F. E. Saltler (*Cincinnati Lancet and Clinic*) gives the following summary of the points which are made:

First.—Dr. Spina denies the statements of Koch and Ehrlich, that solutions of the aniline dyes must react alkaline in order to stain the so-called bacillus tuberculosis, and also that acids and aqueous solutions of vesusin do not enter the bacilli.

Second.—He denies that bacteria, which stand in no causal relations to tuberculosis, react in a different way with coloring matter from the bacilli found by Koch.

Third.—He denies the statement of Koch that the bacilli of tuberculosis occur constantly in the tuberculous organs of man. He found that this statement was too far reaching, and in many cases examined he never found any bacilli. As regards the bacilli in sputa, his results agree essentially with those of Koch.

Fourth.—He was never able to find bacilli in the tubercles which stood in no connection with the open air—the serous membranes of the body. He says “I have examined about one hundred and fifty mesenteric and omental tubercles, in the most various stages of their development, according to Koch's and Ehrlich's method, and found bacilli in *not one* case.”

Fifth.—He also criticises the insulation experiments made by Koch with purified bacilli, and says that the specific character of tuberculosis has not been proved by them. He calls attention to the history of inoculation experiments; the conflicting results, the negative and positive results of inoculations with tuberculous matter and indifferent substances, and also gives the results he obtained by inoculations with purified bacilli.

Sixth.—He concludes by saying that the bacilli of tuberculosis are the result, not the cause of the disease.

Dr. Spina's paper is critical and aggressive rather than judicial. His view that the infection of animals by tubercle has not yet been proved; in other words, that tuberculosis is not an infectious disease, is contrary to the general tendency of pathological opinion at present.

A SWISS HOSPITAL IN NEW YORK.—It is proposed to erect a Swiss Hospital and Home in this city. The enterprise is under the management of the Swiss Benevolent Society, which already has five thousand dollars for the object. The Swiss in New York number between twelve and fifteen thousand.

News of the Week.

A LAW TO LEGALIZE DISSECTION in Colorado has recently passed the Legislature.

AN EPIDEMIC OF SMALL-POX IN NEW ORLEANS.—Small-pox continues to increase in New Orleans. During the week ending March 24th the number of deaths from the disease was sixty-five, out of a total of one hundred and seventy-nine deaths.

NEW DELEGATES OF MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At the stated meeting held the 26th inst., Drs. Charles Hitchcock, Charles A. Leale, and Charles S. Ward were elected delegates to fill the vacancies caused by the resignation of Drs. Laurence Johnson, David Webster, and Frank P. Foster, who were elected permanent members at the last meeting of the Medical Society of the State. The newly elected members are in favor of retaining the Code of the American Medical Association.

A GENEROUS ACT.—The *Louisville Medical News* publishes a list of the New York physicians who were active in sustaining the present code of ethics, and now impliedly recommends that the physicians of the South and West send no patients to these gentlemen, on the ground that they are dishonest, mercenary, and desirous of affiliating with and encouraging quackery.

AN ANNUAL ALUMNI PRIZE of one hundred dollars has been offered by the Alumni Association of the College of Physicians and Surgeons of Baltimore.

A CORONER'S VERDICT UPON A DOCTOR AND APOTHECARY.—The coroner's jury at Titusville, Pa., recently found that Leander Smith, of that place, came to his death by a dose of cyanide of potassium, which had been obtained for him by a physician, at a drug store temporarily in charge of an inexperienced clerk. They found the doctor guilty of criminal ignorance in ordering so poisonous a drug and directing its use in the manner he did, and they found the proprietors of the drug store culpably ignorant and guilty of keeping and selling drugs the nature of which they know nothing about, and guilty of employing an inexperienced druggist.

NO SCHOOL OF PHARMACY FOR WOMEN has been established at Louisville, Ky., as has been very generally reported.

TESTIMONIAL TO PROFESSOR ERICHSEN.—A bust of Professor Erichsen and a sum of money were presented to him a few weeks ago by a number of his pupils and admirers. The bust is deposited in the University College. Mr. Erichsen will use the money to found a prize for skill in operative surgery.

THE STATE PHARMACEUTICAL ASSOCIATIONS of the country meet this year as follows (*Pharmaceutical Record*): April 2d, Louisiana, at New Orleans; May 1st, Iowa, at Davenport; May 8th, Alabama, at Selma; May 15th, Virginia, at Norfolk; May 16th, Massachusetts, at Springfield; May 16th, New Jersey, at Orange; May 16th, Ohio, at Cleveland; May 16th, Kentucky, at Eminence; June 12th, New York, at Ithaca; June 12th, Pennsylvania, at Harrisburg.

STATUE TO PINEL.—Subscriptions are being made in Paris to erect a statue to Pinel. The sum of five thousand dollars has already been raised.

THE NEW YORK SKIN AND CANCER HOSPITAL.—The *Medical Herald*, of Louisville, Ky., says that voluntary contributions for the establishment of this hospital "are being solicited openly all over the country by a printed circular." The promoters are criticised for thus going abroad to beg.

SANITARY INSPECTOR OF SCHOOLS.—Dr. W. E. Griffiths has been appointed by Health Commissioner Raymond, of Brooklyn, Sanitary Inspector of Schools.

A NEW MEDICAL POET.—Dr. S. Weir Mitchell has recently had published a volume of poems entitled, "The Hill of the Stones, and other Poems." The work is highly spoken of. We welcome another medical man into the ranks of poesy; Esculapius was the son of Apollo.

PROPOSED STATE EXAMINATIONS IN GREAT BRITAIN.—There are in the United Kingdom nineteen examining bodies, no two of which agree exactly in the standard of their examinations. Some of them are very severe—notably those of the Universities of London and Cambridge; some are quite the reverse. Nevertheless, all boards now require four years study, and examine in medicine, surgery, and in midwifery before granting a diploma. The English College of Surgeons has recently extended its examinations, and even the Society of Apothecaries now gives some surgery in their final examination. All this, we learn, is to be changed, and a state examination of uniform standard instituted in each of the three divisions of the United Kingdom.

THE NEW HOSPITAL FOR SMALL-POX on North Brother's Island in this city is nearly completed. The old Riverside Hospital on Blackwell's Island will be used probably for other contagious diseases.

THE NEW YORK INFANT ASYLUM.—A medical board has recently been appointed for this institution, consisting of the following gentlemen: For the Sixty-first Street branch, Drs. J. Lewis Smith, George B. Fowler, *Diseases of Children*; Drs. C. L. Dana, Græme M. Hammond, *Mental and Nervous Diseases*; Drs. Paul F. Mundé, William M. Polk, J. Clarke Thomas, *Obstetrics*; Dr. O. D. Pomeroy, *Ophthalmic and Aural Diseases*; Dr. George M. Lefferts, *Diseases of the Throat*. For the Mount Vernon branch, Drs. George S. Conant, J. H. Ripley, *Diseases of Children*; Drs. W. R. Birdsall, W. J. Morton, *Mental and Nervous Diseases*; Dr. William F. Mittendorf, *Ophthalmic and Aural Diseases*; Dr. T. H. Bosworth, *Diseases of the Throat*.

For both branches: Dr. H. G. Piffard, *Dermatologist*; Dr. L. H. Sayre, *Orthopedist*; Dr. Cyrus Edson, Surgeon; Dr. A. N. Bell, *Sanitarian*; Drs. T. E. Satterthwaite, and William H. Welch, Curators and Pathologists.

REJECTED MEDICAL COLLEGES.—The following medical colleges are not recognized by the Illinois Board of Health: American Eclectic Medical College, Cincinnati, Ohio; American Health College, Cincinnati, Ohio; American University, Philadelphia, Pa.; College of Physicians and Surgeons, Buffalo, N. Y.; College of Physicians and Surgeons, Joplin, Mo.; Edinburgh Uni-

versity, Chicago, St. Louis, and elsewhere; Hygeio-Therapeutic College, Bergen Heights, N. J.; Eclectic Medical College of Pennsylvania (late issues); Joplin Medical College, Joplin, Mo.; Livingston University, Haddonfield, N. J.; New England University of Arts and Sciences, Boston, Mass., and Manchester, N. H.; Northwestern Medical College, St. Joseph, Mo.; Penn Medical University, Philadelphia, Pa.; Philadelphia University of Medicine and Surgery, Philadelphia, Pa.; Physio-Eclectic Medical College, Cincinnati, Ohio; Physio-Medical College, Cincinnati, Ohio (late issues); St. Louis Eclectic Medical College, St. Louis, Mo.; St. Louis Homœopathic Medical College, St. Louis, Mo. The list embraces eighteen names, and is short enough.

THE DUVAL PRIZE of the Paris Society of Surgery has been awarded to Dr. Desnos for an essay on "Lithotripsy in Prolonged Sitzings."

THE FOTHERGILL GOLD MEDAL for 1883 has been presented to Mr. Norman Perritt, L.R.C.P., for an essay on "The Operative Treatment of Intrathoracic Effusion."

THE NEW YORK COLLEGE OF PHARMACY held its annual banquet at Delmonico's March 27th. Dr. D. H. J. Menninger presided. Speeches were made by Rev. J. P. Newman, Hon. R. P. Flower, Dr. Walter De F. Day, Mr. D. C. Robbins, Professor Ewen McIntyre, and others. The ices were served in white pastry skulls.

THE MEDICAL ASSOCIATION OF GEORGIA meets at Athens on the third Wednesday in April.

AN ABORTIONIST ARRESTED.—One of the many creatures in this city who unblushingly traffic in foetal life was recently arrested and is likely to be punished. The cases in which sufficient evidence to convict is obtained, like the present, are unfortunately rare.

FREE LECTURES ON MATERIA MEDICA.—Dr. D. W. Prentiss is giving a course of free lectures on Materia Medica at the National Museum, Washington, D. C.

AN ANTI-VIVISECTION SOCIETY is to be organized in Philadelphia.

TYPHOID FEVER FROM MILK.—In a group of fifteen typhoid fever cases recently occurring in the northwestern part of the city, it has been found that all the patients used the milk from one herd of cows, one of which suffered from a herpetic eruption. This cow is watched and the use of its milk is prohibited. The sanitary condition of the houses inhabited by the persons who contracted the disease is excellent.

MEDICAL HOSPITALITY.—An entertainment fund has recently been endowed in the Philadelphia College of Physicians by Dr. S. Weir Mitchell. The income is to be used, under the direction of a standing committee, to defray the expenses of occasional receptions, at which refreshments suited to the dignified character of the Society are to be provided. It is proposed to issue invitations not only to members of the College and other physicians, but also to laymen who may be identified with the intellectual welfare of the city. In this city the New York Academy of Medicine formerly dispensed doughnuts, coffee, and sandwiches after the scientific labors were over. The practice has now, we believe, been given up.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 332.)

* SPINA-BIFIDA COMPLICATED WITH HYDROCEPHALUS.

DR. PUTNAM-JACOBI presented a specimen accompanied by the following history: The child was first seen at the dispensary at Mt. Sinai Hospital about a month after its birth, and then presented a tumor which occupied the entire region of the lumbar vertebrae, the posterior arches of which were evidently absent. The tumor was not covered by skin, but only by a semi-transparent membrane which was ulcerated at the time that she first saw the patient, and during the entire year which followed it continued in an ulcerated condition despite all the care given to it. The tumor was entirely incompressible, but pressure gave rise to no pain, and to no perceptible phenomena. The child was completely paralyzed in its lower extremities, and also had double talipes calcaneus. It exhibited no cerebral symptoms. The treatment was entirely expectant, consisting chiefly in emollient dressings and protection. At the time the child was seven months old its head began to enlarge, and the eyes showed the characteristic appearances of hydrocephalus. They were not protruded at all, but it was noticeable that rolling down of the eyeballs occurred simultaneously with enlargement of the head, thus showing that prominence of the eyeballs cannot be due to mechanical protrusion of the eyeballs from fluid in the orbit, but rather to paralysis of the superior rectus muscle, as suggested by Henoch. Emaciation began from this date. The child remained under observation five or six months, had occasional attacks of apparently cerebral hyperæmia, apparently suffered from headache, and finally died comatose in one of these attacks. The child had no convulsions. It seemed quite probable, on account of the paraplegia and the double talipes, that there might exist communication between the sac of the spina-bifida and the cerebral ventricles, accompanied with dilatation of the central canal of the spinal cord. At the autopsy, however, there was no trace of any such dilatation. A considerable quantity of fluid was found in the arachnoid cavity of the cord which communicated below with the cavity of the sac, and above, through the transverse fissure, with the subarachnoid cavity of the brain, but there was no dilatation of the central canal, and the sac did not communicate with it or with the cord at all. The sac lay against the posterior surface of the bodies of the lumbar vertebrae, from which the posterior arches were absent. The termination of the cauda equina was spread out on the lamina of the sac, which divided its cavity into several loculi. The brain exhibited an extensive dilatation of the lateral ventricles, the latter being filled with serum. There was no roughening of the ependyma, such as exists when ventricular effusion is due to leptomeningitis. The effusion, however, within the ventricle was not sufficient to compress the cerebral convolutions from within. There was no softening of the brain. Death seemed to have been due to gradual pressure within the ventricle without secondary encephalitis or softening. The intelligence of the child was perfectly preserved as far as could be ascertained, but at the time of its death the body was no larger than that of a child five or six months old.

DR. HEINEMAN referred to a case of spina-bifida in which the sac was nearly as large as an orange. In that instance there was double equino-varus with decided spastic contracture. The tumor was situated over the region of the cauda equina.

DR. WYETH referred to a case which came under his

observation at the Polyclinic, in which there was a very great variety of deformities—cleft palate, hare-lip, and with the others a double talipes varus on one side and valgus on the other. His belief was that in these cases the deformities were due to lack of development.

DR. PUTNAM-JACOBI remarked that the association of club foot with spina-bifida had been often noted, and it was remarkable that it was due in some instances to compression of the spinal cord.

DR. L. EMMETT HOLT presented a specimen of

GLIO-SARCOMA OF THE CEREBELLUM (SEE PAGE 342).

DR. WYETH asked if any examination was made of the semicircular canals or the petrous portion of the temporal bone.

DR. HOLT replied that there was not.

DR. WYETH thought it important that such an examination should have been made, as the same symptoms present in Dr. Holt's case might be produced by the affection known as Ménière's disease, which had been established to be due to disease of the semicircular canals, and that interference with the function of the semicircular canals is accompanied by lack of co-ordination.

DR. HOLT remarked that Nothnagel had made a very careful *résumé* of the literature of tumors of the cerebellum, and had reached the following conclusions:

First.—That they were unable to make any diagnosis positive of a lesion which affects the lateral lobes of the cerebellum.

Second.—That the main symptom is ataxia, and this is only present when there is destructive lesion affecting the vermiform process; that the ataxia symptomatic of cerebellar lesion is not like that of locomotor ataxia, but resembles that which exists in alcoholic poisoning.

In his specimen the lesion was limited almost entirely to the vermiform process and to the anterior lobes; the lateral lobes were healthy.

DR. PUTNAM-JACOBI remarked that if a tumor press upon the pons, convulsions might occur and complicate the case. She had seen one case of this kind which was rather an interesting combination of lesion and diagnosis. In a large number of cases of tumor of the cerebellum mentioned by Nothnagel, amaurosis was present.

DR. HOLT remarked that another symptom mentioned by Nothnagel is vertigo, but the presence of this symptom it was difficult to determine in so young a child as was the patient in the case reported.

DR. BIRDSALL remarked that the peculiar description of the ataxia given by Dr. Holt was typical of cerebellar disease, and that the case was extremely interesting with reference to location of the tumor in that region. With regard to disease of the semicircular canals producing certain symptoms, he believed it to be well established that the symptoms of Ménière's disease might depend upon disease of any part of the auditory tract, or disease from that portion back to the centres of the medulla oblongata, and possibly certain parts of the cerebellum from the same cause. The view which at one time held sway that only lesions of the labyrinth caused Ménière's disease he believed had been so modified that it was now generally admitted that disease in any part of the auditory tract might give rise to the symptoms present in that affection.

DR. W. T. BELFIELD was made member by invitation, and demonstrated to the society

THE BACILLUS OF LEPROSY AND THE PRACTICAL USE OF ABBÉ'S ILLUMINATOR.

The two points which he regarded as of special importance in order to demonstrate the presence of bacteria were, first, the use of aniline staining, and, second, the use of Abbé's illuminating apparatus. The peculiarity of the bacteria was that they retained aniline colors under conditions which deprived every other substance of the color. The effect of the illuminator was to obliterate refraction outlines, leaving the bacilli in the luminous field

where, by virtue of their retained color, they are distinctly and easily recognizable.

DR. WENDT was pleased to hear Dr. Belfield admit that in the present state of our knowledge concerning most of the bacteria, we could speak only of their association or coexistence with certain pathological conditions. Perhaps a relation of cause and effect would sooner or later become established. But at present evidence of this kind was still forthcoming. For this reason he thought that when Dr. Belfield had cited trichinosis as a similar example, he had not done justice to the fuller knowledge which we possessed of that subject. Dr. Wendt did not consider trichinosis analogous to the so-called bacterial diseases. For the natural history of the trichina spiralis was fully known, and its causal relationship to attacks of trichinosis did not admit of the slightest doubt. Not so with the bacteria, however, as Dr. Belfield himself had freely admitted.

DR. BELFIELD dissented entirely from the statement made by Dr. Wendt that a relation of cause and effect had been demonstrated between trichina and the clinical history of the disease known by the name of trichinosis, as we did not know much more with reference to the natural history of the parasite than was at the present time known concerning the natural history of the various forms of bacteria. It was known and established that a parasite occurred in the intestines and in various parts of the body, but where it came from originally we were in just the same doubt as in regard to the different varieties of bacillus, and that there was any demonstrative relation of cause and effect he was not willing to admit.

After some further discussion the Society went into executive session.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, March 20, 1883.

EDWARD G. JANEWAY, M.D., CHAIRMAN.

DR. V. P. GIBNEY reported

CASES OF POLIO-MYELITIS ANTERIOR.

CASE I.—*Affecting left leg and foot when fourteen months of age; right similarly, though not symmetrically affected five months later.*

Louis S—, aged sixteen months, was seen first on November 18, 1882, with an infantile paralysis of left leg. It was reported to be of two months' standing, but no further information concerning the attack was recorded.

There was no faradic response in the muscles of the leg, nor was there any to galvanism except in the extensor long. digitorum, where Ca. C. C. > An. C. C. (both weak).

An apparatus was applied, and he was temporarily discharged to report again when he had recovered from pertussis.

January 27, 1883.—He reports to-day for the first time since last note. No response to either current in the affected limb.

February 16th.—For a week or more a response to galvanic current has been obtained in both anterior and posterior tibial groups, A. C. C. > C. C. C., but it requires a fairly strong current. For the electrical notes recorded every few days, I am indebted to Dr. S. M. Taylor, of our hospital staff.

February 23d.—On Monday last (19th inst.), the patient refused to stand on right [affected] limb. He fell frequently, the limb having apparently lost all strength. This was mentioned by the mother on her previous visits, but no notice was taken of it. There was unquestionable degenerative reaction in anterior tibial group, where there was apparent loss of power on the 21st inst.

To-day the degenerative reaction—well marked—was

obtained in all muscles below gluteal region, except posterior tibial group.

February 28th.—Measurements. Right thigh, 9 $\frac{3}{4}$ —8 $\frac{3}{4}$ inches; left, 9—7 $\frac{1}{2}$; right calf, 6 $\frac{1}{2}$, left, 5 $\frac{3}{4}$ inches.

March 5th.—All the muscles of right limb react to a moderate faradic current, except anterior tibial group; also quadriceps extensor and the peronei are questionable. Degenerative reaction in anterior tibial (muscle). Response in quadriceps either normal or C. C. C. = A. C. C. The posterior tibial and posterior thigh group do not respond to the current which gives a response in above mentioned muscles.

March 7th.—Mother reports that yesterday the child would frequently cry out while at play with pain in the limbs. He often complained of the left as the right. He moves the right limb very freely under the stimulus of the current to-day. Can flex the foot and use the toes, using the anterior tibial group where there remains a A. C. C. > C. C. C. No response from nerve. Response to galvanic *nil* in other muscles, all of which react normally to faradism. Electrical treatment suspended for a week.

March 14th.—Is beginning to use the limb a little in standing. No electrical examination to-day.

March 20th.—Examined by Dr. Birdsall to-day with the following result: Right limb. Faradism. Peroneal (nerve) weakened. Primary reaction in anterior tibial group. Muscles. Slight primary in anterior and posterior tibial groups. Left limb. Peroneal. No reaction in either muscles or nerves.

A moderately strong galvanic current, over the peroneal nerve, right side, gives the normal reaction in the anterior tibial group.

Stimulation of the anterior and posterior tibial groups of muscles, right side, gives the normal response.

Typical degeneration reaction in the posterior group of muscles, and no response whatever in anterior tibial group to a strong current.

CASE II.—Thomas G—, aged five. Came to the Outdoor Department of the Hospital for Ruptured and Crippled on March 16, 1883, for the treatment of paralytic talipes.

The mother gave a history of an illness of three weeks dating from Thanksgiving Day of last year. He had considerable fever, and very marked hyperæsthesia of both limbs during this time. The pain in the limbs was the most prominent symptom. The loss of power was noticed in the beginning of his illness.

In a few weeks he began to use the limbs and was soon on his feet. The right limb has entirely recovered. There is one inch atrophy of left calf, one-half inch of instep. Marked coldness of surface and anæsthesia. There is a degenerative reaction in anterior and posterior tibial groups to the galvanic current. Peroneal group shows normal formula but exalted contractility. Peroneal nerve gives response also. No faradic response in any of the muscles of left leg. Thigh muscles and muscles of other limb respond to faradic current.

The question in the first case was whether there was really a recurrence of the infantile paralysis. If we rely upon hyperæsthesia alone it will sometimes mislead, and therefore Dr. Gibney believed that the only really reliable way to test the electrical reaction was to put the patient under the influence of an anæsthetic and proceed with exceeding care. It was a question, however, as to whether hyperæsthesia existed in the paralytic limbs during the first stage, or whether there was general myelitis at the time of the invasion sufficient to give rise to the various sensory disturbances. If it was allowed that hyperæsthesia did so occur, the view would be well maintained in the case presented if it was really one of polio-myelitis on the right side.

DR. PUTZEL remarked, concerning hyperæsthesia, that he had one hospital case under observation in which the disease began suddenly by severe pain in the upper part of the sacrum. On the next day severe pain extended along the course of the sciatic nerve, and continued three

days, and the patient also had a feeling as if pins and needles were in the right foot. At the end of that time the right limb was entirely paralyzed, and when he came under observation there was great atrophy of the whole limb, with absence of all electrical reaction except in the sartorius and one other muscle. The limb was also cold. Autopsy showed distinct polio-myelitis anterior in the right horn of the lumbar enlargement. He thought Dr. Gibney's case was especially interesting on account of the relapse. He had never seen an instance of this kind, and had not seen in literature any reference to its occurrence. He thought that the occurrence of the degeneration reaction would exclude the diagnosis of temporary paralysis merely, and make it really one of polio-myelitis.

The CHAIRMAN saw no reason why we should be dissuaded from the opinion that there was a recurrence of the disease simply because it was the inverse of what usually takes place. At the beginning of all cases of infantile paralysis we usually have a much greater area of manifestation than remains permanently paralyzed. That is, the child at the time of the invasion may have all the limbs paralyzed or paretic, and afterward the paralysis disappear entirely except from a single limb or portion of the limb. In Dr. Gibney's case there was the same order of events, and some time after distinct paralysis appeared, which did not spread; there was a later occurrence of paralysis affecting the opposite leg.

With regard to hyperæsthesia, any one who has examined many cases must have been struck with the fact that the typical outline given in the books does not correspond altogether with the facts as they exist in actual cases, for we find quite a number of children who bear the faradic current out of all proportion, which would imply a certain degree of anæsthesia. Of course, this might be explained to a certain extent by lack of sensibility in the nerves, but beyond that there is a certain degree of anæsthesia manifest to the faradic current. He had seen patients, adults, who had complained of numbness, tingling, a slight grade of anæsthesia, and after a time these cases had run a typical course of anterior polio-myelitis. It is sometimes very difficult to determine whether the case is one which will develop into the more marked diffuse myelitis or remain limited to myelitis of the anterior horn.

DR. GIBNEY asked the Chairman if degeneration reaction was apt to occur within the first week after the invasion.

The CHAIRMAN replied that it was occasionally seen at the end of six days.

DIFFERENTIAL DIAGNOSIS BETWEEN DELIRIUM AND INSANITY.

The CHAIRMAN reported certain cases which illustrated the difficulty and the importance of deciding whether a patient was suffering from delirium or insanity. He had seen a number of such cases in the last year. Of course, delirium, if continued and associated with hallucinations, constitutes one grade of insanity, but if it is possible to do so we should all prefer to call any given case one of delirium rather than one of insanity, both for the sake of the friends and for the sake of the patient. He had been struck by seeing cases which illustrated how closely these two conditions were allied, and how well some cases terminated in which there was delirium accompanied with delusions; for example, delirium in pneumonia, bronchitis, fever, or bronchial pneumonia, had continued for six weeks, and been the leading symptom.

(To be continued.)

THE MIDLAND MEDICAL MISCELLANY AND PROVINCIAL MEDICAL JOURNAL is an English monthly of a new and somewhat novel character. It aims to represent provincial medical work and seems very successful in doing so.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 26, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

RESOLUTIONS ON THE DEATH OF DR. GEORGE M. BEARD.

DR. A. D. ROCKWELL offered the following resolutions:

Resolved, That in the death of Dr. George M. Beard this Society and the profession at large have lost one of their most brilliant, active, and earnest members. As an investigator he was original and conscientious. As a friend he was generous and steadfast. Exposed by his restless activity to many peculiar attacks, he ever manifested the utmost charity and good humor. Of his worst enemies, he seldom spoke a harsh, and never a vindictive word.

Resolved, That to his child, orphaned in one short week, by the added affliction of a mother's death, to his mother, brothers, and sister, we tender our heartfelt sympathy.

Resolved, That these resolutions be published in the medical journals of this city.

In presenting these resolutions, Mr. President, I would simply add, that having been associated for many years with Dr. Beard in a peculiarly close intimacy, it was my fortune to know him perhaps better than most others. His self-poise was remarkable. As a foil, so to speak, to the many attacks that followed his original investigations and his positive and independent methods of expression, he seemed almost to live and move and have his being in humor. His powers were of the most versatile character. His readiness and originality as a scientific writer are well known, but it is not so well understood that he had a genius for an entirely different sort of literary work. While a very young man, serving during the late war in the Gulf Squadron, and merely to give vent to his ever restless mind, he penned a work of fiction, which gave evidence of no mean talent in that direction, and since his death an autobiographical sketch has come to light, which, for its quaint humor, its keen estimate of character, and its philosophic insight is unsurpassed. I could say much in regard to this individuality, through which ran so rich a vein, and which in many respects was as unique and remarkable as any I have ever known or read of; but I forbear and content myself with the brief but just tribute embodied in the resolutions.

DR. D. B. ST. JOHN ROOSA—Mr. President: Before these resolutions are put I would like to say a few words in memory of my departed friend. It was my privilege to know Dr. Beard at the time when he and I entered the profession, and it continued to be my privilege to know him up to the time of his death. I think all of us must have been, during the last winter, particularly admonished of the frailty of the existence of even the strongest. When we recall the names of Draper, and White, and De Luna, and Beard, all men in the prime of life who have passed away, I think we must say that "the battle is not to the swift nor the victory to the strong." Dr. Beard possessed qualities which a physical infirmity did not allow of complete illustration. That physical infirmity in one instance at least had an untoward effect in prejudicing a large number of our transatlantic brethren against him. In an announcement that he made a certain experiment and laid his paper before the New York Academy of Medicine, a claim which he never made, he was not only misrepresented but was unable, in consequence of that physical infirmity, deafness, to appreciate the statement, and therefore did not have the opportunity to show that he had no intention of claiming any such thing. That statement was made one of the groundworks of a charge against him, and those of us who knew him best, whatever we may have thought of his scientific opinions, know that it was utterly mistaken. So in many other instances Dr. Beard was unable to enter fully into debates which his views originated, and therefore he was very much

handicapped. I simply allude to this in doing justice to his noble character, as we all know that in no instance had he ever departed from that which he believed to be entirely and completely true. He was a man, as has been said by the gentleman with whom he was so intimately associated for years, extremely tolerant of the opinions of others. He was a man who never retaliated upon those who seemed to make personal those matters which he regarded as merely differences of opinion on scientific or other subjects. He was a man far ahead of his age in many respects, and I believe that future generations will do more justice to some of Dr. Beard's statements than was done to them during his lifetime. I have more charity, perhaps, than some with reference to his opinions regarding the mental condition of the man who assassinated the President. I believe that his views regarding the mental power of man after the age of forty years will be more and more accepted, and also that his views concerning responsibility at certain periods in life will be more and more respected. I think his idea that the golden period in man's life, however much we may smile upon it now, is the middle period of life, will finally be accepted in all quarters of the world. I had the pleasure of being associated with him in making examinations with regard to the lesions which give rise to deaf mutism. This was early in his career, and these observations, and others I believe have taken a place in the literature of a certain department of medicine.

Dr. Roosa then spoke of his great work on electricity, written in association with Dr. Rockwell, a recognized standard text-book on that subject in all countries. He also referred to the remarkable fact that at one time Dr. Beard wished to read Tobold's writings in the original and to accomplish this he began the study of German, and so perfected his acquaintance with the language that in six weeks he was not only able to read the book but to present an acceptable translation to the medical profession. These were mentioned as illustrations of the versatility of his talent.

I am, Mr. President, in conclusion, very much reminded of the remark with which we are all familiar, made by Edmund Burke on the hustings at Bristol, deploring the loss of an antagonist who had been engaged in the same contest. "The worthy gentleman who has been snatched from us at the moment of the election and in the middle of the contest, while his desires were as warm and his hopes as eager as ours, has feelingly told us of the shadows we are and of the shadows we pursue."

I cannot accept the notion that we pursue shadows, fully as I admit that we are shadows ourselves passing along the galleries of time. I conceive with you, Mr. President, and others, that we are not pursuing shadows but realities in investigations for truth, and it is a hope we fondly cherish that Dr. Beard, to use the language of his own death-bed, "higher, higher," is pursuing the investigation, of what is never a shadow, truth in another sphere.

DR. W. M. CARPENTER—Mr. President: It was about the year 1873 that I made Dr. Beard's acquaintance, and that acquaintance, as it gradually increased, matured and ripened into a friendship which was both true and faithful. I had not heard of his sickness, and when the startling announcement of his death fell upon my ears I felt that I had lost a brother, and it is to the memory of that departed brother that I wish this evening to pay my humble tribute of respect. It has justly been said, Mr. President, that Dr. Beard possessed an active mind. Indeed, it may have been said of him that he was an enthusiast, if in the interpretation of that word we mean devoted, to the study of whatever subject he had under consideration. But I believe there was something more in his work than this. I think I can see, as I trace it from year to year, how he gradually stepped out of routine courses, and finally we find him engaging with those problems which gather along the border line between the seen and the unseen, between the knowable and the unknowa-

ble. It was in that field that his faculties found their greatest freedom. But in whatever department he worked, he wrought well, for he made a worthy fame, carved an enduring name and won a niche in the scientific temple of the last half of the nineteenth century. He indeed was enthusiastic, but he was not precipitate. He was bold in the expression of his opinions, but he was not bigoted. It has been said that he was erratic and visionary. The same, however, was said of men who lived before our generation, and who to-day are accredited with having possessed the brightest intellects of their times. In this great human caravan, keeping pace to the march of time, there are three classes of workers: first, and by far the largest in number, those who merely plod, and follow in routine courses or walk in circles; second, those who strive to make these routine courses and these circles easier and straighter by chipping off a little here and filling a little there, lessening the grade at this point and increasing the momentum at that; and, third, embracing only a very small fraction of this great multitude, those who are the advance workers, who do what is sometimes called "original work," who live beyond their time. It was in this field that Dr. Beard was laboring when the summons came. Therefore it was that any man who had the pleasure of his conversation could always carry away something that furnished food for thought. He worked because he loved to work; not as a slave, but as a child filled with and prompted by filial devotion, and in the very hour of his dissolution he expressed the hope that some one would take up his *work* at the point he left it and carry it forward, and he whispered the wish that he might be permitted, as a contribution to his *work*, to place upon record the thoughts of a dying man.

But his labor has ceased. In the prime of life, in the midst of greatest activity, in the mid-day of gathering usefulness his sun went down. But do we not see on the blue vault a golden radiance which marks the place where it sank beneath the horizon?

The resolutions were unanimously adopted.

The Society then adjourned.

INOSURIA.—Dr. Cochot concludes a thesis on this subject as follows: 1. Inosite (muscle sugar) is *never* met with in normal urine. 2. Urine containing inosite may also contain albumen or ordinary glucose. In some cases, however, the glucose disappears entirely, and is replaced for a time by inosite, or vice versa. 3. Thus inosuria is not a separate disease, but is a symptom which may be met with in Bright's disease or diabetes. 4. Whenever we find inosite in the urine we have to do with diabetes or albuminuria. The patient is exposed to the same dangers, and the effects of injuries are equally grave. 5. Since inosuria may supervene upon glycosuria it adds another difficulty to the diagnosis of the latter. For inosite does not turn the plane of polarization, neither does it give the characteristic chemical reactions of glucose. 6. Inosuria is to be suspected when the urine, boiled with Fehling's solution, throws down a flocculent precipitate of a greenish color. But certainty is only obtained by a thorough qualitative analysis. 7. It is of great importance to remember that a patient with inosuria is really the subject of Bright's disease or diabetes, in view of the gravity of operations or of wounds in general in such patients.—*Journal de Médecine de Paris*, January 13, 1883.

COFFEE IN TYPHOID FEVER.—The value of coffee as a heart and brain stimulant in adynamic conditions is perhaps not fully recognized. Recently Dr. Guillassee, of the French Navy, has given coffee in the early stages of typhoid fever with marked success. Three teaspoonfuls were given adults every two hours, alternating with one or two teaspoonfuls of claret or Burgundy wine. A beneficial result was immediately apparent.

Obituary.

WILLIAM HOLME VAN BUREN, M.D., LL.D.,
NEW YORK.

PROFESSOR WM. H. VAN BUREN, M.D., LL.D. (Yale), died in this city on the morning of March 25, 1883, within twelve days of the completion of his sixty-fourth year.

In his death a pillar of the profession has fallen, and a career has terminated the memory of which will long remain to serve as an example of honest dignity in professional life, an example which, in the commercial hurry of the present day, it would be well for the young physician to recognize and to emulate.

Born April 5, 1819, of a line of medical ancestors, in a family of refinement and education but devoid of wealth, Dr. Van Buren reached a position in the profession of the highest distinction, and dies reasonably mellow in years and ripe with honors.

His flexibility of person, his graciousness of manner, his dignified dexterity as an operator, his wide command of language as a lecturer, his elegance of diction as an author, the magic of his presence in the sick-room, will be long and pleasantly remembered by those who came into contact with him; while the keenness of his scorn and the pungency of his satire were only fully understood by those who ventured, in the heat of controversy, to impugn his motives or to attack the honest purity of his principles.

He entered Yale with the class of '38, but did not graduate; yet the college, in recognition of his literary attainments and distinguished position, decorated him with the honorary degree A.M. in 1866, and later, in 1878, conferred upon him the highest title in her gift, LL.D.

The University of Pennsylvania, in 1840, graduated him in medicine after his return from a tour in the Paris hospitals. He then served in the army until 1845, in which year he came to New York to assist the late Valentine Mott in the work of his clinique in the medical department of the University of New York.

During thirty-eight years he labored in the rich surgical fields furnished by this great metropolis, reaching early and distinguished honors which accumulated upon him as he advanced in life.

Among these may be mentioned the professorship of anatomy in the University, and of the science and art of surgery as well as of genito-urinary surgery and syphilis in the Bellevue Hospital Medical College. He did creditable work as an active surgeon to the Bellevue, the New York, and St. Vincent's Hospitals, and has been consulting surgeon to St. Vincent's, New York, Bellevue, Charity, the State Woman's, and the Presbyterian Hospitals. He was for many years active in medical society work, being vice-president of the New York Academy of Medicine and President of the Pathological Society. He figured also largely as a prominent name upon the consulting boards of many of the dispensaries and other medical institutions of the city. He was a corresponding member of the Society of Surgery of Paris, and his name was nearly as well known abroad as at home.

His first literary efforts were translations of French works, but soon able essays upon matters of personal experience appeared from his pen in the various medical magazines—essays marked by the honesty of the observations reported as well as their graceful elegance of expression. His "Contributions to Practical Surgery" appeared in 1865, his "Lectures on Diseases of the Rectum" in 1870, and again, in much better form, as a second edition in 1882. In 1874 he appeared as joint author with his junior partner in a text-book on "Genito-Urinary Surgery," and finally, his latest and perhaps ablest production on "Inflammation," came out in "Ashhurst's Encyclopædia of Surgery" only a short time before his death.

His work in the Sanitary Commission is a matter of

public as well as of medical interest. To the great detriment of his private revenue, he served his country faithfully upon this commission, and added largely to the efficiency of the medical and sanitary conduct of the war.

The credit of being the author of the tunnelling of urethral instruments attaches to his name. This improvement is perhaps second to none in modern urethral surgery.

He leaves a wife—a daughter of the late Valentine Mott—and two married daughters to deplore his loss.

His friends loved him devotedly, and he reciprocated their attachment with a fervor which could be counted upon in any emergency. When at the summit of his success, in the full rush of practice, he was particularly zealous in sustaining and assisting many younger members of the profession, most of whom hold his past favors in grateful remembrance.

His death was due, indirectly, to apoplexy, which occurred in the spring of 1882, directly, to degenerative changes about the injured cerebral focus, changes which set in with the beginning of the present year. He appreciated the approach of death, and wished for it. In communion with the mother church, and solaced by its sacraments, in the brightness of the Easter morning he ceased to be of earth.

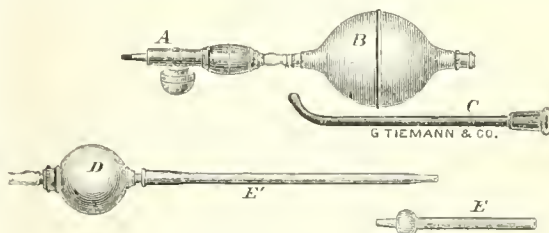
New Instruments.

A COMBINED INSUFFLATOR AND VAPORIZER.

By C. J. CLEBORNE, M.D.,

MEDICAL INSPECTOR U. S. NAVY.

THE woodcut below represents an improved powder blower or insufflator, combined with a vaporizer for chloroform, rhigolene or other volatile substance.

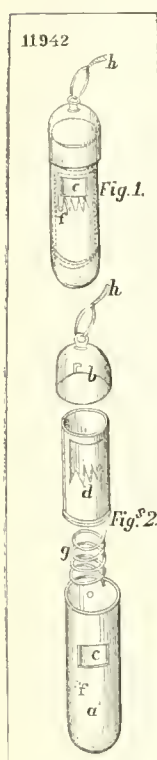


A, insufflator; B, air-bulb; C, throat-tube; D, vaporizer; E, (elastic) uterine or urethral tube; F, ear tube (elastic).

The insufflator A is furnished with valves between A and B, in order to prevent fouling of the air-bulb B, which is to be used for both instruments. The insufflator (with or without the throat-tube C, or the uterine, urethral, or ear-tubes E and F) will be found useful in applying bismuth, calomel, iodoform, or other powder in the "dry treatment of mucous membranes." The vaporizer D is filled with sponge or cotton-wool, and is charged by dropping the chloroform or other volatile liquid upon the filling; then screwing the vaporizer (with its appropriate attachment) to the air-bulb B; by compressing the latter the vapor may be forced into any cavity of the body. In a form of neuralgic headache, described by the patient as "a pain far behind the eyes," or "on the floor of the brain," immediate and generally permanent relief may be obtained by inserting in the external ear its appropriate tube attached to the vaporizer, and then blowing with the mouth or air-bulb the vapor of chloroform into the ear. In a large number of cases of headache and earache of a neuralgic character, and in functional nervous deafness, relief has followed this procedure without any injurious result. The instrument is manufactured by Messrs. George Tiemann & Co., of New York.

A NOVEL TAPE-WORM TRAP.

TO THE EDITOR OF THE MEDICAL RECORD.



STR: While recently looking through the records of the United States Patent Office for another purpose, I came upon a most remarkable invention by Alpheus Myers, M.D., of Logansport, Ind. The invention, numbered 11,942, was patented November 14, 1854, and purports to be a *tape-worm trap*. It is described as follows:

"This trap is made of gold, and is shown set at Fig. 1, the length being less than an inch, and the diameter one-fourth of an inch. The separate parts, Fig. 2, are united by inserting spring *g* into cup *a*, and following the former by cup *d* and by cup *b*, which is held upon cup *a* by a bayonet fastening. In setting the trap stud *f* catches upon the top of cup *d*. Bait being placed in cup *b*, the trap is set and swallowed, after the patient has fasted several days, an end of cord *h* being returned from the mouth. The worm, in reaching the bait through opening *c*, pushes cup *d* from stud *f*, when spring *g* forces upward cup *d*, whose teeth seize the worm, when both the trap and worm may be withdrawn together. In this manner the inventor asserts that he has operated successfully.

Claim.—A trap for the removal of tape-worms from the stomach and intestines, constructed and operating substantially as herein described." C.

NEW YORK, March 3, 1883.

THE THIRTEENTH CRANIAL NERVE.—In 1881, Dr. Sapolini, of Milan, published a monograph bearing the above title. Dr. Burnett (*Medical Times*, February 24, 1883) gives the following résumé of the subject: Sapolini came to the conclusion that the so-called intermediary nerve of Wrisburg, lying between the seventh and eighth nerves at their origin, is the proximal portion of the chorda tympani, which really originates in the floor of the fourth ventricle and terminates in the lingual muscles. He followed this nerve up to the ganglion geniculatum in the facial canal; he then traced the chorda tympani backward to the same point and found that they were really one and the same nerve. To follow this down through the tympanic cavity and the canal of Huguier to its junction with the lingual branch of the fifth is an easy matter. His careful dissections show further that the two nerves now form a plexus in the muscles of the tongue, which he calls the plexus tympano-lingualis. He thinks that from its origin, both in the corpora restiformia and the lateral bodies, it must possess both sensory and motor fibres.

If now all this be true, this nerve must have special function, and to it Sapolini assigns that of governing speech. No articulate sound can be made without a motion of the tongue, and the slow progress in articulation made by children he explains by the late appearance of white matter in the floor of the fourth ventricle. Speech belongs to man, but with patience a parrot can be taught to speak. Two talking parrots, whose chorda tympani he cut suddenly, ceased to speak. To the chorda tympani alone then would he ascribe speech, while he holds that the lingualis of the fifth and the glosso-pharyngeal give the tongue touch and taste, and the hypo-glossal and lingualis of the seventh govern its movements in deglutition.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 17, 1883, to March 24, 1883.

MURRAY, ROBERT, Colonel and Assistant Surgeon-General. Detailed as member of Army Retiring Board to convene at the call of the President thereof, at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it. Par. 2, S. O. 62, A. G. O., March 16, 1883.

SUMMERS, JOHN E., Lieutenant-Colonel and Surgeon. Detailed as member of Army Retiring Board to convene at the call of the President thereof, at Omaha, Neb., for the examination of such officers as may be ordered before it. Par. 9, S. O. 62, A. G. O., March 16, 1883.

BILL, JOSEPH H., Major and Surgeon. Detailed as member of Army Retiring Board to convene at the call of the President thereof, at Omaha, Neb., for the examination of such officers as may be ordered before it. Par. 9, S. O. 62, A. G. O., March 16, 1883.

IRWIN, B. J. D., Major and Surgeon. Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, 3d Cavalry. Par. 1, S. O. 62, A. G. O., March 16, 1883.

JANEWAY, JOHN H., Major and Surgeon. Detailed as member of Army Retiring Board, to convene at Governor's Island, New York Harbor, for the examination of such officers as may be ordered before it. Par. 2, S. O. 62, A. G. O., March 16, 1883.

BURTON, HENRY G., Captain and Assistant Surgeon. To be relieved from duty in the Department of the East, and will report in person to the commanding general Department of Dakota, for assignment to duty. Par. 1, S. O. 67, A. G. O., March 22, 1883.

GIRARD, JOSEPH B., Captain and Assistant Surgeon. Detailed as member of General Court Martial to meet at Whipple Barracks, Prescott, Arizona Territory, April 23, 1883, for trial of Captain J. P. Walker, 3d Cavalry. Par. 1, S. O. 62, A. G. O., March 16, 1883.

PORTER, JOSEPH Y., Captain and Assistant Surgeon. To be relieved from duty in the Department of the South, and will report in person to the commanding general Department of Texas, for assignment to duty. Par. 1, S. O. 67, A. G. O., March 22, 1883.

WINNE, CHARLES K., Captain and Assistant Surgeon. Granted leave of absence for three months from March 31, 1883, and will be relieved from duty in the Department of the East, and upon the expiration of his leave of absence will report in person to the commanding general Department of California, for assignment to duty. S. O. 61, A. G. O., March 15, 1883.

CAUTERIZATION OF THE CLITORIS IN THE TREATMENT OF HYSTERIA.—Dr. N. Friedreich (*Virchow's Archiv*, Vol. XC.) believes, with Baker Brown, that many cases of hysteria are caused by masturbation. Further, he is of opinion that in neuropathic females an over-sensitiveness of the sexual organs may exist, which acts upon the spinal and cerebral centres, causing hysterical symptoms, without there being actual, voluntary masturbation. He treats these cases by cauterizing the clitoris. The operation is most painful, but the results are so remarkable and agreeable that the patients, says Dr. F., never object to a repetition. Eight cases are reported, and all were ultimately cured. In two cases there were relapses, and the cauterization was repeated. In three other cases the cauterization had to be repeated. The disease was in all instances very marked, there being paralyses, general convulsions, hystero-epilepsy, etc.—*Journal of Nervous and Mental Disease*.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending March 24, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 17, 1883	0	13	111	4	96	50	2	0
March 24, 1883	0	10	113	6	102	52	4	0

A GRAVE-YARD INSURANCE COMPANY.—Dr. J. F. Jenkins, of Tecumseh, Mich., writes that his town has a Grave-Yard Insurance Company, composed of an undertaker as president, a homœopathic physician as secretary, and another of the same persuasion as examining physician. It is on the co-operation plan, and the chief feature of it is an "old people's" class, consisting of persons ranging from the age of sixty up to eighty-five years. They take policies on aged and infirm individuals, and sell these policies at the rate of five dollars apiece to any one whom their agents can find gullible enough to purchase them. The laws of the State of Michigan do not appear to reach this species of rascality.

BLUE-GUM STEAM IN THE TREATMENT OF DIPHTHERIA AND OTHER INFECTIOUS DISEASES.—Dr. G. Murray Gibbes, Taranaki, New Zealand, describes (*Lancet*) the result of his use of blue-gum (*eucalyptus globulus*) in the treatment of diphtheria. He takes the leaves and steams them, keeping the patient in an atmosphere of the steam. He has had thirty-seven cases in which this method was successfully used. Dr. Gibbes thinks it would be valuable in other infectious diseases, including phthisis.

SLAUGHTERING MERCIFULLY.—A well-known electrical engineer of London, Mr. George Lam Fox has devised an apparatus for the painless destruction of incurable and worn-out animals, especially horses. The animal to be killed, first has the top of its head and its feet and its legs wetted with salt water. It is then led into a stall and made to stand upon an iron plate connected with the negative pole of a condenser of a capacity of about one hundred microfarads. The operator then touches the animal's head with the positive pole, and it falls dead. The death is believed to be painless, because physiologists have demonstrated that a nervous vibration cannot be communicated to the brain in less than a tenth of a second, and another tenth of a second must elapse before a sensation can result from the vibration thus communicated. One-fifth of a second must, therefore, necessarily intervene between the actual infliction of an injury and the experience of pain from it. But the flash from such an apparatus, as has been described, presumably paralyzes every fragment of a nerve in man or beast in something like a hundred-thousandth part of a second. The difference between this swift and certain death and the horrible practice of the knacker's yard is sufficiently apparent to incline every humane person to fervently wish that this scientific mode of slaughtering may speedily be adopted. The idea, of course, is not new; but the application of the condenser to this business renders the process more certain and manageable than it was a few years ago. It is said for about two thousand five hundred dollars such an electrical apparatus as is here alluded to may be fitted up in any stable or outhouse, that it will kill as rapidly as animals can be placed in position and taken away again. We commend the matter to Mr. Bergh.

COMMENTS ON THE CODE.—Dr. Alexander J. Stone, Vice-President of the American Medical Association and late President of the Minnesota State Medical Society, said in his presidential address:

"The code, since its final adoption, has apparently been laid upon the shelf by the side of the family Bible, to be treated with almost as much reverence, to be read quite as seldom, and to be quoted only when its provisions enable one to discipline a rival, or to exclude him from the benefits of professional affiliation. A judicial consideration of the code forces a conclusion that much which it contains is gratuitous insult to the profession, and more, is rather calculated to amuse than to impress with respect the mind of the layman. There is not a clause or sentence in the first two articles which is not absolutely true; but, should the self-evident truths contained in Article I, be held constantly before the physician, as if by nature he was a brute who is to be taught the ordinary laws of humanity; a fool who must be taught a wisdom in the management of his patients which instinct alone would incultate; a knave who must be withheld from empiricism; or a man without the instincts of a gentleman? Granted that men enter the ranks of the profession to whom the epithets of 'fool,' 'knave,' or 'clown,' apply, of what value are the platitudes concerning brotherly love, or to what good is a formulated code defining the relations of medical men to the public or to each other? Among gentlemen such a code is unnecessary; among pirates it only serves to foster a cathauling hostility; as between a gentleman and a pirate, any difficulty which may arise is not to be satisfactorily settled by a reference to any code, because the standpoints from which each look at matters differ too widely—nor are the penalties which the code imposes such as to deter a real rascal, nor is that unsovereign body, the medical profession, able to enforce its laws rigorously."

THE INCREASE OF INSANITY IN NEW YORK.—The *American Journal of Insanity*, by a very elaborate and apparently careful analysis of statistics, tries to prove that the increase of acute insanity or of new cases in this State is not greater than the increase in the population. The total increase of insanity in 1882 was 633 cases, or 06.28 per cent. of all the insane in the State. The increase in acute cases, however, is estimated to be 01.4 per cent. while that of the population was 01.5 per cent. This estimate does not take into account the fact that many new cases are not put at once in asylums.

THE ST. MARY HOSPITAL of Brooklyn, of which one wing was recently completed, has been very severely criticised by the *Sanitarian* on account of its defective sanitary arrangements. We are told that it has cess-pool drainage, pan water-closets, and no ventilation worthy of the name. Our contemporary concludes: "No new demonstration is necessary to show the criminality of all hospitals constructed without regard to an abundant supply of pure air, and the danger of such plumbing as that which has been put into this institution. Unless these glaring defects are speedily remedied the structure is calculated to bring disgrace on the faculty and destroy all the promised utility of the institution."

MEDICAL CO-EDUCATION.—The Chicago Homœopathic Medical College has given up the plan of educating women. This is the second medical college which has abandoned medical co-education this winter.

THE CODE IN CANADA.—The *Canadian Practitioner* comments on the Code as follows: "In Toronto, we manage these things more quietly. One or two surgeons consult repeatedly with homœopaths, and, although they are members of both the Ontario and Canada Medical Associations yet, these societies meet in this city and—to their shame be it spoken—take no notice of the fact. We wonder if there be a latent fear that a discussion of the matter might reveal the existence of a general *advanced liberality* such as the State to the south of us has not blushed to proclaim."

A DENTAL COLLEGE AND INFIRMARY has been organized in Chicago under the auspices of Drs. N. S. Davis, William Byford, A. R. Jackson, and others. Rooms have been secured and the chairs filled. Students entering the infirmary must have matriculated in some medical colleges of good standing. After attending two courses of clinical instruction and found qualified, they will receive diplomas providing the degree of M.D. has been conferred.

Another new departure in medical teaching, says the *Chicago Medical Journal*, was inaugurated in the medical colleges last fall. Full chairs on dental pathology and surgery were added to several of the colleges, and instruction on dental and oral diseases was given in the regular winter course. These chairs were filled by graduates of medicine who are practising dentistry in Chicago.

ALMOST A SPECIFIC FOR SNAKE-BITES.—Professor Binz in seventeen cases found that filtered solutions of chloride of lime injected into the place where the virus entered, prevented any poisonous symptoms appearing. The suggestion is made that in cases of the bites from hydrophobic dogs, the same plan may be pursued.

PREVENTION OF BLINDNESS.—The fifth International Congress of Hygiene, which will meet at the Hague, Holland, in 1884, will award the prize of two thousand francs (\$400), offered by the London Society for the Prevention of Blindness, to the author of the best essay written in English, French, German, or Italian, on "The Causes of Blindness and the Practical Means for Preventing It." Besides this prize the International Society for the Improvement of the Condition of the Blind reserves to itself the right to award a second prize of one thousand francs (\$200), or two prizes of five hundred francs (\$100) each, and a silver gilt medal with a diploma, should it see fit, to such of the essays as should, in the opinion of the international jury for the principal prize, be deserving of it; the last-mentioned prizes will be distributed at the centenary festival of the first blind institution founded by Haüy, which will take place in Paris in 1884. The fourth International Congress of Hygiene, which met at Geneva, in September, 1882, adopted for this competition the following programme, as prepared by the London Society for the Prevention of Blindness: I. *The study of the causes of blindness*—*a.* Hereditary causes: Diseases of parents; consanguineous intermarriages. *b.* Infantile eye diseases: Various inflammations of the eyes. *c.* School period and time of apprenticeship: Progressive shortsightedness, etc. *d.* General diseases: Diatheses; various fevers; chronic poisoning, etc. *e.* Trade influences: Wounds and accidents, etc.; sympathetic ophthalmia. *f.* Social and climatic influences: Contagious ophthalmias; unhealthy habitations; defective lighting, etc. *g.* Neglect of treatment and bad treatment of eye affections. II. *The study of practical preventive means*—*a.* Legislative means. *b.* Hygienic and professional means. *c.* Educational means. *d.* Medical and philanthropic means.

The international jury elected by the Geneva Congress for the purpose of judging the essays, consists of—Holland: Dr. Snellen, Professor of Ophthalmology, Utrecht; Germany: Dr. Varrentrapp, Frankfurt; Dr. H. Cohn, Professor of Ophthalmology, Breslau; France: Dr. Fieuzal, Physician to the Hospice des Quinze-Vingts, Paris; Dr. Layet, Professor of Hygiene, Bordeaux; Italy: Dr. Reymond, Professor of Ophthalmology, Turin; Dr. Sormani, Professor of Hygiene, Pavia; England: Mr. Streatfield, Professor of Ophthalmology, University College, London; Dr. Roth, Honorary Secretary and Treasurer (*pro tem.*) of the Society for the Prevention of Blindness, London; Switzerland: Dr. Dufour, of the Ophthalmic Hospital, Lausanne; Dr. Appia, Geneva; Dr. Haltenhoff, Lecturer on Ophthalmology, Geneva, and secretary to the jury. Dr. Appia and Dr. Varrentrapp having resigned, the jury completed its number by elect-

ing Dr. Coursierant, oculist, Paris, and Dr. Berlin, Professor of Ophthalmology, Stuttgart.

Those essays to which prizes have been awarded will become the property of the Society for the Prevention of Blindness and of the International Society for the Amelioration of the Condition of the Blind, who will be at liberty to publish them, in whole or in part, in several languages, in order to make them useful in the way they consider best.

The inedited manuscripts for competition are to be sent to Dr. Haltenhoff, secretary to the jury, not later than March 31, 1884. Every manuscript has to be distinguished by a motto, which is also to be written on a sealed envelope containing the name, Christian name, titles, and address of the author. The envelopes will not be opened until after the award of the jury.

LUNACY IN SPAIN.—In 1879 the number of lunatic asylums in Spain was 26, with a population of 3,790, which gives a ratio of one to 2,250 of the whole population. About eight per cent. are discharged cured every year.

DARWIN'S RELIGION.—Karl Blind, in the Vienna *Neue Freie Presse*, notes the curious fact that the recent revelations regarding Darwin's religious opinions were only noticed by three or four of the English periodicals, and that even *Nature* suppressed Darwin's letter to a Jena student, which Haeckel had sent to the editor as part of one of his lectures. In this letter, it will be remembered, Darwin had stated verbatim: "For myself, I do not believe that there ever has been any revelation;" and in a conversation with Dr. Ludwig Büchner, he said he was with him in thought, but preferred the word agnostic to atheist, and that he had given up Christianity because "it is not supported by evidence." Karl Blind adds to this testimony another item, in the form of a letter written by Darwin in 1873, to a Dutch gentleman (N. D. Doedes) of which we give the following translation from the German, as given in the *Presse*: "I find it impossible to give a brief answer to your question. I do not know if I should be able to answer it if I should write a great deal about it. Thus much I can say, that the impossibility of understanding how this great and wonderful universe, besides our own consciousness, could have come into existence, through chance, seems to me to be our principal argument for the existence of a God; but whether this argument is of any value I have never been able to decide; for I know that, if we accept a highest cause, the mind again strives to know whence it came and how it arose. Moreover, I cannot pass over the difficulty which, on this assumption, arises from the vast amount of suffering prevalent in the world. I am, indeed, bid to attach a certain amount of weight to the judgment of the large number of intelligent men who have implicitly believed in God; but here, again, I see what an insufficient kind of proof this is. The safest conclusion seems to be that the whole subject lies beyond the range of human understanding; nevertheless, a man may do his duty."—*Gaillard's Weekly*.

THE INCREASE OF THE JEWS.—The *Lyon Medical* states that in general throughout Europe the increase among Catholics, Protestants, and Jews is as 1, 2, 3. In France and Austria the increase of the Jews is seven and four times that of the Catholic population. At the same time, the actual birth-rate of the Jews is as a rule lower than that of Catholics and Protestants; but illegitimate births are very rare among Jews, and the infant mortality is very much less. In general, among the Christian population, the number of girls and boys is nearly equal, the boys being slightly more numerous, the figures being 105 to 100; but among the Jews of Russia, Prussia, Austria, Hungary, and Verona, the proportion rises from 110 to 120 and 130 boys for 100 girls. This predominance is believed by Dr. Lagneau to be the consequence of the early marriages of the Jews.

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ON VARIOLA.

ITS DEFINITION, HISTORY, CAUSE, VARIETIES, PROGNOSIS, AND TREATMENT.

By J. N. MCCHESNEY, M.D.,

LATE ONE OF THE ATTENDING PHYSICIANS TO THE HOSPITAL FOR CONTAGIOUS DISEASES OF THE CITY OF NEW YORK.

(Continued from page 342.)

Variole Anomale.—Small-pox occurring with other diseases, or presenting unusual features, is called anomalous. We have seen scarlatina, diphtheria, and variola in the same person. The patient, while sick with a mild attack of discrete small-pox, slept in a bed which had been occupied by a scarlatina patient. The scarlatinal eruption developed regularly, and all of the symptoms were very severe. The diphtheritic deposit was abundant. Desquamation in both diseases took place at the same time, and the patient made a good recovery. In another case variola developed in a female patient who was desquamating from scarlatina. The attack was mild, and she recovered after a slow convalescence.

A rare complication occurred in a case of variola at the Riverside Hospital in the spring of 1881. A patient was admitted with discrete small-pox, and in a few days desiccation began. About this time the temperature went up to 104° or 105°, the patient became delirious, and in a few days a petechial eruption made its appearance on the trunk and upper extremities. The symptoms and eruption were those of typhus fever. The man was a tramp, admitted from one of the lodging-houses of the city which were making daily contributions to the typhus wards of the hospital, and the chances of exposure were many. Later in the case, cerebro-spinal meningitis was developed and the case terminated in death. An autopsy confirmed the correctness of the diagnosis.

Pregnancy is a complication which is of serious consequence; abortion generally follows with fatal results to both mother and child.

Another anomalous condition is the birth of a child with the eruption on its body. It is obvious in this case that the disease must have been conveyed to the foetus and the stages of incubation, invasion, and partly of eruption passed in utero.

We have met with a number of cases of variola complicated by pregnancy. In most of them abortion occurred, though in one or two recovery took place and the child was born at full term. In only one instance have we seen the foetus born with the eruption. The history of the case is as follows:

Mrs. F—, aged thirty; native of this city; vaccinated in childhood; fair cicatrix. First seen on February 11, 1882, and found to be sick with discrete variola in the vesicular stage. The initial stage had been moderately severe; the eruption was abundant on the face and extremities, scant on the trunk. At this time she was about two and a half months pregnant. The disease ran a modified course, and on March 11th, a little more than one month after the beginning of the attack, quarantine was raised and she soon resumed her household duties. Quickening occurred in the first week of April. On the 23d of that month she ceased to feel any fetal movements, and three weeks passed without any signs

of life in the foetus; two careful examinations, made at different times, failed to discover any evidence of life, which, taken with the fact that the abdominal tumor had diminished in size, rendered it quite probable that death had occurred. On June 6th she was delivered of a dead female child. There was little or no decomposition. Forty or more distinct pustules were counted on the body. They were most abundant and better developed on the trunk and about the folds of the axillæ and groin, where they were grouped in twos and threes; they were also present in the palms of the hands and soles of the feet. The pocks varied in size from the head of a pin to a pea, the largest being on the posterior aspect of the trunk. There was no evidence of umbilication.

Many questions of interest are present in this case, the discussion of which would, however, exceed the limits of this paper.

Several cases of small-pox in females recently delivered were admitted to the hospital. The eruption made its appearance on the children when they were only a few days old, showing that the contagion had been conveyed to them, and nearly the whole period of incubation passed, in utero. In several of the pregnant cases the children were born at full term, apparently strong and vigorous, without any evidence of having suffered from the disease before birth. These children were vaccinated at the age of three months. In one case three attempts were made before vaccination was successful.

One case, seven months pregnant, had discrete hemorrhagic variola, with a moderately abundant eruption. Abortion was threatened, but the course of the disease was modified. She passed safely through the attack and was delivered of a living child with no traces of the disease on its body. It was puny and delicate, however, and died of infantile diarrhœa a short time afterward.

Variola sine exanthemata, or small-pox without the eruption, is an anomalous form which now and then occurs during the prevalence of an epidemic. Early in 1881, while attending the wards of the small-pox hospital, at a time when there was a number of unusually malignant cases, the writer was seized with rigors, headache, obstinate nausea and vomiting, intense pain in the lumbar region, rapid pulse, temperature went up to 106° F.; the tongue was heavily coated with thick yellowish white fur, and complete anorexia existed. The fauces were inflamed and swollen. The temperature remained high, in spite of heroic doses of quinine and cold sponging, until the fourth day, when it fell to the normal and all other symptoms disappeared. Careful examination was made, but not the slightest trace of eruption could be discovered. Vaccination had been successfully performed only a month or two previous and doubtless prevented the appearance of the eruption. The following case, related by a writer on this subject, is interesting as illustrating this form of the disease as well as the occurrence of variola in the foetus:

"During a severe epidemic of small-pox, a midwife, forty years of age, in the eighth month of pregnancy, fell sick with rigors, followed by violent fever, headache, pain in the back, etc., apparently the initial stage of small-pox. On the fourth day, however, she was free from fever, and in spite of the most careful examination, exhibited no trace of the expected eruption. Ten days after the commencement of the disease, feeling perfectly well, she gave birth to a child covered with a small-pox eruption, evidently just appearing, which developed still

further, and in three days terminated in death during the stage of supuration."¹

A variety of anomalous small-pox called *variola verrucosa* (from *verruca*, a wart), in which the disease assumes a mild form, is occasionally seen. The initial stage may be as severe as in the worst types of the disease, but the severe symptoms subside early in the eruption, which assumes a modified form. Some of the pustules shrivel up, while others mature; desiccation is early; there is no secondary fever; the scabs fall off and leave little or no pitting.

Complications.—The complications and sequelæ occurring with, and subsequent to, small-pox are numerous and varied, often leading to a fatal termination when the disease itself is not necessarily so. The number and variety of complications and sequelæ differ very much in different epidemics, and at different times of the same epidemic. Erysipelas, abscesses, etc., abound in some epidemics and are comparatively rare in others. Among the patients admitted to the hospital in 1881 the complications were numerous—erysipelas, crops of boils, large, diffuse abscesses, two or three cases of gangrene, ulcerations of the cornea, with destruction of one and, in one instance, of both eyes, several cases of pyæmia, and nearly every other complication. The frequency of erysipelas may be accounted for by the fact that during the winter of 1880, and the spring following, that disease prevailed to an unusual extent in this city.

During the stage of secondary fever, in the more severe forms of the disease, when desiccation is taking place, crops of boils appear, diffuse abscesses occur in different parts of the body, the pus burrows underneath the skin and between the muscles, forming sinuses and not unfrequently causing extensive destruction of tissue. These are apt to occur in the neighborhood of old wounds and recent bruises. Glandular swellings occur now and then, and frequently result in supuration.

Large bed-sores are formed on those parts where there is any pressure. In one case, that of a negro man, the whole sacrum was uncovered and both trochanters were exposed; he recovered from his attack of small-pox, but succumbed to the exhaustion consequent upon this ulceration. The hair falls out in some cases, leaving the patient completely bald. Fortunately, however, unless there has been great ulceration, or erysipelas of the scalp, it is generally reproduced. The nails fall off occasionally. We have met with one case of well-marked pyæmia in a boy who had a semiconfluent eruption. There were frequent rigors, high temperature, nausea, numerous small boils and ulcerations, with collections of pus in all of the large joints. Death occurred in a few days.

Gangrene, fortunately, is of rare occurrence. We have seen three cases: one of the right forearm, in a man with confluent hemorrhagic small-pox, and the other two of the scrotum. One of the latter had discrete variola, which was complicated with gonorrhœa. Nearly the whole of the scrotum sloughed away, leaving the testicles bare. The ragged edges were trimmed, the testicles pushed up into the abdominal rings, and aided by the elasticity of the tissues the edges were easily approximated and united in a central raphé. Union was speedy and complete, giving him a short but useful scrotum. He will probably never suffer from varicocele, or be under the necessity of wearing a suspensory bandage.

Of the internal organs the pleura is the most disposed to take on inflammatory action. Pleuritis is one of the most painful and fatal complications; it supervenes suddenly, and runs a rapid course. One of the cases which occurred in the hospital was in an adult negress. The attack was not of a very acute nature; the effusion in the right chest was very large—became purulent, perforated an intercostal space, and formed a large abscess in the axillary region; this was opened and fully three pints of offensive purulent fluid withdrawn. The case

terminated in death, and autopsy showed the whole right chest filled with fluid of the same kind; the pleura of the left side was also involved.

Pneumonia of the congestive variety frequently occurs. Inflammation of and purulent discharges from the ear are of occasional occurrence. Conjunctivitis, of more or less severity, is a frequent complication; it is due to the presence of the pustules on the margins of the eyelids, and on the palpebral and sclerotic conjunctivæ.

A complication of tolerable frequency, which generally results in serious mischief to the patient, is ulceration and perforation of the cornea. We have seen several patients lose one eye, and one case became completely blind from this cause. The trouble first shows itself as a small whitish speck at the margin of the cornea, generally on the inner side. It may disappear, or give rise to an opacity of such size as to interfere with vision, or else destructive ulceration may ensue, resulting in perforation of the cornea, escape of the aqueous, and loss of sight. In one case of perforating ulceration we had the startling accident occur of having the lens pop out into our hand while attempting to separate the lids to examine the progress of the ulceration.

The nervous system is now and then implicated. Two brothers, Canadians, were admitted to the hospital about the same time; in the suppurative stage both had hemiplegia, and one, the elder, aphasia; both died. In two cases we have seen insanity; one patient made a complete recovery, the other committed suicide after recovering from small-pox.

A sequel which occurred in five cases, all of them except one being negroes, was œdema of the left foot and ankle. The swelling extended from the instep to several inches above the ankle, was painless and unattended by heat; the urine was examined for albumen and casts, but the result was negative. The cause of the swelling was doubtless due to some obstruction of the venous circulation. It passed away without any further trouble.

As a rule, one attack of small-pox renders the person insusceptible to the disease for the remainder of his life. Exceptions do occur, but are of less frequency than the statements of patients might lead one to suppose. We have seen but two cases of recurrent small-pox; the first was in a young man aged twenty-two, who was admitted with a discrete form of the disease, which ran its course in about two weeks. On the night previous to the day on which he was to have been discharged from the hospital, he was seized with rigors, headache, pain in the back, and the other initial symptoms of variola, which so closely resembled the symptoms that ushered in his first attack that he remarked, "I believe I am going to have a second attack of the disease." The eruption appeared on the third day, and ran a course similar in every respect to the first attack. The second case was that of an Italian child, not vaccinated; the variety was discrete from which it recovered and was discharged from the hospital. In less than a month it was again sent to the hospital with the disease, which proved to be of the confluent variety, and ended in death.

Several patients were admitted who exhibited the pits of a former attack. Two or three who had mild discrete small-pox claimed and exhibited cicatrices resulting from inoculation, done years before in the "old country."

Diagnosis.—It is always of the greatest importance to decide upon the nature of febrile eruptive diseases at the very earliest moment, in order that isolation of the patient and other precautionary measures may be taken for the protection of those who may have been exposed.

While we recognize the importance of early diagnosis, we should be exceedingly careful not to declare an eruptive trouble only measles and harmless, or, on the other hand, to decide it to be small-pox, and have the patient removed to a small-pox hospital, where, if he has not the disease, his chances for contracting it are greatly increased, before the evidence in the case warrants our giving a decided opinion. When small-pox is

¹ Churschmann in Ziemssen's Encyclopædia.

prevalent, mistakes in diagnosis frequently occur, growing out of undue haste and want of careful examination of the patient. In every case where doubt exists the patient should be isolated and closely watched.

In natural or unmodified variola, after the eruption is well out, there is little or no difficulty in making a diagnosis. No one symptom, or series of symptoms, before the appearance of the eruption, is sufficient to justify a positive opinion. All of the symptoms, taken in conjunction with the character of the eruption, should be carefully considered before deciding whether we have small-pox, or one of the less dangerous eruptive fevers, to deal with. It will be of great assistance to find out whether there has been any exposure to small-pox, also whether the patient has been recently vaccinated or re-vaccinated. In regard to vaccination, the statements of the patient or of his friends is not alone to be relied upon, but the arm should invariably be examined for a vaccine cicatrix.

The diseases which in the early stages are most apt to occasion difficulty in diagnosis are measles, varicella, scarlatina, febrile lichen, and some of the skin diseases. Many of the symptoms of the initial stage of variola—as chills, fever, headache, aching of the limbs, nausea with vomiting, and anorexia, are common to the other eruptive fevers, but the intense lumbar pain which accompanies these symptoms in small-pox is rarely found in the other diseases. In some cases of small-pox the pain in the back is not so pronounced, and its absence does not exclude the possibility of that disease.

The duration of the initial stage is a point for consideration; in small-pox it is from two to four days; in measles, four to five; in scarlatina, one day; in febrile lichen the eruption appears on the second day; varicella can scarcely be said to have any prodroma.

The presence of catarrhal symptoms—redness of the conjunctivæ, burning, smarting pain in the eyes, sneezing and coughing, and known exposure are in favor of measles; the temperature of the initial stage of measles is not so high as in variola—is seldom above 102° to 104° F.

The early appearance of throat symptoms, the strawberry tongue, and a diffuse eruption showing itself on the second day, favors scarlatina.

In the initial stage, the symptoms of greatest diagnostic significance in favor of small-pox are obstinate nausea and vomiting, the intense pain in the lumbar and sacral regions, and a temperature of 104° to 106° F. These, with the other symptoms and a known exposure to contagion, should put us on our guard. A positive opinion, however, is not to be given until the characteristic eruption is established.

The eruption of variola appears on the third day, consists of small red spots or macules, seen first about the mouth, nose, and chin, and at the same time on the fronts of the wrists and forearms. In twelve to twenty-four hours papules are formed; these change to vesicles, in which the central depression or umbilication is seen.

In measles the eruption is first seen on the forehead and about the temples, extends rapidly over the face, neck, and trunk, but more slowly over the lower extremities. The confounding of small-pox with measles usually occurs in the papular stage of the eruption; the papules of variola are smaller and have a hard, shot-like feel; those of measles are larger and softer.

Vesicles are to be carefully sought for, and if found with umbilication, decide the question. They are often found first about the axillary folds, inner face of the arms and thighs, where the skin is thinnest. The mouth and throat should be examined for the eruption. In measles it appears as a mottled redness; in variola the spots are round, whitish or ashy.

The eruption of scarlatina appears on the second day about the neck and chest, is diffuse, and extends rapidly over the whole body. The general erythematous con-

dition of the skin accompanied by redness of the fauces, which sometimes precedes the eruption of variola, may lead to the diagnosis of scarlatina. We have known this to occur in one or two instances. This erythematous redness is of a brighter scarlet tint than the eruption of scarlatina, which is more dusky in hue; it is not so generally diffused over the whole surface; the faucial symptoms are more pronounced in scarlatina. Crops of miliary vesicles are now and then met with in scarlatina, and may give rise to doubts. These occur chiefly about the sides of the neck and upper part of the chest, are small in size, do not umbilicate, dry up in a day or two and desquamate.

The eruption of febrile lichen appears on the second day as small papules on the trunk and face at the same time, and does not vesiculate. The duration and character of the prodromata and the difference in the eruption, will decide between this affection and variola.

The fall of temperature and disappearance of the symptoms of the initial stage after the eruption is established, is a strong diagnostic point in favor of small-pox. It does not occur in any of the other eruptive fevers.

The diagnosis of modified small-pox or varioloid from varicella is not always an easy matter, and the more modified the small-pox, the greater the difficulty. They are frequently confounded, and such errors have led to incalculable mischief. To mistake varicella for varioloid and send the patient to a small-pox hospital, where in all probability he would contract small-pox, would be a great injury to him; but to mistake a mild case of variola (varioloid) for varicella, would lead to far more serious consequences, from the lack of the necessary precautions to prevent the spread of the disease. We recall a case which occurred in the person of an only son, in a family, living in this city, which illustrates the serious consequences of the latter error. After a mild stage of invasion an eruption made its appearance. There was a difference of opinion among the physicians who saw him as to the nature of the disease; the diagnosis of varicella prevailed, and the case was treated accordingly. The patient only remained away from business for a day or two. It was deemed advisable to vaccinate the members of the family, and this was done except in the case of the mother, who was excepted because she had had an attack of small-pox when young. In due time she was attacked with confluent hemorrhagic variola, of which she died.

Varicella usually, though not invariably, occurs in children. There is scarcely any appreciable systemic disturbance, though exceptionally there may be a mild stage of invasion, lasting twenty-four hours. The eruption is vesicular almost from the beginning, appears first on the body as small spots which can be felt, but there is no hardness as in small-pox. The vesicles are present on the face and scalp, but are most abundant on the trunk, and are largest about the shoulders and between the shoulder-blades. They may attain the size of a split pea, though frequently are no larger than the head of a pin. They are very superficial, and look as if caused by a shower of boiling water. The contents of the vesicles become turbid, but not purulent, unless they are irritated. As a rule the vesicles are not found in the palms and soles, and, when found there, are along the radial and ulnar borders of the hand, and the inner and outer sides of the foot—not in the centre. Umbilication is now and then observed, but is not so universal as in varioloid. It may be due to the presence of a hair-follicle, or the depression resulting from the escape of a portion of the contents of the vesicle. However this may be, its presence may lead to error, and alone it should not be taken as a decided point in favor of varioloid. The vesicles of varicella are less often found on the mucous membranes than in varioloid.

The presence of a characteristic cicatrix, due to a recent vaccination, is strongly, if not positively, against varioloid. Supposed varicella, occurring in adults, is

always suspicious and should be very carefully looked into. In many cases it will prove to be varioloid.

Some dermatologists, among them Hebra, consider varicella and varioloid to be identical, but a careful comparison of the two diseases will demonstrate the error of these views. The following history of a series of cases that occurred in the experience of the writer will serve to controvert the above opinion :

CASE I.—Maud H—, five and one-half years of age ; vaccinated when four years old, good cicatrix. On January 8th, after little or no general disturbance, a vesicular eruption made its appearance, most abundant on the trunk, and ran its whole course in about one week. Diagnosis varicella.

CASE II.—Margaret H—, two years of age, sister of Maud : vaccinated when nine months old, excellent cicatrix ; was taken sick (January 21st) one week after the recovery of her sister ; after a slight indisposition, had an eruption identical in every particular with that in her sister's case.

CASE III.—Jennie W—, eight years of age ; never vaccinated ; lived on the first floor of the same house and was a playmate of the H—s. Was sick first on February 5th : her symptoms, the appearance and duration of the eruption, were the same as in the other cases.

In February an uncle of the H—s came to visit them. On the 15th was sick with the following history :

H—, twenty years of age : exhibited cicatrix of a vaccination done in infancy ; began to be sick on the afternoon of February 15th, with chills, headache, pain in the back, fever, anorexia, etc. On the 17th "pimples" were noticed on his face and wrists, which changed to vesicles, and later some of them became pustular ; the eruption was present in the palms of the hands. The initiatory symptoms abated as soon as the eruption appeared and the patient was not confined to his room after the 27th, though the spots of the eruption and pigmentation were plainly seen after convalescence. The occurrence of this case, after the illness of the children from varicella, and the similarity of the attack, led to the conclusion that this case also was one of varicella, "only a little more severe," and no physician was called.

On February 27th, J. H—, a brother of the young man, began to be sick and had all the symptoms of the initial stage of variola. No eruption appeared, but on the fourth day the fever subsided and all of the symptoms disappeared. This was in all probability variola sine variolis.

On March 2d, H. W—, forty-six years of age, father of Jennie W—, had the first symptoms of small-pox. The eruption appeared on the 5th. He was removed to the hospital ; the disease assumed the confluent form, and death ensued on March 14th.

Jennie W—, eight years of age, never vaccinated, recently recovered from varicella, taken sick with the first symptoms of variola on March 4th ; the eruption appeared on the 7th. She was removed to hospital with her father. The form was discrete small-pox. She recovered and was discharged from hospital on the 24th of the month.

These cases illustrate not only the many points of diagnostic difference between varicella and varioloid, but also the fatal consequences of mistaking one for the other ; and further, that an attack of varicella does not prevent the occurrence of variola, since Jennie W— had scarcely recovered from the former when she was attacked by the latter. All of the cases of varicella were in children—two vaccinated and one unvaccinated—which illustrates the fact that vaccination does not act as a preventive against varicella. The supposed case of varicella in the adult was undoubtedly modified small-pox (varioloid), he having been vaccinated in infancy, as the occurrence of the three cases of variola in the same house are clearly traceable to him. The benefit of vaccination is illustrated by the fact that the two nieces of H—, both having the protection of comparatively re-

cent vaccination, escaped, notwithstanding constant exposure in the same rooms. Jennie W—, though not so constantly exposed, being unprotected by vaccination, contracted small-pox.

Of the diseases of the skin, those most likely to be mistaken for small-pox are pustular acne, papular eczema, ecthyma, and some forms of the secondary syphilitic eruptions. By strict attention to the stage of invasion, careful observation of the characteristic points of the eruption, and noting the regular development of, and the changes in the form of the eruption of variola, there will be little difficulty in making the distinction.

The question of diagnosis between typhus fever and the petechial type of hemorrhagic variola occasionally presents itself. Reliance is to be placed in the differences in the symptoms and duration of the initial stage, and upon close observation of the appearance of the eruption and the changes which occur in variola. Vesicles should be carefully sought for, and if present will decide the point. The temperature of variola abates on the development of the eruption, in typhus it does not.

Purpura hæmorrhagica has been mistaken for petechial small-pox, and, during the prevalence of variola, deaths are now and then reported as caused by the former, when investigation proves them to be due to the latter.

Hemorrhagic spots are occasionally seen in acute rheumatism, which may lead to a diagnosis of petechial variola. The writer has met with one such case.

Sudamina, and miliaria occurring in fevers and diseases in which there is profuse acrid perspiration, notably rheumatism and scarlatina, have been diagnosed variola. With a little care this need not occur. The vesicles are consequent upon profuse acrid perspiration, are minute in size, contents very clear, generally found at the root of the neck, around the shoulders and sides of the thorax ; there is no redness at their base ; they attain full development in a few hours, remain so for about a day, and either burst or dry up. We have met with one case in which a profuse crop of sudaminous vesicles appearing in a patient subject to rheumatism led to the diagnosis of variola. In this instance they were even noticed beneath the hardened cuticle of the palms.

Now and then cases are encountered in which the eruption of small-pox is found coexisting with the eruption of syphilis, and the detection of variola on first examination is extremely difficult. The symptoms and appearance of the eruption must be carefully considered ; an attempt to make a diagnosis on the appearance of the eruption alone may lead to discomfiture. We have seen one case of this kind, occurring in a Cuban negro. The presence of a pustular syphilide was recognized, but a few days of fever, with the other symptoms of the initial stage of variola, with new points of eruption appearing, and small-pox being prevalent, gave good grounds for the suspicion of the coexistence of the two diseases. He was isolated, and, after a few days watching, variola was excluded.

Prognosis.—In predicting what will be the probable termination in any particular case of small-pox, we should be guided by the following points : the character and quantity of the eruption ; the age of the patient ; the extent of the implication of the mucous membrane of the larynx and trachea ; the previous habits and condition of the patient ; whether vaccinated, and if so, how recently ; the complications, their nature, etc.

Discrete variola when uncomplicated is attended with but little danger. Of 657 cases admitted to the Riverside Hospital for 1882, 409 were of this variety, and but 25 of these died—a mortality of 6.11 per cent. The danger to life is not from the disease *per se*, but if death occur it is usually from some complication. A semiconfluent eruption greatly increases the danger to life.

The prognosis of confluent small-pox should always be guarded, and cannot be given with safety in the early stages of the disease. Confluency about the face is unfavorable, as these patients frequently die, although the

eruption may be discrete on the other parts of the body. When the pustules do not fill out, but remain flat, and the eruption has a dirty whitish, pasty appearance, recovery almost never takes place. A deep, clarety-colored areolæ surrounding the pustules, is to be regarded as unfavorable. In the year 1882, of the 657 cases of small-pox admitted to the hospital, thirty-one were of the confluent variety, of which number only four recovered.

Recovery from the petechial type of hemorrhagic small-pox is so rare that it may be said never to occur. Death very frequently occurs from the intensity of the poison before the eruption is established. From confluent-hemorrhagic small-pox recovery rarely, if ever, takes place. There were thirty-seven cases of this form in the hospital in 1882, all of which died.

Age occupies an important place in prognosis, the mortality being greatest among young children and the aged. The least mortality takes place from ten to twenty years of age.

TABLE II.

Showing the Total Number of Cases admitted to the Riverside Hospital, for the Years 1880, 1881, 1882, arranged according to Ages, with the Ratio of Mortality for each Period.

	AGES.										Total
	0-5	5-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80		
Admissions	456	159	281	637	311	112	46	9	3		2,014
Deaths	247	37	53	135	68	32	16	4	3		595
Mortality per cent. .	54	16	23.27	18.86	21.19	21.86	28	57	34	78	29.54

Although the mortality is greater among young unvaccinated children, it is to be remembered that mild, discrete small-pox does occasionally occur and recovery take place.

In the year 1881, of 1,259 cases of small-pox admitted to the hospital, 138 were in unvaccinated children of two years and under. Recovery took place in 41 of these.

The patient's having been vaccinated will make an important difference in prognosis. The recency and thoroughness of the operation is of more importance than any number of cicatrices resulting from the same operation.

The stage of invasion of small-pox in those who have been vaccinated may be of the severest nature, yet the eruption is usually discrete and runs a modified course unattended by any great danger.

The symptoms which justify a grave or unfavorable prognosis are : great prostration ; rapid and feeble pulse ; low muttering delirium, or intense restlessness ; diarrhœa ; general confluence of the eruption ; the formation of large blebs or bullæ ; a flat, white, pasty appearance of the eruption ; the appearance of a dark spot in the centre of the pustule during maturation ; a livid, purple color of the vesicles and surrounding surface ; hemorrhages into the vesicles and from the mucous surfaces ; abundance of the eruption in the throat and larynx.

Pregnancy is a most dangerous complication and renders prognosis unfavorable.

During the stage of desquamation the occurrence of pleurisy, pneumonia, erysipelas, gangrene, numerous abscesses and sinuses, and prolonged exhaustive suppuration render the prognosis unfavorable.

(To be continued.)

INTERESTING SANITARY EXPERIMENT.—An interesting debate took place in the Italian Parliament recently on the employment of convicts in agricultural operations, which has been going on for some years at the Abbey of the Tre Fontane in the Roman Campagna, under the direction of the Trappists. The object with which these works were started was to ascertain if the cultivation of the soil would result in purifying the air of the Campagna, the general opinion being that the malaria is caused by atmospheric influences unsuceptible of modification. The results so far have been most satisfactory. At first the monks were obliged to live within the city walls during the bad season, but since the ground has come under cultivation, and, above all, since the Eucalyptus globulus has been planted on a large scale in the neighborhood, the Abbey has been inhabited all the year round, and the fevers from which its inmates still sometimes suffer are of a mild character, and rarely fatal ; whereas at the outset something like a fourth of the little community succumbed every year. The debate proved that the health of the two hundred and eighty convicts employed on the works was satisfactory, the average annual deaths from malaria not exceeding three. The government has lately made a very large grant of land in perpetuity to the Trappists, who have already planted on it no fewer than one hundred thousand eucalyptus trees, which are all doing well.

TABLE I.
Showing the Total Number of Vaccinated and Unvaccinated Cases of Small-Pox admitted to Riverside Hospital, New York City, in 1882, according to the Forms of the Disease, with the Percentages of Admissions, Recoveries, and Deaths in each Form.

FORM.	Aggregate admissions.			Recovered.			Died.	VACCINATED.			NOT VACCINATED.			No HISTORY.												
								Total.			Died.			Total.												
	No.	Per cent.		No.	Per cent.			No.	Per cent.		No.	Per cent.		No.	Per cent.											
Discrete	409	62.25		384	93.89		25	6.11	303	74.08	297	98.01	6	1.99	105	25.67	86	81.90	19	18.10	1	.25	1	100.00	..	...
Semiconfluent	128	19.48		62	48.44		66	51.56	29	22.65	21	72.42	8	27.58	95	74.22	39	41.05	56	58.95	4	3.13	2	50.00	2	50.00
Confluent	31	4.72		4	12.91		27	87.09	5	16.13	..	..	5	100.00	26	83.87	4	15.38	22	84.62	..	..	..	..	..	..
Discrete hemorrhagic	12	1.83		5	41.67		7	58.33	5	41.67	4	80.00	1	20.00	7	58.33	1	14.29	6	85.71	..	..	..	..	..	..
Semiconfluent hemorrhagic	40	6.09		7	17.50		33	82.50	9	22.50	3	33.33	6	66.67	30	75.00	4	13.33	26	86.67	1	2.50	..	..	1	100.00
Confluent hemorrhagic	37	5.63		..	..		37	100.00	11	29.73	..	33.33	11	100.00	25	67.57	..	..	25	100.00	1	2.70	..	..	1	100.00
Total	657	100		462	70.32		195	29.68	362	55.09	325	89.77	37	10.23	288	43.84	134	46.53	154	53.47	7	1.07	3	42.86	4	57.14
Total admissions	657																									
Total deaths	195																									
Vaccinated..... 362; 55.09 per cent.																	Died..... 37; 10.23 per cent.			Per cent. of total deaths among vaccinated..... 18.07						
Not vaccinated..... 288; 43.84 "																	"..... 154; 53.47 "			"..... not vaccinated 76.98						
No history..... 7; 1.07 "																	"..... 4; 57.14 "			"..... no history 2.05						
Mortality per centage..... 29.08																										

ON THE
PRODUCTION OF IMMUNITY FROM CONTAGIOUS
FEVERS BY INOCULATION WITH
DILUTED VIRUS.

By D. E. SALMON, D.V.M.,

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A FEW years ago, a considerable number of extremely ingenious and instructive experiments were made by M. Chauveau, which demonstrated beyond the possibility of doubt that the active principle of virulent liquids consisted of solid particles held in suspension and not of soluble chemical substances. These experiments were modelled after those of Spallanzani with the spermatic fluid, by which he proved so conclusively that the fecundating agent was not the *aura seminis* of the older philosophers, but existed as suspended and insoluble particles.

The idea of one series of experiments was to obtain the results of inoculations with diluted virus. If, after the dilution was carried to a certain extent, the inoculations in some cases produced the disease and in others did not affect the animals, he reasoned that this must be due to the fact of the solid particles being too few to exist in every drop of the diluted liquids, and that the disease was only caused by those drops which contained one or more of the virulent particles. If the virus was a soluble poison, it should exist equally in every drop, even of the greatest dilutions.

Practically he found that virus diluted to the same degree sometimes produced the symptoms of the malady with all their intensity, while sometimes it had no effect whatever. Vaccine virus diluted to one-fiftieth nearly always failed, and this was accepted as a proof of the theory that the active agent consisted of solid particles too few to be inserted in every inoculation puncture. Similar experiments were made by way of confirmation with the virus of small-pox, sheep-pox, and glanders.

From that time until the present, no one, as I am aware, with the single exception of Chauveau himself, has ever expressed a doubt in regard to the ability of a single disease-germ, once introduced into the tissue of the body, to produce the disease with all its characters. On the other hand, our best scientific authorities have felt confident in assuming that because disease-germs evidently have the power of multiplying themselves indefinitely, when the conditions are favorable, a single one of these would produce the disease as certainly as a larger number, though it would probably require a longer period of incubation.

Strange and inexplicable as it may appear to us, this assumption is not in accordance with the truth, and if the conclusions from all of M. Chauveau's experiments had been as defective as with this series, which happily they were not, we might well have doubted the power of man to solve a problem so complicated and mysterious.

If we examine a drop of fresh vaccine lymph, with suitable precautions, we will have no difficulty in deciding that it contains many more than fifty germs, and that, consequently, if Chauveau's reasoning was correct there should have been no failures with dilutions of one to fifty.¹ Again, Chauveau's experiments with diluted virus, like those of every other investigator who has attempted the same line of research, are unreliable and defective, because, first, lymph, blood, or other liquids taken from the animal body contain cells, organic *débris* and coagula to which the germs adhere and which prevent their regular diffusion in the diluting liquid; secondly, because the number of germs in a drop of lymph from different pustules, or in a drop of blood from different animals, varies to an extraordinary degree; and, thirdly, because different animals have a different degree of susceptibility in regard to the germs of the same dis-

ease. In other words, just as there is a *vis medicatrix naturæ* which enables a certain number of the individuals in which disease-germs have multiplied to overcome such germs and to recover from contagious diseases, so there is a *vis conservatrix naturæ*, by which not only a certain number of individuals resist the germs of any given disease, but which enables every individual to resist a certain number of these germs.

When, in the summer of 1880, I commenced my investigations of the effect of inoculations with diluted virus, I soon became convinced that, to obtain definite and comparable results, it was necessary to obtain a virus of a standard strength and one free from coagula and other foreign particles which prevent the even diffusion of the virulent granules. In these experiments, fowl-cholera was the disease selected, not only because it is an excellent type of the non-recurrent contagious fevers; but also because the virus is easily cultivated outside of the body, the subjects are cheap and easily obtained, and the Department of Agriculture, with which I am connected, was anxious for an investigation in the interests of our agricultural population.

The production of a virus which should contain a practically constant number of disease-germs in every drop, which could be obtained at will and in any desired quantity, which should be free from foreign particles, certainly seemed, at the time I am referring to, a most difficult question to resolve. But, fortunately, the obstacles to our success, as so frequently happens, did not prove so insurmountable when we came to grapple with them as they had appeared when contemplated from a greater distance. The germs of this disease were easily cultivated in a broth made from the flesh of fowls, which was carefully filtered until perfectly limpid and sterilized by heat. A few germs placed in a flask of this liquid, multiplied for a certain time and then became inactive. Pasteur demonstrated that this cessation of activity was due to the exhaustion of the available nutriment. What, then, would be easier than to make a broth of a definite strength by extracting the soluble parts of a given weight of flesh with a given quantity of distilled water? If we cultivate our germs in such a broth, at a favorable temperature, we should always obtain, at the moment when the nutriment is exhausted, a virus of practically identical strength. This reasoning, I may add, has been fully justified by the many experiments which I have made with a standard virus prepared in this way.

The number of germs in a drop of such standard virus, I have never accurately determined, but I assured myself at an early stage of these researches that there were over one million six hundred thousand.

It was not until the 13th of May, 1881, that my methods of investigation were sufficiently perfected to allow the inauguration of a series of experiments by inoculating with dilutions of a standard virus. The inoculations always consisted of a single lancet puncture, and as much of the virulent liquid as would adhere to the grooved lancet was inserted between the skin and the muscles beneath the wing.

It will be necessary for me to refer here to some symptoms of this disease, in order that the reader may better appreciate the results of these experiments. Owing to some anatomical and physiological peculiarities of birds, the secretions of the kidneys are added in the cloaca to the feces. The kidney secretion of birds is of a semi-solid consistency; it is in health perfectly white and is seldom intimately mixed with the bowel contents. This white secretion of the kidneys, which for convenience I call the urates, is easily seen and examined in the droppings. The very first symptom which is seen after inoculation with strong fowl cholera virus is a slight yellowish coloration of the urates, due very probably to disturbance of the liver, as this organ is the one most constantly and most intensely affected in the disease under consideration. A day or two later, the droppings are more frequent and consist almost entirely of

¹ I hope that the opponents of the germ theory will forgive me for assuming that the organisms seen in virulent liquids are disease-germs, for it would be manifestly impossible for me to enter into a discussion of this question in the present article.

the yellowish urates mixed with an increased proportion of liquid. The fleshy parts about the head now become pale and bloodless, the temperature rises four or five degrees, the appetite is lost, the bird becomes dull, stupid, sleepy, and finally dies within two or three days from the first symptoms.

May 13, 1881, I inoculated four fowls with diluted virus; for one the dilution was 1 to 50; for the second, 1 to 500; for the third, 1 to 2,500; and for the fourth, 1 to 5,000.¹ With the first one the urates were slightly tinged for a day or two; with the second the urates were deeply colored, and there was loss of appetite for a few days; with the remaining two the urates showed no signs of coloration, nor was there any apparent change in the perfect health of these birds. The most important result of the inoculations was a slight circumscribed inflammation, which was noticed in each case at the point of inoculation the seventh day after the operation. This local lesion is very apparent from the increased size of the blood-vessels, and a noticeable swelling from one-fourth to three-fourths of an inch in diameter.

At the time of these experiments, I underestimated the importance of the lesion just described, for, while I thought it possible that a slight degree of immunity might be obtained by means of it, I could not conceive that a complete insusceptibility would result without the yellow urates and other symptoms of a constitutional affection. That is, it was naturally expected that a mild attack of the fever was necessary to protect against the subsequent recurrence of the disease.

Being desirous of producing the general fever of as mild a type as possible, I now inoculated four fowls with the same virus diluted as 1 to 1,000. What was my surprise to see each one of these birds succumb to the disease in its most virulent and fatal form! I was now brought face to face with the great obstacle which has always prevented the physiological investigator from developing an exact science, and which had proved an insurmountable difficulty to those who had previously attempted this line of investigation—that is, the individual peculiarities of living animals.

It was not to be supposed that the birds in the first experiments escaped because no germs were introduced with the diluted virus, since in a dilution of 1 to 2,500 there would be more than 600 germs to every drop, and in the dilution of 1 to 50 these would be increased to more than 30,000; besides there was the local inflammation which developed after the punctures had healed, and with two of the birds a sufficient coloration of the urates to denote constitutional disturbance.

My experiments have demonstrated, conclusively, that susceptibility and insusceptibility are only relative and never absolute conditions. A certain proportion of fowls will resist inoculation with a drop of strong virus, but if we increase the dose to ten, twenty, thirty, or sixty drops, even these may be made to contract the disease. As we decrease the dose to one-fiftieth, one-five-hundredth, one-thousandth of a drop, we find that the proportion of fowls which contract the affection becomes continually smaller and smaller. Measuring the susceptibility of fowls by means of this diluted virus, we find that it varies to an enormous extent with different individuals. In one case a bird died from inoculation with one-forty-thousandth of a drop, while another resisted the enormous dose of one drachm, or about two and one-half million times the former amount.

We will now return to our experiments in the production of immunity. The 2d of June, 1881, the two birds which had been inoculated with dilutions of 1 to 50 and 1 to 500 and recovered, received an inoculation with pure standard virus, while the two which had been inoculated with dilutions of 1 to 2,500 and 1 to 5,000, were tested with a dilution of 1 to 500. Not one of these inoculations produced the least effect; the punctures healed

and remained free from irritation as though no virus had been inserted, and the general health was not in the least disturbed.

On November 7, 1881, I inoculated two fowls with a dilution of 1 to 2,500, two others with a dilution of 1 to 5,000, two others with a dilution of 1 to 10,000, and two others with the undiluted virus. The last two died, as did one from each of the first two lots. The remaining four birds had a well-marked local lesion, but no constitutional disturbance, and remained in the best health. December 6th, all were inoculated with a dilution of 1 to 500. This producing no effect, either general or local, they were reinoculated December 13th with undiluted standard virus. Two now showed more or less coloration of the urates, but no other signs of ill health; the appetite and general appearance were perfect throughout the experiment.

Ten fowls were inoculated November 28th with a dilution of 1 to 10,000. Of these, three died, two had mild attacks and recovered, while five had the local lesion with no general symptoms. December 21st, the seven birds which recovered from these inoculations were inoculated with the strongest virus. This was followed in one or two cases with yellow urates, but there was no loss of appetite or dulness, and all remained in excellent health.

Up to this time more than eighty birds have been inoculated with diluted virus, though, as the remaining experiments have only recently been communicated to the Department of Agriculture, it would be premature for me to publish details at present. I may say, however, that with dilutions beyond 1 to 100,000, I have had no results, and it appears that inoculations with dilutions of 1 to 80,000 would give the local lesion and immunity to the most susceptible birds, and that the remainder could then be safely inoculated with a dilution of 1 to 10,000, which would grant immunity to all or nearly all. The experiments are still too few, however, to enable us to be perfectly certain in regard to the strength of virus to use with the greatest safety. The birds protected in this way have not only been tested with strong virus, but they have been placed in infected runs with sick birds, and in no case has there been a failure to resist the contagion.

From these experiments a number of exceedingly important conclusions may be safely drawn:

First.—A single disease-germ cannot produce this extremely virulent disease; it cannot even multiply sufficiently to produce the local irritation at the point of inoculation. When a quantity of virus was introduced into the tissues, which should have contained at least twelve germs, there was no effect, either general or local, but by increasing this one-third with the same birds, the local irritation appeared.

Second.—It is apparent that the local resistance to the germs fails, while the constitutional resistance may still be perfect, and that in this case there may be a local multiplication of the organisms for two or three weeks without any disturbance of the general health.

Third.—That this local multiplication of the virus is sufficient to grant a very complete immunity from the effects of such virus in the future.

From these conclusions it follows that the most virulent virus may be diluted to such an extent as to become practically a vaccine, and that in this condition it may be used safely for producing insusceptibility.

These facts are not exactly what we should have expected from theoretical considerations, but unless I am greatly mistaken, they are on this account, even, destined to modify our ideas very materially as to the general principles underlying the contagia and the contagious fevers. At present I can do no more than refer to this aspect of the question, leaving the practical applications to suggest themselves, as I believe they will, to every one who ponders over the many mysteries connected with the phenomena of this class of diseases.

¹ Details of these experiments will be found in the Report of the Department of Agriculture for 1881 and 1882, p. 285.

Interesting and important as the results I have detailed evidently are to the veterinarian and the agriculturist, they would be more or less out of place in this journal, were it not for the probability that the germs of the contagious fevers in men and animals are very closely related organisms, that the mysterious condition of the animal body, which we call insusceptibility, is comparable from all points with the insusceptibility of mankind, and that the methods by which we can grant immunity to animals are equally applicable to the human subject. From this standpoint it at once becomes a matter of importance to learn if the diluted virus of other contagious fevers of animals produces either a milder affection or a harmless local irritation also ending in immunity; in other words, is our method of vaccination, with a small number of very virulent germs, generally applicable to the various diseases of this class?

In April, 1881, M. Chauveau¹ announced the result of experiments made with charbon virus, by diluting virulent blood until each cubic centimetre contained from fifty to one thousand rods of the *Bacillus anthracis*, and injecting this dose directly within the jugular vein. He did not state how the number of the germs was estimated, and one would suppose that this would be rather a difficult matter to accomplish with any degree of certainty, unless, indeed, an apparatus similar to that used for counting blood-corpuscles was at hand. M. Chauveau believed that by introducing the germs directly into the blood-stream there would be less danger of a fatal result—a supposition which may be contested from the results of my experiments. In his first experiment four sheep received a dose of one thousand bacilli each. All died of charbon. In the second experiment, two sheep received about six hundred bacilli each. One died of charbon; the other did not show the least symptom of disease. In the third experiment, one animal received fifty and the other one hundred bacilli. To the liquid containing the larger number one per cent. of carbolic acid was added. No effect was produced by the carbolized virus; the other animal had a very slight fever of short duration.

The animals remaining from the second and third experiments, and two others, in all five sheep, received, seven days after the third experiment, a dose containing about one thousand bacilli. All died of charbon; but the one which had showed slight symptoms of fever in the third experiment did not die until the seventh day. The death of this animal was due to a bacterial meningo-encephalitis—being the usual result of inoculating partially insusceptible sheep with large quantities of virus. It seemed, then, that this one animal had acquired a certain degree of immunity.

In the fifth experiment, five sheep received about two hundred and fifty bacilli each. All recovered after presenting slight and transient symptoms of fever. Re-inoculated, six weeks later, with strong virus, four resisted perfectly, while a single one died. In this experiment, the first virus used was taken from a rabbit which had been dead several days, though perfectly preserved because of the cold weather. We know, however, from Pasteur's experiments, that when the bacilli are preserved, either at so high or so low a temperature that they cannot form spores they rapidly lose their virulence, and, as in this case the strength of the undiluted virus was not tested, there is some reason to doubt if the dilution should receive the entire credit of the results.

In the same communication, M. Chauveau records an observation with the virus of *charbon symptomatique*, which corresponds to the black quarter of this country, and is entirely distinct from charbon. This virus, though one of the most active known, may be injected into the veins in considerable quantity without causing death; but a very much smaller dose in the connective tissue infallibly destroys cattle and sheep. In December, 1880, ten sheep had been collected, which, from many preven-

tive inoculations with charbon virus, had obtained a very complete degree of immunity from this disease. Before receiving their final test, they were to have a last preventive inoculation with one cubic centimetre of liquid extremely rich in bacilli. By mistake, this liquid was filtered through a cloth that had served in preparing the virus of *charbon symptomatique*. This cloth had been washed, but a sufficient quantity of virus remained in it to produce the disease in each of the ten sheep. The virulent liquid was drawn with the syringe from a high and narrow vessel, so that for each animal it came from a different depth. The results were in proportion to this depth, being mildest with the first and most severe with the last. The first four recovered, while the remaining six died. A month later, an inoculation was made in the other thigh, of those which had recovered, with a considerable quantity of black quarter virus. The resulting symptoms were very mild, but not equal with all. Those which suffered the least by the former inoculation were more intensely affected by the latter.

The observations of M. Chauveau are undoubtedly very important if we look upon them as confirming the doctrine of attenuation by dilution, but of themselves they are plainly insufficient to establish this doctrine with either of the diseases with which they are connected. With charbon all the indications must be drawn from the last experiment, and this was made with virus of doubtful activity. The observation with black quarter virus was not a premeditated experiment, there was no intention to inoculate with this virus, and, consequently, it cannot carry the weight of a genuine experiment. At the same time, viewed in the light of my results with fowl cholera, these experiments with charbon and the observation with black quarter are sufficient to show that these viruses are subject to the general law which my experiments were first to demonstrate.

Still more recently, M. Peuch,¹ Professor at the Toulouse Veterinary School, has made experiments in the same direction with the disease known as sheep-pox. This is a form of variola peculiar to sheep and extremely fatal to these animals. It has been combated in the north of France by inoculation, but in the southern departments the losses from this operation were so nearly equal to those caused by the spontaneous disease that the practice has been about abandoned. As the danger in this disease is principally due to the eruption, and as M. Chauveau in his experiments with vaccine had granted immunity to cattle by hypodermic injection of virus without producing any specific eruption, M. Peuch conceived the idea that by reducing the number of germs by dilution, and injecting the liquid beneath the skin a similar result might be obtained with sheep-pox. His recorded experiments have been made with seventeen sheep. Eight were inoculated with a dilution of 1 to 20, four with a dilution of 1 to 30, and five with a dilution of 1 to 50. The inoculations with the strongest virus (1 to 20) produced a general eruption, which followed the regular course. But with the weakest virus, injected in half the quantity, the effects were less marked. With five sheep inoculated with eight centigrammes of this dilution a single one presented a very mild secondary eruption, three had a pustule at the point of inoculation, the fifth had only a slight swelling at this point. All acquired immunity.

These experiments, like Chauveau's, are not sufficiently numerous to demonstrate a great principle, but they are one more and a very important contribution to this end. In the methods of both of these gentlemen, there is much to be desired before they could be applied in practice, especially to such virulent diseases as fowl cholera, with which a single drop of a dilution of 1 to 40,000 sometimes causes death. The strong virus which they use varies greatly in strength, it contains coagula and animal *débris* which prevents its even diffusion; it is in many

¹ Comptes Rendus, ser., 1881, p. 844.

¹ Recueil de Médecine Vétérinaire, 1882, p. 977.

cases difficult to obtain when desired. By my method the virus is obtained of a definite strength; it may be preserved for an indefinite length of time in cultivation tubes, and in a short time can be increased to any desired quantity. These are points which, especially in endeavors to control the diseases of mankind, must be considered of the greatest importance.

In presenting a new method for attenuating the active viruses of contagious diseases, it is, of course, desirable to know how it compares practically with the method of M. Pasteur which has recently received so much attention, and which, in spite of adverse criticism, must be accepted as a remarkable advance in medical science. It has not been unusual for men who stand quite high in scientific circles to speak of Pasteur's method as though the mitigation in this case was produced by dilution; others of equal eminence have told us that it consisted in passing the virus through a large number of cultivations. In reality, it is neither the one nor the other. Pasteur's first attenuation was made with fowl cholera virus, and his method with the later ones has only been changed to suit the peculiarities of the virus of other diseases. With fowl cholera a cultivation of the virus was made in sterilized broth, the flask being arranged to admit filtered air. This was set aside for an indefinite period, varying from five to eight months, during which time the attenuation occurred. A second cultivation, made from this first one after this indefinite period, was the vaccinal virus. During this time the activity of the germs is gradually lessened, but the same degree of attenuation does not always occur in the same length of time; and when preparing fresh vaccine the degree of attenuation must be determined by inoculation experiments.

When the vaccine is once obtained it may be preserved for a considerable time by frequently renewing the cultivations of it, but this cannot be done indefinitely, as Pasteur at first announced. This vaccine gradually loses its strength, no matter what precautions are observed; consequently, it must from time to time be renewed, the setting aside for from five to eight months, and the testing of the activity, which involves much trouble and expense, to say nothing of the skill required, all must be gone over again as at first. What makes this still worse, there must be two vaccines, one stronger than the other, because the weaker vaccine is too inactive to grant complete immunity.

With charbon virus, the attenuation occurs more rapidly, being complete in less than eight days for the weaker vaccine; but here there is also an obstacle to its preparation. The virus must be kept at a constant temperature of 42° to 43° C. to prevent the formation of spores. If spores are formed, there is no attenuation and the vaccine obtained will produce fatal effects. Koch and Klein have each attempted to show that virus could not be attenuated in this way; but they undoubtedly failed by allowing spores to form either by variation of the temperature, by the liquids being too shallow, or from neglecting to supply some other required conditions. These experiments, while they cannot overthrow Pasteur's general conclusions, are sufficient to demonstrate the difficulties and the uncertainties of the method when attempted by others less skillful than the originator.

With the method of attenuation by dilution, as I have developed it, most of these difficulties are avoided. The preparation of the standard virus and its dilution can be accomplished, with fowl cholera at least, within twenty-four hours from the time the particle of blood which originates it is taken from the affected animal. The stronger the virus, the longer will it retain its full activity, and, hence, the unmitigated virus is in far the best condition for preservation, and the dilution can at any time be made in a few minutes.

Again, the method of Pasteur cannot well be applied to human diseases, because it requires too many experiments to learn the degree of attenuation. In some

cases, the attenuation does not occur until a few hours before the death of the virus, while in other cases it may be weeks or months before. So that, in applying it to a new disease, there are no indications except those furnished by inoculation experiments. On the other hand, if we dilute we know that we attenuate. If we introduce but ten or twenty germs of almost any disease the probabilities are that the effect would be very slight; if such an inoculation were unsuccessful, the number could be gradually increased. Surely when many people are exposed to a deadly plague, it would not be impossible to pursue this class of investigations. Of course, I only mean the above remarks to apply to those non-recurrent fevers from which immunity may be acquired within a few days or weeks.

Whether I am right or wrong in considering that this method of preventive inoculation may, under certain circumstances, be used advantageously in controlling the plagues of mankind, it seems to me that the method by dilution has some incontestable advantages over the method of Pasteur. I may summarize these as follows: 1. The virus is obtained by a definite strength. 2. It may be preserved in the condition in which it retains its activity the longest time. 3. The attenuation requires but minutes instead of weeks or months. 4. The experiments to learn the proper degree of attenuation are less dangerous to the individuals operated upon. 5. These experiments once made, it is not necessary to repeat them with every fresh lot of virus. 6. One virus and one successful vaccination are all that is required. 7. The amount of virus needed is many times less than with other methods. Certain disadvantages will doubtless be revealed by the experiments of the future, but their importance cannot be foretold.

I should not be surprised if greater advances are made by the investigations of the future, for the prevention of contagious diseases, than have been accomplished in the past, possibly vaccination in all forms may be discarded, but at present the question is fairly before the medical profession—Shall we vaccinate with a large number of comparatively inactive germs, or with a small number of those which retain their greatest virulence?

The solution of such a question can hardly be made from theoretical considerations, it may even require investigations which include a large number of individuals, scattered over a considerable territory and embracing a variety of diseases; but, with the principles upon which these methods depend for their success once understood by our scientists, it cannot be long before we have the elements for a complete and satisfactory conclusion. At the same time, it is not to be forgotten that the method by dilution, because of the little time required to prepare the virus, might often be resorted to when the other would be impossible.

In conclusion, I would call attention to the following points of this communication, which are believed to be original:

First.—The method of producing a virus of standard strength.

Second.—The fact that germs which usually multiply throughout the whole body may be compelled to limit their reproduction to the point of inoculation by reducing the number inserted.

Third.—That this local multiplication grants an immunity from the disease in the future.

Fourth.—That a very small number of germs may be introduced into the tissues with impunity, and are not able to produce the least effect, either general or local.

GRANULATED MILK is made by subjecting milk to a temperature of 130° until the watery part has been evaporated. It is then granulated and sugar is added, when it looks like corn meal. The evaporated milk is not as solid as condensed milk, and when water is added it cannot be distinguished from natural milk.

THE INFLUENCE OF EXTREME LATERAL CURVATURE OF THE SPINE UPON THE COURSE OF LABOR.¹

By W. M. POLK, M.D.,

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THE following case is one so interesting to me that I cannot forbear presenting it to you to-night. In June last a lady seeking my services as an attendant in her first confinement, asked that I make an examination of her pelvis, that she might know whether any difficulty in labor was to be apprehended. She was moved to this by the fact that she was the victim of decided lateral curvature of the spine, a state of things which had existed for some years.

I made a very careful examination of the pelvis, and finding it of normal dimensions expressed myself as satisfied that all would go well in the coming labor.

She then told me that before marriage she had sought the same opinion from one of the most distinguished and careful obstetricians in our city, and he, after a careful examination, had expressed himself precisely as I had done. Thus reassured she went forward to confinement with all confidence. The sequel showed, however, that matters were not to end so smoothly as all had expected.

On Friday evening, in the latter part of December, she sent for me, as labor had commenced. I found her in excellent condition, mentally and physically. A vaginal examination proved that labor had just set in. The cervix was rather higher than is usual even in a first labor, and the os was somewhat nearer the left pelvic wall than to the right, showing right lateral obliquity of the uterus. This, to some extent, being almost a normal condition. I attached but little importance to it. The patient now called my attention to the position of the fundus. An examination of the exact position of the uterus was now made, and it was seen that the obliquity was somewhat excessive. An attempt to push it toward the median line revealed the fact that it could not be placed and held in normal position without causing more pain than the patient was willing to bear. The resistance came from the left side of the abdominal wall and the left free border of the ribs. Inquiry showed that for three months the uterus had gradually been pressing more and more toward the right, and for some weeks past had caused a decided bulging of that side. As she expressed it, she had been carrying the child on the right side. Thinking position would correct the defect, she was advised when resting to lie on the left side.

Friday night, Saturday, Saturday night, Sunday, and Sunday night were passed, and still the patient was not delivered.

Until Sunday night at twelve, her condition was excellent, the pains though regular were feeble. Under the influence of morphia she had sleep Saturday night and Sunday. The condition that existed was "tedious labor" to an aggravated degree. An observation taken at 1 A.M., Sunday night, showed the membranes intact, the os about the size of a trade dollar, soft and dilatable, still out of the median position. Uterine contractions were regular, but short and inefficient, the organ seemed to be acting at a disadvantage. A catheter was introduced into its cavity, and allowed to remain half an hour, the result was to strengthen its action, but still no progress was effected.

The condition of the child was excellent, but the mother began to show signs of exhaustion. The pulse stood steadily at 110, and the temperature had reached 100 $\frac{3}{4}$ °. It was evident that the woman could not deliver herself, that dangerous symptoms were appearing, and that the pathological condition present was tedious labor, due to inefficient uterine action. The cause of the faulty action was evidently right lateral obliquity of the uterus, and this in turn was directly due to the lateral curvature of the spine and its accompanying pelvic deflection.

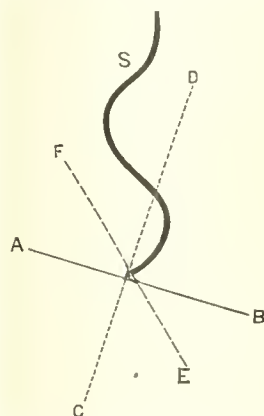
This conclusion was reached only after a careful consideration of all that was before us. Tedious labor was certainly present, *no other cause of such a labor save lateral obliquity was present*. The inclination of the uterus was such that the plane of the os looked toward the middle of the left pelvic wall, while nearly the entire fundus lay to the right of the median line, so that a rough estimate of the uterine axis, made at the time, found it to correspond to a line running from the centre of the left ischium to a point about three inches to the right of the umbilicus. The organ was freely movable, and no other tumor was to be found in either the pelvis or abdomen. All attempts to place it squarely over the pelvic inlet were prevented by the position of the free border of the ribs on the left side, aided by the tension of the muscles attached thereto. The spine was curved laterally to an extreme degree, the dorsal convexity looking to the right, the lumbar to the left, the left leg was half an inch shorter than the right, and the pelvis was displaced so as to meet, and as far as possible correct the deformity. The right side was thrown up and forward, consequently the left was lowered and thrown back, making the axis of the superior strait strike the abdominal wall to the left of the umbilicus. The distance from the free border of the ribs to the iliac crest was one and one-half inch shorter on the left side than on the right. In other words, the deformity present was an extreme form of the more common variety of lateral curvature of the spine.

By looking at the diagram it will be seen at what great disadvantage the uterus was placed, the position of the ribs on the left side had evidently thrown it over to the right, while the centre line of the pelvic inlet had been displaced to the left, the two conditions not only intensifying, but tending to maintain the uterine obliquity. The observations upon the spine, thorax, pelvis, and leg were carefully verified after confinement, both upon the patient and by reference to the Case Book of Professor Lewis A. Sayre, who kindly granted me access to it, the lady having formerly been under his care.

From all this I was able to verify the opinion formed at the time of labor as to the

nature of the difficulty and its course. It was a case of tedious labor, due to uterine obliquity, which in turn was due to lateral curvature of the spine. The obliquity could not be easily corrected because of the position of the free border of the ribs on the left side.

As said above, the woman could not deliver herself, making it necessary to apply the forceps. The os was dilated so as to apply the instrument within the uterine cavity. Some little traction was needed to get the head well into the canal. After a while this was accomplished, and all seemed going well. By the time the head reached the floor of the pelvis the uterus had shifted its position over to the left of the median line. Suddenly violent contractions set in, and, though the patient was completely under the influence of chloroform, the head was driven out so rapidly I could not remove the forceps, a ruptured perineum being the result. This was repaired, and for a few hours it looked as if we would have a favorable termination of the puerperal period, but the persistent elevation of temperature dispelled the hope. For three weeks we battled with a stubborn attack of puerperal fever, finally carrying the patient to a complete recovery. Such is the record of this case. That all questions as to the possibility of some deformity of the pelvis being present may be met, I will say that in addi-



Explanations—S, spinal column; A, B, plane of pelvic inlet; C, D, axis of pelvic inlet; E, F, axis of uterus—down.

¹ Read at a meeting of the Practitioners' Society of New York, February 2, 1883.

tion to the examinations made before and after labor, I took advantage of the anæsthesia to explore the canal with the hand in the vagina. This, together with careful external measurements, showed that the pelvis in itself was normal.

Uterine obliquity as a cause of tedious labor is mentioned in every work on obstetrics; but the variety mentioned is that in which, owing to relaxation of the abdominal muscles, the uterine axis is not held in coincidence with the axis of the pelvic inlet. Such a condition is one remedied easily by external pressure and position. Neither of these sufficed here, owing to the causes mentioned making the case one of great danger, calling for the introduction of the forceps through an incompletely dilated cervix, and the delivery of the head from above the superior strait, the high forceps operation. It would seem, then, that extreme lateral curvature of the spine, even with a normal pelvis, is a condition likely to seriously affect delivery.

I am at a loss to account for the fact that such cases have not been observed and reported frequently, for the reason that lateral curvature is so common. I can only imagine that such extreme cases as this, complicating pregnancy, are not common, else our works on obstetrics would not be so free from all allusion to them as now appears.

The condition of contracted pelvis with lateral curvature is known and dwelt upon, but lateral curvature is not recognized. One always feels hesitation in reporting a case which may appear to suggest that his observation may have been more acute than that of others; therefore I do not ask you to accept my conclusions; I only ask you to consider them for what they may be worth.

EXHAUSTION OF BRAIN-ENERGY.

By J. LEONARD CORNING, M.D.,

NEW YORK.

INTIMATELY associated with, and often the direct outgrowth of insomnia is a condition which manifests itself by a greater or less degree of impairment of cerebral energy, more particularly in the domain of the psychical functions. Those who suffer from this disorder complain that they are quite unable to perform the usual amount of mental work; that they are easily fatigued by a continuation of the same employment for any length of time; that the memory for remote as well as recent events has become unreliable; that society has become distasteful to them; that ambition has deserted them; that they are frequently and even profoundly depressed. Sometimes they complain of fatigue upon even the slightest bodily exertion, but very often there is no impairment of the motor functions whatever, and the disturbances are purely psychical in nature. Sometimes those afflicted by this disorder are the victims of various forms of morbid fear. This fear may be directed toward extraneous sources or may confine itself to the individual economy. In the first instance it may manifest itself in a vague dread of being left alone, in a dread of society, in a fear of open or exposed places or of circumscribed localities. Again, there may be an ever-present fear of pecuniary calamity or a dread of a possible loss of social status, etc.

Where the attention of the sufferer is directed toward himself, the symptoms often assume the form of hypochondria. The individual imagines that his liver or some other organ is diseased, that he is about to become insane, that he is about to suffer from a stroke of paralysis, or that he has entered upon some form of insidious malady, which is sure to result in death.

It is very necessary, however, that the physician should use the utmost caution before ascribing importance to apprehensions of these persons. Usually these fears have only a subjective significance, and are purely

the outgrowth of a morbid condition of the mind mechanism.

Otherwise to be considered are those symptoms which point directly toward those organs enclosed within the cranial cavity. Those symptoms are: (1) Great weariness upon the slightest mental exertion, and often total inability to work at all; (2) pain in the region of the vortex following even slight mental work; (3) sometimes frontal headache; (4) tenderness of the scalp; (5) a feeling of constant weariness; (6) disorders of memory; (7) impairment of will power; (8) sometimes occipital pain, which not infrequently disappears after a few applications of the faradic current; (9) morbid excitability, which often assumes the form of violent anger upon slight provocation; (10) very great depression, particularly during the early morning hours; (11) disorders of the cerebral circulation, which may sometimes assume the form of congestion, sometimes of anæmia, or sometimes the two conditions may alternate with each other. In any event the vascular derangements, although, doubtless, of secondary origin, deserve especial attention on account of the baneful effects which they in their turn exercise upon the already demoralized condition of the central ganglia.

In brain-exhaustion we have to do with a condition of the ganglia in which the processes of disintegration have outstripped those of integration, a condition in which the ganglia are no longer able to hoard up the usual and requisite amount of explosive energy. Exhaustion of brain-energy is, therefore, the outgrowth of defective nutrition, primarily inaugurated by an illegitimate demand upon available brain resources. It is the state engendered by an excess of demand over supply.

Treatment of exhausted brain-energy by prolonging the duration of brain-rest.—If, then, brain-exhaustion be that condition of the organ in which the mechanism of supply has become more or less defective, the problem presented for therapeutical solution is how best to bring the supply of brain-energy up to the normal standard. I know of but one method of accomplishing this end, namely, by decreasing for a time the expenditure of cerebral energy to a minimum, and increasing the amount of available cerebral force. By prolonged sleep it is possible for the ganglia to hoard up, in spite of the defective mechanism of supply, an amount of energy proportionate to the comparably reduced output of brain-force. Thus, by slow degrees, the proper co-relation between integration and disintegration may be re-established. But it is utterly useless to hope for such a result at once, as, when the perverted nutritive conditions have once become established, nothing short of prolonged brain-rest can by any possibility result in the re-establishment of the normal nutritive processes of the cell economy. In many instances of brain-exhaustion there is present a condition of anæmia, which calls for a tonic treatment. Sometimes, however, the general bodily condition is excellent, and there is no organic or even functional trouble discoverable excepting the morbid cerebral manifestations described above. In these, and in fact in a large number of cases of impaired brain-energy, general faradization and central galvanization often aid materially in treatment. Where there are marked derangements of the function of sleep, and where the insomnia is not attributable to gastric or other visceral disturbances, sedatives may be employed with good results in combination with the Turkish or hot bath. The reaction from these baths is, however, often too great to be borne by very sensitive patients. In such cases recourse may be had to tepid baths. The best soporific effects from baths are obtained shortly before retiring, and they should be prescribed at this time, do circumstances admit of it. Exercise is another important element in treatment, but should never be carried to excess. The effects on sleep induced by horseback riding or a brisk walk are often quite remarkable. In the treatment of those cases of cerebral erethism, in which a morbid degree of irritability is present during

the day, the bromides play a conspicuous part. The dose will depend somewhat on individual idiosyncrasy, but five or ten grain doses will often be found to answer.

Where there is a marked determination of blood to the head, cold baths should not, as a rule, be resorted to. On the other hand, a warm bath to the body and ice-bag to the head, will often be found to render the greatest service.

A change of climate is often very beneficial in these cases, more particularly from the seaboard to an elevated and dry atmosphere.

Sometimes benefit is experienced from the administration of ergot in large doses, but the effects of this drug are not constant. Where gastric derangements are present, these cases are very materially complicated, and nothing very permanent can be hoped for until the stomachic conditions have been sufficiently improved to render an amelioration in nutrition possible.

In a more extended consideration of this and allied subjects ("Brain-Rest," Putnam's Sons) I have devoted considerable space to the discussion of the various therapeutical questions connected with sleeplessness, on account of the intimate relationship which subsists between disturbances of sleep, insanity, and functional brain-trouble.

Reports of Hospitals.

BELLEVUE HOSPITAL, NEW YORK.

(Reported by ROBERT T. MORRIS, M.D.)

A CASE OF DISLOCATION OF THE SCAPHOID AND OS MAGNUM.

ON January 20, 1883, Frank M—— came to Bellevue Hospital as an "office case," to be treated for an injury which he had received seven days previously; he having caught his right hand between a heavy brush and roller, which are used in polishing paper, and having forcibly extricated it.

On making an examination I found the hand strongly adducted and rotated inward, with an unnatural projection at the carpus anteriorly. At the fourth metacarpophalangeal articulation there was also a marked deformity. In addition to the above the whole radial side of the thumb was denuded of cuticle. On account of the tension exerted by the muscles of the forearm, which the patient kept firmly contracted, it was difficult to make a diagnosis, and he was placed under ether, the nature of the injury thus becoming apparent. The scaphoid and os magnum were dislocated anteriorly and the semilunar, although not out of place, was freely movable. The fourth proximal phalanx was also dislocated anteriorly from its metacarpal bone. The dislocations at the carpus were easily reduced after pressing the semilunar forward slightly, and there was no difficulty in replacing the phalanx.

On allowing the patient to come partially out from under the influence of the ether, the dislocations at the carpus were immediately reproduced, so that it was necessary to readminister the anæsthetic. This having been done, and the bones again put in place, anterior and posterior splints were applied, and the hand bandaged in such a way that the tendency to adduction would be overcome.

Passive motion to all of the fingers except the fourth was begun in a few days, and continued until the splints were removed, nearly four weeks later. Passive motion at the wrist and to the fourth finger was then proceeded with, and at the present time (March 12th) the patient has a fair amount of voluntary movement at the carpus, as well as at his injured finger-joint.

The mechanism of the injury to the wrist would seem to be as follows: The patient throwing himself violently backward in order to extricate his hand from the ma-

chinery, probably ruptured the external lateral ligament, and portions of the anterior and posterior ligaments of the carpus, the dislocation of the bones occurring secondarily. The ligaments connecting the dislocated bones together and to adjacent bones were probably ruptured also, as the scaphoid, os magnum, and semilunar were individually freely movable. (There was no fracture of the radius.) Whether the dislocation of the phalanx took place secondarily to rupture of its ligaments, or whether the bone in being forced out of place ruptured its ligaments, it would be hard to say.

Progress of Medical Science.

INTESTINAL MOVEMENTS.—Nothnagel, in a recent lecture (*Canada Medical and Surgical Journal*, March, 1883), gave a detailed account of some valuable experiments which he has performed in connection with this subject. His method of investigation was to keep chloroformed animals, with their abdomens opened, immersed in a bath (100° F.) of a half per cent. solution of common salt. He has demonstrated by this method that, in animals at least, no peristaltic actions occur in uninjured intestines. The effect of injections into the rectum was examined, colored fluid being used. It was found that a small quantity of water had no effect on the peristalsis. A considerable quantity distended the rectum without exciting any action. Iced water caused action sufficient to move the fluid from 15 to 20 cm. up the bowel. Olive oil had a similar action. A strong solution of common salt, forced up by a syringe a distance of 10 cm., was carried up, together with a mass of feces, by the antiperistalsis to the cæcum. Similar results were obtained by using concentrated solutions of nitrate of potash and bromide of potassium. The common salt injections always caused contractions, which passed both ways. In a case of ileus in the human subject, an injection of colored salt solution, which was used during life, was found, after death, to have reached the cæcum. The conclusions to be derived from these experiments are that, in intestines in a healthy condition, or containing only unirritating contents, peristalsis only occurs from above downward, and if there are any irritating substances in the bowel, antiperistalsis occurs also. To explain the occurrence of fecal vomiting in intestinal obstruction, ligature of the small intestines was resorted to. It was found that, unless irritating substances were introduced into the bowel, no ascending contractions occurred. When the intestine is ligatured, the part above becomes filled and the part below empty. Descending contractions are generally seen commencing at the stomach and terminating at the distended portion, and as the distention ascends higher and higher, the waves of descending contraction travel less and less, until finally they are limited to a narrow segment near the pylorus. There is no such thing noticed as antiperistalsis sufficient to bring about fecal vomiting. Its true cause is due to the action of the diaphragm and abdominal muscles. The paralyzing effect of distention of the bowel above the ligature proves clearly the well-known injurious effect induced by the use of purgatives in intestinal obstruction. By increasing the peristaltic contractions, they carry the contents of the intestines more rapidly and violently to the seat of obstruction, and in this way the paralysis which follows distention is more quickly brought about.

Nothnagel had many opportunities of noticing the occurrence of intussusception during the course of his experiments. The invagination always occurred from above downward, a part that was contracting strongly slipping into a portion that was at rest. He was often able to remove these invaginations by injections of salt, which set up an antiperistaltic movement. Morphia, in doses of from one-sixth to two-thirds of a grain, has the power of preventing the antiperistalsis induced by salt

injections, but if larger doses are given, from a grain and upward, then not only does the antiperistalsis appear, but in an aggravated degree. This anomalous effect Nothnagel ascribes to the small doses stimulating and the large ones paralyzing an inhibitory mechanism which is antagonistic to the nervous mechanism stimulated by a salt solution. This action is comparable to that of digitalis on the innervation of the heart, small doses stimulating and large ones paralyzing the inhibitory fibres of the vagus. The constipation produced by morphia is thought to be owing to a stimulation of a nervous mechanism which other experiments have located in the splanchnic nerves.

ON THE TREATMENT OF INFANTILE PARALYSIS.—Dr. Robert J. Lee calls attention to the very marked value of artificial heat in the treatment of infantile paralysis. This he illustrates by the case of a girl suffering from this disease in a severe form, who received no other treatment than hot sponging night and morning, and artificial heat to the affected limb, after going to bed. This limb was equal in size to the sound one eight years after the attack came on, although still paralyzed below the knee.

Dr. Wm. H. Barlow refers to the fact that artificial heat is an old therapeutic method in the disease in question. He considers it always necessary to protect carefully the paralyzed limbs, but believes that electro-therapy and voluntary and passive movements are much superior remedies to heat.—*Journal of Nervous and Mental Disease*, January, 1883.

MICROCOCCHI IN CEREBRO-SPINAL MENINGITIS.—At a meeting of a German medical society Dr. Leyden exhibited germs taken from a case of fatal inflammation of the membranes of the brain and cord. According to him, there is little doubt that meningitis is due to germs. Both Klebs and Eberth have observed meningitis after pneumonia, where micrococci were present in the sputum; indeed, Eberth detected the same germs in the fluid exuded from the inflamed meninges as he found in the pneumonic exudation; the same authority found micrococci in the pus, from a case of pyocephalus. In purulent fluid, found under the meninges of a school-boy, aged sixteen, Klebs discovered bacteria in active motion. Ebert claims to have observed, in the pus from traumatic cases of meningitis, germs of a different kind to those which he had found in septic cases of the same local affection. The question remains as to whether idiopathic meningitis, independent of wounds, pneumonia, or pyæmia, be a parasitic disease. Dr. Leyden believes that it is essentially due to micro-organisms. He bases his observations on a case under his own observation. A woman, aged thirty-five, was seized with violent vomiting in a railway carriage, on December 22, 1882. As she was stepping out of the carriage at the Berlin terminus, she was seized with a giddiness, and fell on the platform. Her face was bruised, and the membrana tympani of one ear ruptured, some fluid escaping. A few days later she was admitted into the Charité Hospital, with inflamed ear, violent headache, and constant sickness. After the other tympanic membrane had become perforated, and appropriate treatment adopted, the patient apparently recovered. At the end of last January all the symptoms recurred, with the more special symptoms of cerebro-spinal meningitis, rapidly proving fatal.

At the necropsy, the exudation over the pia mater of the brain and cord was found to be very abundant, the otitis had disappeared, and the perforation in each membrane had closed. In the fluid, hosts of micrococci of a perfectly oval form were found, oscillating freely, and rather larger than pneumonic micrococci. Some were solitary, some in pairs, some in chains.

In the discussion that followed Dr. Leyden's demonstration, Dr. Baginsky observed that, in children who had apparently recovered from cerebral symptoms after the rupture of one membrana tympani as the result of suppurative otitis, fatal pneumonia sometimes appeared

very suddenly in a few days, and this complication was probably due to micro-organisms. In Dr. Leyden's case there were symptoms of intracranial disease before the patient fell out of the railway-carriage; but then rupture of one membrana tympani occurred, discharge escaped, and thus clear evidence of otitis was proved by the accident. The distinction between uncomplicated otitis and mild meningitis is not always easy, and the first disease alone might have existed before the fall. The rupture of the membrane admitted air into a suppurating cavity; and the suspicion that the subsequent cerebro-spinal disease might have been a purely secondary affection is very strong. Dr. Leyden, however, believes that the micrococci of meningeal pus, as seen in this case, are more oval, but oscillate less actively than those of pus simply putrefied by exposure to air: in other words, he endeavors to prove that the meningitis was primary, and that the micrococci existed within the patient's body before the injury.—*British Medical Journal*, March 10, 1883.

MERCURY IN INTESTINAL OBSTRUCTION.—From an examination of a large number of cases, Bettelheim has come to the conclusion that the use of mercury in bulk (about seven ounces as a dose) is by no means a worthless remedy. On the contrary it sometimes saves life in cases of obstruction of the intestine, not yielding to other means, which are due to fecal accumulation, ascariæ, twisting or intussusception. No injury, and especially no perforation of the intestine is caused by it. He therefore recommends that after the use of the ordinary means, such as moderate doses of laxatives, opiates, irrigation of the intestine, changes in the position of the patient, electricity, and massage, mercury in bulk should certainly be had recourse to without fear.—*The Practitioner*, March, 1883.

INVERSION OF THE SEXUAL SENSE.—Under this title Charcot and Magnan (*Archives de Neurologie*, November 3, 1882) report six cases of imperative conceptions respecting sexual matters, which they consider allied to the sexual perversion of the Germans. The first case was that of a masturbator, a physician, who felt drawn to the anal region of females and clothed children for sexual gratification; the naked bodies were repugnant to him. He was disgusted with the idea of pæderasty and sexual intercourse; there was strong heredity in the case. In the second case there was also strong heredity, and the patient felt sexually attracted by the nails of women's shoes, concerning which he constructed elaborate romances and masturbated while gloating over these. The third case also had hereditary defect, and felt sexually attracted by white table-cloths, several of which he stole and was punished for so doing. The fourth patient, also a victim of hereditary defect, was unable to copulate with a woman unless her hair was dressed in a certain way, and she had a night-cap on. The other cases were victims of nymphomaniacal impulses. There is, it will be obvious, very little in common between these cases and sexual perversion as described by Gock, Servaes, Krüg, Krafft-Ebing, Ulrichs, and others. Dr. Hammond ("Diseases of the Nervous System") has described a case where shoes were the attraction, and Van Buren and Keyes ("Venereal Diseases") a case where a man was impotent except with women dressed in a peculiar style. As might be expected, impulses of this character are very frequent among hebephreniacs.—*Journal of Nervous and Mental Disease*, January, 1883.

SIR ERASMUS WILSON, although now in his seventy-fourth year, is not yet past work, his present studies being Egyptological. He is the President of the Biblical Archaeological Society, and Treasurer of the Society for the Exploration of the Buried Cities of Egypt. He is also one of the Court of Assistants and late Master of the Curriers' Company.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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PROPOSED CHARTER AMENDMENTS AND THE HEALTH BOARD.

It is well known to many, if not to a majority of our readers, that there is now pending before our State Legislature a bill containing some radical amendments to our city charter, and which, if it becomes a law, will have the effect to reorganize our city government. Ever since the overwhelming Democratic victory achieved at the last election demands and promises have alike been made for such "reform" in the several departments as will both lighten the burden of the taxpayers, and at the same time secure a faithful and judicious administration of the functions of various departments sufficient to meet the public wants and merit the public confidence. With this motive in view Mayor Edson, several weeks ago, sent to the Legislature a bill providing for such amendments to the charter as would in his view meet the best interests of the city. It certainly had the merit of depriving politicians of their power to dictate or to interfere with the Mayor's appointments, and of placing the responsibility of the city's government where it properly belongs, in its chief magistrate. This feature not suiting the politicians, a substitute has been prepared in which the present power of the Board of Aldermen to confirm or reject the Mayor's appointments is retained, and which is openly declared to be for the benefit of a political party.

Now we do not propose to discuss in the columns of THE MEDICAL RECORD any political question whatever; but there are a few points in these proposed amendments to which we desire to call the attention of our readers.

A prominent feature of the bill is the provision for one headed commissioners in the city departments, with the exception of those of Charities and Corrections, of Police, and of Taxes and Assessment. This will remove our Health Department from its present efficient management, and place it directly under the control of political influence, to which we most seriously object. Whatever may be the result as it regards other branches of the city government, it must be acknowledged that the functions of the Health Department are too manifold and important to be intrusted to one man, and that man appointed for political purposes. The Board of Health is not only executive in its functions, but legislative and judiciary; that is to say it has the power of making ordinances, sitting in judgment upon nuisances and enforcing the sanitary laws. Questions often arise involving large property as well as sanitary interests, which

need careful consideration and full discussion before being finally decided. Emergencies are not infrequent where cool judgment is required, and heavy responsibilities assumed, and where interchange of opinion is important to intelligent action. These matters are all of too grave a nature to be exposed to the corrupting influences of political manipulations.

We very well remember when, some twenty years ago, the New York Academy of Medicine instituted a movement looking toward the rescuing of our public health matters from the hands of the crafty politician who then controlled them. We have not forgotten the health warden who defined hygiene as an offensive gas which rises from stagnant water. We remember how eminent physicians and sanitarians labored in this cause of sanitary reform until the legislation of 1866 was secured, which established the present system of health government, the efficiency of which was in a few months demonstrated by the masterly manner in which the outbreak of cholera during that summer was controlled, saving to the city hundreds of lives and hundreds of thousands of dollars. The same system is now in operation with such amendments as have from time to time been suggested by experience and advance in sanitary knowledge.

The Board of Health has to deal with an almost unlimited variety of nuisances. It is charged with the regulation of offensive trades, which involve large amounts of capital and industry. In settling the question of manure disposal and cattle driving, it was almost constantly at war with moneyed interests and political influence, while it is often obliged to call upon the courts to sustain its actions. It is charged with the care and treatment of contagious diseases, requiring ambulance and hospital service, disinfection, and gratuitous vaccination. It has undertaken to see that our citizens are supplied with pure milk by the arrest and punishment of persons offering for sale an impure article; it is also charged with the duty of supervising the plans for all tenement and apartment houses, the registration of plumbers, the establishing of rules for, and the inspection of all new plumbing work, a duty second to none other in importance.

The President of our Board of Health is a gentleman well known as a man of science and ability, who is just completing his second term of an office which he has filled to the eminent satisfaction of the public. His colleagues are the President of the Police Department and two physicians of eminence, one of whom is Health Officer of the Port. For efficiency and intelligence our Board has received repeated acknowledgments from sanitarians at home and abroad; and as specimens of its good work we can point with pride to its control of small-pox, and to its more recent success in arresting a threatened epidemic of typhus fever in the spring of 1881, and again in the following year. Its counsels are often sought by health authorities of other cities, who have copied the general features of its organization and work with success.

The duty of caring for the public health is too important and responsible to be influenced by any political considerations. We cannot afford to take any backward steps. Such will certainly be the case if the proposed charter passes as it stands.

GOVERNOR BUTLER AND THE CHARGES OF MISMANAGEMENT OF THE TEWKSBURY ASYLUM.

ON Tuesday last the Committee on Charitable Institutions began its investigations into the charges of mismanagement of the Tewksbury Almshouse, made by Governor Butler in his inaugural message. The Governor has conducted the investigation personally in his well-known style. The investigation is interesting to the public, not only from the fact that the whole subject of the care of the sick and insane poor and of foundlings is brought forward, but also grave charges are made against the management in relation to the disposal of the pauper dead. This latter point is the one on which Governor Butler lays the greatest stress, and on which the witnesses examined have been most closely questioned.

The principal witness on this subject was a physician, a graduate of the Harvard Medical School in 1873, who swore that he dissected at least fifty or sixty babies a year, besides adults. At that time there were two hundred or three hundred students in the school. It may be that the witness was a more zealous anatomist than others in the school, and that he was able to obtain more babies for dissection than others, though he states that several of his classmates obtained an equal number. Now, it has been shown that the average number of deaths of infants under one year of age in this almshouse during the years 1870-73 was forty-seven. Yet he says that he was "told" that the babies all came from Tewksbury.

The examination of other witnesses brought out the fact that bodies were removed from Tewksbury at night in a covered wagon, a very proper method of proceeding, one would think, and up to the present time it has not been shown that any of these bodies were removed and sent to the medical schools contrary to the provisions of the Anatomy Act.

Other charges are made against the managers of the institution, such as neglect of sick and insane inmates, misappropriation of supplies, etc. Whatever the examination may show later, up to this time it has only proved the desire of the Governor to make political capital at the expense of dragging the secrets of the dissecting-room before the public, which is to the last degree indecent and unnecessary.

Koch's REPLY TO HIS CRITICS.

IN a recent communication to the *Deutsche Medicinische Wochenschrift*, Dr. Robert Koch has published an elaborate review of the various criticisms made against his experiments and conclusions regarding the tubercle bacillus.

He premises by saying that investigators have somewhat lost sight of the chief point which he made, viz.: that tuberculosis must be a parasitic infection because he caused it by inoculating the isolated parasites. He refers to the fact that in nearly all instances the bacilli have been found in phthisical patients and in no others. The few failures he attributes to lack of diligence in examination, the bacilli being sometimes few in number, or to want of skill in microscopic technique.

He then takes up the various criticisms and answers them in detail. We observe that it is only among Americans and Germans that he finds persons who have ventured to oppose his views.

Dr. Ephraim Cutter's opinion that Koch's discovery is not new, and that his bacilli are only the "babies" of Salisbury's *mycoderma aceti* is stated without comment.

Dr. Rollin R. Gregg "appears to have considered," says Koch, "that microscopical investigations would be superfluous for the establishment of his views."

Schmidt is commended for his honest desire to find the bacillus, but is advised that it would have been better if he had had the patience to wait till he had obtained good colors and learnt how to use them, before announcing fat-crystals as bacilli.

Dr. Formad, of Philadelphia, is complimented as a more skilful microscopist. Still he has not, Koch thinks, yet learned to distinguish the bacilli of tuberculosis. He is further accused of being a prejudiced observer, having certain preconceived views regarding the lymphatic system of scrofulous animals. Finally, Koch states that Dr. Formad cannot give authoritative evidence upon the subject of tuberculosis until he has learnt to find the bacilli with certainty, and until he has made himself familiar with the literature of tuberculous inoculations, especially of those of Cohnheim and Salomonsen, Hänsell, Schuchardt, Baumgarten, and Damsch, and until he has become sufficiently expert in experimental technique not to let his animals inoculated with wood, glass, and metal, die of tuberculosis.

Turning then to his German critics, Koch says: "If one thinks that German medicine cannot bring forth such blossoms of tubercle-bacilli literature as America, he is mistaken."

Beneke, who discovered, as he thought, bacilli in the ethereal extracts of the blood of healthy men, really found, says Koch, fat-crystals, like Schmidt's.

Crämer announced that by using Ehrlich's coloring method he had found bacilli in the stools of twenty healthy persons. Koch cites contrary results obtained by Gaffky and states that Crämer's bacilli were not identified with those of tuberculosis.

Balogh found in the Berlin mud, after a rain, bacilli like those of tuberculosis. Koch, from examinations of his own, contradicts Balogh, and denies any value to the inoculation experiments made by that investigator.

Schottelius produced anatomical tuberculosis in dogs by causing them to inhale masses of finely pulverized non-tuberculous matter. Koch states that the anatomical appearance is not the criterion of what is tuberculous matter, and that Schottelius' experiments are completely contradicted by those of Bertheau and Wigart. Koch also argues against the view of Schottelius that bovine and human tuberculosis are not identical.

Dettweiler has tried to show that the bacilli of tuberculosis are accompaniments, not causes of phthisis, because their inoculation is always followed by acute milary tuberculosis, not by the pulmonary phthisis seen in man. Koch thinks he would change this view if he had a better knowledge of the pathology of tuberculosis.

Koch finally reviews Spina's recently published criticism, which has excited much attention, because this critic alone had repeated Koch's cultivations and inoculations.

Koch says that "Spina's microscopic technique is almost entirely different from that employed to-day in the study of bacteria." He speaks of Spina's "mistreatment of the bacilli with coloring methods," compares his

work with that of Schmidt, and believes that all the new conclusions of Spina as regards staining are valueless. Spina's cultivation and inoculation experiments are also characterized as imperfect and ill-conducted, and as being but "characatures" of Koch.

Koch's reply shows how exacting and careful all experimenters must be in order to test fairly the problem he has claimed to solve. It shows also Koch's great confidence in the fact that he alone so far has carefully, accurately, and impartially studied and settled the question.

MORTALITY IN THE UNITED STATES.

THE statistics published in the Compendium of the Tenth Census show a total mortality, during the census year, of 756,893 deaths. This gives the low ratio of 15.1 per thousand. Allowing for deficient returns, however, the actual mortality rate is estimated to be about eighteen per thousand. This is a better showing than can be given by any other civilized country, so far as is known. Thus the death-rate for the whole of England, in 1880, was 20.5 per thousand; for Scotland, in 1878, it was 21.3 per thousand. In other European countries the death-rate is about as follows:

Denmark.....	20.2 per 1,000
France.....	24.2 per 1,000
Prussia.....	27.1 per 1,000
Austria.....	32.2 per 1,000
Italy.....	30.2 per 1,000

The death-rate is found to be considerably higher among the colored race than among the whites. Thus in the Southern States it is over 17.28 for the former, and about 14.04 for the latter. This excess of mortality is attributed to the great number of deaths among the infants of the colored population. As we showed some time ago, however, the negro race is so prolific that its actual increase in numbers has been greater, proportionately, than that of the whites, and this despite the fact that their numbers receive no accessions from outside.

While the males in the United States number nearly nine hundred thousand (872,857) more than the females, the death-rate is 15.35 per thousand for the former, and 14.81 for the latter. This corresponds with the law that more male infants are born and more die than females.

The relation of age to mortality is shown in the following table:

	Male.	Female.
Total number of deaths.....	390,644	363,874
Ratio of deaths under 1 year to total deaths....	24.803	21.538
Ratio of deaths under 5 years to total deaths...	41.951	38.185
	Male and female.	
Ratio of deaths between 5 and 15 years to total deaths....	8.757	
Ratio of deaths between 15 and 60 years to total deaths....	29.966	
Ratio of deaths over 60 years.....	17.24	

These figures, if they represent the truth, show a very marked excess of infant mortality, and one which has not, we believe, so far been alluded to in the numerous comments upon the census. One-fourth of all the male deaths occur among children under one year of age. This is a higher rate than exists even in the city of London, where, in 1871, it was only 20.8 per cent. for both sexes. In 1862 Dr. Letheby found that this same death-rate (20 per

cent.) existed, and commented upon it as being very high. The death-rate among children under five years of age is also about the same as that for London twenty years ago, and is certainly a high one. It must be admitted, therefore, that our infant mortality-rate is proportionately very high indeed.

The causes of death could be obtained in only 733,840 cases. They are classified as follows:

		Per cent.■
Measles.....	8,772	....
Scarlet fever.....	16,416	....
Diphtheria.....	38,398	5.23
Whooping-cough.....	12,202	....
Enteric fever.....	22,902	3.121
Diarrhœal diseases.....	65,565	....
Consumption.....	91,551	12.475
Diseases of nervous system.....	83,670	....
Diseases of respiratory system.....	107,904	....
Diseases of digestive system.....	34,094	....
Malarial diseases.....	20,261	2.761
Accidents and injuries.....	35,932	....

Diphtheria, enteric fever, and malarial fever are all found to be more prevalent in small towns and rural districts than in large cities. For diphtheria and typhoid the difference in favor of the cities is between five and ten per thousand on all deaths reported. Consumption also is less prevalent in the large cities of the North Atlantic and lake regions than in the rural districts. We note in this connection, that Colorado, with a population of 194,327, has a mortality from phthisis of 420, and from other respiratory diseases of 1,012, the total number of deaths from all causes being 4,094.

In Florida, on the other hand, with a population of 269,493, the deaths from phthisis were 263, and from other respiratory diseases 346, the total deaths from all causes being 3,150. This apparently gives a much more favorable showing for Florida as a health resort.

PENSACOLA'S BOARD OF HEALTH.—It appears from the following presentment of the grand jury that the Board of Health of Pensacola, Fla., is held responsible for the yellow fever epidemic which occurred there in September and October last: "We find the Board of Health of this county have been grossly negligent of their duties, in that they did not take proper sanitary precautions previous to the introduction of yellow fever into Pensacola in 1882, and in the fact of their having employed an inexperienced and inefficient physician at the quarantine station, and in that after the yellow fever had made its appearance here they failed to take the proper measures for stamping it out, and that they suppressed the information, misleading, not only the people of our city and county, but of neighboring cities and States, causing distrust for the future; and from these causes we consider them responsible for the loss of many valuable lives, and of incalculable injury to the business interests of the city. We, therefore, recommend to the Governor that he shall appoint a new Board of Health, . . . and we would suggest such a revision of the quarantine laws as that it may be made absolutely efficient, either by land or water." The members of the Board have since resigned.

News of the Week.

THE NEW YORK NEUROLOGICAL SOCIETY held its annual meeting April 3d. The following officers were elected: Dr. Wm. J. Morton, *President*; Dr. L. Weber, *First Vice-President*; Dr. Farrington, *Second Vice-President*; Dr. M. J. Roberts, *Secretary*; Dr. M. Putnam-Jacobi, *Corresponding Secretary*; Dr. E. C. Harwood, *Treasurer*.

GIFT FOR A VERMONT HOSPITAL.—Mr. Chauncey Warner has given some property for the establishment of a free hospital in St. Albans, Vt. An organization for the building and managing of the institution has been effected.

A GRAVE ROBBERY AT CAMILLUS, N. Y.—A body was recently stolen from the cemetery at Camillus, N. Y., and taken to Syracuse, where it was left in the dissecting-room of the Syracuse Medical College. The officers found it in this place. It had not been purchased by the College, as the vender was unknown.

NEWPORT AS A RESORT FOR CONSUMPTIVES.—A controversy is going on in the *Boston Medical and Surgical Journal* between Dr. J. H. Tyndale and Dr. H. R. Storer, regarding the climate of Newport. The former gentleman denies the claims of Dr. Storer that Newport is a favorable climate for consumptives.

BIRTHS AND DEATHS IN NEW JERSEY.—According to the statistical report of the State Board of Health there were 25,942 deaths in New Jersey in 1882, an increase of 5,000 over the previous year. There were 8,837 marriages and 23,108 births.

SYPHILIS IN THE MONKEY.—M. Martineau reports progress as regards the syphilitic lesions in the monkey inoculated by him. On the fifteenth day mucous patches appeared, and the monkey showed signs of constitutional disturbance. The question whether lower animals can be affected with syphilis, which seems likely to be settled by M. Martineau, is not one of scientific interest alone. The pathology and treatment of the disease can be greatly helped by a study of it upon such animals.

THE MEDICAL DEPARTMENT OF THE STATE UNIVERSITY OF IOWA will insist in future that all applicants for admission must pass a preliminary examination in the English branches.

SCIENCE.—This is the title of a new journal published weekly at Cambridge, Mass., by Moses King, and edited by S. H. Scudder. It is intended to occupy such a position as is held by *Nature* in England. The first numbers have been excellent, and the journal promises to be a help and credit to American science.

We venture to criticise, however, the plan of introducing pictures and biographies of living American scientists. This is a catch-penny practice not countenanced or desired by earnest scientific workers.

HOSPITAL ABUSES.—“The Hospital Abuses of London” is the subject of a very elaborate and caustic paper by Mr. Henry C. Burdett, in the current number of the *Nineteenth Century*.

Mr. Burdett complains of the very large number of small, semi-private, special hospitals. These are gene-

rally run in the interests of a single doctor, who superintends it and whom it advertises. Benevolent people are imposed upon; the profession and the larger and legitimate hospitals are injured.

The same abuses are appearing in the large cities of this country. It behooves the profession and the public to be on the watch against these semi-private, special hospitals.

THE TREATMENT OF HEART-COMPLICATIONS IN RHEUMATISM.—Dr. Sansom's lectures on heart diseases before the Medical Society of London have aroused renewed discussion as to the therapeutics of cardiac complications in acute rheumatism. Dr. MacLagan has again brought forward his views as to the value of the salicyl compounds, and especially salicin. He urges that small doses are ineffectual, but that we should employ large doses and at frequent intervals, say twenty to forty grains every hour for six hours, or until relief from pain is experienced. Dr. MacLagan thinks we may, by the early and free use of salicin, *prevent* valvular inflammation. Dr. Sansom, while endorsing much that Dr. MacLagan says, is not so sanguine as to the preventive action of salicin.

SANITARY INSPECTION OF SCHOOLS IN OHIO.—An important bill for the sanitary inspection of all schools in Ohio has recently passed the Legislature of that State. The following are some of its main provisions:

The board of health may take measures and supply agents, and afford inducements and facilities for gratuitous vaccination and disinfection, may afford medical relief to and among the poor of the corporation, as in its opinion the protection of the public health may require; and during the prevalence of any epidemic, may provide temporary hospitals for such purposes; and the said board is hereby required to inspect semi-annually, and oftener, if in the judgment of the board it shall be deemed necessary, the sanitary condition of all schools and school buildings within the limits of the corporation.

A NEW CLINICAL JOURNAL, the *Zeitschrift für Klinische Medicine*, is to be edited by four prominent German professors, representing the Berlin and Vienna Schools. These are Frerichs and Leyden, Bamberger and Nothnagel. The journal is to be devoted to the cultivation of internal medicine.

THE ALLEGED POTENCY OF IODOFORM IN LARYNGEAL ULCERS is being questioned by some eminent Vienna specialists. Professor Schrötter, who claims to have seen “many thousands of cases of tuberculous ulceration of the larynx,” states that he never saw iodoform do any good. The Vienna Medical Society has appointed a committee to report upon the subject.

THE CHÂTEAUVILLARD PRIZE of the Paris Faculty of Medicine has been divided between Dr. Giraud Teulon for a work entitled “Vision and its Anomalies,” and Dr. Cadial, for a “Treatise on General Anatomy.”

PROLONGING THE COURSE OF MEDICAL STUDY IN BAVARIA.—The Munich Medical Society has presented a petition to the Bavarian Government asking that the course of medical studies be prolonged from four years to five. The petition is widely signed and appears to be favorably received.

THE ALKALINE TANNATES, *e.g.*, the tannate of sodium, is said by Prof. Pribram to be a very efficient diuretic, and useful in dropsies from nephritis.

POP-CORN AS A REMEDY FOR THE VOMITING OF PREGNANCY is recommended by Dr. T. C. Wallace, of Cambridge, N. Y. The writer states (*Philadelphia Medical and Surgical Reporter*) that for the past four years he had always found it beneficial, and generally a sufficient remedy.

THE STORY OF A STOLEN DIPLOMA.—A student in the Medical School of Maine a year ago was plucked at his final examination. His diploma, however, had been made out and he managed to get possession of it. The party then came to New York and put out his sign. It was discovered that things were not as they should be, and a requisition for the young doctor was served on the Governor of New York. It was not successful, however, and he continued to practise. A short time ago he returned to Bowdoin, thinking that matters were settled. He was arrested on the charge of larceny and placed under \$100 bonds (which raises the query whether this is the legal market value of a diploma). He declined to contend and was ordered to appear later and receive sentence.

DR. WILLIAM SALISBURY HEADLEY died at his residence, in this city, on March 31st. Dr. Headley was born at Walton, N. Y. He was educated at Union College, and was a graduate of the College of Physicians and Surgeons of this city. He practised medicine in Syracuse for a time, but impaired health compelled him to give up his profession. For the past thirteen years he had been Assistant Appraiser in the Department of Drugs in the Public Stores in this city.

DEATH OF DR. M. A. WILCOX.—The death of Dr. M. A. Wilcox, of Halifax County, N. C., one of the oldest physicians in the State, is announced.

SCARLET FEVER AND CEREBRO-SPINAL MENINGITIS IN HORSES.—A writer in *The New York Times* comments on the claim of Dr. J. W. Stickler to have discovered a preventive of scarlet fever in the equine virus. He adds:

"I have long known that scarlet fever exists among horses, and that it has been recognized, especially by French veterinary surgeons, but could obtain no information about it in New York, although I was well satisfied that it lurked among one of the forms of so-called 'pink-eye,' and I have several years ago called attention to this fact. It is well known, also, that the great epidemic of cerebro-spinal meningitis among horses, in 1871, was followed by the greatest outbreak of that disease among our citizens in 1872. There is some well-established connection between the two. I have long thought that scarlet fever and cerebro-spinal meningitis were carried by grooms and hostlers to their own homes, and perhaps to those of their masters and patrons, but could not positively prove the facts, because so much concealment and prevarication is always covered around such matters, arising from ignorance and surprise at such notions, more perhaps than from deceit."

SWIMMING SCHOOLS AND PUBLIC BATHS are to be established in Paris. A nominal charge for their use will be made.

CONVICTION FOR THE SALE OF ADULTERATED SULPHUR.—A druggist in this city was lately convicted and fined \$10, at the suit of the State Board of Health, for selling as precipitated sulphur a mixture of sulphur with thirty per cent. of plaster-of-Paris.

THE ASTLEY COOPER PRIZE.—The next triennial prize, founded by the late Sir Astley Cooper, will be awarded for the best essay or treatise "On Diseases and Injuries of the Nerves and their Surgical Treatment; together with the Operations Performed upon Nerve-Trunks in the Treatment of Various Diseases, and Descriptions of the Changes which ensue in the Structures as well as in the Nerves Themselves from the Operations." The money value of the prize is £300. It is open to the whole world. Essays must be sent to Guy's Hospital before January 1, 1886.

THE CULTIVATION OF TUBERCULAR BACILLI.—It is somewhat noteworthy that although a year has passed since Koch announced his discovery of the bacilli of tuberculosis no one has yet repeated his experiments. The explanation is, no doubt, due to the fact that the experiments are difficult and require a large outlay of time and money, besides much technical skill. We learn now, however, that Professor Feltz, of Nancy, has been attempting to cultivate the bacilli, following strictly Koch's descriptions. He announced recently that all these attempts had proved utter failures, although he exactly followed the directions given by Dr. Koch for this purpose in his original paper. "In presence of my failures," he says, "I could not be sufficiently thankful if I were furnished with the necessary information to enable me to avoid this kind of misadventure: for I would not cast a doubt, from the facts only which I have just mentioned, upon those which Dr. Koch has so positively affirmed."

SMALL-POX IN NASHVILLE has become very prevalent. About forty-eight cases were reported in two weeks.

DR. R. S. HUIDEKOPER has been elected Professor of Veterinary Anatomy and Pathology in the proposed Veterinary Department of the University of Pennsylvania.

THE NEW YORK INFANT ASYLUM—A CORRECTION.—In THE RECORD of last week Drs. Græme M. Hammond, William M. Polk, Cyrus Edson, Lewis H. Sayre, and T. E. Satterthwaite are reported as members of the Medical Board of this asylum. We are informed by these gentlemen that this is an error, as they hold no medical positions in this institution.

EXPERIMENTAL INVESTIGATIONS INTO THE NATURE OF CONTAGIOUS DISEASES IN ANIMALS.—We are glad to announce that the Government has at last undertaken to make some experimental investigations into the nature of infectious diseases in animals and the value of protective vaccinations. The Department of Agriculture has leased a piece of ground in the suburbs of Washington to be used as an experimental farm and hospital. The grounds are being put in order and buildings erected thereon. Dr. D. E. Salmon, who has for several years been employed by the Department in the investigation of diseases of cattle, swine, and poultry, will arrive in Washington about May 1st to take charge of the work. Dr. Salmon will bring with him a number of cattle and

sheep, and the experiments will begin soon after his arrival. The Pasteur system of inoculation will be adopted. The investigations now to be made will be on a much larger scale than any heretofore attempted by the department, and will be conducted with the view of ascertaining the origin, causes, and nature of the Texas cattle fever, pleuro-pneumonia, and hog and chicken cholera, together with means of preventing and curing these diseases.

QUARANTINE AT NEW ORLEANS.—Governor McEnery has issued a proclamation establishing a quarantine of not less than ten days against vessels, crews, passengers, and cargoes from the Mexican ports of Matamoros, Tampico, Tuxpan, Vera Cruz, and Minatitlan; Porto Rico and Jamaica, and the Brazilian ports of Rio de Janeiro, Bahia, and Pernambuco; other West India Islands and ports along the isthmus and the coast of South America to Brazil; the Islands of Barbadoes, St. Thomas, Martinique, Guadeloupe, and Trinidad, and the ports of Colon, Cartagena, Savanilla, Baranquilla, Laguayra, Georgetown, and Cayenne. The quarantine will go into effect May 1. It is unusually severe, and practically prevents intercourse with the specified points.

DR. NATHANIEL LOW died at Dover, N. H., April 3d, aged ninety. He was graduated at Dartmouth in 1869, and held numerous offices of trust in New Hampshire and Maine.

DR. JOSEPH H. BAILEY, United States Army, died at his residence, at Kent Cliff, N. Y., April 1st, in his eightieth year. Dr. Bailey entered the United States Army in 1834, as Assistant Surgeon. He was promoted to the rank of Captain in 1839. In 1862 he was retired from the service through a disability obtained in the line of duty.

PROFESSOR LASÈQUE, the eminent alienist, died recently, in the sixty-seventh year of his age, after a long illness, deeply regretted by all who knew him. He took his degree in 1846, and became successively "Chef de Clinique," Hospital Physician, Agrégé, and Professor of the Faculty, and it was only in 1876 he was elected member of the Academy of Medicine. He was nominated Chevalier of the Legion of Honor in 1850, for his zeal during the cholera epidemic of 1849, and was promoted to officer in 1871, in recognition of his distinguished services during the siege of Paris. But it was as a medical jurist in mental cases that he particularly distinguished himself. Dr. Lasèque's literary productions were confined principally to medico-psychological subjects, in which he eminently excelled, though his contributions to the "Archives Générales de Médecine," of which he was the principal editor, bore testimony to the profoundness of his knowledge of general medicine. He was for some years clinical professor at the Hôpital la Pitié, where his lectures were well attended, and he displayed great skill in diagnosis. He also proved himself a therapist of a high order, in which branch he equalled, if not surpassed, his former master and friend, the much-lamented Trousseau.

EXHIBITION OF INSECTS IN PARIS.—An exhibition of great interest to the agricultural and industrial world is to be held in Paris in July next. The exhibition will

comprise different sections of useful and destructive insects, showing their products in a raw state, the apparatus and instruments employed in their transformation for the various purposes of arts and manufactures, as well as the means adapted for the destruction of injurious insects. During the exhibition an insectological and an agricultural congress will also be held. The insectological congress will treat of the nature and importance of the injury caused by insects, the means employed for their destruction, and those proposed to favor the development of birds and reptiles which contribute to their destruction. The phylloxera and its habits will be particularly treated of, and sericulture will form a very important section of the exhibition. The agricultural congress will study the creation of artificial hives and the most practical means for increasing the production of honey. The exhibition, which is to be organized under the patronage of the Minister of Agriculture, will take place at the Palais de l'Industrie.

GAV-LUSSAC, the distinguished chemist and son of the illustrious "savant" of the same name, died recently in Paris at the age of sixty-three years. His works on chemistry are well known, but those on metallurgy were particularly appreciated.

A NEW DOLMEN has just been discovered at St. Pierre Quiberon in Brittany. The dolmen contained four skeletons in a perfect state of preservation, and in one corner was found some twelve or fifteen skulls. Among the bones were also found two hatchets in silex, a long pin in bronze, and some fragments of pottery. M. Gaillard, of Plouharnel, who was charged with the restoration and the preservation of Celtic monuments, immediately resorted to the locality and had a photograph of the dolmen and the skeletons taken. Judging from the position in which the latter were found, one would conclude that they were thrown there anyhow. This discovery is considered very interesting, and M. Gaillard states that it will throw some new light on the question of Celtic monuments. Up till now skeletons or loose bones had not been found near dolmens or menhirs. The skeletons of Quiberon would therefore appear to justify the hypothesis that the stones there found formed part of the monuments indicating the places of sepulture.

THE ANNUAL COMMENCEMENT OF THE COLUMBIA VETERINARY COLLEGE AND SCHOOL OF COMPARATIVE MEDICINE was held at Chickering Hall, March 29th. Twenty-five students were graduated, this being one of the largest classes ever graduated in the city. The valedictory was delivered by Dr. Henry C. Slee, of Brooklyn. The degrees were conferred by Dr. Alexander Hadden, President of the College. Junior certificates were awarded by the Dean, Dr. E. S. Bates, to a large class. The prizes, which were numerous, were awarded by Professor Hubbard W. Mitchell. Judge Rufus B. Cowing delivered the address to the graduates. Hon. Andrew L. Souland, delivered the concluding address. The audience was a very large one.

THE NEW MEDICAL SCHOOL IN BOSTON AND "SARCOGNOMY."—On Monday last, the College of Therapeutics, being the "medical department of the American University," was formally opened. The medical department of this great institution, by the way, is the

only department to be opened at present. The principal address was made by Dr. J. R. Buchanan, the president. He states that "the college will have the scientific basis of Sarcognomy, a revelation of the philosophy of the human constitution, explaining the relations of soul, brain, and body." It is, perhaps, unnecessary to remark that the "University" hopes to issue diplomas, for a consideration, to a large number of graduates.

SUICIDE OF A PHYSICIAN.—Dr. John W. Ferguson, of Charleston, S. C., was found dead near Savannah, April 1st. He is supposed to have committed suicide.

Reviews and Notices.

MANUAL OF GYNECOLOGY. By D. BERRY HART, M.D., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh, etc., and A. H. BARBOUR, M.A., M.B., etc. Vols. I. and II. With Plates and Woodcuts. New York: Wm. Wood & Co. 1883.

It was a wise choice on the part of the publishers to select Hart and Barbour's "Gynecology" for the opening volumes of their Library for 1883. The treatise before us is different from all other works on diseases of women with which we are acquainted, and for the general practitioner, if not for the specialist, this new manual is in some respects superior to them. In the first place, it does not reflect the bias of a single mind, nor does it represent the system of an exclusive school. It is not a distinctively English, American, French, or German gynecology, and yet it is somewhat of all of these. It might be supposed from the international character just alluded to that it was confusing on account of the multiplicity of counsel offered; but the judicious eclecticism of the authors has enabled them, in most instances, to steer clear of such a fault.

We cannot attempt to analyze seriatim the different sections of the work, but we may give some idea of the scope of the manual by a cursory examination of the plan of arrangement of the subject matter. The entire treatise is divided into two parts, the first dealing with anatomy, physiology, and methods of gynecological examination, the second being reserved for the detailed description of diseases of the pelvic organs. We have no hesitation in stating our preference for the first part. Here Dr. Hart's personal studies have enabled him to present a well-worn subject in an original and attractive shape. The style, however, is often marred by poor diction, the result, in many instances, of forced brevity, while yet the desire to be explicit, is evident throughout. In a second edition these faults will doubtless be largely remedied.

Part Second, forming the main bulk of the manual, may be called a well-illustrated and lucid epitome of modern gynecology. The different diseases of women are one by one discussed, generally in a satisfactory manner. We are pleased to note the absence of excessive enthusiasm about favorite methods of treatment or the broad enunciation of pet theories of etiology. The authors are fond of giving facts, and it is to be hoped that this fondness may prove contagious. All the subjects are not evenly dealt with; but perhaps that is excusable, being an inherent difficulty of first editions. There is no doubt in our mind that Hart and Barbour's "Gynecology" will soon be one of our most popular manuals. The mechanical execution of the volumes is excellent. What with good paper, large, bold type, clear woodcuts, and some really satisfactory plates, the publishers may be complimented upon having turned out a valuable work in a proper and becoming dress.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago, etc. Philadelphia: H. C. Lea's Son & Co. 1883.

In this treatise of 560 pages Dr. Hyde has presented us with the main features of dermatology as they appear to-day. No claim as regards completeness can be made for the present manual, but in a clear, concise, and practical way the different diseases of the skin are presented in their various aspects of etiology, symptomatology, diagnosis, prognosis, and treatment. For the student and practitioner the book might have been made more valuable still by discarding altogether the more or less artificial and arbitrary subdivisions and varieties of the commoner dermatoses. The dermatologist proper, on the other hand, will probably be inclined to take the author to task for too much condensation and simplification; but as the book was written for the former class, their needs alone should be consulted. On the whole, the work is a commendable one, and will not fail to win the appreciation that it well deserves.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and edited for English Students by DONALD MACALISTER, M.A., M.B., M.R.C.P. Part I. General Pathological Anatomy. London: Macmillan & Co. 1883.

DR. ZIEGLER's treatise on pathology has quickly achieved a merited popularity in Germany. It is now made accessible to the English student, and will, without doubt, be found by him a welcome guide-book in this department of medicine. The great merit of the present work lies in its elementary simplicity, in its clearness, and in its positiveness. In many existing manuals the reader is confronted by the simple narration of the conflicting views of different observers. And thus the task of gleaning the author's personal convictions often becomes a sorely perplexing one. Not so with Ziegler's manual. He has carefully filtered contending views through the media of a critical mind and extensive personal investigation. And he presents the result as a clear solution of existing knowledge on pathology. That there needs must be a tinge of individuality about a work thus prepared goes without saying. But we have no reason to regret this. It rather makes the book a more even and pleasant one to read, and in no way detracts from its usefulness.

The work is divided into seven sections, and we must content ourselves with simply mentioning the subjects described, as space forbids our examining each one in detail. Section one deals with the malformations, and though short is satisfactory. The second section is devoted to a consideration of anomalies in the distribution of the blood and of the lymph. Retrogressive disturbance of nutrition are next discussed in a very complete way. Then the progressive or formative disturbances of nutrition are examined. The fifth section is an interesting and important essay on inflammation and inflammatory growths. Section six is devoted to an excellent exposé of the intricate subject of tumors. The seventh and last section deals with parasites, and we may conclude by saying that we know of no student's text-book which presents this branch of pathology in so perfect and yet elementary a manner.

We must also congratulate the translator and editor on the good judgment which he has shown in making some needful alterations and additions. We hope soon to see the work completed.

FLUID EXTRACT OF COCA is said to cause anæsthesia of the pharynx when brushed upon the mucous membrane.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, February 2, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

DR. ROBERT F. WEIR related the history of a case of

HIP-JOINT AMPUTATION, IN WHICH DAVY'S RECTAL ROD WAS SUCCESSFULLY USED.

The patient, a boy seven years of age, had received, in the autumn of 1881, a severe fall, striking upon the right knee. One month later a swelling appeared in this region, which continued to grow, with some pain and some depreciation of general health. Nearly a year later the boy was admitted to the New York Hospital. At that time the tumor had grown so as to involve the thigh-bone, and to reach from the knee to within an inch of the trochanter. Amputation at the hip-joint was decided upon, but the pathological conditions made it necessary to give up the idea of attempting the most rapid method of operating, *i.e.*, by anterior and posterior flaps. Instead of this the slower procedure of making a circular division of the muscles a little lower down, then gradually working up to the joint, was determined upon.

The control of the hemorrhage in such cases could be made in three ways: either by an abdominal tourniquet, by the use of Trendelenberg's transfixing rod (which is passed for the anterior incision in front of the bone, and then a rubber tube is wound half round the limb and caught in a figure of 8 turned over the projecting ends of the rod, in this way compressing the vessels, after which the flap is made, vessels secured, and the same procedure resorted to for the formation of a posterior flap), or by the employment of a rectal rod. This latter method was suggested by Mr. Richard Davy in 1878, and has since been resorted to some twenty-two times, and with very good results. The rod, about two feet long and the size of one's finger, is passed up the rectum about eight inches, until it reaches the common iliac artery, which it presses against the subjacent structures. In this case the rod (a syringe of oil having been first thrown into the bowel) was very readily passed up the rectum on the right side, and rested nearly parallel to the spine; the outer end was then tilted up and the artery easily controlled. There was a little slip once during the operation, and a spurt of blood, but this was promptly stopped. The vessels were secured by bull-dog forceps and ligatured. The total amount of blood lost was only two and a half ounces. The wound was dressed with bichloride of mercury dressing, and left open in its lower half. The patient recovered very satisfactorily and was shown to the Society. The tumor was a round-celled sarcoma of a very juicy nature and likely to return. It had its origin in the bone, however, and some authorities think that in such cases a return is less probable.

There is one point in relation to the use of the rod which is of interest in other than a surgical point of view. In the region compressed by this rod the

URETER

is also found, which tube we sometimes wish to compress in order to determine the comparative condition of the two kidneys. Dr. Sands suggested some time ago, in trying to acquire a knowledge of the condition of a single kidney, the passage of the hand into the rectum and compression of the ureter thereby. The speaker thought that, by the use of the rectal rod, this might be better done, and for the accomplishment of this idea one end of the rod had been broadened and flattened.

In seven of the cases in which the rectal rod had been used for the control of hemorrhage in hip-joint amputations, there had been only a total of seven ounces of

blood lost. One accident only had taken place in its use, which occurred in the experience of Mr. Davy himself. In this case, narrated in the *Medical News* of July 8, 1881, twenty-four hours after amputation at the hip-joint, peritonitis set in, due to perforation by the rod, and the patient died. In this case, however, Mr. Davy¹ had been experimenting with a little different instrument. Whatever risk, and it is probably slight, is connected with its employment is confined to the control of the right iliac artery.

With reference to the amputations at the hip-joint in general, by common consent surgeons use the circular method adopted by the speaker, if it is practicable, since the risk is less. It is even suggested by F. Jourdan that one should cut low down, and dissect the bone out of its bed where possible, so as to leave a greater length of soft parts. The mortality is thus diminished, and the stump furnished is a good one.

In the discussion which ensued DR. GEORGE F. SHRADY said that he had seen the operation in question, and was much pleased at the readiness with which hemorrhage was controlled. Dr. Shradly remarked that in Davy's fatal case the right iliac artery was compressed. It seemed to him that there was an anatomical reason why the rectum, which was situated to the left, should suffer from injury under such circumstances.

DR. A. H. SMITH said that when a student, and attending one of Dr. Carnochan's clinics, the idea suggested by Dr. Weir had occurred to him, *viz.*, that it would be better to make the section lower down and dissect out the bone from its bed.

DR. WEIR said, in response to a question, that there was no difficulty in his case in finding the artery and compressing it. The compression did not increase arterial tension, since it cut off only the circulation of one limb. The rod had this advantage over the abdominal tourniquet, that it did not compress the viscera, and thus, perhaps, interfere with respiration.

DR. POLK asked how long the ureter would have to be compressed in order to collect sufficient urine from the other kidney.

DR. WEIR said that in one case which Dr. Sands tried, the ureter was compressed for fifteen or twenty minutes. During this time he collected about half an ounce of urine. He did not think that pressure for that length of time would do any harm.

DR. POLK had been making some experiments in this direction. He had found that by taking an ordinary sound and giving it a double curve, then introducing it into the female bladder and pressing the urethral curve against the wall of the pelvis, the other part of the sound comes square across the track of the ureter. Then by introducing a finger into the rectum and pressing against the sound, the ureter can be occluded completely. In order to test this, the speaker had made the following

EXPERIMENTS ON THE CADAVER.

He opened the ureter just below the kidney. Then having introduced the sound in the manner described and occluded the ureter, he injected water into its upper open end by means of a syringe. Not a drop of water flowed through the ureter, although he had dilated it to the point almost of bursting. He was unable to detect any special erosion of the mucous membrane in consequence of the pressure made. The experiments were performed on two women and one man. The question was whether the bladder in the living subject would stand this sort of treatment.

DR. WEIR said that the sound left in the bladder for some time does not cause any serious trouble. He was much pleased with Dr. Polk's idea, and did not see why it would not prove practicable.

¹ Mr. Davy, in the *Lancet* of February 17, 1883, speaking of his accident, says that his rod has now been used over forty times, twenty of which were on the right side. Under its use there was 65 per cent. of recoveries after amputation at the hip-joint. In seven deaths the rectum had been carefully examined, and in only one (the above) was there any injury to the intestine found.

DR. SEXTON asked if it would not be possible to catheterize the ureter with a suitable instrument.

DR. HUNTER said that he had seen Dr. Emmet do this once in a female.

DR. POLK thought it quite impracticable ordinarily, even in the female. Schroeder had done it once.

DR. DANA said that the pressure of the urinary secretion was quite exactly known, at least in the higher mammals. The rate of flow of urine normally was about an inch a second. It was influenced by the administration of ether, however. Emmet had asserted that

THE FLOW OF URINE OFTEN CEASES IN ETHER NARCOSIS.

DR. HUNTER said that on the other hand it was sometimes increased in that condition. In one case the urine was ejected almost in a spurt.

DR. POLK read the paper of the evening (see p. 374), which was entitled

THE INFLUENCE OF EXTREME LATERAL CURVATURE OF THE SPINE UPON THE COURSE OF LABOR.

In the discussion Dr. Polk, in response to inquiry, said that the patient had been under treatment for two or three years, but he did not think that any of the trunk-muscles had been weakened thereby.

DR. V. P. GIBNEY said that he thought Dr. Polk's view was correct, and that the observation made was a new and important one. Such cases would be apt to escape the attention of orthopædists, because they are rarely seen by them after twenty years of age. It was a common thing in such cases of curvature to have the abdominal organs compressed down into the pelvic cavity, thus, perhaps, affecting the uterus. Ladies who had had Pott's disease had frequently asked him whether they could get married, and he had generally discouraged them.

The exaggerated form of curvature which Dr. Polk described was not very common. A great many persons have a slight deformity; they get treated for a time, the curvature ceases to increase, and they give up treatment. They go through life with a slight deformity which is not noticed.

DR. HUNTER had attended one case of labor in which the lady was the subject of Pott's disease. The patient had suffered from this trouble for two years, and married while still uncured. She had a normal labor, but the child was very small, weighing only three pounds. The disease was low down at about the fourth lumbar vertebra where there was a very decided prominence. There was no contraction of the pelvic outlet.

DR. GIBNEY thought it important to know when the Pott's disease developed. In cases where the disease came on early, even if it was slight, it often affected the growth, the stature was small, the pelvis also might be small. It was further worthy of note that a patient may have Pott's disease, and often does have it, the symptoms being so slight that years may elapse before the fact is recognized. Then some one is examining for the cause of certain pains considered neuralgic and finds the kyphosis (long since solid), and perhaps an old residual abscess just now coming to the surface.

DR. WEIR said that it seemed a fair inference, since so many women had lateral curvature, that Dr. Polk's case was a very exceptional one. He could recall two cases in which there was very great lateral curvature, and in which there had never been any trouble during labor.

DR. F. P. KINNICUTT read a short paper entitled:

A REPORT OF A CASE SHOWING UNUSUAL SUSCEPTIBILITY TO THE SCARLET-FEVER POISON.

In the discussion DR. C. L. DANA related the case of a medical friend, who before the age of twenty-one had suffered from five attacks of scarlet fever. In each case the symptoms had been well marked. Desquamation took place, and in most of the attacks albuminuria was present.

The Society then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. T. E. SATTERTHWAITE, from the Committee on Microscopy, made the following report: (1) That the tumor of the rectum presented by Dr. Robert Newman at the stated meeting held February 28, 1883, was a *cylindrical epithelioma*; (2) that the placenta presented by Dr. Tauszky at the same meeting was the seat of *waxy degeneration*; (3) that the specimens of *metritis desiccans* presented by Dr. Garrigues at the stated meeting held January 24, 1883, contained smooth muscular tissue.

Dr. Satterthwaite also presented specimens removed from the body of a dwarf upon whom Dr. Richardson, of Philadelphia, a few years ago, performed

PORRO-MÜLLER'S OPERATION.

The patient died of acute Bright's disease. There was a ventral hernia, one of the results of the operation, but it had been so easily supported by a truss that it had not given the woman marked discomfort. The vagina, the cervix uteri, and surrounding tissues were presented and showed the cervical canal intact and containing mucus. The complete history of the case has already been published by Dr. Richardson in the *American Journal of the Medical Sciences*.

DR. W. P. NORTHRUP presented a specimen of

CONGENITAL CYST OF THE KIDNEY—ABSENCE OF THE URETER.

"A male child, aged four months and one week, died in the New York Foundling Asylum with gastro-intestinal catarrh and broncho-pneumonia. There was also cranio-tabes.

The right kidney was about twice the normal size. It seemed normal; the ureter and bladder were in normal condition. The left kidney was a monolocular cyst. There was entire absence of the ureter. The pelvis seemed to be a part of the common cyst.

Remarks.—Virchow has written an elaborate article on cysts of the kidney. 'In all but two cases both kidneys were affected.' In cases of cystic kidney malformation of the pelvis or ureter or bladder were generally found. The theory he gives is of intra-uterine inflammation from impaction of uric acid in the straight tubes, obstruction, dilatation of tubules, Malpighian capsules, until the whole kidney is involved."

Dr. Northrup also presented a specimen of

CALCULOUS PYELO-NEPHRITIS.

"A female child, aged thirteen months; foundling. First appears on the books of the New York Foundling Asylum, 'Aged one day; condition miserable.' Four days after entrance was put into the care of a wet-nurse out in the city and brought to the Out-door Department from time to time. Three months later is an entry, 'Condition poor; vomiting, purging; sprue.' Nine months later, 'Pale, thin; bowels regular.' One month later, and one month before death, was returned to the hospital very much emaciated. Over both lungs were well-marked signs of consolidation. A week later diarrhoea set in again. From this time the child wasted rapidly, developing no new symptoms and showing none at any time referable to the urinary tract. It died February 6, 1883.

Autopsy.—Body: Emaciated; excoriations about buttocks; moluscum sebaceum on the face. Lungs: Broncho-pneumonia of both in posterior portion of upper and lower lobes. Heart: About two drachms clear serum in pericardium; heart itself normal. Spleen: Normal. Stomach: Moderate congestion and increase of mucus. Small intestine: Inflated, little solid material; mucous membrane thin, pale; mesenteric glands enlarged. Large intestine: Membrane dusky red in linear patches, and increase of mucus; intestine empty. Liver: Closely

adherent to the diaphragm, the abdominal walls, and to the tissues covering the right kidney; hepatic substance shows no gross change. Left kidney: Somewhat enlarged; in its pelvis is a calculus moulded to its cavity and filling it; pelvis not dilated, ureter normal. Right kidney: Enlarged to twice the size of its fellow, tightly adherent to the surrounding tissues, capsule thickened and adherent. On section the whole of the spongy fluctuating mass found perforated with cavities radiating from the pelvis to the periphery, and these cavities are filled with grayish, ropy pus. In the pelvis are three or more calculi, varying in size from a pea to a filbert. Ureter is dilated and filled with ropy pus; its mucous membrane is thickened, granular, and red; its orifice at the bladder is slightly larger than that of the left; no obstruction. Bladder contains pus from the right ureter, but its mucous membrane looks normal.

"On examination the calculi are found to be uric acid. The left kidney shows well-marked parenchymatous inflammation, degenerated epithelium, engorged capillaries, hyaline casts. Right shows all gradations from moderate parenchymatous degeneration, engorgement of capillaries to interstitial hemorrhage, inflammatory infiltration, necrosis, abscess detritus. To summarize, the left kidney shows parenchymatous nephritis with calculus; the right shows calculous pyelo-nephritis or suppurative nephritis; right ureter shows dilatation and inflammation.

"The inflammation obviously arose from the irritation of the calculi. In the right the pyelitis became purulent and extended along the straight tubules until nearly the whole kidney was involved. It also extended down the ureter to the bladder, but did not set up inflammation there.

"*Remarks.*—Civiale, in 5,900 cases, found 45 per cent. of calculi in children. Neussauer gives the following table of frequency of calculi: From three to twelve months, 1.55; from twelve to twenty-four months, 1.55; from two to four years, 27.6; from four to five years, 12.5; from five to seven years, 22.4; from seven to twelve years, 17.7; from twelve to sixteen years, 3.63. The most common calculi are the uric acid, and occur more often in males than females (Gerhardt)."

DR. NORTHRUP also presented a specimen of

ENLARGED BRONCHIAL GLANDS AND FALSE CROUP.

"Male; aged eleven months; New York Foundling Asylum. In November, 1882, the child had broncho-pneumonia. From the urgent symptoms the patient recovered after about three weeks. The emaciation and cough remained persistent. Child very white and pinched. The character of the cough simulated very closely whooping-cough—periodic, spasmodic, severe. Râles heard over both sides of chest.

"Two months later there were diarrhoea and vomiting. Cough continues; child pale and thin. Three months later, a week before death, it was taken again with acute broncho-pneumonia. On the following evening laryngeal dyspnoea developed and the symptoms very urgent and severe. On the following day the dyspnoea became less, and did not again become severe. Breathing continued more or less stridulous until death.

"*Autopsy.*—Body emaciated; both sterno-costal regions depressed; brain normal; larynx normal. Right lung: Adherent by tough, slender, scattered filaments over anterior and lateral surfaces; posterior surface covered with recent fibrin; extensive consolidation of the lower and posterior portion of upper lobes. Left lung: Consolidation of about two-thirds of lower and posterior portion of the upper lobe; recent fibrin over the lower lobe. Bronchial glands all enlarged, soft, dusky, apparently the seat of recent change; one large, cheesy gland, about one inch and three-fourths by one inch, was tightly wedged up into bifurcation of the trachea, compressing both bronchi; the gland lies up behind trachea, is firm, exerts pressure forward upon the trachea, and

upward and forward upon the bronchi, diminishing the calibre of both. Heart normal; liver large and fatty; spleen anæmic, reddish, size normal; kidneys normal. Stomach: Increase of mucus, red in linear patches; empty. Intestines: Mesenteric glands enlarged, dusky; solitary follicles swollen; Peyer's patches not changed; crease of mucus. Large intestine appears normal; contents yellow and tenacious."

Dr. Northrup remarked that the case was interesting, because it illustrated the irritation which may arise from pressure of an enlarged gland upon the bronchi or the vagus nerve. There was a spasmodic cough and a nightly attack of what appeared like false croup.

DR. B. LIVINGSTON said that he had had a similar case, in which there was no history of cough. The enlarged gland was an inch and a half in its vertical and three-fourths of an inch in its antero-posterior diameter, and it seemed to press upon both bronchi and also upon the œsophagus, but there was no difficulty of swallowing. There was no croupy cough, but there was broncho-pneumonia, as seen in Dr. Northrup's specimen.

DR. E. L. PARTRIDGE presented specimens illustrating

PURPURA HEMORRHAGICA,

removed from the body of a child *four* months old. The history of the case was furnished by Dr. Remsen, of the resident staff at the Nursery and Child's Hospital. "The child was born in the hospital, and had always appeared to be healthy. No evidence could be obtained of hereditary tendency to the affection. Early in March the mother directed attention to the child, and on examination small ecchymoses were observed quite thickly scattered over the face, arms, legs, and feet, varying in size from a mere dot to a pin's head. Otherwise the child seemed well. It nursed, and the temperature was 98° F. During the night of March 4th it vomited blood and had epistaxis. Wine of iron and cod-liver oil were ordered.

"March 7th.—Patient growing stupid; does not nurse well; very pale; vomiting has ceased; had a bloody stool.

"March 11th.—The child refuses the breast. No vomiting; has attacks of epistaxis; temperature normal; large hemorrhagic spot upon the hard palate, and many smaller ones upon the tongue. Passes urine in small quantities, and only when wrapped in hot blankets. Last night an ecchymosis appeared on the cutaneous surface of the nasal septum, which broke and gave rise to considerable hemorrhage. Continuous oozing of blood from the mouth. The gums appeared normal. The patient died of exhaustion March 12th.

"The autopsy was made by Dr. Beverley Livingston. The body was well nourished, and here and there were remains of purpura hemorrhagica. The heart showed some very small ecchymotic spots on the pericardium. The cavities contained no clots and the valves were normal. The liver was extremely fatty. Spleen normal. Blood fluid. The stomach showed some submucous hemorrhages, but there was no fluid-like blood in either the stomach or intestines. The right kidney was very pale and the pelvis contained a number of small calculi. The left kidney showed several small hemorrhages under the capsule and also scattered in the substance of the organ. There was some bloody fluid in the supra-renal capsules. There were no calculi in the bladder, and the urine it contained was clear. Dr. Livingston exhibited microscopic slides of the blood, taken post-mortem, which showed chain bacteria in abundance. They had taken the methyl-violet staining, and their presence he regarded as difficult to explain. He did not regard the micro-organisms as the result of decomposition. The number of white blood-corpuscles was materially increased."

DR. NORTHRUP referred to a case of purpura hemorrhagica, occurring in a child, in which, soon after death, the skin became intensely yellow.

Dr. VAN GIESON thought that absence of bloody urine was a point worthy of note.

Dr. GARRISH remarked that the affection usually occurred in the poorly nourished. In all the cases he had seen bloody urine had been passed and hemorrhage from the gums had occurred. In one case, that of a man ninety-two years of age, blood oozed from every part of the body. In two cases occurring in children, six and ten years of age, he had given the fluid extract of ergot, and both patients recovered.

SUBPERIOSTEAL REMOVAL OF THE RADIUS—REPRODUCTION OF THE ENTIRE BONE.

Dr. J. A. WYETH presented a radius removed from the left arm of a boy ten years old, who six weeks before the operation received an injury to the wrist-joint that caused separation of the epiphysis, followed by necrosis. The operation, performed in November, 1882, was a subperiosteal one, and since that time the radius has reproduced itself entirely, and there is free motion at the wrist-joint and about 15° motion, with pronation and supination at the elbow.

FRACTURE OF THE NECK OF THE FEMUR.

Dr. Wyeth also presented the upper part of the femur of a woman who died at the age of sixty-seven years, and who suffered at the age of sixty-two from what was supposed to be fracture of the neck of the thigh-bone. She was under the care of Dr. William Selden, of Norfolk, Va., who gave the history that the patient fell upon a carpeted floor, was unable to rise, was carried home, and when the doctor arrived, he found the characteristic deformity of fracture of the femur high up. Careful measurement showed that there was from three-fourths to one inch shortening. He regarded the case as one of fracture of the neck of the femur, probably within the capsule. He put the patient into bed, kept her quiet, and no other treatment was adopted. The patient so recovered that she was able to walk without a crutch and showed no signs of lameness for several years, although it took a year to recover from the injury.

Dr. Wyeth also presented two

CARTILAGES FROM THE KNEE-JOINT,

removed post-mortem. They were found in the synovial bursa, connected with the knee-joint, lying over the most external tendinous insertion of the semi-membranous muscle. They were found at the bottom of this pouch, close to the side of the bone, but not adherent to it. Dr. Wyeth believed that they developed in the bursa.

Dr. Wyeth also presented the contents of an

OMENTAL FEMORAL HERNIA

removed from the same body, and the specimen was interesting because it demonstrated the fact that an omental hernia can cure itself. The mass had come partly through the femoral canal, had become incarcerated without being strangulated, and had become adherent. It was the third specimen of omental femoral hernia that he had seen.

Dr. Wyeth also presented the fragments of an

ENGLISH GUM CATHETER REMOVED FROM THE BLADDER.

The patient had suffered from a severe accident which involved the spinal cord, but his locomotion was good. He was obliged to use a catheter, and lost the instrument in the urethra, from which locality Dr. Wyeth attempted with several different instruments to extract it, but it slipped on into the bladder before he succeeded. He then removed it by the aid of a lithotrite. There was almost complete anesthesia of the urinary tract, the patient feeling the lithotrite only when quite vigorous pressure was made with the instrument on the floor of the bladder.

Dr. Wyeth also presented several

PHOSPHATIC CALCULI

which he had removed from the bladder by means of Thompson's evacuator, although no stone could be detected by sounding. The patient had marked cystitis. Dr. Wyeth thought it well to resort to this method in similar cases, with the view to determining whether or not calculi were present which could not be touched with the sound.

THE PRESIDENT referred to a case in which he performed the sub-periosteal operation for acute necrosis of the humerus, and the result was reproduction of the entire shaft of the humerus. The results in these cases showed how much the periosteum had to do with production of bone as compared with the epiphyseal cartilages.

Dr. FERGUSON presented a specimen of

ANEURISM OF THE ARCH OF THE AORTA.

"The specimen was from a male, aged forty-five, a native of the United States, and a news-dealer by occupation. He was admitted into the New York Hospital on March 4, 1883. He had been temperate in his habits. Some of his remote relatives had phthisis. He had had a chancre, but secondary and tertiary syphilitic symptoms were not well marked. He gave a history of sun-stroke, rheumatism, and malarial fever, the latter during the months of June and July of last year. The attack was attended by cough, elevation of temperature, and sweating, but no chills. Following this his health was good until last November, when his cough returned, accompanied by pains in his chest. A month later he noticed his voice failing, and he suffered from moderate dyspnoea. Three weeks previous to his admission into the hospital, he began to be troubled with spasmodic attacks of dyspnoea, coming on without any apparent cause, and not accompanied by cough. During that time he had six of these attacks, each more severe than the preceding one, and the last so severe as to occasion fears of a fatal issue. The last occurred immediately after eating, and for the first time he noticed difficulty in swallowing. During the intervals he was almost entirely free from dyspnoea. He gave no history of violence, cardiac, or renal disease.

"On admission, patient was noticed to be indifferently nourished. The face was slightly cyanotic; there was no oedema. His respiration was much embarrassed, inspiration high-pitched and forcible, and expiration prolonged, blowing, and cogwheel in character. The accessory muscles of inspiration acted strongly. The cardiac action was rapid and forcible; the arterial tension was high. The cardiac sounds were obscure. There was no bruit detected. On the day of admission patient had three attacks of dyspnoea, each of which lasted from five to twelve minutes, and during which the respiration was very greatly embarrassed and the face was very cyanotic. These attacks were at first relieved by bromide of ammonia and chloroform vapor, but later they were not influenced favorably by these drugs. Examination of the urine showed a trace of albumen, granular casts, and blood. His temperature was normal. First night in the hospital he had several slight attacks of dyspnoea (none of them severe), and on the morning of March 5th, his temperature was 98.1° F., his respiration 18 per minute, and his pulse 76. The left radial pulse was markedly less forcible than the right. The pupils were equal, and there were no symptoms of paralysis. In the afternoon he had a severe and prolonged attack of dyspnoea, during which respiration was suspended for a time.

"Laryngotomy was performed and a tube was inserted through an opening made in the crico-thyroid membrane, but this gave no relief. A stiff catheter, No. 12, English, was then inserted through this opening, into the trachea to the distance of five and a half inches, and by this means respiration was established. A note on the 5th describes a tumor above the clavicle on the right side. On

deep palpation there is pulsation, and over its site a distinct systolic murmur is heard, which is audible in the cervical vessels. During the night, temperature rose to 104.6° ; respiration, 25; and pulse, 128 per minute. During the 6th he suffered for lack of oxygen and an unsuccessful effort was made to introduce a larger catheter. The smaller one then was reinserted. He became more and more cyanotic, gradually sank, pulmonary oedema developed, he became moribund, and died on March 7, 1883, at 2.40 A.M.

"The highest temperature was 105.2° , his respiration 34, and pulse 160 per minute.

"He was treated with whiskey and digitalis.

"Autopsy on March 7th, at 2 P.M.—The body was well nourished. There was an incised wound in the median line of the neck, one and a half inch in length, dividing the crico-thyroid membrane. There was a small amount of serum in both pleural cavities. The lower lobe of the right lung and a part of the lower lobe of the left lung were in the condition of red hepatization, and the pleura covering the hepatized parts was covered by recent lymph; lungs elsewhere were intensely congested. The spleen, kidneys, stomach, and intestines were normal. The liver was pigmented, but otherwise normal. Heart and aorta: The heart is normal in size; its cavities contain recent clots. The cusps of the aortic valve are thickened and retracted, other valves are normal. The aorta throughout is atheromatous. There is a circular opening in the arch of the aorta, three-fourths of an inch in diameter, between the innominate artery and the left common carotid. This opening communicates with an aneurismal sac rising above the upper wall of the aortic arch two inches, the transverse diameter is two and one-half inches. It contains laminated fibrin and recent clots. The innominate artery communicates with the sac, partially arising from the lower right side of it. The left subclavian artery admits a cylinder one-fourth of an inch in diameter, while the corresponding artery on the right side admits a cylinder nearly one-half inch in diameter. There is a growth in the wall of the left subclavian artery, just above its origin, one-eighth of an inch in thickness, which is situated between the intima and media. This growth is lenticular in shape, its long diameter, parallel with the long axis of the artery, is one-half an inch, and its short diameter is one-fourth of an inch. It is made up of white fibrous tissue, small, round, and spindle cells.

The Society then went into executive session.

LIGATURE OF THE BILE-DUCT.—Beloussow has studied this subject under the direction of Cohnheim and Weigert. He experimented upon rabbits, guinea-pigs, and dogs. The longest time that any animal survived was eighteen days. The liver was jaundiced and slightly enlarged. In its substance were seen yellowish gray spots, varying from the size of a pin's head to a pea. These were most numerous from the first to the sixth day. The microscopic examination showed them to represent a partial necrosis of the liver substance caused by the pressure of the bile. Around these nodules appeared a zone of reactive inflammation with the formation of young connective tissue in which were newly formed bile-ducts. This new tissue gradually replaced the necrotic portions entirely. In this way is to be explained the cirrhosis of the liver observed by earlier experimenters (Wickham, Legg, Charcot, Gombault, and others) after the ligature of the ductus choledochus. This occurred in entirely aseptic cases, and was in no way to be connected with any inflammation starting from the point of ligature and following up the course of the bile-ducts. Kelsch (*Rev. de Méd.*, 1881) records two cases where the retention of bile was followed by cirrhosis—one following closure of the duct by cholelithiasis and cancer of the gall-bladder, the other in which a dilatation of the bile-ducts was found without any formation of concretions.—*The Practitioner*, March, 1883.

New Instruments.

A NEW HYPODERMATIC SYRINGE.

BY FRANK SARGENT GRANT, M.D.,
NEW YORK.

Description.—The illustration shows the size, in and out of the case. The syringe is of glass, with hard rubber fittings, and holds ten minims of fluid when fully charged. The piston is of the dumb-bell kind, and works smoothly in a *uniform* bore. The piston-rod is made larger than usual, in order to insure *an easy and steady action*. The steel needle drops into the top of the piston-rod when not in use. A little vaseline placed in the rod will effectually prevent rusting of the needle. The syringe screws on to a glass vial with a capacity of a little over ten minims, and should be always filled when not in use, as by this means the leather packing on the rod is *constantly kept moist and in working order*. Both syringe and vial screw into a hard rubber case, and thus can be carried in the vest pocket. At the bottom of the case is a receptacle for holding the various hypodermatic preparations now in the market.

Directions.—Unscrew vial from syringe at A; fill *almost full* with solution or water, leaving only an air-bubble to act as an air-chamber, and rescrew on to syringe firmly. Now invert instrument and draw solution into syringe; unscrew vial at B, attach needle, and the instrument is ready for use.

If desirable, the physician can have the instrument ready for an injection at a moment's notice, by previously dropping into the vial a powder or globule of given strength. For such a purpose I have found the hypodermic "globules," as manufactured by Wm. R. Warner & Co., most reliable and quickly soluble.

The hypodermatic syringe is made by John Reynders & Co.

11 WEST FORTY-FIFTH STREET.

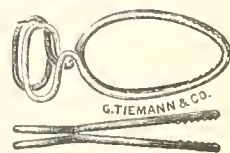
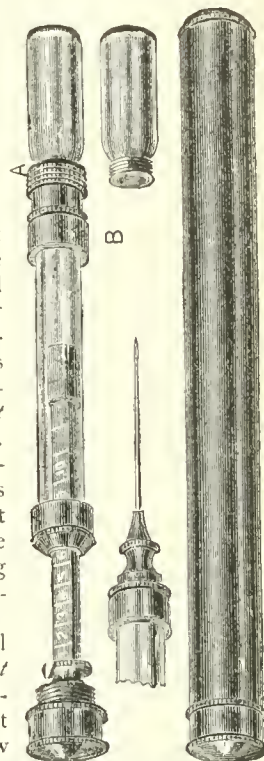
A KEY RING ARTERY CLAMP.

BY BREWER MATTOCKS, M.D.,
FARIBAUT, MINN.

In the routine practice of surgery—especially in the country, where one rarely has experienced assistance—delay, annoyance, and chagrin invariably attends the ligature of arteries; and even in town, where one may avail himself of experienced surgical friends, sooner or later the exclamation is breathed, "good surgeon but poor assistant." If this be true of operations involving a surgical staff, how much more trying is the ligature of arteries where one has no assistance whatever, as frequently happens in the office, or in cases of emergency.

Ten years ago, after working alone with my patient over a small artery for a long time, it occurred to me, "If I could but put a split ring on an artery?" I could not, however, until recently.

This cut explains the instrument I have devised, and



suggests its application perfectly. With a set of these clamps—they should be had in sets of six or more—one may apply them to the arteries in a capital operation himself, and ligate at leisure; or one may be applied to a single artery till bleeding has been controlled, or until one may turn to his table for a ligature, without fear of its weight pulling it loose; or one may *fish* for a wounded artery with the clamp, and the artery having been secured it may be left in position for several days if thought best. It is nickel plated. To sum up its advantages:

First.—It is self-holding, and its lightness will not cause it to tear loose, and its shape is perfectly adapted to slipping the ligature to its place.

Second.—With the clamp one is enabled to operate with no assistance when necessary.

Third.—In cases of emergency one may be attached *blindly*, and left in position.

Fourth.—If a pair be placed upon a physician's key-ring he will always have a convenient and ready means of controlling hemorrhage from a wounded artery.

Fifth.—While it would be idle to claim that this clamp will supersede the use of the forceps, I may claim that a set of them will multiply the uses of his forceps tenfold.

Sixth.—May I make the claim that a surgical instrument may be constructed so simply that any one may understand its application, and so cheaply that its cost will not be a bar to its use?

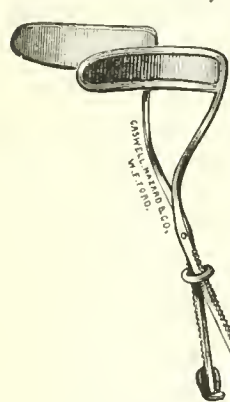
A NEW NASAL SPECULUM.

By WM. C. JARVIS, M.D.,

NEW YORK.

A CAREFUL and satisfactory trial has induced me to present to the medical profession a new nasal speculum.

Its simplicity in principle and construction as shown in the figure, drawn full size, makes an extended explanation unnecessary. It is represented as half-opened.



The arms of the speculum, pivoted in the centre, are encircled by a small ring.

The instrument is readily introduced into the nostril when the blades are closed. Gentle pressure upon the handles separates the blades and at the same time permits the ring to drop and keep them open. The tension of the speculum can be very nicely regulated by this arrangement, and a very light pressure is sufficient to retain them in the nostril.

It does not irritate the nose even when used at short intervals on the same person. Indeed, patients sometimes forget the presence of the instrument in the nostril.

This is an important advantage in view of the severe excoriation and fissure which has followed the frequent use of most self-retaining nasal specula.

Mr. W. F. Ford has constructed the instrument in several shapes with skill and at little expense. He informs me that he can furnish eye, vaginal, and anal specula working on the same *ring-drop* principle.

I take this opportunity to communicate with the many correspondents who have encouraged me by their success in the practice of my operations, and believe they will find that this little instrument facilitates the use of the *écraseur* in the anterior nares.

123 EAST TWENTY FIFTH STREET.

CANNABIN TANNICUM AS A HYPNOTIC.—Hiller confirms the statements of Froumüller that the tannate of cannabin is a good hypnotic in the milder forms of insomnia. The dose is 0.3 to 0.5 gramme.

Obituary.

PHILIP HARVEY, M.D.,

PORTLAND, ME.

DR. PHILIP HARVEY, Professor of Diseases of Women and Children, Willamette University, died in Portland, Oregon, March 23d, in the seventy-ninth year of his age. He was born in England, pursued the study of medicine, and graduated in that country. He traced his descent to the family of William Harvey, the discoverer of the circulation of the blood.

During early manhood he came to the United States and commenced practice in Brooklyn, N. Y., where he became one of the physicians to the Brooklyn Dispensary. Believing that a larger field was open to him in the West, he moved thither and practised for some years in Cincinnati. During that period he published a treatise on "Food and Climate," a work of much learning, originality, and research. Afterward he was induced to remove to Iowa, where he edited, with marked ability, the *Burlington Gazette*, making it a model newspaper, and greatly increasing its circulation. He was appointed and reappointed Surveyor of the Port, and notwithstanding the absorption of much of his time by the duties of those positions, he wrote considerably, made investigations on scientific subjects, and carried on a large practice. Soon afterward he accepted the chair of Theory and Practice in the University of Iowa, which he held at the outbreak of the rebellion. Politically he subscribed to the doctrines of the Jeffersonian Democracy, but throughout the entire war was a staunch Unionist. He received early in the struggle the commission of surgeon of an Iowa regiment, and was continuously on duty at the front or in hospital from that time till the cessation of hostilities, when he retired as Lieutenant-Colonel and Surgeon of Volunteers.

About eight years ago he went to Oregon in search of relief from asthma. There he at once became identified with the medical school, as teacher and consultant, lecturing and writing much upon medical and scientific subjects.

He was a profound scientist and Shakesperean scholar. His memory was remarkable; he could repeat word for word, whole pages after one perusal. He was a man of extremely abstemious and simple habits, of high moral rectitude and general impulses. Sympathetic and conscientious in his professional life, he was at all times ready to sacrifice his personal ease, health, or prospect of gain at the call of duty. He knew several languages well, and had some acquaintance with many, was an excellent musician, and possessed considerable artistic ability.

His widow survives him at the age of sixty-nine. Also two sons, George Harvey, an artist, and Dr. Philip F. Harvey, U. S. A., and one daughter, Mrs. E. P. Rogers, of Portland, Maine.

ANOTHER DEVICE FOR PREVENTING THE BREAKING OF THERMOMETERS.—Dr. James Bordley, of Centerville, Ohio, writes regarding this much-agitated matter: "The device is nothing more nor less than an *old* style pencil-holder, with pin for attaching. Secure it by its pin just within the upper pocket of the vest, and I am sure there will be no further complaint, for it is satisfactory in every respect, answering the purpose much better and at less cost and trouble than anything I have tried or seen offered.

"I would suggest that some instrument-maker (or some one else) manufacture them especially for the purpose, making them a little stronger than they are usually made for pencils, with such other slight modifications as might more perfectly adapt them for this vicarious function."

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 24, 1883, to March 31, 1883.

BARNETT, RICHARDS, Captain and Assistant Surgeon. To proceed to Fort Adams, R. I., and report to the commanding officer for duty at that post. S. O. 51, par. 1, Department of the East, March 28, 1883.

CRONKHITE, HENRY M., Captain and Assistant Surgeon. Relieved from duty at Fort McKinney, Wyo. Ter., and assigned to duty as Post Surgeon at Fort Fred Steele, Wyo. Ter. S. O. 31, Department of the Platte, March 22, 1883.

DE LOFFRE, AUGUSTUS A., Captain and Assistant Surgeon. Granted leave of absence for three months. S. O. 71, par. 3, A. G. O., March 27, 1883.

LORING, L. Y., Captain and Assistant Surgeon. To proceed without delay to Fort Schuyler, N. Y. H., and report to the commanding officer for duty as Post Surgeon. S. O. 51, par. 2, Department of the East, March 28, 1883.

MOSELEY, EDWARD B., Captain and Assistant Surgeon. To report in person to the President of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. S. O. 70, par. 3, A. G. O., March 26, 1883.

PAULDING, H. O., Captain and Assistant Surgeon. Relieved from duty at Fort Laramie, Wyo. Ter., and assigned to duty at Fort Sidney, Neb. S. O. 31, Department of the Platte, March 22, 1883.

SKINNER, JOHN O., Captain and Assistant Surgeon. To report in person to the President of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. S. O. 70, par. 3, A. G. O., March 26, 1883.

TAYLOR, MARCUS E., Captain and Assistant Surgeon. To report in person to the President of the Army Medical Examining Board in New York City for examination for promotion, and upon completion to return to proper station. S. O. 70, par. 3, A. G. O., March 26, 1883.

TURRILL, HENRY S., Captain and Assistant Surgeon. Relieved from duty at Fort Fred Steele, Wyo. Ter., and assigned to duty as Post Surgeon at Fort McKinney, Wyo. Ter. S. O. 31, Department of the Platte, March 22, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Comparative statement of cases of contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 3, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
March 24, 1883	0	10	113	6	102	52	4	0
March 31, 1883	0	9	125	7	96	52	2	0
March 31st to April 3d..	0	4	53	6	29	16	0	0

Deaths from contagious diseases from March 31st to April 3d, inclusive, are scarlatina, 8; diphtheria, 8; typhoid fever (emigrants), 2; cerebro-spinal meningitis, 5; measles, 7.

THE VOTE OF THE NEW YORK STATE MEDICAL SOCIETY.—That the vote of the Society fairly represents the sentiment of the entire State at the present time seems, further, to be pretty certain. During the summer the secretary of the society addressed a card to members of the county societies asking for the vote of individuals upon the question. To this he received about seven hundred replies, of which three hundred and sixty were in favor of the new code, a small number were non-committal, and the rest were opposed to it. This vote, which in its way fairly represents the prevailing feeling, tallies quite closely with that of the assembled representatives of the county societies and permanent members. More than half the counties, moreover, were directly represented by instructed delegates, many of whom were compelled to vote against their individual convictions. It is altogether probable that a free vote to-morrow would result in a larger majority, and that each passing day would add to it.—*Medical Annals.*

BEEF-TEA.—Dr. Ridges gives the following directions for preparing an article which really is what it purports to be, and far superior to any of the so-called extracts of meat: 1. Take one pound of lean gravy beef and cut it into pieces as small as possible. A sausage-machine will accomplish this most thoroughly, and thus save half the time of step No. 5, while it will enable you to extract all the goodness of the meat more thoroughly. 2. Place the meat in a preserve jar with one salt-spoonful of salt, and put the jar in a saucepan sufficiently large to allow the lid to be placed on when the jar is in it. 3. Mix in a large jug equal quantities (carefully measured) of boiling water and cold water. 4. Put half a pint of this mixed water into the jar which contains the meat, and pour sufficient of the remainder into the saucepan outside the jar to reach as high as the water inside the jar, then put the lid on the saucepan and place it on the hearth, not on the fire or on the hob. It will do no harm to cover the saucepan with a cloth or anything which will keep in the heat. 5. The meat must remain in the jar from three-fourths of an hour to two hours, according to the fineness to which it has been chopped, being stirred every quarter of an hour. If cut into pieces a little smaller than dice, one hour and a half will be sufficient. At the end of this time take out of the jar and strain through a hair sieve, or through muslin, with gentle pressure. 6. Place the red meat-juice thus obtained in a small saucepan, and heat it to boiling while you stir. It will turn brown and curdle. Strain off the solid flakes and rub these thoroughly with a small teaspoonful of arrowroot or corn flour, then boil these again five minutes with the liquor which was strained off, and set it on one side for the present. 7. Now take the meat which was left in the sieve at the end of step No. 5, and put it into a saucepan with a quart of boiling water, cover, and let it simmer over a slow fire for three hours; then allow it to boil and strain immediately. 8. Now boil this strained liquor down to half a pint. 9. Then mix this half pint with the half pint left at the end of step No. 6, and you will have one pint of strong beef-tea containing all the soluble portion of the meat.

"HOW MANY DOCTORS ARE THERE," says Montaigne, "who disdain medicine in their own persons, following a free sort of life very different from what they recommend to others? What is all this but abusing shamefully our simplicity? For their life and health are as dear to them as they are to us, and they would accommodate their proceedings to their doctrines if they did not know their falseness."

GAMBETTA'S BRAIN AGAIN.—It is claimed by Prof. W. Krause of Göttingen, that the true weight of Gambetta's brain was not 1,160 grammes as reported. Soon after death the arteries were injected with a zinc chloride solution. This solution extracted the water from the brain and lessened its weight according to Prof. K. He estimates its true weight, at 1,320 grammes. There may be some truth in this view, but not much.

THE LATE PROFESSOR POND was once demolishing Darwin and his theories—a task which he frequently engaged in—when he triumphantly wound up with the question: “If we are monkeys, where are our tails?” The professor, who had been speaking for two hours at a stretch before asking this poser, was startled to hear a tired auditor answer audibly: “We have sat on them so long that they are worn off.”

A NEW REMEDY IN THE TREATMENT OF SYPHILIS is described by Dr. J. Marion Sims in *The British Medical Journal*. It consists of fluid extracts of *smilax sarsaparilla*, *stillingia sylvatica*, *lappa minor*, *phytolacca decandra*, and a tincture of *Xanthoxylum carolinianum*. The *s. sylvatica* (queen's delight) is thought to be the active drug. It has long been used in the South against syphilis by the Indians and negroes. It has also been introduced and used by Drs. McDade and Rush Jones. Some remarkable instances of its efficacy are given by Dr. Sims.

THE INDICATIONS FOR THE USE OF DIGITALIS in heart troubles are empty arteries, full veins (Fothergill). The bulk of urine is the index of arterial fulness, and tells whether digitalis is acting (Traube). Digitalis fills the arteries and empties the veins (Rosenstein).

A PROSPECT OF CHOLERA IN THE SOUTHWEST THIS SUMMER.—Dr. Ludeking, clerk of the Board of Health of St. Louis, has found that cholera ravaged that city in 1849 and in 1866, and was each time preceded by very high water in the Mississippi. As another seventeen years has passed, and the premonitory high water is at hand, he will not be astonished if the disease becomes epidemic again next summer. It must be added, he says, that before the cholera made its appearance in the West, it each time visited Asia, and thus far Asia is uncommonly free from it. The latter statement, sad to say, is not true, judging from recent accounts.

A CLASS QUIZ ON ANATOMY—NEW POSITIONS FOR THE AORTA AND NEW RELATIONS FOR THE PANCREAS.—A correspondent from Chicago writes: “Frequently short articles have appeared in THE RECORD and other medical journals alluding to and praising the excellent laws which regulate medical practice in Illinois. Perhaps the operation of these laws does not exclude ignorant quacks from the State as well as distant observers may suppose. Allow me to speak of a visit I made one of the *recognized* medical colleges of Chicago a short time before the end of its term. The subject of the hour happened to be a quiz on anatomy by the regular lecturer. As soon as the throwing of orange-peels had ceased and the embryo male and female doctors had become somewhat quiet, the lecturer began to ask about the abdominal aorta. Although there was a diagram of the vessel in front of the class, and many of the students had Gray's open before them, yet much difficulty was experienced in determining the location of the artery. Of the half of the company who answered at all, some held that the vessel was behind the sternum, one said it supplied the heart, and one man carefully affirmed that it was located one inch to the left of the left nipple. Like results were obtained when the quiz on the branches was reached. Perhaps a climax of ignorance occurred when one man said that the gland on the tip of the coccyx was the pancreas. These answers fairly represent four-fifths of those given during the hour. This is one of the recognized colleges whose diploma is gladly given to any one who has taken two five months' courses of lectures. Between four and five hundred diplomas are granted each year in this city, and very few of the graduates have taken more than two short courses of study. Entrance examinations are unknown. These conditions do not tend to make an Illinois student especially proud of his chosen profession. Likewise there seems little possibility of improving the condition as long as diplomas are recognized as licenses.”

PROFESSOR RILEY ON MIND IN PLANTS.—At a recent weekly lecture at the National Museum, under the joint auspices of the Biological and Anthropological Societies, delivered by Professor C. V. Riley, the subject was, “Do Plants have Mind.” He first spoke of insectivorous plants which derive nourishment from the animal mould, and his ideas as to the allurements of insects by plants in order to secure cross-fertilization were elucidated by numerous illustrations of both plants and insects. He described the movements of many plants as voluntary and the actions of many insects as rational. In concluding, the Professor said: “One thing is certain and profoundly significant, viz., that the lowest organisms and the first existant on our planet possessed at some state of development the power of independent motion—activity. It matters little whether we call them animals or plants; they were, and their present representatives yet are, perhaps, combinations of both. They represented the potentiality which has developed on the one side the most complex animal intelligence, and on the other the highest vegetative organization.”

THE INCOMES OF LONDON PHYSICIANS.—Our London correspondent writes: “Few London physicians can earn more than £1,200 a year, even by the most unremitting labor. The number of London practitioners who make more than £10,000 a year in practice is probably less than a dozen. In the pre-railway days, however, when large fees were paid for long distances, physicians did occasionally receive very large fees. It is stated that the late Dr. Jeaffreson, of Leamington, earned considerably over £10,000 a year for many years, and that one year he actually realized in practice the large sum of £20,000.”

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The next annual meeting of the Association of American Medical Editors will be held in the city of Cleveland, Ohio, simultaneously with that of the American Medical Association, on June 5 and 6, 1883. An address will be delivered by the President, Dr. N. S. Davis, Chicago, on “The Present Status and Tendencies of the Medical Profession and Medical Journalism.” A free discussion upon this important subject is invited, which will be open, not only to members, but to all physicians present. Dr. Marcy will also present the subject of “Journalism Devoted to the Protection and Concentration of Medical and Surgical Science in Special Departments.” Special papers by Dr. John A. Octerlony, of Louisville, Ky., and Dr. Alexander J. Stone, of St. Paul, Minn., are also promised.

THE RESULTS OF RESECTIONS OF THE PYLORUS FOR CANCER, as given by Rydygier, are as follows: Sixteen surgeons have operated upon twenty-three cases, all but two of which have been examples of cancer. Of these last two operations one was performed by Rydygier in a case of stenosis, caused by round ulcer, which terminated successfully; and the other by Lauenstein in a case of supposed cancerous tumor, which at the autopsy proved to be one of gangrene of the transverse colon. Of the twenty-three cases nineteen proved fatal, viz., fifteen some hours after operation, three on the seventh or eighth day, and one (Billroth's) four months after from relapse. Of the four recoveries, one belongs to Billroth (no relapse having occurred in six months), one to Wolf-ler (the patient seeming well at the end of a year), one to Czerny (seven months without a relapse), and one to Rydygier.—*Medical Times and Gazette*.

MOUNTAIN FEVER, so called, is thought by Dr. B. P. Anderson (*Denver Medical Times*) to be due not to malarial infection or influence, but probably to accumulated secretions from the liver, kidneys, and skin. He believes that a dose of calomel or blue pill taken every two or three months, with the practice of frequent bathing, would so thoroughly prevent this disease that physicians would seldom be called upon to treat it.

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Original Articles.

ON VARIOLA.

ITS DEFINITION, HISTORY, CAUSE, VARIETIES, PROGNOSIS, AND TREATMENT.

By J. N. MCCHESENEY, M.D.,

LATE ONE OF THE ATTENDING PHYSICIANS TO THE HOSPITAL FOR CONTAGIOUS DISEASES OF THE CITY OF NEW YORK.

(Continued from page 369.)

Treatment.—The treatment in small-pox is of two kinds: prophylactic or preventive, and measures, local and general, addressed to the symptoms as they occur, in other words, the expectant method. Small-pox once contracted can neither be cut short nor the course of the eruption modified by any plan of treatment that we know of. In mild, discrete cases little or no treatment except ordinary hygienic measures will be needed. Patients are often not ill enough to keep their bed, and, if they can be kept away from others, are benefited by exercise in the open air. This, of course, is only permissible when they are so situated that out-door exercise will not bring them in contact with other persons.

For the first few days, during the initial stage, we cannot be certain what febrile disease is approaching, since the symptoms of this stage are similar in many respects to those of other acute eruptive troubles, and the same general measures are to be adopted. For the fever, cooling acidulated drinks; if the bowels be constipated, they should be opened. Active cathartics are to be avoided, and enemas, or the milder laxatives preferred. The effervescing salines, such as the citrate of magnesia, seidlitz powders, Rochelle salts, or some one of the aperient waters, will act sufficiently and prove agreeable, as well as have a tendency to allay the nausea and vomiting attendant upon this stage. Sponging of the body with cool or tepid water reduces the temperature, and renders the patient comfortable. Quinine to allay fever is of but little use in this stage; it is rarely retained and generally increases the irritability of the stomach.

Headache may be relieved by cold cloths—occasionally cloths wrung out of water as hot as can be borne prove more acceptable. The bromides, combined with chloral in an aromatic vehicle, are useful if there is restlessness and delirium; if they prove inefficient a small amount of morphia may be added. If diarrhoea be present—as it occasionally is, more especially in children—the ordinary *mistura creta*, alone or with some one of the vegetable astringent tinctures in combination, is frequently sufficient to check it. We have had much satisfaction from the use of the fluid extract of *coto bark*, alone or with an aromatic syrup, giving twenty minims every half hour till three doses have been taken; this quantity is usually sufficient. If these remedies do not suffice some of the more powerful astringents may be resorted to; the mineral astringents combined with opium in pill, or given per enema, should be tried.

The nausea and vomiting, which is one of the most persistent and disagreeable symptoms of this stage, is very difficult to relieve. Small lumps of ice, swallowed whole, relieve the thirst and allay nausea; lime water, carbonic water, taken in small doses, is frequently retained. One-eighth to one-sixth grain morphia, hypodermically, in the epigastric region, is frequently success-

ful. Mustard applied to the stomach is useful, but it is to be remembered that counter-irritation brings out the eruption, and vesication takes place very easily. The numerous remedies for this condition may all be tried—the simplest will often prove the most efficacious.

Another obstinate and distressing symptom is the intense pain in the lumbar and sacral regions. The patient will often complain of this and beg to be relieved. The sponging and bathing which reduces the temperature often affords some temporary relief. A sponge wrung out of water as hot as can be borne and placed on the back gives ease. It should be changed as often as it becomes cool. Mustard poultices may be used, but are open to the objection above mentioned. Dry cupping is worthy of trial. Morphia hypodermically may be necessary.

The diet during this stage should be light and easily assimilable, consisting of milk, rice, corn-starch, and like articles.

After the appearance of the eruption all of these symptoms, as a general rule, are either greatly ameliorated or disappear entirely; the patient feels so well that for a few days little or no treatment is required.

As soon as the nature of the disease is determined—if the case occur in a town or city—the health authorities should be notified, and if the most perfect isolation and quarantine is not possible at the patient's home, he should be removed at once to the small-pox hospital, or to some isolated building set apart for the purpose.

The isolation of patients at their homes is always a questionable measure, and keeping a case in houses where there are more than two small families should never be permitted. If small-pox be prevalent or a history of exposure can be obtained, or there are any other grounds to justify suspicion of variola, even in the stage of invasion, strict isolation should be enforced from the beginning.

When the diagnosis has been established, the first steps to be taken, after the isolation or removal of the patient, are to protect all those who may have been exposed in the slightest degree. This is to be accomplished by thorough vaccination and revaccination of every person in the house where the case occurs, and all of those living in the vicinity. The persons living in the house and neighborhood should be visited every second day, and kept under the closest surveillance for two or three weeks after the removal or recovery of the case.

If the patient is to be treated at his home, a large, well-ventilated room, at the top of the house, with an open fire-place, should be selected. The carpets, and all unnecessary furniture, should be removed; the bed should be firm, a hair mattress is preferable; a sufficient supply of linen for frequent changes, both for the patient and his bed, and all other articles for his use should be set aside and kept apart. Old pieces of muslin for handkerchiefs will be useful for cleansing the mouth and nostrils of the patient; they can be burned after using. An adjoining room, opening into that occupied by the patient, should be prepared for the use of the attendants, whose isolation must be almost as strict as that of the patient. We do not mean that they should not be allowed exercise and fresh air, but the promiscuous mingling with the family or others, even for the shortest time, without proper disinfection and change of their infected clothing, should be enjoined. The attending physician should be equally careful as to his person; he should provide an old suit of clothing and a calico wrapper, or linen duster, to go over

all; these should be kept in the adjoining room, to replace his own clothing when he makes his visits. A rubber coat and shoes are frequently used, but these are cumbersome and impede the movements more than lighter garments. Disinfectant materials and solutions should be kept in saucers around the rooms, and in the vessel into which the discharges from the patient are passed. The best for this purpose are Labarraque's solution, crude carbolic (crystalline) acid, and a solution of sulphate of iron (copperas), one pound and a half to the gallon of water. For washing the hands and bathing purposes, we prefer tar to carbolic soap.

If the attack proves to be of a mild form, with a discrete eruption, little or no treatment will be necessary except that of a hygienic kind; but if it prove to be one of the more severe forms of the disease with an abundant eruption, there will be many distressing symptoms throughout its course which may be alleviated.

The symptoms which occasion the most discomfort in the stage of eruption, are those caused by the presence of the eruption on the mucous membranes of the throat and larynx, the œdema of the face, especially of the eyelids; and the smarting pain of the whole surface.

The œdema of the eyelids and face is soonest relieved by the constant applications of compresses, wrung out of hot water. They should be frequently changed, and never allowed to become cool. For the smarting of the surface, vaseline or cosmoline applied cold is preferable to any of the various cold creams, ointments or salves. The former are perfectly bland and do not become rancid. The throat symptoms give most trouble and are most complained of. It is necessary to explain to the patient that the presence of the eruption on these parts is the cause of the distress, and that we are unable to check its development. For this, the various gargles of flax-seed tea, solutions of the chlorate of potassa, alum, or borax, may be tried. We have used almost every form of gargle, and have had more satisfaction from bromo-chloralum than anything else; it gives relief quickly and for a longer time. Small lumps of ice, allowed to dissolve in the mouth, are usually very grateful to the throat. Hot moist applications externally around the throat sometimes give comfort. The inhalation of steam, and the use of astringent solutions, applied by means of a spray, will often prove useful.

For the conjunctivitis, cold compresses and astringent collyria have been recommended to allay the inflammation and lessen the liability to development of the eruption on the conjunctiva. We have found weak solutions of alum useful for the conjunctivitis, and have also used solutions of atropia (ij.-iv. grs. to $\frac{z}{j}$.) with good effect when there is pain and photophobia. As to preventing the development of the eruption on the conjunctiva, we have not been able to accomplish so much, but think that prompt treatment will prevent ulceration and perforation of the cornea.

The intense pain caused by the distention of the vesicles in the palms, on the finger-tips, and in the soles of the feet is relieved by soaking the hands and feet in hot water for fifteen or twenty minutes at a time, and then puncturing the vesicles and allowing their contents to escape. The large blebs or bullæ so often seen in the confluent eruption frequently burst, or become broken, leaving large raw exuding surfaces; these should be dusted with some fine dry powder—bismuth and oxide of zinc is best for this purpose; lycopodium may also be used.

The great restlessness and prostration, which often comes on early in the severe forms of the disease, must be met with stimulants and anodynes, in conjunction with nutritious and easily assimilable food. When the eruption is abundant, and the suppuration likely to be extensive and protracted, supportive measures should be resorted to early in the treatment of the case. The use of stimulants should be commenced early and administered regularly throughout the suppurative stage, and continued until

convalescence is established; the form and amount should be governed by the indications furnished by the pulse.

In the stage of secondary fever, should the temperature rise very high, say 103° F., the patient will become very uncomfortable, restless, and delirious, and be continually trying to get out of his bed. If the temperature be reduced he becomes more comfortable, and frequently falls asleep. We have tried large and frequent doses of quinine under these circumstances, and had such poor satisfaction from its use that we ceased to give it, preferring to rely upon the use of cold sponging, the wet sheet, or the use of the Kibbee cot.

The latter measure we have found both agreeable and effective in reducing the temperature and allaying restlessness and delirium. If the patient be a child, or a person of delicate constitution, sponging, or the pack, is to be preferred to the cot. We should always begin with the water barely tepid, and continue its use till the temperature falls to about normal. The addition of alcohol to the water for feeble subjects is of advantage. In persistent high temperature, after sponging and the wet sheet have been tried, the use of the Kibbee cot will often prove effectual. It may be necessary to resort to the use of anodynes and sedatives to insure quiet and sleep. The bromides, chloral and morphia, will prove useful. Care should be exercised in the administration of anodynes to those cases where there is copious formation and expectoration of viscid mucus; if the patient should fall asleep, the accumulation may go on in the air-passages to such an extent as to interfere with respiration, and may produce asphyxia.

The diet throughout this stage should be as nutritious and easily digested as possible, it may consist of milk, beef-tea and other meat-broths, eggs, gruel, etc. Stimulants may be given alone, or in the form of egg-nog or milk-punch.

When the pustules break and their contents escape over the surface, there is burning and itching of the skin, which is very annoying to the patient. This is generally allayed by frequent use of carbolyzed baths, after which the skin may be freely anointed with vaseline. The odor at this stage of the disease is peculiar and very offensive; for this we have found Labarraque's solution, solutions of the permanganate of potassa, and bromo-chloralum much preferable to carbolic acid.

In the hot months care must be exercised to prevent the large green flies from depositing their eggs in the pustules; these, once deposited, are in the most favorable condition for development into larvæ, which, when developed, burrow into the pustules and ulcers, make their way into the nose and ears, and thus occasion much annoyance. A strong solution of permanganate of potassa, liberally applied, is the best method of exterminating them and of preventing their return.

When desquamation is established and the temperature subsides, if suppuration has been extensive, and the patient in an asthenic condition, tonics, such as iron and quinia, with the bitters, should be given, with a nutritious diet, and the use of stimulants. During convalescence wine, ale, beer, and porter are useful. All of the hygienic surroundings of a patient suffering from small-pox should be the very best possible; free ventilation is especially important, but care should be taken not to expose the patient to currents of air and thus incur the risk of getting up a pleurisy or pneumonia.

During the stage of desquamation frequent warm baths give comfort to the patient and promote the falling off of the crusts. The ulceration on the face, about the cheeks and wings of the nose, is frequently prolonged; the scabs are unusually adherent, confining the pus beneath them, which has a tendency to increase the ulceration. The crusts should be soaked with hot water, or softened by vaseline, and removed, and applications made directly to the bottom of the ulcers. The best application that we have used in this condition is iodoform and balsam of Peru, thirty grains to one ounce. Patients, especially

females, and their friends are always anxious about the pitting and danger of disfiguring of the face, and they will beg of you to do every thing to prevent it. Numerous remedies have been used to prevent pitting, with varied success claimed for each by its advocate. The following list is given by Professor Flint :

1. "The careful evacuation of the vesicles by means of a fine needle." This calls for much patience, both on the part of the patient and the physician, and may be useful when the eruption is scant—under which circumstance there would be little or no pitting anyway. Where the eruption is confluent the undertaking would be an endless one, far exceeding the patience of the operator or the endurance of the patient, and the amount of benefit not at all commensurate with the time expended.

2. "Evacuation of the vesicles, and cauterization by means of a fine-pointed stick of nitrate of silver." This too is a tedious process and open to the above objections. In mild cases this method may possibly shorten the time of quarantine, and may be resorted to for that purpose.

3. "The application of the tincture of iodine, once or twice daily, by means of a brush, while the eruption is papular." This has been claimed to diminish the size of the vesicle and lessen pitting. We have given this plan a trial in a number of cases, and the results were not at all satisfactory. It causes severe smarting, and occasionally produces considerable swelling.

4. "The exclusion of light and air. This is done by covering the face with a plaster of some kind." We have not found that this lessens the amount of eruption, or sufficiently diminishes suppuration to alter the result.

5. "The application of a mild, mercurial ointment, spread on cloth, or of compresses dipped in a solution of corrosive sublimate (gr. ij. to iv., to water $\frac{5}{8}$ vj.)." The risk of producing the constitutional effects of mercury is an objection sufficient to condemn this plan.

6. "The application of subnitrate of bismuth and prepared chalk in equal parts, twice daily, after smearing the surface with sweet-oil."

7. "The application of poultices over the face, beginning at the earliest period and continuing to the advanced stage of the disease."

8. "Solutions of collodion or of gutta-percha, painted on the surface twice daily by means of a brush. This should be done in the papular or early vesicular stage." Our experience with these remedies has been the reverse of satisfactory. The contraction produced by the drying of the solutions is much complained of by the patient. If they be kept up in the later stages of the disease they confine the discharge, produce a very offensive condition of the patient, and increase ulceration.

9. "Carbolic acid, liquefied by alcohol, and applied by means of a camel's-hair brush as soon as the contents of the vesicles appear puriform." This is recommended by Lister to lessen the amount of suppuration. He also advises the following paste: Carbolic acid, four to ten parts; olive-oil, forty parts; prepared chalk, sixty parts.

10. "Compresses, wet with cold water, are applied by many and regarded as useful."

In deference to the wishes of patients and their friends, it is always well to make a trial of some of these methods, but it will be prudent not to encourage them to expect too much in the way of results. After a faithful trial of nearly all of the methods enumerated above, we have come to the conclusion that the amount of pitting in each case will be in proportion to the amount of eruption and destruction of true skin. If the pustules are superficial the scars will be slight; if the true skin is involved, pitting will occur in spite of all the preventive measures that may be used.

The brown staining of the skin from the eruption, which at first is so plain, soon fades, but the pitting becomes more perceptible some time after the patient has recovered.

Pneumonia, pleurisy, and bronchitis, are to be treated

according to the indications for the management of these affections occurring primarily, bearing in mind always that the tendency to asthenia is greatly enhanced by the presence of small-pox. Erysipelas we have best met by the internal exhibition of large doses of the tincture of the chloride of iron with quinine, and a generous nutritious diet; locally, by the application of the tincture of iron over the whole of the surface involved, and painting with the tincture of iodine a broad margin around the inflamed skin to prevent its extending. If there is a tendency to suppuration, hot poultices should be continuously applied, and as soon as evidence of fluctuation is detected free incision should be made.

For the corneal ulceration we have tried the various local applications, including the use of the solid "stick," and have not had sufficiently satisfactory results from any one to give it preference. The use of tonics, a generous diet and stimulants are especially indicated in these cases.

Gangrene and pyæmia call for the remedies applicable to these conditions occurring under other circumstances. Abscesses of the cellular tissue and suppurating glands should be freely opened, and are best healed from the bottom; occasionally we have succeeded in healing large abscesses by hyperdistention, afterward introducing a tent of oakum and applying firm compression. Sinuses should be laid open, otherwise they do not readily close. Balsam of Peru, in our experience, has proven more generally useful as a dressing than any other application.

We have made use of the sulphide of calcium in a number of cases selected with a view to try its efficacy in preventing the crops of boils and abscesses which so frequently follow small-pox. In no one of the cases was there any appreciable benefit from its use.

Convalescence from the severe forms of variola, and also from the milder forms, when there have been complications, is often very protracted.

Patients should not be discharged from quarantine until the whole surface is completely free from scabs and every part of the body, including the scalp, has been thoroughly and repeatedly washed. Desquamation is very slow about the elbows, knees, backs of the arms and thighs, in the palms of the hands and soles of the feet. The pustules in the hands and feet require to be opened and disinfected.

All of the clothing worn by the patient during the disease should be left at the hospital, or in cases in private practice destroyed. The bedding and other articles should be burned, not buried. No amount of washing, disinfecting, or fumigation can render them safe against infecting others.

The apartments occupied by the patient during his illness should be thoroughly fumigated with chlorine or sulphurous acid gas. The latter is preferable, because it is more easily generated. The method adopted is as follows: Close all of the windows and doors; stop all the cracks with cotton, or by pasting strips of paper over them; place a vessel containing water several inches deep in the centre of the room. In this may be floated the tin or iron vessel containing the finely broken sulphur. Moisten it with a little alcohol, which will make it burn quicker. One pound and a half of sulphur to the thousand cubic feet of space will be sufficient. The better plan is to burn a sufficient quantity to exhaust the oxygen of the room, which should be kept closed for not less than twelve hours. The windows and doors may then be opened and free ventilation permitted. After this the floors and all woodwork, including furniture, should be thoroughly scrubbed with soft-soap and hot water, to which carbolic acid has been added (one pint of cresylic or crude acid to three or four gallons of water). The walls should be scraped and freshly whitewashed or painted. The apartments from which patients suffering from small-pox have been removed to hospital should be thoroughly fumigated and disinfected. If the disease has reached the latter stages, suppurative or desquamative, all clothing and bedding used by the patient should be taken with him.

In country places or small towns, in times of epidemics of small-pox, cheaply constructed buildings are generally erected to be used as hospitals. When the disease has disappeared these should be burned and not allowed to remain standing, deserted, to afford shelter to some tramp, who, after sleeping in the infected rooms, will, in all probability, carry contagion away with him and spread it abroad.

Prophylaxis, or the preventive treatment of small-pox, is to the general public of more importance than the treatment of one or more isolated cases. The only sure method of prevention is by vaccination and revaccination at the proper intervals. Unfortunately, the conclusions first reached and published to the world by Jenner, "that one successful vaccination afforded protection to the individual for the remainder of his life," has not been entirely eradicated from the minds of many of those who submit to vaccination in the first instance, and fail to recognize the fact that, after the lapse of time, a new susceptibility to the poison is acquired. Even in this late day we frequently meet with persons who retain these views, and only submit to a second operation after much persuasion. In the country, nothing but the appearance of the dread disease in their midst is sufficient to awaken the people to the necessity of vaccination and revaccination. This disregard of so vital a matter furnishes the grounds for the strongest argument in the hands of the few anti-vaccinationists which they possess against vaccination, namely, that in spite of the practice of vaccination and the boasted immunity afforded by it, every three to five years witnesses epidemics of small-pox sweeping over the whole inhabited world.

That this does occur we cannot deny; but the explanation is easily given. An epidemic of small-pox only ceases when the material upon which it feeds is exhausted by systematic vaccination and revaccination. As soon as many communities are rid of the scourge they cease to avail themselves of the protection so easily obtained. Children are being continually born, and those who have heretofore been protected have by the lapse of time acquired a new susceptibility, and the material awaits but the importation of the contagious principle to renew the experience of former years.

Non-vaccinated children of five years and under contributed over forty per cent. of the deaths from small-pox at the hospital during the epidemic of the last two years. And while a vaccination performed in childhood may and generally does modify an attack of variola occurring in after life, so that there is little or no danger to life, it does not prevent the person infected from being the source of contagion, and increasing the number of cases, and thus indirectly the death-rate. When the day arrives at which every man shall consider it his moral duty to his children, to himself, and to the community in which he lives to pay strict attention to this great preventive measure, we shall see the world rid of this scourge and small-pox numbered among the plagues of the past.

Much discredit is brought upon vaccination by the improper performance of the operation, which is often considered too insignificant to be worthy of much care or time. The simple scarification and application of the quill is to the observer unattended with any special requirements of skill, but it is far otherwise. Nothing but strict attention to the minutiae of the operation, and close observation of the changes which occur at the spot where the virus has been introduced, and an acquaintance with the appearance of a characteristic vaccine sore will justify any one in pronouncing that the individual is thoroughly protected against small-pox. Too many of the laity are impressed with the belief that they are not only capable of performing so trivial an operation as well as the physician himself, but also that they know what a sore arm is; and this, even though they go to the doctor to be vaccinated, leads them to neglect to return at the proper time to see whether the operation is successful or not.

The careful, conscientious physician should not only

see that the operation is properly done in every respect, but what the result has been, and not rely upon the statement of the parent or any other incompetent observer as to the success. We have often been told by patients "that their vaccination had taken," when an examination showed an irritated, slightly inflamed spot, or the raspberry-looking growth which frequently occurs but is of a fungous nature, not in the least protective.

It is always advisable to procure virus, either bovine quills, or crusts one remove from some creditable source, rather than to trust to any of the patent cones, etc., guaranteed never to fail. If the quill slips can be procured fresh, they are preferable, as being most convenient, and not open to that popular prejudice of conveying disease which is held against humanized virus.

The proper age for vaccination is when the child is two or three months of age; it will then have sufficient time to recover from the effects of the operation before dentition begins. If the child be suffering from any of the acute exanthema, the operation should not be undertaken, for in all probability it will be unsuccessful. If small-pox be prevalent there can be no reasons why the operation should not be performed.

The best instrument for the operation is the ordinary thumb lancet; it is convenient, easily kept clean, and occasions less pain than any of the patent devices. The best method of performing the operation is to make a number of parallel scratches and cross these till a spot about the size of a ten-cent piece, over the insertion of the left deltoid muscle, is obtained; they should be barely deep enough to cause the transudation of serum, or the smallest possible amount of blood; the convex surface of the square cut end of the quill should then be rubbed on this surface for the space of half a minute to a minute. It is unnecessary to moisten the quill. The arm should be kept uncovered until it is perfectly dry. It is not necessary to apply adhesive plaster, or tie anything around the arm. In remote towns or country places it is often impossible to procure fresh reliable bovine virus, and it is necessary to use crusts of humanized virus instead. A portion of the crust, sufficient for the number of vaccinations to be performed, should be rubbed up on a glass slide, with sufficient water or, better, glycerine, to make a paste, which is then to be applied to the scarified surface.

On the third day after vaccination papules make their appearance at the point where the virus was inserted; these develop and by the fifth day become vesicles, which umbilicate and contain clear lymph. On the eighth day the vesicles are fully distended, and a faint blush makes its appearance around the circumference; on the ninth the areola is fully established, and is generally from the size of a trade dollar to three or four inches in diameter. There is usually some febrile action, with headache, pains in the back, perhaps nausea, and considerable itching of the arm. In this stage the vesicles should be protected by some lightly applied dressing, as vaseline applied cold on a soft old handkerchief tied loosely about the arm. Woollen or tight sleeves should be avoided. The contents of the vesicles become purulent on the ninth or tenth day; desiccation and desquamation follow, and at the end of about three weeks the whole course is complete.

Now and then we have seen patients, generally children, admitted to the hospital with small-pox, who presented a vaccination advanced to the vesicular stage and there arrested by the development of small-pox. Such cases usually pursue a modified course and recover.

Vaccination to be protective must have reached the areolar stage before the first symptoms of small-pox appear, and it does no good whatever to vaccinate persons after the symptoms of the stage of invasion have made their appearance. Since the exact time at which the contagion of variola is received cannot be positively known, as long as persons who have been exposed are well it is right to vaccinate and revaccinate them. As

has been stated, after the poison of small-pox has been taken into the system, there is a period of twelve days before any symptoms of illness are manifested. The areola of vaccination (the sign of protection), is not fully developed until the ninth or tenth day, in those who have never been vaccinated before, so that unless there is sufficient time for the formation of the areola before the first symptoms of small-pox are manifest there will be no benefit from vaccination. If a person receive the poison of small-pox on Monday and be vaccinated two days later it will be in time to prevent the development of that disease; if vaccination be done on the third day small-pox will appear but will be modified; if the vaccination be postponed beyond the third day no benefit will be received, since there will not be time enough for the development of the areola before the first symptoms of small-pox appear. In secondary, or revaccination, the areola appears on the seventh or eighth day, therefore vaccination will be protective if done two days later.

ON THE

OCCURRENCE OF THE BACILLUS TUBERCULOSIS IN TUBERCULOUS LESIONS.

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A CAREFUL and impartial study of Dr. Koch's papers on the bacillus tuberculosis, and the more or less valuable communications upon the same subject which have followed in great numbers, would seem to lead to the conclusion that an important discovery has been made; although how important, and in exactly what direction its value lies it is yet too early to say. The incomparable mortality of tuberculosis, the almost boundless possibilities in prophylaxis and therapeutics which the establishment of the new hypothesis suggests, and the generous hospitality which is to-day so freely accorded both by lay and professional writers to all so-called germs, have combined to give to this bacillus an importance which only a much more extended series of careful observations can fully justify. In the prevailing furor it is important to remember that even if all that is claimed for the new bacillus should be proven true, still the morphological basis upon which the present knowledge of tuberculosis rests has not been in the least disturbed, and that even the proof that this bacterium causes all the lesions of tuberculosis, would not explain either the peculiar reaction of the living organism against the parasite or the varied phenomena of the distribution of tubercle, heredity, variations in mode of attack, etc. While, however, a too ready acceptance of the new belief is to be deplored, it should not be forgotten that such a carefully conducted series of experiments as that by which Dr. Koch was led to his conclusions, is not to be met or shaken either by general scepticism or by reasoning based on analogy or more or less remote clinical data. It is only by actual experiments and observations, as minute, extended, and logical as his own, that Dr. Koch's conclusions are to be confirmed or disproved.

The proof of the parasitic character of any infectious disease involves, first, the demonstration of the constant association of the parasite with the disease—this may be called the morphological part of the problem, and is often mistakenly regarded as the most important; second, the complete isolation of the parasite by cultivation; third, the production of the disease in a healthy animal by inoculation; fourth, and lastly—and this factor is, unfortunately, too generally ignored—it is necessary, in order to make the results of animal inoculation applicable to man, to prove that his organism will react in approximately the same way in the presence of the parasite as the animals experimented on.

The present paper, which has almost exclusively to do with the first or morphological part of the problem, presents the record of the examination of a series of cases of tuberculosis with a view of determining to what extent, and in what way the tubercle bacillus was associated with the lesions in the material at the writer's disposal. The results seem worthy of record, not because of any novelty either in method or result, but simply because they serve to increase the data available for arriving at just conclusions upon the important subject of the etiology of tuberculosis. The simple purpose of this paper and the contemporaneous character of the publications on the subject, will justify the absence here of specific reference to the work of other observers.

It requires but a short practical experience in the staining and study of phthisical sputum and tuberculous lesions to become convinced that they are more or less constantly associated with a well-defined bacterium, having the characters described by Dr. Koch. It is highly important, however, to determine at the outset very definitely the exact distribution of the bacillus in tuberculous organs, and whether they are present in every growth of tubercle tissue, for simply to say that the parasite may be found in the sputum, or in the organs of all cases of tuberculosis examined, means little unless the number of cases is recorded and the seat of the parasite described. For, as has already been shown, and as will be seen farther on, they have a marked predilection for certain parts of the body or organs, and for certain varieties of the lesion; all of which has an important bearing upon the significance which we must ascribe to their presence.

It has been the writer's endeavor, in the present series of examinations, to hold himself strictly to the morphological phase of the problem, and not to permit the observations to be in the least prejudiced by the cultivation and inoculation experiments thus far done and recorded by others.

Technique.—The method of staining employed was Ehrlich's, which, in the writer's experience, gives uniform and satisfactory results. The staining fluid was warmed to about 50° C. when the specimens were immersed, and the staining prolonged to twelve hours. The most scrupulous attention was given to cleanliness of instruments and apparatus, in order to avoid contamination of specimens from previous examinations. Here, as everywhere in delicate technical procedures, and here perhaps to an unusual degree, a certain amount of experience is requisite in arriving at precision of result; and accordingly a long series of the earlier examinations are not included in the present record, except those upon material capable of re-examination. The Abbé condenser was made use of, and greatly facilitates the examination, although in many objects—sputum, for example—it is not absolutely indispensable.

Sputum was prepared in the usual way, and, after staining and decolorizing, the specimens were mounted in glycerine, in which the bacilli appear with perfect distinctness, and retain the color for several weeks; the recorded examinations were, however, made immediately after the staining. In the examination of tissues the method varies, depending upon the exact purpose of the study—whether for the simple determination of the presence or absence of the bacilli, or for their exact location in the tissue. If for the former purpose, a fragment, a miliary tubercle, for example, may be picked out, moistened with a minimum quantity of distilled water, and ground to a pulp in a small mortar, and the pulp applied to the cover-glass and treated as in the manipulation of sputum. This method is valuable, because it enables the observer to obtain an approximately accurate analysis of the contents of an entire miliary tubercle or other small nodule; but it is especially applicable to fresh tissue, and is obviously less exact for the purpose of localization than the examination of thin sections. Sections may be cut from the fresh tissue by the freezing microtome, but in the present studies they were cut by

the ordinary microtome from tissues hardened in strong alcohol. Thoma's microtome was used, and the sections were cut of a nearly uniform thickness of .01 mm. After staining and decolorizing, the sections were mounted and studied in oil of cloves, in which the color is perfectly preserved for several weeks, and often much longer. It is important that tissues be hardened in alcohol, and only specimens thus preserved were used. Organs whose blood-vessels are injected with acidified coloring material are not available, since the bacilli under these conditions do not uniformly stain. Organs which have become partially rotten before the preservative and hardening agents are used are also useless, for the same reason.

The material examined was all from man, and may be classified as follows: 1, acute miliary tuberculosis of lung, nine cases; 2, sputum in acute and chronic phthisis, fifty-eight cases; 3, sputum in chronic bronchitis and lobar and lobular pneumonia, nine cases; 4, lung lesions in acute pneumonic phthisis, six cases; 5, lung lesions in chronic phthisis, thirteen cases; 6, miliary tubercles in liver, three cases; in kidney, two cases; in spleen, three cases; in pia mater cerebri, four cases; ependyma of lateral ventricles, two cases; 7, localized primary tubercular pleuritis, two cases; 8, tubercular ulcers of small intestine, eight cases; of larynx, one case; 9, typhoid and dysenteric ulcers of intestine, six cases; 10, primary tubercular inflammation of bladder, ureter, and kidney, one case. The importance, for purposes of control, of the examination of non-phthisical sputum and non-tubercular ulcers is obvious.

Acute miliary tuberculosis of lungs.—Nine cases. Four of the cases were uncomplicated acute general miliary tuberculosis, with miliary tubercles in lungs, liver, spleen, kidney, and pia mater cerebri. In the remaining five cases from young children the tubercles were confined to the lungs and were associated with chronic peri-bronchitis, chronic interstitial pneumonia, and bronchiectasis, but the tubercles were the predominant lesions and were presumably the cause of death. These cases were studied by 520 sections of miliary tubercles from different parts of the lungs, and by 105 entire tubercles which were ground to a pulp and stained in the manner above described. The tubercles, control sections from which were examined after staining in hæmatoxylin and eosin, presented the usual structural variation; some being of the traditional giant-celled type, others of the pneumonic form, some dense, others cheesy and disintegrating at the centre. The bacilli were found in eight of the cases, in about seventy-five per cent. of the individual tubercles examined. They were entirely absent from all of the tubercles examined in one case (180 sections and 15 entire tubercles). In the cases in which they were present, the number of the bacilli varied greatly. In some of the sections there would be twenty or thirty, in others only one or two. As a rule they were most abundant in the vicinity of the cheesy centres which were undergoing disintegration, but they were not infrequently scattered in small numbers in the intact tubercle tissue near the periphery of the nodules; more rarely in tubercles which presented no cheesy degeneration or breaking down. They were present occasionally in the giant-cells, but seemed to have no predilection for this situation; the record of examination of giant-cells showing the presence of bacilli in about one in sixty. A large number of large and small bronchi and their contents and blood-vessels, were examined but no bacilli were found in them. The case in which no bacilli were discovered was from a young child with acute general miliary tuberculosis with tubercles in lungs, liver, spleen, pia, and ependyma, the tubercles in the lungs were few in number, in the other organs moderately abundant. In a large proportion of them there was cheesy degeneration but very little breaking down. They were mostly loose in texture, containing the usual proportion of giant-cells and presented the usual variation in character in the different organs which is found in acute general miliary tuberculosis. They did not appear to differ morphologically in

any respect from the tubercles in the other cases in which an abundance of bacilli were found. As will be seen below, the bacilli were absent in this case not only from the tubercles in the lung, but also from those in the spleen, liver, kidney, pia, and ependyma of the lateral ventricles.

*Sputum in acute and chronic phthisis.*¹—The material was taken from cases in which the diagnosis had been carefully made by competent observers, and in ten cases confirmed by autopsy. The sputum was collected in carefully cleansed wide-mouth bottles, which were used for spit-cups, and in most cases embraced all that was expectorated during the night and early morning hours.

This was carefully mixed in the bottles by prolonged shaking, and in all cases several examinations were made to insure accuracy. In some of the cases giving negative results, the examinations were repeated at intervals of days and weeks. The number of cases of phthisis from which sputum was examined was 58. In these the bacilli were present in 46 cases, absent in 12. Of the 46 cases in whose sputum the bacilli were found, physical examination revealed cavities in 41. Of the 12 cases whose sputum was without bacilli only 4 had cavities; 5 of these 12 cases passed from under observation before re-examination was made, 2 died before re-examination, and no autopsy was made. At the autopsy of one of the negative cases which died shortly after the examination of the sputum, no cavities were found, but myriads of bacilli were found embedded in dense cheesy nodules in the lungs. The remaining negative cases presented on physical examination a moderate amount of consolidation, but no cavities.

In some cases, notably in those presenting large cavities, the bacilli were present in the sputum in enormous numbers, in others they were not very abundant. To this general rule, however, there were occasional exceptions, for in some cases with numerous and extensive cavities the number of bacilli was small and remained so up to the time of death.

The presence of spores within the bacilli was observed with varying frequency in nearly all cases, and the abundance of these forms appeared to bear no definite relation to the size of the cavities or the gravity of the disease. They were as often found in the sputum of patients with small cavities, who were not apparently very sick, as in that of those in the last stages of the disease.

Sputum in chronic bronchitis and lobar and lobular pneumonia.—The examination of sputum from six cases of chronic bronchitis, two cases of lobar pneumonia, and one case of lobular pneumonia gave negative results, no bacilli were found.

Acute pneumonic phthisis.—The number of cases examined was six, and the bacilli were found in all. In all but one of these cases there were several cavities, some large and some small, and in the contents and in the inner disintegrated portions of the walls of all of the cavities there were large numbers of bacilli. In cases in which there was a distinct wall to the cavity, the bacilli were absent in the outer portion of the wall adjoining the lung-tissue. In the consolidated areas of the lungs—one hundred and forty-nine sections from various parts—the bacilli were present in great numbers, in a large proportion of instances where the cheesy portions were breaking down, and in a few instances they were present in the cheesy masses which were still dense and solid. In one case they were scattered in and among the cells in air-vesicles lying in the periphery of tuberculous nodules, which contained otherwise only the exudations of simple pneumonia. In nodules composed of tubercle tissue which was not cheesy, the bacilli were present in many but not all cases, but always in small numbers.

Chronic phthisis.—Number of cases, thirteen. In nine of these cases there were larger and smaller cavities. In

¹ The writer wishes to express his sincere thanks to Dr. H. Koplik, Resident Physician to Bellevue Hospital; to Dr. W. T. Van Vredenburgh, Resident Physician to Roosevelt Hospital; to Dr. W. S. Gottheil, Resident Physician to Charity Hospital, and to Dr. C. S. Mack, First Assistant Resident Physician to Mount Sinai Hospital, for their courtesy in securing the collection of material for this part of the investigation.

the lungs, in which, without or in addition to cavities, there were larger and smaller consolidated areas, these presented the usual variation in structure, which it is not necessary to describe in detail. In all of these cases of chronic phthisis, the bacilli were found, usually in large numbers. In four of the cases they were met with only in the walls and contents of cavities and in the contents of the bronchi. Eighteen cavities were examined, and in all the bacilli were found in enormous numbers, many of the yellowish masses clinging to the walls consisting almost entirely of them. In cases in which the cavities were limited by a distinct wall, the bacilli were usually found in the inner portion only. In the consolidated tuberculous areas, of various forms—four hundred and sixty sections from different parts of the lungs—the bacilli were found in a small proportion only, and in these, with few exceptions, only in and immediately around cheesy areas which were disintegrating. In a few instances they were found in large numbers in dense cheesy areas, and, in a few instances, in the intact diffuse tubercle-tissue in the periphery of the cheesy nodules. In one lung they were found in considerable numbers in the air-vesicles near tuberculous nodules, which contained otherwise only the ordinary products of simple inflammation. They were never found in areas of simple intra-alveolar and interstitial pneumonia, except when these were closely associated with tubercle tissue. They were found in considerable numbers, in large and small bronchi, in cases with cavities; in others they were invariably absent. The inner walls and contents of a large number of blood-vessels were examined, but no bacilli were found. It will thus be seen that in the cases of chronic phthisis examined the bacilli were found in all, but chiefly in the walls and contents of cavities and in and about cheesy areas; most frequently in such as were disintegrating, but occasionally in those which were not. Their occurrence in diffuse tubercle tissue not cheesy was comparatively infrequent, and in the dense so-called fibrous tubercles they were never found. Their presence in the giant-cells of all forms of the tuberculous lesions in chronic phthisis was infrequent.

Miliary tubercles.—In kidney, two cases; spleen, three cases; liver, three cases; pia mater cerebri, four cases; ependyma of lateral ventricles, two cases. These organs were all from cases dying with acute general miliary tuberculosis. In the tubercles of one of each of the different organs—those from the above-described case, in which no bacilli were found in the lung tubercles—no bacilli could be detected, although about one hundred and fifty sections from different tubercles were examined, and a large number examined entire after grinding to a pulp. In all of the remaining cases bacilli were found. When present, they were very few in number, and were as often present in tubercles without as in those with cheesy degeneration. Very rarely were more than two or three seen in a single section of .01 mm. in thickness, and never the large clustered masses so frequent in the lungs.

Localized primary tubercular pleuritis.—Two cases. The tubercles in these cases were of the loose-textured, traditional giant-celled form ("Schüppel's tubercles"), with and without cheesy degeneration. The bacilli were found in both cases in a large proportion of the miliary tubercles, but always in small numbers.

Tubercular ulcers of intestine.—Nine cases. Larynx, one case. These were all from cases of chronic phthisis. In eight of the cases with intestinal ulcers, the bacilli were present in all of the ulcers examined, but in comparatively small numbers. They were scattered in and among the shreds of necrotic tissue at the bottom and sides of the ulcers and in the tubercle tissue in the vicinity. In one case they could not be found. In this case thirty sections from six different ulcers and scrapings from portions of these and from two others were examined with the greatest care. As shown by the examination of sections stained in the usual way, the ulcers in this case

were typically tubercular in character. The lung in this case had not been saved, so that it is not known whether the bacilli were present in it or not. In the ulcer from the larynx, which was shallow, they were present in small numbers in all of the sections.

Typhoid ulcers, two cases; dysenteric ulcers, four cases. The examination of these ulcers for purposes of control gave entirely negative results, no tubercle bacilli being found.

Primary tubercular inflammation of bladder, ureter, and kidney.—One case. The lesions in this case were seen both macroscopically and by the study of sections stained with hæmatoxylin and eosin to be of most unmistakable tubercular character, and yet the examination of a large number of sections from different typical parts and of a number of scrapings, and of the fresh purulent fluid abundant in the calices of the kidneys, failed to reveal a single tubercle bacillus.

In reviewing the above recorded studies, it will be seen that in 100 cases of tuberculosis of various forms, in none of which the diagnosis was doubtful, and in 51 confirmed by autopsy and thorough subsequent microscopical study, the examination for the presence of bacilli in nearly 1700 preparations revealed their presence in 46 out of the 58 cases of simple sputum examinations and in all but 3 of the 42 cases whose tissues were examined after death.¹ In one of the three exceptional cases, however, the examination was only partial, being limited to ulcers of the small intestine in a case of chronic phthisis. Again, in a large proportion of the cases in which they were present they seemed to have a decided predilection for tubercle tissue in a degenerated and disintegrating condition, either cavities in the lungs, cheesy and breaking down areas or tubercular ulcers, although present with great frequency in small numbers in well-formed intact tubercle tissue. In the present series of cases it is worthy of remark that the bacilli were present in far greater abundance in the respiratory organs and intestinal tract than in other parts of the body less directly in communication with the external world.

It is further evident that in nearly every case there are many miliary tubercles of all forms, and in many cases much diffuse tubercle tissue, from which the bacilli appear to be entirely absent.

The examination of the present series of sputum of phthisis throws but little light upon the value of such study for diagnostic purposes, since in most of the cases the diagnosis was certain enough without recourse to this factor. While undoubtedly the detection of bacilli in sputum in doubtful cases may be of great value in forming a diagnosis, it should be remembered that their absence does not exclude the possibility of the existence of phthisis. This is shown in one of the above cases, in which careful examinations of sputum failed to reveal bacilli, and yet on the death of the patient both lungs were extensively involved and large numbers of bacilli were found embedded in cheesy nodules; *but there was little breaking down of tubercles and no cavities.* The abundance of bacilli and the presence of spores within them does not seem to the writer to have the importance in the formation of a prognosis which has been ascribed by some recent writers to them, since the presence of large numbers of the spored forms was observed in all classes of cases, and in many of the gravest cases the bacilli were present for long periods in comparatively small numbers.

In regard to the miliary tubercles and other forms of tuberculous tissue in which no bacilli could be detected, although they were found in other parts of the body, and also to those cases in which, although distinctly tuberculous, no bacilli were found in any part of the body, the simplest conclusion would be that they were not there. But to the unqualified adoption of this conclusion those

¹ The apparent discrepancy between the figures in this summary and those in a preceding portion of the paper are due to the fact that in the former arrangement of the material by organs several of the specimens belonged to one case.

objections may be justly urged. In the first place, it should be remembered that our main reliance for the detection of the bacilli is upon their staining, but, as recognized by Dr. Koch in his first article upon this subject, they may, when life in them is becoming or has become extinct, fail to stain and hence escape detection. Dr. Koch furthermore recognizes the fact that they may be entirely absent from some forms of tubercle tissue, but assumes that this is the case only when the tuberculous process has come to a standstill. It does not, however, seem to the writer that we are sufficiently familiar with the process of development of all forms of tubercle tissue to enable us to say in many cases positively, or even with great probability, which tubercles are in an early and active stage of development and which are not; hence it is very difficult to form a definite conception on morphological grounds of the part which the bacilli play, if any, in producing tubercle tissue. This difficulty of determining the exact significance of the presence of small numbers of or of single bacilli in or near tuberculous lesions is enhanced by the possibility that they, like pigment or other small granules, may be carried about passively to a certain extent through the lung tissue by amoeboid cells or lymph currents. The failure of the bacilli to stain under certain conditions has been repeatedly observed by the writer in the walls and contents of cavities and sputum, which when fresh showed an abundance of easily stained bacilli, but in which after being allowed to remain in a warm, moist atmosphere until a considerable degree of decomposition had occurred, the bacilli could be detected only with the greatest difficulty, being in a few cases but very slightly and in most not at all stained.

Again, the results obtained by the above methods, sections and grinding of entire tubercles, do not admit of absolute accuracy, since the bacilli are very small, and it is obviously impossible to examine completely all of the tuberculous lesions in any given case, the degree of approximation to absolute accuracy depending entirely upon the thoroughness of the work. The objection, that in all this morphological work on the distribution and occurrence of the bacilli in tuberculous lesions there is a certain lack of precision, seems to the writer to be a perfectly sound and legitimate one. The lack of absoluteness in the data upon which conclusions rest is one of the evils inherent in every incompletely developed science, and particularly in the medical department of the science of biology, and the frank recognition of this inherent difficulty in many of our problems would leave our conclusions quite as available for future use if proven true, and much less difficult to get rid of if false, than if we ignore it. Nevertheless the limitations in the present case are so clearly defined that the acknowledged lack of absolute precision would seem to be of no vital importance in the present phase of the inquiry.

It should not be forgotten that it is a form of inflammation with which we are dealing in tuberculosis, the characters of which are by no means embraced by the traditional descriptions of miliary tubercles, descriptions whose very precision and exclusiveness have unfortunately come to be stumbling-blocks in the way of progress toward a broader comprehension of the entire process. It does not appear at present that there is such unity in the lesions of tuberculosis as to render improbable a duality of causation.

The writer is perfectly aware that the discussion of the causation of tubercular inflammation from the morphological standpoint alone can never be aught but an imperfect and partial one; but the demonstration, with the above limitations, of the fact that tubercular lesions can exist without the presence of the tubercle bacillus in them, while not in the least tending to discredit the possibility, or even the demonstration by Dr. Koch of the bacterial origin of many or most forms of tuberculous lesions, would seem to make the doubt of its universality perfectly legitimate. It should be remembered, finally, that Dr. Koch's experiments have not been done on man,

but on the lower animals, and that the proof that the human organism reacts toward the bacilli in the same manner as that of other species has not yet been furnished, and in the absence of this link, the facts recently furnished by Schottelius¹ in regard to the harmlessness of the ingestion of presumably tuberculous meat by man, and what is still more important, the large amount of clinical experience which at present seems distinctly not in harmony with the new hypothesis, should receive careful consideration.

TRIAL BY JURY.

AS A MEANS OF ASCERTAINING THE MENTAL STATE OF ALLEGED LUNATICS, AND AS A PRE-REQUISITE TO THE SECLUSION OF LUNATICS.

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A BILL has recently been introduced in the New York Legislature, or is about to be introduced, providing that hereafter no person shall be deprived of his liberty in this State, as a lunatic, unless such person shall have been duly tried on the charge before a jury of his peers, and shall by them have been adjudged insane. The objections to such a law are so grave that the probabilities of the measure being approved by this or any other legislature would seem to be slight. Yet its advocates are earnest and undoubtedly sincere in the belief that such a law is required; and it must be remembered that earnest, sincere men often accomplish their ends against truth and justice and against the feeble efforts of indifferent opponents. In fact, this has already taken place in the State of Illinois, where a similar law has been in existence for some years past. Hence the subject is of sufficient importance to entitle it to general attention and especially to the attention of physicians.

The following are the most important of the considerations urged in favor of the proposed law.

In the first place the general plea is urged that it is both unconstitutional and is a dangerous invasion on the rights and liberties of the citizen to incarcerate him without affording the opportunity of making a defence in accordance with the usual legal forms. Every citizen is entitled to the rights and benefits of a trial by jury before he can justly be deprived of his liberty under any pretence or charge whatever, and a violation of this right involves possible danger to every citizen. It does not follow even that every man who is of unsound mind is dangerous to the community and ought to be placed in prison. But physicians are educated to look upon all lunatics as subjects of a dangerous disease and to think that the only proper course to take with them is to shut them up. As the law and the practice now stand, the doctor is, to all intents and purposes, both judge and jury in the case. An ordinary jury is quite as competent to judge of the weight of evidence in a case of alleged lunacy as in any other brought before them for judgment, and is more likely to decide without bias than medical men are.

It is further urged that through defects in the present methods of adjudging men to be insane many are actually incarcerated as lunatics who are of perfectly sound mind; and that if a trial by jury were required in all such cases this danger would be for the most part if not altogether avoided.

Some of these reasons and arguments are plausible but it is believed that none of them will bear the test of a candid examination. A man's house may be pulled down or his property destroyed without process of law if by reason of a conflagration or of any great public danger it becomes a public menace. Or a person sick of a dangerous, contagious disease may be removed from a hotel or public building on the simple judgment and

¹ Virchow's Archiv, Bd. 91, Heft. 1, S. 120.

authority of one or two men who are assumed to know the nature of the disease. And sometimes mistakes are made in both these instances. But the public have rights as well as the individual. So in the case of lunatics, they may justly be restrained without any process of law, if the public safety or even if the safety of the insane person demands. Further than this due process of law is and always has been required. But the assumption that a jury would make a better judgment regarding the question of sanity in a given case than is now made by the methods in ordinary use, either in this country or abroad, is altogether gratuitous and improbable. The main weight of the evidence that would be brought before a jury would be the *opinion* of the physicians who had made a study of the case, and if such opinions did not prevail with them as determining facts the presumption would certainly be against the jury and in favor of the scientific decision of the physicians.

It is quite true that from time to time mistakes are made in the diagnosis of insanity, and that sane men are deprived of their liberty under such a mistaken diagnosis. Indeed, it would be strange if mistakes were not sometimes made in this as well as in other matters upon which men form candid deliberate judgments. But it should be remembered that there may be vast differences in the character of the mistakes that are made. For instance, a mistaken diagnosis of insanity might be founded on eccentricities of conduct that were an expression of the natural characteristics of the individual and were harmless in character; or, a mistaken diagnosis might be founded upon such appearances, actions, and language as are usually found to be the expression of a state of lunacy. In the former case, a more careful investigation would have served to establish the true nature of the case. As a matter of fact, this sort of mistake is of very rare occurrence. In the latter case, or rather class of cases, for the manifestations are very diverse, the person suffers no serious harm on account of having been judged in accordance with his actions. At all events, it is in the highest degree improbable that a jury would have made a more correct, or even a different judgment. Almost without exception the *improper subjects* who have come under my own observation, have been of this category. They have been cases of delirium, of cerebral congestion, of concussion, of alcoholism, of drug-poisoning, or of pure folly, or malignity of disposition that has been brought to the surface by some peculiar train of circumstances. The following example will serve to illustrate the last-mentioned type: A married man with a family of grown-up daughters, is observed by his family physician to conduct himself in a strange excited way, to run excitedly about the street, hatless, with dishevelled hair and disordered garments, to talk in an excited way, to neglect his business, and to disturb the quietude of his household. He mentions the subject to the family and is informed that the husband and father watches about the house in corners and by-places as though he suspected some conspiracy, and that he is at times so violent in language and conduct that the family fear lest he may do some of them bodily harm; in fact, that one day he actually did seize one of the smaller children in a violent manner and hold it over the heated range. The physician made the diagnosis of insanity, and advised commitment to a lunatic asylum as a measure of safety. It afterward transpired that the alleged lunatic had an ungoverned and ungovernable temper, that during the whole twenty years of his married life he had been subject to outbreaks of blind passion whenever his wishes were opposed, and that latterly the malignity of his disposition had been brought out with especial virulence by a series of family events, among which were a growing indisposition on the part of his daughters to submit to his abusive language and treatment, and the advent of a lover to one of the daughters he did not approve. He was found not to be insane, and collected damages of the family physician for false

imprisonment. The physician was, without doubt, entirely honest in his diagnosis. The members of the family were quite willing to accept his view as a plausible explanation of the father's conduct, and as a means of relieving them of such a terror, and so were not anxious to change the doctor's opinion. Few will be likely to think, however, on a careful consideration of the circumstances, that the doctor ought to have been fined on account of his mistaken diagnosis, or that the father did not deserve to be considered a lunatic and treated like one, since his conduct had fairly entitled him to that distinction. In the other cases to which reference was made there was a state of actual mental obscurcation, although the condition was not one of technical insanity. The patients—for such they should be considered—needed treatment somewhere, and might possibly have done worse than become inmates of a lunatic asylum.

The impression, which would seem to have gained some credence, to the effect that large numbers of sane persons are shut up in lunatic asylums, is strengthened by the various suits at law which are brought under this pretence or belief. Yet it will undoubtedly be found that very few persons of this class who have been declared of sound mind by an intelligent jury, in opposition to the opinion of well-educated physicians, really conducted themselves so rationally as to inspire universal confidence in their sanity.

The statement that sane persons are often shut up as insane through interested motives is rarely made. The supposed instances are not numerous enough nor clear enough for that. The claim is rather that sane persons *may* be put in asylums through such motives. Certainly every sort of injustice is possible, but the obstacles to the perpetration of this sort of injustice are too great to render the attempt attractive. Too many persons of responsible position would require to be in guilty collusion in the first instance; and the dangers of detection by numerous other persons would be too imminent.

The fact is that the ratio of indisputably sane men who are incarcerated in asylums as insane is so small that the Lunacy law should be constructed with especial reference to the welfare and interests of our unfortunate fellow-citizens who are really insane. While the legal methods should be such as to prevent mistakes as far as possible, they should be so ordered that the insane may enjoy every needed facility to get that early efficient care and treatment which their malady requires.

A trial by jury would be very decidedly prejudicial to the interests and welfare of many, if not of a majority of the insane. The whole process of being arraigned and tried before a court on any charge is repugnant to most men. The charge of being insane is particularly offensive, especially when made in public, and no less so to many of the insane than to those who are of sound mind. Not only would such a trial be offensive to many of the insane, but it would also be repugnant to all of their devoted friends. The inevitable result would be that friends would hesitate and delay in taking the necessary steps for early and efficient management and treatment. It is a well-established fact that the likelihood of recovery depends very much on the promptitude with which the patient is removed from perturbing influences, placed in favorable surroundings, and properly treated and managed. Although the hesitancy of friends to subject the unfortunate patient and themselves to the repulsive ordeal of a trial would probably be the most important cause of delay, there must be added to this the various causes of delay that would of necessity be incident to the trial itself.

The following quotation from the Annual Report for 1882, of Dr. H. F. Carröl, Medical Superintendent of the Asylum for the Insane, at Jacksonville, Ill., will show that the above-mentioned objections are not merely hypothetical, but are supported by actual experience, viz.: "It is probably in the experience of every superintendent in this State (Illinois), as it certainly has been

in mine, to notice how many have been deterred from making application for their friends' admission to a hospital on account of the laws of this State requiring a public trial, a judge, jury, and lawyers, just as in a criminal proceeding. I say many are kept out of the hospital in the early stage of the disease on account of the repugnance and dislike in the minds of friends to this public trial. Many such cases have come under my personal notice."

Again, the immediate effect of a jury trial, or of any proceeding analogous to a jury trial, would be highly prejudicial to many of the insane. It may be admitted that cases often occur that might not be seriously injured by a trial, as those which are apathetic or demented; but these are not the cases for which the formalities of a trial would be invoked. The process would of necessity be a serious cause of disturbance and injury to all insane patients who were able to comprehend the nature of the proceedings and of the evidence.

In addition to the disturbing influence of the proceedings themselves, they would be disturbed, annoyed, and injured by the evidence adduced in proof of their insanity. They either deny the truth of such evidence or do not admit the inferences that are drawn. In either case they naturally feel that they are objects of misrepresentation and injustice.

A consideration of the actual facts and circumstances attending cases of insanity will show more clearly than any merely theoretical discussion how annoying and harmful a jury trial would be.

For instance: a young girl suffers an attack of melancholia attended by morbid fears and suspicions, or from an accession of hysterical mania with nymphomaniacal propensities. In the former case she shrinks from strangers with terror, and in the latter she behaves in an unbecoming manner in their presence. Or the mother suffers from an acute attack of puerperal mania attended at the same time with great mental disturbance and great physical depression. Her immediate safety requires that she be carefully protected from all disturbing influences and promptly placed under the conditions most favorable for efficient care and treatment. Or the father suddenly manifests symptoms of mental aberration, which it is hoped will be only temporary in character, but whose case requires prompt and careful management. It may safely be assumed that even the most strenuous theoretical advocate of the jury trial would hesitate a long time before subjecting a dear relative or friend who was suffering as in the cases instanced above, or in a multitude of similar ways, to the coarse, repulsive ordeal of such a trial. They would be restrained by their own better feelings; by a humane wish to protect the sufferer from unnecessary annoyance, pain, and danger, and by a desire as much as possible to avoid a publicity which might seriously prejudice the social or business interests of the patient after recovery had taken place, and the remembrance of which would certainly be a painful one. Harmful delay in taking the measures most conducive to the welfare of the patient would be the probable result.

Even in the case of a patient suffering under a mild form of mental aberration without serious physical disturbance, and who is anxious for the trial, such a procedure is by no means certain to be harmless to the patient. He will certainly not be convinced of his insanity if a dozen juries were to pronounce him insane. It is not unlikely that he will be irritated by the appearance against him of those whom he supposed to be his friends, and that he will be annoyed by evidence which appears to him irrelevant or untrue, or distorted, and that diminished prospects of recovery will be the result. The influence upon such a patient will be more especially bad when, as is often likely to happen, there is conflicting evidence and conflicting opinions are expressed. Being of an argumentative disposition of mind, he will afterward urge the evidence and opinions in fa-

vor of his sanity as true and correct, and thus establish himself in his insane delusions, although the decision may have been adverse to his sanity.

The conclusion is that men who manifest no symptoms indicative of insanity need have little fear of being shut up in lunatic asylums as insane; that if possibly mistakes are sometimes made in the case of some who appear and act in a greater or less degree as though they were insane, the results are not likely to be very serious in character, and that the injury of a jury trial to the insane as a test of their sanity would immensely counterbalance any possible advantages that might accrue to the sane. The insane are the weaker parties, and need the full protection of the laws, in this instance by being protected from legal annoyances. If a few sane men and women are in danger of being declared lunatics, means certainly can be devised for their protection that will not be prejudicial to the multitudes of the insane.

If additional means not prejudicial to the insane can be devised to prevent such mistakes as are liable to occur, and it is altogether probable that the methods of investigation and procedure can be improved, there will certainly be universal and unqualified acquiescence in such improved methods.

THE ANALOGY BETWEEN UNION IN SCION-GRAFTING AND THE HEALING PROCESS OF WOUNDS.

By H. I. RAYMOND, M.D.,

ASSISTANT SURGEON U. S. ARMY.

THE surgeon is satisfied to consider a wound aseptic that fulfils these two conditions, viz., emits a sweet, healthful, non-putrefactive odor, and reveals to the microscope no micro-organisms upon the wound-surface. When antiseptic surgery was first introduced to the profession, surgeons observed that under the use of certain so-called antiseptics, a wound would run an aseptic course, but not apprehending clearly the rationale of such action of an antiseptic, experiments were set on foot by investigators to determine the same.

One of the most recent and plausible explanations of how an "antiseptic" provides for the two conditions mentioned above, as essential to an aseptic course, is that set forth by Boillet in his experiments with zinc chloride and carbolic acid. Although his experiments are familiar to the medical world, I desire to recite them in brief in this paper, in order that the theory which Boillet advances as to why zinc chloride or carbolic acid secure good healing in flesh wounds may be compared with a theory—its prototype—on scion-grafting, published before 1855, and appearing in an article on "Fruit-garden" in "Chambers's Information for the People."

First, then, for Boillet's theory of the action of zinc chloride or carbolic acid upon the prevention of the development of micro-organisms upon a wounded surface. The assertion that these substances acted detrimental to bacteria, or at least arrested their growth, was shown by Koch's experiments to be incorrect. He placed certain species of micro-organisms for a longer or shorter period in one of the antiseptic media under question, and then brought them into a favorable culture medium and found that their function of development had not decreased. But although the afore-mentioned antiseptics exert no direct fatal effect upon bacteria, they do act preventive to the development of bacteria in wounds.

Now, Boillet explains that this prevention depends upon their power to form insoluble compounds with albumen. Thus chloride of zinc added to a solution of albumen, gives an insoluble albumenate of zinc; in a similar manner an albumenate of mercury may be formed with the corrosive chloride, and even carbolic acid was found to produce a precipitate in albuminous solution. A part of a solution of the albumenates of zinc, copper, and mercury in water was placed in the open air, and

another portion of the solution was supplied with the germs of bacteria. These solutions of the metal albumenates proved to be unfavorable culture media for bacterial germs. In the solution exposed to the air, bacteria did not appear until after four weeks, and after six weeks only could a decided decomposition be recognized.

In preparations of pure albumen exposed to the air, bacteria appeared very shortly after twenty-four hours. Now, according to the opinion of Boillet, these metal-albumenates would prevent the development of bacteria for an indefinite period, *if they were not decomposed by the oxygen of the air and the water.*

Now follows Rennie's theory of the treatment of scion-grafting, published nearly three decades ago. My attention was called to it in a letter from Dr. Adler of the army.

The practice advocated is that of bandaging the grafted pieces by a strip of mat, lightly applied, so as not to obstruct the circulation, and over this bandage is plastered around a handful or two of a soft adhesive material—a conglomeration of clay, cow-dung, and chopped straw. This will form a hardened coating over the junction of the coapted surfaces, and may be allowed to remain until midsummer, when, union having been perfected, the plaster case may be removed.

The principle upon which the external plaster was applied over the junction of the raw surfaces was that of *excluding the atmosphere* from the wound, and is thus scientifically explained by Rennie.

"It is to prevent the oxygen of the air from getting to the fluid pulp at the joining, where it would unite with the carbon and form carbonic acid gas, and thereby rob the pulp of its solidity. The exclusion of light is necessary on the same account; for, as in the case of a finger cut, the oxygen would unite with the carbon and prevent the thickening of the blood. On the same account, moisture by supplying oxygen would be injurious, and dryness might act both by exhausting the pulp, and by causing the edges of the bark to shrivel and to gape, which would facilitate the entrance of the air with its oxygen. It must be obvious that the occlusive covering of plaster conferred a benefit by its virtue of excluding the atmosphere, for the principle (never, so far as I am aware of, before stated in reference to scion-grafting) that no composition, whatever may be said of its peculiar power of healing, can act in any other way than this, any more than the farrago of plasters and salves for healing flesh wounds and cuts, which are only good in so far as they keep the lips of the wound together *and exclude oxygen and light.*"

Rennie wrote this in 1855. Is not his theory of scion-grafting a prototype—in analogy—of the recent theory of Boillet that explains the reason why flesh wounds heal favorably under an impermeable albumenate formed by the union of a metal with the albumen of the tissues!

UREA AS AN ANTIPERIODIC.—Urea, which is used by homœopaths for diabetes is now recommended (*Weekly Med. Review*) by Dr. Belvouseff as an efficient substitute for quinine. He asserts (*Journal d'Hygiène*) that carbanide has a specific action in intermittent fever; that it can be employed in many other complaints as an antipyretic; that it is an efficient germicide, killing bacteria and vibrios instantly. It is tasteless, and does not depress the nervous system, and is much cheaper than quinine. In Southern Russia and Montenegro the use of urine as a cure for intermittent fever is common among the peasants. Several years ago the attention of the profession was called to the value of a double salt of urea and quinine for use by hypodermic injection instead of the other salts of quinine, the claim for it being that it was less irritant, and equally, if not more efficient. The facts just cited, as to the therapeutic qualities of the urea, will explain and guarantee these claims.

Progress of Medical Science.

FEVER A NEUROSIS.—Dr. W. Finkler (*Pflüger's Archiv*, vol. xxix.) has made an elaborate study of the phenomena of fever experimentally produced in animals. Since Tcheschicin first announced that there was a centre inhibiting the production of heat, there have been no very exact methods carried on to prove the fact. Finkler, however, has selected a very accurate method to settle the question; that is, a quantitative estimate of the oxygen absorbed and of the carbonic acid given off. In Pflüger's school at Bonn, it has been found that in guinea-pigs cold increases in a very regular manner the generation of carbonic acid and the consumption of oxygen. In this school it has also been shown that in poisoning with curare the production of carbonic acid and the absorption of oxygen fall greatly, showing that the nervous system is a factor in the tissue metamorphoses. It was also further established that section of the medulla oblongata was followed by similar results, there being here a partial elimination of nervous action. Finkler measured the oxygen consumed and the carbonic acid given off, and compared these with a time unit and the weight of the animal. From his experiments the law is deduced that the consumption of oxygen is greater during the fever-elevation of temperature than during the non-febrile state, under like conditions of food and surrounding temperature. He also thinks that in fever an increased amount of carbonic acid is given off, due to increased heat-production. When the oxidation passes through the three phases of increase, continuance at a height, and decrease, it corresponds only in a general way to elevation, continuance at a height, and decrease of temperature. Finally the author concludes that fever is mainly an affection of that portion of the nervous system which regulates temperature.

INSANITY IN THE UNITED STATES.—The ratio of insanity to the population is lower in the United States than in any other civilized country, and would be still lower if estimates could be limited to American born inhabitants. At least so says Dr. Everts, of the Cincinnati Sanitarium, in his annual report. One fact which swells the number of insane reported is that "almost all adults of the feeble-minded class are enumerated as insane." This is no less true in other States than in Illinois, where it was noted specially by Dr. Wilbur, of the Asylum for Feeble-Minded Children of that State. Dr. Everts expresses a truth which we all recognize when formulated, in saying: "With us it is more reputable to be mad than to be weak, and our public provision for those who have lost their reason is much more pretentious, if not more generous, than for those who never had much, if any, to lose." He thinks there is no ground for believing that insanity as a disease is increasing in this country. The causes of insanity are such that in the opinion of Dr. Everts, the American people may be assumed to have a comparative exemption from the disease. Life insurance records and the army statistics show that the organic heritage of the American people is superior to that of European natives, while it is unquestionable that ours is the best fed people in the world. Again, the disease drunkenness is less common among Americans of the present day than among their immediate or remote ancestors, and less common, too, than among the present inhabitants of Northern Europe, to whom they are so intimately related.—*Weekly Medical Review.*

NEW METHODS OF REDUCTION OF DISLOCATIONS OF THE THIGH.—In cases where reduction of the femur by manipulation in the usual way, with the aid of anæsthetics, has failed, or is inapplicable, and as a substitute, in many cases, for anæsthesia, assistants, and mechanical power, Dr. Kelly proposes the following methods:

For posterior dislocations.—The patient is laid prostrate upon the floor. Three strong screw-hooks are in-

serted into the flooring close to the perineum and each ilium of the patient, and to these hooks he is secured by strong bandages or rope. The injured thigh is flexed at right angles to the patient's body; the foot and lower extremity of the tibia are placed against the perineum of the surgeon, who, bending forward, with the knees slightly flexed, passes his forearms behind the patient's knee and grasps his own elbows. Reduction is now accomplished by drawing the femur upward. But circumduction may also be practised; the surgeon stepping backward, then extends the limb, and lays it by the side of its fellow. In sciatic dislocations in order to liberate the head of the bone from the foramen a bandage may be passed around the thigh, close to the trochanter, by which an assistant may make traction.

For anterior dislocations.—The patient is placed upon a table of such elevation as to have his pelvis nearly as high as the trochanter of the surgeon. A bandage around the pelvis, and secured to the side of the table farthest from the dislocation affords counter-extension. The surgeon, with his face directed toward the dislocated joint, and standing on its inner side, with his trochanter pressed against the femur, now bends the leg behind his back, and grasps the ankle with the corresponding hand. Reduction is effected by rotating or turning his body partially away from the patient, thus making traction on the femur in the most favorable direction, and at the same time pressing his head toward the acetabulum with the disengaged hand.—*The Practitioner*, March, 1883.

IS CRANIOTOMY JUSTIFIABLE.—From an analytical study of the subject, Dr. Montgomery (*Philadelphia Medical Times*, March 10, 1883) is inclined to answer the above question in the negative. He terminates his studies by stating the following proposition: Craniotomy is unjustifiable, as, 1st, it considers only the life of the mother, and destroys that of the child, while it is our duty to endeavor to save both. 2d. In pelvis with a conjugate diameter greater than $2\frac{1}{2}$ inches we have other alternatives equally safe for the mother, which afford the child a chance for life. These alternatives we would suggest in the following order: Where the conjugate measures 3.25 inches or over, the forceps; 2.75 inches or over, version; $2\frac{3}{4}$ inches or over, symphyseotomy, followed if necessary by the forceps. In all subsequent pregnancies, and in the first when distortion is discovered sufficiently early, premature labor should be induced. 3d. In pelvis measuring less than $2\frac{1}{2}$ inches, Cæsarean section affords better results for the mother, and should be done whether the child be living or dead.

In a limited number of cases (where the os is dilated) laparo-elytrotomy may be preferred to Cæsarean section. In all cases requiring it, operative interference should be early. The obstetrician should control events, not be controlled by them.

PICRIC ACID AS A TEST FOR ALBUMEN IN THE URINE.—For the detection of albumen, Dr. Johnson (*British Medical Journal*) recommends that this acid should be used in the form of a saturated aqueous solution, or in the form of powder or crystals. The aqueous solution is most suitable for home use, while the powder or crystals may conveniently be carried in a urinary pocket test-case. A saturated aqueous solution may be quickly made by adding about fifty times the bulk of boiling distilled or rain water to the powder or crystals, a portion of the acid will crystallize out on cooling, leaving a transparent yellow supernatant liquid. This solution being added to an equal volume of albuminous urine in a test-tube, immediately coagulates the albumen. The coagulated picrate of albumen is soluble in alkalies; if, therefore, the urine be highly alkaline, it must be acidulated by a vegetable or a mineral acid before adding the picric acid solution. In numerous testings for albumen with picric acid, the author has not once found it necessary to acidulate the urine. The picric acid solution is itself sufficiently acid to dissolve the phosphatic sediment which

results from boiling a neutral or alkaline specimen of urine. To detect a very minute quantity of albumen, the following method is the best. Into a test-tube about six inches long the urine is poured to within two inches of the top: then, the tube being held in a slanting position, about an inch of the picric acid solution is gently poured on the surface of the urine, where, in consequence of its low specific gravity (1.003), it only partly mixes with the upper layer of the urine; and, as far as the yellow color of the picric solution extends there will be more or less turbidity from coagulated albumen, contrasting with the pellucid unstained urine below. If, then, the tube be placed in a stand, the coagulated albumen will gradually subside, and form a delicate horizontal film at the junction of the colored and the unstained stratum of urine, the yellow liquid above and the uncolored urine below being quite free from turbidity. If the urine should be turbid with urates, it must be cleared by heat before the addition of the picric acid solution.

As a result of numerous observations, Dr. Johnson has arrived at the conclusion that picric acid applied in this way is a more delicate, and therefore more trustworthy, test for albumen than nitric acid in cold urine, whether the latter be employed by the method of dropping the acid into the cold urine or by pouring the urine on the acid previously placed in the tube. The simplest and most satisfactory mode of comparing the two tests as regards their relative delicacy, is to dilute a specimen of albuminous urine until one or the other test fails to act; and it will be found that the picric acid solution shows the presence of albumen in a specimen diluted considerably beyond the point at which the nitric acid fails to give any indication. The picric acid, too, often causes an immediate albuminous opalescence in specimens in which nitric acid only slowly, and after an interval of some minutes, gives a similar, but sometimes a doubtful, indication.

ERGOTINE INJECTIONS FOR HYDROCELE.—Dr. Walker, says (*British Medical Journal*) that, owing to an accidental substitution, he injected two drachms of liquor ergotæ, instead of the same quantity of tincture of iodine into the sac of a hydrocele. The result was very gratifying, there being a radical cure without the slightest reaction. He has since repeated this method with perfect success, and prefers it to other plans of treatment.

PRIAPISM IN LEUCÆMIA.—Dr. Carl Kétli, at a recent meeting of the Medical Society of Budapest, Hungary, exhibited a patient who had been suffering from painful priapism for two weeks and had not been benefited by the use of bromide of potassium, lupuline, and various other measures undertaken for his relief. Spinal disease was not present, but the patient showed all the characteristic symptoms of splenic or medullary leucæmia. Similar cases have been described heretofore by Longuet (*Progrès Medical*, 1875, No. 32), and Salzer (*Berliner Klinische Wochenschrift*, 1879, No. 11).—*Orcosi Hetilap*, March 4, 1883.

SASSAFRAS IN RHUS POISONING.—Dr. R. L. Hinton claims that sassafras tea is almost a specific for the rash produced by poison oak. This is an infusion of the bark of the red sassafras. The diseased parts are covered with compresses soaked in the cold infusion, while internally there is administered the infusion warmed, sugared, and with milk, according to the taste.

PRIMARY TUBERCULOSIS OF THE INTESTINES.—The existence of tuberculosis of the intestines as a primary affection has been denied by several writers. Dr. Koczynski, however, affirms its occurrence and cites a case in proof. A previously healthy man, forty-seven years of age, began to suffer from pain in the abdomen after having lifted a heavy beer-keg. He lost appetite and strength, and general anasarca supervened. The stools were frequent, thin, and slimy. After a time he began to complain of constant pain to the right of the umbili-

cus, and upon palpation a tumor the size of an apple, soft, elastic, and very tender, could be felt. This tumor disappeared from time to time and reappeared with borborygmus and inclination to stool. The diagnosis was made of tuberculosis of the small intestine with consequent circumscribed peritonitis and constriction of the gut. At this time there were no signs of disease in the lungs. Later, the lungs gave evidence of being affected. After death the autopsy confirmed the diagnosis. There was a tuberculous tumor in the ilium with secondary peritonitis. There was a recent disseminated tubercular infiltration in the lungs without any cheesy collections. The author thinks that the injury received in lifting the heavy weight caused a slight inflammation of the ileum, which inflammation determined the localization of the previously latent tuberculosis.—*Centralblatt für Klin. Med.*, February 3, 1883.

DIABETIC AND NEPHRITIC NEURALGIAS.—Dr. Berger has analyzed a number of cases of neuralgia depending upon diabetes or nephritis. He states that these neuralgias affect usually the sciatic nerve, and more particularly single branches of this nerve, such as the plantar or aural. They show a tendency to affect both sides symmetrically, are often associated with vaso-motor symptoms, and are exceedingly obstinate to treatment other than that directed against the primary disease. The severity of the neuralgia bears a direct ratio usually to that of the causal disease, although in the cases under consideration it was by means of the former that the organic trouble was discovered. The author is inclined to regard these neuralgias as having a central origin.—*Centralblatt für Klin. Med.*, February 10, 1883.

PHOSPHORUS IN THE TREATMENT OF OSTEOMALACIA.—Dr. W. Busch reports two cases of osteomalacia treated by phosphorus. The first patient was a fairly healthy-looking woman, thirty years of age, in whom the disease appeared a few weeks after childbirth. The objective signs were confined to the bones of the pelvis. This presented the appearance of having been pressed together from the sides. The symphysis projected forward like a beak, while the horizontal rami of the pubes were sharply bent. Walking was impossible, the patient being able only with the greatest difficulty to move from the bed to a chair. Absolute rest in the horizontal position was ordered to be maintained for three months, and Wegner's phosphorus pills were prescribed. After five months' treatment the patient was able to go up and down stairs without difficulty. At this time she changed her residence and passed from under observation. The second case was that of a woman, fifty years of age, who complained of intense pain in the right arm near the insertion of the deltoid muscle. A diagnosis of osteitis was made and the ordinary measures were prescribed. No improvement was noticed, and after several weeks the patient abandoned the treatment. In about nine months she again came under observation. She was then reduced almost to a skeleton, was absolutely unable to walk, and was greatly deformed. The dorsal spine was kyphosed, while the cervical spine was so strongly lordosed that the head seemed to rest between the shoulders. The thorax was distorted, the femora were bowed, and the pelvis presented the characteristic deformity of osteomalacia. The patient was confined to the bed for seven months, and took Wegner's pills for a year and a half. At the end of this time the bones were firm, and she could go about without complaint. The deformity was not decreased. The following is the formula for Wegner's pills: ℞. Phosphori, 0.025; syr. simpl., 7.5; M. bene et adde pulv. glycyrrh. rad., 10.0; pulv. gummi arab., 5.0; gummi tragacanth., 2.5; ft. pil. No. 250. Each pill contains about $\frac{1}{850}$ grain of phosphorus. The dose is one pill twice a day, to be gradually increased. Busch does not consider the drug to be of any value in rickets or caries.—*Centralblatt für Klin. Med.*, February 10, 1883.

PERITONITIS NEONATORUM.—Dr. Oscar Silberman recognizes two varieties of peritonitis in the new-born. The non-septic or chronic form is developed usually in the first third of fetal life, and is generally syphilitic in origin. If the peritoneum covering the intestines be involved, as well as that over the liver and spleen, various forms of intestinal obstruction may result. Most frequently we find occlusion of the anus, less often stenosis or complete occlusion of the small intestine. Of a number of cases of congenital occlusion of the intestine, collected by the author, all ended fatally, only one living beyond twelve days. The second, acute or septic, form of peritonitis in the new-born the author divides into two varieties, according as the peritonitis is only a part of the general infection or is the sole manifestation of the septic poison. In either case the point of entrance of the poison is always at the navel wound. The symptoms, which need not all be present in a given case, are vomiting, watery stools, meteorism, ascites, abdominal tenderness, icterus, etc. The pulse, temperature and respiration may vary in degree in the different cases. A cure of the septic form is possible; therefore, the treatment should be carefully considered. The navel wound must be cleansed, and the child is to be isolated from its mother. To control the fever quinine may be given. The Priessnitz sheet is of value. Vomiting may be checked by chloral (one-half to one grain in water). The strength should, of course, be maintained by stimulants if necessary.—*Schmidt's Jahrbücher*, January 17, 1883.

FOOD MAKES THE MAN.—Speaking roughly, says the *London Lancet*, about three-fourths, by weight, of the body of man is constituted by the fluid he consumes, and the remaining fourth by the solid material he appropriates. It is therefore no figure of speech to say that food makes the man. We might even put the case in a stronger light and affirm that man *is* his food. It is strictly and literally true, that "a man who drinks beer thinks beer." We make this concession to the teetotalers, and will add that good sound beer is by no means a bad thought factor, whatever may be the intellectual value of the commodity commonly sold and consumed under that name! It cannot obviously be a matter of indifference what a man eats and drinks. He is, in fact, choosing his animal and moral character when he selects his food. It is impossible for him to change his inherited nature, simply because modifications of development occupy more than an individual life, but he can help to make the particular stock to which he belongs more or less beery, or fleshly, or watery, and so on, by the way he feeds. We know the effect the feeding of animals has on their temper and very natures; how the dog fed on raw meat and chained up so that he cannot work off the superfluous nitrogenized material by exercise, becomes a savage beast, while the same creature fed on bread and milk would be tame as a lamb. The same law of results is applicable to man, and every living organism is propagated "in its kind" with a physical and mental likeness. This is the underlying principle of development. Happily the truth is beginning, though slowly and imperfectly, to find a recognition it has long been denied. It is possible that in the natural desire to secure the best and purest supplies of food and drink for man we are pushing matters a little to extremes and becoming ridiculous. Utopia is a long way off, and "Hygeia" has not yet been built. It is, however, desirable that we should aim high and make the teachings of physiological science the precepts of our daily life and conduct. We may not be able to reach our ideal, but progress will be advanced by striving to make its attainment an object. "What to eat, drink, and avoid" is a rational proposition; and if some of us are becoming a little unreasonable in the attempt to solve it, at least we are on the right road, and ought to be encouraged rather than abashed by the, not unkindly, criticism our endeavors are calling forth.

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SEWER GAS, AND ITS ALLEGED CAUSATION OF TYPHOID FEVER.

In a paper recently presented before the College of Physicians of Philadelphia, by Dr. George Hamilton, some very excellent arguments are brought forward relating to the causation of typhoid fever, as opposed to the opinion that sewer gas is the principal agent in the production of this disease, and more than equal, singly, to all other causes combined. While admitting the importance of the vehicle sewer gas as one element in this direction, numerous instances are cited, supported by facts founded upon personal observation and inquiry, and upon statistics, in which sewer gas played no part whatever, and showing that the larger number of cases of typhoid fever occur altogether independently of this influence. Indeed, the weekly reports of the health boards of Philadelphia and New York City, and, in contradistinction, the practical experience and investigation of eminent authorities, show that typhoid fever has always been far more prevalent in the suburbs and surrounding country than in the cities subjected to the contamination of sewer gas.

That sewer gas is, however, a prominent factor in the causation is not denied; but upon this foundation enthusiasts have built until the credulity of public opinion has accepted the mountain, while other agents, the little mole-hills, which possess not only an equally important, but even a greater, influence in this respect, are almost totally ignored.

Regarding the declaration that there is in country houses, or the surroundings, something equivalent to sewer gas, personal experience has shown that the young men at work in the fields were more frequently attacked than the females, who were generally engaged in domestic duties in or about the house. The same results are also exhibited of diphtheria and scarlatina, as to the causation of these maladies by this agent, the most fatal attacks occurring in the country where sewer gas is wanting. Furthermore, experience justifies the assertion that in not more than one house out of five has any evidence of sewer gas been detected, either before or during an attack of typhoid fever. If, also, the opinions of some eminent authorities are correct that the plumbing apparatus, as at present constructed, is incapable of excluding the gas, and that the dwellings of New York City and Philadelphia are so thoroughly infected, the self-evident conclusion is that the mortality would be something frightful. Again, instances are recorded where individ-

als returning from the country to their city homes have been taken with typhoid fever in a very few days, and before the incubative period could have passed. And others where the disease has appeared among the wealthier residents of the country, where the surroundings, the farm, the agriculture, domestic and general economy have been exceptionally good. Yet all this has often occurred without the influence of sewer gas or, to all appearances, of any of the other agents which are usually held responsible. And the experience of extensive practitioners, both in town and country, almost invariably serves to show that typhoid fever, when it appears in the country, is far more general and more fatal than in the city, and that it is, as a rule, impossible to trace its origin.

Attention is also directed to the habit, by professed sanitarians, of expatiating on the unnecessary prevalence of the so-called "filth diseases"—typhoid fever, scarlet fever, and diphtheria—in large cities, while, at the same time, they seem unmindful of the great excess in the ravages of these same diseases in the country, both in proportionate number of cases, in violence, and in fatality. In connection with this it is further shown that in the central portions of Philadelphia, where sewers and water-closets most abound, there is, as a rule, less typhoid than in the adjacent country; and just in proportion as the city encroaches upon the rural sections, constructing streets, houses, and sewers, a diminution in the fever has invariably followed. The condition of the streets of one or two of the most populous cities of Africa are also mentioned, where every species of filth abounds, and yet typhoid fever prevails only to a very slight extent.

In regard to the contamination of drinking water acting as a cause, while this is unquestioned, yet it is reminded that the quality of the water remains essentially the same from year to year, whether typhoid prevails extensively or is absent. In this connection, however, should not individual susceptibility also receive consideration? And, moreover, is not the fact of the streets of Africa, etc., reeking with filth and stench, while the statistics of that region show a comparative immunity from the disease, but a blow at every generally accepted cause of typhoid fever, since nothing would seem to be wanting among such surroundings but the appearance of even one single case?

Admitting the various factors, then, can the preponderant one be selected by exclusion. Possibly water-pollution may claim the foremost rank, but is this simply because the use of water is universal and its infection so easy a matter? May it not be fair to assume that, at least in the primary exhibition of the disease, the peculiar state of the constitution holds an important part. The acarus scabiei cannot thrive in every soil. May not also the typhoid germs (presupposing their existence) often fail to set up their specific condition, particularly when taken into a healthy and robust constitution; and may not the drinking water be essentially the same from year to year—be infected—and yet the germ fail to excite its disease, until the particular individual or the special state offers? While, therefore, the numerous elements brought forward in this direction are important in their several bearings, yet it must finally be admitted that the intimate and primary cause of typhoid fever is, at present, one of the most obscure problems of medical science.

THE WHOLESALE PREPARATION OF DRUGS AND MIXTURES.

New Remedies publishes the following letter, from a correspondent, concerning what is termed "a growing evil."

"The leading pharmacists of this city have had several meetings recently to consult in regard to the prescribing by physicians of special preparations emanating from the large manufacturing establishments. This practice is working to the injury of both the physician and pharmacist. The pharmacist, in order to hold his trade, is obliged to keep in stock a full line of similar preparations from perhaps half a dozen different makers, and the physician often loses his fees, from the patient finding out that he can purchase the remedy prescribed in original packages, and at reduced rates, from the fancy goods dealer or the wholesale druggist, and will continue the use of the medicine, and if benefited, recommend it to a friend, without giving his doctor the credit by sending him other patients. It is now proposed, and an able committee has been appointed, to get up a uniform set of formulas for the preparation of the different elixirs, syrups, and other products of elegant pharmacy, so called, for the use of the pharmacists and physicians of New York and Brooklyn, so that after the adoption and publication of these formulæ the physician may send his patient to any respectable pharmacy, confident that his prescription will be filled with a uniform and reliable preparation, which cannot be obtained by the patient in any other way than by his order."

The preparation of a set of formulæ such as is suggested will no doubt be useful. The whole matter, however, appears to be one of greater interest to the pharmacist and the public, than to the physician. The manufacture and extensive advertisement of special mixtures containing numerous vegetable drugs in unknown proportions "so combined as to produce peculiarly valuable effects" has become very popular of late. This practice tends to demoralize legitimate therapeutics and is not to be commended. The manufacture, however, of officinal drugs, singly or in various combinations, and the putting them upon the market in attractive form, has much to be said for it, and we do not share the fears of the correspondent quoted above, that such action of itself injures the physician's practice or diminishes his income.

THE CLINICAL TEACHING OF MENTAL DISEASES IN AMERICAN COLLEGES.

The National Association for the Protection of the Insane and the Prevention of Insanity has issued a circular addressed to the various medical colleges of the country, and asking that the didactic and clinical teaching of insanity be introduced. The circular is signed by Dr. E. C. Seguin, Dr. M. Putnam-Jacobi, and Dr. Margaret Cleaves.

With the increased prominence now being given to clinical teaching, it is most proper that mental diseases should receive their share of attention also. Every medical student ought certainly to see some of the various types of insanity before graduating, and be able to recognize their salient features. We have often insisted upon the need of a better knowledge of insanity on the part of medical men, believing that such a knowledge would be

a powerful factor in preventing and lessening the disease. The recommendations of the National Association will appeal to every one as wise and sensible.

We understand that there are already nearly a dozen colleges which have lectureships on mental disease, but that very few of these attempt any clinical instruction. It is this latter alone which will give value to the teaching.

THE NOURISHMENT OF CHILDREN AFFLICTED WITH HEREDITARY SYPHILIS.

THE question of the nourishment of children afflicted with hereditary syphilis is one upon which there is considerable diversity of opinion. Most authors agree that the lives of this unfortunate class of beings can only be preserved by a strict diet of human milk. But writers are less unanimous in their views as to the best means of obtaining this nourishment. Zeissl advises (*Centralblatt für Gynäk.*, February 3, 1883), in case the child of a syphilitic mother shows no signs of hereditary syphilis, that a nurse be procured. He argues that, even if the milk cannot convey the poison, it is yet unhealthy and unfit for the nourishment of the child. In the other case of a syphilitic child born of a healthy mother, Zeissl thinks it safe, as a rule, to let the mother suckle her infant. Yet Colles' law*, that a child cannot infect its mother in nursing, is not without exceptions. Two of these have already been recorded, and the author cites a third case related to him by Dr. Lüth. If a nurse be employed she should be warned of the possibility of infection. Eisen-schitz (*Centralblatt für Klin. Med.*, February 3, 1883) agrees with Fournier and Fürth that the infection of the nurse is certain to occur, and, therefore, insists that the mother herself should suckle the child. A nurse should be procured only when the mother is absolutely unable to nourish the infant, and when the prognosis for the latter is favorable. And she should, of course, be warned of the danger to which she is exposed.*

THE ACTION OF CALABAR BEAN UPON THE INTESTINE.

A NUMBER of authorities have commended the use of calabar bean on account of its peculiar power of stimulating intestinal peristalsis. Subbotin and Schaefer, of Bonn, have especially called attention to its value, but we find mention and commendation of it in nearly all the modern therapeutical works. At the Berlin Veterinary School, and at the Columbia Veterinary College and School of Comparative Medicine in New York, eserine, the active principle of physostigma, has been used with remarkable results in the obstinate constipation and colic of horses. Grain doses of the drug injected into the jugular vein, or subcutaneously, will, it is said, cause movements when everything else has failed. Subbotin has reported a similar experience in cases of obstinate constipation in man.

The attention that has been called to the value of calabar bean as a tonic and stimulant to the intestinal musculature gives a special interest to a recent communication by Dr. A. Hiller, of Berlin, detailing his experience. He employed a fluid extract of calabar bean, one part in three hundred of glycerine, and gave ten drops three or four times daily. He confirms the statements of Subbotin that calabar bean is a rapidly acting remedy

in atonic conditions of the intestinal tract, and is useful in the flatulence and oppression which accompany this atony. He adds, however, that in his experience the drug has a temporary action; that after a few days the intestine seems to become less responsive, and that then the fluid extract must be given in doses which are likely to produce toxic symptoms. Furthermore, Dr. Hiller states that he has never known the physostigma alone, in safe doses, to produce an evacuation. It must be given with aloes, castor oil, or some other purgative. The writer concludes that if one wishes to use physostigma as a tonic to the intestinal wall, he can safely give the drug for only two or, at most, three days, using doses of 1.5 to 3 milligrammes three or four times daily. An early evidence of toxic action is found in the narrowing of the pupil.

Calabar bean, when given in large doses to rabbits, was found by Hiller, as has been done by others, to produce at first increased peristalsis, but finally a tetanus of the intestinal wall accompanied by great anæmia. Hiller suggests that possibly the drug, in large doses, may be useful in cholera, since it produces the opposite condition to that of the disease in question. Some years ago this idea was broached by Mapother and by Munro. The drug was, we believe, tried, but the results were not very satisfactory.

AIR-BATHS.

DR. FRANKLIN is credited by the *Boston Journal of Chemistry*, March, 1883, with the discovery of a sanitary or curative agent called the air-bath. It is certainly a matter of common experience that the application of cold or warm water is not equally well borne by all. Indeed, some invalids, convalescents, or enfeebled persons have experienced deleterious effects from bathing as ordinarily used. In certain conditions of the body, sponging, douching, the wet-sheet, and especially the popular Turkish and Roman baths, or similar ordeals, may be readily conceived to be measures of doubtful hygienic value. Yet attention to efficient cutaneous action is never out of place. Now, it is for the benefit of persons who do not bear well any kind of "water-cure," that it is proposed to substitute the air-bath as a means of, or, at least, an aid to recuperation.

We are told by the author that the morning is the best time for the air-bath, and all that is required is a hair-cloth mitten and a moderately cool room. Here are the directions for this new kind of bathing: Let the invalid step from the bed to the floor, seize the hair glove or mitten, and without removing the night-clothes proceed to rub gently all parts of the body, at the same time walking about in the room until a feeling of fatigue is experienced. Then drop the glove, and gently pass the hand over all parts of the body before resuming the clothing. Unless the nude body is extremely sensitive to cold, a portion may be exposed to the air for a few moments while in motion, even on the first morning. The next morning jump out of bed in a moderately cool room, and go over the same process as before, remaining a little longer exposed to the air after the rubbing. The third morning repeat this treatment; and on the fourth, or at the end of a week, take off all the night-clothing, and briskly apply the hair glove, first with the

right hand and then with the left, all the time walking about. Follow up this as the degree of strength permits, morning after morning, until the blood is so attracted to the surface, that the cool air is felt to be a luxury. Let the body be entirely nude. At first, or after the first week, perhaps, the exposure to the pure cool air may be three or four minutes. Soon this may be increased, until, after a month or two, the air-bath may continue for twenty minutes or half an hour. It is essential to walk about during the first month, using the hands in polishing the skin. Later on the patient may sit in the air of the room part of the time. But constant, gentle exercise is best.

Now, according to the author, another most important curative agent connected with the air-bath is sunlight. In summer, this is easily accessible, but in winter only the late risers can secure its benefits. Exposure to sunlight during the air-bath apparently enhances its hygienic value. It is thought that the direct actinic rays of the sun may have some very beneficial properties. We are not aware that air-bathing has already become universally recognized as an important aid in re-establishing normal vitality in enfeebled constitutions. Judged *à priori* the method appears to commend itself in certain selected instances. Yet it will scarcely supplant the popular aqueous ablutions, as a healthful, delightful, and time-honored practice.

CURE OF SQUINT WITHOUT OPERATION.

IN the early stages of convergent strabismus, before the internal rectus muscle is permanently contracted, Dr. Boucheron (*Schmidt's Jahrbücher*, January 17, 1883) claims that a cure is possible without operation. He states that as convergence is caused by efforts of accommodation for near objects, if we take away the power of accommodation squint will not occur. He maintains a constant mydriasis by the instillation of atropine night and morning. A cure is usually obtained in two or three weeks. If atropine is not well borne, other mydriatics, such as duboisia, may be used. In nine cases of intermittent strabismus the author obtained eight cures by this method.

THE METHOD OF BRANDT.

DURING the late epidemic of typhoid fever in Paris, upward of six thousand persons were attacked with the disease, and the mortality was nearly thirty-seven per cent. In three months the number of deaths was 1,358. These facts may be some excuse for the interminable discussion regarding typhoid fever which has been going on in the Académie de Médecine since last Fall.

One of the features of this discussion was the appearance of a Lyons physician, Dr. Frantz Glenard, who came up to Paris as a representative of the Faculty of his city, and as an apostle of the method of Brandt in the treatment of typhoid fever. Glenard has long been known as an enthusiastic advocate of hydrotherapy in this disease. His first and second monographs on the subject have been quite widely circulated. A third monograph, published two years ago, contrasted the use of cold baths with that of phenic acid, very favorably to the former.

In Glenard's later writings he states that, while the mortality from typhoid fever without cold baths was 22 per cent. in 33,293 patients, with cold baths, as directed by Brandt, the mortality has fallen to 7.4 per cent. in 8,141 cases. The report of M. Strube, Medical Director to the Prussian Minister of War, is quoted, in which it is stated that in several army corps where the Brandt method was tried, the mortality fell from thirty to three or four per cent. Glenard claims that the hospital physicians of Lyons, almost without exception, have adopted the method of Brandt.

There is a certain lack of definiteness and authority about Dr. Glenard's statistics, and we cannot find that he now brings forward very much new evidence for his hobby. He firmly believes, however, that the method of Brandt strictly carried out will reduce the mortality from typhoid fever to three per cent. We hope he is right, but in America, at least, there have been no clinical results which in the least support this pleasing view.

THE STATE MEDICAL SOCIETY AND A TURN IN THE TIDE.

It is gratifying to observe the change which is taking place in the attitude of the American medical press and profession toward the New York State Medical Society. One year ago THE MEDICAL RECORD and the *New York Medical Journal* were almost alone in defending the position assumed by this Society.

Now matters are much changed. The *Buffalo Medical and Surgical Journal* accepts the action taken last February; the *Medical Annals* ably defends it. The *Medical Age*, one of the best edited and most representative journals in the West, sides with those who believe that the position of the profession will be elevated by not attempting to antagonize homœopathy, or to enforce a petty and ineffective discipline. The *Weekly Medical Review*, perhaps the most wide-awake and progressive of medical journals west of the Alleghanies, takes an impartial position, and admits arguments on both sides. The *Indiana Medical Monthly* shows in a recent editorial how foolish, exaggerated, and unjust have been the criticisms against New York's action. It is quite willing to wait and learn from this State's experience. The *Southern Clinical Review* and, we believe, the *Northwestern Lancet* side with the position taken by our State Society. The *Virginia Medical Monthly* comments with great fairness upon this position; so also does the *Maryland Medical Journal* and the *New Orleans Medical and Surgical Journal*. The *Independent Practitioner* is non-committal.

To all this we should add the weighty effect of the doctorate address delivered by Professor Moses Gunn and published in the *Chicago Medical Journal and Examiner*, as also that of the Presidential address by Dr. Alexander Stone, Vice-President of the American Medical Association.

It is no longer possible, therefore, to say that the medical profession universally disapproves of allowing freedom in consultations.

Under the influence of maturer thought, kindly and sensible feelings have developed. The efficacy of fanatical and abusive declamation has spent its force. The question is reaching the right basis for fair discussion.

THOMSEN'S DISEASE.

PROFESSOR WESTPHAL recently showed to the Berlin Medical Society two patients suffering from a very unique affection which he christened at the time, and very appropriately, with the name of "Thomsen's Disease." Dr. Thomsen, a general practitioner in Schleswig, first described the trouble in 1876, having himself been a victim to it all his life. Since his description was published only eight similar cases have been reported, and so far the disease appears not to have been observed in France, England, or America.

The prominent symptom is the following: When the patient under certain circumstances attempts voluntary movements, the muscles undergo tonic contraction, and the movement is stopped or hindered. Thus, after long sitting or standing, if the person tries to move, he finds his muscles so stiff that it is at first impossible to stir. The same thing follows after rapid and powerful muscular movements. The unfortunate patient, in trying to run or dance, is suddenly overcome with muscular stiffness. If he throws a stone, the extended arm remains rigid. Sudden irritations, either physical or mental, also bring on the spasm. If, while walking along, the foot strikes a stone, the leg becomes rigid and the patient may fall down. In some of the cases simply concentrating the mind upon the trouble would bring on some evidences of it.

The spinal nerves are most affected, but the innervation of the face, and even of the ocular muscles, is partially interfered with. The smooth muscles are not disturbed. The muscles undergo an increase in volume, though not in proportionate strength. Their electrical reactions are unaffected. Microscopic examination of the fibres shows nothing abnormal. The reflexes are normal. Sensibility is undisturbed and the contractions and stiffness do not cause pain.

The cause of the disease is not known, but it has a curious hereditary tendency. In fact most of the cases have occurred in Dr. Thomsen's family, where it has been traced through four generations. Dr. Thomsen was inclined to think that the trouble had a psychical basis, but Westphal believes it to be an anomaly of the muscular tonus. Treatment accomplishes little or nothing. The disease is a pathological curiosity and a highly interesting one.

THE PROPOSED JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

WE had occasion recently to refer to the statements of the committee on the proposed journal of the American Medical Association, and suggested that the estimates of the yearly cost of the scheme, and a definite statement of the encouragement received be published at once. We have neither heard nor seen anything in response to this practical and common-sense advice.

Surely the members, who are individually to become liable for any deficit in the annual accounts, and in our judgment a deficit is more than probable, should have the fullest opportunity to consider the prospective debit and credit sides of this account.

If the committee have the figures, as they say they have, let the items be published now; if they are favor-

able to the plan, it can do no harm; if they do not satisfy all, the Association will, at least, have the satisfaction—if it concludes to start the journal—of knowing that it went into it with its eyes open. To withhold the figures, upon which alone an intelligent judgment can be made, until the time of the meeting is quite unfair and unjust to the members generally. Shall we have light?

News of the Week.

THE NORTH CAROLINA BOARD OF HEALTH has failed to receive an appropriation from the Legislature.

THE NEW YORK POST-GRADUATE SCHOOL AND THE NEW YORK POLICLINIC.—We are glad to learn that both the above institutions have prospered beyond expectation during the past season. The present courses are larger than ever. They will continue open during the spring and summer, a fact which will be much appreciated by many physicians who cannot easily come to New York in the winter season. The advantages which these post-graduate schools possess is the ability to offer direct and personal instruction in technique and in symptomatology.

SIR WILLIAM JENNER has been re-elected President of the Royal College of Physicians, London.

DEATH OF PROFESSOR VON BRUNS.—The death is reported of Professor von Bruns, one of the highest surgical authorities in Germany. The deceased, who was born in 1812, in Brunswick, was the author of several surgical treatises and handbooks, and made a special study of diseases of the larynx, for the treatment of which he invented a new and effective throat-mirror. His work on laryngoscopic surgery gained for him the grand prize of 20,000 marks offered by the Academy of Turin.

THE KENTUCKY STATE MEDICAL SOCIETY held its twenty-eighth annual session on April 4th, at Louisville. A large number of members were present. The address of welcome was delivered by Dr. Coleman Rogers, who referred to the fact that, in accordance with a previous resolution, no special entertainments would be offered the Society, which was expected to devote itself to scientific work alone.

A letter was read from Dr. S. D. Gross, in which he said: "Forty-two years have elapsed since my then colleague, the lamented Drake, and I were deputed by the Medical Faculty of the University of Louisville as delegates to attend a convention at Frankfort, called at the instance of Dr. George Sutton, of Georgetown, to assist in the formation of a State medical society, of which the present Society is the offspring. The attempt was a signal failure, and it was not until the following year, if indeed so soon, that Dr. Sutton's efforts were crowned with success.

"Since the date of my visit vast changes have taken place in and outside the profession. Medical education has been greatly improved, and the practice of medicine has assumed many new features, while many of its branches have been completely revolutionized. All my old colleagues, with the exception of two, of the University of Louisville, are dead, and most of my old personal

friends of Louisville are mouldering in their graves. My own days are numbered; time has made me an old man, and I cannot expect to attend many more public meetings of any kind. All that I can do is to send you and all the rest my love and my best wishes for your and their prosperity and happiness. Always truly your friend."

The annual address was delivered by Dr. A. D. Price, and was sensible and practical in character. He touched upon the subjects of medical education, trained nurses, legalizing prostitution, and specialism in medicine.

ACTION OF THE ILLINOIS STATE BOARD OF HEALTH IN RELATION TO THE COLUMBUS MEDICAL COLLEGE.—The following action of the Illinois State Board of Health was had at its meeting, January 12, 1883:

"*Ordered*, after a careful investigation of all the essential facts in the case of the Columbus Medical College, two members of the Faculty of said College being present, and the facts elicited being confirmed by documentary evidence, that, while said College committed an irregularity in granting a diploma to A. M. Dent, that irregularity does not seem to warrant this Board in refusing to recognize other diplomas of said College."

We are asked to add, in regard to the "Dent" case that the Faculty "presented to said Board evidence of a previous full course of lectures at a regular college, eight years of reputable practice, a copy of his written examination by the Faculty of Columbus Medical College, a thesis in his own handwriting, and the recommendation of two medical gentlemen of West Virginia of high standing and character, etc., and after careful review of the case, they said there was no doubt as to his (Dent's) *qualification* and fitness for degree; that there was simply a technical 'irregularity,' *in this*, that the Board now required two full courses of lectures. In regard to the charges of graduating 'short time men,' these were without foundation, in the opinion of the Board."

A COLLEGE OF MIDWIFERY has been established in this city. The object of the institution is to give instruction to all desirous of learning the art of midwifery. There are, we are told, only two others of similar design in America.

The announcement says: "France and Germany have their schools and maternity hospitals, and no one can practise midwifery without a thorough course of training, passing a strict examination, and receiving a certificate or license. The opportunities for practical instruction in midwifery in this country are so limited that many of the graduates of the medical colleges begin practice without seeing a single case of obstetrics, and are sadly deficient in the details of this important branch."

The course of study lasts three months. Four evening lectures a week are given on anatomy, physiology, midwifery, puerperal diseases, and management of infants.

QUEBEC ANATOMY ACT.—The Quebec Government has recently brought in important amendments to the Anatomy Act, which will, it is hoped, put an end to body-snatching in the Dominion. Inspectors are to be appointed whose duty it will be to see that all unclaimed bodies in institutions receiving government aid are handed over to the schools, who shall pay ten dollars for

each body. The institutions are to notify the inspectors within twenty-four hours after the death of any friendless persons, and claimants must show relationship within the third degree.

HEALTH STATISTICS IN CANADA.—The Dominion Government has increased the appropriation for the purpose of collecting and utilizing health statistics, the sum of \$20,000, instead of \$10,000 as last year, having been placed in the estimates just brought before the House.

THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.—At a meeting of this Council, April 4th, the following resolutions were passed:

First.—That a committee be appointed by the President of the Council to petition the President of the United States to place the \$100,000 epidemic fund in the hands of the National Board of Health for disbursement, in case its use is demanded.

Second.—That in case the National Board of Health is deprived of the power of making inspections of persons and freight, when demanded by the local doctors, health certificates issued under the supervision of representatives of the Sanitary Council of the Mississippi Valley shall be accepted as valid by the Boards of Health of the Mississippi Valley, provided that said inspections be carried on under the rules and regulations heretofore prescribed by the National Board of Health.

A JUDGMENT AGAINST THE UNITED STATES MEDICAL COLLEGE.—New York Supreme Court. Special Term. The People of the State of New York, plaintiffs, against Robert A. Gunn, Benjamin J. Stow, Paul W. Allen, Alexander Wilder, Thomas A. Granger, Mark Nivison, and Dennis E. Smith, defendants. Judgment, April 4, 1883.

This action having been brought to trial upon the issue of law raised by the plaintiffs' demurrer to the defendants' second defence contained in their answer herein, and beginning with the words, "Second, And for a further and separate defence," and ending at the demand for judgment; and the said demurrer having been, by order of February 5, 1883 (settled and filed March 12, 1883), sustained, with leave to defendants to answer over on payment of costs; and the costs having been taxed at \$108.13; and the order having provided further that unless the defendants pay said costs and amend their answer within twenty days, plaintiffs should have judgment absolute against defendants as for want of an answer; and the defendants having failed to pay said costs, or amend said answer, within the time aforesaid,

Now, on motion of Leslie W. Russell, Attorney-General, attorney for the plaintiffs, it is

Adjudged: That the said defendants are not and have not been incorporated as a medical college, with the franchises or powers of a medical college; and that the said United States Medical College, mentioned in the complaint, is not and never has been incorporated as a medical or surgical college, and does not possess the powers or franchises of a medical college,

And it is further adjudged: That the defendants, and each of them, and all persons acting with or under them or any of them, be and they hereby are enjoined and restrained from acting, or assuming to act, as an incorporated medical or surgical college, and from usurping or exercising the power, functions, or franchises of

an incorporated medical or surgical college; and from maintaining or assuming to maintain, for gain or otherwise, a medical or surgical college; and from granting diplomas or certificates of graduation to medical students or practitioners, purporting to be granted by a medical or surgical college; and that the plaintiffs, the People of the State of New York, recover of the defendants, Robert A. Gunn, Benjamin J. Stow, Paul W. Allen, Alexander Wilder, Thomas A. Granger, Mark Nivison, and Dennis E. Smith, the sum of one hundred and eight dollars, and thirteen cents costs and disbursements taxed as aforesaid; and that plaintiffs have execution therefor. (Endorsed, Filed April 4, 1883.) (A copy.)

Dr. Nagle, Deputy Register of Vital Statistics, has instructed the clerks in the Bureau of Vital Statistics to reject all death certificates signed by graduates of that college.

DISCIPLINING A DOCTOR FOR PRODUCING ABORTION.—The New Haven Medical Association has taken steps to expel Dr. E. L. R. Thomson on account of his connection with a case in the city court, in which he is charged with procuring an abortion. The statements made by his counsel, Col. Dexter R. Wright, claiming that there was not a father in New Haven who would not be willing that an abortion should be performed on his daughter to save her from shame and trouble, and that he would have no difficulty in finding physicians to perform the operation were strongly resented. The Prudential Committee claim that if Dr. Thomson is allowed to remain in the society it would be a tacit support of him.

DISTRIBUTION OF THE EXCISE MONEY TO THE MEDICAL CHARITIES.—The sum of \$35,430 from the Excise Fund has been assigned to the different charities of the city. The hospitals get between one and five thousand dollars each.

NURSES' TRAINING SCHOOL OF THE NEW YORK HOSPITAL.—The Commencement exercises of the graduating class of the Training School for Nurses attached to the New York Hospital were given April 5th in the lecture-room of the institution. This was the first Commencement of the school, which has been in successful operation since 1877, and the exercises were attended by a number of the friends of the pupils and of the hospital. The school numbers twenty-six pupils, of whom nine were graduated.

A BILL TO ESTABLISH A DEPARTMENT OF ECLECTIC MEDICINE in the University of Michigan has been introduced in the Legislature. Should it pass, that most catholic university will have a triple set of therapeutical professors.

ATTEMPT TO ROB A PHYSICIAN.—Dr. Patrick H. Flood, one of the oldest and wealthiest physicians of Elmira, N. Y., was knocked on the head in front of his own gate last Tuesday night, and would have been robbed but for his pluck and vitality, even under the stupefying effects of the blows. The robbers escaped, and there is no clue to their identity.

DR. HAVREMANN, a young physician residing in Rostock, has been appointed special physician to the Queen of Madagascar.

THE UTICA INSANE ASYLUM is being investigated again by a committee from the State Assembly.

DEATH OF DR. JOHN DAVIS.—Dr. John Davis, one of the oldest physicians of the city, died recently in his eighty-second year. Dr. Davis graduated from the College of Physicians and Surgeons in 1823. He had practised in this city and Brooklyn for fifty-five years.

MME. SCALCHI is staying while in New York with Dr. Louis Elsberg and his family, who are old friends of the great contralto.

CHICAGO MEDICAL SOCIETY.—The following officers were elected for the ensuing year: *President*, Dr. D. W. Graham; *First Vice-President*, Dr. R. G. Bogue; *Second Vice-President*, Dr. R. Park; *Secretary*, Dr. L. H. Montgomery; *Treasurer*, Dr. E. F. Ingals.

PROFESSOR CHARCOT has been elected an honorary member of the Royal Irish Academy on account of his important researches in pathology and physiology.

CAMBRIDGE UNIVERSITY.—England is gradually developing a medical school. Funds have been supplied for the Physiological Chair, occupied by Dr. Michael Foster. Dr. Humphrey has accepted the Chair of Surgery without stipend, leaving vacant an endowed Chair of Anatomy, which will soon be filled.

THE ORKNEY ISLANDS are at present suffering from a wide-spread and unwonted epidemic of measles.

Reviews and Notices.

A MANUAL OF THE PRACTICE OF MEDICINE. Designed for the Use of Students and the General Practitioner. By HENRY C. MOIR, M.D. Second Edition. 12mo, pp. 455. New York: James H. Belding.

THE second edition of this admirable little work has been very carefully revised, and several portions of it have been entirely rewritten. We take occasion to repeat our good opinion of the work, considering it, as we do, one of the best condensations of the theory and practice of medicine that has been published. The more it is known the better will it be appreciated.

POCKET THERAPEUTICS AND DOSE-BOOK. By MORSE STEWART, M.D. Third Edition. Revised and enlarged, pp. 240. Detroit: Geo. D. Stewart & Co.

THIS little work, now in its third edition, hardly needs any special comment. We believe it will be found useful, and can recommend it, both to the student and practitioner.

A PRACTICAL TREATISE ON THE DISEASES OF THE UTERUS, OVARIES, AND FALLOPIAN TUBES. By A. COURTY, Professor of Clinical Surgery, Montpellier, France. Translated by AGNES M'LAREN, M.D., M. K.Q.C.P.I. With a preface by J. MATHEWS DUNCAN, M.D. Philadelphia: P. Blakiston, Son & Co. 1883.

COURTY's gynecology has been long familiar to the French as one of the ablest exponents of that branch of medicine. It is now made accessible to the English reading portion of the profession. The present is a good translation of the third edition of Courty's treatise, and may be said to compare favorably with the works of Barnes, Thomas, Emmet, and others. It can scarcely hope, however, to replace the volumes just mentioned, being more valuable to the specialist desirous of becoming familiar with Gallic methods, than the general practitioner in want of precise directions for daily use.

The introductory chapter of the work contains a good account of the anatomy, physiology, and teratology of

the female generative organs. The remaining chapters are divided into two parts—the first dealing with uterine diseases in general, and the second being devoted to their special and detailed consideration. We regret to find no description of that frequent class of diseases affecting the external organs of generation and the vagina. A work already extending to 802 pages might be profitably made complete by devoting some space to a discussion of the diseases of the external parts.

Laceration of the cervix does not appear to have engaged Courty's attention, a fact which the American reader will be sure to deplore. In general, the author's views on pathology are sound, and his therapeutical recommendations are practical and rational. We are pleased to find him quite emphatic about the great value of constitutional measures, while he does not underestimate the importance of local treatment. The translator is to be congratulated on the fidelity with which her part of the work has been accomplished. In conclusion we may repeat that no specialist should be without this work; but the student and general practitioner will scarcely need it.

LEGAL MEDICINE. By CHARLES MEYMOTT TIDY, M.B., F.C.S. Vol. I. Philadelphia: Henry C. Lea's Son & Co. 1882. Also, in two volumes, Wood's Medical Library. New York: Wm. Wood & Co. 1882.

THIS work is intended to be a comprehensive treatise on the branches of legal medicine. The present volume takes up the following subjects: Evidence, the Signs of Death, the Post-Mortem, Sex, Monstrosities, Hermaphroditism, Expectation of Life, Presumption of Death and Survivorship, Heat and Cold, Burns, Lightning, Explosives, Starvation.

To treat all these matters properly requires no small degree of research, knowledge, and judgment. The writer must not only be familiar with their physiology, pathology, and chemistry, but also have a good degree of legal knowledge. Dr. Tidy has shown that he is competent for the task so far, however, and has produced a volume which in scope and accuracy has no equal in the English language.

The plan of the work is excellent. The author has collected a very large number of illustrative cases, but has placed them at the end of the chapters instead of interpolating, as is the custom, in the text. This lightens the labor of reading and makes it easier to grasp the subject. There are many subdivisions and tables, which add to the intelligibility and clearness of the discussions.

The author shows an acquaintance with foreign literature, but he quotes less extensively from German works than could be desired, seeing that Germany has done the most scientific work in this particular field.

The book really deserves an extended analysis, but our space forbids this. An enumeration of the subheads in the chapter on "The Signs of and the Appearances Produced by Death" will show, however, how elaborately each topic has been studied. This chapter begins with a definition of death, somatic and molecular, then follow the titles Premature Burial, and The Circumstances under which the Medical Jurist may be called upon to Certify as to the Reality of Death. Under heading of "Signs of Death" we find the following: 1, The entire and continuous cessation of the heart's action, and 2, of respiration; 3, insensibility and loss of power to move; 4, certain minor signs of death; 5, changes in and about the eye; 6, changes in the temperature of the body; 7, changes in the muscles and in the general condition of the body after death.

The subjects of cadaveric ecchymoses, putrefaction, formation of adipocere, and mummification of bodies conclude the chapter, to which are appended many illustrative cases.

Dr. Tidy's work shows the very wide range of matters upon which legal medicine touches. It will be especially acceptable to medical practitioners at the present time, when interest in forensic medicine is increasing.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 5, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Corresponding Secretary, DR. J. G. ADAMS, announced the death of Brigadier-General Joseph E. Barnes, recently Surgeon-General of the United States, and Baron Jules Cloquet, of Paris, France.

The Statistical Secretary, DR. F. V. WHITE, announced the death of William H. Van Buren, M.D., LL.D.

DR. E. L. KEYES then read

A MEMOIR OF W. H. VAN BUREN, M.D., LL.D.,

in which he paid an eloquent and just tribute of respect to the dignified bearing, the gentlemanly deportment, the scholarly acquirements, the professional skill, and profound judgment of his grand old master and enduring friend.

DR. AUSTIN FLINT, JR., in behalf of Dr. Austin Flint, unavoidably detained from being present, offered resolutions expressing admiration of his character as a teacher, a writer, and a gentleman, and of heartfelt sympathy for the family of the deceased.

DR. LEWIS A. SAYRE, prevented by sickness from the privilege of seconding the resolution, sent a letter, which contained a touching reference to the sterling worth of his departed colleague.

DR. ALFRED C. POST, associated for many years with Professor Van Buren in the Medical Department of the University of the City of New York, took great pleasure in seconding the resolutions offered by Dr. Flint, and fully endorsed the eminently appropriate remarks made by Dr. Keyes. As a gentleman, a scholar, a teacher, and an operator, the deceased had left a name so distinguished that no one could be looked upon as his superior, and but few could be regarded as his equal.

THE PRESIDENT remarked that, having listened to the beautiful eulogy which had been read, the resolutions offered, and the remarks made by the gentlemen who had seconded them, he felt incompetent to add anything except to express the feeling that all must be heartily in accord with what had been said with regard to our departed Fellow.

The resolutions were unanimously adopted.

DR. BEVERLEY ROBINSON then read a paper entitled

A CLINICAL STUDY OF CAFFEINE AND CONVALLARIA MAJALIS AS CARDIAC TONICS.

The author of the paper gave a *résumé* of the literature of the subject, the views held concerning the physiological action of the drug, and added an extensive clinical contribution. The clinical histories of several cases, with post-mortem conditions, were referred to as having already appeared in the proceedings of the New York Pathological Society, published in THE MEDICAL RECORD.

THE PRESIDENT related the histories of two cases, and raised the question whether the effect produced by this remedy is entirely due to its power as a cardiac tonic, or whether it might not have another property, which is perhaps as useful, but which, so far as he had observed, had not been mentioned by any writer.

CASE 1.—Five weeks ago he was called to see a gentleman who was in a very feeble condition, but the only evidence of disease which he was able to detect was a general failure of nerve-power and loss of appetite and strength. Any exercise caused shortness of breath, and at times he suffered from a sense of suffocation, with palpitation and a feeling of terror. When an exacerbation came on the patient was ashy white, very restless, anxious, and alarmed, and there was coldness of the ex-

tremities. Careful examination, made not only by himself but by several eminent physicians in cities through which the patient had been travelling, failed to discover either cardiac, pulmonary, or renal disease. The patient had profound mental depression on account of a family affliction. It was noticeable, however, that during the periods of his greatest distress there was no marked feebleness of the pulse. Six drops of convallaria were prescribed to be taken every three hours. On the evening of the same day, six or eight hours having elapsed, the patient expressed himself as feeling very much better, and on the following day as being in the most comfortable condition he had been in for two months.

CASE II.—A widow had an attack of bronchitis accompanied by very violent and persistent cough. Nervous prostration was very great, attended by apprehension, inability to get her breath, palpitation, etc., *but there was no marked weakness of the cardiac impulse.* Convallaria was prescribed and the benefit which followed was even more marked than that shown in the first case.

The question was, Is it not a vasomotor stimulant?

DR. F. P. KINNICUTT remarked that his observations, also, made largely in St. Luke's Hospital, corroborated essentially those reported by Dr. Robinson. The diuretic effect of the drug, however, he had not noticed as being so marked as stated by the author of the paper. He thought that further experiments were necessary to determine the exact *modus operandi* of the remedy. He also regarded as still an unsettled question whether palpitation depends on exhaustion of the vagi or of the cardio-inhibitory apparatus.

DR. A. A. SMITH'S experience concerning the diuretic power of the drug accorded with that expressed by Dr. Robinson.

It had seemed to him that when cardiac hypertrophy was present the remedy was not indicated. In chronic renal disease, with cardiac hypertrophy, according to his observations, it aggravates the symptoms. In cases of enlargement of the heart in which dilatation predominates, it serves a very good purpose. He was not, however, prepared at present to give up digitalis and substitute convallaria. Nor was he quite sure the experiments of Ott had not demonstrated that it does not act through the pneumogastriacs.

Dr. Smith then referred to four well-marked cases of

PULMONARY ŒDEMA COMPLICATING PNEUMONIA,

occurring in his service at Bellevue Hospital, and which illustrated the good results that possibly might follow the administration of convallaria. Three patients received a hypodermic injection, containing ten minims of the fluid extract of the root of convallaria with one two-hundredth of a grain of sulphate of atropia, repeated every half hour, and all recovered. The fourth case was one of pulmonary Œdema complicating pneumonia, occurring in a patient suffering from Bright's disease, and it terminated fatally.

He had seen better results follow the use of hypodermics of one two-hundredth of a grain of sulphate of atropia than by the adoption of any other plan of treatment, and therefore was unable to say exactly how much the recovery in the three cases reported depended upon the effect produced by the convallaria; the combination, however, was a happy one.

DR. SMITH did not think that the drug acted as a direct respiratory stimulant, as does belladonna and strychnia, but that it probably acts through the circulatory system. However, on account of the difficulty of obtaining preparations of uniform strength, and for other reasons, he regarded it as important to be exceedingly careful concerning accepting conclusions with reference to the way in which the drug produces its effects, and precisely what those effects are.

DR. ROBINSON, in closing the discussion, said that he had not had cases which made him feel that possibly in convallaria we possessed a special stimulant to the vasomotor system.

On motion by DR. J. C. PETERS, the President was empowered to appoint a committee of five to make investigations concerning scarlet fever in horses.

The Academy then adjourned.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, March 20, 1883.

EDWARD G. JANEWAY, M.D., CHAIRMAN.

(Continued from p. 359.)

DELIRIUM WITH EMPYEMA.

A CASE had lately come under his observation which presented some interesting and rather remarkable features. It was one of a series of cases of empyema. The patient was admitted to Bellevue Hospital and assigned to the insane pavilion as a case of acute mania. His wife said that he was apparently perfectly well until the night before admission, when she found him against the door with his head in his arms and screaming out, "father," "mother," "God," etc., and saying "they are going to kill me." Previous to that time he had been able to work and was in his usual health. The history seemed to be a rather straightforward one of mental aberration, and perhaps independent of any definite cause. The point of interest was that his left side was one-half an inch larger than the right, the apex-beat of the heart was two inches to the right of the median line, and there were well-marked evidences of effusion into the left pleural cavity. The hypodermic needle was introduced and pus was obtained. The patient, therefore, was suffering from empyema, and he had been taken suddenly with acute mania and without fever. Under the influence of hyosciamin and morphine he quieted down somewhat and had some sleep, and then Dr. Janeway attempted aspiration. His plan of treatment in such cases is, first, to aspirate the chest, and afterward, if necessary, to make a free incision. This led to the remark that he made it an absolute rule not to give anæsthetics for making an incision into the chest, as he believed it to be a most dangerous practice. In this case he experienced considerable difficulty in introducing the needle, and obtained only about twelve ounces of pus, for the reason that the fluid was so thick that it did not flow through the canula. On examining it microscopically its thickness was easily explained, and was due to two things: First, the large number of pus-cells; and, second, to the presence of little lumps of fibrin, equivalent in size to about six or eight pus-corpuscles. On the next day after the aspiration hydropneumo-thorax developed, and then followed rapidly a septic process. Five days after the operation Dr. Janeway made a free incision into the chest, and after washing out the cavity with a weak carbolyzed solution the patient's temperature fell to normal. So far, however, his mental condition had not markedly improved. The time at which his mental condition seemed to be the best was shortly after the occurrence of the pneumo-thorax.

Another interesting point in this case was the inability to say from the history when this process began. It was found, after considerable inquiry, that five years ago he was sick for about nine months, first in the hospital, where he was treated without benefit, and that he was short of breath, etc., and that he was then taken home and soon after spat up very large quantities of matter which gave him a great deal of relief. Dr. Janeway regarded it as possible that that process might have continued up to the present time, and perhaps was the original source of the empyema. One circumstance which pointed somewhat in that direction was the fact that the chest did not sink in after the free incision, the heart still remained displaced, and at no time had the pulse been very rapid, nor had the respiration been very hurried. In one case of empyema, much more marked than the one just related, the disease had existed probably for a year and a half before it came under observation, and the heart was displaced to the left. In that case for days

there was no elevation of temperature, and yet he removed two hundred and six ounces of pus at three sittings. A little further inquiry made it somewhat apparent that the disease dated as far back as three years. In that instance it was decided to diminish, if possible, the size of the pleural cavity, and he made a free incision. The patient has had no fever except on two occasions during the entire period, and the chest is now on the right side one and a half inch smaller than it was, although it is still about two inches larger than on the left side. There has been no accumulation of pus. In this case there was absence of those phenomena which are supposed to indicate the development of purulent pleurisy, but the symptoms throughout had been rather those of serous effusion. There had been an entire absence of elevation of temperature and sweating.

EXPLORATORY PUNCTURE WITH THE HYPODERMIC NEEDLE.

DR. JANEWAY remarked that, recently, German writers had brought forward the use of the hypodermic needle as a new means of making the exploratory puncture in cases of pleuritic effusion. This practice, however, he had followed during the last ten or twelve years, and it had also been freely adopted by others in this country. He believed that there was no danger in using the hypodermic needle if it was properly cleansed, and his rule was always to wash it thoroughly with warm water, and then with a strong carbolic solution, before introducing it into the chest.

DR. GIBNEY asked the Chairman if he attributed the delirium to the presence of pus in the pleural cavity.

The CHAIRMAN replied that the empyema had its influence in producing a deterioration of health, and in that way might be regarded as the cause of the delirium, the same as diseases of organs constitute causes of insanity.

DR. GIBNEY asked if delirium was not more likely to be an accompaniment of acute processes than of chronic.

The CHAIRMAN replied that it occurred very frequently in chronic affections with more or less anæmia.

DR. POST remarked that delirium is a common symptom in thoracic affections, especially in young children.

The CHAIRMAN remarked that, of course, cerebral abscess, embolism, and meningitis were to be excluded in making up an opinion concerning any given case.

DR. PUTZEL asked the Chairman if he had had any pathological experience with regard to the lesions of the mild chronic mania of Bright's disease.

The CHAIRMAN replied that there were lesions in these cases, such as peri-arterial thickening, œdema of the brain, and, as a result of the mixed process, there might be more or less anæmia of the brain. These conditions would in part account for the delirium.

DR. PUTZEL remarked that he had one case in which there was chronic mania lasting several months, and at the autopsy nothing whatever could be found to explain it.

DR. POST remarked, with reference to cleansing the hypodermic needle, that the method recommended by Dr. Squibb was a most efficient one, namely, to pass it through the flame of a spirit lamp or Bunsen burner.

A CASE FOR DIAGNOSIS.

DR. PUTZEL read the history of a case and submitted it for diagnosis. Joseph J—, fifty-nine years of age, a laborer, with unimportant previous or family history, had rheumatism (?) three years ago affecting the ankles and lasting three days. Twenty-five years ago he fell down stairs, and as the result of the injury received he was in bed ten weeks, was out of his mind for three months, and since that time has been easily excited, especially easily affected by drink, has had poor memory, but no headache or other symptoms, except more or less pain in the cervical spine.

In March, 1882, he went to bed all right, but his wife found him in a convulsion in the middle of the night, his body and legs twitching, but the arms being quiet. He

frothed at the mouth, and remained unconscious for an hour, with the mouth closed and moaning continuously. About fifteen minutes afterward he vomited and purged once. As soon as he regained consciousness he complained of pain in the shoulders and arms, and cried out with pain whenever he attempted to move the upper limbs. There was no pain in the lower limbs, which became very much swollen six weeks later. The upper limbs swelled at once from the shoulders to the wrists, and about two weeks afterward the arms turned black and remained so nearly two months. The pain which he had suffered in the cervical spine was relieved. There was no bladder trouble.

November 22, 1882.—Opacity of the right cornea due to injury. Eyesight normal in the left eye. Hearing approximately normal. Motion and sensation in the face normal. The left deltoid muscle is a little less full than the right. When the limb is directed forward he can raise it to a horizontal, but when it is directed outward, only to an angle of about thirty-five degrees. The head of the left humerus is very much enlarged, especially posteriorly. There are no sensory disturbances, and only very slight paresis of the other muscles of this limb. The right deltoid is apparently normal; shoulder movements freer than in the other limb. Anteriorly the limb can be raised a little above the horizontal, and outwardly above forty-five degrees. Enlargement of the head of the humerus very marked, especially posteriorly, where it simulates dislocation. Sensation normal. Other movements of the arm very good, although not quite so strong as before the attack. A sensation of coarse grating is obtained on motion in each shoulder-joint.

Six weeks ago there was considerable atrophy of the deltoids, and the other movements of the arms were considerably weaker than at present. The faradic excitability of the deltoids was slightly diminished (probably from the atrophy).

EPILEPSY FOLLOWING CEREBRAL CONCUSSION.

The CHAIRMAN directed attention to the fact that injuries of the character of that received in Dr. Putzel's case are not infrequently followed, after the lapse of a considerable period of time, by some cerebral disturbance. During the last year he had seen cases in which epilepsy had developed *three months, six months, three years, and six years* after the receipt of an injury which was probably the cause of the convulsive affection, no other cause being ascertained. He had been especially struck, with reference to such cases, by the fact that railroad companies desire a certificate from the person injured and with whom they settle, that the person so injured is absolutely well, and so worded that it looks forward to the cutting off of any compensation for possible future disturbance. He thought that medical men in giving certificates should, for their own interests, if for nothing else, be guarded in expressing an opinion beyond the fact that "such person, so far as present appearances go, is well, but that the future must be uncertain for at least one year—perhaps much longer."

Dr. Post thought it might be difficult to make the evidence strong enough to convince a jury that such remote consequences were the result of the injury. It might be regarded as probable, but not proved. If, however, there had been even slight disturbance, such as headache or other nervous manifestations, occurring at short intervals and referable to the injury, he thought we might fairly attribute the more grave phenomena to the same cause.

THE USE OF A BIVALVE ANAL SPECULUM TO FACILITATE CATHETERISM.

Dr. Post was requested by Dr. Gouverneur M. Smith to see in his service at the Presbyterian Hospital a man who was in the advanced stage of Bright's disease, and was unable to pass his water freely on account of the enormous œdematous distention of the prepuce. Nu-

merous punctures were made to evacuate the fluid from the cellular tissue, but he was unable to find the urethra. He then resorted to the expedient of introducing a small bivalve anal speculum into the preputial opening and carrying it down and dilating the tissues sufficiently to permit the introduction of a catheter.

The Section then adjourned.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, March 2, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

CASE OF MASTOID DISEASE ILLUSTRATIVE OF TREATMENT AND CURE WITHOUT RESORT TO TREPHINE.

Dr. SEXTON, in presenting this case, hoped that this Society, so largely composed of practitioners who saw much of disease in general, would find it not without interest, inasmuch as it was a case in which the treatment adopted differed very widely from that generally in vogue. He thought that the mastoid was much too frequently trephined in these cases, and were one to estimate the value of the operation by the current literature of the subject he feared that we must conclude that fatal results had not been lessened by such treatment, and in some instances it even appeared that aggravation had resulted. In a large number of such cases occurring in his own practice he had not found the operation necessary.

The case had been referred to him by Dr. Weisse, on October 3, 1882. The patient came to this country from Ireland two years before the attack, and ever since her arrival had been subject to menstrual irregularities. She was found by Dr. Sexton to be suffering from an attack of purulent inflammation of the left middle ear and of the pneumatic cells of the mastoid process, consequent upon a severe cold in the head, contracted in March, 1882.

She is a tall brunette, twenty-four years of age, and weighs one hundred and forty pounds. Her mother probably died of consumption, but her own health has been pretty good until of late. Her condition was, when first seen, one of extreme depression, her complexion was sallow, the eyes were heavy, and the tongue coated. Her appetite was not good, and owing to the painfulness of mastication she was limited to soft or fluid foods.

The patient for a considerable time had been subject to naso-pharyngeal catarrh of the dry variety, with a tendency to ozena—dark greenish crusts forming in the upper pharynx, which were removed by persistent hawking every few days.

Altogether she presented the appearance of a very sick person, too weak, indeed, to ascend a flight of stairs without resting. Were it not for the aid given by her sister she could not keep up with her work as waitress, and she now fears she will have to give it up altogether. She had been seen by several physicians, the treatment consisting for the most part in the usual routine of syringing the ear and the introduction of powders into the external auditory canal. During the time she was so great a sufferer the ear discharged "off and on"—the secretions which accumulated in the tympanum every few days giving rise to painful distention.

That the patient had been long subject to aural catarrh was shown by the lustreless, porcelain-looking membrana tympani of the right ear. The left external auditory canal was found to be somewhat narrowed at the inner end from periosteal inflammation, which also affected the tempero-maxillary articulation, thus giving rise to the painfulness experienced in mastication. The left membrana tympani was inflamed and fleshy in appearance, and there were three perforations, one in front of, and one posterior to the short process (both in the membrana flaccidi) and one in the lower segment of the membrane. From each one of these perforations sprung a polypoid growth

the size of a very small pea. A slight, greenish colored, thick, purulent discharge existed.

Hearing was not greatly affected in the right ear, but she could hear a loud voice only in the left. At no time was tinnitus aurium a marked feature, although the voice was autophanous.

For the past two months there had been pain referred by the patient to the left side of the neck, and she was observed to hold the head very rigidly, inclining it to that side, motion being painful.

The integument over the mastoid was of a dark-red color; the tissues were considerably swollen, the prominence of the apex, owing to the extension of the swelling down the neck, being lost. During the past few days there had been pain in the neck just below the occiput, and higher up, toward the vertex, pressure could not be well borne.

The pains in the mastoid had been steady from the first, but during the past month they had much increased, and a dull, heavy pain is now constantly experienced. It is worthy of note that during the exacerbations of pain experienced in the ear, from retained secretions, the left cheek became flushed and moving the head extremely painful. There was a decidedly bad odor about the patient's ear, such as is sometimes experienced when carious bone is present.

The treatment adopted was the sulphurated lime, in small doses, in the form of hepar sulphur, and the tincture of aconite. The former was given every two or three hours at first, and the latter in teaspoonful doses of a solution consisting of a few drops of the tincture in four ounces of water. Locally, powdered boracic acid was lightly applied.

On the next day, October 4th, the patient reported that she had not rested so well for the past three months. She had experienced no pain excepting in the region down along the sterno-mastoid muscle. The three polypi were removed at this visit, one at a time, with my own snare. They were very soft, and the pedicles were slender. After their removal the membrane presented a smooth surface. During the first week the improvement of the patient was very marked; the purulent discharge became thinner and the polypi showed no disposition to return, although there was slight pouting. The appetite improved, mastication was easy, and the patient was more comfortable. Local applications of tincture of calendula were now made to the drumhead daily. Swelling, tenderness, and purplish redness of the skin over the mastoid remained. During the first month's treatment, improvement continued, although the discharge was variable. Fluctuation, limited to a small area over the mastoid was now found to be present, and an incision less than half an inch long was made down to the bone on a level with the external auditory canal. In a day or two a slight purulent discharge was established, and the running from the canal of the ear became less. The wound was carefully probed on this and subsequent occasions, and although some roughness of the bone was seemingly felt, no sinus leading through the cortex of the mastoid and giving exit to the discharge which evidently came from the mastoid cells, was ever found. The wound was soon filled with redundant granulation-tissue, which was for a long time elevated slightly above the surface. At one time the hepar sulphur was withheld for a few days, but the patient did not continue to improve until it was again renewed, and subsequently calcium sulphide was substituted in somewhat larger doses.

During the month of November the case slowly improved. The membrana tympani began to clear up, the nipples upon its surface becoming daily smaller. The discharge from the mastoid, at no time free, was less and irregular, sometimes ceasing entirely for a day or two. The discharge from the external auditory canal was almost absent.

During the month of December the treatment was continued, but the doses of the calcium sulphide were

given less frequently. Discharge from the external auditory canal ceased entirely about December 20th. At this time, when the perforations had closed and the intratympanic structures were clearing up, the flexible Eustachian catheter was daily employed to inflate the tympanum. There was only a little oozing of bloody serum now from the wound behind the auricle, and the incision had a tendency to close if let alone. There was great improvement in general health, the patient looking brighter. The hepar sulphur was again resumed, but was given in smaller doses. The membrane was almost entirely clear. During January the patient was feeling as well as ever, but early in February the mastoid incision, being occasionally the seat of irritation, was deepened with a knife. This was followed in a few days by a more free discharge, and on February 12th the wound closed altogether, and the patient was discharged cured.

Dr. Sexton drew the following conclusions from this case: *Otitis media purulenta*, occurring in subjects of ozena, is liable to assume a grave form, and extension to the mastoid cells is common. Such cases are also characterized by their chronicity. *Carious teeth and collections of tartar*, which give rise so often to irritation of the dental filaments of the fifth pair of nerves, were present in this case; in consequence of their reflex influence on the ear, such conditions should always be regarded as important etiological factors. *Uterine functional disturbance* was probably also a factor in this case, and had been in other cases also frequently observed by Dr. Sexton to react most unfavorably upon aural disease. *Hygienic treatment* had not been omitted, and was considered important in all cases. This patient had been required to take daily out-door exercise, although the weather during the time she was under observation was usually very inclement. The patient at no time entirely failed to attend to her work. *The dry method* which Dr. Sexton had adopted some eight years ago was practised in this case throughout. The few drops of tincture of calendula employed in the ear were not allowed to remain long in the canal, but were carefully removed by means of cotton-wool.

The employment of calcium sulphide in the case lessened pain, as it frequently does, and is by no means to be regarded as an inactive or "let alone" method, when its controlling influence over inflammatory processes about the ear is considered. The avoidance of anodynes, which, if given in large and repeated doses, derange the system, was considered advantageous.

Not the least interesting feature of the case was the behavior of the crusts, which eventually closed the perforations in the membrana tympani. They were observed to travel slowly toward the periphery of the membrane. The one in the anterior superior quadrant reached the walls of the canal within the first eight weeks; the one in the posterior superior quadrant was considerably slower, while the one on the lower segment did not disappear from the membrane until in the fifth month after the removal of the polypoid growths. Hearing in the affected ear was almost normal, and the autophonous voice had long since ceased to be experienced. No symptoms of ozena remained.

DR. GEORGE F. SHRADY remarked that the result was a very satisfactory one and served to prove the value of conservative treatment. He was not an otologist, but during the past four years, and since his intimate personal relations with a case that had attracted the attention of many of the leading specialists of the city, he had been much interested in the surgical management of the mastoid complications of otitis media. The patient, who was in a position to command the best talent which the city could afford, was the subject of a severe attack of inflammation of the middle ear. The disease ran its usual orthodox course, until finally symptoms of mastoid trouble manifested themselves, and trephining was proposed by one of the consultants as the only means of saving life. To this measure Dr. Shradý offered objections which were happily sustained by Dr. Roosa, the

gentleman having direct charge of the case, as well as by a majority of the other distinguished otologists and general surgeons subsequently added to the consultation. The patient finally recovered without the operation or the formation of an abscess externally, and in spite of the appearance of a formidable swelling of the neighboring soft parts. The good result in that case had made such an impression upon Dr. Shrady that he had become a convert to the conservative method of treatment. Since that time, through the kindness of Dr. Sexton and others, he had seen several cases of mastoid complication, some in which pus had already found its way externally, but in none had he felt called upon to advise the use of the trephine, or do more than increase the opening in the soft parts. In all of these there had been a perfect recovery. He did not presume to say that trephining of the mastoid was not a perfectly justifiable operation in very many instances, but that there was possibly not enough credit given by many surgeons to the wonderfully conservative power of nature in such as were generally looked upon as desperate cases.

DR. KINNICUTT was much interested in the good results claimed by the use of aconite in acute ear diseases in children. He also alluded to the prompt manner in which pain was relieved by the puncture of the drum-head.

Obituary.

JOSEPH K. BARNES, M.D., SURGEON-GENERAL, U. S. ARMY (RETIRED).

GENERAL JOSEPH K. BARNES, recently Surgeon-General of the United States Army, died in Washington April 5th, of Bright's disease. He was born in Philadelphia on July 21, 1817, and was in his sixty-sixth year. He studied medicine in the office of Dr. Thomas Harris, a celebrated physician of his generation, and attended lectures at the Medical Department of the University of Pennsylvania, where he was graduated with honor in the spring of 1838. The first year of his practice was spent as resident physician at the Blockley Hospital, where he laid the foundation for the distinction he afterward gained in the organization and management of the hospital system of the United States Army. His second year of professional work was devoted to the medical care of the poor in one of the northern districts of Philadelphia. On June 15, 1840, he was appointed an Assistant Surgeon in the army, and one month later was assigned to duty at the Military Academy at West Point. In November of the same year he was transferred to Florida, where he saw his first field service in Gen. Harney's famous expedition to the Everglades in the war against the Seminole Indians. He remained with Gen. Harney's command in Florida two years, and in 1842 was transferred to Fort Jessup, an old-time military station in Louisiana, where he served until its abandonment, four years later. At the breaking out of the Mexican war, in 1846, the young surgeon, then only twenty-nine years of age, was appointed chief medical officer of the cavalry brigade, and in that capacity he participated in every action of the war in either Gen. Taylor's or Gen. Scott's lines, excepting that at Buena Vista, and at the close of the hostilities was placed in charge of the general army hospital at Baton Rouge, La. For the next few years he rendered valuable service to the Government in organizing medical posts at various stations in Texas and throughout the West, acting for a short period as Medical Director of the Department of Oregon. He was assigned to duty at West Point again in 1854, and served there several years. In 1856 he received his commission as a Surgeon.

At the outbreak of the war of the rebellion Surgeon Barnes was stationed in Oregon, and was among the first officers to be called to Washington. In 1861 he was assigned to special duty in the office of the Surgeon-

General at Washington, where his experience in field and hospital service was of great value to the Government. Two years later he was promoted to be a Medical Inspector with the rank of Lieutenant-Colonel, and a few months afterward he was appointed Medical Inspector-General with the rank of Colonel. In September, 1863, he was made acting Surgeon-General, was promoted to fill the vacancy, with the rank of Brigadier-General. He served during the war with great honor, and in 1865 received the brevet rank of Major-General. He was the first physician called to the bedside of President Lincoln when he was assassinated, April 15, 1865, and had charge of the case until its fatal termination. On July 2, 1881, when the late President Garfield was shot, he was among the first physicians to be summoned to the White House, and served on the consulting board of physicians until the death of the President, giving the case his closest attention. He was placed on the retired list last year by the operation of the compulsory retirement law, and has since then been living quietly at his residence in Washington.

The General had a fine, erect military bearing. He was agreeable in his manners, and socially was a most attractive person. In his profession he stood deservedly high, and was universally respected by all who knew him.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 31, 1883, to April 7, 1883.

HAMMOND, JOHN F., Colonel and Surgeon. Granted leave of absence for six months on Surgeon's certificate of disability, with permission to go beyond sea. S. O. 75, par. 6, A. G. O., April 2, 1883.

HAMMOND, JOHN F., Colonel and Surgeon. To be relieved from duty in the Department of the East, and to report by letter to the Surgeon-General United States Army. S. O. 75, par. 7, A. G. O., April 2, 1883.

Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, from January 1, 1883, to March 31, 1883.

BAILHACHE, P. H., Surgeon. Detailed as member of Board for the Examination of Officers of the Revenue Marine Service. March 27, 1883.

MURRAY, R. D., Surgeon. To proceed to Vicksburg, Miss., as Inspector. March 24, 1883.

PURVIANCE, GEORGE, Surgeon. To proceed to Cleveland, O., to investigate management of hospital. January 22, 1883. Granted leave of absence for seven days. February 8, 1883.

AUSTIN, H. W., Surgeon. To proceed to Gallipolis, O., as Inspector. January 9, 1883.

FISHER, J. C., Passed Assistant Surgeon. Detailed as member of Board for the Examination of Officers of the Revenue Marine Service. March 27, 1883.

CARTER, H. R., Passed Assistant Surgeon. To proceed to New Orleans, La., for temporary duty, thence to San Francisco, Cal., for duty. February 7, 1883.

PORTER, F. D., Passed Assistant Surgeon. Granted leave of absence for thirty days. February 10, 1883.

GUITERAS, JOHN, Assistant Surgeon. Granted leave of absence for thirty days. January 19, 1883.

WHEELER, W. A., Assistant Surgeon. To proceed to Chicago, Ill., for duty. January 27, 1883.

ARMSTRONG, S. T., Assistant Surgeon. To proceed to Key West, Fla., for temporary duty. February 1, 1883.

BENNETT, P. H., Assistant Surgeon. To proceed to Charleston, S. C., for temporary duty. February 19, 1883.

Resignation.

PORTER, F. D., Passed Assistant Surgeon. Resignation accepted, to take effect March 31, 1883. February 10, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 10, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
April 3, 1883.....	0	11	128	12	97	54	2	0
April 10, 1883.....	0	6	130	6	121	55	1	0
<i>Deaths.</i>								
April 3, 1883.....	1	6	29	12	25	21	4	0
April 10, 1883.....	0	5	15	6	16	23	1	0

Whole number of deaths for the week ending Saturday, April 7th, 746; of which 132 were from pneumonia.

THE RESULTS OF SECTION OF THE VAGUS UPON SHEEP.—Ellenberger has made some very interesting experiments to determine the effect of section of the pneumogastrics upon sheep. He found that after cutting the pneumogastric on one side only, no disturbance of heart, lungs, or stomach was observed. The general matter was not impaired. Ten weeks after the section the animals were killed. There appeared to be some thinning and atrophy of the muscular wall of the third and fourth stomach in the animal whose right vagus was cut, and a similar change in the first and second stomach of the animal whose left vagus was cut. When both vagi were cut the animals died in from twelve to twenty-six hours, except in one case, when life was prolonged for sixteen days. Death resulted in all cases from suffocation by stopping of air-passages. There was constantly observed: complete paralysis of the œsophagus, partial paralysis of the first and second stomachs, increased heart-beat up to 160 per minute, labored irregular and at first slower (12 to 16 per minute) respiration, and inability to regurgitate and chew the cud. It appears that the vagus sends motor nerve-fibres to the first and second stomachs, but that the third and fourth stomachs are enervated independently. The constant development of *tyimpanitis* as a result of paralysis of the vagus may have some practical significance.—*Journal of Com. Med.*

THE SEAT OF THE "MUSIC OF THE HEMISPHERES" IN THE DOG.—H. Munk thinks that he has located the centre of hearing in the cerebral cortex of the dog. And not only this, but he believes that different parts are devoted to the perception of different notes. This centre for sound-sensations is in the convolution near the apex of the post-sylvian fissure. The posterior parts appreciate the low notes, while the more anterior portions appreciate the higher notes.—*Journal of Comp. Med.*

CONGENITAL ABSENCE OF ONE KIDNEY.—Another recent case of this kind has been reported by Dr. Turbin, of Tiflis (*Deutsche Med. Zeit.*). He has collected eight similar cases from literature. That this may especially concern the surgeon is shown by a recent case from Czerny's clinic. That surgeon found it advisable to extirpate a kidney for disease, the operation being performed with his customary dexterity and skill. On the death of the patient some thirty-six hours later, it was first made known that the patient had had but one kidney, and that it had been removed. A similar case occurred in New York some time ago.

A CURIOUS EXPERIMENT.—The ease with which persons fall under hallucinations of special sense is illustrated by M. Yung, in a recent communication to the Helvetic Society of Sciences. The operator places eight cards on a table, in positions corresponding to forehead,

eyes, ears, nose, mouth, and chin; he pretends to "magnetize" them and also some person in the company, and then goes out, while the magnetized person is required to touch any one card. The operator, having returned, notes the action of a confederate, who scratches a part of his head corresponding to the card touched. Then he commences an innocent comedy, passing his hand carefully over the cards, and on reaching the touched card seeming to experience a strong shock. The observers are surprised, of course. One of them is then asked to go out and repeat the experiment. It is assumed that a certain card has been touched. Passing his hand over the cards, he indicates, in nine cases out of ten, a particular card as giving him a shock; and if the company be instructed to support his idea of that being the "correct card," he is confirmed in his illusion, which may be successfully repeated. Of 85 persons tried, M. Yung found only 9 who refused to indicate a card, not having experienced any sensation; 53 said they had exactly the sensation announced, and 23 described some different sensation.

THE EVERLASTING PILL.—The "everlasting pill," once a part of our ancestors' armamentarium, was composed of metallic antimony, and it was believed to have the property of purging as often as it was swallowed. This was economy in right earnest, for a single pill would serve a whole family during their lives, and might be transmitted as an heirloom to their posterity. We have heard of a lady, who having swallowed one of these pills, became seriously alarmed at its not passing. "Madame," said the physician, "fear not; it has already passed through a hundred patients without any difficulty."

THE QUESTION OF NATIONALITY has at last found its way into medicine. The French doctors in Nice are up in arms against their English and other foreign brethren established in that favored health resort. A general meeting of the former body has been held, at which protests were entered against the manner in which alien practitioners monopolize the most lucrative practice. Amongst other points which were urged, it was stated that many of the intruders are not qualified French physicians, and consequently have no right to practise anywhere in France.

CREDIT TO WHOM CREDIT IS DUE.—Philip Doddridge (1702-1751) spoke of nerve-stretching, and recommended it as a religious stimulant in his zeal and vigor in the Christian race.

"Awake my soul: stretch every nerve,
And press with vigor on."

MEDICAL PROFESSOR TO RAW STUDENT: "Where is the glottis?" "I don't know, sir. I think you put it on the shelf in the dissecting-room with the rest of your surgical instruments."

BLESSED IS THE COLLEGE, and especially the medical school, says the *Boston Medical and Surgical Journal*, which is so munificently endowed that it can fix its standard of scholarship independently of the necessity to make a living for itself; in fact, which can from the first adopt the position of the sought and not the seeker.

THE WATER-CLOSET'S DOOM.—An ingenious German has invented a plan for the manufacture of gas from human feces. These are decomposed in a retort by heat, the chief products being a light-yielding gas, carbonic acid, tar, oil, and ammonia. As in ordinary gas-works, the tar and oil are separated, and the light-yielding gas purified for use. There remain in the retorts the ash-constituents with a portion of carbon, which the inventor designates coke. The authority for this description, *Der Techniker*, informs its readers also that a Breslau hotel has already been successfully lighted by means of this novel and presumably economical gas.

JONATHAN HUTCHINSON'S ADVICE TO MEDICAL STUDENTS.—"If now I were to sum up in one sentence what I have been enforcing, it is this: The secret of all noble life lies in belief, and the characteristic of all noble minds in the vigor with which they believe that which is

true. Try to attain belief in the reality of all things ; so shall you never want for motives ; so shall you be able to live and work without hurry and without sloth. Finally, permit me to commend you this formula : Prize strength, love the beautiful, practise self-denial, and be patient."

A CANDID CRITICISM ON THE ACTION OF THE NEW YORK STATE MEDICAL SOCIETY.—We do not share in the opinions of those who see in this action (the vote of the New York State Medical Society) nothing but disaster to the profession. We do not believe that the teachings of the code of ethics are infallible, that its provisions should be accepted with unquestioned faith, and that any amendments thereto, or an abrogation of one or all of its provisions, would encourage quackery, disorganize the profession, and place it on a common level with all the isms and pathies of the age. We have more faith in the honesty and probity of the great body of men who compose the profession of this country, as exhibited from time immemorial in the performance of those imperfect obligations which the code does not reach and cannot enforce, than to believe for a moment that, if the entire code should be abolished, the old professional ship would lose her bearings and be dashed to pieces on the inhospitable shores of quackery. Therefore we are perfectly willing that our New York brethren shall try the merits of the new code, and if, as they believe, it will result in good to the profession and to humanity, the whole profession will ere long follow their example ; and if, on the other hand, it shall result, as has been predicted, in lowering the tone and dignity of the profession and the encouragement of quackery, we do not doubt but they will soon see their folly, repudiate the new code, and return to their first love, wiser if not better for their experience.—*Indiana Medical Journal*.

DIPHTHERIA IN FOWLS.—Dr. L. Roth, of Kitzingen, observed an epidemic of diphtheria in a flock of hens. It was caused by the slops from a room in which two children had been sick with diphtheria, being thrown upon the dung heap in the yard where the fowls were kept.

SOME LESSONS FROM THE SMALL-POX EPIDEMIC AT LOCKPORT, N. Y.—Dr. Walter J. Ransom, of Lockport, N. Y., sends us an account of the epidemic of small-pox at Lockport, N. Y., with some suggestive points relating thereto. The epidemic lasted from October, 1881, to January, 1882. It originated and was stopped in the following manner : "During the early part of October a woman was taken suddenly ill and died in a few days ; her sickness was pronounced 'gangrenous erysipelas complicated by acute eczema.' During her illness she was visited by numerous friends and acquaintances. A public funeral was had. Within different periods of time corresponding to the incubating stage of small-pox twelve of fifteen persons who had visited the patient came down with small-pox, and the result was that we had our hands full of just so many centres of contagion. We quarantined our cases according to the rules prescribed by the State Board of Health, and began the fight. In all we had about fifty-three cases. I suggested general vaccination as the remedy to prevent the spread of the disease, and submitted my plan to our local board, which was adopted, and they nobly sustained me in carrying it out. The plan was this : Our population is about fifteen thousand ; city divided into four wards ; two physicians to be appointed to each ward, they to be supplied with virus procured from the vaccine bureau of New York City, they to go from house to house, factory to factory, store to store, and office to office, and offer free vaccination to all. This was done, and not another case of small-pox did we have. Our vaccinating corps quilled about four thousand. The rule was to vaccinate all previously unprotected individuals, and all others who would consent to a re-vaccination who had not been vaccinated within seven or eight years."

One of the points of interest observed was the follow-

ing : "In one family, consisting of the parents and four children, two children too young to attend school, and never vaccinated, had confluent small-pox. The other children, vaccinated successfully during the summer term of school, escaped entirely. Parents, vaccinated years before, had varioloid. Another family, two adults, three children. Mother pregnant, six months advanced, protected by a previous vaccination, escaped entirely, and was subsequently delivered at full time of a healthy child. Her brother, boarding, unprotected, had confluent small-pox. In my experience the so-called partial working characterized by a red papule or macule was no protection. In many instances I saw the marked power of vaccine to protect, exemplified by the escape of all in the family who were vaccinated within three days of first exposure and in whose cases the vaccination worked. In my own case I escaped, and I was exposed, as far as man could be, without direct inoculation, for I delivered a woman who was prematurely confined and was dying with the disease at the period of secondary fever ; had retained placenta, which I removed.

"I say, palsied be the tongue that opposes vaccination."

SLOW PULSE.—Dr. W. T. Harris, of Brantford, Ontario, Canada, writes : "In one of the numbers of THE RECORD last summer, I observed a reference to a remarkably slow pulse, thirty-six per minute. Last October, I saw a gentleman in perfect health with a pulse of thirty-one per minute, and the same case I saw again last week, and found his pulse thirty-three per minute in the sitting posture. This man is sixty-eight years of age, and has always been perfectly healthy. He is a farmer residing in the vicinity of this city."

A LIST OF HEALTH OFFICERS OF THE PORT OF NEW YORK FROM 1784 TO 1884. Dr. Stephen Smith of this city writes : "While engaged in the preparation of a Report to the National Board of Health on the 'Origin and Growth of the Quarantine Systems of the United States,' I obtained from Mr. Ferno, the learned custodian of the colonial archives of the State of New York, a corrected list of the names and dates of appointment of all the Health Officers of the Port of New York. As the first appointment was made in 1784, and as the present Health Officer's term continues until 1874, the list comprises a century of Health Officers of this Port. At the same time, Mr. Ferno prepared lists of the Commissioners of Health, of Resident Physicians, and of the Health Officers of Albany and Hudson. I am not aware that these lists have ever been published."

Health Officers of the Port of New York : Charles McKnight, appointed May 12, 1784 ; Malachi Treat, January 10, 1792 ; William Pitt Smith, September 29, 1795 ; Richard Bailey, February 19, 1796 ; Isaac Ledyard, August 22, 1801 ; John R. B. Rodgers, October 5, 1803 ; Joseph Bailey, March 15, 1810 ; John R. B. Rodgers, February 19, 1811 ; Joseph Bailey, March 5, 1813 ; Benjamin De Witt, March 6, 1815 ; Joseph Bailey, February 4, 1820 ; John T. Harrison, April 24, 1823 ; John S. Westervelt, February 25, 1829 ; William Rockwell, February 10, 1836 ; A. Sidney Doan, February 14, 1840 ; Henry Van Hovenburgh, February 8, 1843 ; Alex. B. Whiting, January 28, 1848 ; A. Sidney Doan, April 4, 1850 ; Richard L. Morris, April 10, 1852 ; Henry E. Bartlett, April 21, 1854 ; Richard H. Thompson, April 21, 1855 ; Alex. N. Gann, April 6, 1859 ; John Swinburne, March 19, 1864 ; John M. Carnochan, January 27, 1870 ; S. O. Vanderpoel, February 28, 1872 ; William M. Smith, March 24, 1880.

Commissioners of Health under the Act of April 1, 1796 : Robert Bowne, Francis Childs, John Campbell, John B. Coles, William Robinson, Henry Will, John Murraysen, appointed April 9, 1796 ; William De Peyster, appointed September 30, 1796.

Act of February 10, 1797 : John Oothoudt, Jacob Abramse, Ezekiel Robins, appointed February 25, 1797 ;

Gabriel Furman, March 12, 1799, reappointed April 9, 1800; Edward Miller, appointed August 22, 1801; Gardner Jones, October 5, 1803; John H. Douglas, April 6, 1807; Gardner Jones, February 8, 1808; John H. Douglas, April 3, 1810; Gardner Jones, February 19, 1811; John Onderdonck, March 5, 1813; Samuel Torbert, March 6, 1815; Nicoll H. Dering, April 24, 1818; Peter S. Townsend, June 6, 1820; Jacob Dyckman, February 13, 1821; Richard L. Walker, April 11, 1823; Smith Cutter, April 22, 1828; James H. Hart, March 14, 1838; William Turner, March 14, 1840; Stephen R. Harris, February 8, 1843; Richard L. Morris, April 4, 1850.

Resident Physicians of the Port of New York (Act of February 25, 1799): James Tillary, appointed March 12, 1799; John B. R. Rodgers, March 27, 1802; Edward Millen, October 5, 1803; Joshua E. R. Birch, April 3, 1810; Edward Millen, February 19, 1811; J. E. R. Birch, March 5, 1813; Nicholas I. Quackenbos, March 6, 1815; David Hosack, June 6, 1820; N. I. Quackenbos, February 13, 1821; reappointed, April 24, 1823; Joseph Bailey, appointed February 4, 1826; James R. Manley, April 11, 1828; William James McNeven, April 9, 1840; John W. Francis, July 6, 1841; Alexander F. Vache, August 16, 1843; Seth Geer, January 21, 1848; Orid P. Wells, January 25, 1850.

Health Officers of Albany, N. Y.: Charles D. Cooper, appointed March 27, 1794; Christopher C. Yates, April 11, 1803; Peter Wendell, April 11, 1822; Barent P. Staats, July 3, 1832; John F. Townsend, March 10, 1840; Richard H. Thompson, January 15, 1849; John Swinburne, May 28, 1855.

Health Officers of Hudson, N. Y.: Joseph Hamilton, appointed October 3, 1803; Moses Younglove, February 9, 1809; Robert G. Frary (Tracy?), June 21, 1832.

A RAPIDLY SUCCESSFUL TREATMENT OF ERYSIPELAS is, according to Dr. Richard Barnwell (*Lancet*), the painting the part with white-lead paint. He reports five cases of traumatic erysipelas so treated, and one case of idiopathic erysipelas.

DOCTORS' DINNERS AND DOCTORS' WINES.—A writer in the *London World* discourses upon the difference between the preaching and the practice of London medical men: "As an M.D., Æsculapius cannot hear the name of wine or spirits mentioned without a shudder; but as Amphitryon, it is quite another thing. He is the most lavish of hosts, keeps an excellent cellar, and gives his guests of the best which it contains without stint. Doctors were surely never so nobly fond of seeing their friends at dinner as at the present moment. It is Hippocrates, Podalirius, Machaon, and others who make up the company of veritable Amphitryons. Politicians, diplomatists, poets, novelists, journalists, and even royalty meet round his pleasant and profuse board. A little of that Roman punch, you are surprised to hear, is indispensable after the clear turtle. A couple of glasses of Johannisberg is the minimum which it is safe to take with your fish. Then comes the question which champagne you will have, Pommery Greno or Perrier-Jouet—*brut* or only *sec*. Your astonishment increases as the banquet proceeds. Champagne—you can scarcely believe your ears as the sentiment is uttered—is the true drink of the statesman and the author; and champagne is not a wine which, if it is to be appreciated, can be sipped. If you had any superstitious idea that it was unwise to touch claret after dinner, you are entreated to emancipate yourself from it as soon as possible.

"Doctors' dinners have deservedly achieved a high place in the scale of London entertainments. And, indeed, so hospitable are the doctors, that it would really seem as if they did not wish their friends and patients to dine with any one except themselves. If you happen to feel a little out of sorts, and, on consulting your physician, mention that you have latterly been dining out a good deal, he shakes his head; and, while commencing with

the general proposition that alcohol is, under all circumstances, abominable—that for wine in any shape you should substitute cocoa, and milk, and beef-tea, and other slops—concedes you the indulgence of a couple of glasses of a remarkably thin hock at dinner. This wine is only to be purchased at one establishment in London; and of this Æsculapius gives you the address: your only chance of physical salvation lies in being constant to it. If you attend a dinner-party, a bottle of it must be your *vade mecum*. It looks somewhat odd to see a gentleman produce from his coat-pocket a flask of a fifth-rate Rhine vintage. You do not quite like the idea; but you are sternly informed that it must be done. You must obey the special mandate of your physician; and if you have not the courage to do this you had better decline the hospitality of your friends."

THE PROTECTIVE FUNCTION FOR ANIMALS OF THE SEMICIRCULAR CANALS OF THE EAR.—Necessity compels most of the higher animals, but especially wild animals, to be constantly on the alert, and the sense of hearing is of especial value in self-protection. Dr. P. McBride endeavors to prove the theory (which is not entirely new) that the semi-circular canals have an important function in this matter. Sudden sounds conveyed to the internal ear excite the nerve-fibres. These reflexly cause a sudden turning of the head in the direction of the noise. This action is seen when a deer is suddenly startled by a whistle. The other function of the semicircular canals relates probably to the sense of space. Stefin has recently asserted that the cells of Purkinje in the cerebellum were in close relation with the semicircular canals, so that when the latter are destroyed the former elements atrophy.—*Journ. of Comp. Med.*

SEAT OF "GOOD NATURE" AND INTELLIGENCE IN DOGS.—Goltz, by experiments upon dogs, shows that extensive and profound destruction of both vertex convolutions causes not only diminished intelligence, but also a remarkable change in their disposition. Harmless and good-natured dogs, after this operation become surly, quarrelsome, and violent. If the occipital lobes are damaged, the animals preserve their good-tempered character, but the intelligence is more seriously impaired.

A CASE FOR THERMOMETERS.—Dr. A. L. Cory, of Chicago, writes: "I desire to add my mite to the methods of preventing broken thermometers. Some years since I carried my thermometer-case loose in my pocket, and averaged a broken thermometer at least once in two weeks. Three years since I had constructed a case which contained a tongue depressor, an hypodermic syringe, with space for morphine powders, and a small bottle with the compressed hypodermic tablets. It takes little room, being only two inches wide, five and a half inches long, and three-fourths of an inch thick. I have carried it in my pocket now three years, and during that time have broken only one thermometer, and that I let slip from my fingers when shaking down the register. The case was made for me by E. H. Sargent & Co. of this city."

THE NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.—The fourteenth annual report of this association shows a continued prosperity. The additions to the membership in the past year have been twenty-six, the deaths ten. The association has been able to give \$425 to the families of deceased members. In future it will be able to do more, for its permanent fund now amounts to over ten thousand dollars, and the interest upon it will hereafter be used.

We are glad to observe the success of this association, and would urge its claims upon the physicians of the city and neighborhood. Any member of the regular medical profession of the counties of New York, Kings, Queens, Richmond, and Westchester, in good health, and under seventy years of age, may be admitted.

A PURE ALKALOID OF GELSEMINUM has been obtained recently, and for the first time, by Mr. A. W. Gerrard, of the London Pharmaceutical Society.

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Original Articles.

CATARRHAL HEADACHES AND ALLIED AFFECTIONS.¹

By RICHARD C. BRANDEIS, M.D.,

PROFESSOR OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY, NEW YORK POLYCLINIC.

THERE is no class of disease which presents more varied types and greater difficulties in the differential diagnosis and treatment than that which is grouped under the generic name of headache. It is met with not only in nervous affections, but in almost every other form of disease, as in fever, in disturbances of the digestive organs, and in the most diverse inflammations of the head and adjacent parts.

As the caption of this paper shows, it is not my intention to enter into a consideration of all the various types of headache, but I wish to call your attention to those forms which, in my opinion, are due to the different diseases affecting the nasal and adjacent cavities.

If we bear in mind the fact that the nose has to perform a threefold function, we cannot but agree that a consideration of the relations which it bears to the system at large must be of great importance. The special function of the nose is to preside over the sense of smell; it plays a leading part in the process of respiration, since in health all the air taken into and expelled from the lungs, is intended to make its way through the nasal cavity. The voice is also dependent, in a great measure, upon the co-operation of the nasal cavity, inasmuch as it acts the part of a resonant chamber.

Nature has recognized the important rôle which the nasal cavity has to play in the general economy by placing it in the middle of the head and bringing it into direct communication with almost all the bones which enter into its construction. It is, as I hope to show you, in immediate relations with the cavities of the superior maxillary, the frontal, ethmoidal, and sphenoidal bones.

The nose consists, grossly, of two parts: first, the anterior prominent part, which is composed of bone and cartilage, with small muscles which slightly move the latter, and two orifices, the anterior nares, opening downward; and, secondly, of the two nasal fossæ. As the former part does not participate in the affections which we propose to consider, it is hardly necessary to enter into its anatomical details, as it contributes but little to the physiology or pathology of the parts under discussion.

The nasal fossæ are two cavities, placed one at each side of the median line, separated by the flat, vertical septum, part bony and part cartilaginous. The depth of the fossa from the upper to the lower wall is considerable, as is also the extent from before backward, or between the anterior and posterior nares. But the breadth from the outer to the inner wall is very limited, and is less at the upper than toward the lower part of the fossa, and in the middle than at the anterior or posterior openings. The roof of the nasal fossa is flat at its middle part, and sloped before and behind; it is formed in front by the inner surface of the nasal bones; behind by the body of the sphenoid, and in the middle by the horizontal or cribriform lamella of the ethmoid bone. The floor—smooth, concave from side to side, and formed by the palatal plates of the superior maxillary and palate bones—

extends backward and a little downward from the nares to the pharynx.

The internal wall, or septum narium, which extends from the roof to the floor of the cavity, is flat, almost vertical—although often deviating toward the left side—and composed of the perpendicular plate of the ethmoid bone, the vomer, and the nasal cartilage.

The outer wall of the cavity is formed by the ethmoid, superior maxillary, lachrymal, inferior turbinated, and palate bones. The posterior and inferior parts of this surface are marked by a number of inequalities, whilst the superior and anterior are comparatively even. In the latter situation may be observed, first, the smooth surface just mentioned, and secondly, passing downward and backward, three, and sometimes four-arched and convoluted bones, beneath which are grooves (meatus) leading from before backward. The superior turbinated, or spongy bone, is much shorter than the others, arises from the lateral plate of the ethmoid; beneath it is the superior meatus. The middle spongy bone, also arising from the ethmoid bone, overhangs the middle meatus. The inferior turbinated bone appears as if appended to the side of the superior maxillary and palate bones. Between it and the floor of the nasal cavity we have the inferior meatus.

To illustrate the relations which the nasal fossæ and the pneumatic cavities in the adjacent bones, which form their framework, bear to one another, I beg to show you a number of anatomical sections of the head, which I made a few years ago, according to Schalle's¹ method.

In specimen No. 1 I have cut away the external nose, the frontal bone, all of the superior maxilla of the right side, and on the left side have only left that part which forms the external wall of the corresponding nasal cavity. In order to show the position of the turbinated bones on the left side, I have removed the external nasal wall on the right, as well as the septum narium, excepting the nasal plate of the ethmoid.

If we look at the specimen in front, we see, above, the left frontal sinus, with a bristle passing downward through the infundibulum into the middle meatus. Looking downward, and near the roof of the cavity, on either side of the vomer, we see two foramina, which, leading upward and backward, pass into the sinuses situated in the body of the sphenoid bone. Looking at the left external wall of the cavity from the right, the short superior and the middle and inferior turbinated bones are brought into view. At the same time, farther back, the pharyngeal orifice of the left Eustachian tube can be seen.

In the second specimen, I have removed the frontal bone, the external nose, and the outer half of both of the superior maxillæ. I have, however, left the nasal fossæ and their component parts, as nearly as possible, intact. On the left side, we see the inner wall of the antrum of Highmore. We see this also on the right side, but find, near the upper and posterior border of the cavity, the foramen which connects it with the right nasal fossa, and which passes in through the middle meatus near the lower surface of the middle turbinated bone. In front, we see, above, the right frontal sinus, a bristle passed through the foramen which connects this cavity with the nose, and which enters the middle meatus just above and in front of the foramen which leads into the antrum of Highmore. Further down we see the right and left nasal fossæ, separated one from the other by the vertical septum,

¹ Read before the County Medical Society, March 26, 1883.

¹ Virchow's Archive, 1877.

which, however, in this instance, deviates somewhat to the right side. On either side of the septum we see, above, the middle turbinated, and below, the inferior turbinated bones. We can also see the inferior, middle, and superior meatuses of both sides. In this specimen the three cavities of the nose are very large; but I must call your attention to the fact that in the living subject they never attain this size, owing to the extreme vascularity of the mucous membrane lining the septum and the turbinated bones. This mucous membrane attains its greatest bulk on the inferior turbinated bone, where, according to Kohlrausch¹ and later observers, it forms a truly cavernous network, which in health attains a thickness of at least four millimetres between the periosteum and the lining membrane. This erectile tissue is sufficient to explain the transitory obstruction to nasal respiration which a sudden turgescence sometimes gives rise to, as well as the profuse mucous secretions which are common to acute and some chronic catarrhal conditions.

In the third dissection I have removed all the parts not directly connected with the nasal fossa. On the right side we again see the inner wall of the antrum of Highmore and the foramen which leads into the nasal fossa. It will be noted, however, that this foramen is not situated in the upper and posterior angle of the inner wall, but is seen near the anterior superior angle of the cavity. On the left side there is no salient point. Viewed from the front, the specimen shows, above, the two frontal sinuses, with bristles passing downward and backward through the infundibuli into the middle meatus on either side. Lower we see the septum narium and the two pairs of turbinated bones. In order to show the cavities of the nose, as well as those of the ethmoid and sphenoid bones, I have made two vertical sections through that part of the base of the skull formed by the frontal, ethmoid, and sphenoid bone, on either side of the median line. These sections pass downward into the nasal fossa on either side of the septum narium, and when the parts are held asunder we see the nasal cavities in their entirety. On the right side we see, above, two of the sphenoidal cells, below these the middle and inferior turbinated bones and the three longitudinal canals. We next see the septum narium and its component parts: the nasal plate of the ethmoid, the vomer, and the cartilage. On the outer wall of the left half of the specimen we have an excellent view of the cells contained in the ethmoid bone in front, and of the sphenoid bone behind. We can here see how the cavities of these two bones are connected, and in what manner they bear relation to the nasal cavity. Below we again see the turbinated bones, with their respective meatuses, and behind the inferior turbinated bone we have a fair view of the orifice of the Eustachian tube. We learn from this dissection that in the superior meatus there is a small orifice which leads into the posterior ethmoidal cells, and through them into the sphenoidal sinus.

In acute coryza we have, besides the lassitude, general malaise, and alternate chilliness and heat, more or less weight and pressure about the head, especially in the frontal region. On ocular inspection we find the nasal mucous membrane highly congested, and sometimes so swollen as to produce occlusion of the fossæ. The greater the obstruction the greater will be the sense of uneasiness about the forehead, which in some cases may reach such a degree as to cause the patient and surroundings considerable anxiety. I have seen instances where the agony was so great that fears were entertained that there might ensue a loss of reason.

This condition, however, generally endures only during the first stage or dryness of the nasal mucous membrane. As soon as the mucous discharges have fairly set in, a gradual amelioration of the symptom is usually observed.

The connection between the nasal cavity and the frontal sinus is very free by means of the anterior eth-

moidal cells and infundibulum. The sinuses in the frontal bone vary greatly in size, and in proportion to it will be the distress occasioned by any inflammatory condition which may be propagated to them from the nose. The membranous lining of these cavities is similar to that of the nasal fossæ. But, as Luschka¹ says, it is subject to certain modifications, which consist of a diminished thickness and a far less number of secreting glands than is found in the pituitary membrane. As long as the nasal mucous membrane is in an active state of inflammation, which is attended with a greater or less degree of swelling, the communication with the frontal sinus must be occluded. As soon as secretion sets in there must be an accumulation of fluid, which presses upon the anterior and posterior tables of bone forming the boundaries of the cavities, and as the pressure increases so will there be an increase of the pain. This may cease almost spontaneously as soon as the imprisoned fluid finds an exit through its natural passage, and if the inflammation subsides entirely no further discomfort need be felt.

In order to illustrate the causal connection between acute coryza and frontal pain, I will give a brief history of a case which was recently under my care:

Mr. Charles P—, aged twenty-seven, traveller, has been subjected to repeated violent attacks of colds, which manifested themselves chiefly by marked obstruction of the nasal passages and intense pain in the forehead, extending to both temples. This pain has, during recent attacks, been so severe that the patient was completely prostrated and unable to sleep in spite of the administration of the most powerful hypnotics. I found, on examination, that he had an unusually prominent brow and very protuberant superciliary ridges. On inspection, the mucous membrane covering the inferior turbinated bones was found to be so much swollen that the latter were in absolute contact with the septum narium on both sides. The entire surface of the forehead was painful to the touch, but the notches, through which the supraorbital nerves pass, were not more markedly tender. The entire mucous surface was dry and harsh, and touching it lightly with a probe caused considerable pain.

In order to stimulate the secretions, and thereby diminish the bulk of the mucous membrane, and restore the patency of the foramen leading to the frontal sinuses, I prescribed a small quantity of Hegar's fluid, with instructions that a few drops should be inhaled every hour until profuse secretion had set in. This fluid is composed as follows:

R. Acidi carbol. cryst.	3 j.
Alcohol fort.	3 iij.
Liq. ammoniæ fort.	3 j.
Aquæ destillat.	3 ij.

M.

This the patient employed five or six times, when a profuse mucous discharge appeared, accompanied by a gradual disappearance of the headache. The next morning he again visited me, and at that time, aside from a feeling of weariness, all discomfort had disappeared. The entire nasal cavity was lined with a layer of tenacious mucus, which I removed by means of a spray of alkaline water, and found that the turgescence of the mucous membrane had diminished so much that the patency of the canals was normal. There was not the slightest tenderness over the forehead, and all the sense of constriction had passed away.

Since this time Mr. P— has had repeated manifestations of coryza, with the usual accompaniment of frontal headache, but this always disappears as soon as he has made several inhalations of the fluid.

Chronic catarrhal rhinitis, when accompanied with hypertrophy of the mucous membrane, is also often attended with more or less pain in the frontal region.

¹ Muller's Archiv für Anat. Physiologie, etc., p. 147, 1853.

¹ Die Anatomie des menschlichen Kopfes, p. 359. Tübingen, 1867.

When we consider the fact that the frontal sinus and the nasal cavity are in such direct communication, we can hardly be surprised that disease of one cavity is frequently attended with a similar condition of the other. According to Zuckerkandl¹ there is one opening leading into the ostium frontale in the anterior portion of the infundibulum, and another between the insertion of the anterior extremity of the middle turbinated bone and the processus uncinatus, or one of the anterior ethmoidal cells.

This predisposes to consecutive inflammations of the frontal cavities, and, in fact, they are more frequently affected than any other of the pneumatic adnexæ, excepting the antrum of Highmore. The favorable position of these cavities, and the form of the foramen renders a restoration to a healthy condition more probable than in the other pneumatic spaces, as the fluids and secretions contained in them can readily be drained off. In a healthy condition, the mucous membrane lining this sinus does not secrete, but when it is diseased its discharges are similar to, but less in quantity than, those thrown off by the pituitary membrane. As the infundibulum may be occluded either by a swelling of its lining membrane or by pressure from a thickened turbinated bone, the secretion must increase in bulk until it either finds a natural outlet or forces its way through the roof of the sinus into the dura mater. Fortunately this latter is but a *dernier ressort*, which is but rarely encountered. I have known several cases of severe, persistent headaches, which have had all the changes of treatment rung upon them, and have only disappeared when the nasal cavity was restored to its normal condition.

Mrs. C. R—, aged twenty-four years, recently married, has, since her fourteenth year, suffered from continuous distressing headaches, which have been most intense in the frontal region. She informed me that during these ten years she cannot recall a single day during which she was free from pain. On close questioning I found that her paroxysms were always increased during wet weather; but she could not recall the fact that the season of the year exerted any special influence on her affection.

At one time or another Mrs. R— has been under the care of almost every authority in New York, in hopes of finding relief; but, in spite of the most varied forms of treatment, she has derived no lasting benefit. For some time past, however, she has noticed a considerable obstruction in both nasal fossæ, which interfered with respiration, and for the relief of this condition she came to me.

On examining the nasal cavities I found a diffuse thickening of the entire pituitary membrane, with decided hypertrophy of the anterior extremities of both the inferior and middle turbinated bones. The bulk of the former was so much increased that it completely closed the inferior meatus, and its inner surface was in immediate contact with the septum narium. Posterior rhinoscopy showed but slight thickening of the posterior ends of the bones; but I found the entire surface covered by a thin layer of muco-pus.

On applying pressure over the frontal sinuses the patient complained of some pain, but stated that she often did the same, as it seemed to afford some relief for her headache.

As a result of my examination I advised a removal of the hypertrophied tissue of the turbinated bones, hoping in this manner to relieve the nasal obstruction. The patient absolutely refused to consent to any operative measures whatever, but begged me to apply any other form of treatment which might afford her some relief. I thereupon cleansed the nasal cavity thoroughly by means of a coarse spray of Dobell's solution, and gave the patient a quantity of Hegar's fluid, in the hope that by irritating the mucous membrane and gustatory nerves I

might stimulate an active secretion. Two days later the patient returned, stating that the cleansing of the cavity had somewhat relieved the nasal obstruction, but the headache had not diminished. I again douched her thoroughly, and after a careful cleansing of the cavity, I insufflated a quantity of German sternutatory powder, called Schneeberger's sneezing powder, composed principally of finely powdered white hellebore (which can be procured at any German pharmacy), into the middle meatus, on both sides. I endeavored to drive the powder as nearly as possible to the orifice of the infundibulum. The patient soon began to sneeze violently, and continued to do so between forty and fifty times. This sneezing was not attended with any pain, and was soon followed by a profuse discharge of mucus from the nose.

Before leaving me the patient expressed herself as already much relieved. During her absence the discharges increased in quantity, and when I again saw her, after an interval of three days, I observed a very decided diminution of the thickening of the pituitary membrane. On the evening after the last treatment the headache had been greatly relieved, and for the two days following the pain was much less. I repeated the above applications six or seven times, at intervals of three days, with increasing benefit to the nasal stenosis and headache, and then gave the patient a quantity of the powder and a Davidson syringe, for nasal irrigation, with instructions to use both daily. I last saw her on January 26th, when she suspended further visits and treatment, owing to an imminent confinement. A few days ago, however, I learned that Mrs. R— had been entirely free from headache for nearly two months, and the nasal obstruction had almost disappeared.

We find that in this case an undoubted catarrh of the frontal sinuses was relieved, and, perhaps, cured simply by stimulating the mucous membrane to active secretion, thereby diminishing the congestion and consequent increase of bulk which caused an obstruction of the efferent passages. There are, however, many cases in which the mucous membrane and the turbinated bones are so hypertrophied that operative procedures alone will suffice to remove the obstruction.

Hartmann¹ has recently reported two cases of obstinate supraorbital neuralgia, due to empyema of the accessory cavities of the nose, in consequence of obstruction to a free discharge through the middle meatus.

Two years ago I had under treatment a case which strikingly illustrated this state of affairs. Mr. H. K—, aged twenty-seven, had suffered for many years from chronic conjunctivitis with nasal catarrh. He had been subject to many attacks of coryza, and in the winter of 1880–1881 contracted a violent cold, which was complicated with intense pain in the forehead, which remained even after the disappearance of the original trouble. The pain was so continuous, and the photophobia so intense, that he was compelled to absent himself from his business, and after the lapse of several weeks he consulted me for the relief of the nasal obstruction.

On examining the nose I found the mucous membrane hyperæmic and slightly swollen throughout. The nasal septum was deviated below to the right side, and above to the left, thus diminishing the size of both the middle and inferior meatus. The turbinated bones were greatly hypertrophied on both sides, so that but little air could enter on either side. There was a total absence of the sense of smell, and the voice was characteristic of an obstruction of the passages. In attempting to gain a better view of the cavities, I pushed the turbinated bones aside, and found them covered with a thick layer of creamy pus. Posterior rhinoscopy merely showed a swelling of the mucous membrane on both sides of the septum.

Pressure on the supraorbital notches caused intense neuralgic pain, which extended over the entire frontal region, but was not comparable to the paroxysms which set in every afternoon and lasted throughout the greater

¹ Normale und pathologische Anatomie der Nasenhöhle, etc. Wien, 1882.

¹ Berlin. klin. Wochenschrift, No. 48, 1882.

part of the night. At these times there was generally a profuse discharge of fetid pus from both nasal fossæ.

I had but little doubt that the pain was due to the nasal affection, and to satisfy myself on this point I inflated the nasal cavity by means of Politzer's method, as suggested by Hartmann.¹ After this I cleansed the passages thoroughly with an alkaline solution. This done, the patient felt himself much relieved, the pain and the fullness of the head being greatly lessened.

In order to enable the pent-up secretions to discharge freely, and to restore the nasal fossæ to their normal potency, I removed the hypertrophied tissues of the turbinated bones by means of the galvano-caustic snare. This was done in three sittings, and was followed by a marked improvement in the condition of the patient, although there was some pain in the supraorbital region for a few days after the last operation.

Before I undertook the treatment of the case, the patient had been under the care of one of the most eminent physicians in this city, who employed every remedy at his command for the relief of the neuralgia, but without avail. As soon as I cleansed the nasal cavity and allowed some of the pent-up secretions to escape, a decided improvement was noticeable, and when the connection between the nasal and frontal cavities was restored all trouble disappeared. I do not think that there can be any doubt but that the neuralgia and the obstructed condition of the nasal fossæ stood in the relation of effect and cause.

For nearly two years the patient has been able to breathe freely through the nose, and since that time, without any further treatment, the chronic affection of the conjunctiva has disappeared spontaneously.

I am somewhat at a loss to explain the manner in which the neuralgia was superinduced, whether it was due to a direct pressure upon the trunk of the supra-orbital nerve or caused by a reflected irritation of some of the many branches of the trigeminal nerve. Hack² has reported a number of cases of nasal affections combined with reflex neuroses, and found that the latter invariably disappeared as soon as the cause was removed or the irritability of the diseased surface was diminished.

Affections of the deeper parts of the nasal cavity and the ethmoid and sphenoidal sinuses may give rise to such grave conditions that disease of the brain or its meninges may be suspected. Schwalbe, Axel, Key, and Retzius³ have demonstrated the fact that not only can the lymphatics of the nasal mucous membrane be injected from the subdural and subarachnoidal spaces, but if force be used the fluid will pass through the lymphatic canals to the surface of the nasal mucous membrane. We thus see that there must be a direct communication between the nasal and the cerebro-spinal cavities. It is therefore fair to conclude that if these channels are obstructed there may ensue an increased pressure on the cerebro-spinal fluid. It occurs to me here, that the cases of exudation of fluids from the nose, reported a few years ago by Sir James Paget and Dr. Althaus, may be attributed to an unusual patency of these communicating canals, which favored an egress of the cerebro-spinal fluid.

In December, 1882, Mr. Henry B—, of Chicago, came to me to learn whether or no he had any nasal polypi. The patient had for several years been suffering from continuous headaches, referable to the base of the brain and the occiput, was greatly emaciated, suffered from insomnia and loss of appetite, and from difficulty of respiration. During the greater part of the time he had been under the care of Dr. Jewell, of Chicago, who, however, finding that he could not afford him any relief, and suspecting the true cause of the trouble, advised Mr. B— to consult a specialist for diseases of the nose and throat. My patient did apply to several physicians, who failed to give him any satisfactory information, and he,

therefore, determined to come to New York. On examination, I found that the posterior nasal space, on both sides, was absolutely filled with polypoid growths, which I determined to remove. Owing to the prostrated condition of the patient I was compelled to proceed very slowly, but in the course of several weeks I removed a sufficient number of polypi to completely fill an ounce vial. I operated at first with a Wilde's snare, and later by means of the galvano-caustic loop, hoping thereby to serve the double purpose of removing the growths and destroying their attachments.

The patient began to improve perceptibly after the removal of the most prominent polypi, which enabled him to breathe somewhat through the nose. As the patency of this passage was restored his headaches disappeared, his appetite returned, he was able to sleep without the aid of narcotics, and, in short, when he left me for the South, about five weeks ago, he was, to all intents and purposes, a well man.

Zuckerkandl¹ says, "that polypi arise in the majority of cases from ethmoidal turbinated bones and the tissues of the middle meatus. They are frequently found near the orifices of the ethmoidal foramina, and thereby contribute, by their gradual growth, to an obstruction and inflammatory condition of the cellular cavities contained in the ethmoid and sphenoid bones." This condition must naturally have an influence in causing more or less marked congestion of the base of the brain, producing headaches which may be irremediable, owing to the great difficulty of arriving at a satisfactory explanation of the cause of trouble. It is almost impossible to effect a radical cure, owing to the inaccessibility of the polypoid growths, as they are generally situated in a part of the nasal cavity which cannot well be reached by any surgical apparatus.

Of all the cavities which are connected with the nose, the antrum of Highmore is most liable to disease, owing not only to its intimate relations with the nasal fossa, but to irritation and inflammation caused by the development of the teeth. Diseases affecting the nasal cavity are readily propagated to the cavity of the maxilla, but owing to the peculiar situation of the communicating canal are not so easily relieved. It will be remembered that the foramen is situated in the upper portion of the inner wall of the antrum, and that it connects with the nasal fossa just below the middle turbinated bone. While in a healthy condition the lining membrane of the antrum does not secrete more fluid than can be absorbed by the lymphatics. But in disease these secretions are increased, the absorbents cannot carry them off, and they will accumulate until they reach almost the roof of the cavity, when they may force their way through the foramen into the nose. In the meantime, however, the patient may suffer from great pain in and about the upper jaw, owing not only to the inflammatory process but from the weight of the column of fluid contained in the cavity. This pressure and the propagation of the diseased condition to the teeth give rise to neuralgias, and even the teeth may become seriously affected.

In many cases it becomes necessary to perforate the antrum in order to procure a discharge of its contents and to allow the application of topical remedies. The most common mode of procedure, and the one which I have repeatedly employed, is to extract the second upper molar tooth on the affected side, and then to perforate the alveolus so that a direct communication between the cavity and the external air is established. Zuckerkandl,² however, suggests that it is more feasible to perforate the outer wall of the nasal cavity just behind and below the infundibulum, where the sinus is only separated from the nasal fossa by soft parts.

Mr. J. P—, of Newark, was frequently subjected to acute attacks of nasal catarrh, which were generally attended with more or less tenderness of the right upper jaw, and shooting pains into the corresponding eye and

¹ Deutsches Archiv für klin. Medicin, Band xx., 1877.

² Berliner klin. Wochenschrift, No. 25, 1882.

³ Hack; loc. cit.

¹ Op. cit., p. 79.

² Op. cit., p. 143.

ear. At these times he was always affected with toothache, which led him to consult his dentist, who gave him the assurance that his teeth were perfectly sound. In November, 1882, Mr. P—— was again affected with a severe cold, which, however, disappeared after the lapse of a few weeks. The pain in the upper jaw remained, however, and the patient observed, from time to time, a faint fetid odor in his nose, and whenever he lay on the left side he could distinctly taste some putrid fluid. Fearing that he might be affected with nasal catarrh he came to me for advice.

On examination I found a general hyperæmia of the nasal mucous membrane, with some hypertrophy of the inferior turbinated bones, especially so on the right side. There was a thin deposit of creamy pus in the middle and inferior meatus which emitted a very offensive odor. The right cheek was rather puffy, and pressure over the antrum gave rise to considerable pain, which was most marked near the infra-orbital notch, the place of exit of the superior maxillary branch of the trifacial nerve.

After thoroughly cleansing the nasal cavity I bade Mr. P—— to bend his head strongly toward the left side, and dilating the nares and illuminating the cavity I could see the pus exuding from the orifice of the maxillary foramen. I now felt certain that I had to deal with a chronic purulent catarrh of the antrum of Highmore, and determining to attack the disease boldly, I took the patient to a dentist, who unwillingly extracted an apparently healthy second upper molar tooth. On the next day I perforated the alveolus with a small trocar, and was pleased to have this followed by a copious flow of bloody pus through the canula. The quantity of fluid evacuated was more than three drachms. I now introduced a small drainage-tube, such as is used in trepanation of the mastoid cavity, and injected a one per cent. solution of carbolic acid into the cavity. After an interval of a few minutes I allowed this fluid to drain off, and ordered the patient to return on the following day. I then injected a fluid drachm of a two and one-half per cent. solution of chloride of zinc, which I retained in the cavity a few minutes by letting the patient lie down and turn his head toward the left side. When he again resumed the erect posture this solution escaped through the drainage-tube. I made fifteen injections, at intervals of from three days to a week. At this time the tenderness had disappeared, and I discharged the patient with instructions to return within a month. During all this time the drainage-tube remained *in situ*, and when Mr. P—— returned he informed me that at first he noticed an occasional exudation of fluid from the opening, but none had escaped for nearly three weeks. On examination I found no evidence of disease, and therefore removed the canula, intending to allow the fistula to close up. More than two months have now elapsed, and, in spite of several attacks of acute coryza, Mr. P—— has had no further trouble in the antrum.

I might continue to multiply instances indefinitely of the causal relations between diseases of the nasal and accessory cavities. But I hope that I have succeeded in calling attention to the necessity of making a careful examination of these parts in all cases where symptoms of headache, neuralgia, and other pains exist, which cannot be traced to other sources by the usual methods of examination.

DEAD DRUNK.—"Dead drunk" is described by savants of the Paris Biological Society to be a condition in which there is a proportion of one part of alcohol to one hundred and ninety-five parts of blood in the circulation. Should the proportion ever come to be one part of alcohol to one hundred of blood, death would ensue. This might happen, and in fact has happened repeatedly, where a very large quantity of alcoholic liquor is swallowed at one time and quickly. In ordinary drinking consciousness is lost, and with it the power to drink more, before the proportion of alcohol in the circulation becomes fatal.—*Medical and Surgical Reporter.*

THE HOT-WATER RETROJECTION IN THE TREATMENT OF GONORRHOEA.

By H. HOLBROOK CURTIS, M.D.,

NEW YORK.

DURING the past twenty years in no disease has there been less advance made therapeutically than in the treatment of simple gonorrhœa. Of late there have appeared in the London *Lancet* many articles upon this subject, but no especial claim has been advanced for any method that will effectually abridge the orthodox three weeks' limitation of this troublesome difficulty. I propose, without entering upon the discussion as to the probable bacterian origin of the malady, to explain a course of treatment that I have employed for two years with very excellent results.

Endoscopic examination reveals that a current of hot water passed continuously through the urethra primarily congests and secondarily renders anæmic the mucous membrane, in the same way that a hot bath affects the fingers. It is observed also that the urethra, after being acted on for some time, will endure water of a temperature that cannot be tolerated by the hand. Taking advantage of this fact, I have arranged an apparatus by means of which one is enabled to pass several quarts of hot water through the urethral canal from the prostatic portion outward, increasing all the time the temperature of the water until the thermometer oftentimes indicates 180° to 190° F. I have repeatedly passed ten quarts of water from behind forward in this manner, continuing the retrojection for some time after the point of toleration has been reached. This varies much in different persons. It remains then to pass a mild astringent solution through the same catheter that has been employed for the retrojection. Preferably I use a suspension of iodoform in a glycero-tannin solution in the following proportions:

R. Acidi tannici,	
Iodoformi.....	āā ʒij.
Glycerinæ	ʒj.
Aquæ	ʒiij.

Sig.—Heat, shake, and inject.

After the injection the catheter is withdrawn and the patient is directed to return in twelve or twenty-four hours, as the case may warrant.

As I intend shortly to publish the histories of some twenty cases of gonorrhœa and gleet that have been treated in this way, I will here but briefly outline the method and results.

In twelve cases of undoubted acute gonorrhœa the discharge has been entirely checked in three days. In two cases I have succeeded in aborting the disease by one prolonged (ten quarts) thermo-retrojection. In six cases the disease lasted six to ten days, while a case of chronic gleet that had made the round of the profession for nine months succumbed in seven days to dilatation and retrojection.

It has been noticed that cases that have been treated for some time with strong mineral injections do not respond nearly as quickly to the hot-water method. I have yet to see, however, a "fresh case" of gonorrhœa, in which no previous injection has been employed that will not recover within a fortnight if the retrojection is properly administered.

From a careful study of more than forty cases I claim for hot retrojection:

First.—The course of the disease is shortened by, at least, two-thirds, making the average limit of the case—viz., stoppage of the discharge—nearer one week than three.

Second.—The discharge immediately changes from a purulent to that of the nature of gleet, and is reduced to a very small quantity.

Third.—There is absence of chordee and pain in passing urine.

Fourth.—Stricture as a sequel is improbable.

Fifth.—The usual inconveniences of the disease are done away with.

A brief description of the apparatus employed is as follows: An ordinary wooden armchair is half-mooned in the front of the seat to admit a tall cuspidor. A pulley is rigged on the ceiling by means of which a tin pail with a lamp beneath is elevated. A rubber tube, provided with a stopcock and connection, leads from the pail and at any time may be fitted to an ordinary No. 8 English flexible catheter. The necessity of having a catheter with a bulbous end to prevent water passing into the bladder is purely imaginary. I would also state that an ordinary Davidson's syringe may be used, the patient giving himself the retrojection from the pail on a chair beside him; this is not as convenient, however, as the gravity apparatus. When the water is of the proper temperature, say 120° F., the catheter is vaselined and introduced to within an inch of the prostate, connected with the rubber tubing and the pail elevated to such a height that the flow is brisk. The lamp under the pail will keep the temperature of the water slowly increasing. The patient holds the catheter in position and may read the morning paper until the water becomes uncomfortably hot. The lamp is then extinguished and the retrojection proceeds at the point of toleration. After this has gone on for a sufficient time, a syringe of the *injection* formulated above is thrown in and the catheter withdrawn. If the patient is unable to come back at once give him the same prescription for urethral injection or slightly modified to suit the particular case, with directions to use it twice a day, until he can return. As an adjunct to this the only internal treatment I employ is bicarbonate of soda in five-grain compressed tablets, to take ten daily. Heretofore my cases have been confined to private practice, but recently, at the kind invitation of Professor Sturgis, I had an opportunity to demonstrate this method at the Charity Hospital, where I am told the results have been so gratifying that Dr. Sturgis has promised to compile the statistics in regard to this mode of procedure, which seems so rational that it will undoubtedly supersede the ordinary injection treatment.

Several writers have advocated warm water "irrigation" of the urethra in gonorrhoea and have claimed more or less success for their methods, but no one, to my knowledge, has shown any statistics that can compare with those obtained by prolonged progressothermal retrojection. More than a brief outline of the subject would be too lengthy for an article of this kind, but there is such a field for experiment afforded in this direction, I take this opportunity of placing some fragmentary data before the profession.

A SINGLE CASE OF OVARIOTOMY AND WHAT MAY COME OF SIMPLE CLEANLINESS.¹

By DAVID LITTLE, M.D.,

ROCHESTER, N. Y.

THREE years ago this Society was entertained and instructed by Dr. J. Marion Sims in a graphic portrayal of Thomas Keith and his ovariectomies. It must dwell fresh in the memory of each one who heard the recital. Quoting a single paragraph will suffice as a text for what I have to offer:

Said Sims: "If Keith cured from 86 to 90 per cent. before antiseptics, while others were curing 70 or even 80, and if he now cures 97 per cent. with it, while others cannot get even 88 or 90 with it, then I thought there must be something besides antiseptics to account for this difference. With this feeling I went to Edinburgh, and I think I have learned the secret of his great success."

This secret (if I heard rightly and remember correctly) might be summarized in the one word—*cleanliness*. Cleanliness that is next to godliness; cleanliness that is godliness; for to do good is to be godly, and as a bene-

factor in surgical operations cleanliness stands pre-eminent.

Almost three years later came the wonderful record of Lawson Tait—one hundred consecutive ovariectomies with but three deaths! and one of these due to "immediate suffocation," so as in no wise to be attributable to septic poison. "*and in no case was any detail of Listerism used.*"

In homely phrase, "put this and that together," and is it not apparent that Listerism played but an insignificant part in the success of Keith reported to us in 1880?

So Keith and Tait can "cry quits." Ninety-seven per cent. of recoveries tallied to each! One with his germicides and germ-shields, and the other germ defying; but both doubtless worshipping at the shrine of cleanliness.

Without further preface, let me introduce my single case of ovariectomy, nor let those with "their flocks and herds" who count their operations by the hundreds, smile at my lone "ewe lamb." Bear in mind the Scotch proverb, "Every mickle makes a muckle." Every little unit helps to swell the sum of experience.

Regina E.—(resident of Wheatland, Monroe Co., N. Y., of German nativity, aged forty-six, married and the mother of three children) first noticed a lump in her left side (iliac region) about June 1, 1881, which grew rapidly, invaliding her, so that with her illness and poverty she was forced to become an inmate of the County Almshouse, on February 28, 1882. Dr. Backus, the attending physician, made a diagnosis of ovarian tumor, and asked me to see her, in the latter part of March following.

We found a fluctuating tumor occupying the abdominal cavity and extending from pubes to near the ensiform cartilage, and lying largely to the right of the median line. It was slightly movable, and we thought we could trace its attachment and pedicle down into the right iliac fossa, though the woman insisted that the growth began in her left side.

Examination per vaginam showed the uterus to be tilted with its fundus to the right side.

The patient was bedridden and in constant pain, for which she had for months been taking hourly doses of morphia.

The operation was done on April 22d, in a room 25 x 18 x 11 feet in dimensions, thus having an air capacity of 4,950 cubic feet. This room was in the southeast corner of the third story, and was furnished with five windows and a door with a transom.

It had been thoroughly cleansed, painted, and white-washed a few days before. As soon as the woman, incased in flannel, was covered in bed, each of the five windows was opened, top and bottom, and so left as long as the patient occupied the room. The transom and door were kept closed, because of the existence of ten suspicious cases of post-partum fever lying in a room across the hall.

The instruments used (Thomas' case) were new. Sponges new and acid-cleansed. Anæsthetic, Squibbs' sulphuric ether.

Present and assisting, Drs. Backus and Montgomery of Rochester, Dr. Richmond of Livonia, Dr. Roseboom of Utica, and Messrs. Moore and Fulton, internes.

With hands prepared only by soap and water with a nail-brush, we were ready to begin. Temperature of room about 90° Fahrenheit.

The cut in the abdomen was four inches long. Before opening the peritoneum, all oozing of blood was stopped. Adhesions were found to abdominal wall and to omentum. Pedicle of tumor was traced to left side; tumor a monocyst; pedicle was twisted (which perhaps explained her pain). After emptying and drawing out the sack, the pedicle was tied in two halves by a strong, double silken ligature.

The pedicle was severed three-fourths of an inch above this, and its raw end smeared with liquid persulphate of iron. Two fine silken ligatures only were needed to se-

¹ Read before the State Medical Society, Albany, N. Y., February 6, 1883.

cure bleeding vessels. All these intraperitoneal ligatures were cut short and left *in situ*.

Sponges were freely used in the bottom of pelvic cavity, until they came forth clean and stainless as they entered. Then the cut was closed with interrupted sutures of silk. Operation was completed and the patient in bed in three-quarters of an hour.

And now I have to confess that (unlike Tait's cases) in this one were used two details of Listerism, so incomplete, however, that they should be admitted as inconsequential. For Lister and his imitators insist that, with a missing link in its details, the whole system falls to the ground, and fails in effecting its object of excluding the noxious germs.

For form sake, and to appease the fears of assisting surgeons, the water used was carbolyzed, but only to the extent of a drachm to the pint, *i. e.*, less than one part to one hundred and twenty! What part this inundated carbolic played in the destruction of disease-germs, if such there be, I know not, my care being that the vaunted germicide should not in this (as in many authenticated cases) prove to be a homicide.

Again, after the wound was closed, a piece of lint soaked in the thymol (1 part to 1,000) was laid on it, and over this was pinned the customary flannel binder. "Only this and nothing more." I should have mentioned, while describing the operation, that no one was asked to thrust a hand into the opened abdomen for any purpose. The gentlemen were polite enough to take my word for it that bladder, uterus, and remaining ovary were healthy, and the last sponges coming spotless from the pelvic floor satisfied them that we had, at least, made *clean* work of it.

The size of the tumor had to be estimated, owing to an accident. When the trocar was withdrawn, the rubber tubing attached to the canula was forced off, and most of the fluid escaped onto the floor; fortunately, none of it leaked into the peritoneal cavity. It was judged that about three gallons flowed from the cyst. The liquid was of a dark straw-color, and was albuminous.

And now as to results. The poor woman with her tumor lost her pain, lost her appetite for opium, and, in due time, lost her worn and haggard look and regained complete health. Only three-fourths of a grain of morphia in all was given to her after the operation. Her pulse never exceeded 116 per minute, and her temperature reached its highest point at $100\frac{2}{3}^{\circ}$! Both dropped to normal standard on the third day, and thereafter so remained.

On June 20th the woman walked away from the almshouse to the house of a friend a mile and a half distant. She called at my office last August and expressed herself as "perfectly well and able to do as hard a day's washing as any Dutch woman going."

In giving this history, for brevity's sake I have refrained from entering into the many little details which are known to be so essential to the proper performance of the operation. Suffice it to say I kept steadily in mind the lesson learned from Dr. Sims—Cleanliness, cleanliness, above all things cleanliness. To the surgeon's motto "*tuto, cito, jucunde*," might well be added "*et munditer*."

To this scrupulous cleanliness before, during, and after the operation, together with the free admission of air and sunlight throughout the management of the case, in my opinion, belongs the credit of its successful issue.

You remember what dear, soft-hearted old Uncle Toby said, as he bore unhurt the troublesome fly (which he vainly fought, but finally caught) to the open casement: "Go! Surely the world is wide enough for both thee and me." So said we to the bacteria, only (because we had been told they vastly outnumber the fly) they were given vent through five windows instead of one.

Vaccine virus needs but the slightest abrasion to effect its entrance into the system; if the unrecognized, or at any rate unconvicted micro-organisms are so numerous,

omnipresent, and dangerous, why don't they enter on their errand of destruction through like small gateways? "Ay, ay, a scratch, a scratch; marry 'tis enough. . . . No, 'tis not so deep as a well, nor so wide as a church door, but 'tis enough, 't will serve." And why do not the daily accidents of prick or scratch make us constant victims of septicaemia?

Common experience teaches that such trivial wounds are best left alone exposed to the air, and only covered, in nature's own time and way, with her plaster of dried blood and lymph. This common experience is but the outcome of an instinct. The dog licks his wound, the child sucks his; so the wound is cleansed.

Years ago, a certain "quack," wiser than his day and generation, or it may be building better than he knew, proclaimed to the wounded knight that he could heal his hurt by anointing the offending weapon, if only the sick knight would meanwhile keep his wound clean. His marvellous success soon banished salves and plasters, and there ensued open air and water-dressings. But now, again, the fear of the ultra-microscopic fiend brings back plaster and salve and in turn banishes air and water as being probable vehicles of the infinitesimal vermin.

Pasteur and his co-workers are engaged in investigations of absorbing interest, from which may some day come an "output" that shall give us an applied science, working a revolution in the healing art. Meanwhile, let us "hasten slowly," and hesitate to fight an unseen and perhaps imaginary enemy with uncertain and dangerous weapons; weapons that, like the boomerang, may be more destructive to friend than foe.

A CASE OF IDIOPATHIC (?) PURULENT INFLAMMATION OF THE SEROUS MEMBRANES OF ALL THE GREAT CAVITIES.

By FRANCIS P. KINNICUTT, M.D.,

PHYSICIAN TO ST. LUKE'S HOSPITAL, THE OUT-PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL, ETC.

C. F.—, male, aged twenty, grocer by occupation, was admitted into my wards in St. Luke's Hospital, February 4th.

The patient's condition was such that a reliable history could not be obtained from him. Doctor Robert Campbell, former house physician of the hospital, under whose care the patient had been, and by whom he was sent to the hospital, has kindly furnished me with the following facts. The patient had complained during the previous ten days of headache, wandering muscular pains, loss of appetite, and general malaise; had been free from chills, but was feverish. There had been several attacks of epistaxis during the same period. His bowels had been regularly moved; there had been no cough or sore throat, nor any discoverable eruption. The patient was first seen by Dr. Campbell on February 2d, and an examination at this time of the throat and chest revealed nothing abnormal. There was no eruption; there was general sensitiveness over the abdomen. Temperature, 103° ; pulse, 120; respiration, 24.

On the following day he was found lying in bed covered only with a horse blanket, in a room without a fire, and which was very cold.

The patient complained of stabbing pains in left side. Examination revealed pleuritic crackling over the whole of left chest, posteriorly. On the succeeding day the patient was admitted to the hospital. On admission he was well nourished, tongue dry, face congested; respiration, 40; pulse, 138; temperature, $104\frac{1}{2}^{\circ}$ (mouth); complains chiefly of pain in left side. P.M.—Patient slightly delirious; respiration, 50; pulse, 140; temperature, $105\frac{1}{2}^{\circ}$. Severe attack of epistaxis.

Physical examination of the chest was necessarily imperfect on account of patient's condition. There was marked flatness on percussion over the lower three-fourths of left chest, posteriorly, with distant respiratory

sounds and exaggerated voice over the same area; examination of the urine showed the presence of a small amount of albumen.

February 5th.—Respiration, 58; pulse, 152; temperature, 105 $\frac{1}{2}$ °. Flatness over whole of left chest, anteriorly and posteriorly, with distant respiratory sounds. Heart-sounds hardly distinguishable; impulse absent. Area of cardiac dullness cannot be defined on account of general flatness over left chest. Pericardial effusion believed to be present in addition to pleural. Exploratory puncture into left pleural cavity revealed the presence of a sero-purulent effusion. Aspiration performed and sixteen ounces of thin creamy pus, free from odor, withdrawn. Immediately previous to aspiration, respiration, 50; pulse, 132; temperature, 105°. Two hours later, respiration, 36; pulse, 138; temperature, 102°.

February 6th.—Patient passed a comfortable night; respiration, 44; pulse, 152; temperature, 102.5°. Flatness over whole of left chest, anteriorly and posteriorly. Aspiration again performed and sixteen ounces of sero-pus withdrawn, but with only very temporary improvement in patient's condition. The fluid in the pleural cavity apparently accumulated almost as rapidly as it was withdrawn; the physical signs remained unchanged; the symptoms of cardiac failure gradually became more marked, and death occurred on the 9th.

Autopsy, fourteen hours after death, by Dr. Ferguson, pathologist to the hospital.—Body well nourished; rigor mortis well marked; no cedema; no cutaneous lesion. Peritoneum: Visceral and parietal peritoneum congested, especially in pelvic cavity and over coils which dip into it; small amount of pus and lymph in this situation. Thorax: Right pleural cavity contains twenty-two ounces of sero-fibrinous fluid; left pleural cavity, seventy-four ounces of sero-pus. The right lung is markedly congested and cedematous; bronchi congested; left lung compressed against spinal column, seems totally deprived of air; and is covered by recent lymph. Heart: The pericardium contains about six ounces of fluid, consisting of serum, pus, and fibrin; valves normal; muscular tissue of heart normal in appearance, surface covered with recent lymph. Spleen slightly increased in size, normal in appearance. Kidneys normal in appearance. Stomach, intestines, bladder, urethra normal. Liver apparently contains a slight excess of fat. Larynx and trachea normal. Joints examined and found to be normal. Examination of the brain not permitted.

Microscopic examination of the different tissues showed only a slight degree of fatty degeneration of the cardiac muscle and swelling, with a cloudy appearance of the epithelial lining of the renal tubules.

Remarks.—So general an inflammation of a purulent character of the serous membranes of the great cavities is, in itself, an interesting observation. Such inflammations are of occasional occurrence in simple pyæmia and in the metastatic form. They are more rarely seen accompanying the acute infective diseases and as secondary to Bright's disease. Pericarditis, with bilateral pleurisy, is of sufficiently common occurrence in acute inflammatory rheumatism, but the exudation is usually of a sero-fibrinous character. In the present case, a very careful investigation of the immediate previous history of the patient failed to reveal the existence of any of the usual causes of pyæmia, the presence of an acute infective disease, of a renal affection, and finally, of any of the symptoms of rheumatism.

A very complete post mortem examination corroborated the clinical evidence of the absence of any possible source of pyæmic or septic infection; the kidneys, moreover (with the exception of presenting the cloudy appearance of the epithelium of the tubules not unusual in individuals dying of acute disease) were wholly free from disease. The inflammation of the peritoneum was almost wholly confined to that portion lying within the pelvis, indicating the absence of the influence of contiguity of structure in its production.

The very acute nature of the morbid process (the illness only extending over a period of ten days), its occurrence in an individual of exceptionally fine physique, the entire absence of any of the usually recognized causes of similar wide-spread serous membrane inflammations are noteworthy. I hesitate to pronounce the pathological process idiopathic in character, yet all the evidence obtainable in the case would seem to justify such an opinion.

CASE OF CYANOSIS DUE TO CONGENITAL CLOSURE OF AORTIC ORIFICE.

CHILD LIVING TWENTY-SEVEN DAYS.

By ALFRED MEYER, M.D.,

NEW YORK.

THOUGH cases of congenital malformation of the heart have not infrequently been put on record, with few exceptions these have been cases of malformation of the right side, with possible secondary changes in the left. Moreton Stillé, writing in 1844 (*American Journal of the Medical Sciences*), mentions sixteen forms of congenital heart disease giving rise to cyanosis, but does not even allude to atresia or stenosis aortæ. J. Lewis Smith ("Trans. N. Y. Ac. of Med., 1863," p. 335) publishes one hundred and ninety-five cases of cyanosis, of which seven were cases of disease of left side of heart, and of these seven only one of complete closure of the aortic orifice (Case 143). Rauchfuss (Gerhardt's "Handbuch d. Kinderkr.," vol. iv., pt. 1, p. 123) has collected twenty-four cases of congenital disease of the aortic orifice, in six of which there was stenosis and in the remaining eighteen atresia.

Of one hundred and thirty-nine cases of congenital heart disease which I have collected from the journals of the last fifteen years, there is not a single case which bears the remotest resemblance to my own, nor have I been able, after diligent search, to find a heart like mine in any of the pathological collections of the city. Of course, when speaking of the rarity of occlusion of the aortic orifice, I exclude cases of stenosis and of atresia aortæ at or near the points of insertion of the ductus arteriosus. Of these latter numerous instances are on record. Thus Eppinger (*Prager Viertelj.*, vol. cxii., p. 31), in a historical review of the subject, collected forty-two cases of this kind up to the year 1871, to which he added two more cases of his own; whilst Kriegk (*Prager Vier.*, vol. cxxxvii., 1878) collected and tabulated fifty-six cases, beginning with one observed by Paris at the end of the last century, and described in "Desault's Journal,"¹ which is probably the first case on record. To this series of cases I am able to add nine² more, omitted by Kriegk or published since the appearance of his article. A great many of this kind of cases live many years without any appreciable disturbance of health. Living to fifty and sixty years of age is not at all uncommon, and Reynaud (quoted by Kriegk) reports the case of a man dying at ninety-two years, in whom this malformation was found.

My own case is not one of this more common and favorable kind, but of the rare and fatal variety of *complete absence of the aortic orifice*. It has already been reported by me at the Society of German Physicians, but will surely prove of interest to a wider circle—a justification for its publication in detail in this journal.

On the evening of June 7th last I was called in haste to see the patient in question, a male infant, twenty-four days old, whom I found in great dyspnoea, with marked cyanosis of entire body, and no radial pulse to be felt on either side. Curiously enough the pulsations in each

¹ Gosling's Transl., vol. ii., p. 104.

² Hertel: Berl. Kl. Wochenschr., 1871, p. 337; Fitz: Bost. Med. & Surg. J., 1875, p. 444; Wasastjerna: Prag. Viertelj., 1876, vol. cxaxii, (2 cases); Greenhow: Lancet, 1876, vol. i., p. 674; Moore: Am. J. Med. Sc., 1877, vol. ii., p. 172; Lütich: Centralbl. f. d. m. Wiss., 1876, p. 351; Legg: Dublin Med. J., 1878, vol. i., p. 260; Kuessner: Berl. Kl. W., 1879, p. 3.

dorsalis pedis artery were full and distinct enough to permit of their being readily counted. At that time they numbered one hundred and thirty-five. On examination of the chest, to which, naturally, attention was first directed, nothing abnormal could be discovered in the lungs, but there was a distinct, loud, blowing systolic

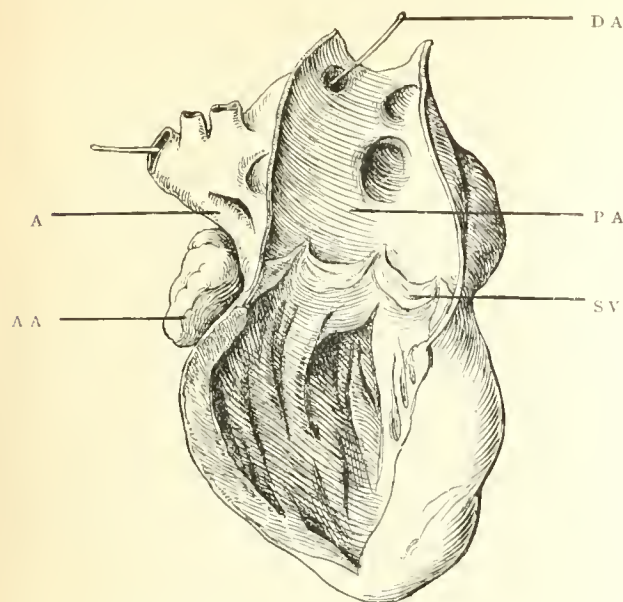


FIG. 1.

D A, ductus arteriosus; A, aorta; P A, pulmonary artery; S V, semilunar valves; A A, auricular appendix.

murmur to be heard in the neighborhood of the second and third ribs to the right of sternum. The mother of the boy reported that he had been short of breath from birth, but that no discoloration of the skin was observable until some time in the third week, and that then the midwife pronounced the child to be suffering from "severe jaundice." The gradual increase of the dyspnoea at nursing, as well as the deepening cyanosis, finally impelled the

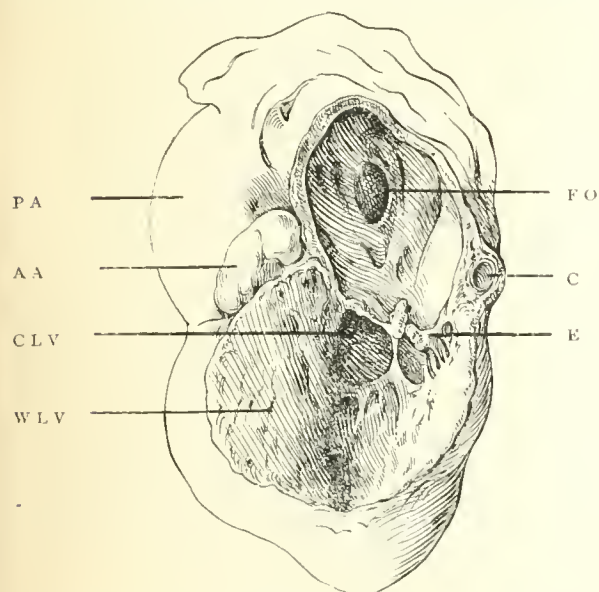


Fig. 2.

F O, foramen ovale; P A, pulmonary artery; C L V, cavity left ventricle; A A, auricular appendix; C, coronary vessel; E, endocarditic deposit; W L V, wall of left ventricle.

mother to seek other advice. This was on June 7th, when I found the condition as described above. The child was found dead in bed, somewhat more than forty-eight hours later. After a great deal of opposition, I was finally permitted to remove the heart through a small incision. The pericardium contained about three-fourths

of a drachm of clear serum. Heart-substance of a dark-blue color. Right auricle and ventricle both greatly dilated; foramen ovale pervious, pulmonary artery fully twice the normal size; ductus arteriosus pervious; left auricle about one-third the size of right one; walls of left ventricle about one-half inch thick, its cavity just large enough to hold a small pea, muscoli pectinati being fused into a solid mass. Mere traces of chordæ tendinæ to be seen. *Aortic orifice completely closed; no trace of semilunar flaps.* Ductus arteriosus leads into arch of aorta, which is about one-eighth inch in diameter, but ends as a blind sac at the base of the heart. Septum ventriculorum complete.

The circulation in this case was carried on by the right ventricle and the two auricles, the systemic circulation being supplied from the pulmonary artery via the ductus arteriosus.

The absence of a radial pulse, at a time when pulsations were to be distinctly felt in the dorsal arteries of the foot, seems to me accounted for by the fact that the arch of the aorta is more nearly a direct continuation of the ductus arteriosus than the vessels going to the upper extremities, and that hence the blood-current mainly took this direction.

A rather unusual feature of this case was the length of time the child lived—twenty-seven days. The one most nearly resembling it which I have been able to find in print lived only two days. It is the case of a girl reported by Canton in the London Pathological Society's "Transactions," vol. ii., p. 38.¹ The case quoted by J. Lewis Smith (No. 143) in the article already referred to lived four days.

A close inspection of the heart indicated that the malformation was due to an endo- and myo-carditis.

The causes of foetal endocarditis, as of many other foetal diseases, are obscure. Anxiety or fright are frequently mentioned in this connection. In my own case there was a history of this kind. When in the seventh month of pregnancy the mother was frightened by the severe scalding of one of her children, and shortly after nursed her husband during a severe attack of pleurisy. Be this as it may, the exciting cause of the endocarditis must certainly have acted after the end of the second or the beginning of the third month of pregnancy, for this is the period of closure of the ventricular septum, and, as we have seen, the closure was complete in this heart.

In the Transactions of the German Medical Congress,² 1882, Von Hoffman records a case of congenital heart disease, in which the placenta was the seat of numerous recent and old extravasations. He advances the theory that pathological products had been introduced through villous absorption into the foetal circulation, and had thus given rise to endocarditis. He advises a careful examination of the placenta, and believes much light may be thrown on the etiology of congenital disease.

INFLUENCE OF FOWLER'S SOLUTION UPON THE HÆMOGLOBIN IN THE BLOOD.—From an investigation made to determine the effects of the medicinal administration of some remedies upon the proportion of hæmoglobin in the blood, Dr. Fenoglio, of Turin, concludes that the iron preparations vary considerably in their effects. Fowler's solution increases the hæmoglobin, and this becomes more marked the longer it is given. In spite of the general opinion to the contrary, the administration of Fowler's solution is indicated in anaemia, chlorosis, and in general in all conditions in which there is a decrease in the hæmoglobin, for the influence of this agent is very evident in increasing the proportion of the hæmoglobin. And, furthermore, its use increases the appetite and produces a general improvement in the bodily appearance and condition.

¹ Also included in Rauchfuss' series of cases.

² MEDICAL RECORD, December, 1882.

Reports of Hospitals.

THE TREATMENT OF FRACTURES IN BRITISH HOSPITALS.

(From our London Correspondent.)

THERE is, perhaps, no other province in the wide domain of Surgery, in which similar and equally satisfactory results are so commonly brought about by a variety of means than in the treatment of simple fractures of the limbs. And this is the case, not because any great diversity of opinion exists as to the end that is to be desired, for that cannot be alleged in this particular instance, but rather because the result sought for is in all cases identical, though capable of being accomplished by very many forms of treatment, which differ in this detail, and allow scope for the ingenuity and dexterity of the individual surgeon.

Fractures of the limbs are so common, that it is not a matter of surprise that we find at each institution some recognized method, which is sanctioned by custom and hallowed by time, for meeting all the more common forms of each injury, whilst any complication that may be found needs generally but a very slight modification of the apparatus. And this is rendered all the more necessary seeing that such injuries, except when complicated by some serious addition, such as severe injury to a joint or rupture of an artery, are treated in the first instance by the house surgeon, and the surgeon on his visit is rarely called upon to do more than approve, or at most to suggest some slight alteration in the apparatus.

Except there be some other injury, or on account of the feebleness of the patient, or in the event of some serious complication to a joint or artery, cases of fractures of the upper extremity are usually treated as out-patients, thus coming entirely under the care of the house surgeon and his dressers, and this renders it necessary that a convenient and portable apparatus shall be applied to keep the ends of the injured bone in good apposition. It would be impossible to enumerate the many ways in which fracture of the clavicle is dealt with, or the many ingenious appliances which have been invented by surgeons and by instrument makers; but speaking only of hospital practice, the result obtained by a simple bandage with or without a pad in the axilla, and applied so as to throw back the shoulder upon the injured side, to raise and keep steady the humerus, and to take off the weight of the arm, are as satisfactory as could be wished for. Sometimes a figure-of-eight bandage, with a sling for the arm, produces the desired effect, whilst in other cases where it is difficult to overcome the deformity, the surgeon must rely upon his skill in using and applying a bandage, with a pad secured in the axilla by a strap passing over the opposite shoulder.

Fractures of the scapula do not commonly occur without either severe bruising of the surrounding parts or some other more serious complication, of which fractured rib is by far the most frequent. When they do occur without any serious complication, the treatment consists only of a sling or bandage to steady the arm and take off the weight of the limb, and this is all that can be done if the acromion or coracoid process be broken.

Before speaking of the mode of treating the long bones in detail, it may be well to mention some of the materials which are in use in London at the present time for securing the position of fractures, after the application of splints has been dispensed with, as these means are not uncommonly found available in the first instance, and can be applied in many instances where there is no bruising, and where only one of two bones is broken, as happens particularly in the case of a fracture of the fibula or radius. The principal of these are, the starch or glue bandage, the plaster-of-Paris bandage, and one made stiff with dextrine, gum, and chalk, etc. A very useful material for this purpose has long been in use at St. George's

Hospital, and can be applied in the first instance in treating fracture of the fibula without bruising, and is almost invariably employed to put up fractures of the thigh or leg as soon as union has taken place and the splints can be laid aside. A piece of ordinary stout mill-board is cut to about the size necessary to embrace the limb; it is then soaked in hot water, which renders it pliant, and is shaped roughly to the limb, the edges being torn carefully so as to form a bevelled margin. A piece of flannel is then placed round the limb, or a simple roller is applied, and then a bandage is neatly and firmly carried from the toes to a distance above the joints between which the fracture is situated, and closely embracing the mill-board. This, on drying, makes a very convenient apparatus, light and strong, and in order to increase its strength and to keep the bandage from becoming unravelled, a thick coating of clarified gum is pasted over the bandage. The starched bandage which is in general use at University College is applied in much the same manner, coarse pasteboard soaked in starch being used, and the limb being surrounded by an even layer of cotton-wool before this is applied. This being elastic, avoids the danger of compression which might ensue when this treatment is followed, as it often is, in the case of recent fractures; and the apparatus has the advantage, when thus applied, that it can, if necessary, be split up by a strong pair of pliers, and its width curtailed, while its efficacy for support can be re-established by the application of tapes or a fresh bandage. With one of these forms of permanent apparatus it is almost invariably the custom to treat fractures after union has taken place, and in many instances where the displacement is not great and the extravasation slight, recent fractures are also treated in this way. In the case of the bones of the leg, a junk is sometimes slung in a "Salter's swing" and the limb placed in it for a few days, until all swelling and bruising have disappeared. A solution of silicate of potash is sometimes preferred to either of the above-named materials.

To return, then, to the consideration of the fractures of the various bones and the usual plans for their treatment. In London hospitals the general method adopted in cases of fracture of the shaft of the humerus is to put the arm up in four well-padded wooden splints tied together by two pieces of bandage which are made to encircle them, one above and one below, and the forearm, being supported by a sling round the neck, gives sufficient extension to ensure a good position of the broken ends. The fingers and forearm may be left unbandaged, unless there is a tendency for these parts to become swollen, and this treatment is usually continued until union has taken place, but the plaster-of-Paris bandage can be applied as soon as all swelling has subsided. This form of treatment can be used in all cases of fracture of the shaft, except those of the condyles or of the lower end of the bone, for which a rectangular wooden splint is almost always resorted to, with or without three additional flat splints to encircle the humerus, the one arm of the right angle being placed along the front of the forearm, and the other along the anterior aspect of the humerus. Any immovable apparatus is disapproved of in this locality on account of the desirability of making early movement in the elbow-joint, which generally is more or less injured when the accident takes place, and is therefore liable to become stiff if passive motion is not commenced at an early stage.

The old plan of treatment of fracture of the olecranon was to put a long straight splint on the anterior aspect of the arm and thus keep it fully extended, whilst the fragments were brought as nearly as possible into apposition by a figure-of-eight bandage. But when, by the action of the triceps, the upper portion of the ulna was drawn a long way up the arm, this plan was not found to give very good results, which answered, however, sufficiently well when the fibrous covering of the bone held sufficiently together to prevent any great separation of the

parts. Accordingly, the plan which has been successfully carried out in the case of the patella has been tried for the ulna, and the parts brought closely together by a silver wire passed through holes drilled obliquely down from the surface of each fragment. Under the antiseptic system this mode of proceeding has been attended with remarkable success in the few cases which have been reported, but it remains to be seen whether it is capable of being more generally followed.

A couple of well-padded, straight, and flat wooden splints are generally all that is required to keep the bones of the forearm in position when fracture takes place in the shaft of one or both, but many plans are in use for correcting the deformity in the injury which goes by the name of "Colles's fracture." Some surgeons use these same splints, and by a turn of the bandage which keeps them in position, passed over the hand, maintain it at an angle downward to the side of the ulna, and obtain satisfactory results. Another very useful apparatus, by which the deformity is more easily corrected, is that invented by Dr. Gordon, of Belfast, who denies that impaction of the broken ends of the radius is of common occurrence, and corrects the deformity "by traction on the hand or pressure on the fragments, placing the hand in the prone position, then applying to the anterior surface of the forearm a splint to which a wooden conical or triangular piece is so attached that the external border of the splint projects beyond it; and on the back of the forearm a straight splint more thickly padded over the wrist than over the forearm," the whole to be fixed by two straps of webbing, and not by bandage. A more convenient and less complicated method in common use is a pistol-shaped splint applied to the back of the hand, with or without a short straight splint to the front of the forearm, and not extending beyond the wrist; the two being kept in position by a bandage.

Passing to the lower limbs, and to the fractures which occur in the femur, the plan of treatment usually followed in London hospitals is by one of the two forms of long splint reaching from the axilla down to the foot, and applied with or without shorter splints surrounding the thigh. When these are applied the foot is fixed by bandages to the lower end of the splint, and to an iron foot-piece which runs out at right angles to it, the form of splint known by the name of the French surgeon Desaulx, and this is secured to the body by a band passing round the waist, and runs up on the outer side of the body to the axilla, having a fork cut in its upper extremity for the purpose of giving a secure *point d'appui* for the perineal band, as it is called, by which traction is made. On this band are threaded three short flat splints, the upper ends of which are cut obliquely so as to fit the line of the groin, and these, with the long splint, surround the whole thigh, and are kept in position by one or more pieces of webbing. The whole having been properly adjusted, traction is made by tightening the perineal band, which, by passing over the upper end of the long splint round the groin and behind the nates, causes extension of the whole limb, and brings the fractured surfaces into close and accurate apposition. The shorter splints are, however, very frequently dispensed with, and then extension is effected by means of a weight applied with strapping to the leg and passing over the end of the bed, where an apparatus is fixed with a rest, over which the cord attaching the weight of seven to nine pounds is passed; and to further the effect of extension the lower end of the bed is slightly raised by blocks, so that the weight of the body may act in a manner to extend from the opposite direction. A patient thus treated is usually kept in bed for from four to seven weeks, and then one of the forms of immovable apparatus is generally applied, plaster-of-Paris being less frequently used in the case of the thigh on account of the great weight which a splint made with this material necessarily involves. With very young children the best results are often obtained by using a weight to the leg as above described, whilst to secure

the limb from movements during sleep, and to keep the fragments in good position, a sandbag is placed on either side of the thigh, and another laid across the seat of the fracture; and further to prevent the patient from slipping down and so nullifying the influence of the weight, a band is passed behind the back from which two loops pass over the shoulders, and this is tied beneath the bed or secured to its upper end. One of these forms of treatment suffices in almost all fractures of the thigh-bone, but there are some in which the broken ends cannot be kept in position by any such means, and this happens particularly when the break occurs a short way below the trochanters, and the upper fragment is drawn upward and inward by the action of the psoas. For these cases the most frequent apparatus used is Earle's bedstead, which allows the patient to lie flat on his back, but the foot being secured on the injured side to a foot-piece, the knees are bent over the raised portion of the bed, which thus forms a double inclined plane, and traction is kept up by the weight of the body, the knee thus becoming practically a fixed point. Many other ingenious modes of effecting the same results have been invented and are occasionally used, but they are not in general use, and are only required in exceptional cases; such, for instance, are the methods of placing the limb in a wire support, without splints, and making extension by a weight attached to the foot and passing over a pulley, which is placed at some height and distance from the end of the bed, or the splint known by the name of "Thomas," which consists mainly of a couple of parallel iron rods united at both ends, the upper being secured round the pelvis and the lower to the foot, whilst a bandage passes round the whole apparatus and gives support to the lower part of the limb.

The treatment of fracture of the patella varies in detail at almost every institution, but the main points are to reduce the effusion into the synovial membrane of the knee-joint, by which the primary separation of the fragments is mainly produced and maintained, and then to bring the two surfaces as nearly as possible in apposition. The first object is attained by raising the limb to an angle with the trunk on pillows, junks, or other apparatus, and applying evaporating lotions to the joint, and the second, by the use of bandages applied in various fashions, strapping, to which is sometimes attached a weight, which, passing over the foot, is intended to drag down the upper fragment and to act counter to the retraction of the quadriceps extensor. Some surgeons still use Malgaigne's hooks, but they are objectionable on account of the risk of inducing erysipelas. The operation of wiring together the fragments has been already alluded to, and has now been performed in a considerable number of instances, but the danger, even with the utmost aseptic precautions, is sufficient to deter surgeons from recommending the operation, especially when the accident occurs, as it most frequently does, in persons past the healthiest period of life, and also considering the very useful limb which is obtained by patients who are willing to submit to a prolonged course of treatment by simple means. Where the separation of fragments has taken place after fibrous union between the two ends of bone, the operation has been resorted to in several cases with more or less satisfactory results. Where splints are used for the treatment of fractures of the bones of the leg, those which bear the name of Cline are perhaps most frequently had recourse to. They consist of two pieces of light pine-wood roughly hollowed out and shaped to embrace the outer and inner surfaces of the calf, ankle, and foot, a round hole being cut for the malleolus in each. These are padded with tow or cotton-wool, and are fixed to the foot by pads and bandages, whilst they are secured round the leg by two pieces of broad webbing. Other surgeons prefer to support the back of the limb, and for this purpose use three flat deal splints to which a foot-piece is applied, and these are kept in position by webbing and strapping or bandages.

Whatever form of splint is used, the custom is almost invariable of swinging or raising the limb, either by junks or by the use of "Salter's swing," which allows the patient to exercise more movement of the body without disturbing the injured extremity. In some cases where the swelling is not great, the limb is placed in plaster-of-Paris, by laying strips of blanket soaked in the plaster on either side of the leg, and bandaging with muslin into which the dry plaster has been rubbed, cotton-wool being used, or, as some prefer, a flannel bandage, to guard against the risk of subsequent swelling. For Pott's fracture, where ecchymosis forbids its immediate treatment by some immovable apparatus, the practice recommended by the Dublin surgeon is usually adopted, namely, to place a single flat wooden splint upon the inner side, with a thick pad over the inner malleolus, and to secure to this the foot below and the leg above by a light bandage.

The same apparatus suffices in the treatment of compound as in simple fractures, the more so as the wound is almost invariably treated on antiseptic principles, more or less strictly carried out in the manner of Professor Lister. Some surgeons, however, still adhere to the use of "Assalini's fracture-box," a weighty and somewhat cumbersome machine, whilst others prefer MacIntyre's splint, which has the advantage of being more easily cleaned, and is thus less likely to become a medium for conveying or retaining the germs of contagious diseases.

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ANEURISM IN THE GALL BLADDER.—At a recent meeting of the Society of German Physicians in Prague, Dr. Chiari presented a specimen of aneurism in the gall-bladder. The patient had died of melæna. At the autopsy the œsophagus, stomach, and intestines were found filled with partly fluid blood. About two fingers' breadth below the pylorus, in the wall of the duodenum, was a fistula, closed with a blood-clot, leading into the gall-bladder. The latter contained about a dozen calculi. At its lower part was seen an aneurismal dilatation in the course of the right hepatic artery measuring one inch in length by about half an inch in width. Death had resulted from a rupture of this sac. Careful search revealed a second aneurism protruding into the gall-bladder. It was the size of a pea and arose from a branch of the gastro-duodenal artery. There had been an inflammation of the gall-bladder with ulceration, by which the arteries had been laid bare, and the aneurisms resulted from the blood-pressure upon the exposed arterial walls. —*Wiener Med. Wochenschrift*, February 3, 1883.

TREATMENT OF VASCULAR TUMORS WITHOUT OPERATION.—Dr. Fiorani has treated several cases of telangiectasis successfully by the external application of corrosive sublimate in collodion (three parts in twenty). He applies four layers of the substance over the tumor, and a little beyond, with a camel's hair brush. On the fourth day the edges are a little raised, and then a second application of four layers is made. This is repeated every four days until the swollen edges have become depressed. After the crust falls off, the surface is seen to be somewhat sunken and of a pinkish color, which gradually changes to a normal hue. The procedure is entirely painless. It is to be employed only where the angioma is raised but a line or two above the surface. —*Allgem. Med. Central Zeitung*, January 3, 1883.

THROMBOSIS OF THE BASILAR ARTERY.—Professor Leyden (*Allgem. Med. Central Zeitung*, January 20, 1883) relates two cases of this rare affection. The thrombosis results from arterial sclerosis, with consequent dilatation, or from embolism. In the latter case the embolus is usually lodged in one of the vertebral arteries. The changes in the vessels are usually due to syphilis. Ley-

den divides the symptoms into local and general. To the former, due to changes in the pons and medulla, belong paralyzes, difficulty of deglutition and of speech, and a low temperature. The paralysis may be of the face and extremities on the same side, of the face on one side and the extremities on the other, or of the oculo-motor nerve on one side and of the facial muscles and extremities on the opposite. This points to a lesion in the crura cerebri near the pons. To the general symptoms belong stupor, somnolence, delirium, and sopor. They depend upon disturbances of the circulation, induced through closure of the basilar artery. Choked disc is a symptom sometimes present and due to the same cause.

MEDICATED GELATINE IN THE TREATMENT OF SKIN DISEASES.—Dr. Pick speaks highly of medicated gelatine in the local treatment of various skin diseases. It is a clean and convenient dressing, obviating the necessity of bandages or plaster to retain the application. After a bath the patient applies the gelatine, melted in a water bath, with a brush, and after it is dry paints over it a thin coat of glycerine. The latter prevents cracking and chipping off of the dried gelatine, and also keeps it flexible, so that the joint movements are not interfered with. The following is the mode of preparing the medicated gelatine: Dissolve fifty parts of gelatine in one hundred parts of distilled water in a water bath. Then add the medicament in the desired proportion, stirring constantly. Then set the mixture aside and, when cool, wrap in oiled paper. The patient is instructed to melt a piece of this gelatine cake in a saucer set in hot water and, when fluid, to apply with a camel's-hair pencil to the diseased surface. When it is desired to make a fresh application, the patient takes a warm bath and the old dressing is washed away. —*Allgem. Wiener Med. Zeitung*, February 13, 1883.

TREATMENT OF NEURALGIC METRORRHAGIA.—Uterine hemorrhage, occurring in connection with lumbo-abdominal neuralgia, is a condition which is pretty generally recognized, and one for which treatment is, as a rule, unsatisfactory. A writer in the *Revue Méd. Chir. des Mal. des Femmes* claims to have employed with success the tincture of aconite in repeated doses. The only indication for its use is the establishment of a relation between the neuralgic exacerbations and the return of hemorrhage. Even in cases depending upon actual lesion of the uterus, the writer asserts that we can always obtain a favorable remission, if not a permanent cure. The tincture is given in drop doses, in a teaspoonful of water, every fifteen minutes for six hours. No food is to be taken in the meanwhile. On the following day, if the symptoms are ameliorated, the aconite may be repeated in the same dose. If there is no improvement the dose is to be doubled. The maximum daily dose necessary to arrest the hemorrhage is said never to exceed forty-five to fifty drops. But this is an amount of aconite that might give rise to serious symptoms, and the effects of the drug should be very carefully watched.

ANTISEPTIC THORACENTESIS.—In the *Revue de Chirurgie* for January, 1883, Dr. Hache reviews at length the various operations for the removal of pus from the pleural cavity. A comparison of the results obtained in the different modes of procedure leads him to prefer that which is conducted in strict accordance with the rules of Lister himself, even to the eight layers of gauze and the mackintosh. The following are the rules by the strict adherence to which he thinks the greatest success may be obtained: 1. The operation and the subsequent dressings should be performed under the most vigorous antiseptic precautions. 2. The incision should be large and permit of the complete evacuation of the contents of the pleural cavity. The operation should be undertaken as soon as the diagnosis is made. 3. A single washing out of the pleural sack should be made, unless in exceptional cases. A large drainage-tube is to be inserted, and removed only when the discharge has nearly ceased for

several days. When conducted in this way, Dr. Hache favors the operation as leading to a more certain and speedy cure than do the old methods. Since such scrupulous attention to minutiae is required to ensure the success of the procedure, it would seem to be better to transfer it to the domain of surgery.

TYPHO-MALARIAL OR CONTINUED FEVER.—Dr. R. D. Webb concludes a paper in the April number of the *American Journal of the Medical Sciences* as follows: "Seeing, then, that fevers are so closely allied generically, and that even when separated into species, there are striking resemblances; that pathological researches do not establish a constant anatomical lesion, which is pathognomonic of any one of them; and that ulceration of Peyer's glands (claimed as characteristic of typhoid fever) is frequently found in other diseases, we are justified in claiming that a continued fever, occurring under circumstances which point to a miasmatic origin, although it may present many of the vital phenomena of the typhoid fever, and occasionally its recognized anatomical lesion, is still malarial fever. There remains, to his mind, but one other explanation of these continued fevers, viz., that they are to be regarded as atypical typhoid fevers, originating *de novo*. But, admitting the origin, *de novo*, of typhoid fever from animal miasm, and that possibly it may have thus originated in the example he has given, even the warmest advocate of this view will be unable to bring those sporadic, isolated cases which occur again and again in malarial, but otherwise salubrious and healthy country localities, within the rôle of such instances as are claimed as establishing this mode of origin. The natural conclusion, taking all the facts into consideration, is that they are malarial fevers of a typhoid form, using the term typhoid, not in a specific sense, but as indicating a typhoid condition of the system.

GASTROSTOMY, ŒSOPHAGOSTOMY, AND INTERNAL ŒSOPHAGOTOMY.—Operations on the internal organs of the body have become much more common than they were formerly, and in recent years the stomach has been very frequently operated on with the view of counteracting the effects of Œsophageal obstruction. Dr. Morell Mackenzie, in the *American Journal of the Medical Sciences* for April, 1883, analyzes the cases of this character which have been already published, and gives an account of two new cases. He finds that gastrostomy has been performed 81 times, and that death occurred from shock in 27 or in 24.6 per cent.

The advantages of gastrostomy are: 1, that it can be carried out with comparative ease; 2, that there is very little risk in the steps of the operation itself, especially if done in two acts separated by a proper interval of time; 3, that there is almost entire certainty of being able to effect the object aimed at, which is the establishment of an alimentary fistula altogether beyond the seat of stricture; and 4, that the fistula is hidden from sight. The only disadvantage is that gastrostomy still yields a high percentage of deaths. Twenty-six cases of Œsophagostomy are analyzed; of these 16 died within a fortnight, and 7 died from shock.

The advantages claimed for Œsophagostomy are: 1, that it is attended with comparatively little shock; 2, that it facilitates subsequent dilatation of the stricture; while the disadvantages are that the operation is a very difficult one, and attended with considerable danger from its proximity to so many important structures, and there is great uncertainty in any given case whether the opening in the Œsophagus can be made below the stricture; and finally a discharging fistula in the neck is a conspicuous disfigurement.

Seventeen cases of internal Œsophagotomy are analyzed, and the following advantages claimed for this operation: 1, that it is attended with an inconsiderable amount of shock; 2, that if the stricture can be thoroughly divided, gradual dilatation can be carried out, and a cure thereby effected; 3, that the procedure involves no ex-

ternal wound. The disadvantages of Œsophagotomy are: 1, that it can only be safely performed in cases where it is still possible to pass a bougie; 2, it is often difficult to pass all the strictures; 3, in many cases the walls of the Œsophagus are so thickened that limited longitudinal incision does not relieve the obstruction; 4, the actual danger in the operation is far from inconsiderable.

THE USE OF IODINE AS A STOMACHIC SEDATIVE.—The employment of iodine for the relief of the vomiting of pregnancy has been somewhat in vogue for a number of years. And while the success attending its use has been pointed out with more or less enthusiasm, its exact value has never been established. Dr. T. T. Gaunt (*American Journal of the Medical Sciences* for April, 1883) has for a number of years been employing the compound tincture of iodine in drop doses in nearly all forms of emesis, and reports thirteen cases of the most varied character, in all of which vomiting was promptly arrested by the use of this drug.

PERINEPHRIC ABSCESES.—Prof. Dr. John B. Roberts (*American Journal of the Medical Sciences*, April, 1883) believes that purulent collections in the cellular and adipose tissue surrounding the kidney are very properly termed perinephric, or circumrenal, abscesses. It has recently become somewhat customary to speak of them as perinephritic abscesses, but Dr. Roberts believes that perinephric is etymologically the more correct adjective.

The early recognition of the existence of perinephric abscess, and the determination of its relative position with regard to the kidney is important, as the promptness and efficiency of operative treatment must depend very much upon the early discovery of the exact position of the abscess. The author arbitrarily divides the perinephric celluloso-fatty tissue into six tracts. The upper, middle, and lower anterior; and the upper, middle, and lower posterior tracts. There is, of course, no sharp definition between these regions, which are used to conveniently indicate the location of the disease.

It may be premised as an axiomatic truth that, although there may be pains radiating in various directions, anterior inflammation will give rise to pain especially in the front or side of the abdomen, posterior lesions to pain in the loin. Tenderness upon pressure, œdema over the abscess and pointing will be similarly exhibited. The swelling, the tumor-like outlines, and the feeling of resistance to palpation will naturally be the more evident in anterior lesions because the tissues between the disease and the surface are flaccid. Involvement of the chain of sympathetic ganglia, situated along each side of the spinal column, would occur in posterior lesions only.

The following tabular statement of symptoms is given to assist in the localization of perinephritis and perinephric abscess:—

All anterior regions.—Pain, tenderness, swelling, œdema, and pointing in front and side of abdomen. All posterior regions.—Pain, tenderness, swelling, œdema, and pointing in loin. Upper tracts.—Pleuritic friction, pleural effusion, empyema, expectoration of pus; dyspnoea; suprarenal involvement; solar plexus involvement. (On right side.) Bilateral œdema of legs; jaundice; fatty stools; persistent vomiting; rapid emaciation; ascites. Middle tracts.—Albuminuria and casts; suprapubic, scrotal, or vulvar pain or anæsthesia; suppression of urine; uræmia; pus in the urine; œdema of scrotum or varicocele (especially on left side). Lower tracts.—Flexion of hip; pain or anæsthesia of front, inside or outside of thigh; retraction of testicle; pain at knee; scrotal or vulvar pain or anæsthesia, without accompanying albuminuria; unilateral œdema of legs; abscess or sinus near Poupart's ligament; constipation (if left side); involvement of chyle receptacle (if right side).

THE GERMICIDE VALUE OF CERTAIN THERAPEUTIC AGENTS.—Dr. George M. Sternberg, in the *American Journal of the Medical Sciences*, April, 1883, has made a long series of experimental studies as to the germicide value of certain therapeutic agents on various forms of bacterial organisms. In his experiments on the micrococcus of gonorrhoeal pus, he found that, in general, those reagents which destroyed the vitality of the micrococcus from pus are destructive of other organisms of the same class; and their relative value as germicides is not changed when a different micro-organism is used as the test of this value. Moreover, the reagents which were found to be practically valueless as germicides in the first series of experiments, *e.g.*, ferric sulphate, sodium sulphite and hyposulphite, boracic acid, etc., proved to be equally without value when the test was extended to other micro-organisms of the same class. But the reagents found to possess decided germicide power have, in some cases, a different value for different organisms. In other words, the vital resistance of different bacterial organisms to the reagents in question is not in all cases the same. Nevertheless, the comparative germicide value of the reagents tested is the same for the several test-organisms, and, allowing certain limits for specific peculiarities, it is safe to generalize from the experimental data obtained in the practical use of these reagents as disinfectants. But it must be remembered that the resisting power of reproductive spores is far greater than that of bacterial organisms in active growth (multiplication by fission), and the data obtained for the latter cannot be extended to include the former. The *antiseptic* value of the reagents tested depends upon their power to prevent the multiplication of putrefactive bacteria, and this is not necessarily connected with germicide potency.

DISINFECTION OF THE STOOLS IN TYPHOID FEVER.—The importance of the thorough disinfection of the stools in typhoid fever is, to those who believe in it at all, so great, and its practical results in the control of the extension of the disease are so manifest and direct, that any additional data as to the best methods of employing disinfection cannot fail to be of interest. On the other hand, there are quite as many other physicians to whom the subject appears to have no importance whatever. These latter either do not believe in the necessity of the disinfection of enteric fever stools, or else they regard it as of so slight moment that it matters not practically whether it be attended to or not, or, finally, whilst professing to recognize its importance, they adopt in practice imperfect or incomplete measures to accomplish it. Indeed, it may be regarded as the exception to the rule, rather than the rule, both in private practice and in hospitals, to systematically and thoroughly disinfect every stool, even in well-characterized cases of typhoid. Both of these classes of physicians will be interested in a paper on this subject published by Dr. James C. Wilson, in the *American Journal of the Medical Sciences* for April, 1883. He shows that although the nature of the germ that gives rise to enteric fever is unknown, many facts in its natural history are established by abundant proof. Of these the following have a direct bearing upon this subject: 1. It is invariably derived from a previous case of enteric fever. 2. It is eliminated with the fecal discharges. 3. It is not capable of producing enteric fever at once in susceptible persons exposed to it, but must undergo changes outside the body before it acquires this power. 4. It retains its activity in favorable situations for a lengthened period, the requirements to this end being decomposing animal matter, especially fecal discharges, and moisture. 5. In such situations it is capable of reproducing itself.

TRIGEMINAL NEURALGIA RELIEVED BY LIGATION OF THE COMMON CAROTID ARTERY AND NEURECTOMY.—Dr. Ferdinand H. Gross publishes in the *American Journal of the Medical Sciences* of April, 1883, a condensed clinical history, extending over nine years, of a case of this disease, with an account of the various

remedial measures undertaken for its relief. The result of the operative treatment may be summarized as follows:—

First.—The effect of the ligation of the common carotid artery was immediate relief in the domain of the first and second divisions of the trigeminal nerve: the period of immunity from pain in the second division being fully two years, while in the first division the pain has never returned, the relief there being probably permanent, and can only be accredited to the carotid ligation. The effect of this operation upon the third division of the nerve was too transient to count for anything.

It should be added that no impairment of intellect has followed the ligation. After the lapse of nearly two years and a half no disturbance of brain functions has been noticed either by Dr. Gross or the patient, or by any of those who are habitually associated with him.

Second.—The first neurectomy of the inferior dental nerve, eight months later, resulted in a period of relief from the neuralgia of about one year and three months—to remain within safe limits.

Third.—The last two operations, *viz.*, the neurectomy of the superior maxillary and the repetition of the operation upon the inferior dental nerve, were performed within two months of each other, September 14th and November 11th, respectively, and may be considered together. The result thus far is entirely satisfactory, the patient being now, three months later, completely relieved of the neuralgia.

SYPHILIS OF THE EYE AND ITS APPENDAGES.—Dr. Leartus Conner publishes in the *American Journal of the Medical Sciences* for April, 1883, a paper bearing on this subject, in which the following points are emphasized:—

First.—The study of specific ocular diseases is helpful in the diagnosis of certain obscure cases otherwise difficult to make out satisfactorily. Thus, a specific iritis will at once set at rest all doubts as to the origin of a series of indefinite general symptoms which have annoyed the patient and puzzled the doctor.

Second.—The careful attention to these cases is the only method by which, in many cases, the eyes can be saved intact during the course of the disease. Surely, when such attention can save eyesight in some cases, it is criminal not to give it to every case.

Third.—The study of these lesions calls for the most searching examination of the entire organism. Especially is this true of such affections as cannot be distinguished from like diseases of the eye due to far different causes. Thus, if the early treatment of a dacrocystitis be simply local, it is sure to fail if it be of specific origin. Hence, the only chance to avoid failure lies in such an examination as will reveal its specific nature. The same remark applies with even greater force to many other specific diseases of the eye, as will be gathered from his brief review. From this it follows that, in every eye case, the only safe practice is to constantly entertain the possibility of specific infection.

Fourth.—The treatment of every specific case calls for constant watchfulness of the eyes with the ophthalmoscope, otherwise lesions impossible to repair may be established before the practitioner is aware of their existence or of any danger. Perhaps in no class of troubles is it more apparent that the general and special knowledge of morbid phenomena need to be constantly combined in one person. The special practitioner needs to be a general one, and the general practitioner a special one.

HOLMES ON RICORD.—"I think life has not yet done with the vivacious Ricord, whom I remember calling the Voltaire of pelvic literature—a skeptic as to the morality of the race in general, who would have submitted Diana to treatment with his mineral specifics, and ordered a course of blue pills for the vestal virgins."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE QUININE OF THE POOR.

UNDER this attractive title Dr. Ugo Bassi describes the result of his experience with resorcin in the treatment of intermittent fever. He reports twenty cases in which he had used this remedy. Of them seventeen were entirely cured; two of the remainder were old and obstinate quartan types, while the third patient was in very unfavorable hygienic surroundings. In one case the symptoms returned and were not removed again either by resorcin or quinine. It required only two or three doses of the drug to effect the cure in the successful cases. The doses given varied between thirty and forty grains. Larger amounts were not found to do any good. The peculiar advantage of resorcin in Dr. Bassi's opinion is its cheapness.

Resorcin is a drug of which much has been written lately, especially by foreign observers. It was first obtained in 1864 by Hlasiwetz and Barth from galbanum resin by fusing it with potassa. It is now best prepared by fusing potassium benzol-disulphate with caustic potassa. Resorcin is a substance closely allied chemically and in its physiological action with phenol, its formula being $C_6H_6O_2$, while that of phenol is C_6H_5O . It is claimed, however, to be much less poisonous and much more agreeable in taste and smell.

Among the most recent contributions regarding its therapeutical uses is an article by Dr. C. Fürst, of Vienna, upon resorcin as an antipyretic. This physician states that resorcin was given in more than three hundred cases of puerperal fever occurring in the service of Professor Braun. It was administered in doses of three grammes (forty grains) dissolved in water, repeated when necessary. The result was almost without exception to bring down the temperature nearly to the normal. After a few hours there was a rise again, so that a dose given, for example, in the evening had to be repeated in the morning. The temperature fall was usually accompanied with profuse perspiration.

Dr. A. Skibnevsky, of Moscow, has used injections of resorcin in erysipelas with good results. From ten to twenty injections of the five per cent. solution were given, with the result of lessening very rapidly the fever and checking the progress of the disease. In the *Deutsche Medical-Zeitung*, for 1882, page 347, are recorded similar favorable results obtained by Dr. Bogusch.

Dr. Justus Andeer, of Wurzburg, has experimented with resorcin externally applied, and finds that it is not

absorbed by the sound skin. He made a fifty per cent. vaseline ointment and used it in the treatment of some cases of anthrax. The ointment was applied to the pustules and covered with a gauze bandage. The results were remarkably favorable, the pains disappeared and the diseased parts speedily assumed a healthy appearance. Dr. Andeer also states that the drug does not cause hæmaglobinuria like naphthol, and develops none of the poisonous symptoms caused by its congener, carbolic acid.

THE INFECTIOUS NATURE OF PNEUMONIA.

At a recent meeting of the Berliner Verein für Innere Medicin (*Allgem. Med. Central-Zeitung*, February 3, 1883), Dr. Leyden exhibited some preparations of micrococci taken from a patient with pneumonia. They were obtained by inserting a Pravaz syringe into the hepatized portion of the lung, and were prepared by the dry method and stained with methylene blue. The parasites were of an oval shape, usually in pairs, but sometimes united in a chain of three or four links. The patient died, and an autopsy was made six hours after death. As soon as possible portions of the inflamed lung-tissue were removed and placed under a Hartnack immersion lens, without staining. The micrococci were readily perceived. In stained preparations the parasites were seen to be most numerous in the portions of red hepatization, but much more scanty in the parts which had passed into the condition of gray hepatization. Dr. Leyden stated that he had withdrawn blood from the diseased portion of lung in two other cases of pneumonia, but without result. He explained the absence of micrococci in these cases by the fact that the disease was in both instances in the stage of resolution, and hence it was to be expected that the parasites should have been absent, or present in very small numbers. The speaker gave to Klebs the credit of having first described these organisms in 1875. His article, however, attracted but little attention at the time, owing perhaps to the fact that his investigations were apparently not conducted with efficient exactitude.

THE ETHICAL CRISIS.

THERE is little doubt that the activity displayed by those holding diverse views regarding the question of ethics is leading many who heretofore have given little thought to the matter to begin a careful examination of the subject for themselves. A series of commentaries by Dr. Austin Flint on the Code of the American Medical Association are in process of publication in the columns of our valued contemporary the *New York Medical Journal*. In his remarks concerning the portion of the Code that relates to consultations, Dr. Flint claims that the "exclusive dogma" clause of the Code was directed not so much against the homœopaths, as against the steam doctors, or Thomsonians, etc. He further claims that the American Code was not intended "to interfere with the practice of medicine, under any circumstances, in the cause of humanity." He says that "the restrictions of the Code are in nowise inconsistent with the demands of humanity in cases of emergency." This view of the case is certainly a novel one, and one that, so far as we are aware, has never been taken by any of the organized bodies that

have heretofore accepted this Code. If this is the correct view, it is greatly to be regretted that Dr. Flint had not brought it to the notice of the profession at an earlier date. Curiously enough he goes on to say that "a practice based on an exclusive dogma" is not a proper ground on which to refuse to "meet practitioners in consultation." "Any physician has a right either to originate or adopt an exclusive dogma, however irrational or absurd it may be." Dr. Flint hopes that the American Medical Association will adopt such modifications in the phraseology of this section as will place restrictions on consultations, not on the ground of doctrines or forms of belief, but on separation from and avowed antagonism to the medical profession." If Dr. Flint would personally urge this matter on the attention of the Association at its approaching meeting, we have little doubt that much could be effected in the way of restoring harmony in the profession. A much better and lasting solution of the question, however, would be arrived at if the Association itself would rescind all formal codes, and simply urge the profession to establish such ethical regulations as local circumstances might render most expedient. If the American Medical Association would for the future strictly confine its deliberations to the consideration of purely scientific matters, science would be the gainer and propriety would lose nothing.

CAN A FŒTUS BE POISONED WITH ALCOHOL THROUGH THE BLOOD OF THE MOTHER?

WE have received from Dr. William A. McDonald, of Lynn, Mass., some interesting testimony bearing upon the question of the effect upon the fœtus of alcohol taken by the mother. It appears that Dr. McDonald was called upon to deliver a woman who had been drinking for some ten hours, and who, when labor began, was profoundly intoxicated. The child was large, weighing about twelve pounds, and the pelvis small. Forceps had to be resorted to. The infant lived for only three hours, and died, it is believed by our correspondent, from alcoholic poisoning. The use of the forceps and the death of the child were made the pretext by a Catholic priest for circulating stories against Dr. McDonald's professional skill and moral character. A suit was brought. Four local physicians testified for the defendant and all agreed, as Dr. McDonald writes, that "There is no quantity of alcoholic stimulants taken into the mother's system that can in any way affect her unborn child, or affect it after it is born. That the perineum is never lacerated by the passage of the child's shoulders in parturition, and that forceps, when properly applied to the child's head in delivery, cannot slip under any applied degree of traction, however great."

It is regarding the first point that we are furnished some interesting testimony. The following inquiry was sent to Drs. John C. Dalton and William B. Carpenter: "If during the progress of labor, and at the moment of delivery, the mother is deeply intoxicated from the excessive use of alcoholic stimulants, would the new-born infant suffer in consequence, or show any symptoms of alcoholic poisoning?"

To this Dr. Dalton replied: "I would say that if the mother were deeply intoxicated at the beginning of

labor, I should not be surprised to find the new-born infant affected in consequence. As the fœtus derives its nourishment, by absorption through the placenta, from the blood of the mother, I see no improbability in alcoholic substances being absorbed by the same channel, so long as the placenta is adherent, and the placental circulation going on."

Dr. W. B. Carpenter answered: "I cannot profess to speak with any authority upon the question you have submitted to me, for I am not aware of any experiments (such as have been made with other poisons) on the passage of alcohol from the maternal to the fœtal blood. I can only say that as there can be no question of alcohol received into the alimentary canal being taken into the circulation by transudation through the walls of the blood-vessels of the intestinal villi, there seems every probability of its passage from the maternal blood, through the placental villi, into the fœtal circulation. Though I can see no reason why such passage should take place more actively during parturition than at any other time, I can suppose it to have a much more pernicious effect. For up to the detachment of the placenta, the fœtus is not only deriving *nutriment* from the maternal blood, but is dependent upon the placental circulation for the small amount of *aëration* which it requires to sustain its intra-uterine life. As soon, however, as the child comes into the world, active muscular movement begins, and atmospheric respiration is required to sustain it. The first inspiration, as you are doubtless well aware, is a reflex act, performed through the instrumentality of the nervous system. And it seems to me not only *possible*, but *probable*, that blood-poisoning of the fœtus by alcoholic intoxication of the mother during parturition, may so torpify the respiratory centres of the infant that the ordinary inspiratory movement may not be excitable, and the child be 'still-born.' You do not say whether this was the condition of the infant in the case to which you refer. Supposing it to have been so, my opinion would be that while there is strong ground for believing the death of the child to have taken place through the mother's fault, there would *not* be an adequate basis for a criminal charge against her."

Dr. Carpenter subsequently submitted his views to Dr. B. W. Richardson, who corroborated them entirely.

Despite the opinions of the above eminent savants, we must consider it, in the lack of positive facts, extremely improbable, if not entirely impossible, that the fœtus should be fatally poisoned by alcohol through the blood of the mother. Alcohol is rapidly eliminated from the mother's system, and no great amount can exist in the blood at a time. On the other hand the fatally poisonous dose of alcohol is considerable. There is little doubt that the fœtus could be affected somewhat, but this needs to be better proved. The question deserves further study.

THE PATHOLOGY OF INTESTINAL SYPHILIS.

SYPHILITIC lesions of the intestines are, according to Kundrat, very seldom met with in adults, being more commonly found among the manifestations of hereditary syphilis. Yet even here they are comparatively rare, Kundrat and Marzek having seen but nine instances among two hundred cases of infantile syphilis. In all

of these cases syphilis of other organs was also present. The small intestine appears to be oftener attacked than the large, in the proportion of about four to one. Two varieties of the affection present themselves. In the first the process is essentially localized, and is confined usually to Peyer's patches and the solitary follicles. In the second the disease attacks the entire circumference of the canal. The mucous membrane presents a velvety appearance, and about Peyer's patches is of a dark red color. Little pits are seen in the surface of the patches, giving a cribriform appearance to the part. In the second form little nodules are scattered over the inner surface of the intestines, of the size of a hemp-seed, or smaller. The meconium is thickened and adherent to the wall of the intestine. The peritoneum is usually of a pale red color and presents numerous points of syphilitic growth about the vessels. In more severe cases there is a fibrinous exudation covering the peritoneum.

A diagnosis of this variety of visceral syphilis is evidently a matter of some practical importance. But it is not always possible to make it. As regards the treatment of luetic affections of the alimentary canal, the same general principles which govern all cases of congenital syphilis are applicable to this class of cases.

PATHOLOGICAL SLEEP.

OVER a year ago, M. Gélinau described a peculiar symptom which he called narcolepsy, and which consisted in an abnormal tendency to sleep. The subject excited some interest, and recently M. Gilbert Ballet has contributed several cases, having the same features. The narcolepsy of Gélinau and Ballet, however, is a different thing from the sleeping sickness of Africa, which is apparently a specific and generally fatal endemic disease. Narcolepsy, or pathological tendency to sleep, is a symptom of several different morbid conditions. Ballet classifies them under four heads, viz.: 1. In a certain number of cases the morbid condition is not known. It can only be assumed that the metabolic changes in the brain-tissues are modified, the retrograde process being perhaps too active, or the constructive action too feeble. 2. This condition certainly appears to exist in diabetics, a class in which excessive somnolence sometimes develops. 3. Narcolepsy is observed in connection with various organic diseases, which diseases are related in some way to the sleep-symptom. Camusat has observed it in a patient with heart disease; Bouland, in a case of hepatic congestion; Gélinau, in a case of chronic dyspepsia. In these instances there seemed to be a condition of cerebral congestion. 4. Certain hysterical persons will at times be affected with narcolepsy or attacks of spontaneous sleep. Some of the cases reported as of this nature are rather examples of trance lethargy.

The symptoms of this condition are generally simple. The patient sleeps all night, and is awakened with difficulty. During the day he is frequently overcome with an invincible drowsiness; he dozes at his meals, and falls to sleep after them; he sleeps in the cars, or stages, or whenever he sits down to rest. The appetite may be good and all the bodily functions normal.

Some benefit has been done by treating any coincident disease that may be present and by hydrotherapy.

THE HOLMES DINNER.

THE profession of the city can congratulate itself upon having so happily conceived and successfully carried out the project of tendering Dr. Holmes a complimentary dinner. It is but once in a century that the medical profession raises up to literature an equal to our Boston guest. Since the days of Goldsmith, medicine has had many singers; Akenside has written his beautiful pastorals, Armstrong his robust and prophylactic epic, and Darwin his botanic philosophy and his episodes in vegetable loves. We would claim Keats, if it were fair to do so. Mr. George William Curtis fitly reminded us that New York has had a doctor-poet in Nathan Drake, of whom we may be justly proud. We would be glad to think, as many do, that the late Dr. Holland was sometimes touched with the divine afflatus.

But although the list of the last hundred years is not so very short, it contains no name which can justly rank with that of our Boston anatomist, autocrat, and poet. It is most creditable, therefore, to the profession here that it has shown its appreciation so handsomely and enthusiastically.

The guests of the evening appear to have been satisfactorily entertained in every way. Dr. Holmes's poem discovered the pleasant fact that he has lost none of his old inspiration; but that, even under the ribs of seventy he can kindle a flame as warm and brilliant as in his younger days. The poem was received with an applause and enthusiasm such as is rarely displayed by our dignified Faculty.

News of the Week.

FIFTIETH ANNUAL MEETING OF THE TENNESSEE STATE MEDICAL SOCIETY.—The Tennessee State Medical Society met at Nashville, April 10th, 11th, and 12th, the President, Dr. W. F. Glenn, presiding. About seventy members were present. Dr. Deering J. Roberts, Chairman of the Committee on Arrangements, delivered a stirring address of welcome, defending the Society against the charge that it was a decrepit institution.

The President's annual address was devoted to the subject of the "Immortality of Man," arguing eloquently for the reality of such immortality.

Dr. J. S. Nowlin read a paper upon "Vaccination and Small-Pox." It presented strongly the facts demonstrating the value of vaccination. He thought that special care and skill was required for the preparation of bovine virus. At the close of his paper the Society passed the following resolutions:

Resolved, That this Society does recommend and ask the State Board of Health to immediately institute such measures as will at the earliest possible moment secure a law requiring the vaccination of every infant born in this jurisdiction.

The resident physicians of Nashville gave their visitors a dinner Wednesday evening.

The following officers were elected for the ensuing year: *President*—Dr. A. B. Tadlock, of Knoxville (who said he would rather hold that office than be a Congressman); *Vice-Presidents*—Dr. A. Morrison, of Nashville;

Dr. W. W. Taylor, Dr. C. S. Wright; *Secretary*—Dr. C. C. Fite; *Treasurer*—Dr. D. J. Roberts.

Papers were read by Dr. Tadlock, on "Femoral Hernia;" by Dr. G. W. Davis, on "Induced Abortion." Dr. Grant opened a discussion on puerperal fever; Dr. J. G. Sinclair showed a case of burn of the eye; Dr. W. D. Haggard read by title a paper on "Ovarian Disease," and Dr. S. Lipscomb related some interesting historical reminiscences.

So far as our reports inform us, the Medical Society of the great State of Tennessee during the parturient stress of a two days' session, gave birth to only three written contributions to medical science.

We agree with the late President that man is probably immortal, but we feel less confident as regards the Tennessee State Medical Society. *Deo volente*, it will meet next year at Chattanooga, on the second Tuesday in April.

THE KENTUCKY STATE MEDICAL SOCIETY.—The scientific work of the first day consisted of a report upon "Materia Medica," by Dr. T. J. Greely, and one on "Surgery," by Dr. W. M. Fuqua. During the second day, papers were read on "Obstetrics," by Dr. P. B. Scott, and on "Hygiene," by Dr. Speed. Dr. J. N. McCormack read a report on "Local Boards of Health," which opened a very lively discussion upon the subject of the State Board of Health. Dr. Holland defended it; Dr. Yandell attacked it, and stated that in five years it had received \$12,500 in cash, without making any real return.

The following officers were elected: *President*—Dr. J. N. McCormack, of Bowling Green; *Vice-Presidents*—Drs. J. M. Riffe and G. M. Harwood; *Secretary*—Dr. S. M. Letcher; *Treasurer*—Dr. H. Brown. Dr. L. S. McMurtry tendered his resignation as Permanent Secretary.

Papers were read by Dr. Thomas F. Rumbold, on "Chronic Naso-Pharyngeal Catarrh;" by Dr. W. O. Roberts, on "Head Injuries;" by Dr. J. M. Matthews, on "Diseases of the Rectum."

The Committee on Prize Essays reported that no essay had been reported for them.

On the last day seven papers were read upon various topics.

The Society adjourned to meet next year at Bowling Green, the first Wednesday in May.

A MEDICAL SCHOOL FOR WOMEN at Toronto is talked of, co-education having failed.

THE ONTARIO MEDICAL ASSOCIATION meets in Toronto the first Wednesday in June. The Secretary, Dr. White, is trying to arrange for an exhibition of pathological specimens at the time.

SCARLET FEVER FROM OYSTERS.—Dr. Fred. Eklund, of Stockholm, says that in the juice and parenchyma of oysters he has found two kinds of micro-organisms in great number. One of these, the *plax scindens*, is, we are informed, the determinate cause of scarlet fever.

ST. PAUL is to have a Health Officer, says the *North-western Lancet*; and no doubt the old gentleman needs a little attention, being now in his nineteenth century.

AN EPIDEMIC OF INFLUENZA is prevailing at St. Paul, Minn. It appeared about January 1st and has been steadily increasing in severity.

THE GEORGIA STATE MEDICAL ASSOCIATION holds its annual meeting at Athens, April 18th, 19th, and 20th.

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.—The January number of this journal contains a steel portrait of the late Dr. George M. Beard, with an appreciative notice of that lamented neurologist.

The *Journal of Nervous and Mental Diseases* has been ably and successfully conducted since it was removed to New York and placed under the editorship of Dr. Morton. It most creditably represents neurological science in this country.

PHYSIOLOGICAL INVESTIGATION.—Dr. McKendrick, Professor of Physiology in the University of Glasgow, and Fullerian Professor of Physiology to the Royal Institution of Great Britain, will give at the Institution a course of ten lectures on Physiological Discovery, being a retrospect, historical, biographical, and critical, of the subject. The object of the course of lectures is to trace the progress of physiological research from about the beginning of the sixteenth century to recent times, and more especially along those lines that have led to great results.

THE MISSOURI STATE BOARD OF HEALTH, recently established by legislative enactment, is to be composed of seven persons, to be appointed by the Governor and confirmed by the Senate. Five of the Board are to be physicians in good standing, graduates of reputable medical schools. No special school is designated. The Board is to exercise general supervision over the health of the State, but not over the private practice of physicians. Ten thousand dollars are appropriated to meet expenses.

A LAW TO REGULATE THE PRACTICE OF MEDICINE IN MISSOURI has recently been enacted. It requires every person practising medicine and surgery to register his diploma with the Board of Health. If the diploma is genuine and issued by a reputable school of medicine, the Board issues its certificate upon the payment of a fee of one dollar; said certificate entitles the lawful holder thereof to practise medicine. If not a graduate, and practising medicine in the State for a term of less than five years, he shall submit to an examination as to his qualifications. If his examination proves satisfactory to the Board, upon the payment of a fee of five dollars the said Board shall issue its certificate in accordance with the facts, and such shall entitle the lawful holder to all the rights and privileges. If a diploma is found to be fraudulent, or not lawfully owned by the possessor, the Board shall be entitled to charge and collect twenty dollars from the applicant presenting it. It appears to us that the law will be found a most inefficient one. It will legalize all the five-year quacks, and it contains apparently no machinery for carrying out its provisions.

AN AFFECTIONATE DAUGHTER.—It is said that Mlle. Bernard, the daughter of Claude Bernard, has been fined at Boulogne-sur-Seine, on complaint of her neighbors, for converting her courtyard, garden, parlor, and bedroom, into a kennel for destitute dogs. She felt some reparation was due the canine race for the miseries inflicted on it by her father's vivisections.

DR. JAMES B. BAIRD has retired from the editorship of the *Atlanta Medical Register*. He will be succeeded by Dr. John H. Logan.

NEW FIELD FOR WOMEN PHYSICIANS.—The Russian journals state that General Tchernieff is about to establish a hospital for Mussulman women at Tashkend. It is to be presided over entirely by Russian female physicians.

THE PATHOGENIC MICROCOCCUS OF ERYSIPELAS.—The existence of micrococci in erysipelas has long been known. Dr. Fehleisen, Bergmann's assistant, now announces that they are positively the cause of the disease. He has isolated them, cultivated them on gelatine through fourteen generations. He then inoculated rabbits, and also men, with the pure organisms and produced in most cases a typical erysipelas. The inoculations were made in seven patients who were suffering from lupus, cancer, and sarcoma. One case of lupus was almost completely cured, in another case the cancerous tumors disappeared, in another of fibro-sarcoma the tumor diminished in size. In the other four cases no especial effect on the tumors was noticed.

NEWPORT MEDICAL SOCIETY.—At the Annual Meeting of the Newport Medical Society, held April 3, 1883, the following officers were elected: *President*—Dr. H. R. Storer; *Vice-President*—Dr. Samuel W. Francis; *Secretary*—Dr. W. D. McKim; *Treasurer*—Dr. William C. Rives; *Librarian*—Dr. C. L. Fisher; *Curator*—Dr. S. H. Sears.

THE NATIONAL ACADEMY OF SCIENCES held its Annual Meeting, during the present week, at Washington, D. C.

THE TURN OF THE TIDE: THE KINGS COUNTY MEDICAL SOCIETY ON THE SIDE OF THE NEW CODE.—The Medical Society of the County of Kings held its regular meeting April 17th. The question of action upon the new Code of Ethics came up. The resolutions offered by Drs. E. R. Squibb and Kretschmar were disposed of by laying the whole matter on the table, by a vote of 54 to 35. It was then moved that, in the opinion of the Society, it is inexpedient to discuss this general Code question further for the current year. This motion was carried by a vote of about 48 to 35. The action of the Society was a decided victory for the new Code. The vote to refrain from further discussion of the subject during the current year will strike all as a very sensible act.

COLUMBIA VETERINARY COLLEGE AND SCHOOL OF COMPARATIVE MEDICINE.—Dr. Alexander Hadden has purchased a new site and buildings for the Columbia Veterinary College and School of Comparative Medicine at 215 and 217 East Thirty-sixth Street. A new hospital will at once be erected and the buildings will be enlarged and improved. The college has been growing so rapidly that the old buildings were quite insufficient for the proper accommodation of the students. The Columbia Veterinary College has been the centre of much good work in comparative pathology and physiology, and its present prosperity is amply deserved.

A DOCTOR EXPELLED.—Dr. E. L. R. Thompson, charged with causing abortion, was expelled last Monday from the New Haven Medical Association.

DEATH OF DR. WILLIAM FARR.—Dr. William Farr, F.R.S., D.C.L., Superintendent of the Statistical Department of the Registrar-General's Office, Somerset House,

which he organized in 1838, died April 16th. He was born at Kenley, Shropshire, in 1807, and received his medical education in the universities of Paris and London. He was for a time editor of the *Medical Annual* and *British Annals of Medicine*, and was a frequent and a learned contributor to medical literature. He assisted in taking the census of 1851, 1861, and 1871 in Great Britain, and wrote a considerable portion of the reports of the first two years named. He wrote the annual official reports on the public health, and among his best known works were "The Finance of Life Assurance," "English Life Tables, with Values of Annuities and Premiums for Single and Joint Lives," a new "Statistical Nosology," and a report on the "Cholera Epidemic of 1849." He was chosen a corresponding member of the French Institute in May, 1872. Dr. Farr was one of the pioneers in state medicine.

THE PROCEEDINGS OF THE NAVAL MEDICAL SOCIETY are published in the form of a neatly printed monthly. So far, the society has evidently done excellent work.

AN INTERNATIONAL CONGRESS OF COLONIAL PHYSICIANS will be held at Amsterdam, September 6, 7, and 8, 1883, during the International Colonial Exposition which is to be held at that time. Professor Stockvis is chairman of the Committee of Organization; Dr. Van Leent, Secretary-General. Questions of special interest to physicians living in the colonies, and tropical climates will be discussed.

STRICKER, SPINA, AND THE TUBERCLE BACILLUS.—At a recent meeting of the Medical Society of Vienna, Professor Stricker stated that though he had not followed Spina's work in detail, he believed in its trustworthiness. He thought that Spina had shown that some bacteria of putrefaction can be colored in the same way as the so-called tubercle bacillus.

OUR DENTAL BRETHREN on both sides of the water are becoming a very pushing class. Not long ago several Parisian dentists offered to do dental work free in the municipal hospitals. The Municipal Council, politely refusing this over-liberal offer, reminded the petitioners that it was a principle of true democracy that every man should be paid for his work. New York dentists vent their surplus activities in other ways. A firm in this city, for example, have a large show-window containing a wax figure with moving jaws and a hysterical smile. Above it is the legend: "Acher, Puller, & Filer, French Dentists. No charge for extracting teeth. Come in and have one drawn. Rubber sets, \$1 to \$5."

DRUG-STORE TIPLING.—The Liquor League at Indianapolis, Ind., has inaugurated a movement looking to the suppression of dram-drinking in drug-stores, as it has grown to such proportions as to interfere with the regular retail business. It is said much testimony has been taken, and an effort will be made to compel drug-stores at which liquor is sold in less quantities than a quart to take out a State license.

THE NIGHT MEDICAL SERVICE OF PARIS.—In 1882 there were 6,891 visits against 5,282 in 1879, and 3,613 in 1876, the year in which it was first started. The service contains 658 physicians and 185 sages-femmes.

WOMEN PHYSICIANS IN AUSTRIA.—A young woman of Prague, who had received a medical degree from the University of Zurich, asked permission of the Minister of Public Instruction to have her diploma recognized and to be admitted to the examinations of the Vienna Faculty. This permission was denied, the minister alleging that the practice of medicine by women is not permitted in Austria.

SANITARY STATISTICS WANTED IN ITALY.—The Italian Government has asked for an interchange of vital and sanitary statistics with the Board of Health of this city.

Reviews and Notices.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA at its Thirty-Third Annual Session, held at Titusville, May 10, 11, and 12, 1882. Vol. xiv. Philadelphia: Times Printing House. 1882.

ON opening this volume, we were agreeably surprised by the marked improvement in paper and type which it presents over the previous annual reports of the Society. Of the papers contained in it, the following deserve mention: "Address in Obstetrics," by R. Stansbury Sutton, M.D., of Pittsburg, giving a good bird's-eye view of the present state of abdominal and pelvic surgery on the continent of Europe; but not containing a word about obstetrics; "Reflections of Criminal Lunacy, with Remarks on the Case of Guiteau," by C. K. Mills, of Philadelphia; "The Oleates and Oleo-Palmittates in Skin Diseases," by John V. Shoemaker, of Philadelphia; "A Comparative Study of the Action of Certain Mydriatic Alkaloids," by Edward Jackson, M.D., of West Chester; "On Sympathetic Irritation and Sympathetic Ophthalmia," by W. S. Little, M.D., of Philadelphia; "Powdered Boracic Acid in the Treatment of Otorrhœa," by C. S. Turnbull, M.D., of Philadelphia; "Excision of Cartilage in Nasal Obstruction due to Deviated Septum," by John B. Roberts, of Philadelphia.

INJURIES OF THE SPINAL CORD, WITHOUT APPARENT MECHANICAL LESION AND NERVOUS SHOCK. IN THEIR SURGICAL AND MEDICO-LEGAL ASPECTS. By HERBERT W. PAGE, M.A., M.C. Cantab. Philadelphia: P. Blakiston, Son & Co. 1883. \$4.00.

MR. PAGE devotes the first two chapters of his book to the discussion of concussion of the spine. He combats the generally received view that the spinal cord is subject to serious disturbances or suspension of function from blows which shake it, but do not cause mechanical injury. The spinal cord, he says, is the best protected organ in the body, and is not affected by concussion, as is the brain. In Mr. Page's opinion, the clinical symptoms generally classed under this head of "concussion of the spine," are due to nervous shock, united often with sprains or other injuries of the muscles and ligaments of the spine. Those symptoms of functional disturbance of the cord which are objective and can be demonstrated are, he thinks, due to hemorrhages and mechanical lesions. They are not brought on by a simple shaking of the cord. The author particularly attacks Mr. Erichsen for his too easy acceptance of the concussion theory.

The nature and symptoms of shock are described very well, from a surgical point of view. The author insists upon the larger importance of this physical element in the disturbances from railway injuries.

There is a chapter upon functional or neuro-mimetic disorders which is interesting, although chiefly a compilation from others—a too prominent feature in the book.

The chapter on malingering is more original and better written.

A very useful appendix containing the tabulated histories of two hundred and thirty-four cases is added.

The author states in his preface that although surgeon to a railway company, he is not biassed in his views. Mr. Page, no doubt believes this; but it strikes us that the general tone of the book and the discussions in it are decidedly favorable to railway companies, and that it would be an excellent thing for them, from a business point of view, to see that it is well circulated. We say this, while believing that the author is right in his view as to the importance of nervous shock, and the physical element in railroad injuries. He has undoubtedly shown also that functional disturbance of the spinal cord from concussion is rarer than has been supposed. That it can, and does occur, however, we must still believe.

The book should be examined by all physicians who have to deal with the class of cases treated of.

THE DISEASES OF THE PROSTATE, THEIR PATHOLOGY AND TREATMENT. By SIR HENRY THOMPSON. Fifth London Edition. Philadelphia: P. Blakiston, Son & Co. 1883.

THE present fifth edition of Thompson's well-known treatise has been carefully revised, and, by many new additions, has been brought fully up to date. It may be consulted with profit by student and practitioner, as it embodies the ample experience of a careful observer and the mature judgment of a sound mind.

SUPRAPUBIC LITHOTOMY. By WILLIAM TOD HELMUTH, M.D., New York. Illustrated. 4to, pp. 93. New York: Boericke & Tafel. 1882.

THIS volume is a plea in behalf of the high operation for stone or epicystotomy, on the grounds of its easy performance and comparative freedom from danger. Dr. Helmuth presents his case strongly, and his work may be instrumental in restoring to professional favor a method of cystotomy now but rarely resorted to in calculous affections. With commendable diligence the author has collected statistical data concerning the various methods of lithotomy. From these it would appear that the high operation is followed by the smallest mortality. Helmuth's work deserves to be read and studied by all who are interested in this department of surgery. The mechanical execution of the volume is satisfactory, the paper, type, and illustrations being unusually good.

FORMULÆ FOR HYPODERMIC INJECTION OF CAFFEIN.—Dr. C. Tauret, of Paris, Laureate of the Institute of France, etc., writes us: "I have read in THE MEDICAL RECORD of January 6th, the résumé of my researches on caffein. I seize this opportunity to give you below the exact formulæ that I use for ten hypodermic injections of caffein. First:

R Benzoate of soda	.....	3 grm.	60
Caffein	.....	3 "	00
Distilled water, about	.....	5 "	40

or a sufficient quantity to get ten cubic centimetres.

One cubic centimetre of that solution contains thirty centigrammes of caffein. Second:

R Benzoate of soda	.....	2 grm.	95
Caffein	.....	2 "	50
Distilled water, about	.....	6 "	00

or a sufficient quantity to get ten cubic centimetres.

One cubic centimetre of that solution contains twenty-five centigrammes of caffein."

Two other formulæ are given, but the interest in them is chiefly pharmaceutical.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

CHRONIC HYDROCEPHALUS WITHOUT ENLARGEMENT OF THE SKULL.

DR. BEVERLEY LIVINGSTON presented a skull and brain with the following history:

"James B—, born in the United States, aged two years and seven months, was admitted to the Nursery and Child's Hospital on February 16, 1883, with his mother, who stated that she was twenty-three years old, had been married three years; that she was one of twins, the first one, also a girl, was born dead, that she was paralyzed on the left side after birth, but recovered, with the result that her left leg is at present smaller and two inches shorter than the right, so she has to walk on the toes of her left foot. The patient, her first child, was born naturally, nine months after marriage. The father is a healthy man; neither parents show any signs of syphilis. Until three or four months old the child seemed healthy, then he was taken sick, but how I could not discover, only that the doctor said he had water on the brain; his mother says he has always been a restless child, who did not sleep well and would have "spells of crying;" he never had any convulsions, but was very dull; he grew like any other child, cut his first teeth when he was about one year old, and he has never had any other nourishment than his mother's milk. The mother at present is a pale, anæmic, poorly nourished woman, and her milk may not have been good, but her second child, now seven months old, born when this one was two years old, has the appearance of a strong healthy baby. The mother cannot say definitely when she first noticed that this child was blind, but assures me that she always thought his eyes were queer; his hearing seems normal, his bowels have been regular, and his urine normal.

"When admitted the child was 76.70 ctm. (2 feet 7 inches) in length, symmetrically developed. The head was only of the average size, being 44 ctm. in circumference, 15 ctm. in the antero-posterior diameter, and 10.75 ctm. in the biparietal; the only abnormal point was that the anterior fontanel was open and would admit the end of the finger. The face was well formed and perfectly symmetrical; the expression was vacant, for the eyes were widely open and the eyeballs wandered aimlessly here and there, the pupils being partially contracted, but equal; they would not respond to light or other stimulant, there was no strabismus or the usual rolling of the eyes downward; he was totally blind. The bridge of his nose seemed flattened, and he was said to have suffered from the snuffles. The mouth was regularly formed but the child kept it half open most of the time with his tongue more or less between the lips and in constant motion. The teeth, particularly the four upper and the two lower middle incisors, are notched. This change is, even in the first dentition, attributed to syphilis by Parrot,¹ of Paris, and others, but Mr. J. Hutchinson,² in his remarks to the last International Congress in London, says they are caused by stomatitis, either mercurial or not.

"The way in which the teeth meet is peculiar, both molars coming in contact, while generally only the first molars strike when the jaws are closed naturally; during life the teeth did not project much from the gums. The hair was well developed. When quiet, the child's limbs were extended, the hands and feet being flexed, but the spasm of the muscles was only partial, for at times the child would kick and move on the bed like one that was healthy. The tendo-reflex was present at the knee and

in the abdominal muscles, but absent in the dartos. The physical examination was negative, the ophthalmoscopic was not made. When admitted the child was weaned and put on bread and milk with 3 j. of Mardock's food t.i.d.; he seemed to do well until February 28th, when he had a slight dry cough. The physical examination gave nothing, he lost his appetite, which had been very good before, and died suddenly on March 2d. He had no convulsions or other symptoms. He had never walked or made the slightest effort to say anything.

"The autopsy was made on March 3d, 10 A.M., eleven hours after death. Child fairly nourished; well marked rigor mortis. Lungs were congested in the posterior part of the upper and lower lobes; toward the central portion were regions that were rather harder than the rest of the lung substance, and seemed to be commencing catarrhal pneumonia. Heart, liver, spleen, kidneys, intestines, normal.

"Head, as has already been said, was not enlarged, the open fontanel being the only abnormality. When the calvarium was opened a gush of light yellow fluid followed, and what could be collected measured 350 grammes (11½ ounces); quite a little was lost. Before the brain was removed the hemispheres were seen to collapse. The meninges were congested and the convolutions flattened. On section the brain-substance was rather pale and the gray seemed to be normal, while the white substance was decreased, due to the expansion and pressure of the fluid in the lateral ventricles. The thickness of the cortical substance varied between 1 to 1.50 ctm. The ventricles were evenly dilated, their lining membrane very much thickened; the third ventricle was dilated and the various canals leading in and out of it were much dilated, viz., the two foramina of Monro, the aqueduct of Sylvius, and the iter ad infundibulum, and when the spinal cord was removed the fluid was found increased.

"On examination of the base of the brain I found the blood-vessels normal and all the cranial nerves seemed of normal size and consistence except the optic nerves, which were smaller and harder than normal and when the eyes were removed the disk was found to be 1 mm. in diameter and very white, the other structures of the eye were normal.

"The bones of the skull showed nothing of note that has not been mentioned. The orbital plates of the frontal bone are seen to be depressed and the opening of the orbit is increased in the perpendicular diameter, the base of the skull shows the basilar portion of the occipital bone. Internally the skull shows the marks of the convolutions and the arteries, in some places being quite thin; the ossification was normal here as well as in the long bones."

ENLARGED THYMUS GLAND.

DR. LIVINGSTON also presented a thymus gland which was removed from the body of a child one year five months and fourteen days old, that died March 26, 1883.

The mother stated that the child had had "fits" for some time, but had always come out of them on being patted upon the back. The nurse said the child had convulsions when looked at by anybody. On the day before death slight stridor was noticed in the respiration. The child died in one of the "fits."

At the autopsy the body was well nourished; rigor mortis fairly marked. The thymus gland was enlarged equally in all directions, hard to the touch, and weighed twenty-five grammes. (For comparison the thymus from the body of another child, one year and six months of age, and weighing three grammes, was presented.) The lungs were intensely congested and there was considerable bronchitis. The larynx and trachea were congested, but contained no false membrane. The heart, liver, and spleen were normal. The kidneys were intensely congested. The peritoneal cavity contained a small quantity of reddish serum, probably post-mortem.

Dr. Livingston thought that death was caused by press-

¹ Trans. International Congress, London, 1881, vol. iv., p. 35.

² Loc. cit., p. 146.

ure of the enlarged thymus upon the organs within the mediastinum.

DR. J. C. PETERS said that twenty years ago cases of enlarged thymus gland, asthma, and sudden death were reported very frequently. Of late years only a few cases have been reported. Either they had been overlooked or did not occur so frequently as formerly.

DR. GARRISH thought that serrated edges of the teeth occurred in scrofulous subjects, and therefore did not necessarily indicate the presence of syphilis.

EXSECTION OF RIBS FOR EMPYEMA—NEW FORMATION OF BONE.

DR. GERSTER presented a specimen illustrating the new formation of bone after exsection. A boy, five years of age, came to the German Dispensary in the beginning of June, 1882, with empyema of four weeks' duration. The left side of the thorax was filled with purulent fluid, as ascertained by puncture, and was attended by the ordinary symptoms of purulent pleurisy. An incision was made, a drainage-tube was placed in the cavity, and, after the ordinary methods, the cavity was washed out with a weak solution of carbolic acid. The operation was performed on June 24th, and the incision was made in the sixth intercostal space. A few days afterward it was found that the opening was not sufficient to allow of complete drainage, and therefore retention of pus took place, and it was necessary to resort to further measures to secure efficient drainage. The patient then came under Dr. Adler's care at the German Hospital, who performed exsection of the sixth and seventh ribs on June 29, 1882. The patient was dismissed cured on October 29th of the same year. In the beginning of January of this year the boy presented himself again to Dr. Gerster at the dispensary, and it was found that he had grown considerably, that he looked healthy, that the lung had expanded, and the thorax presented its normal appearance. At the place of the former excision, however, a fistulous opening had from time to time showed itself, closed, discharged a little, then closed, then opened and discharged again, and so on. On examination, Dr. Gerster found roughening of the bone, surrounded by a cavity which was filled with unhealthy granulations, which were scraped away with a scoop and the cavity washed out with an eight per cent. solution of chloride of zinc. The cavity, however, did not exhibit the least tendency to close, although it could not contain more than two or three drachms of fluid, and did not communicate with the pleural cavity. He concluded he had to deal with that condition of affairs which sometimes occurs in scrofulous patients where ulceration of the surface of the bone takes place, from which unhealthy granulations spring up without tendency to bone formation or cicatrization. On March 21, 1883, he cut down upon the rib in that locality, and ascertained that the ribs from which the exsection had been made had grown together, that there was a circular opening one-third of an inch in diameter, and corresponding to the site of the drainage-tube, in this newly formed bone, and that behind this there was a little cavity filled with unhealthy granulations. The portion of newly formed bone was exsected, and the wound has closed.

TUBERCULOSIS AND HYDROTHORAX IN A FEMALE RHINOCEROS.

DR. LAUTARD presented specimens with the following history:

"'Mingo' a female rhinoceros, about sixteen years of age, weighing about five thousand pounds, had been for the last thirteen years one of the attractions of Mr. P. T. Barnum's show. Ever since she joined the show she had enjoyed apparently good health, and at the time of her arrival in New York on the morning of last Wednesday, seemed to be as well as usual. She was on the evening of that day fed as usual, and when on Thursday morning her cage was opened, she was found dead, lying in her

natural position, and showing that she had died without a struggle. Her cadaver was brought to the American Veterinary College, when a post-mortem examination was made.

"An incision was made in the median line of the body from the chest to the pubes, and the skin, more than an inch thick, was dissected from the body. The abdominal cavity being open and the contents removed, the following principal lesions were found: Near the stomach and between the cardiac and pyloric opening of that organ, was found a large, nodulated tumor, resting upon the small curvature of the stomach, tuberculous in character, and filling the entire space left between the two openings of that curvature. Spleen and the liver presented several nodulated tuberculous deposits much smaller than the first one. Near the quadrifurcation of abdominal aorta a number of tuberculous deposits were also found. The uterus is mammillated here and there on the body and the horns with tuberculous masses of the size of a walnut, situated in the cellular tissue between the muscular and mucous coat.

"All the organs of that cavity are healthy—the stomach, the intestines, the kidneys, the suprarenal capsule—with the exception of the small deposits already alluded to in the liver and spleen.

"On opening the thoracic cavity it was found to contain twenty-eight gallons of clear serous fluid, which had crowded the lungs into the upper portion of the chest, and the anterior lobes of both lungs were adherent to the thoracic walls by strong fibrous bands. The pleura presented a number of thickened spots containing tubercular deposits. The mediastinum was filled with tuberculous masses, varying in size from that of a pea to that of a child's head. The lungs were dark, of a bluish color, slightly emphysematous at their lower border, and with their surfaces filled with miliary tubercles, very heavy and dense. Heart has both cavities empty and presented tuberculous granules on the tricuspid and semilunar valves. At the base of the heart, around the aorta and pulmonary artery, was found a large mass of tubercles. The pericardium is adherent to the pleura and to the lungs by fibrous bands, but is otherwise healthy. The pericardiac and cardiac lymphatic ganglions are enormously enlarged and indurated. On section they presented a circular wall of dense fibrous tissue, sending off shoots into the centre of the mass, and interlacing each other formed a kind of reticulum or stroma, with a dark greenish aspect in the meshes, containing tubercular deposits of various sizes. On the superior face of the sternum three large tubercles were found attached, and the axillary glands of both sides were very much enlarged, dense, of whitish color. The pectoral, prepectoral, and lymphatic glands of the neck were also much enlarged, indurated, and tuberculous in their character.

"Both of these affections were evidently of old standing, and readily accounted for the sudden death of the animal."

DR. JOHN A. WYETH presented specimens as follows:

FRAGMENTS OF BONE REMOVED FROM THE SKULL BY TREPHINING.

The patient, a man thirty-two years old, came to the Polyclinic six weeks ago. He had been struck on the head with a hammer. A portion of the frontal and parietal bones were driven in. The depression was about one-fourth of an inch. Operation one week after the injury. A large blood-clot was found lying upon the dura mater. A square inch of bone was entirely removed. All the dangerous symptoms disappeared and the patient is fully recovered.

ORIGIN OF THE CALCANEAN ARTERIES.

Two specimens of arteries, showing the derivation of the *calcaneous* branches from the external *plantar*. The necessity of a thorough knowledge of this fact was insisted upon in order to obtain good results from Syme's amputation.

Professor Stephen Smith, who had made an analysis of all amputations, had concluded that re-amputation was more frequently necessary in Syme's than in any other, and that the sloughing was principally confined to the inner flap.

The incision should be made from the anterior portion of the malleoli, directly across the sole, in the axis of the leg when the foot was held at a right angle to the leg. Dr. Wyeth demonstrated, in 1876, in an essay embodying eighty-seven dissections of the tibio-tarsal region, that this method of operating was the only one based upon a thorough understanding of the anatomy of the parts involved. Mr. Erichsen and others advise an incision well back over the heel, on account of redundancy of flap from an incision farther to the front. But a redundancy is better than a re-amputation. Mr. Syme practised the long flap. Mr. Savory, in the *Lancet* for February 3, 1883, advocates the long flap, but neglects to say that his advocacy is based upon a study of the arterial distribution from the calcaneous branches of the external *plantar* (not posterior tibial) to the posterior flap. From the standpoint of practical surgery I wish to reiterate what was said in the Prize Essay of the Bellevue Alumni Association in 1876, that the line of incision, which is carried obliquely backward over the heel, divides the posterior tibial so near its bifurcation that the supply of blood to the heel is insufficient, while the incision well forward (as above described) divides the internal and external plantar arteries well beyond the bifurcation of the tibial and leaves the calcaneous branches of the external plantar uninjured.

ABNORMALITIES OF THE CAROTIDS.

The *arch of the aorta* from a man in which the left *common carotid* artery was absent, the *external* of that side arising from the *aorta* in the usual site of the *common* trunk. The skull of this subject had no carotid canal on the left side. It was presented to the Wood Museum of Bellevue Hospital. It is the second one known to me, the other being mentioned by Hyrtl. Dr. Eugene Peugnet had reported a case of absence of the *common carotid*.

AN INTERNAL CAROTID ARTERY, FROM WHICH THE ASCENDING PHARYNGEAL ORIGINATED, ONE INCH ABOVE THE BIFURCATION OF THE COMMON TRUNK.

It is stated, generally, in the anatomies, that no branches are derived from the cervical portion of the *internal carotid*. Dr. Wyeth found the *ascending pharyngeal* derived from this vessel in seven of one hundred and twenty cases examined.

Twelve specimens of the *common internal* and *external carotid* arteries, in which the distance from the origin of the *superior thyroid* and bifurcation of the *primitive carotid* to the origin of the *lingual*, varied from one half to three-fourths of an inch. The average distance between these two points, he found in an analysis of 121 cases, was $\frac{5.7}{100}$ of an inch.

These specimens went to prove that the application of a ligature to the *external carotid* artery at this point was a safe and justifiable operation. Nevertheless, in performing this operation, it was always safer to examine if any branch was derived within the immediate vicinity of the ligature. If found, it should be separately secured, as a safeguard against secondary hemorrhage.

A specimen in which the *common carotid* trifurcated into the *internal*, *external*, and a single large trunk, which afterward divided into the *superior thyroid*, *lingual*, and *facial*.

This anomaly occurred twice in 121 cases examined carefully. The cases are reported in the Prize Essays of the American Medical Association for 1878.

A specimen showing a common origin for the *facial* and *lingual* arteries from the *external carotid*. I found this condition to exist in 31 cases out of 121.

Three cases showing an exaggerated type of the

normal trumpet-like expansion of the origin of the *internal carotid*.

The explanation he offered for this almost constant dilatation was, that the column of blood projected into the common trunk divided about equally into the two principal branches when it reached the septum of bifurcation. The pressure upon the *external carotid* was relieved by reason of the large number of branches given off by it, while the *internal carotid*, having no such means of relief, expanded under the pressure.

(To be continued.)

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE NEW MEDICAL BILL—HOSPITAL ACCOMMODATION IN LONDON AND ITS ABUSES—MEDICAL FEES.

LONDON, March 31, 1883.

THE new medical bill continues a prominent subject of interest. It is believed that some of the corporations will oppose it, particularly the College of Surgeons, as its diploma of membership will probably die out in the event of the bill becoming law. One objection justly urged against the new bill is, that although it provides for a uniform *final* examination in medicine, surgery, and midwifery, it offers no guarantee that the examinations in the primary subjects of study shall be of equal and sufficient security.

The subject of hospital accommodation in London is again receiving attention. On the one hand, it appears that some districts are insufficiently provided, notably the north of London; on the other hand, there is no doubt that the existing hospital accommodation is greatly abused. This remark applies chiefly to the out-patient departments. There is no doubt that many—it might almost be said most—of the out-patients could afford to pay *something* for the advice and medicine received. In many cases well-to-do middle class people, and even the upper classes, do not disdain to receive gratuitous advice and medicine. In some instances, no doubt, the motive is to avoid expense, but in others such patients attend public institutions under the belief that they will receive better advice than from their family attendant, and they are either unable or unwilling to pay the fee of a hospital physician and consult him as private patients. On one occasion a banker's wife went to an hospital to see a celebrated specialist, and leaving her carriage at the corner, presented herself among the patients attired in her lady's maid's clothes. She was, however, recognized by another member of the staff who happened to be present, and unkindly informed his colleague, so that on a subsequent visit the specialist refused to prescribe for a lady of her position within the hospital walls, and gave her a short lecture on the use and abuse of charitable institutions.

I have known though of a wealthy man attending as a hospital patient in order to "take a taste" of a physician before consulting him privately. This gentleman betook himself for this purpose to a large institution in London which shall be nameless. He entered the physician's consulting-room along with several other patients. One of these approached the great man, and, amongst other symptoms, mentioned his inability to keep awake, and said he could always go to sleep at any time. He was always falling asleep, he said. "Very well," said the physician, "then lie down on that bench and go to sleep." The patient lay down as bid. Several patients were seen and dismissed. The physician then bethought himself of the drowsy one, and, turning toward him, said loudly, "Hallo there, are you asleep?" "No, sir," timidly replied the patient. "Well, go to sleep at once then," responded the doctor. In a few minutes the doc-

tor again demanded if he were asleep, and finding he was not, said "How dare you tell me such a lie as to say you could go to sleep any time?" and scolded and dismissed him. The gentleman *did not* consult that physician, who, I beg emphatically to say, is not a fair specimen of London medical behavior.

Your readers may care to know how our scale of fees runs. General practitioners charge from half a crown to seven shillings a visit, and this charge includes the medicine supplied. Consulting practitioners, whether physicians or surgeons, charge a guinea per consultation. For the first interview it has of late years become customary with many to charge two guineas. For visits, consulting practitioners charge by distance. For short distances a guinea a mile is charged, with a minimum charge of two guineas. For long distances, one-third of a guinea is charged per mile for the double journey; *i.e.*, sixty guineas would be charged for a journey of ninety miles and back. Though these are the accepted fees, it will readily be understood that they are subject to variations. Thus many young physicians are glad to take a guinea for two or even three consultations, and even established hospital physicians and surgeons will sometimes see a patient of limited means an extra time or so without extra charge. Similarly, it is only the busiest men who exact the outside charge for visits at long distances.

MEDICAL EDUCATION IN CHICAGO.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of April 7th is a description of a "Class Quiz on Anatomy in a recognized Medical College in Chicago," which I think should not pass without notice. The article has no signature, and the name of the medical college in which this wonderful quiz took place is not given. If this narrative is anything but a grotesque exaggeration, the class spoken of must have been made up of the champion ignoramuses of America, and it is unjust to other colleges not to specify the one alluded to. A reader not familiar with the schools and laws of Illinois would be likely to suppose that this occurred in a school which is recognized by the profession. Our State Board of Health recognizes all the schools here; but not many who read *THE RECORD* do. We have the Rush Medical College, the Chicago Medical College, the Woman's Medical College, and the College of Physicians and Surgeons, which we recognize; but the others are Homoeopathic and Eclectic, and would not be classed with those named. The scene described could not have been in any of those four schools. None of these have mixed classes, and therefore no "embryo male and female doctors to throw orange-peel before the lecturer began to ask about the abdominal aorta." *THE RECORD* has before said, in substance, that "entrance examinations are unknown in Chicago." This is an error. The Chicago Medical College and the Woman's Medical College established the rule of requiring a good English education as a condition for matriculation in 1875, and perhaps may claim the rank of pioneers in this movement.

The College of Physicians and Surgeons adopted this rule on its first organization in 1882. I have reason to believe that it has been fairly applied by these institutions. I suppose that all medical schools in the State will feel compelled to require this in future; if our State Board of Health adheres to its rule, recently adopted, of not recognizing schools that do not, I think your correspondent is warranted in doubting that the medical practice act of Illinois excludes ignorant quacks from the State. That it does has been claimed, and the claim has been generally admitted. It may be said for this act that it is an effort in the right direction; but if it has driven any quacks from Illinois, I am not aware of it. There are, and always have been plenty of them practis-

ing in Chicago. Some may have been *frightened* away, but I do not think any have been *driven* away. A person has long practised medicine in Chicago under an alias. The Board revoked his certificate several years since, but he has never suspended his practice. A doctor's sign has been on one of the principal streets of this city many years. Several years since his well-advertised name brought him a patient who lost her life in an attempted abortion. An investigation revealed the melancholy fact that the doctor had been a good while dead, but another had personated him, and the infamous business went on without interruption, and the old name still stands at the entrance to invite the unwary across the threshold. I have long been an attentive observer of the condition of the profession in Illinois, and I do not think that our legislation has greatly advanced its interests. The profession has accomplished much through its own organizations by carefully registering its recognized members, and by a persistent demand that medical colleges shall give more thorough instruction to students and exact a higher grade of attainments for graduation. "T is true 't is pity, and pity 't is 't is true," that the medical schools of Chicago confer about five hundred diplomas annually, and that the ease with which they are obtained nearly robs the parchment of its value; yet I doubt if our regular schools distribute their diplomas with a more liberal hand than do those of New York.

E. INGALS, M.D.

CHICAGO, April 10, 1883.

CATHETERIZING THE FEMALE URETER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the *New York Medical Journal*, February 17th, there appeared an interesting report of the extirpation, by Dr. W. M. Polk, of a misplaced kidney. The patient, a girl of nineteen, died eleven days later of uremia, and the autopsy revealed the congenital absence of the other kidney, the excised organ having therefore been the patient's only kidney. After alluding to other cases in which the same operation has been followed by the same result from the same singular cause, Dr. Polk discusses the various possible means for detecting the absence or disease of one kidney before operations upon the other. No mention is made, however, of Pawlik's method for catheterizing the ureter in females—an easy and generally practicable proceeding, which involves no preparation of nor danger to the patient.

As originally demonstrated to the *Versammlung deutscher Naturforscher*, at Salzburg, in 1881, the method was this: The patient is placed in the knee-elbow position, the posterior vaginal wall retracted by means of a Sims speculum; the position of the trigonum vesicæ is recognized by the conformation of the vaginal wall. An elastic bougie (or small catheter) is introduced into the bladder and its point is directed, by inspection and palpation of the vagina, into the orifice of the ureter. Dr. Pawlik subsequently acquired such dexterity that inspection of the vagina (and the use of the speculum) became unnecessary; the finger in the vagina sufficed to guide the bougie. Pawlik has thus repeatedly introduced bougies into the ureters in patients of Billroth as preparation for the vaginal extirpation of the uterus. He informed me last July, that he had thus sounded some thirty patients, and had failed but once, in a case of pronounced prolapsus uteri. The writer is convinced by experience that the proceeding is practicable on the cadaver, at least, though demanding patience and practice.

A sketch of Pawlik's method was communicated to the London Congress, and the doctor intended to publish it in detail with illustrative plates; but so far as I can learn, the article has not yet appeared.

W. T. BELFIELD, M.D.

71 DEARBORN STREET, CHICAGO, ILL.

THE HOLMES DINNER.

THE complimentary dinner to Dr. Oliver Wendell Holmes was given, as announced, at Delmonico's, April 12th. About two hundred and twenty-five guests were present. Almost all of them were medical men, there being representatives from Boston, Springfield, Utica, Albany, Syracuse, Washington, and Philadelphia. Among the laymen present were, Mr. Horace White, John Habberton, Noah Brooks, Bishop Clarke, Hon. Wm. M. Evarts, and Mr. George Wm. Curtis. The guests were seated at five long tables, completely filling the hall. On a raised dais, sat Dr. Fordyce Barker, who presided, at his right Dr. Oliver Wendell Holmes, at his left Right Rev. T. M. Clarke, of Rhode Island. Among others seated on the dais were Drs. Wm. Pepper and S. Weir Mitchell, of Philadelphia, Drs. A. C. Post, J. T. Metcalfe, T. A. Emmet, J. C. Dalton, S. O. Vanderpoel, and I. E. Taylor.

Dr. Barker, in calling the assembly to order, made some happy introductory remarks introducing the guest of the evening. These were supplemented by a poem from Dr. A. H. Smith, which was received with much laughter and applause.

The following is the poem :

You've heard of the deacon's one-hoss shay
Which, finished in Boston the self-same day
That the City of Lisbon went to pot,
Did a century's service, and then was not.
But the record's at fault which says that it bust
Into simply a heap of amorphous dust;
For after the wreck of that wonderful tub,
Out of the ruins they saved a hub;
And the hub has since stood for Boston town,
Hub of the Universe—note that down.
But an orderly hub, as all will own,
Must have something central to turn upon,
And, rubber-cushioned, and true, and bright,
We have the axle here to-night.
Thrice welcome, then, to our festal board
The doctor poet, so doubly stored
With science as well as with native wit;
Poeta nascitur, you know, *non fit*.
Skilled to dissect with knife or pen,
His subjects dead or living men;
With thoughts sublime on every page
To swell the veins with virtuous rage.
Or with a syringe to inject them
With sublimate to disinfect them;
To show with demonstrator's art
The complex chambers of the heart,
Or armed with a diviner skill
To make it pulsate at his will;
With generous verse to celebrate
The loaves and fishes of some giver,
And then proceed to demonstrate
The lobes and fissures of the liver;
To soothe the pulses of the brain
With poetry's enchanting strain,
Or to describe to class uproarious
Pes hippocampi accessorius;
To nerve with fervor of appeal
The sluggish muscles into steel,
Or, pulling their attachment, show
Whence they arise and where they go;
To fire the eye by wit consummate,
Or draw the aqueous humor from it;
In times of peril give the tone
To public feeling called backbone.
Or to discuss that question solemn
The muscles of the spinal column.
And now I close my artless ditty
As per agreement with committee,
And making place for those more able,
I leave the subject on the table.

Yet one word more. I've had my pride
As *medicus* most sorely tried.
When Englishmen, who sometimes show
Of things American, you know,
An ignorance that is melancholy;
As Dr. Holmes is very jolly,
Assume that he must therefore be
A Doctor of Divinity.
So to avoid all chance of wrong,
To medicine, or church, or song;
Let Doctor Holmes discarded be
For Oliver Wendell Holmes, M.D.

And now, for I really must come to an end,
May the fate of the chaise be the fate of our friend.
May he never break down, and never wear out,
But a century old, or thereabout;
Not feeling the weight of years as they fly,
Simply stop living when ready to die.

Dr. H. D. Noyes was then announced as the toast-master; his reading of the subject of the first toast, "Our Guest," was the signal for a vigorous outburst of enthusiasm, all rising to their feet and following the quaffing of their wine by three hearty cheers.

Dr. Holmes then read his poem. He was listened to with the most enjoyable attention. No doubt many were surprised at the freshness and vigor of the speaker's presence, his clear voice, and sympathetic elocution. There was no trace of old age in manner or matter.

The poem has been so extensively printed in the daily press throughout the country that we present only a fragment of it, but sufficient to show the power and pathos of its author:

Have I deserved your kindness? Nay, my friends,
While the fair banquet its illusion lends
Let me believe it, though the blood may rush
And to my cheek recall the maiden blush
That o'er it flamed with momentary blaze
When first I heard the honeyed words of praise.
Let me believe it while the roses wear
Their bloom unwithering in the heated air;
Too soon, too soon, their glowing leaves must fall,
The laughing echoes leave the silent hall,
Joy drop his garland, turn his empty cup,
And weary Labor take his burden up—
How weighs that burden they can tell alone
Whose dial marks no moment as their own.

Am I your creditor? Too well I know
How Friendship pays the debt it does not owe,
Shapes a poor semblance fondly to its mind,
Adds all the virtues that it fails to find,
Adorns with graces to its heart's content,
Borrows from love what nature never lent,
Till what with halo, jewels, gilding, paint,
The veriest sinner deems himself a saint.
Thus while you pay these honors as my due
I owe my value's larger part to you.
And in the tribute of the hour I see
Not what I am, but what I ought to be.

Brothers in art, who live for others' needs
In duty's bondage, me:cy's gracious deeds,
Of all who toil beneath the circling sun
Whose evening rest than yours more fairly won?
Though many a cloud your struggling morn obscures
What sunset brings a brighter sky than yours?

I, who your labors for a while have shared,
New tasks have sought, with new companions fared,
For Nature's servant far too often seen
A loiterer by the waves of Hippocrene;
Yet round the earlier friendship twines the new,
My footsteps wander, but my heart is true
Nor e'er forgets the living or the dead
Who trod with me the paths where science led.

How can I tell you, O my loving friends,
What light, what warmth your joyous welcome lends
To life's late hour? Alas! my song is sung,
Its fading accents falter on my tongue.
Sweet friends, if shrinking in the banquet's blaze,
Your blushing guest must face the breath of praise,
Speak not too well of one who scarce will know
Himself transfigured in its roseate glow;
Say kindly of him what is, chiefly, true,
Remembering always he belongs to you;
Deal with him as a truant, if you will,
But claim him, keep him, call him brother still!

As Dr. Holmes read the last line he sank back into his seat, and a loud cheer burst from the listeners, which lasted for at least a minute. Several ladies had stood in the gallery overlooking the room, and they waved their handkerchiefs and applauded as heartily as the men did. Suddenly Mr. Evarts jumped to his feet, swinging his handkerchief in the air, and in an instant every man in the room was standing, shouting and cheering and waving napkins and handkerchiefs. It was a scene of enthusiasm seldom witnessed even in Delmonico's, and Dr. Holmes bowed his thanks with a face in which smiles and tears struggled visibly for the mastery.

The speeches that followed were exceptionally good. Bishop Clarke, of Rhode Island, responded to the toast "The Clergy." He said, among other things, "When the name of Dr. Holmes is spoken, we do not think of bones and ligatures and lesions. It is difficult to conceive of him as ever administering to a poor man anything that it

was hard for him to take. If he had not been great in so many other ways we might consent to think and speak of him as the great doctor. How much we learn from him, and how much we are impressed by his glowing words! As we read we weep, and sigh by turns, but the glad song of the bird is always heard above the sad moaning of the sea. Whatever chord he touches, the answer comes back from the soul, prompt and clear. But I am diverging from my subject, which is the clergy. Now, we clergymen are proud of Dr. Holmes, because we consider him as one of us. If he had never had a father he would never have been, and his father was a clergyman, so that he is really one of our production. We are very grateful to the father for producing such a son. Long may it be before the sun of his life sets."

Mr. Evarts responded to the toast, "The Bar." He began by complimenting the doctors. "It is much pleasanter," he said, "to be asked to meet three hundred doctors in this way than it is to ask one to meet you. An old German book on medicine lays down the sweeping proposition that all diseases and all accidents requiring surgical treatment are caused in order that the skilful and learned in the profession of medicine may be educated by means of them. I don't know, after all, but there is a good deal of feeling in the three learned professions that this is a true view of human affairs. The estate, the body, and the mind make up, do they not, all that is visible, all that is interesting, all that is important in human affairs? The lawyer takes charge of the estate, the clergyman is the curer of the souls, and the doctor is the curer of the bodies. As the sheep are for the shepherd, so those taken care of are for those who take care of them. You medical men have one striking advantage over the rest of us, for though, alas, everybody has not an estate, and everybody has not a mind, yet everybody has a body. We are all bound to be in at the death, and although it is a cheerless moment, yet to us there are assuaging circumstances. In contrasting our relations I should say that Bishop Clarke and his fellow-laborers are sent out as sheep among wolves; you and I are sent out as wolves among the sheep." Dr. Holmes, Mr. Evarts said, "had the advantage of being born and living near to Boston, a place that no one can live early in life without feeling that he has a great advantage over his fellows, and no one who first learns it later in life fails to be grateful that he has seen it before he dies. Now fame was nothing to Dr. Holmes in influencing him to pay us a visit. The only curiosity that he had in the matter was to see how a Boston fame would sound echoed from New York. I never could understand how the Boston people were able to put up so long with Dr. Holmes, who, while he furnished a reputation to Boston, took also the principal part of the reputation of Boston to himself. Now," said Mr. Evarts in conclusion, "as we are all professional men here, and as the rest of the world is shut out, and there is no possibility of anybody knowing what we say or do here, is it not fair for us, does not our character for truth require us, to admit that we are really the saviors and protectors of society? Why should we strive to hide this even from ourselves? Let us animate ourselves to a more vigorous pursuit of our several interests, as sheep and wolves! Let us understand that the laborer is worthy of his hire, and that those who are unwilling to be aided by professional skill and advice in parting with their property and their lives are unworthy of serious consideration."

"The Medical Profession" was responded to by Dr. T. Gaillard Thomas. He said that everybody knew that nothing was so difficult for a medical practitioner as the making of an impromptu speech. He felt embarrassed when asked to present his speech between the speeches of the two eloquent gentlemen who had preceded him and those who were to follow. But he felt that a person must indeed be barren in thought and entirely bereft of speech if he could not express in some way his appreciation of the sweet and noble qualities of the honored

guest of the evening. Dr. Holmes was not only an honor to the medical profession, he was an honor and a blessing to mankind. He concluded with an eloquent tribute to the character and genius of Dr. Holmes.

George William Curtis responded to the toast of "Literature." He said that medicine, the church, and the law had spoken praise of the honored guest. As the church was supposed to dispose satisfactorily of a man's mind, the law most summarily of his estate, and medicine inevitably of his body, what was there left for literature to do but to claim the man in his entirety. One profession had cried "All hail, Macbeth!" Another, "All hail, thane of Glamis!" A third, "All hail, thane of Cawdor," and it remained for literature to cry, "Hail, King that shall be!" It was appropriate that literature should assert its claim upon Dr. Holmes, for in literature he had attained his greatest reputation and honors. It was also appropriate that the literature of New York should extend the hand of fellowship to the eminent literary son of Boston. The speaker referred to the literary work done by New York men, Cooper, Halleck, Irving, and Drake. His speech was a wonderful specimen of finished oratory, and excited great applause.

Mr. Whitelaw Reid responded to the toast "The Press." In concluding he said: "Your honored guest, Mr. Chairman, must have seemed to every one here the youngest man at your table to-night. Yet we know, and perhaps may venture to say, that save for the ever youthful spirit, he is no longer young. The man who has written thirty-two successive annual poems for the class of 1829 must not be surprised that all the world knows by heart—if not his precise age—at least how long he has been out of college. It is one of the pleasantest things connected with his formal relinquishment of some of the burdens he has been bearing that he has the right, in this mellow Indian Summer of his fruitful life, to know that his fame is still a growing one. The very flash and glitter of his wit have sometimes blinded men's eyes to the rich and generous qualities that lay beneath it. Lowell painted him as

"A Leyden-jar, always full-charged, from which flit
The electrical tingles of hit after hit."

This tribute from your profession, Mr. Chairman, has served to recall to us how many more are his titles to renown; how wide has been the field of his work and how rich the harvest he has gleaned. And it gives us the welcome opportunity to show that New York prizes him no less than Boston; and is glad to thank him alike for the pleasure he has for so many years given us all personally; for the example of his life, for the service he has rendered our literature, and the honor he has done our country."

On the conclusion of Mr. Reid's speech, Dr. Barker referred to a number of physicians who had sent letters of regret, and then called for a bumper to absent friends. It was drunk standing and the company sang "Auld Lang Syne" right heartily as a response, and then separated.

BRAINS OF GREAT MEN.—General Skobelof, the hero of Plevna, after death was subjected to a rigorous autopsy. The circumference of his head was 57 centimetres; of the skull, 54; antero-posterior diameter, 18 centimetres; transverse, 14. The brain weighed 1,457 grammes. The brain of Gambetta is deposited in the laboratory of the School of Higher Studies, and will be described by M. Mathias Duval of the Society of Mutual Autopsy, to which M. Gambetta also belonged.

THE HEALTH RECORD OF NEW ORLEANS from 1863 to 1882, as given by the Louisiana State Board of Health, shows a remarkable and steady improvement. In 1863 the mortality was 41.35 per 1,000; in 1873 it was 37.73; in 1882 it was 26.45.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 7, 1883, to April 14, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. To be relieved from duty at the U. S. Military Academy, West Point, New York, August 28, 1883. S. O. 82, par. 6, A. G. O., April 10, 1883.

BARTHOLF, JOHN H., Captain and Assistant Surgeon. The extension of leave of absence for twenty-three days by S. O. 37, C. S. Department of the Columbia, further extended one month. S. O. 31, par. 1, Military Division of the Pacific, April 3, 1883.

GIBSON, R. J., Captain and Assistant Surgeon. Relieved from duty at cantonment on the Uncompahgre, Colorado, and assigned to duty at Fort Hays, Kansas. S. O. 73, par. 1, Department of the Missouri, April 7, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 17, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
April 10, 1883.....	0	6	130	6	121	55	1	0
April 17, 1883.....	1	3	137	4	199	50	2	0
<i>Deaths.</i>								
April 10, 1883.....	0	5	15	6	16	23	1	0
April 17, 1883.....	1	6	21	3	27	20	0	0

Pneumonia still figures largely among the causes of death, the number for the week ending April 14th being 131 out of 721, the total number of deaths reported.

A SIMPLE AND INGENIOUS INSTRUMENT FOR REMOVING FOREIGN BODIES FROM THE EAR.—Dr. Louis B. Couch, of Nyack, N. Y., sends us the description of a little instrument which any jeweller can make, and which, he says, is very useful and efficient in removing foreign bodies from the ear. The description is as follows:

I have been interested in the late discussion going on in your journal with reference to the best methods for the removal of foreign bodies such as corn, beans, etc., from the auditory canal or nares, and herewith transmit my mite to the general fund of information.

Take a piece of eight-sided brass wire, or round wire with roughened surface, and drill into either end a small hole a quarter of an inch deep. Into one end bronze or solder a small twist drill one thirty-second of an inch in diameter, and into the other a nice sharply cut screw (such screws may be obtained of any jeweller) of about one twenty-fifth of an inch in diameter. When this is done, you are ready for your smart boy with more beans in his head than brains.

Suppose the bean is at the bottom of the auditory canal, enlarged and surrounded by inflamed swollen tissues, a small portion only being visible.

Introduce the speculum, and carefully with light pressure drill into the presenting portion of the corn or bean to the depth of about one-quarter of an inch, and clear

off all dust, then reverse the instrument and insert the screw and the bean must come.

I have by actual test inserted my sample instrument into a bean, and sustained with it a weight of twenty-five pounds, as shown by scales; a holding power far in excess of that required for the removal of any such bodies.

Physicians will be surprised at the rapidity with which the drill will perforate the hardest of dry beans and the slight pressure required. Care, however, should be exercised in first entering the drill, that it does not slip.

I confidently recommend this instrument to the profession in all cases for which it is applicable.

WRITTEN AND UNWRITTEN ETHICS.—We venture the statement that of the 75,000 practitioners of medicine of this country, not ten per cent. have ever read the Code of Ethics of the American Medical Association, and that not five per cent. even of the ethically correct in their department toward both the public and their brother practitioners remember enough of it to be of the slightest possible value to them as a guide to conduct. Certain it is that as a guide to the every-day conduct of the physician, it is as if it did not exist. The gentleman does not require it, and he who is not a gentleman can utilize it to cloak his rascality. One of the greatest sticklers for the code whom we know, is notoriously unfair toward his brother practitioners, injuring them by innuendo and robbing them of their patients when he can. Correct medical conduct requires more than can be formulated in words. It requires that rare admixture of regard for others, self-respect, charity, and magnanimity which goes to make up the gentleman. No code can define the constituents of this admixture, and any code which cannot define it is useless, and in many respects injurious. Better than such a code is the unwritten and indefinable law which defines a gentleman. If physicians were absolved from the obligations of gentlemen, and required only not to violate the Code of Ethics of the American Medical Association, the profession of medicine would soon cease to be the honorable calling that it is.—*Medical Age.*

NEW MEDICAL COLLEGES.—Dr. Richard C. Moore, of Omaha, Neb., writes: "The position you have usually taken in reference to new medical colleges being established in cities already occupied or in towns too small to furnish clinical material, I consider correct; but in referring to the Omaha Medical College in the same article in which mention is made of new colleges in Boston, organized under act incorporating *manufacturing companies*, you do an act of injustice to a flourishing and honest institution."

Dr. Moore then describes to us, in a temperate manner (barring a slight exaggeration of his city's population), the advantages which Omaha possesses as a medical centre. There is also, we are told, no medical college equal to that in Omaha, short of St. Louis or Chicago, five hundred miles away. Our correspondent is plainly a sensible and judicious gentleman. We are anxious to do his institution justice. We cannot, however, force ourselves to believe that the lack of medical men in the West is such as to require the establishment of more colleges, even though, like that at Omaha, they require "two full terms of six months each."

THE AFTERBIRTH MISTAKEN FOR INTESTINES AND RETURNED.—A correspondent from the Sandwich Islands sends us the following: "Some of the statements about obstetrics in the Sandwich Islands made in THE RECORD are not quite true, but the following is what took place here: 'An Englishman's donkey had a colt, the first the man had ever seen born. When the after-birth came he thought it was the bowels, and so he and two other white men took a stick and pushed it back. This they did three times, and at last out of pity they shot the donkey. The man said, 'I did not like to see the animal suffer for want of bowels.'"

ADVERTISING IN LAY JOURNALS.—The Irish College of Physicians has followed in the steps of the English College in adopting the following resolution: "That the advertisement of medical books in other than medical publications, and the giving by any of the licentiates, members, and fellows of the college, whether for publication or not, of laudatory certificates of medicinal or other preparations, or medicinal or surgical appliances, is misleading to the public, derogatory to the dignity of the profession, and is censurable by the college."

HEALING THE SICK BY FAITH.—The "Rev. Dr." Monck, "teaching and healing pastor" of the "Apostolic Church of the Divine Gifts," conducted a public exhibition in the Academy of Music, Brooklyn, Sunday evening. Curiosity, belief, and liberal advertising filled the house with people of simple appearance and decorous behavior. The exhibition of "healing" the sick was preceded by a suitable discourse. Then the process of healing began. Little children, men, and women came forward; the doctor announced their disease, spoke his formula, asked how they felt, interpreted their answers to the people, and hurried them aside.

To the above we append the following anecdote: "Have you ever tried the faith cure?" asked a long-haired, fallow-faced stranger, addressing a gentleman who sat behind him in a street-car. "I have," was the answer. "Do you believe in it?" "I do." "May I ask, then, of what you were cured?" "Certainly. I was cured of my faith."

A NEW REMEDY FOR AN OLD DISEASE—HYDRIODIC ACID IN THE TREATMENT OF ACUTE INFLAMMATORY RHEUMATISM.—Dr. James Craig, of Jersey City, N. J., writes us: "Before using the remedy shortly to be spoken of, I was in the habit of prescribing bicarbonate of potassa, which, as a rule, gave relief as soon as the urine was rendered alkaline, which required about a week or ten days, and during that time opiates had to be given to relieve pain and produce sleep. I have also prescribed salicylic acid, but cannot say that I have seen any decided benefit derived from its use. [!] Syrup of hydriodic acid, prepared by Robert W. Gardner, of New York, is the remedy *par excellence* for this painful and troublesome affection. I have used it for the past two and a half years in bronchitis and scrofula, but its effects have been most prompt in acute inflammatory rheumatism, relieving pain in from twelve to forty-eight hours. I have been called to see patients suffering from this affection, and found them with high fever, joints swollen, and suffering terribly, and on the following day have been agreeably surprised at their rapid improvement, finding them in a great measure free from pain, and fever reduced. Some other cases take a longer time, but I have yet to find one that was not in a comfortable condition within forty-eight hours. The dose I prescribe for adults is from two to three teaspoonfuls every two or three hours, in a wine-glass of water, until relieved; afterward I reduce the dose to one teaspoonful, which may be continued for five or six days, at longer intervals. I was first led to the use of this remedy in prescribing for a patient suffering from bronchitis complicated with rheumatism, its effects being most salutary in the relief of both diseases. I should state that under this mode of treatment the heart has been free from complications; the remedy preventing exudation and organization of plastic material. I more frequently use it now in rheumatism than in bronchitis—in fact, I use it in all cases of acute rheumatism, and must say have always been pleased with its results. I have also prescribed it in chronic rheumatism, but with less effect. I hope that other physicians will give it a fair trial, and find it as useful in their hands as it has been in mine."

MENSTRUATION.—In a lecture on the subject of the comparative physiology of menstruation, by Dr. Alfred Wiltshire, of London (*British Medical Journal*), in which he adduces proof of menstruation in various brutes, the following curious statements are quoted: "Velpeau (*Tr.*

Comp. de l'Art des Accouch., t. 1, p. 126) says that in Lapland and Greenland women are not often more regular than every three months, and Gardien (*Tr. d'Accouch. et de Mal. des Femmes*, t. 1, p. 233) pretends that in women in polar countries the menstrual flow takes place only twice or thrice a year."

POWDERED RHUBARB.—Mr. George W. Hayes has made some investigations into the quality of and tests for powdered rhubarb. *New Remedies* says: "Some of the samples examined by Mr. Hayes contained more cathartic acid (the laxative principle) than the standard, and the inference that may be drawn from his investigations of twelve specimens, some of them obtained from thoroughly respectable and conscientious dealers, is that powdered rhubarb may be of value commercially, but is not to be depended on therapeutically. In other words, we may paraphrase a famous *mot* by *Punch* as follows: 'Advice to those about to purchase commercial powdered rhubarb. DON'T!'"

ERGOT IN THE TREATMENT OF CONGESTIVE HEADACHE.—Dr. Charles T. Rogers, of Honolulu, Hawaiian Islands, writes us regarding the above subject, referring to an article by Dr. J. L. Corning in *THE RECORD* of December 23d. Dr. Rogers thinks that the value of ergot in this trouble is not appreciated. He gives it in large doses (ʒj. of fluid extract) and would not be afraid to repeat it within an hour. He combines it generally with a full dose of bromide of potassium (gr. xl. or more). The combination is much more effective than bromide alone. Dr. R. says that he is not at all afraid to use ergot in large doses. He has seen ʒss. given for pulmonary hemorrhage without toxic symptoms following.

OPHTHALMIC APHORISMS.—Dr. J. J. Chisholm, of Baltimore, gave the following aphorisms in a report presented to the Maryland State Medical Society at its last session:

First Aphorism.—Do not blister. In forty-nine applications out of fifty, as I find it used by physicians at large, it is an additional and useless torture to the eye diseases from which the patient is already suffering.

Second Aphorism.—Do not use nitrate of silver. As constantly prescribed by general practitioners, it is not beneficial in one case out of one hundred, and therefore is a very painful infliction to the ninety-nine who would have been so much better off without it.

Third Aphorism.—Do not prescribe sugar of lead. In every case zinc, tannin, or alum is better, and then there is no fear of having insoluble deposits incorporating themselves with the exposed surface of corneal ulcers.

Fourth Aphorism.—Always use weak solutions of the mineral and vegetable astringents in the treatment of eye inflammations which attack the mucous surfaces, and restrict their application to conjunctival diseases exclusively. One grain of alum, sulphate or chloride of zinc, sulphate of copper or nitrate of silver, in an ounce of water, will, in the majority of cases of conjunctival diseases, do much more good and give much less uneasiness than the very painful five and ten grain solutions which are so often injuriously prescribed by physicians.

Fifth Aphorism.—Solution of the sulphate of atropia, from one to four grains to the ounce of rose water, is an essential eye-drop in the treatment of acute iritis, to break up newly formed adhesions. One drop of atropia solution in an inflamed eye is a most valuable means of establishing the diagnosis whether iritic complications exist or not, and should be used in most cases of eye inflammation to find out whether there are any adhesions of the pupil to the lens.

Sixth Aphorism.—Eserine, in solution of one grain to the ounce of water, is the remedy for purely corneal lesions.

Seventh Aphorism.—When physicians are in doubt as to the character of an eye disease, they should seek a consultation from specialists who are more familiar with the eye diseases than general practitioners can possibly be. Such timely aid often saves the patient a lifetime of trouble.

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Original Articles.

SCARLATINAL NEPHRITIS AND ITS COMPLICATIONS.

By JOHN H. RIPLEY, M.D.,

PROFESSOR OF DISEASES OF CHILDREN IN THE NEW YORK POLYCLINIC.

IN the following paper it is intended to consider some of the more important points of practical interest in the subject of scarlatinal nephritis. The views therein expressed are based on personal clinical observation. Special reference is had to prognosis and the indications for treatment. As it is believed that the great object in the management of the disease should be to give the inflamed kidneys rest by having their work done vicariously, the number of drugs recommended is correspondingly small.

The subjoined case presents many instructive features, and is especially illustrative of the subject under consideration.

W. McG—, four and a half years old, had whooping-cough when two years and a half old, and a year later an attack of measles. From both of these diseases he made perfect recoveries, and had had no other important ailment when the present illness began, September 2, 1881, with fever and vomiting. I was sent for, September 4th, and found him with the earlier symptoms of scarlet fever. There was a small area of red rash over the upper part of the chest and another at the root of the neck behind. The fauces were reddened, the tonsils swollen, and the tongue presented its ordinary raspberry appearance in that disease. The temperature was 103° ; the pulse, 160. The skin was hot and dry, and the patient quite restless. I prescribed a tepid bath and a diaphoretic mixture.

September 5th.—The rash now covered most of the body. Temperature, 102° ; pulse, 140. Patient more comfortable.

September 6th.—About the same. Has vomited twice since yesterday. Temperature, 102.2° . Urine examined with negative results.

September 18th.—10 A.M.: Since the last note the boy has been doing tolerably well, but he has remained peevish and feeble, and the temperature has fluctuated between 100° and 101.5° during the interval. Desquamation has been slight. The fauces have remained congested. The urine has been repeatedly examined, but there has been no evidence of kidney complication until to day. Since midnight last night no urine has been passed, the patient cannot void any now, and there appears to be none in the bladder. The boy has been wakeful and restless since early this morning, and has vomited several times. Pulse, 130; temperature, 101° . Pressure on the kidneys causes some pain, but it is not very decided. Flaxseed-meal poultices containing foxglove leaves are to be applied over the lumbar region, and twenty drops of the U. S. solution of morphine are to be given every two hours until the patient gets quiet and dozy.

September 19th.—Three consecutive doses of the morphine were given, when the boy fell asleep and slept for three hours. The medicine was then continued at intervals of between three and four hours, and quiet thus maintained. He perspired a good deal throughout the day and night, but no urine was voided until this morning (thirty hours) at four o'clock, when he passed about

two drachms which was thick and bloody. He has taken buttermilk, fresh milk with lime-water, beef-juice and water, in dessertspoonful doses and has vomited only three times. He looks very pale and has a dry tongue. Temperature, 101° ; pulse, 130. At times a little delirious. No œdema. Treatment continued. 5 P.M.: After several fruitless trials he succeeded, about an hour ago, in passing a couple of teaspoonfuls of urine of the same appearance as the last. His general condition remains unchanged. Same treatment.

September 20th.—Sixteen hours after the last urine reported above was passed, he voided about an ounce which was of a lighter color than the former; and again, four hours later, two drachms. This last I carefully examined microscopically, after allowing it to stand in a champagne-glass for half an hour. It contained all the varieties of casts common in acute scarlatinal nephritis—hyaline, epithelial, blood, and granular. The multiplicity of forms of these bodies was a matter of especial interest to me. There were large and medium-sized epithelial, and granular, and blood casts; small straight, and long, narrow, curved, and colorless casts; and a number of small, twisted, worm-like, or pig-tail forms. Of the first two forms there was a large number—a dozen or more in a single field ($\times 500$). Besides casts, the urine contained, of clinical importance, a profusion of red and white blood-corpuscles and tubular epithelium. This specimen was not examined for albumen.

September 22d.—Urine a little more free; about four ounces having been passed during the last twenty-four hours. It continues of a dark, smoky color. There is still no dropsy of cavities or tissues. Erysipelas appeared at the left base of the nose last night and now involves the lower half of the organ and a small area of the adjoining cheek. Temperature, 101° ; pulse, 126. Had one severe attack of vomiting in the night, but none since. The amount of nourishment has been increased. The tincture of iron in five-drop doses every three hours is now prescribed for the erysipelas.

September 23d.—The water is still dark and scanty, only six ounces having been passed during the last twenty-four hours. As usual, since the beginning of the kidney trouble, the boy perspires freely, although less so now than during the two preceding days. The erysipelas is fading at the site of the original invasion, but now involves a portion of both cheeks, and these parts are quite red and tender. The tongue is moist at the edges, but still dry in the centre. Emaciation has been rapid. Only one dose of morphine has been given since yesterday, and only one attack of vomiting has occurred in the interval. Pulse, 116; temperature, 99° . The urine presents the same microscopical appearances as at the last examination. About one-third of its volume solidifies with heat and nitric acid.

September 24th.—Patient improving. He has passed a pint of urine since yesterday. He is hungry and retains large quantities of food. The erysipelas is fading.

September 25th.—Still gaining.

September 27th.—The boy has a ravenous appetite. The urine is now about normal in quantity and of a lighter color, but contains yet a large number of casts of all kinds; those from the smaller tubes being the more numerous. Less red blood than at former examination, and more leucocytes. Albumen diminished.

October 6th.—Since the last report the patient has been gaining until yesterday, which was a poor day; he

was unusually feeble, had no appetite, and his face was very pallid. The urine is again dark and scanty and contains an increase of blood and casts.

October 9th.—Better again. More and lighter-colored urine.

October 11th.—Convalescent. The urine still contains a few casts, some red blood globules and leucocytes.

October 13th.—Gaining rapidly in flesh. Urine slightly albuminous and contains a little blood, but no casts.

October 31st.—Urine normal. No sequelæ.

The special interest in the above case pertains to (1) the unusual grouping of symptoms, and (2) the fact that the child recovered notwithstanding the gravity of the kidney lesion, which was indicated by both the anuria and the microscopic appearance of the urine.

Dropsy is one of the earliest and most constant symptoms of scarlatinal nephritis. So well established is this fact that "renal dropsy" and "dropsy after scarlet fever" have often been used by intelligent practitioners and writers as synonymous terms with "scarlatinal nephritis." Thomas¹ recognizes it as one of the initial symptoms, and so does Roberts.² Bartels³ says: "The insufficient excretion of water by the kidneys leads to dropsy—a symptom which is scarcely ever absent in the severer cases of acute parenchymatous nephritis, although very often absent in the milder cases. The opinion expressed by the last-named author quoted is in full accord with my own experience, and hence I consider it noteworthy that this boy had not an observable trace of serum-infiltration during his entire sickness.

In this connection it may not be entirely irrelevant to state that I have observed in a few instances, in children suffering from acute nephritis, symptoms which could most easily be explained by supposing *pulmonary interstitial œdema* to be present. Such children had not excessive anasarca, and the congested face, rapid pulse, and frequent respirations were suggestive of pneumonia. On examination of the lungs, however, a little dull tympanitic percussion would be obtained, a slight bronchial or rude character to the respiration, and, perhaps, a few moist râles would be heard, but nothing indicating either intra-alveolar œdema or pneumonia. If any cough accompanied the other symptoms it was dry and short and infrequent. The temperature varied, but was generally from 100° to 103°. Hertz⁴ recognizes an interstitial œdema of the lungs as sometimes occurring during a chronic nephritis and giving rise to the "so-called *uræmic asthma*." But the manifestations and physical signs of *uræmic asthma*, as I have observed it, are precisely the same as those of *bronchial asthma* produced under other circumstances and by other causes, and besides it will often quickly and entirely disappear after a full dose of morphine or a hydragogue cathartic. Now, to account for *uræmic asthma* by calling it an interstitial pulmonary œdema, we must suppose the calibre of the smaller bronchi to be reduced by the infiltration of their walls at the same time that the alveolar capacity remains uninvaded; for otherwise the symptoms and physical signs would not simulate bronchial asthma. Such a condition would seem very improbable. The cases of supposed interstitial pulmonary œdema which I refer to, lasted several days each, and, although modified at times in the severity of their symptoms, there was no complete intermission during the whole period of attack.

The *low temperature* in this case, when considered in relation to the severity of the onset of the disease, is noteworthy. Gee⁵ states that pyrexia accompanies the onset of renal dropsy and is high in proportion to the severity of the symptoms. This accords with my own observations and is the general rule according to most authorities. In several fatal cases of which I have record, the temperature ranged between 103° and 106.5°. A low tem-

perature, therefore, in otherwise grave cases, may prove to be of prognostic value.

Prolonged anuria, as one of the manifestations of scarlatinal nephritis, justly excites the apprehension of the experienced physician.

Bartels¹ says: "Apart from the individual conditions and complications, the prognosis may be set down as absolutely bad, so far as my own experience goes, in every case (with the exception of cholera nephritis) in which the suppression is complete. In no such case have I ever seen recovery take place."

So, too, Thomas² considers the prognosis unfavorable when there is "great diminution in the secretion of urine, or complete anuria for several days with or without signs of uræmia, and with or without fever." West³ expresses himself still more strongly, as follows: "Of all indications furnished by the urine none is of such constantly evil import as a marked diminution in the quantity of that secretion, especially when such diminution takes place suddenly; and in whatever other respects the state of a patient may differ, complete suppression of urine for a period much exceeding twelve hours almost invariably announces the speedy approach of death." Although the cases of nephritis from scarlet fever that I have observed have, in a large majority of cases, terminated in resolution, still this is the first instance which has fallen under my observation of a child recovering from acute nephritis after a total suppression of the urinary secretion of more than fifteen hours. And if I have found the prolonged suppression of urine in scarlatinal nephritis so uniformly followed by death, anuria occurring during an attack of *diphtheritic nephritis*, even of much shorter duration, has in my experience been equally fatal. I cannot agree with Jacobi ("A Treatise on Diphtheria," pp. 90-91), that nephritis is of such rare occurrence at a very early period in diphtheria, but I believe it is a complication of great danger, both in that disease and in scarlet fever, when occurring thus early.

It is very important in these cases of nephritis not to mistake retention for suppression. Children will sometimes retain their urine in the bladder for many hours when there is no lack of secretion. Should percussion over the bladder leave us in doubt, a catheter can be introduced and the question thus positively answered.

A number of cases of prolonged anuria from acute nephritis have been published, which show how, partly by vicarious excretion and partly by special tolerance of the system to the retained poisons, patients have been enabled to endure this condition for an unusual period before a fatal result ensued, and some have even recovered. Dr. C. Lellman has referred me to a very interesting case of scarlatinal nephritis, reported by Biermer,⁴ in which the suppression of urine lasted at one time five days—fatal. Dr. L. Haupt, of this city, has kindly furnished me with notes of the case of his little nephew, six years old, who, about the beginning of the fourth week after an attack of scarlet fever, began to suffer from nephritis, which caused great anasarca, and, at one time, a total suppression of urine for thirty-six hours. The child ultimately recovered.⁵ Meigs and Pepper mention two cases of prolonged suppression due to scarlatinal nephritis. In the case of a boy between one and two years old there was no discharge of urine for thirty-six hours. In the other case, which occurred in a girl between three and four years old, no urine was passed for five successive days, and there was no accumulation in the bladder. The patient suffered very much and passed nearly the whole time in a semi-comatose state, but could be roused and then showed some intelligence and complained of headache. Vomiting was persistent. She had no convulsions and finally recovered.

I saw, with Dr. L. D. Sproat, a few months ago, a man, thirty years old, who was taken suddenly with fever, in-

¹ Ziemssen, vol. ii., pp. 249-257.

² Reynolds' System of Med., p. 651.

³ Ziemssen, vol. xv., p. 284.

⁴ Ibid., vol. v., p. 279.

⁵ Reynolds' System of Medicine (Hartshorne), vol. i., p. 92.

¹ Loc. cit., p. 291.

² Loc. cit., p. 289.

³ Diseases of Children. Sixth edition.

⁴ Virchow's Archives, vol. 19.

⁵ Diseases of Children.

tense headache, pain in the back, and vomiting. From the onset of the disease until the death of the patient from pneumonia, nine days later, only a few ounces of urine were passed, which was bloody and became nearly solid by boiling. At one time during his sickness he passed no urine for three days, and at the end of that period only about an ounce. For forty-eight hours before he died he passed no urine. A catheter was several times introduced, but none found. He had no convulsions, and delirium was not marked until the last day of life, when he gradually lapsed into deep coma. His temperature was about 103° until pneumonia developed, about the seventh day of his illness, when it became more elevated. In this case, as in my own, there was no dropsy. The theory of Harley¹ that "anasarca, in fact, only makes its appearance when not alone both, but the whole of both kidneys are so much affected as to be unable to excrete the urinary products," is disproved by such cases as these. According to Ebstein,² complete anuria from nephrolithiasis may exist and go on to a fatal termination, and yet one kidney remain healthy.³

The quantity of albumen alone furnishes no trustworthy guide for prognosis. In some cases of acute nephritis, as also during acute attacks in old cases, I have seen the urine rendered nearly solid by coagulating its albumen, and yet the patients make good recoveries, whereas some of the very worst cases have had proportionately small amounts of albumen. I have often found it in the urine of diphtheritic patients in considerable quantities when casts were absent and other kidney symptoms mild. As is well known, temporary albuminuria occurs in malarial fever patients, even in cases in which the temperature is comparatively low, but, as a rule, it disappears without causing serious complications. I have had no experience in those rare cases of scarlatinal nephritis associated with various dropsies in which albuminuria is absent. Bartels emphatically states that he has never seen a case of acute parenchymatous nephritis in which the urine was not albuminous, although, in a few cases, he has known the dropsy to precede the albuminuria for a short time. However, Thomas, Niemeyer, Reynolds, Frerichs, Steiner, and others recognize such a form of acute nephritis. Dickinson⁴ reports a single cure which came under his care, with the autopsy.

Philippe, of Berlin, is said to have examined the urine of sixty patients suffering from scarlatinal anasarca, during a certain epidemic, without once finding albumen. In regard to the prognosis of such cases, Niemeyer speaks of it as "a sequel of scarlatina as free from danger as it is inexplicable." Johnson,⁵ however, quotes two cases from Roberts, both of which were fatal. The autopsy on the second case, after five months' illness, showed the kidneys "to be good examples of the smooth white 'Bright's kidney.'"

The number and forms of casts found in the urine are, in my opinion, of great value in determining the prognosis. A small number of straight casts suggests a mild attack. Although a large number pretty uniformly indicates a severe form of the disease in scarlatinal nephritis, it is of still more evil import in diphtheritic nephritis. This arises from the fact, I believe, that when this marked form of nephritis occurs in diphtheria, that disease is in other respects more severe, and the kidney affection occurring, as it often does, during the early stage of the attack, the system has a double poison to withstand.

When all parts of the kidney are represented by casts, as in this case, I believe the gravest apprehension should be felt as to the result. My own observations are limited to five cases. One, a case of diphtheria, elsewhere reported, died (MEDICAL RECORD, 1880). The second,

a young married woman with scarlatinal nephritis, a patient of Dr. Milne, died. The third, a girl six years old, also scarlatinal nephritis, died. The fourth, a girl four years old, nephritis following scarlet fever, died. Dickinson¹ has reported a similar case, with a drawing representing the appearance of the casts, which was also fatal. The fifth, the boy on whose case these remarks are based, recovered.

No very positive statements can be made from observations so limited; but as I have found all these different forms of casts present together only in these few cases, and as all but one have terminated fatally, I infer (1) that the combination is rare, and (2) that it indicates a very grave form of the disease. Although it has been abundantly proved by pathological examinations that casts are *formed* in the convoluted tubes, some authorities deny that they are ever found in the urine, it being, in the opinion of these observers, impossible for such cylinders, on account of their large size, as inferred from the comparative size of the tubes in which they are formed, to pass through the narrow loops of Henle. The force of this objection is considerably weakened by the fact that the epithelium of the convoluted tubes is much thicker than that lining the descending loops of Henle, and thus the disparity between the calibre of these different tubes is greatly reduced. And when the cortex of the kidney is the seat of congestion or inflammation the epithelium of the convoluted tubes is increased in thickness much more proportionably than the latter.

In speaking of the anatomy of the convoluted tubes, Charcot² says: "The cells which form this lining, as we know, almost coalesce; they are voluminous and leave in the cavity of the tube only a narrow lumen." Farther on he says, "In the descending limb of Henle's loop the epithelium suddenly undergoes a profound modification; we then find only, indeed, a tessellated and clear epithelium, swollen only at the level of the nucleus and entirely analogous to that presented by the blood-vessels." This is substantially in harmony with Flint's³ description of the minute anatomy of the kidney. If to the above anatomical facts we add the one in regard to a physical property of casts themselves, wherever produced, namely, that a certain amount of shrinkage takes place in them before they are dislodged from the site of their formation, it seems quite possible that they may be driven through the narrow looped tubes and subsequently appear in the urine. Clinical testimony in support of this opinion is not wanting. Charcot⁴ says that "the casts of the convoluted tubes can, indeed, pass through this narrow branch only with the greatest difficulty, and we cannot expect to find them *often* in the urine." Cornil and Ranvier assert that "it is certain that casts formed in Henle's loops sometimes pass into the urine, and it is probable that narrow casts formed in the convoluted tubules of the cortical substance may also be washed out by the secretion of urine." On the following pages, in describing the different forms of casts, they say "at times they resemble a corkscrew, having the shape of the convoluted tubules in which they are formed." Under the head of "Casts," Dickinson⁵ makes the following statements: "Casts of large diameter are seen, containing within themselves others of smaller size. In such cases the small cast has been formed in the upper or convoluted part of the tube," etc.

Tyson,⁶ after mentioning the theoretical objections advanced against the escape of casts from the convoluted tubes, and stating that it is easy for them to pass from the *intermediary* portion, says, "While there are difficulties in the descent of a cast from the cortex of the kidney, and while such descent is doubtless more rare, I do not consider it impossible." Now, casts formed in the con-

¹ The Urine and its Derangements.

² Ziemssen, vol. xv., p. 712.

³ Dr. E. P. Fowler, of New York, published in 1881 an interesting and instructive monograph, *Suppression of Urine*, in which he tabulates and comments upon ninety-three cases of anuria. In many of these cases the suppression was of almost incredible duration, lasting in one patient sixty days.

⁴ A Treatise on Albuminuria, p. 74. Second edition. New York.

⁵ Lectures on Bright's Disease.

¹ Loc. cit.

² Lectures on Bright's Disease of the Kidneys. Millard's translation.

³ Human Physiology.

⁴ Loc. cit.

⁵ Loc. cit., p. 14.

⁶ Bright's Disease and Diabetes.

voluted tubes would probably retain the general shape of the mould in which they originate, as is true of casts from other parts generally, even after passing through the medullary portion of the kidney, and hence be pathognomonic. The small, crooked, spiral, or corkscrew-shaped bodies which I observed in the urine of the boy whose case I have herein detailed, as well as in that of the other similar cases referred to, I believe were formed in the convoluted tubes. They resembled those seen *in situ* in the cortex of the kidney, and correspond to the illustrations of Dickinson, Bartels, and others. If they are not formed in the convoluted tubes it is difficult to account for their shape. If they come from straight tubes, and their shape is a matter of accident, they should be seen oftener and in mild cases. Judging from my own observations, I should say that they are rarely seen, and that their presence is a symptom of very great gravity. As bearing on this subject, the following extract of a letter which I received from Dr. George L. Peabody, Pathologist to the New York Hospital, more than two months after I made the inquiries, is of interest: ". . . I have had the usual crop of diseased kidneys this winter, and can now answer your questions, I think, with more certainty and definiteness than I could have done before. In answer to your first question as to the comparative frequency of casts in the straight and convoluted tubes, I may say that in my experience they are much more common in the straight ones, and are frequently confined to the straight tubes of the pyramids. I can hardly say that it is rare to find them in some of the tubes of the cortex (other than the straight tubes of the medullary rays); but from the anatomical intricacies of the cortex I do not think that in any given case it is always possible to say whether the casts are actually in the convoluted tubes or in the intercalated tubes. In regard to your second question, I do not now recollect to have seen casts in the convoluted tubes in any case where they were not present in the straight tubes." In regard to the significance of granular casts they seem to be present at times in the urine in all forms of nephritis, and in all stages and all degrees of gravity of the disease. Certainly they are common enough in the milder grades of acute parenchymatous nephritis. If the urine contain a large number of blood-casts, it is a symptom of gravity.

(To be continued.)

THE BLUE MAN OF MISSOURI.—Dr. Thomas F. Rumbold reports in the *St. Louis Medical and Surgical Journal* the following history of a patient known as the blue man of Missouri: "Mr. J. S. F., aged thirty-three years, of Columbus, Mo. At the age of about fifteen years he took daily from five to ten drops of a solution of nitrate of silver of the strength of grs. xx. ad ̄j. This was continued for about five or six months; at the end of this time he noticed that his face and hands were getting a peculiar dark color. The color increased for some time after he discontinued taking the silver solution. The color of the integument of his face and hands at the present time resembles a No. 2 lead pencil mark, with a light sky-blue in it. A stove merchant, who happened to see him in my office, thought that his face and hands had the appearance of being colored with a light coating of stove-polish, which is really a very good description of his appearance, as the skin of the face, especially, has a marked polished appearance or a shine to it. The color is decreased during cold and dry weather, and increased during damp and hot days. The mucous membrane lining the anterior nares, the inside of the mouth, the lips, the under portion of the tongue, the soft palate, tonsils, pharyngo-nasal cavity, larynx, and vocal cords were all colored by the nitrate of silver, so were also the membrana tympani and the sclerotic coat of the eyes. The whole of his body was more or less colored, but not to so marked a degree."

HEMIANÆSTHESIA AND HEMIOPIA IN CEREBRAL SYPHILIS.¹

By L. PUTZEL, M.D.,

NEW YORK.

THE symptomatology of cerebral syphilis is almost as varied as that of hysteria, the most capricious of all neuroses. In the present paper I shall not attempt to enter into the general bearings of the topic, but shall merely call your attention to a complex of phenomena which is of such exceedingly rare occurrence in this disease that my acquaintance with the literature of the subject has made me cognizant of but one case bearing any analogy to it, and to which attention will be called further on. I suspect, however, that the symptoms in question are not so rare as the infrequency of reference to them might lead us to believe, but that this is partially accounted for by the fact that they are not alone usually unrecognized by the patient but also escape the observation of the physician unless careful search is made for them. None of my cases proved fatal, so that post-mortem demonstration was impossible, but the peculiar combinations of symptoms were so well defined that a tolerably exact localization of the lesion could be ventured upon. At all events, there can be no doubt that the symptoms in question were due to cerebral syphilis. The histories of the cases are as follows:

CASE I.—R. S., admitted to my wards in Randall's Island Hospital January 13, 1881, a native of this country, aged forty-seven years; her family history is unimportant; she is married and has had five children and two miscarriages. Three of the children died; one had an eruption appear upon the body which lasted until death at the age of nine months; the other two died in convulsions, one at the age of nine months, the other at four months. The patient states that her husband was dissolute in his habits.

She has had crying spells for which she could give no cause, and also a sensation of something in her throat and vague pains in her head, all of which symptoms passed off without treatment. About eight years ago she had a sore throat with a similar condition of the tongue and lips, and also lost a large quantity of hair from the scalp. Five years ago she had an iritis in the right eye together with sore throat; vision has been impaired ever since in this eye.

Seven years ago she began to suffer from muscular twitchings in the right leg, occurring during the night. In the spring of 1879 she first noticed loss of strength in this limb, accompanied by a sensation of cold on the outer side of the right thigh and leg. About the same time her attention was called to a dead sensation on the outer side of the right arm and hand, occurring during the night; five months later she also began to lose power in this limb. These symptoms had been preceded by occasional burning pains in this region. The power in the arm and leg continued to diminish very gradually until finally the patient was compelled to give up work. Five months ago she began to notice a loss of general sensibility over the entire right side of the body, and about the same time the sense of smell was lost in the right nostril. There has never been any disturbance of the functions of the bladder or rectum.

Present condition.—The patient is well nourished; has a rather flabby look; denies drink. There is nothing noticeable about the face; the muscles can be moved normally; the tongue is protruded in a straight line. The patient masticates better on the left side of the mouth than on the right.

Special senses: *Sight.*—Can read ordinary newspaper print at a distance of about twelve inches with the left eye and at about eight inches with the right. The right field of vision is much contracted.

¹ Read before the Section on Practice of Medicine of the New York Academy of Medicine, at a Stated Meeting held February 27, 1883.

Smell and taste.—Absent on the right side, normal on the left.

Hearing.—The ticking of a watch is heard at a distance of eight inches on the left side, and very slightly when pressed directly against the right ear.

Motion.—There is considerable loss of power in the right arm; the dynamometer can only be forced to fifteen on this side, to twenty on the left. The right side of the thorax lags somewhat during respiration; tenderness over the sternum on pressure. There is considerable loss of power in the right leg, but no muscular atrophy; the tibiae are tender on pressure. The patellar tendon reflex is increased on the right side.

Sensation.—Tactile sensation is diminished on the right side of the face, and also over the right upper limb, the diminution being most marked in the hand and fingers. Can feel nothing but large articles with this hand, and then is unable to recognize them by the touch. Over the right leg the patient feels only one point of the æsthesiometer, although the instrument is separated to its fullest extent.

Dr. D. C. Cocks, Ophthalmic Surgeon to the hospital, has kindly furnished me with the following notes of the results of three examinations of this patient's eyes:

April 22d.—Choked disks, most marked in the right eye; slight insufficiency of the interni; field of vision slightly contracted.

June 14th.—V. = $\frac{1}{10}$ with $-\frac{1}{8}$; the interni are weak, also the right externus; the patient states that she sees double with the right eye when the object is carried to the right and upward. Examination with the ophthalmoscope shows neuro-retinitis.

September 21st.—Left eye: temporal side of nerve looks atrophic, but the upper and nasal sides are still indistinct. Right eye: nerve indistinct. Patient was ordered the anti-syphilitic remedies, and soon showed considerable improvement. Smell is much improved and she now hears a watch at a distance of six inches on the right side. The field of vision has expanded slightly. Taste has not improved. She can now distinguish articles by feeling them. The muscular power of the right side has also increased; grip with the dynamometer, right hand 28, left hand 28.

April 1, 1881, the patient was discharged at her own request, greatly improved.

Diagnosis.—The occurrence of hysterical symptoms in this patient may, perhaps, lead to the suspicion that she suffered from hysterical hemianæsthesia, but this view may be discarded for the following reasons: The mildness of the hysterical symptoms which were really present; the absence of convulsive seizures and other phenomena occurring in grave hysteria; the gradual and regular onset of the symptoms; their persistence; the presence of organic changes in the optic nerves.

There can be no doubt, indeed, that the cerebral disease was organic in its nature, and the well-marked history of syphilis, together with the marked improvement under the antisymphilitic remedies prove the case to be one of cerebral syphilis. As is well known, this disease is characterized by various lesions, by gummata growing from the dura or pia mater, by gummatous meningitis, endarteritis with its sequences, and the occurrence of gummy growths in the substance of the brain. The development of the latter within the brain-substance, *i.e.*, not propagated from the periphery, is of exceedingly rare occurrence, and has been denied by a number of authors. I have had the good fortune, however, to observe a case of this kind in which a gumma was found in each corpus striatum, surrounded on all sides by brain-tissue. To this category I believe the case under consideration belongs, since all the symptoms can be readily explained by the formation of a gumma in the posterior portion of the white capsule on the left side, and, so far as I am able to judge, by a lesion in no other situation. The occurrence of softening in this region from vessel changes

is negated by the slowly progressive character of the symptoms, their long duration, and the marked improvement under treatment. The branches of the middle cerebral artery, which supply this portion of the brain, are terminal arteries, and vessel changes of such long duration would inevitably have led to disorganization of cerebral tissue, and a consequent incapacity for the restoration which occurred to a certain extent in this case. The existence of choked disks is also significant in this respect.

CASE II.—Jane O'N—, aged thirty-three years; domestic; admitted as prisoner from the Workhouse, September 19, 1881.

Family history.—Unimportant.

Previous history.—Patient has been a hard drinker, chiefly of alcohol diluted with water; was married at the age of fifteen years; had six children, all of whom, with one exception, died at the age of two to four years. Denies venereal. She was always healthy until two years ago, when diplopia developed, with turning inward of the right eye; about a week later the right eyelid and face in the neighborhood of the eye began to swell, and there were shooting pains in the ball of the eye and the head. Since that time these parts have been more or less swollen; at times the eye would be closed, then the swelling would diminish, but it has never been entirely absent. At the outset she noticed anæsthesia of the right side of the face, but after the lapse of six months there was marked hyperæsthesia of the upper half of the right side of the face and forehead and the anterior half of the right side of the scalp. This has continued to date, being much worse at times. She has had pain and ringing in the right ear from the beginning; during the last two or three months there has been more or less deafness in this ear.

About a year ago the legs got weak after standing for any length of time, the right more markedly than the left; there have been slight cramps in the limbs at night. About two months ago the right arm began to grow much weaker than the left, so that the patient was compelled to give up work.

Present condition.—The patient is fairly nourished. Marked tumefaction of the right side of the face, beginning at the lower border of the malar bone and extending to the upper part of the right side of the scalp and forehead; the right eyelid is swollen and partially closed. There is a perceptible heaviness and dragging of the right leg in walking.

Special senses: Hearing.—The patient hears a watch at six inches with the right ear, and two feet with the left.

Sight.—Left eye normal; the right field of vision is narrowed in all directions, markedly in a vertical direction, to a much less extent laterally. Spots are sometimes seen before the right eye, and, at times, vision is entirely lost for a short period. Dr. Cocks states that the right optic nerve shows evidences of neuritis.

Taste and smell are also markedly diminished on the right side.

Motion.—Considerable diminution of power in the extensors of the right arm and forearm, less of the flexors; dynamometer: right hand, 22; left hand, 40. There is slight paresis of the right lower limb.

Sensation.—Tactile sensation is abolished in the toes of the right foot; markedly diminished on the dorsal and plantar surfaces, to a less degree on the leg; it is abolished on the last phalanges of the right hand, markedly diminished on the front and back of the hand, less on the arm. Slight diminution of sensibility on the right half of the trunk except the infraclavicular region; abolition on the right cheek from the lower border of lower jaw to a horizontal line drawn from the lobe of the ear. Exquisite hyperæsthesia on the right side above this line. Sensation to pain, heat, and cold correspond to the tactile sensation; these sensations are all slightly delayed.

Reflexes.—The cutaneous reflexes are abolished on

the right side, normal on the left; all the tendon reflexes are normal.

Electrical reactions.—The faradic reactions of the muscles and nerves are equal on both sides; electro-cutaneous sensation diminished and delayed on the right side.

Diagnosis.—Syphilitic (?) periostitis of that portion of the cranium and face corresponding to the tumefaction; endarteritis of the left middle cerebral artery, producing softening of the internal capsule. The patient was ordered iodide of potassium gr. xv. and hydrarg. bichlorid. gr. $\frac{3}{32}$ t. i. d. After the lapse of two weeks there was marked improvement in the symptoms.

October 13th.—She complains of steady burning pain in the epigastrium with a tendency to vomit; states that her menses came on four days ago but stopped at once; has a sharp shooting pain in the left leg.

October 20th.—The shooting pains in the leg are increasing; an occasional shooting pain in the left thigh along the sciatic nerve; a feeling of crepitation under the patella. Increased cutaneous reflex in sole of left foot; with the exception of the hip-joint, the joints of the left leg are tender when pressed together; pain relieved on extending them. Tenderness over the transverse processes of the spine, chiefly on the left side, from the middle of the dorsal region to the upper border of the coccyx; this is most marked over the last lumbar and first sacral vertebrae. Marked hyperæsthesia over the left side of the trunk, beginning above at the middle of the dorsal region, and also over the left lower extremity. The right side is approximately normal.

The tumefaction on the head is rapidly disappearing. The dose of the antisyphilitic remedies was ordered to be doubled and the actual cautery applied, every second day, over the transverse processes of the spine on the left side.

Dr. W. O. Moore examined the eyes and found R. V., $\frac{15}{60}$; L. V., $\frac{20}{60}$; R. Snellen, I.; L. Snellen, IV. Accommodation good.

November 8th.—The iodide was increased to $\mathfrak{z}$ j. t. i. d.

November 12th.—The pains in the limb have disappeared. The patient has made a marked improvement, with the exception of the special senses, which remain as at time of admission.

December 2d.—Patient discharged.

The symptoms which developed late in the left leg may be attributed to spinal pachymeningitis below the middle of the dorsal region. Although syphilis of the spinal cord is a rare affection, a number of cases have been reported in which post-mortem examination showed the presence of lesions in the spinal cord and its membranes similar to those occurring in the brain.

In this case no direct history of syphilis could be obtained, but the occurrence of periostitis without any known cause, the irregular distribution of the cerebral and spinal lesions, and the prompt response to anti-syphilitic treatment, justifies the assumption of constitutional syphilis.

The question arises whether the disturbance of the special senses in this patient was peripheral or central in its nature. I incline to the former view, for the following reasons:

The disease began with diplopia from paralysis of the right sixth nerve, and this symptom, when isolated, is always peripheral in its character. The trigeminal and auditory nerves were the next to suffer, and the same remark holds good with regard to these. In addition, syphilitic periostitis of the cranial bones is often combined with pachymeningitis. But perhaps the strongest argument in favor of the peripheral nature of the special sense disturbance is the fact that vision was affected on one side alone. Were the lesion of the optic fibres central in its origin, it would undoubtedly have produced interference with vision in both eyes.

CASE III.—Cornelius J—, aged forty-seven; janitor, single; admitted December 23, 1881.

Family history.—A maternal uncle became melancholy and committed suicide; a brother and sister died of phthisis.

Previous history.—At the age of fifteen years the patient had ship-fever and small-pox; when sixteen years old had a chancre and buboes. At the age of eighteen he states that he had a true syphilitic eruption; also gives a history of enlarged glands, pain in the bones, etc. Began drinking when twenty years old, and has since indulged in protracted sprees from time to time. About two years ago, after he had been drinking for two weeks, the patient rose from bed in order to go to the closet, when he found that the left side was powerless and apparently dead. On the first attempt to step he fell and was carried to bed. Before the fall he was conscious, appreciated his condition, and called for help; after the fall he was unconscious for a few hours. It is stated that while in this condition he was asked by a physician with regard to sensation on the left side, but no evidence of sensibility could be obtained. Upon the return of consciousness, however, the left side was again almost normal as regards sensation and motion. A slight feeling of weakness remained in the left leg and has never disappeared, but the hand was normal. The patient left his bed the same day, feeling no worse than prior to the attack. For six months previously he had complained of pains in the head, and these have continued until the present time. A week later he returned to work and no further trouble was experienced until four months ago. At this time he went to bed one night feeling perfectly well, and, on the following morning, awoke with complete loss of vision, which lasted five minutes; he was then able to see the color of a friend's coat, but required assistance in dressing himself, being unable to see small objects, such as buttons, etc. He groped his way down stairs into the yard; is unable to say how well he could see, but knows that he could not depend on his vision. When he reached the yard, he fell upon his back and rolled on the right side, the left being powerless, and cried for help. He did not lose consciousness, but remembers being carried to his room, and was soon able to see better than when he went to the yard. After sitting in a chair for two or three hours, he rose, undressed himself, and went to bed. Eyesight was perfect then, and the left side caused no inconvenience to him while undressing. Upon the following morning he got up after a restless night, but could detect no trace of the attack of the previous day. The pains in the head were, perhaps, more severe than usual.

For upward of nine months he has had various attacks of more or less complete momentary loss of vision while walking in the street. At times he has walked directly against persons, and, on one occasion, fell into an open cellar, knocking himself senseless. He found himself in the New York Hospital when consciousness returned. About a month ago the patient noticed that his sight was very poor, and to this he attributes breaking several articles of glassware intrusted to his care.

Present condition.—The patient is a well-nourished, healthy looking man; appetite fair, bowels costive. There is a swelling in the left temporal region, and a short incised wound on the left supraorbital ridge, the result of running into a pillar in a dark cellar. No paralysis of the facial muscles; the tongue is protruded in a straight line and freely movable; the movements of the hands and feet show no perceptible loss of strength in these parts. The left triceps is weaker than its fellow on the opposite side. The dynamometer registers in the right hand 49, left hand 40. There is no difference in the power of the lower limbs, except that the flexors of the left thigh appear to be slightly paretic. The measurement of the limbs are the same on the two sides. The patella tendon reflexes are well marked and equal. The cutaneous reflexes are lost on the left side and normal on the right.

Sensation.—There is complete anæsthesia and almost

complete analgesia on the left side of the body, bounded exactly by the median line; sensibility to heat and cold is much diminished on this side, but not entirely lost; no delay of sensation. The right half is apparently normal. The patient suffers from a constant pain in the head, principally in the frontal region; this is the chief source of complaint.

Special senses.—*Hearing* is much impaired in the left ear; he only hears the tick of a watch at two inches on this side, while with the right ear it can be heard at a distance of twenty inches; no perforation.

Sight is impaired in both eyes, especially for near objects; he is inclined to close the left eye when unusually good vision is required. He states that the defect in the left eye is due to a pustule forming in the eye during his attack of small-pox; but no remains of this can be detected at the present time. He reads print at twenty feet with the right eye that he can only read at ten feet with the left eye. The pupils respond to light and show the reaction of accommodation. The left half of the normal field of vision is absent on both sides. The right half of the field of vision of the left eye is also considerably narrowed. Examination with the ophthalmoscope shows slight neuro-retinitis of both eyes.

Smell appears to be abolished on both sides.

Taste is also impaired, but no difference can be detected between the two halves of the tongue. Sweet substances are recognized, but quinine and other bitter articles produce simply a bad taste and cannot be distinguished from one another. A number of seconds elapse before any taste is appreciated. This patient was suddenly discharged without my knowledge, so that I am unable to describe the further course of the disease.

The *diagnosis* of this case is surrounded with great difficulties, and the localization of the lesion can only be made with a certain degree of probability. It seems to me most probable that the symptoms are due either to a diffuse lesion of the cortex of the right occipital lobe, perhaps gummatous meningitis with softening of the subjacent cortex, or more probably to a lesion of the posterior third of the posterior half of the internal capsule. I am inclined strongly to the latter opinion, on account of the very marked loss of general sensation.

CASE IV.—Richard B—, aged forty years; family history unimportant; about two years ago, patient had an attack of gonorrhoea; last June had some chancres, which were cauterized, but for which internal remedies were administered also. Last winter he had rheumatism (?) in both legs, for which he applied turpentine locally, and states that this application was followed by the suspicious pigmented spots which are now visible over both tibiae. At the present time has a slight enlargement upon the upper part of the right tibia, which is exquisitely tender on pressure. Also has two patches of eruption (in the palm of right hand and left forearm), which look like tubercular syphilides. About July 4, 1882, he became affected with a violent headache, which lasted uninterruptedly until near the middle of September (about five weeks after the beginning of his present illness).

August 1, 1882, while crossing the street in order to enter his house, the patient suddenly became dizzy and acted as if under the influence of liquor; he managed to reach home, but then lost the use of the right side and was carried to bed; he says that sight was lost for three-quarters of an hour (whether this loss of vision was real or merely apparent, and due to the intense vertigo, I was unable to determine positively). On the following day the power over the right side was restored and he became paralyzed on the left side; he also suffered from nausea and could retain nothing on his stomach; the bowels, which had been regular previously, became very much constipated, and since the attack he has had but one movement every eight to ten days; for the past five months micturition has been attended with some difficulty. Contracture and tremor of the paralyzed side

developed soon after the attack, and have been growing steadily worse ever since. About a month ago the speech became so thick as to be almost entirely unintelligible; this condition lasted four or five days, and then disappeared entirely.

Present condition.—The patient is a fairly nourished man; he presents well-marked nystagmus, which, according to the statement of his mother, existed from birth. The movements of the facial muscles appear to be normal; the tongue is protruded in a straight line and can be moved readily in all directions; speech entirely normal. Sensation is slightly dulled on the left side in the lower half of the face. Smell is impaired in left nostril; taste is also distinctly impaired upon the left half of the tongue, both anteriorly and posteriorly. Dr. D. C. Cocks, to whom I sent the patient for examination, kindly furnished me with the following report:

"DEAR DOCTOR—I have examined the eyes of Richard B—, but the fundus could not be examined in detail owing to the rapid nystagmatic movements of the eyes. First V. = $\frac{3}{8}$ with —30.

"The field of vision is somewhat contracted downward and outward in each eye. The ophthalmoscope shows one or two floating bodies in the vitreous, but no marked lesion of the fundus. Nystagmus probably congenital, but he has better vision than is generally found in these cases.

Yours, etc., D. C. Cocks."

Upon testing hearing, I found that there was a slight difference in favor of the left ear in detecting the ticking of a watch, but that there was a very marked difference in favor of the left ear in appreciating conversation.

Memory seems to be entirely intact; the patient appears intelligent, and states that he has detected no mental deterioration.

The left arm is flexed at the elbow and at the wrist and fingers. After considerable effort on my part, the limb can be extended completely; but this passive extension is attended with some pain.

The limb is almost completely paralyzed, the movements being extremely limited. Upon comparison with the right side, the limb appears to have undergone general atrophy. Measurements: right forearm, $10\frac{1}{8}$ inches; left forearm, 9 $\frac{1}{2}$ inches. The muscles are somewhat softer than those of the opposite side. There is slight anaesthesia of the entire limb, most marked in the fingers. The tendon reflexes are enormously increased, particularly those of the biceps and triceps; the mechanical excitability of the muscles is also increased markedly.

The loss of power in the left lower limb is much less marked than in the upper. In walking the limb is moved stiffly, and is not bent at the knee; movement is often attended by involuntary tremor. Atrophy of the lower limb is also evident. Measurements: right calf, $13\frac{1}{8}$ inches; left calf, $12\frac{3}{8}$ inches. The muscles are somewhat flabby, and the limb feels very cold to the touch. Sensation is diminished throughout the entire lower limb and to a more marked extent than in the upper. There is an enormous increase of the patellar tendon reflex and ankle clonus, the entire limb being thrown into violent spasmodic movements upon tapping the ligamentum patellae or the tendo-Achillis. The knee phenomenon can be produced also by tapping the tibia or the muscles of the thigh (these reflexes are also exaggerated considerably in the other limb).

In some of its features—viz., the evidences of descending degeneration of the lateral column (increased tendon reflexes and contracture) and of secondary atrophy of the anterior horns of the spinal cord (early muscular atrophy)—this case resembles very closely the history of a case which I had the honor of reading before this Section a year ago, and in which the diagnosis was confirmed upon autopsy. With regard to the cerebral localization, I must confess to an inability to make a diagnosis, unless we assume the occurrence of two lesions—one which has given rise to the loss of hearing on the right side, and concerning whose situation I am unwilling to offer any

opinion whatever; the other probably in the posterior part of the right internal capsule.

A comparison between this and the preceding case reveals an interesting diagnostic feature bearing on localization. Anatomical investigations, which have been confirmed by a few pathological facts, have proven that the anterior two-thirds of the posterior half of the internal capsule are occupied by the pyramidal (motor) tracts and the posterior third by the tracts for general sensation and special sense. In the preceding case, therefore, we may assume that the lesion involved almost exclusively the posterior third of the internal capsule, since hemianæsthesia and hemiopia were almost the sole symptoms, motion being unimpaired, while in the present case the lesion affects chiefly the anterior two-thirds of the posterior half of the capsule, and extends very little into the posterior third, since motion is affected most profoundly, general sensation to a moderate extent, and the impairment of sight is limited to a small part of each field of vision.

The following case reported by Dowse ("Syphilis of the Brain and Spinal Cord," p. 92) is the only one which I have been able to find in the literature of the subject which at all resembles those reported above:

"C. A—, aged thirty-three years, contracted syphilis when young. At the age of twenty-nine he began to suffer from attacks of headache, vomiting, and a sense of numbness of the entire right half of the body, but consciousness was scarcely if at all interfered with, neither was voluntary power. The fit commences with dimness of sight, leading to total blindness of the right eye, diplopia during the seizure, but immediately preceding it there was hemiopia (no retinal change). There were no fornications, but the right half of the tongue became numb, as well as the parts supplied by the sensory division of the nerve and pharyngeal plexus. Taste and smell were both lost on this side, and saliva flowed freely from the mouth. Then the tips of the fingers of the right hand became numb, and rapidly the whole of the right half of the body became involved. This condition usually lasted twenty to thirty minutes, the numbness departing inversely to its arrival. Between these attacks he says that he feels all right except that he is a little confused in his mind. The right half of the body during the fit is colder and paler than the left, and at ordinary times there is slight impairment of tactile sensibility and the special senses. He denied ever having had a fit, neither had he found his tongue bitten, or his body bruised when he awoke in the morning, but the pillow was always wet with saliva. I had him watched carefully at night, and there was no doubt whatever about his being the subject of epilepsy during sleep, but of this he was quite unconscious.

"The patient was cured by the administration of iodide of potassium in two-scruple doses every other night, with Donovan's solution three times a day."

The history of my first two cases illustrates a point with regard to the prognosis of cerebral syphilis of long standing, to which I desire to call attention, viz.: that the current opinion with regard to the ready curability of this disease should be modified to a considerable extent. According to my experience, the most we can hope for except in cases of simple syphilitic epilepsy (which are generally due to gummata of the dura mater or pia mater) is a considerable improvement in the symptoms and their maintenance at the minimum. In a certain proportion of cases, especially those due to lesions of the vessels, the disease terminates fatally despite all our endeavors. I may state, however, in this connection, that, during the last few years, I have seen much fewer autopsies upon fatal cases of cerebral syphilis and have observed a less number of cases in practice than in former years. I believe that this condition of affairs must be attributed to the greater length of time during which the profession now subject syphilitic patients to appropriate treatment. At least, no other cause appears

to me to be adequate to explain such a marked change as that to which I have referred.

A word with regard to the frequency of the disturbances of the special senses and of general sensation occurring in the cases reported above. The conclusion has been forced upon me by my clinical experience during the past year or two, that hemianæsthesia, either of the special senses alone or of these in combination with general sensation, is much more common in organic diseases of the brain than is generally supposed. I have observed these symptoms well marked in at least half a dozen cases of the ordinary form of hemiplegia, due either to hemorrhage or embolism, and in none of them were the patients aware of any sensory disturbance. In the present unsettled state of the question of cerebral localization, it may be well worth our while to bear this fact in mind, in view of the light which it may shed upon the subject, and to examine the condition of the special senses, as a matter of routine, in all cases of organic disease of the brain.

Since reading the above paper I have found a reference to the subject under consideration in Fournier's book "*La Syphilis du Cerveau*." After stating that syphilitic hemiplegia is complicated with hemianæsthesia in very exceptional instances, he narrates the following case:

"This woman presents a left hemiplegia of undeniably syphilitic origin. You will observe in her both motor troubles of an uncommon intensity and very marked sensory disorders. The entire cutaneous surface on the left side is absolutely anæsthetic to contact, pain, and temperature. The mucous membranes on this side are also insensible. Furthermore, you will find, on the left side, sight abolished, hearing almost extinguished, taste and smell very much enfeebled."

In conclusion Fournier places the lesion in the posterior third of the internal capsule.

In this case, however, the imperfect history does not permit us to decide whether the sensory symptoms may not have been of an hysterical character. It is a suspicious circumstance in this connection that the disturbance of vision was limited to the left eye. In intracerebral lesions, followed by affections of sight, both eyes are always affected. In the absence of any statements, therefore, concerning the condition of vision in the right eye, the question must be left undecided. Perhaps, as has been shown with regard to a number of cases of cerebral hemianæsthesia reported by Charcot and his pupils, hemiopia was really present but had been overlooked.

THE EFFICACY OF BROMIDE OF ETHYL IN SHORT OPERATIONS.—Dr. Chisolm thus describes the efficacy of the bromide of ethyl in operations on the eye:

"A little girl eight years of age, who had strabismus, was put on the operating table, and told that the folded towel containing a teaspoonful of bromide of ethyl would feel choky when placed over her nose, but that she should breathe it freely nevertheless. In perfect confidence she commenced to breathe freely from the towel placed over her face, and in twenty-two seconds by the watch she was fast asleep. The operation of dividing the faulty muscle did not occupy much more than one-half of a minute. After two minutes of sleep she awoke and expressed herself as not knowing what had been done. Within three minutes from the commencement of the inhalation, the child was perfectly awake and was ready to get from the table. When on the floor she walked at once to the chair, and within four minutes from the time that the anæsthesia was commenced, she was engaged in pinning roses into the front of her dress, with a composure which showed not only no present discomfort, but also a complete oblivion of the experience through which she had just passed. In less than sixty seconds by the watch, an ugly deformity had been painlessly, perfectly, and permanently eradicated."

CHLOROFORM NARCOSIS DURING SLEEP.

By JOHN H. GIRDNER, M.D.,

NEW YORK.

THE impression is very general, both among the profession and the laity, that if chloroform be inhaled by a person while asleep, that person may pass from a natural sleep to a chloroform narcosis without returning to consciousness. This is sufficiently proven by the frequent accounts published in the daily papers of burglars having chloroformed their victims while asleep, and also by the fact that from time to time medical men testify under oath that such a thing is possible.

It is to throw light on this subject that I write this article. The evidence which comes to us from the secular press, tending to prove that such a thing is possible, will, I think, appear at once to be of little value from the standpoint of scientific inquiry, because these reports are written by reporters who have no eye to establishing the truth or falsity of the theory, and if they did, are never in possession of the proper facts to enable them to speak with even a moderate degree of certainty. It is generally stated that the smell of chloroform was detected in the room the next morning after the robbery. The odor of chloroform does not remain many hours in a room, because it is so volatile, and if the odor is really detected it is far from just to argue from that fact that the occupants of the room had been placed under the influence of the drug.

As to the testimony of medical experts, I may say that I am not willing to accept their statements that a person may be chloroformed while asleep without being awakened, because the evidence on which they base this opinion is anything but conclusive. The few experiments which have been made by these experts were not reliable tests, because the parties on whom they experimented were aware that at a certain hour of a certain night the doctor would make the experiment, and a desire on the part of the subjects to have the experiment succeed may have been strong enough to tempt them to simulate narcosis. At any rate, no experiment of this kind can be considered as evidence one way or the other, unless the subject on whom the experiment is made is ignorant of it, and not a willing party to the affair.

The experiments which I here give in detail were made by another medical man and myself, and I may add that we had both had large experience in the administration of anæsthetics, and that every possible precaution was taken that no error should creep into the result. The persons on whom we experimented were entirely ignorant of our intention to administer chloroform or anything else to them while asleep, and, in fact, we had told no one of our intentions.

It will be seen, therefore, that these experiments were made solely with the desire of arriving at the scientific facts, and under the best possible conditions to that end.

At twelve o'clock on the night of January 31, 1882, I went to the hospital through a terrific snow-storm, and together with Dr. —, a house surgeon, we made the following experiments:

I.—A little girl, aged twelve, was sleeping soundly, breathing slowly and regularly. Chloroform was poured on a folded towel and held eight inches from her face, and slowly and carefully brought nearer. At the end of about three minutes she coughed, awoke, and sprang upright in bed.

II.—Man, aged thirty-two, sleeping soundly. Chloroform used as before. At the end of about three minutes he awoke, coughing and striking out with his hands.

III.—Man, aged thirty-five. Chloroform given as before. At the end of three minutes he awoke, coughing and attempting to remove the towel from near his face.

IV.—Man, aged thirty. Acted as the others: woke at the end of about three minutes, coughing and resisting.

V.—Little boy, aged eight. Awoke at end of two minutes, coughing and struggling.

Here, then, are five experiments, made under the most favorable circumstances, and on both children and adults, and in each case the subject awoke at the expiration of three minutes, or about the time the nervous system was beginning to be profoundly impressed with the drug; all awoke suddenly, with coughing and resisting, or attempting to tear the towel from near the face. These experiments must then be taken as *prima facie* evidence toward the establishment of the fact that it is impossible to transfer an individual from a natural to a chloroform sleep without an interval of perfect consciousness, during which he would be able to appreciate his situation, and if force were used to carry on the anæsthesia to unconsciousness, the person would still be able on awaking to recall to mind the person who used the drug.

While many will doubtless require a larger number of experiments before giving a decision, there are some who will see sufficient evidence in these five experiments to satisfy their minds that every experiment of this kind, made for whatever purpose, will have a like termination.

THE ECCENTRICITIES OF ATROPINE.

By G. STERLING RYERSON, M.D.,

LECTURER ON THE EYE, EAR, AND THROAT IN TRINITY MEDICAL SCHOOL, TORONTO.

CASE I.—Master M— was brought to me on March 5, 1881. He is a delicate child and an only son, of highly nervous temperament, dark hair and pale complexion. He complained of pain about the eyes after reading; watering of the eyes, slight congestion of conjunctiva and periodic alternating convergent squint. I diagnosed H = 1 D. with ophthalmoscope, and as he rejected all glasses, I ordered two drops of a solution of atrop. sulph., gr. iv., aq. dest., ʒj., to be dropped into eyes twice a day and to return in two days; this was at 10 in the morning. About 2 P.M. I received a message to go at once and see the child, as he was very ill. On arrival I found him covered with a rash closely resembling a scarlatinal eruption. The pupils were dilated ad max.; breathing quick, pulse hurried, throat dry and parched, with difficulty in speaking. He also complained of numbness of the extremities. I felt strongly inclined to give a hypodermic injection of morphia, but thought it prudent not to do so unless forced to it by the urgency of the symptoms, inasmuch as the parents were already sufficiently alarmed, and the proposal would not have helped to calm their fears. Upon inquiry the mother positively assured me that she had only put in *one drop* in each eye about half an hour before I was called. This lady was most intelligent, and I have every reason to credit her statement. The symptoms gradually subsided and in thirty-six hours the boy was playing about as usual. The mydriasis continued for some days, and there was partial paralysis of the accommodation for some weeks after. The patient made a good recovery.

CASE II.—In October, 1882, an infant, one year and a half old, was brought to me with congenital cataract. Proposing to dilate the pupil prior to needling, I dropped into the eyes two or three drops of a four-grain solution of atropine. Within fifteen minutes the child was covered with a scarlatinoid rash and it seemed to have difficulty in swallowing. The pupils only dilated sluggishly. The rash subsided gradually.

CASE III.—When assistant to the late Mr. Soelberg Wells at the Moorfields Hospital an elderly woman came to the clinic with spasm of accommodation and symptoms of irritability of eye, due to prolonged use at her trade as a dressmaker. I ordered atropine to be dropped in. In a few days the symptoms yielded, but after the atropine had been stopped for some time the pupil still remained dilated and fixed. The accommodation also was paralyzed. Eserine and electricity were used

with but little benefit, and when I saw her last, some months later, there was but little improvement.

CASE IV.—In the fall of 1880 an ex-postmaster, aged seventy-eight, consulted me with regard to senile cataract, and a week or so later I did a Moorfield's extraction in the left eye. Ordered atropine (gr. iv. ad $\frac{5}{16}$ j.) to be dropped in, and was horrified next day to find the lid much swollen and excoriated, and a sharp attack of conjunctivitis. There was a little pain about the eye. I could not make out iritis after a careful examination of the eye. The edges of wound looked well. I immediately stopped atropine and gave eserine sulph., gr. ij. ; aq. dest., $\frac{5}{16}$ j. The symptoms subsided rapidly, and beyond a somewhat persistent conjunctivitis I was not annoyed by any more unpleasantness on the part of the conjunctiva.

Remarks.—I am induced to give publicity to these cases of atropine idiosyncrasy for several reasons. Cases I., II., III. have a medico-legal aspect. It would not have been difficult to trump up a charge of malpractice in these cases, and their record in a medical journal of repute may be of assistance to the practitioner should he be so unfortunate as to be placed in such a predicament. It may serve also as a warning against the too free use of atropine in refraction cases, and I would strongly advise preliminary use of atropine in cataract cases as a safeguard against optic accident. Further, they serve to show how small a dose of atropine may in certain individuals produce severe constitutional symptoms.

MENTHOL VERSUS PAIN.

By D. M. CAMMANN, M.D.,

NEW YORK.

WHEN the temperature of the oil of peppermint is lowered sufficiently it deposits small, colorless, prismatic crystals. These are called peppermint camphor, or menthol. Menthol is only slightly soluble in water, but dissolves readily in alcohol and ether, and in oils both fixed and volatile. Until lately it has not been used in therapeutics, but strong oil of peppermint painted over the part has long been a favorite mode of treatment in China for gout and neuralgia. Menthol has antiseptic properties similar to thymol.¹

In a letter to *The Lancet*, Mr. Macdonald, a student at Edinburgh, records the use of menthol in a solution of one part to sixty of rectified spirits, in cases of facial neuralgia, and writes, "relief was had in from two to four minutes, and within one or two minutes at most, after this, the then existing attack was cured." He also recommends the application of the crystals on cotton wool in cases of toothache.² In all my cases the following formula was used :

R. Menthol $\frac{5}{16}$ j.
Alcohol $\frac{5}{16}$ ss.

M.

It may be painted on the part several times daily with a camel's-hair brush. No precautions are necessary in its use, except to keep the solution from the eyes. It is rather agreeable than otherwise, except when applied over a large surface it may cause a feeling of chilliness. Several of my patients now keep it always at hand, and apply it when they feel an attack coming on. One of my cases was a boy, seventeen years of age, who had suffered with intermittent fever. At the time of examination he had had no chills for several weeks, but since they had ceased he suffered with severe pains over the spleen, from which he was never entirely free. The spleen was found to be enlarged. He was told to paint the side with tincture of iodine. In a few days he returned saying the pains were no better. Menthol was then prescribed. A few days after the pain had entirely

disappeared. Another case is of a lady who has had facial neuralgia for several years. She has tried many drugs, including chloral hydrate, bromide of potassium, quinine, and chloroform liniment externally. She is always benefited by quinine. During the last attack she used quinine, and also menthol. She recovered more rapidly than from former attacks, the pain disappearing in a short time. She was surprised herself at the rapidity of her recovery.

In addition to the above I have used menthol in cases of lumbago, facial neuralgia, fugitive chest pains of pulmonary phthisis, intercostal neuralgia, pleurodynia, gastralgia.¹ In all the cases in which internal medication was beneficial, menthol seemed to hasten its action ; in some cases in which both external and internal remedies had been without avail menthol gave relief. In some cases it has failed, but I have been surprised to see that sometimes very obstinate cases have yielded to its influence. It has acted well where tincture of iodine, chloroform liniment, and other local applications have failed. Nor in many cases is the result only temporary ; the pain may return after the first two or three applications, but if the treatment be persisted in for a few days a cure may often be effected. It seems, then, that in menthol we have a drug of considerable value in some of the less dangerous but most troublesome ills that flesh is heir to.

A NOVEL MODE OF CLEANSING THE VAULT OF THE PHARYNX.

By G. FAIRFAX WHITNEY, M.D.,

NEW YORK.

F—, a railroad conductor, aged forty-six, presented himself at my clinic at the New York Post-Graduate Medical School, complaining of having been afflicted during the last four years with post-nasal catarrh. He also stated that he was continually annoyed by hard lumps of mucus collecting in the upper part of the pharynx, and that the only way they could be dislodged was by being scraped away with *the tip of his tongue*. Upon being requested to perform this feat, he, much to my surprise, depressed the base of his tongue and inserted its tip between the velum palati and the vertebral column. I was unable to perceive by merely looking through the mouth to what height the tip of the tongue reached, but by making an examination through the anterior nares I was enabled to see that the tongue approximated the vault of the pharynx, yet could not determine positively whether it came into actual contact ; but, judging from the patient's statement, am of the opinion that such was the case. The patient could readily move with his tongue a probe inserted through the inferior meatus, provided it protruded slightly through the posterior nares.

A rhinoscopic examination revealed no collection of mucus upon the vault of the pharynx, and the patient, when asked whether he could detect any, replied in the negative, adding that immediately before entering the room he had removed with his tongue a hardened lump which he had then expectorated ; but that though he could not detect any mucus, he could distinctly feel a depression with the tip of his tongue. This depression may have been a slight concavity of the vault of the pharynx immediately back of the pharyngeal tonsil, or it may have been the posterior nares. The anatomical structure of the parts was normal, with the exception of the frænum linguæ, which was merely represented by a lax fold of mucous membrane. The tubercle upon the anterior arch of the atlas was unusually prominent, and the patient could easily detect its presence with his tongue.

Remarks.—Though this case is, I believe, the only one of its kind reported, I do not doubt but that there are many more existing to which attention has not been

¹ The Lancet, August 30, 1879.

² Ibid.

¹ My thanks are due to Dr. David Magie for the report of several cases of the use of menthol.

called. It seems very probable that one whose frænum linguae has been severed in childhood can readily acquire the power of introducing the tongue into the upper pharynx. In the above-reported case there was no history of any such operation having been performed.

Progress of Medical Science.

DISSOCIATION OF THE AURICULAR AND VENTRICULAR RHYTHM.—Dr. Chauveau recalls the case (*Lyon Médical*, February 4, 1883) previously recorded by Dr. Figuier, of a man in whom the radial pulse indicated but twenty-four cardiac pulsations per minute, while the auricles contracted about sixty-five times per minute. The ventricular rhythm was perfectly distinct from that of the auricle, the two pulsations coinciding only occasionally and without any apparent regularity. Some cerebral symptoms were present, notably vertigo. The writer argues that this singular dissociation of rhythm was due to a bulbar lesion involving the roots of the pneumogastrics; for experiment has shown that if the right pneumogastric nerve be divided and the peripheral portion be slightly irritated, the ventricular systole is slowed, while the auricular contraction is unaffected.

RENAL INADEQUACY.—Under this title, Dr. Andrew Clark (*British Medical Journal*, February 24, 1883), describes a class of cases which, in some measure, he ventures to separate entirely from Bright's disease, in which the kidney, without any sensible alteration of structure that modern means of investigation will enable us to determine, cannot produce a healthy urine. Such kidneys produce a urine which, assuming the quantity to be a quantity of health, is low in density, and is deficient in solid constituents, principally the constituent of urea and its congeners. This condition may be regarded as a very early stage of Bright's disease, but the writer thinks it of practical value to recognize by a distinct name a state which may remain as it is during the whole period of life, which is nevertheless capable of removal, and which if unnoticed may lead to serious injury to the patient.

Such patients are characterized by three things particularly: 1. By a curious inability to properly repair damages done to them either by accident or by disease. 2. They not only repair damages slowly, but are peculiarly vulnerable; they catch cold, for example, easily, and get rid of it with difficulty. 3. One can never be sure of the result of the performance of an ordinary surgical operation upon them; they die from a simple operation by hemorrhage, or have an ordinary abscess opened and become pyæmic.

Dr. Clark says that he knows of no symptoms in the early stage whereby these cases can with certainty be detected. In general, however, he states that "When you get hold of a patient who is ill, suffering from dyspepsia or nervousness, having headaches, and complaining of malaise and weakness, who cannot sleep well, who cannot do his work very well, examine his urine, and if you find that the urine is low in density you had better proceed a little further, and be very precise, and get the urine of twenty-four hours, and if you find that it is under fifty ounces in quantity, that it has not a specific gravity of 1010, and that the urea in it is deficient in amount—under two per cent.—then, whether there be albumen in the urine or not, whether there be any casts or not, whether there be granular debris deposited or not, you may know with certainty that the kidney is not doing its duty."

It may not be that this defect is the cause of the patient's ill health, but if it is found in addition that an increase of food makes the patient worse, and that, within certain limits, a diminution of food makes him better, there need be little doubt of it. As these cases of renal

inadequacy progress if they be not well managed, that is, if the management be not adjusted to the fact that they are chimneys being choked, and that a roaring fire cannot be kept on, they develop exceedingly characteristic symptoms, symptoms so like those observed in myxœdema that they can scarcely be distinguished. Dr. Clark cites two autopsies on patients who presented the symptoms of renal inadequacy, one in the earlier, one in the later, stages, in which none of the gross appearances of renal disease were present.

In the way of prognosis it may be said, in regard to these cases, that if care be taken, if compensation be made for the defective kidney, they probably may go on indefinitely, that is, they may reach the full term of life allotted to man.

Treatment should consist in close attention to simple physiological laws and careful adherence to such rules in regard to diet, clothing, temperature, and exercise as are generally laid down for chronic albuminuria.

EXPULSION OF A CALCULUS THROUGH THE VESICO-VAGINAL WALL.—Dr. Polaillon reported to the Société de Chirurgie de Paris (*France Médicale*, February 17, 1883) the following case: A woman, seventy-two years of age, suffered greatly from pain, especially during the act of micturition. An examination per vagina was made, and a hard body being felt, the physician gave a diagnosis of carcinoma. One day the patient experienced more severe pains than usual, and passed some blood. Putting her finger into the vagina she felt a hard body, which she supposed to be a piece of bone, and which she managed by violent efforts to expel. It proved to be a calculus of oxalate of lime with a phosphatic crust. It weighed 4½ ounces, and measured 2¾ inches in length, 2⅝ inches in thickness, and 2½ inches in width. The patient was afterward lost sight of, and it was not known whether the vesico-vaginal fistula ever closed.

EFFECTS OF EXTERNAL TEMPERATURE UPON THE BODY HEAT.—Dr. Nasaroff has been experimenting upon rabbits to determine the effects of sudden elevation and lowering of temperature. The animals were first placed in a room the temperature of which varied from 100° to 130°. Partly grown or fasting rabbits responded more quickly to the influence of the hot air than did full-grown animals or those that had just eaten. The body temperature rose at first slowly, but when 110° was reached the increase was more rapid—about 3.5° in ten minutes. If the animal were removed quickly from the chamber when a temperature of 111° was reached, it recovered promptly. The only results of such an elevation were a momentary sinking of the temperature below the normal and a temporary albuminuria. In cases of death the striated muscular tissue as well as the liver and kidneys were seen to be darker than normal. There was also a stasis in the capillaries. In experiments upon the abstraction of heat, young and fasting animals responded more quickly. They were placed in water of 32.5° to 53.5°, and recovered after a lowering of the body heat to 68°, but a temperature of 60° was fatal. After numerous repetitions the animals acquired an increased heat-forming power and were less readily affected by the surrounding temperature. Nasaroff states that the effects upon the internal organs of sudden change of temperature are too insignificant to account for disease from "catching cold."

Drs. Richet and Rondeau have also been conducting somewhat similar investigations to determine the mode of death by freezing. The first change was noticed in the respiration, which became at first shallow and then irregular. Life could be preserved longer if artificial respiration were practised. Next the heart was affected, the pulsations becoming markedly slowed. When the temperature fell below 62° the nervous system became affected. The loss of the power of voluntary movements preceded that of reflex movements. The corneal reflex was lost before the muscular reflexes of the lower extremities. Sensibility to pain and electrical irritability

were also lost. Although the animal was apparently dead, it could often be resuscitated by warmth and artificial respiration. The pulse returns first, then reflex movements; respiration is next established, and last of all to return is the power of voluntary movements. The practical value of these experiments lies in the demonstration of the possibility of recovery in apparent death from cold by means of warmth and artificial respiration.—*Centralblatt für Klin. Medicin*, January 27, 1883.

MISLEADING CARDIAC MURMURS AND EXPIRATORY AUSCULTATION OF THE HEART.—Dr. Hamilton Osgood describes, in the *Boston Medical and Surgical Journal* of March 29, 1883, a cardiac murmur occurring independently of anemia or heart-lesion. The murmur was systolic in point of time, located in the pulmonary area, with but little propagation, and was soft in tone, yet with a suggestiveness of friction. The man, an applicant for life insurance, was the picture of health, not a trace of anemia, had never had rheumatism nor pleurisy, and never experienced the slightest dyspnea. The murmur was discovered to be more faint during expiration. Acting upon this suggestion, Dr. Osgood instructed the man to make efforts at expiration and then to hold his breath. When this was done the murmur was found to have disappeared. The author thinks the murmur was due to some slight irregularity of surface in the pericardium near the base of the heart. During inspiration the pulmonary pressure increased the friction created in systole, while in expiration pressure was removed. He recommends the practice of auscultation of the heart during forced expiration, when the lung is collapsed, and the heart rests more directly under the ear of the auscultator. True endocardial murmurs become more distinct during expiration, while murmurs like the one described disappear.

THE MECHANISM OF LACHRYMAL CONDUCTION.—In a monograph entitled "*Die Muskulatur der Thränenwege und der Augenlider*," published in Stuttgart, Dr. G. Krehbiel, of New York, embodies the results of a painstaking anatomical study of the lachrymal apparatus. He states that the tensor tarsi muscle arises by two roots, the anterior and inner root from the crest of the lachrymal bone, the other behind and external to the first. Immediately after their origin the fibres of the two roots become interwoven, enclosing in their meshes the canaliculi and the ducts of the Meibomian glands. Thus the tarsal portion of the orbicularis muscle is formed of intermingled fibres from both roots of Homer's muscle, but those from the inner root run mostly along the lower lid, and the others along the upper. The author thinks that the tensor tarsi should be regarded as a muscle distinct from the orbicularis. When in action it exerts a considerable compressing force upon the canaliculi, and in so doing occasions the normal periodical emptying of these tubes. It has nothing to do, however, with the expulsion of the contents of the lachrymal sac. The latter is covered on its lateral wall, for the most part, by an aponeurosis from which arise fibres of the orbicularis palpebrarum. The contraction of these fibres causes a widening of the lachrymal sac. Thus, at every closure of the lids, two synchronous actions are caused. The lachrymal sac is dilated by the fibres of the orbicularis, and the canaliculi are compressed by the tensor tarsi. The emptying of the lachrymal sac is occasioned by atmospheric pressure, which exerts its influence the moment the eyes are opened and the orbicularis is relaxed. When the eyes are open the canaliculi act like capillary tubes to suck in the tears. If an unirritating colored fluid be dropped into the outer corner of the eye and winking be restrained, its presence in the nasal cavity is very quickly made manifest.

TREATMENT OF GOUTY PAINS AND NEURALGIA BY THE EXTERNAL APPLICATION OF NITRATE OF SILVER.—Dr. Frommüller advocates the external use of nitrate of sil-

ver to relieve the pain of gout and certain neuralgias. He relates several cases in which this practice was followed by the most gratifying results. The solid stick is to be rubbed over the moistened surface for about thirty seconds. When the skin is dry it is to be covered with a compress of salicylated cotton, which should be removed once or twice a day until the blister is healed. The caustic is to be rubbed over the affected joint in gout, and in neuralgia over the point of exit of the nerve from the bone, when this is possible. In order to be effective, the irritation should be sufficient to cause an exudation beneath the epidermis.—*Memorabilien*, January 31, 1883.

DISTENTION OF THE STOMACH BY CARBONIC ACID GAS AS AN AID IN DIAGNOSIS.—The more frequent employment of this long-recognized method is advocated by Dr. Rosenbach as a means of determining more definitely the situation and character of tumors of the stomach and neighboring abdominal organs. He claims that we can by this means ascertain exactly the position of the stomach, and can determine the size and location of tumors of this organ. The borders of the liver and the gall-bladder are rendered more distinct. Tumors of the spleen can be more readily diagnosed and differentiated from those of the kidney. And lastly, we can study better the pulsating painful tumors met with at times in the abdomen. The author states that such tumor is, in most cases, the head of the pancreas pushed forward by the dilated aorta. When the stomach is distended the tumor disappears, showing that it lies behind this organ.—*Schmidt's Jahrbücher*, February 27, 1883.

TEMPERATURE OF THE JOINTS.—Dr. Redard has been conducting a long series of observations to determine the local temperature of the joints in health and disease, and has arrived at the following conclusions: The temperature of the skin overlying the joints may fluctuate through 7° to 10° from external causes. The local temperature of the joints falls in proportion to their distance from the body. It is always higher on the flexor than on the extensor surfaces, ranging in the larger joints from 87° on the latter to 96° on the former. Joint motion causes an increased temperature not only of the articulation but also of the whole limb. Continuous movements of flexion and extension of the ankle for five minutes will raise the temperature of the entire limb nearly a degree. Thermometry of the joints in diseases is of value only in the superficial articulations. In hæmarthros the temperature rises after the third or fourth day and remains more or less elevated according to the nature of the resulting inflammation. In traumatic joint suppurations the local temperature sometimes reaches the same height as the general, but is never seen to rise above it. In rheumatic, gonorrhœal, and puerperal joint inflammations there is a considerable increase of heat, frequently of the entire limb. In joint effusions following fracture of the long bones there is an increased temperature after a few hours. This would indicate that there is a contusion of the joint with an inflammatory tendency, and not a simple effusion. In white swelling the temperature of the surface over the fungous granulations is raised from $\frac{1}{10}^{\circ}$ to $\frac{2}{10}^{\circ}$ above that of the neighboring parts. In caries sicca there are no characteristic changes to note. In old ankyloses we sometimes find an elevation of from one to two degrees. This shows that the inflammatory process has not fully subsided, and may thus furnish an indication for treatment.—*Centralblatt für Chirurgie*, January 13, 1883.

FATTY NECROSIS.—Dr. W. Balser (*Deutsche Medizinisch-Zeitung*, February 8, 1883) states that there is in many people a growth of fat-cells in the neighborhood of the pancreas. In exceptional cases, usually in very corpulent persons, this attains to such a degree that the greater part of the abdominal fat necroses, and death ensues from hemorrhage induced by this necrosis.

THE MEDICAL RECORD:

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THE MEDICAL SERVICE IN OCEAN-GOING STEAMERS.

THE act passed last year by Congress for the inspection of steamers carrying passengers to and from American ports does not attempt to control the arrangements for medical treatment and sanitary supervision to be exercised by the ship's surgeon. So long as the great majority of these vessels enter our harbors under a foreign flag, and the sanitary police of these harbors remains entirely in the hands of municipal or state governments not directed by a central national authority, any undue interference therewith might hamper the interests of the international ocean traffic, and result in a disadvantage to the immigrants themselves. But it is easily to be foreseen that with the revival of American steamboat travel, the increase of emigration from Europe in a geometrical proportion after the prospective opening of the Northern Pacific Railroad, and the accomplished connection of the southern roads, the question of protecting our great cities and the populations of the vast territories on this continent, against the importation of disease and the germs of widely spreading epidemics, will have to be faced resolutely by the representatives of the nation in Congress and the central executive power. An organized system of sanitary control and disinfection on uniform principles laid down by a federal law, and watched over by the national executive, may be imperiously demanded sooner than the present aspect of affairs might seem to warrant. The late Dr. Woodworth, of the United States Marine Hospital Service, in his paper on Quarantine, read before the International Medical Congress of Philadelphia in 1876, has pointed out that "the endemic homes of cholera and yellow fever are the fields which give the greatest promise of satisfactory results to well-directed and energetic sanitary measures, and to this end an international sentiment should be awakened, so strong as to compel the careless and offending people to employ rational means of prevention." We fear it will be a long time before any international measures of this kind will be universal and efficient, whilst we insist that every national government has the right and the duty to protect its citizens by the most stringent regulations which science suggests and self-preservation dictates. Everybody who has read in Rapp's history of German immigration into the United States, how, during the seventeenth and eighteenth centuries small-pox and typhus fever were rife in the crowded vessels from Antwerp, Rotterdam, and other

ports, tossing for months on the ocean, and how these diseases were sown broadcast among the populations of the North American colonies, will admit that, *mutatis mutandis*, the same danger exists still to some degree. Under the present political and social straits of European states, with England commencing to ship her starving Irish subjects wholesale at reduced rates "to the Canadian fields of promise," with the experiences of the New York Emigration Commissioners, as laid down in the facts published in their yearly Reports at the time of the Irish famines, the great epidemics of cholera and the small-pox visitations in different European countries, the medical profession of the United States should timely consider how to strengthen the hands of the hygienic superintendents in passenger vessels, and of the health officers of ports of entry, in order to prevent and check at the outset all dangers to the public health coming from abroad. We have but to call in mind, in connection with the necessity of such measures the very stringent quarantine regulations adopted by the British self-governing colonies, especially the Australian and African, in consequence of repeated importations of contagious diseases into these young and prosperous communities by half-starved immigrants.

"The supervision of ocean-travel ought to be directed to securing good sanitary conditions for vessels at all times, out of as well as in port" said Dr. Woodworth. We must add that the supervision ought to begin at the ports of embarkation before the immigrants come on board. It was the merit of the late surgeon-general of our national mercantile marine service, to have first inaugurated a system of consular reports by telegraph from those ports. The medical inspections by the government officers of the European countries are notoriously made in a hurry, and are something of a sham. Competent voices have been raised for the establishment of a sort of quarantine lasting a few days before the sailing of the vessel in times of epidemics. This may be unfeasible, but whilst the ship is afloat there are two conditions of guarantee which ought to be complied with. The ship's doctor ought to be an experienced and an authoritative officer, to whom full power is given to order and supervise the inspection and disinfection of the effects and baggage of the passengers. For the latter purpose there ought to be on board a hot-air disinfecting compartment supplied with steam from the engines; there ought to be also proper bath-rooms in all passenger vessels. Now that the importance of the "germ theory" is fully estimated, and its bearings acted upon in the sanitary and therapeutic arrangements of surgical hospitals and infirmaries for contagious diseases, in phthisical and lying-in wards, it is time that the hygiene of sea-going vessels become remodelled on the hints long ago given by all experienced medical officers of the naval and mercantile marine services, but hitherto often unheeded by ignorant or headstrong commanders, or avaricious shipowners and companies greedy for dividends. The position of the doctor in passenger ships becomes more responsible and more important to the whole community under such circumstances. In the Army and Navy the importance of the medical service has been recognized in this country and in Europe after the teachings of great wars and their sufferings. Nothing short of a public calamity may do

the same in regard to the mercantile marine. It has been contended that the nation which takes the lead in securing the lives and health of passengers at sea, will take the first rank on the ocean, and secure the greatest commercial advantages to its shipping. We believe there is some truth in such a saying, and we claim for the ship's doctor a share in bringing about an increase of safety to the ocean traveller, and to the public on shore.

THE DISCUSSION OF THE NEW CODE IN THE ACADEMY, AND WHAT CAME OF IT.

THE proceedings at the Academy of Medicine on Thursday evening of last week were of a character to bring the blush to the cheek of every honorable member of the profession, whatever opinion he may hold concerning the Code or the question that was before the meeting.

Certain resolutions, designed to commit the Academy to a decision in a matter concerning which its members hold widely differing views, and which is seeking its legitimate solution elsewhere, were prepared in secret, brought without notice before a regular meeting, secretly packed with partisan supporters, and rushed without debate to a hasty adoption. Members who asked only for time to discuss the question and for notice to other members of the question to be discussed were received with hisses and their protests with jeers.

The trick, worthy of a machine politician, carried with the manners of a ward primary in a society one of whose declared objects is "the advancement of the character and honor of the profession!"

And then, with a fatuity which, however common its manifestations in the seconder of the motion, has not heretofore been suspected in the mover, a motion was made to reconsider, and then another to lay this one on the table, this being a parliamentary device to dispose finally of a motion. As if any final parliamentary disposal of a *motion* could prevent reconsideration of a *subject*. Such a move might avail to delay where long preliminary proceedings were necessary before a motion could be brought to a vote, but in such a case as this it would be gross flattery to call it even puerile. It served, however, to bring out the two following remarks, as reported elsewhere:

Dr. Agnew asked: "Then the object is to throttle this Academy?"

"Undoubtedly it is," said Dr. Flint, Jr.

The members of the Academy may well cry "Pause," and hesitate to sanction such methods—to follow such leadership. And we believe there are many, even among those who are heartily in support of the old Code, who will not allow their honorable reputations to be smirched by a tacit acceptance of the acts to which we have referred.

MEDICAL EDUCATION IN CANADA AND CHURCH INFLUENCES.

FOR many years back Laval University, of Quebec City, has been struggling against effects of the gradually increasing commercial depression which has attended that city. Its students in medicine became fewer and fewer each year; and, some three or four years ago, the university conceived the idea of opening or establishing a branch called a "*Succursale*," in Montreal, the largest

and most prosperous city in the Dominion. In this way the university hoped to improve its condition by drawing to its doors students from the Montreal district. Up to this period this district had supported the "Montreal School of Medicine," latterly known as "Victoria College," which institution being refused affiliation with Laval some years ago, had affiliated itself to the Victoria University of Coburg, a Methodist institution. This affiliation gave Victoria College in Montreal power to grant degrees in medicine to its students, otherwise it could not have done so. This relationship, however, of Victoria College with a Protestant university, was not pleasing to the Roman Catholic clergy; they wished to establish a purely Catholic institution of their own with university powers. Laval, as before stated, taking advantage of this feeling (some three or four years ago), opened a branch of its medical faculty in Montreal, and induced several of the teachers in Victoria College to give up their positions and accept similar ones in its faculty.

Open warfare now began between Laval University of Quebec and Victoria College of Montreal, and a suit in law was taken by Victoria against Laval to prevent it establishing its branch faculty of medicine in Montreal. This suit was carried to the Privy Council in England and decided by that tribunal in favor of Victoria College, saying that the charter which Laval possessed gave it power only to grant degrees in the Quebec district, and not elsewhere; so that all the degrees issued up to the present time by Laval in Montreal are illegal documents. Laval University now represented the matter to the Pope in Rome, so also did Victoria College. The Pope, after hearing both sides, declared in favor of Laval, reversing the former judgment of the Privy Council in England; and not only gave Laval full power to establish its "*Succursale*" in Montreal, but caused Victoria College to sever all relationship with the heretic institution in Coburg, thus throwing her back to her old position of a teaching school with power to issue a diploma only, and not the degree of M.D. His Holiness also issued a command to the faithful to assist Laval in every way, and all Catholic students to avoid Protestant institutions of any nature whatsoever. He also caused Victoria to withdraw all hindrance to the prosperity of Laval. But now comes the most extraordinary part of all: "The College of Physicians and Surgeons of the Province of Quebec," a lawfully incorporated examining body, before which all men seeking a license to practise medicine and surgery have to appear and obtain such license, simply upon producing a college diploma or university degree from a lawful and recognized institution—this body has all along accepted, and does so still, this illegal document issued by Laval University in Montreal, and grants to its graduates a license to practise.

So much for the colleges; now a few words about the part the hospitals played in the matter.

The "Hôtel-Dieu," the largest charity in Montreal, has always been the clinic of Victoria College. It is conducted by, and belongs to, an independent ecclesiastical order of sisters or nuns, and they have the power to offer or refuse teaching facilities to whatever school they wish. Now, when those gentlemen on the staff of the hospital who went over from Victoria to Laval openly

declared themselves in favor of Laval, the nuns informed them that their services were no longer required, and in fact struck their names from the hospital staff register. These men were now in a difficult position, because they had no hospital material to instruct their students with; so they put their shoulder to the wheel and originated the present flourishing "Notre-Dame Hospital," which is supported by voluntary contributions from all good Catholics, and has the recognition of the Pope and Catholic clergy. While this hospital was being fitted up, the Montreal General Hospital, in its usual liberal and generous way, admitted the Laval students to instruction within its walls, and issued certified tickets to attending students by the clinical professors of McGill University. The matter now stands thus: the Victoria College students and professors are the guests of the nuns in the "Hôtel-Dieu Hospital," and these nuns refuse to countenance in any way the professors or students of Laval, notwithstanding the urgent request of the Pope to do so. The "Notre-Dame Hospital" is the clinic of Laval University students, and is maintained for their use. How matters will be reconciled it is impossible to say. Laval is an illegal teaching body in Montreal, and Victoria College being stripped of her affiliation to the Coburg University, lives in the hope that she may succeed in becoming again affiliated to some Catholic university—there is one in Ottawa, and one in Manitoba—and in this way regain her power to grant university degrees, and at the same time conform to the wishes of the Church.

A JEALOUS WATCHMAN AND A RELIGIOUS HERALD ON QUACK REMEDIES.

AFTER-dinner speakers and commencement orators annually tell us of the close and beautiful harmonies in the work of the doctor and of the clergyman. We have wondered why these gentlemen have not sometimes pointed their rhetoric with journalistic illustrations, and shown us how harmoniously medical announcements work in with fervent piety in the columns of our religious weeklies.

The Watchman is a Boston paper, whose motto on the first page is: What of the Night? The Morning Cometh; on the last, "Yours for Health."

This *Watchman* has written an editorial in which it states that the careful aim of its editor is "to guard jealously its advertising columns," especially, as it says later, as regards "patent medicines." Our contemporary then proceeds to argue that some patent medicines are good, that they can be advertised properly, and ought not to be called quack medicines; it finds also much comfort in a similar position taken by the *Richmond Religious Herald*. These twin journalistic ornaments of religion, and stipendiaries of Lydia Pinkham, *et id. om. gen.*, assert that they cannot test all the mixtures they advertise; they do not endorse them editorially, and there probably is some exaggeration in their claims; their readers should be judicious in buying.

The reasoning adopted sounds finely, but while reasoning for one thing they practise another. The position taken by *THE RECORD*, which is, we believe, that of all just and sensible men, is this: There is a large number of diseases, such as consumption, cancer, Bright's disease, certain catarrhs, surgical maladies, for which there is

generally no cure and never any specific. These things are matters of common and accepted belief among all educated doctors, and they should be known to journalists and editors who, like our religious brethren, assume the responsible position of advertising all sorts of medicines and quacks.

Observe now the inconsistency, and, we will hope, ignorance, of our esteemed contemporary *The Watchman*. We are told that "it guards jealously its advertising columns." In these same guarded columns, we observe first, and with chaste rapture, that the immortal Lydia, Goddess of the Replaced Womb, occupies a considerable space in telling what is for the most part palpably false and impossible. Another party announces a "surest cure for all kidney diseases"—diseases which are not cured by any single medicine or measure. Dr. X advertises the "radical cure of epilepsy, even its worst cases;" Dr. Y announces a positive cure for consumption. Certain bitters will "cure dyspepsia, indigestion, malaria, and weakness." The C. and C. pills "really do cure sick headache, neuralgia, paralysis," and other trifles of a like nature. We note also a sure cure for "pimples," and another for rheumatism, neuralgia, and gout.

Most extraordinary of all, we find in these "jealously guarded columns" an advertisement for the cure of gonorrhœa, which is new, quick, and complete in four days! Is this a religious necessity? Do subscribers want it? *Watchman*, what of the night? Does the morning come with this?

We need not say anything further about the magical remedies for coughs, and asthma, about the "radical cure for catarrh," or of the two hundred New England clergymen who, says our watchful contemporary, have spontaneously testified to the superior excellence of the sarsaparilla troches.

The Watchman is no worse than many of its brother journals, though few go so far as to provide for the nocturnal indiscretions of its readers. It does, however, announce to its subscribers, whom suffering makes credulous, that there are cures for incurable diseases, specifics for troubles that cannot be relieved by specifics; and the whole tendency of its two or three columns of quack advertisements is doubly injurious. They help bolster up impostors, they deceive and very likely injure in purse and body the readers.

But these advertising columns are well-paid for, hence editorial sophistry and shame to the cause of religion.

HOW TO MAKE AN AUTOPSY.

THE remarkable studies of Professor Beneke, a notice of which appeared in *THE RECORD* some time ago, have given a new impulse and interest to the studies of the post-mortem room. The Massachusetts Medico-Legal Society, in a report by Dr. Bowditch, a year ago, called attention to some of Beneke's work as furnishing a model of what might be done by others in this direction. We quote here the conclusions especially referred to, since some of them are sufficiently instructive and significant to bear repetition:

"1. Before the period of puberty the aorta is *smaller* than the pulmonary artery, after this period the relation begins to be reversed, and in advanced life the aorta is always *larger* than the pulmonary artery.

"2. The aorta and pulmonary artery are absolutely smaller in the female than in the male, but relatively to the length of the body there is scarcely any difference between the circumference of the arteries in the two sexes, while the heart in females is absolutely as well as relatively a little smaller than in males.

"3. In adult males the volume of the lungs is greater than that of the liver; in adult females the reverse seems to be true.

"4. In men the volume of the two kidneys is nearly equal to that of the heart; in children it is greater.

"5. Children have a relatively larger intestinal canal than adults.

"6. A sudden increase in the size of the heart occurs at the period of puberty.

"7. The iliac arteries diminish in size during the first three months of life.

"8. The cancerous diathesis is, in the majority of cases, associated with a large and powerful heart and capacious arteries, but a relatively small pulmonary artery, small lungs, well-developed bones and muscles, and tolerably abundant adipose tissue.

"9. Pulmonary tuberculosis is often associated with an unusually small heart.

"10. In constitutional rachitis the heart is generally large and well developed; the arteries are also large."

Taking the above as a text also, Surgeon-General Crane, of the Army, has recently issued a circular of information regarding the methods of making an autopsy. He gives a model form of record of autopsy, which is essentially the same as that of Dr. Bowditch. To this is appended a list of instructions, from the same source, regarding the best methods of making careful autopsies. Most of the hints given are familiar to those in the habit of making post-mortems; but many of the points dwelt upon, even if familiar, are certainly quite ignored. The object of the investigator is, of course, first to find and verify the cause of death. And this in most cases ends the inquiry. Much more, however, could and should be done. The volume measurement of organs, their weight, the measurements of blood-vessels, of limbs, and body height, the length and capacity of intestines; all these and similar points are, as a rule, left out even in hospital record-books. Yet out of data like these some most important conclusions may be drawn.

We are gratified to observe how quickly the new Surgeon-General has learned the value of systematic and complete autopsical records. Some such model as that furnished by Dr. Bowditch should be adopted throughout the country in institutions where these records are kept.

PNEUMONALGIA: AN OLD NAME FOR A NEW DISEASE.

DR. R. R. DASHIELL, in a series of articles published in the *Nashville Journal of Medicine and Surgery*, upon the diseases of the Forked Deer and the Hatchie River Valleys, describes, under the name of pneumonalgia, a "symptom-complex" characterized by a kind of malarial congestion of the lungs. He says:

"Persons suffering from a protracted spell of intermittent fever, or such whose constitutions have been much broken or much impaired by repeated attacks, are frequently the subjects of a periodical painful stricture

across the breast, or sharp shooting pain through the chest, dyspnoea, and a short dry cough, though this in some cases is moist, attended with mucous expectoration in certain individuals, and sanguineo-mucous in others. I have seen the sanguineous expectoration in two cases amount to a hæmoptysis, the hemorrhage in one case coming on every evening, and in the other every other morning, in both cases preceded by chills, followed by painful stricture across the chest, accelerated, quick, small pulse, hot skin, flushed face, difficult breathing, and cough, with bloody expectoration, succeeded by a crisis of sweat. This form of affection I choose to denominate pneumonalgia, believing it to essentially consist in a neuralgic condition of the pulmonic plexuses, occasioning or inviting an afflux of blood to the pulmonary structure."

There are several objections to Dr. Dashiell's terminology and pathology. The term "pneumonalgia" has already been appropriated as a synonym for angina pectoris. Again, although the trouble may be a neurosis of the sympathetic nerves supplying the posterior pulmonary plexus, the essential disturbance is a vascular, not a painful one. From a clinical point of view Dr. Dashiell's contribution is interesting, and no doubt correct.

News of the Week.

CENTRAL PARK AS A SOURCE OF DANGER TO HEALTH.—We are told by the Park Commissioners that the ponds in Central Park are unquestionably a source of danger to the neighborhood. At a recent meeting of the Commissioners an elaborate report was made upon the subject.

"It is a fact," says the report, "too well recognized and understood to be contradicted, that of late years a considerable portion of Central Park, more especially some of the ponds of water, have become sources of malaria, whose unwholesome effects and influence have extended quite beyond the limits of the Park itself, to such an extent as to have given rise to numerous complaints and earnest remonstrance from the residents in the vicinity. There are within the Park six ponds, independent of the Croton reservoirs. These six ponds have a total area of 43½ acres. The total area of the reservoirs is 142 acres. Of the ponds, the one at Fifty-ninth Street and Fifth Avenue, being the nearest to residences outside of the Park, is the one that is most complained of. The area of this pond is 4½ acres. Its height above tide-water is 26 feet, but the others out of the six are lower in altitude. It has a drainage area within the Park of about 160 acres. At the present time the pond in question receives its chief supply of water from three sources, first, the direct surface drainage of all the area of open ground immediately contiguous to it; second, the water collected from the walks and roads lying within its drainage area; third, the water brought to it in brick conduits or sewers that find at this point their lowest outfall. . . . So strong and active is the organic matter in the pond that vegetation is constantly forming on the surface, while the large amount of ammonia discharged into it from the roadways creates the most pungent and offensive odors. The low situation

of the pond, surrounded by high ground and dense vegetation on the south, excluding the sun to a large extent, gives a dank, unwholesome aspect to its surroundings. Furthermore, the soil saturation of the borders of the pond where there is no rock adds largely to the possible chances of malaria."

THE AYES AND NAVS AT THE NEW YORK ACADEMY OF MEDICINE.—On Dr. Agnew's motion to lay upon the table the preamble and resolutions offered by Dr. Austin Flint, Jr. [see page 471]:

Ayes.—C. R. Agnew, W. T. Alexander, W. R. Birdsall, C. E. Billington, R. C. Brandeis, W. M. Carpenter, W. M. Chamberlain, W. F. Cushman, B. F. Dawson, J. H. Emerson, T. A. Emmet, G. H. Fox, V. P. Gibney, H. J. Garrigues, H. Griswold, H. T. Hanks, E. D. Hudson, Jr., A. S. Hunter, W. H. Katzenbach, E. L. Partridge, O. D. Pomeroy, D. B. St. John Roosa, C. D. Scudder, A. A. Smith, A. H. Smith, C. D. Varley, J. S. Warren, D. Webster, R. F. Weir, W. Gill Wylie—30.

Nays.—J. G. Adams, J. Anderson, J. H. Anderson, W. B. Anderton, E. S. F. Arnold, G. C. Arnold, W. B. Blakeman, F. H. Bosworth, F. A. Burrall, E. O. Cowles, A. Dubois, E. Eliot, J. O. Farrington, M. J. Fleming, A. Flint, A. Flint, Jr., J. Foster, G. Frazer, J. P. Garrish, H. Gomez, O. A. Gorton, J. W. S. Gouley, G. Griswold, J. H. Hinton, A. Hodgman, S. T. Hubbard, N. C. Husted, F. E. Hyde, J. E. Janvrin, E. G. Janeway, E. A. Judson, R. P. Lincoln, J. Linsly, W. T. Lusk, M. McLean, A. W. McLeod, J. A. Monell, H. D. Nicoll, E. H. Peaslee, P. B. Porter, S. S. Purple, H. F. Quackenbos, I. B. Read, E. Saunders, L. A. Sayre, L. H. Sayre, J. Shradly, J. L. Smith, I. E. Taylor, C. S. Ward, E. F. Ward, J. W. Warner, F. V. White, O. A. White, W. T. White, L. M. Yale, Wm. Young—57.

On the adoption of the resolutions:

Ayes.—J. G. Adams, J. Anderson, J. H. Anderson, W. B. Anderton, E. S. F. Arnold, G. C. Arnold, W. B. Blakeman, F. H. Bosworth, F. A. Burrall, E. O. Cowles, A. Dubois, E. Eliot, J. O. Farrington, M. J. Fleming, A. Flint, A. Flint, Jr., J. Foster, G. Frazer, J. P. Garrish, H. Gomez, O. A. Gorton, J. W. S. Gouley, G. Griswold, J. H. Hinton, A. Hodgman, S. T. Hubbard, N. C. Husted, F. E. Hyde, E. G. Janeway, E. A. Judson, R. P. Lincoln, J. Linsly, W. T. Lusk, M. McLean, A. W. McLeod, J. A. Monell, H. D. Nicoll, E. H. Peaslee, P. B. Porter, S. S. Purple, H. F. Quackenbos, I. B. Read, E. Saunders, L. A. Sayre, L. H. Sayre, C. D. Scudder, J. Shradly, A. A. Smith, J. L. Smith, I. E. Taylor, C. S. Ward, E. F. Ward, J. W. Warner, F. V. White, W. T. White, L. M. Yale, Wm. Young—57.

Nays.—C. R. Agnew, W. T. Alexander, W. R. Birdsall, C. E. Billington, R. C. Brandeis, W. M. Carpenter, W. M. Chamberlain, W. F. Cushman, B. F. Dawson, J. H. Emerson, T. A. Emmet, G. H. Fox, H. J. Garrigues, V. P. Gibney, H. Griswold, H. T. Hanks, E. D. Hudson, Jr., A. S. Hunter, E. L. Partridge, O. D. Pomeroy, D. B. St. John Roosa, A. H. Smith, C. D. Varley, J. S. Warren, D. Webster, R. F. Weir, W. Gill Wylie—27.

OFFICE THIEVES.—Two miserable-looking, dirty Irishmen, evidently office thieves, are going about the city representing themselves as Cincinnati physicians, sufferers from the flood. One of them says his name is Donnelly.

DEATH OF DR. J. C. PALMER.—Medical Director James C. Palmer, on the retired list of the Navy, died in Washington, April 24th. He had seen thirty-eight years of active duty in the Navy, and was put upon the retired list in 1873.

TYPHUS FEVER IN NEW YORK.—The City Sanitary Superintendent announces that fifteen cases of typhus fever in a very mild form have been discovered among the children in St. Stephen's Home in East Twenty-eighth street, near Third avenue.

ENDORING THE U. S. MARINE HOSPITAL SERVICE.—The New Orleans Board of Health recently passed resolutions unanimously requesting the President to place the Congressional appropriation for the suppression of epidemic contagious diseases, in case it should be required, in the hands of the Marine Hospital Service of the Treasury Department. A telegram from New Orleans states that the Boards of Health of all the Gulf ports will adopt the same course, and the National Board of Health will not have a foothold at any trade point in the Gulf of Mexico.

DR. H. S. TANNER, whose abstinence from food for forty consecutive days in 1880, in New York, caused so much astonishment, is now a resident of Jamestown, N. Y., where he is engaged in the practice of his profession and in manufacturing patent medicine.

Reports of Societies.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Eighty-fifth Annual Convention, held at Baltimore, April 24 and 25, 1883.

(Special Report for THE MEDICAL RECORD.)

FIRST DAY—APRIL 24TH.

THE great event of the year with Maryland physicians, more especially those of Baltimore, is the annual spring convention of the Medical and Chirurgical Faculty of Maryland, an organization incorporated by the Legislature of the State in 1799, and bearing an analogy to the State Medical Societies elsewhere, but distinguished from them in many respects, both in its object and present working.

The Convention of 1883 was called to order in Hopkins Hall, Johns Hopkins University, on Tuesday April 24th, at 12 M., by Dr. William M. Kemp, of Baltimore, President. Seventy-two members answered to their names on the call of the roll.

After prayer by Rev. Charles S. Albert, and the reading and adoption of the minutes of meetings held during the last year, the President delivered his address.

PRESIDENT'S ADDRESS.

He began by congratulating the society on its present prosperity and favorable prospects. His connection with it, he said, extended back over more than half the years of its existence. He then took up the subject of the importance of observation as contrasted with theory in the advancement of medical science. The most prominent epochs in its history correspond with revivals in the laborious and protracted observation and classification of facts. He illustrated this by reference to the lives and labors of Hippocrates, who perhaps gave the first impulse to true medical science; of Galen, whose influence retained its impress on medicine for nearly fifteen hundred years; of Rhazes, the great traveller, who gave to medicine

the first accurate description of small-pox, and the first treatise on the diseases of children; of Harvey, of Sydenham, Bonetus, Baglivi, and others, all of whom have secured their great renown by contributing to science and humanity some fact or facts secured by persevering labor and observation. Dr. Kemp had himself tested the accuracy of the prognoses of Hippocrates, and had been profoundly impressed with their sagacity. Locke and Bacon contributed powerfully to the independence of medical thought and investigation which characterizes modern times. Cullen and Morgagni, in the eighteenth century, the first in Scotland the second in Italy, continued with zeal and success the methods which had so crowned the labors of their great predecessors. The address continued at length to outline the methods and motives which should characterize the true student of nature and of science in the pursuit of knowledge. At its conclusion the address was appropriately referred.

The resignation of Dr. W. W. Murray, who has removed to Virginia, was read and accepted.

TREASURER'S REPORT.

The report of the Treasurer was read, showing a net gain of two members. There had been seven resignations, four deaths, and four dropped for non-payment of dues. Sixteen active and one honorary member (Dr. A. M. Fauntleroy, of Virginia) had been added. The receipts had been \$2,274, the disbursements \$1,736, leaving a balance in the treasury of \$538. The estimated increase in the value of the library was \$800.

The assets amount to \$9,125 (including library furniture, etc., valued at \$8,300). The society is free of debt.

REPORTS OF COMMITTEES.

The Publication Committee reported the distribution, in this country and abroad, of five hundred copies of the last volume of Transactions. The Committee on Memoirs announced, with appropriate allusion, the deaths of Drs. Wilson G. Register, the late Secretary; Charles Albert, Henry Albers, and E. Cleveland Cox.

The Committee on the Library reported gratifying progress in the condition of the library, constituting it the most valuable feature of the Faculty. It now contains 3,346 volumes, an increase of 277 during the year. Among the most valuable contributions are Ziemssen's "Cyclopædia," Sydenham Society publications to end of 1881, and many late editions of leading text-books. Number of books donated by members, 151; expenses, \$595.

One hundred and eight American and foreign journals are regularly received; a number of portraits of eminent Marylanders, including that of Dr. Upton Scot, of Annapolis, the first president of the society; a portrait and autograph letter from Pasteur; a medical diploma granted in 1769, to Dr. Josias Carvil Hall, of Maryland, by the College of Medicine, of Philadelphia, and other articles of value and antiquarian interest had been received. In concluding, the report recommended the adoption of a resolution authorizing the committee to exchange books and pamphlets with the Surgeon-General's library, in Washington, upon such terms as would promote the interests of the society. The resolution was adopted.

These reports, and others which present no general interest, were all accepted.

DELEGATES.

The following delegates presented their credentials and were admitted to seats: Dr. John H. Patterson, Baltimore Academy of Medicine; Dr. A. A. Hanna, Cecil County Medical Society; Dr. Walter Wyman, Chirurgical Society of Maryland; Dr. J. T. King, Baltimore Medical Association. Dr. Randolph Winslow (who leaves for Europe in the morning) was appointed a delegate to the International Medical Congress, which meets in Copenhagen next August.

THE REPORT ON ABDOMINAL SURGERY.

The Chairman of the Section, Dr. O. J. Coskery announced that the subject of his report would be Abdominal Surgery exclusive of operations in gynecological practice. He treated of gastrostomy, splenectomy, and nephrectomy. Gastrostomy, or opening the stomach for the removal of foreign bodies, or on account of obstruction in the œsophagus produced by simple or malignant strictures, has been made most successful since Mr. Howse suggested that the process should be divided into two separate stages—the first consisting of opening the abdominal walls and stitching the stomach to it by six or eight sutures; the second, opening the stomach itself five or more days afterward.

WHEN IS GASTROSTOMY JUSTIFIABLE.

After reviewing the cases reported and the statistics of the operation, Dr. Coskery concludes:

I. Gastrostomy is justifiable (A) in cases where a foreign body has been introduced into the stomach, which, owing to size or shape, cannot pass through the pylorus, (B), in cases where malignant contraction or diseases of the œsophagus is progressing. (C), where the disease in the calibre of the gullet is due to inflammatory action following the introduction of corrosive liquids, and where such contraction will not yield to the bougie treatment.

II. Under all circumstances the first possible opportunity for the operation should be availed of. Mr. Bryant, alluding to cases in which decrease in the size of gullet is the occasion for the operation, says, "Do it as soon as there is any difficulty in swallowing solid food."

III. The incision in the stomach itself should not be longer than one-eighth inch, unless made for the removal of foreign body, and then as small as will permit of its extraction.

IV. The operation is most successful ultimately when undertaken for the removal of foreign bodies or for accidental stricture of the gullet.

V. When done for obstruction to the swallowing of food, the operation should be divided into two stages, as was suggested by Mr. Howse.

THE INDICATIONS FOR SPLENECTOMY.

In regard to splenectomy, Dr. Coskery's conclusions were that the operation of splenectomy for conditions unassociated with leucocythæmia is pre-eminently the most successful in abdominal surgery, but when the white cells are very abundant in the blood, it probably is the most dangerous of operations and should be abandoned. The tendency to hemorrhage in this condition may alone be regarded as a barrier to the operation, even in the incipency of the disease.

The following are the conclusions reached by Dr. Coskery in regard to nephrectomy: The operation must be regarded as a justifiable one; the great difficulty lies in making a correct diagnosis between those conditions of the kidney requiring extirpation, simple tapping, or cutting down and extracting a stone from the pelvis of the kidney.

By the incision made in the same direction as for lumbar colotomy the operation should be as bloodless and as free from danger. The principal dangers are accidental adhesions and the shock of the operation.

SECTION ON PRACTICE OF MEDICINE.

DR. R. H. THOMAS read the report of the Section. His paper was entitled

A CONTRIBUTION ON THE INFLUENCE OF SEASON AND WEATHER ON THE DEATH-RATE FROM DIPHTHERIA IN BALTIMORE, 1861-1882.

The paper was freely illustrated by charts, showing the range of temperature, moisture, wind, etc., during the four and one-fourth years embraced by the report.

Dr. Thomas said that his study of these charts seemed to warrant the following conclusions:

First.—While the weather alone does not regulate the

absolute number of deaths from diphtheria, it has a very important bearing upon the rise and fall of the violence of the disease, although temporary fluctuations occur independently of it.

Second.—Temporary changes in the weather have but little effect; but a continued prevalence of certain kinds of weather does cause a rise or fall in the mortality from diphtheria.

Third.—The conditions favorable to arise are low barometer, low winds, especially from the East, high temperature with high humidity and heavy or continued rainfall.

Fourth.—The conditions favorable to a fall are high winds, especially from the West, low humidity, with high temperature, or high humidity with low temperature, and "generally" a high barometer.

SECOND DAY—APRIL 25TH.

The session opened with a report from

THE SECTION ON MATERIA MEDICA AND THERAPUTICS

read by DR. BARTON BRUNE, consisting of a *résumé* of the contributions made in urinary chemistry during the year. Dr. Brune paid especial attention to the recent lectures by Alfred Barring Garrod, of London, on uric acid and allied subjects, to various urinary pigments lately described, and to new tests for albumen and sugar, particularly the picric acid test of George Johnston, which he thought was likely to supersede the test now in vogue.

The report of the Section on Anatomy and Physiology consisted of a paper on

THE PROGRESS OF PHYSIOLOGY DURING THE YEAR,

by DR. LATIMER, which, owing to the author's being called away from the city, was read by title only.

The Committee on Sanitary Science reported through DR. J. R. WARD, President of the Maryland State Board of Health. The principal point in Dr. Ward's address was the stress which he laid upon

SANITARY INSTRUCTION IN THE YOUNG.

He urged that it should be made one of the subjects taught in the public schools. The susceptible minds of the young men were particularly adapted to receive and retain such instruction, which might then be spread broadcast through the masses.

The report of the Section on Ophthalmology, Otology, and Laryngology was presented by Drs. Friedenwald and H. Clinton McSherry. The former took for his subject

THE RELATIONS OF SPINAL AND EYE DISEASES.

DR. McSHERRY read a paper on

LARYNGEAL STENOSIS,

and exhibited an instrument designed to effect dilatation of the glottis from below after tracheotomy. It consists of three blades, by which dilatation is effected both laterally and antero-posteriorly.

Dr. McSherry reported three cases successfully treated by himself, and exhibited one of the three, who, after being obliged to wear the tracheal tube for a year, is now able to breathe freely without it.

The next was a volunteer paper by DR. C. W. CHANCELLOR, Secretary of the Maryland State Board of Health, upon

THE SEWERAGE OF CITIES BY THE PNEUMATIC PLAN.

This paper was based upon observations made in Europe by the author, who has recently been abroad studying the various sewerage systems in vogue. Dr. Chancellor discussed at length the relative merits of the various methods and expressed a very decided preference for the pneumatic system, which prevails in Holland. He urged the special adaptability of this system to Baltimore.

(To be continued.)

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 23, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

DR. D. B. ST. JOHN ROOSA read an elaborate paper on

THE EFFECTS OF NOISE UPON DISEASED AND HEALTHY EARS.

The author first referred to the literature of the subject as found in the writings of Willis, Wilde, Kramer, Troltsch, Rau, Ficlitz, Burnett, and E. E. Holt, who published his paper in 1882. Politzer, and others. Willis, a little more than two hundred years ago, gave an account of a somewhat famous woman who could only hear the voice of her husband when a servant was beating a drum in the same room. The facts, as stated by that old author, have since been denied and affirmed, and differences of opinion have existed concerning the explanation of the phenomenon, of hearing better in a noise, when its existence has been admitted. Dr. Roosa showed subsequently that Wilde was in error in supposing that the phenomenon depended upon the state of the membrana tympani, and therefore could not occur when there was a hole in the drum-head. He did not agree with Troltsch that the symptom of hearing better in a noise was not a common one. His experience had proved that it is a very frequent one. Holt doubts if in any case the hearing-power is improved by noise. Politzer has no doubt as to the existence of these cases, and confirms what Dr. Roosa stated years ago, "that the patients can understand speech during such noises much easier and at a much greater distance than people with normal hearing;" but he (Politzer) has observed this symptom "almost exclusively in the incurable forms of affections of the middle-ear." Dr. Roosa believed that while the symptom frequently accompanied incurable disease of the middle-ear, it is a very frequent symptom in subacute cases, when both ears are affected. He had never seen the symptom except in disease of the middle-ear. He believed it never occurred except in cases where the nerve is sound. If it be true that it never occurs with disease of the acoustic nerve, the theory of an extraordinary excitement of the nervous apparatus, as a cause of the phenomenon, must be rejected. Special reference was then made to Politzer's explanation and to the conclusions reached in Dr. Holt's paper. Reference was then made to illustrative cases.

But there is a class of patients who have been made deaf by noise. They are often confounded with those whose impairment of hearing has resulted from catarrh, but are to be entirely disassociated from them. Boiler-makers, and those who become deaf from an exposure to the continuous shock of loud sounds, suffer from a lesion of the acoustic nerve. These patients hear better away from the din, and have a sense of relief when in quiet places.

The author of the paper then explained how, by the publication of certain views, he assisted in creating confusion in our ideas, as to hearing better in a noise and the effects of noise upon the ear. He then explained, by means of a diagram upon the blackboard, what is understood by bone-conduction and aerial conduction. This was followed by illustrative cases of boiler-makers' deafness.

The following conclusions were reached:

First.—There is quite a large class of people suffering from impairment of hearing in ordinary places who hear very acutely and with comfort amid a great din or noise.

Second.—The disease causing the impairment of hearing thus relieved, is situated in the middle ear. It has been usually observed in the chronic non-suppurative

form of disease of the middle ear, but it may also be found in acute and subacute catarrh of this part, as well as in the chronic suppurative process.

Third.—The proximate cause of this phenomenon is not as yet positively known. It is probably to be found in some change in the action of morbid articulation of the stapes bone with the fenestra ovalis.

Fourth.—The hearing-power of persons working in such a din as that of a boiler-shop invariably becomes impaired.

Fifth.—The lesion caused by this occupation is one of the labyrinth, or of the trunk of the acoustic nerve.

Sixth.—Persons thus affected do not hear better in a noise. Their hearing-power is better in a quiet place, and becomes better after prolonged absence from the exciting cause of their impaired hearing.

Seventh.—The cases of inspissated cerumen and catarrh of the middle ear, occurring among boiler-makers, are such as occur among those engaged in other occupations, and mask and complicate the fundamental primary trouble so long known as boiler-makers' deafness.

Eighth.—In disease of the labyrinth or acoustic nerve the tuning-fork "C" is heard louder and longer through the air than through the bones of the head.

The President invited DR. KNAPP to open the discussion, who said that the paper was so much in the direction of new experimentation, and observations which must needs be repeated in order to discuss the subject properly, that he had nothing to offer. So far, however, as his observation had extended upon this question, it agreed in the main with Dr. Roosa's, although he could not entirely agree with him in reference to distinguishing between internal and middle-ear disease.

DR. BRANDEIS said that the experiments which he had made had led him well toward the conclusion to which Dr. Roosa had arrived. At the time Dr. Holt read his paper Dr. Brandeis ventured to take issue with him, and claim that in boiler-makers' deafness the disease was not of the internal ear, but in a majority of cases was an affection of the naso-pharynx which extended to the middle ear and tympanic cavity through the Eustachian tube, and that the impairment of hearing was not due so much to impairment of the integrity of the nerve as to the ankylosis of the ossicles and closure of the Eustachian tube. He had found very great difficulty in determining exactly the amount of impairment of hearing in boiler-makers; also, whether it was due to impairment of the integrity of the auditory nerve or of the conducting apparatus, because in every one of the cases there was decided naso-pharyngeal and Eustachian catarrh. In many cases he was inclined to believe that the catarrhal condition was the principal factor in the etiology of the deafness. Dr. Brandeis had recently observed a number of cases of unilateral impairment of hearing, especially among violinists. Here again he was inclined to the opinion that the difficulty was not alone in the internal ear, but that there was also a simultaneous affection of the middle ear, the tympanic cavity, and the ossicles, which he attributed to partial compression of the arteries that go to supply the middle ear, thus impairing the circulation.

DR. POMEROY was inclined to place considerable stress upon the observations made by Dr. Holt, who with others had demonstrated beyond question that there is middle-ear disease in a very large number of these cases of boiler-makers' deafness. Dr. Pomeroy believed that the appearance of the membrana tympani generally sustained that proposition. In many cases it is altogether opaque, showing the signs of a considerably long continued low grade of inflammation, resulting in a certain amount of proliferation. Moreover, all the men who are thrown into the category of boiler-makers are especially exposed to those causes which are supposed to give rise to catarrh. That there is actually catarrh present in a very large number of cases he thought was admitted by all observers. At the very beginning, then, a condition was present which

served to render diagnosis difficult. Dr. Pomeroy's belief was that it begins as a middle-ear trouble and travels into the labyrinth. With regard to the tuning-fork furnishing evidence of middle-ear disease, that is a question requiring the utmost acuteness of observation. Our knowledge on that subject is still so defective that all statements made with reference to it must be taken with a great deal of allowance. He was sure the statement, that if a patient hears the tuning-fork louder and longer by aerial-conduction than by bone-conduction he has not middle-ear disease, but labyrinthian trouble, was true in only a certain number of instances. With regard to hearing better in noise, he believed that in a large number of instances patients with middle-ear trouble were likely to hear better in a noise than a person with normal hearing, and better than when in a quiet place. But that fact he thought was not sufficiently important to be of special diagnostic value. A person may have middle-ear trouble and not hear better in a noise.

DR. BACON believed with Dr. Roosa that the real difficulty in boiler-makers' deafness is in the internal ear. At the same time the middle ear is, in the majority of cases, affected with catarrhal troubles.

DR. ANDREWS said that, at one time, he studied this subject carefully for a number of years. Inasmuch as there had been no post-mortem examinations to verify the statements given this evening, it would be impossible, he thought, to positively locate the disease. Disease of the middle-ear might give all the evidence of disease of the labyrinth, and yet the labyrinth be perfectly normal. He believed that we could not yet, in these cases, positively locate the disease in the labyrinth so long as tympanic disease cannot be eliminated as an acting cause. Dr. Andrews thought that the absence of the drum-head, referred to by Dr. Roosa as disposing of Wilde's explanation, did not dispose of the view entertained by Wilde, inasmuch as the round and oval windows were probably intact.

DR. ROOSA, in reply to Dr. Andrews's question, said he supposed the two windows were intact. But he believed that their presence did not overthrow the argument, because Wilde held that the phenomenon depends upon relaxation of the drum-head; whereas he (Roosa) believes that it depends upon some change of the ossicles, a decidedly different condition.

Dr. Roosa could not agree with Dr. Andrews in the broad statement, that because no post-mortems had been obtained in cases of boiler-makers' deafness, therefore we cannot ever tell whether we have to deal with disease of the middle-ear or of the internal ear. He had assumed two things which he expected would be doubted, and they had been doubted; but he did not think that they had been disproved. He had the fortune of being a pioneer in this kind of investigation, and had come to believe that in the tuning-fork we have a means of making a differential diagnosis between disease of the middle and internal ear. Hearing better in a noise was another means, and by employing these two aids he believed that a differential diagnosis in these cases could be satisfactorily made. Practice in ear diseases had gone to extremes. Only a few years ago nearly every otologist followed Kramer, who said that the acoustic nerve was the part most commonly affected; then Wilde, who said that disease of the middle-ear explained all the symptoms; later the Germans, who came with catarrh of the middle-ear and swallowed all previous theories. Now, no matter what the ear affection may be, the organ must be blowed up almost invariably, according to some authorities, and their teaching is practised by a large number of otologists. Dr. Roosa was contending against that view, and was trying to prove that there is quite a large proportion of cases of deafness in every vicinity, due to acoustic trouble, which are incurable, and that it is better to let them alone than to be continually blowing them up with an apparatus.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 19, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. GASPAR GRISWOLD read a short paper on

CRYSTALLINE ELATERIN.

The author of the paper first spoke of the excellency of elaterium as a hydragogue cathartic, and referred to the uncertainty in obtaining desired results, because of the variations in the strength of the drug sold in the shops. He then described the methods by which the crystals, the active principle of the juice of the cucumber, should be obtained in order to be reliable, and exhibited specimens which illustrated the differences in appearance between the inert substance and the white hexagonal crystals known as elaterin. The following conclusions were reached: First, that the crystalline elaterin of Merck, now for sale in this city, is identical with that discovered by Morries in 1831, and is the active principle of elaterium; second, that its distinct crystalline form and freedom from impurity renders it more reliable than any preparation of elaterium; third, that the proper dose to commence with is one-tenth of a grain, and that this may be prescribed in a solution of one grain of elaterin to half an ounce of alcohol, or in the form of tablet triturates, containing one-tenth of a grain. The last are now to be had at Frazer & Co.'s pharmacy.

ANTEFLEXION OF THE UTERUS—ITS ETIOLOGY AND ASSOCIATED PATHOLOGICAL CONDITIONS.

DR. W. GILL WYLIE read a paper on the above subject, in which he first directed attention to the anatomy of the position and surroundings of the healthy uterus. This referred to the shape and size of the organ, its depth, flexibility, etc. The average depth was given as a little over two and one-half inches. When pressure is made on the fundus or upper portion, the organ bends, chiefly at the os internum. It does not bend so as to form an acute angle, but with a curve such as would be made by a rubber tube with very thick walls and small calibre. In very rare cases the anterior wall might be bent at a much more acute angle. A description of the supports of the uterus was then given. It is held in position chiefly by the fasciæ and connective tissue of the pelvis, and by the reflexions of the peritoneum. These form more or less distinct ligaments, in which there is more or less muscular tissue, and are so elastic as to permit considerable mobility of the uterus as a whole, especially upward and downward, and backward and forward.

The elastic contractility of the muscles and connective tissue, that is, the heart and muscles of the arteries, muscles of the ligaments and perineum and abdomen, the connective tissue of the skin and the abdomen and perineal walls, of the ligaments, fasciæ, and so-called cellular tissue of the pelvis, unitedly exerted a pressure to which he gave the name *vital musculo-connective-tissue pressure*.

Dr. Wylie then proceeded to the consideration of the dynamics of the pelvic cavity, or the influence of force in causing antelexion. The influence of atmospheric pressure has but little to do with keeping the pelvic organs in place by opposing gravity. In order that this force may act as a retentive power by counteracting gravity, the vessel must be rigid and fixed above as well as on the sides, and impermeable to air. Gravity acts upon the contents of the pelvis as it does upon the semi-solid, elastic, and mobile contents of a rigid cylinder with a flexible bottom, and with a top opening into another flexible cylinder, also filled with an elastic ever-changing mass, falling and lifting at all times, and with more or less force.

The writer then spoke of the influences which prevent

a normal uterus from bending forward at or above its middle when the person stands erect, or when it is pressed upon by the action of the diaphragm and abdominal muscles, etc. First, the firm, elastic nature of the tissues of the organ had a tendency to keep it in its normal shape; second, the forward inclination and slight anterior curvature of the normal uterus placed the organ in the best possible position to enable it to withstand both continued and sudden waves of force from the action of the diaphragm and abdominal muscles. The third influence mentioned was the vital musculo-connective-tissue pressure—that is, the sustaining power of the surrounding flexible and elastic adjustable tissues, which during life are filled with blood, fluids, gases, etc. So important is this influence that it cannot be left out when considering the dynamics of the pelvic cavity, and while the uterus is surrounded by these elastic and adjustable tissues in the living body, it is sustained in the same way as a flexible sea-weed is when surrounded by water. In other words, the tendency of the fundus to fall forward and bend the uterus on itself is very much less than it would be out of the pelvis.

The advocates of the mechanical pathology of uterine displacements had overlooked this greatly modifying influence of all indirect force acting on the pelvic organs, and had, therefore, exaggerated the effects of sudden falls in producing antelexion, consequently were naturally led to rely too much upon mechanical support for effecting a cure. The effect of downward pressure on the healthy uterus tends to produce general prolapsus rather than antelexion.

Dr. Wylie then asked the question: When a uterus is soft what causes it to become flexed when the person is erect, or when there is downward pressure produced by the action of the diaphragm and abdominal muscles? The answers were, first, the normal position of the uterus is one of anterior curvature, and if the tissues are soft the weight of the fundus has a tendency to increase this curvature; second, downward pressure would cause the pouch of Douglas and the bladder to yield first, and this yielding would make taut the utero-sacral ligaments attached to the uterus just above the vaginal junction posteriorly until these ligaments gave way. This particular part of the uterus would be held upward and backward, while the abnormally soft cervix would be pushed downward in the direction of the vaginal axis. At the same time the utero-vesical ligament would be made taut only at its higher points of attachment to the uterus, and the upper part of the fundus would be pulled downward on the bladder. The third answer referred to Hart's views as to the floor of the pelvis being divided into two segments, the author accepting some of them with modifications. Fourth, the loss, to a greater or less extent, of the vital musculo-connective-tissue pressure. Dr. Wylie then spoke of the influence of downward pressure in producing backward and forward displacements of the uterus, the latter result being the most frequent and the most important pathologically.

The influence of the bladder on the position of the uterus, and the influence of the rectum on the uterus were then considered.

The point of greatest curvature in antelexion was mentioned next, and the writer stated that the exact location of this point is often very difficult to determine. As a rule, it is just about the os internum. And he then gave the reasons why it occurred at this point.

The time of making examinations to decide the exact degree of flexion should be carefully considered; for, without doubt, the amount of curvature varies at different times, for instance, just before and just after menstruation. The most favorable time is during one or two weeks between the menstrual periods, when the uterus is usually quiescent.

After speaking of the variability of the generative organs reference was made to the frequency and degree of antelexion. All nulliparous women have some degree

of anterior curvature of the uterus, and this may vary considerably without denoting an abnormal condition; that is, while the uterus is quiescent the angle made by the axis of the cervical canal with the axis of the canal of the body may vary from 165° to 135° without being abnormal. But when it is most of the time found less than 135° it may fairly be called abnormal.

ETIOLOGY.

Under this head the author considered the influences which prevent the perfect development of the organs of generation; the enervating influences of modern life; the general tendency to development of the intellectual faculties at the expense of the physical health; the tendency there is in civilized communities to keep the function of these organs under restraint, enforced restraint brought about by measures to avoid child-bearing; the influence of deformities of the pelvis; the influence of excessive physical labor, although not so potent as excessive intellectual development, etc. The condition of the general health has much influence on the development and position of the uterus. Many of the cases classed as congenital are undoubtedly merely flexions made permanent before maturity is reached. Of children born of healthy parents, few reach full development in perfect health.

In those who have an inherited or acquired rheumatic diathesis, or a tendency to catarrhal diseases, exposure to malarial poisoning or to cold may induce endometritis, and finally lead to anterior displacement.

Child-bearing is usually enumerated as a predisposing cause of antelexion; but Dr. Wylie preferred to say that too frequent child-bearing, or abnormal labors or the puerperal state, or labor in an unhealthy woman, may result in an antelexion. Child-bearing is as truly a natural act as is eating. Besides these, a large number of causes were mentioned.

PATHOLOGY.

For several years past he had given up the belief that antelexion very often directly caused dysmenorrhœa by mechanically closing the canal, and thus obstructing the menstrual flow. Where there is obstructive dysmenorrhœa, except in rare instances, he believed it to be due, as a rule, to stenosis of the os uteri at some point, or to clonic spasm at the os internum, as is the case in the majority of instances of dysmenorrhœa in antelexion. He believed that pain and obstruction is caused by the hyperæsthetic condition at or near the os internum, combined with more or less stenosis at this point.

Antelexions may be divided into two classes: first, those usually termed congenital, that is, those in which the curvature exists before puberty, or is acquired before maturity is completed, and the result of interfered or imperfect development; second, those in which the curvature takes place after full growth. The peculiarities of these two classes of cases were then discussed at some length.

The President invited DR. T. ADDIS EMMET to open the discussion, who thought the subject could be simplified by recognizing the fact that in most cases the condition under consideration is due entirely to obstruction of the circulation outside of the uterus. As a rule, it is due to inflammatory action caused by cold. When we have dysmenorrhœa accompanied with that condition it is not a mechanical affection, but it is due to faulty nutrition and obstruction of the circulation, and is an affection of the general system. He believed that it was very important to recognize this as a cause of flexure from the simple fact that malpractice was seen to no greater degree than in the treatment of such conditions by dividing the cervix, dilating the canal, etc., etc., treating the effect as if it were the cause. Inflammation in the pelvis somewhere, in one of the ligaments, is the chief cause of antelexion, and this explains why we have so uniformly

trouble from surgical procedure for its relief. If attempts are made to raise the uterus before the pelvic inflammation is removed, a fresh attack will be set up. This doctrine is applicable to the treatment of all versions, and it is due to this fact that there is such a difference of opinion in regard to the use of pessaries in the treatment of uterine displacements. Whenever we treat anteversions and reduce inflammation to a point at which it is regarded as safe to undertake to restore the uterus to its normal position, whatever the mechanical appliance is that is employed, it simply relieves the patient by raising the organ up to where the circulation can be restored; sometimes we can antevert the uterus still more than it is anteverted, and yet give entire relief. The principle is not simply to correct the position of the uterus so far as flexion or version is concerned, but to raise the organ up in the pelvis to a point at which circulation can go on unimpeded.

DR. W. T. LUSK said he had been invited to participate in the discussion; but inasmuch as the author of the paper had anticipated nearly all that he had proposed to say, he would not further consume the time of the Academy.

DR. W. M. CHAMBERLAIN thought the paper covered a range of inquiry which all would do well to prosecute. He referred to a single illustration of one point, namely, the propagation of force from the contraction of the diaphragm and connective-tissue movements in the upper part of the abdomen. Whoever has had occasion to watch the movements of the pelvic viscera in a patient anesthetized for operation, and has noticed the result when an attack of vomiting came on, would recognize the fact so well brought out, that the maximum downward pressure is not exerted into Douglas' cul-de-sac, but into the space anterior to the uterus and upon the posterior wall of the bladder. So far as his observation went, the extrusion of the vaginal wall had always been much more in the form of a cystocele than in the form of a rectocele.

The dynamics of uterine movement has a wide relation to education and habits as well as to the cure of the sick, and he thought that manifestly any great departure from the order of nature, as is frequently dictated by fashion, was likely to be mischievous. For example, the influence of affected posture, what is sometimes called the "Boston tip," in which the body is bent forward and the abdominal walls are relaxed, he believed was prejudicial to good health. The influence of high-heeled boots he also believed was a factor worthy of consideration. He was especially pleased with Dr. Wylie's statement concerning the influence of the vital musculo-connective-tissue pressure. While Dr. Emmet had spoken most judiciously of antelexions depending upon a greater or less amount of pelvic inflammation, he thought there were antelexions, but more especially anteversions, which are the source of great discomfort, which never can be cured by any mechanical appliances, because they depend essentially upon an empty state of the connective tissue. And he believed that in many of those women who are bedridden, the displacement continues because they are bedridden, and that the one means of restoring them is to restore the normal condition of the connective-tissue system.

DR. WYLIE, in closing the discussion, said, with reference to Dr. Chamberlain's remark, concerning the effect of pressure of the diaphragm being chiefly expended upon the bladder when the patient was anesthetized and placed in Sims' position, that Dr. C. would recollect that in Sims' position the curve of the spine is mainly taken out, and that the greater part of the force is directed downward more in the direct line of the bladder. In the upright position he thought that the pressure was so equally distributed that there is a proper balance between the two, and that the uterus settles in the pelvic cavity in accordance with this equalized and balanced pressure.

DISCUSSION ON THE NEW CODE, AND WHAT CAME OF IT.

The Academy then proceeded to the transaction of new business.

DR. AUSTIN FLINT, JR., rose and said: I have been requested to introduce a certain preamble and resolutions with reference to the election of resident Fellows. I think, Mr. President, it is time that in this hall, the gift of a distinguished fellow and benefactor of this Academy, in the presence of these portraits of past presidents and distinguished fellows, and many good men who have left us, I think it is time that resolutions should be introduced deprecating the admission of any Fellow who cannot conscientiously sign, as we have all signed, and cannot cordially support, as we should all support, the Code of Medical Ethics recognized by the regular profession of this city, State, and country, the Code of Ethics which has been embodied as one of the by-laws of this Academy. I therefore move you, Mr. President, the adoption of the preamble and resolutions which I will read:

Whereas, The New York Academy of Medicine has adopted in its By-Laws, and as its standard of medical ethics, the Code of Ethics of the American Medical Association; and

Whereas, Each newly elected Fellow of the Academy is required to sign its Constitution and By-Laws, be it

Resolved, That the Committee on Admissions be and are hereby instructed to report to the Academy for election as resident Fellow, no physician who is known by the Committee to be in opposition to the Code of Ethics of the Academy, and who in consequence cannot conscientiously sign the By-Laws of the Academy; and

Resolved, That these instructions to the Committee on Admissions continue in force until the American Medical Association shall have modified or repealed its Code of Ethics, and such modification or repeal shall have been adopted by the Academy, or until the Academy shall have modified or repealed its by-law referring to medical ethics.

DR. J. P. GARRISH.—I second the resolutions.

DR. C. R. AGNEW.—Mr. President: Of course, in common with a large number of my colleagues and Fellows of this Academy, I have had no intimation of the import of these resolutions offered at this time. It was only by accident, the merest accident, that, at half-past seven o'clock this evening, I heard that a certain number of the Fellows had been secretly informed that such resolutions would be introduced. It seemed to me, when informed of the intention of my honored colleague to introduce such resolutions—accidentally and unintentionally informed—that I had a right to suppose, as a Fellow of this Academy, I should have been informed by the Secretary of the Academy of the intention to introduce resolutions of this kind. It has been very evident, by the rhetorical way in which our distinguished colleague has introduced them, that these resolutions have been well prepared, and that persons have been informed that they were to be introduced, and so a very large attendance at the Academy has been secured of those who were known to be favorable in advance to the ethics of the resolutions which the gentleman has introduced.

Now, may I ask the Secretary to read the qualifications for membership in this Academy? These are found in the Constitution, Article 3, Section 1.

The SECRETARY reads: "Each candidate for Resident Fellowship must have been a graduate or licentiate in medicine residing in this city and county, or in either of the counties of this State thereunto adjoining, for three years."

DR. AGNEW.—Are there any other qualifications provided for in the Constitution, Mr. President, for admission into this Academy?

THE PRESIDENT.—Signing the Constitution and By-Laws.

DR. AGNEW.—Then it seems to me that it is the in-

tention of the resolutions to embody in the Constitution of the Academy an additional qualification for membership, and that it should have been noticed by the Secretary in conformity with the provision of the Constitution, which says that "no part of the Constitution shall be altered, except at a stated meeting, subsequent to one at which a proposition to that effect shall have been made in writing, and then only by a vote of three-fourths of the Resident Fellows present."

Now I move that the resolutions with their preamble be laid upon the table until that provision of the Constitution shall have been complied with. It is proposed to establish a new test for membership, and I think the Secretary should, in conformity with the custom of the Academy, if nothing more, give notice of their introduction. I call for the Ayes and Nays on my motion.

Ayes 32. Nays 60.

The motion to lay on the table was declared lost.

DR. ROOSA.—Mr. President, the distinguished gentleman upon this occasion seems to have forgotten the scene which occurred in this Academy when his even more distinguished father, in an address to the medical profession, counselling harmony, distinctly stated that it was in the County Medical Society that discussions like this were to be carried on, and that, that was the arena for the discussion of ethical subjects on which medical men of all shades of opinion might differ. It is very interesting to watch the indignation beginning in Brooklyn and being continued in Philadelphia, which it has taken a year and a half to whoop up to proper dimensions. When the Medical Society of the State of New York, in the right given to it by a charter as old as 1809, and given to it by its by-laws, which have not been repealed, did in 1882 repeal a certain section of its by-laws, I had the honor of conversing with many of the gentlemen who have now become so excited lest the honor of the profession of the State should be entirely swept away, and I failed to see then any of the indignation expressed in the gentleman's remarks when he claims that he and his party alone represent the regular profession, and causes the inference that those gentlemen who do not resort to the same expedients to obtain control of medical societies, represent an irregular profession. This is not a spontaneous agitation. It is not an expression of the real sense of the medical profession lest its time-honored rules should be overturned. It is an expression created simply by a secret society, a high organization which sends its orders to individuals to be present on certain occasions. This is an agitation which is all artificial, and is one of the most decidedly political organizations which ever existed.

It was not until this evening at a very late hour that we became aware, those of us who are standing by the rights of the medical profession of the State of New York [Interruptions and jeers, promptly suppressed by the President], and of that society which will survive any derision, and can rest secure simply upon its own history and its own merits, it was only at a late hour, I repeat, that we knew anything of such an occasion as this, or we should have been better represented than it has been our fortune to have been. If there were that sublime ethical feeling for which these gentlemen are clamoring, even if any attention had been paid to that law of ethics, higher than those of any academy or any American medical association, to the law which obtains among men who are waged in contest with each other, we would have been notified that this matter would be brought up to-night, and it would not have appeared in the characteristic method in which it has been presented. To properly characterize it would require language not parliamentary, and from which I will refrain. I simply appeal to the honor of the gentlemen who differ with us in opinion concerning ethical interpretations, and who claim to represent the purity of the ethics of the profession, as against us who are irregular.

DR. GOULEY.—I rise to a point of order. The gentleman is not speaking to the question.

THE PRESIDENT.—The Chair decides that the gentleman is speaking to the question.

DR. ROOSA.—I wish simply to say that I appeal to the honor of the gentlemen who claim to represent the purity of the ethics of the profession, as against us who are irregular, that they shall forego their action this night, and allow us to discuss this question when the Academy may have a fuller representation. I trust I see men here, no matter what their obligations upon the general question are, who are under no obligations which would bind them to disregard the common courtesies of any contest, and especially this one, which thus far has mainly been carried on in a friendly way. I hope it will be continued in a friendly manner, and let us at least have an opportunity to say what we may have to say when we are adequately represented.

THE PRESIDENT.—The Chair begs leave to state that any one speaking on either side, will, while he is speaking, be protected, and that without reference to the opinion he may express.

DR. FLINT, JR.—Mr. President, I would like to explain with reference to certain strictures which have been made by the gentlemen who have spoken. All I intended to say was in the few remarks with which I introduced these resolutions, and they constituted all which I should have said upon the subject, did I not feel that I must reply to the strictures which have been put upon me and have been put upon some others. We consulted together, and all thought it best that these resolutions should be introduced at this time. They have no reference to State or county medical societies. The movement which many of us have gone into is to sustain the Code of Ethics of the American Medical Association until it shall be modified by that body.

The New York Academy of Medicine is the only chartered medical society in the State of New York, which is entitled, through its delegates, to recognition, either in the American Medical Association or in any of the State Medical Societies in the Union. I wish that fact to stand fully before the mind of every Fellow of the Academy. Now the question is that, being the only body which can send delegates to the forthcoming meeting of the American Medical Association, that being disfranchised by an action which I shall not attempt to characterize, that action which cannot be compared to anything—I will not try to go on—but I think many of us feel deeply that that action has been the occasion of such action as we have taken to-night. It is true, we invited our friends to be present, and expected that they would be here and vote for these resolutions. But we have not organized and given our organization a public appearance in medical journals; but we have a list of the names of the men who have signified their willingness to sustain the Code of Ethics of the American Medical Association until it is so modified, which I will give to any one who may ask for a copy. There is no secrecy in the matter, but the simple question is this, Will the Academy take the ground which shall put it right before the country, before the medical societies of our sister States, and right before the American Medical Association?

Shall we fall in with the idea that there may be a code of ethics for New York State, another for New Jersey, another for Connecticut, another for Massachusetts, and so on? Shall we do it? Or shall we sustain the code which has governed all the States? I contend that we have a right to call our Committee on Admissions to account if they report for election any men who cannot sign these By-laws. It does not follow that they must be called upon to go and vote against good men on that account. But that committee should know their duty. We are not modifying the Constitution or By-laws, we are simply saying that it is the sense of this meeting, that these are the By-laws which are to be signed, and that they are to be signed without mental reservation. The Academy may dismiss the committee, if necessary, if it does not do its duty, by a two-thirds vote. If any one

feels that he is hampered by this action, he can resign. I have considered the matter carefully, and I undertake to say that there is no thought of any new qualification or modification, or alteration of the By-laws, but it is simply a resolution to instruct this committee to act in accordance with the By-laws. I hope it will pass, and I hope that this question regarding the Academy of Medicine will be forever settled.

DR. AGNEW.—As the gentleman says there is no organization on their part, I ask if he would have any objection to telling us the method by which he secured this attendance of his associates? [Confusion, and cries of order, question.]

DR. PURPLE.—Is that in order? Has the gentleman a right to call upon any member of this Academy to tell the mode in which he attempts to support the Constitution and By-laws of this Institution. We wish to let the profession know that this Academy has its code of ethics, and that it is not a dead letter. There are those members here to-night, gray in years, who have stood by this institution, stood by its Constitution and its By-laws, and they are going to go through thick and thin to support them, and if need be to fight for them, either by blackballing or any other means which will support the By-laws. The gentleman must not consider that these are dead letters. [Question, question.]

DR. WEIR.—If I understand Dr. Flint correctly, his resolutions are only intended to instruct the Committee on Admissions as to their duties; that they are not to do any more by passing these resolutions than is now expressed in the By-laws. Therefore I do not see why the passage of such resolutions should be enforced. We have no delegates to be sent to the American Medical Association. They have already been chosen. We have no meeting to-night in accordance with all fair working, and I think we are entitled to this consideration from gentlemen on the opposite side; that due notice should have been given, and that this matter should be postponed until the next meeting or to a special meeting. I am sure that is not much to ask of them.

DR. A. H. SMITH.—I should like to ask, before I vote on this question, inasmuch as everything seems to hang upon the intents and purposes of the candidate, how the members of the committee are to know what he is going to do, and exactly how the committee are to go about settling the question for his conscience—a question which should arise in the conscience of each man. It seems to me that it is rather ungracious, and that to clothe the committee with any such power is extending to it a province which does not belong to any committee. I would like to know upon what ground the action of the committee is to be based.

DR. IRA B. REID.—The object is to throw upon the committee the work which would be otherwise thrown upon all of us every time a name comes up. The By-laws and Constitution are not usually presented to the candidate to sign before his name is balloted upon, and it is simply to permit him to say whether he can sign them or not; if he cannot the matter is ended with the committee; if he says he can the committee will present his name for election.

DR. E. C. HARWOOD read Sec. 14, Art. 5 of the By-laws, which relates to the Code of Medical Ethics of the Academy, and said that when he entered the Academy he signed these by-laws and constitution, and that he proposed to stand by them, and it implied that he must stand by the Constitution and By-laws of the American Medical Association. At the same time he did not see any necessity for the resolutions that had been introduced, as the same ground had been entirely covered by the By-laws. He would be glad if the subject could be considered more fully, and what the opposite side had claimed he regarded as no more than fair. He had always sustained the Code of the Academy, but he did not see any necessity for the resolutions, and believed that they were entirely out of order, and declined to vote.

DR. PARTRIDGE said if the resolutions were a modification of the By-laws, a three-fourths vote would be required. Were they intended as such, or simply as instructions to the Committee on Admissions?

DR. AGNEW.—It is an aphorism of Montesquieu that any act of authority exercised over one man by another, which is not absolutely necessary, is tyranny. [Oh! Ho!] Now these gentlemen, who hope these resolutions will be adopted, imagine that this act will help their cause. I tell them that it will not. The cause of liberty of conscience [Oh! Oh!], which we represent, is a cause which is advocated by a higher power than that of man. The Medical Society of the State of New York appointed a committee to revise its system of medical ethics, that committee made its report—a report which was afterward adopted—and which was in strict conformity to the Statutes of the State of New York. The New York State Medical Society in so doing accomplished an act which cannot be overthrown as long as the people of this State are influenced by the principles of the love of freedom which animated our forefathers. [Derisive laughter.] Gentlemen may jeer and scoff and laugh in derision. So it was when Disraeli stood up in the House of Commons; he was laughed at by more respectable gentlemen than those who sneer at me, and gentlemen who represented the aristocracy of their profession. I am a much smaller man than Disraeli, but I tell my scoffing friend on my right—

DR. JOHN G. ADAMS.—I call the gentleman to order.

DR. AGNEW—that the time will come when this Academy will hear me. Now, Mr. President, the Revised Statutes of the State of New York—

DR. FLINT, JR.—Ah, we have heard enough about that.

DR. AGNEW.—Very well, if this Academy does not wish to hear me it can say so.

THE PRESIDENT.—The gentleman is in order and will proceed.

DR. AGNEW.—I was about to state that the Revised Statutes of the State of New York say that any incorporated society shall have its by-laws strictly within the limits of those statutes. The friends and advocates of the Code of Ethics of the State of New York did not come in to disturb this Academy. They had no intention of bringing this question into the Academy. I defy any man to bring evidence of any infraction by us of the Code of Ethics of the American Medical Association before the Medical Society of the State of New York passed its revised Code allowing consultations with legally qualified practitioners, and brought its by-laws to conform with the statutes of the State. We know gentlemen, however, in this Academy who have lived in violation of the Code of Ethics of the American Medical Association, and who would have to take refuge under the Code of Ethics of the Medical Society of the State of New York if their cases were carried before the Academy's Committee on Ethics. Now I had hoped that the gentlemen would consider the full bearing of the question before they passed these resolutions, and before bringing in here a disturbing element. The number of men who have voted in opposition to them, even under these unfavorable circumstances, shows that this Academy is not united. The number is sufficiently large to show that they cannot be disregarded and ignored. Matters of morals and matters of conscience should not be settled by a certain number of men who, organized like ku-klux, endeavor to compel others to submit to their will. [Cries of "Order, order, order."]

DR. ROOSA.—I ask for the ruling of the Chair: Does this measure require a majority or a two-thirds vote?

THE PRESIDENT.—The Chair decides that it is not a by-law, being simply a resolution containing instructions, and therefore only requires a majority to adopt.

Ayes, 56. Nays, 26.

THE PRESIDENT declared the resolution adopted.

DR. FLINT.—I move a reconsideration.

DR. GOULEY.—I move that the reconsideration be indefinitely postponed.

DR. AGNEW.—What is the object in postponing indefinitely? [Cries of "Order, order."] I simply ask the question if it is the intention of the gentleman to put this subject beyond further discussion?

DR. FLINT.—It is.

DR. AGNEW.—Then the object is to throttle this Academy?

DR. FLINT.—Undoubtedly it is.

DR. AGNEW.—I call for the privilege of having this statement recorded, that it is intended to throttle discussion in this Academy. [Cries of "Order, order." "Question, question."]

THE PRESIDENT.—The Chair, before putting the question, wishes to state that in his opinion no body, by any parliamentary move, can declare that expressions of opinion or action upon any question can never be changed by that body.

The motion to indefinitely postpone was carried.

DR. FLINT.—Mr. President, I have now another resolution to introduce, and I hope it will be adopted.

Resolved, That the Academy hereby disavows any sympathy with the action of the State Medical Society which has put the State and County Medical Societies in an attitude of opposition to the profession of the State through the State and County Societies.

DR. ROOSA.—Mr. President, it was agreed, as much as it can be agreed among gentlemen, that this fight would not be carried into this Academy, and now it has been brought here by means which no honorable man can successfully defend. [Cries of "Order, order."]

A motion was made to adjourn.

THE PRESIDENT.—I wish to make a request, and I beg the pleasure of the Academy to comply with this request. I beg that some gentleman will make a motion, which I believe most earnestly and most strongly should be adopted in the best interests of the Academy, and that is, that the by-laws be suspended, and that when the Academy adjourns, it adjourns to meet on the first Thursday in October. [Confusion.]

DR. WEIR.—Before that motion is made, Mr. President, I wish to make a statement. I believe I am called upon to choose between the law of the State and the State Medical Society, and the Code of Ethics of the American Medical Convention, an organization of which I know nothing. I consequently choose to abide by our State law and the Medical Society of the State of New York and therefore tender my resignation as Vice-President and Fellow of this Academy. [Confusion.]

The motion asked for by the President was made and put, and declared lost.

DR. E. D. HUDSON, JR.—I would like to know if intimidation has not been a part of the mode adopted by the friends of this organization which has such a following. To the best of my belief they have had their secret meetings in this building, with locked doors, where measures were discussed for packing the hall this evening to vote for these resolutions. [Great confusion.]

DR. WILLIAM T. WHITE.—As Chairman of the House Committee, I wish to say that I do not know of any such meeting.

DR. AGNEW.—I wish simply to raise my protest once more. It has always been the practice of this Academy to issue notices containing memoranda of the work proposed, and in that way every gentleman has had an opportunity to attend and act upon questions in which he was either especially or generally interested. In that respect the Academy has been on the side of the best kind of parliamentary practice. Now, this secret society which issued its instructions to its members some time or other during the last day or two, has prepared for the action of this Academy a resolution which contains the most important questions which this Society has ever undertaken to decide upon, and yet no notice of it has been given to the Academy in general. We might have come here simply supposing that papers were to be read, but a sufficient number have been gathered to accomplish

the purposes of the mover of these resolutions—resolutions duly prepared in ink and with facility of expression; and the direct voting which these men so assembled have given, shows how well they are drilled, and that each gentleman is under command. I simply wish to put in my protest, and to say that such a movement will not bring peace or honor into this Academy. One of the principles upon which this Academy is based is, that there should be toleration of dissent. Our profession has reached its eminence, I know, by doing things against precedent, but these gentlemen propose to enforce a system of ideas from which there shall be no dissent without incurring their displeasure. But I am not afraid of their displeasure. I see a gentleman pointing his finger at me. I defy him or any other man to bring any charges against me. In accord with my convictions, I defy these men who have organized this secret Society, and who have come here to throw this Academy into anarchy. If there is not to be freedom of discussion and freedom of opinion in a scientific body, where is there to be freedom?

DR. GIBNEY.—I move that, in the interest of harmony, the question be laid upon the table.

Lost.

The resolution was then adopted.

DR. FLINT.—I move a reconsideration.

DR. GOULEY.—I move that the reconsideration be indefinitely postponed.

The motion to indefinitely postpone was carried.

THE PRESIDENT.—I have asked the personal favor that, in what I believe to be for the best interests of the Academy, the Academy should adjourn to meet on the first Thursday in October. That request, by a vote of the Academy, had been denied. I now file my resignation.

Drs. Roosa, Agnew, and W. F. Cushman also offered their resignations.

DR. PURPLE.—I rise to a point of order. The Academy cannot act upon any of these resignations until we know whether or not the gentlemen have paid their dues. [Storm of hisses.]

DR. BOSWORTH.—I renew the motion that the By-laws be suspended, and that when the Academy adjourns it adjourn to meet on the first Thursday in October.

A rising vote was taken, 54 voting in the affirmative, and 16 in the negative.

The Academy then adjourned amid confusion.

A CASE OF PROCTITIS RESULTING FROM ACUTE METRITIS.—Dr. E. T. Hubbard, of Madison, N. H., describes a case under the above head. Dr. H. considers the complication quite a rare one. A married lady, twenty-eight years of age, after a long railway journey, aborted at the second month, since which time she has suffered considerably from irregular menstruation, and at times flooding quite profusely. I was called to see her in about three months after she aborted. Found uterus enlarged, very tender, and exuding a thick grumous discharge. Put her on ergot with bromide potash. At my next visit, in two days from that time, I found temperature $103\frac{1}{2}^{\circ}$, circulation 130, with dry tongue and considerable abdominal tenderness with pain shooting down the thighs and across the lower and back part of the pelvis, she having passed considerable tough, stringy mucus from the rectum, attended with considerable tenesmus, there being also a complete retention of urine. I diagnosed it as proctitis as a complication of metritis. I think it quite a rare complication. We may have considerable irritation of rectum, but no true inflammatory action, as there evidently was in this case.

A NEW WORD—DYSCARDIA.—M. Lubanski suggests (*L'Union Médicale*) the term dyscardia to signify difficult action of the heart. The word, he thinks, would mean for the heart what dyspnoea means for the lungs.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DEBATE ON DIABETES AT THE PATHOLOGICAL SOCIETY—THE GROCERS' COMPANY AND THE ENDOWMENT OF RESEARCH—COMPARATIVE PATHOLOGY—THE VICTORIA UNIVERSITY—MEDICAL TITLES.

LONDON, April 7, 1883.

DIABETES has been selected this year as the subject of the annual debate at the Pathological Society. This was opened on Tuesday last by Dr. Wilks. After a few remarks, in the course of which Dr. Wilks said that he had not himself found any changes in the fourth ventricle in patients dying from diabetes, Dr. Ralfe rose and brought forward his views. He distinguished two forms of diabetic coma, to the rarer of which he considered the term acetonæmia should alone be applied. He thought this condition was paralleled by those of acute yellow atrophy and phosphorous poisoning. He doubted the existence of free acetone in the urine, but thought aceto-acetic acid was probably present. If so, this would explain the high acidity of the urine so often observed in diabetes, the lactescent condition of the blood, and the intense fatty degeneration so noticeable in cases of acute diabetic coma. No other speakers advanced any theories, but confined themselves to criticisms. Several microscopic specimens were exhibited. The debate will be resumed in May.

Great outcries have been from time to time raised against the city companies and their disposal of their funds. The Grocers' Company, though, has shown its liberality on several occasions. The new wing of the London Hospital was built by its contributions, and now it again comes forward with a generous proposal to spend some thousands of pounds in the endowment of research.

Dr. Garrod's "Lumleian Lectures on Uric Acid," now in course of delivery at the College of Physicians, are interesting as containing the results of researches carried on by him for years, into the chemistry of the excretions of various animals. Dr. Garrod is, however, not alone as an investigator in the field of comparative pathology. The senior surgeon to one of the London hospitals has a model farm a short run by rail from London, to which he is accustomed to repair in his leisure hours. He has stocked it by purchasing diseased stock from neighboring farmers, and occupies himself in watching the pathological phenomena thus presented to him.

The Victoria University, Manchester, has received a charter to grant degrees in medicine to persons of either sex. Those who object to a multiplicity of titles now remark that this makes a twentieth medical licensing authority.

American physicians find it difficult to understand how it is that so many medical men call themselves Mr. The fact is, only university graduates (*i.e.*, M.D. or M.B.) can call themselves Dr., and in England the majority of practitioners are not university graduates in medicine. Some even who have taken a degree in arts do not take a degree in medicine. The older English universities require residence, and this arrangement practically excludes students at the London hospitals. This anomaly is not seen in Scotland, where the universities draw large classes. Consulting surgeons call themselves Mr., even though they are graduates. Physicians are nearly all graduates and style themselves Dr. In England most of the general practitioners are not graduates: those who are use the title of Dr. These anomalies are the growth of years, and are almost universally adhered to. Specialists are mostly surgeons, and use the title Mr. on their door-plates, though many who have degrees use them even when practising a surgical specialty. In

Edinburgh, every medical man is called "Dr." by the public, no matter what his qualifications. In Dublin, consulting surgeons often distinguish their mode of practice by prefixing "Surgeon" to their names.

DO THE LAWS OF A STATE DEFINE THE DUTIES OF INDIVIDUALS OR SOCIETIES IN MATTERS OF ETHICS?

SIR: A noticeable feature of Dr. Agnew's article on the Code question in a recent issue (*vide* p. 349) is that it does not in any way discuss the claims to recognition of the class or classes of practitioners who are welcomed by the new Code; but, aside from some rhetorical reference to liberty, progress, inalienable rights, etc., his remarks are devoted entirely to the legal aspect of the question, and the obligation which he claims is placed upon the medical societies of the State by the various medical acts of the State Legislature.

I shall not discuss at present the ethical principle involved by our recognizing in the new Code officially, as it were, the right of those whom we have formerly entitled irregular practitioners to exercise the duties of physicians; I will only call attention to our relation to the law.

Is there any one who will claim for a moment that the law created the Medical Society of the State of New York, or for that matter any other medical society. It is simply an impossibility for the law to exercise such a function. The first condition for the organization of a society of the nature of medical societies is the coming together or agreement of a certain number of individuals having certain interests and objects in common. Here we have the essential idea of the society upon which the law may confer certain corporate rights, which no doubt may, and in fact often do, amount to privileges. It is not necessary that there should be formal meetings and organization before the incorporating act of the Legislature, but it is necessary that there be men ready for the corporate work, and practically we find that these men are the originators and promoters of the special law. The laws of the State of New York have never defined the duties of individuals or societies in matters of ethics, while, on the other hand, in medical affairs these matters have been distinctly and properly left to physicians themselves, by the acts incorporating the various societies representing what we will call differences in opinions and practice.

The Act of 1880 can in no way be construed as compulsory in matters of practice, either as to the persons we shall accept as patients or the physicians whom we shall meet in consultation. These are matters of individual liberty, and any restraint put upon us concerning them by the law would be contrary alike to the spirit of the age and the genius of our political institutions. We are at liberty to respond to a call or to decline going. We can meet another physician in consultation or refrain from doing so, and the law cannot interfere; we are private citizens and not officers of the State, and I believe the best interests of society will be served by our continuing to occupy that relation to the law.

As members of the State and County societies we are at liberty to frame for our guidance such rules and regulations as seem best, simply keeping ourselves in this instance, as in other relations of life and in common with other citizens, free from violation of the laws.

If the regulations adopted seem onerous or unjust to individual members, they have the right of protest and of effort to secure action favorable to their views; and finally if the difference be irreconcilable, there remains the "inalienable right" of withdrawal.

The statement that the objectionable feature of the new Code in the matter of consultations with "legally qualified practitioners of medicine is permissive and not mandatory" seems to concede the question of law, but

certainly is no argument as to the question of right. This *permission* might serve as an incentive to objectionable affiliations, and the instances, now too common, of men serving low and selfish purposes with the indorsement of honorable associations and the livery of honest intent would be multiplied.

* I cannot see any additional light as to the legal status of the question in the opinions quoted from lawyers. It is possible that the "Professor of Municipal Law" may have been studying closely the various acts and projected acts of the Legislature concerning the city of New York during the last quarter of a century, and thus have become confused when he takes up the question of our rights and duties.

I trust our societies will continue free from any interference on the part of the Legislature comparable to that visited upon some of our municipalities, but, failing to maintain that freedom, it would be the part of wisdom to forfeit our corporate privileges and become simply voluntary associations.

Unless it can be shown that the law is compulsory in this matter, it is idle to raise the question for argument. I listened attentively to the discussion at the recent meeting of the State Society, and I heard no reason advanced in favor of the new Code, except that an adherence to the former Code placed us in hostility to the laws of the State, and a certain amount of sentiment as to a generous spirit, a progressive age, efforts for a higher standard of qualification and the like. These statements are not arguments, and become nonsense unless supported by a plain and distinct array of facts showing their truth.

I heard no one deny the legal right to decline a consultation with any physician, regular or irregular, so that the consultant felt that he preferred to decline, and I have yet to hear the proof from the champions of the new Code that a physician can be what we have termed an irregular practitioner and at the same time a proper and desirable person for fellowship in our societies or to be met in formal consultations.

In the discussion of the question that will occur till the meeting of the State Society in February, 1884, and at that meeting as well, it is desirable that we confine ourselves as closely as possible to the real merits of the case, and leave the idea of "courtesy to the Legislature," etc., alone; and, above all, unless some statutory obligation can be shown which will make us liable to some penalty for a particular action in the premises, let us hear no more of the law.

E. D. FERGUSON, M.D.

TROY, N. Y.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 14, 1883, to April 21, 1883.

WOLVERTON, WM. D., Major and Surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 85, par. 7, A. G. O., April 13, 1883.

SHUFELDT, ROBERT W., Captain and Assistant Surgeon. To report in person to the President of the Army Medical Examining Board in session in New York City, for examination for promotion, on completion of which will return to proper station. S. O. 87, par. 10, A. G. O., April 16, 1883.

SWEETS FROM COAL-TAR.—A new substance, remarkable for its intense sweetness, being much sweeter than cane-sugar, has lately been found by Dr. Fohlberg, in the course of some investigations on coal-tar derivatives (*Journal of the Franklin Institute*). He designates it benzoic sulphonide, or anhydro-sulphamine benzoic abid.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending April 24, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
April 17, 1883.....	1	3	137	4	199	50	2	0
April 24, 1883.....	17	6	141	5	166	51	2	0
<i>Deaths.</i>								
April 17, 1883.....	1	6	21	3	27	20	0	0
April 24, 1883.....	0	2	20	3	26	26	1	0

Typhus fever has appeared among the children at St. Stephen's Home; the cases so far are very mild.

Deaths during the week ending April 21 were 676, of which 98 were from pneumonia.

A THERMOMETER HOLDER.—Dr. J. P. Savage, of Sioux City, Iowa, writes that an efficient thermometer holder is already in the market and has been for some time. He says: "Several years ago, when attending Bellevue, after breaking three thermometers in one day, by falling out of pocket while stooping to examine patients, I found a holder, made and now for sale by Caswell & Hazard, of this description: made of German silver, screw top, in top is a small staple to which is attached a chain; to other end of chain is attached a small 'safety pin.' The pin can be fastened in pocket out of sight. Since using this I have not lost a thermometer."

PRESCRIBING BY TELEGRAPH.—The *Electrician* publishes the following: "An employé of the Eastern Extension Telegraph Company, stationed at Cape Bolimao, Manila, had a narrow escape the other day, having taken ten grains of sugar of lead in mistake for a similar quantity of ammonia. He telegraphed for advice to the Hong Kong telegraph office. Dr. Hartigan, of that city, came down to the office and sent him advice per cable which resulted in his recovery. The distance between Hong Kong and Cape Bolimao is about five hundred and fifty-five miles. Probably this is the first time that a doctor has prescribed for a patient over five hundred miles away from him."

TO PREVENT PITTING IN SMALL-POX.—Dr. Emil Steiger, of Prairie du Chien, Wis., writes: "I have perused with much satisfaction the article of Dr. J. N. McChesney, on variola, but I was surprised not to see among the remedies against pitting a simple preparation which, in three epidemics during the last twelve years, has proved to me invariably successful. The fact that the preparation has given the utmost satisfaction in all cases where it was properly employed, including even those where I only obtained charge in the vesicular stage, may justify my presumption in publishing my treatment. Take of white lead (plumbum carbonicum), quantum lib., mix with linseed-oil q. s. to make a cream-like paste, add to the bulk about five to six per cent. carbolic acid, and apply with a large camel's-hair brush repeatedly, so as to keep the surface of the face, hands, etc., permanently and fully covered."

THE ASSOCIATION FOR PREVENTING THE RE-ENACTMENT IN THE STATE OF NEW YORK OF THE PRESENT CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION has issued the following address to the medical profession of the State of New York:—

When very many members of a learned and liberal profession come to the conclusion that the rules by which their relations to their colleagues and to the public have hitherto been regulated have been injurious to themselves

and to the community, it is evidently the duty of persons having these convictions to labor for the abolition of such rules, and to state clearly the reasons why they should no longer be enforced.

The Code of Ethics of the American Medical Association which is now in force is identical with that which was in authority in the Medical Society of the State of New York, and which was abolished at the annual meeting of that society in February, 1882. It appears from the proceedings which led to the abolition of the Code in the State of New York that there had been a gradually increasing conviction among its members that some of the provisions of the Code were arbitrary and illiberal, and that a larger liberty should be granted the members of the society in the performance of their professional duties. After a full discussion of the subject, a vote of the society was taken, and by a constitutional two-thirds majority the old Code was abolished and a new one was enacted in its place. Among those who voted for the substitution of the new Code for the old one were many who preferred the entire abolition of the special ethical Code as unnecessary for the guidance of an honorable and learned profession. But the members who took this view of the subject were willing to unite with those who were less radical than themselves, in order to secure the abandonment or the most obnoxious features of the old Code.

At the annual meeting of the society in February, 1883, a strong effort was made by the advocates of the old Code to undo the work of the previous year and to re-establish in this State the Code of the American Medical Association. For this purpose no exertions were spared to secure the election of delegates who were in favor of the proposed retrograde movement. But the efforts which were then made failed to secure the votes of even a majority of the members of the society.

It is well known also that a strong effort is now being made, even by coercive measures, to secure in advance such a representation at the meeting of the society in 1884 as will undo the work which was done in 1882 and 1883. Believing that such action would be injurious to the honor, dignity, and usefulness of the profession, and to the best interests of the community, we earnestly entreat the members of the profession to give the subject their serious consideration, and to use all honorable and legitimate means to prevent the re-enactment of the present Code of the American Medical Association by the Medical Society of the State of New York. It appears to us to be particularly important to preserve to each member of the profession perfect liberty to decide for himself with whom he shall consult in order to secure the best interests of the sick.

The arbitrary rules which have to so large an extent controlled the actions of medical men, and which were originally designed to defeat the efforts of irregular practitioners to gain influence with the community, have signally failed to accomplish the object in view. These rules also have not commanded the respect of intelligent men in other professions. They have been regarded as belonging to the same category as the rules by which the various trades unions have infringed upon the individual liberty of their members, subjecting those who resisted the arbitrary action of the majority to the greatest indignities, pecuniary losses, and even personal sufferings. We call upon all fair-minded medical men to unite with us in freeing the profession from this stigma, and in giving all its members perfect liberty to practise their art in accordance with the dictates of their own consciences and with the enlightened opinion of intelligent men who are engaged in other pursuits.

There are indications that the movement which has begun in this State is destined to extend throughout the Union and to end in establishing a larger liberty than we have hitherto enjoyed, and in increasing the usefulness of our profession, and in giving it a more honorable position in the State and in the nation.

A. C. POST, M.D., President.

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Original Articles.

SCARLATINAL NEPHRITIS AND ITS COMPLICATIONS.

By JOHN H. RIPLEY, M.D.,

PROFESSOR OF DISEASES OF CHILDREN IN THE NEW YORK POLYCLINIC.

(Continued from p. 452.)

THE *prognosis* in scarlatinal nephritis is generally favorable. A very large number of those attacked completely recover. In addition to the symptoms already given (anuria and multiform casts) as rendering the prognosis unfavorable may be mentioned: 1, a severe form of fever preceding the nephritis, especially if complicated with true diphtheria; 2, a complicating pleurisy or pneumonia; 3, a late or an excessive dropsy, especially of the lungs, pleural cavities, or pericardium. In some cases, even where the nephritis seems not in itself severe, the child has become so enfeebled from the effects of the fever that it offers only slight resistance to this new malady and slowly dies of exhaustion. Pleurisy, so common in infancy and early childhood as a primary disease, is a frequent complication of scarlatinal nephritis. The pleura is probably the most commonly inflamed of all the serous membranes in this disease, and for obvious reasons the inflammation is more likely to be purulent than when occurring primarily in a previously healthy child. It is, therefore, a very serious complication and adds decided gravity to the prognosis. Pneumonia is less common than pleurisy and less dangerous, unless complicated with pulmonary œdema. Judging from my own experience, limited to two cases, both of which recovered, I should say that acute pericarditis is not as formidable a complication as one would suppose, theoretically. Extensive pulmonary œdema and large effusions into the pleural cavities only occur, as a rule, in consequence of a very feeble state of the vital powers, especially cardiac weakness, and hence are unfavorable lesions. The last two conditions are not infrequently mistaken for pneumonia. In a certain proportion of cases of pulmonary œdema, in which the air-cells over large areas are completely filled with fluid, the physical signs are precisely those of the second stage of pneumonia; and when only one lung is involved to this extent, the differential diagnosis must be made more particularly from a comparison of the vital signs with those of pneumonia. A change in the decubitus of a child for a few hours, when practicable, will determine the fluid to another part and so clear up the diagnosis. Dangerous *œdema glottidis* is a complication of acute Bright's disease, which I do not remember to have ever seen in a child.

Treatment.—The tendency of scarlatinal nephritis is, in a majority of cases, to terminate by self-limitation in recovery. The same general principles of treatment apply to all grades of the disease, but certain individual symptoms and the different complications should be met as they arise. A child suffering from a mild attack of this form of nephritis should be put to bed as soon as the disease is recognized, and an equable, moist, and rather high temperature (70° to 75°) should be maintained in the sick room. Although it is now generally conceded that the nephritis of scarlet fever does not, as a rule, arise from the patient's taking cold, still exposure to cold is a recognized cause of a similar form of nephritis, occurring as a primary lesion, and it is also known to cause exacerbations

of the disease in all its forms and stages. It is not improbable, therefore, that it may aggravate existing inflammation, or even determine it from a simple congestion in a small percentage of cases. The bowels should be kept rather free by means of some mild laxative, such as a combination of magnesia, senna, and rhubarb, but hydragogue cathartics are not indicated, although some physicians seem to hold the opinion that the appearance of albumen in the urine is the signal for drastic purgations. A simple nutritious diet, such as could be formed by alternating with milk, buttermilk, milk porridge, beef-tea, broths, and stewed tripe should be adopted. A diaphoretic mixture, as the *liquor ammonia acetatis*, completes all that it is necessary to do in mild cases. In the management of grave cases we have to deal with one or more of the following symptoms: 1, Partial or complete suppression of urine; 2, dropsy; 3, uræmia; 4, complications with other diseases.

1. *Partial or complete suppression of urine.*—In those forms of chronic Bright's disease in which we have a feeble heart and anæmic kidneys, much good may be done by stimulating the heart and irritating the kidneys with diuretics, thereby bringing about an increased flow of urine by an increased blood-pressure. But in the earliest stage of this disease the secreting portion of the kidney is already surcharged with blood, even to rupture of its capillaries, while later the terminal capillaries are so compressed by interstitial cell-infiltration and intratubular epithelial swelling, as to render the action of diuretics worse than useless. Says Klein: "Portions of the cortex are converted into pale, firm, round-celled tissue, in which the original urinary tubes of the cortex become gradually quashed and lost." These elements cannot be "washed out," and this is probably the only instance in which intelligent practitioners can be found treating an acutely inflamed organ by trying to drive more blood into it. Here it is done in violation of the ordinary rules of treatment, with the vain expectation of squeezing out a little more urine, and washing out intratubular *débris*. In my observation the opposite result has generally been produced. It is only when the disease is subsiding, either temporarily or permanently, as can be affirmed from concomitant symptoms, that the apparent diuretic effect of these active drugs is observed.

In the examination of a large number of sections of kidneys which had been taken from the dead body of a girl four years old, who had died of diphtheritic nephritis lasting only four days, the disease being accompanied with almost total suppression of urine, I observed the following microscopical changes: The Malpighian tufts were pretty uniformly congested and swollen, so much so as to distend their capsules. I saw no tufts showing compression from intracapsular exudation, and very few instances of capillary hemorrhage. The epithelium lining the tubes of the cortex was much swollen, coarsely granular, and the calibre of the tubes consequently greatly diminished. In some instances neither the nucleus nor the inter-epithelial markings could be made out, and in longitudinal sections such tubes appeared to be lined by one continuous granular strip. Quite a number of stumps of hyaline casts were seen in transverse sections, occupying mostly the narrow tubules, but some were seen in the convoluted tubes. The intertubular vessels were more or less engorged throughout all parts of the kidney, but there was almost entire absence of cell-infiltration as also of detached

epithelium in the tubes. Bartels objects to the theory that suppression is due to swelling of the epithelium and obstruction of the tubules by fibrinous casts, because "diminution or arrest of secretion is observed in the very earliest stage of the renal affection." In two of the worst cases which I have had under my care, mucus first appeared in the urine and then slight traces of albumen, forty-eight hours before the fulminant onset of the disease; the children meantime exhibiting no premonitory constitutional symptoms of illness. Considering, then, the pathological conditions which exist in bad cases of scarlatinal nephritis, the rational plan of treatment would seem to be to endeavor to re-establish the kidney circulation by reducing the congestion of the proximate portions of these vessels and thus favor absorption of the exuded material by both lymphatics and capillaries. "Among the curative measures," says Bartels, "a sustained diaphoresis deserves, unquestionably, the first place, not only in the symptomatic treatment of the dropsy, but as a measure which favors and promotes the retrogression of the inflammatory process in the kidneys." Theory and clinical experience alike sustain the correctness of this opinion. It will be observed that in the case which forms the text of this article, there was profuse and pretty constant voluntary sweating during the whole period of the inactivity of the kidneys, and to this vicarious work of the skin, mainly, I attribute the comparative mildness of the constitutional symptoms.

I have observed this fact before both in the nephritis of pregnancy and in that due to scarlet fever. One very remarkable case of the latter I saw with Dr. W. A. Hawes. The patient, a girl about five years old, although passing only a few drachms of urine at long intervals for several days, had profuse sweats, suffered principally from an irritable stomach, and ultimately recovered. Now, whether we hold that the skin can or cannot eliminate *urea* in any considerable quantity, the clinical fact remains that free perspiration will generally relieve a patient, temporarily at least, from what we call uræmic poisoning. But, according to Foster,¹ "the toxic consequences are due not to the presence in the system of the large quantity of urea, but of other, at present undefined, substances, which have at the same time ceased to be excreted," and these, perhaps, may be more freely excreted by the skin. Of the different methods of inducing perspiration in cases in which it does not occur spontaneously, one of the best is the moist, warm pack. This has the advantages of simplicity, practicability, and efficiency. The following is the plan of preparing it: A bed covered by woollen blankets should be made ready. Then a sheet or sheets several folds thick, loosely wrung out of warm water should be closely wrapped around the child so as to completely envelop it, except the head, and the child thus enveloped be tucked in between the woollen blankets and allowed to remain for at least two hours, unless the coverings become sooner cold, when the pack can be renewed. In a bad case it may be necessary to repeat the pack several times during the twenty-four hours and perhaps every day for several days. Great care should be taken in the intervals to avoid exposing the patient to the cold air. In case the child prove refractory, the hands and arms may be pinioned and the coverings fastened securely by safety-pins or by means of tapes, or a simple and often better way is to keep the patient partially under the influence of morphine while in pack. When taken out of the pack the body should be thoroughly rubbed with a rough towel until the surface is dry. The warm bath, even when facilities for its use are ample, can only be recommended to a limited extent. Many children are terribly afraid of it. In some it produces speedy and alarming syncope. In general, it has a tendency to exhaust the patient if prolonged or frequently repeated. The hot air bath is very highly prized by G. Harley and others, as not only greatly increasing the cutaneous but

also the pulmonary elimination of the urinary poisons. It may serve as a good substitute for the pack with older children in a small proportion of cases, but it will generally be found less practicable. *Dry cupping over the kidneys* appears occasionally to do good. Any one who has seen much of cupping for œdema or active congestion of the lungs must have observed how speedily efficacious it often is in those conditions. I believe, with Tyson,¹ that the cups should be removed before stagnation and rupture of the capillaries occur. From five to ten minutes is sufficiently long to allow them to remain on. In delicate, nervous children it is better to give chloroform while applying them. Large, hot poultices of flaxseed meal placed over the same parts, either instead of the cups or following them, have, I think, a deserved reputation. Whether the admixture of foxglove leaves and the meal is any more efficacious than the latter alone, I cannot say, but I frequently use it. Of the internal remedies, jaborandi or its alkaloid, pilocarpine, morphine, veratrum viride, and aconite are, perhaps, the most valuable. After other means of inducing perspiration have succeeded, a dose of from five to twenty drops of jaborandi repeated every two hours, according to the age of the child, has a tendency to keep up a gentle moisture of the skin, and is often a more satisfactory way of giving the drug than to give larger doses at longer intervals. When the disease is accompanied with a high temperature and a rapid, strong pulse, small doses of the tincture of veratrum viride, given every two hours, have a very marked beneficial effect on both temperature and pulse, and secondarily on the action of the kidneys. My friend, Dr. L. D. Sproat, who prizes it highly in puerperal peritonitis, thinks that the system will tolerate much larger doses if it be combined with syrup of ginger. He certainly succeeds in giving it with a free hand. Tincture of aconite is less certain to produce its specific effects than veratrum, but it is not so likely to induce vomiting and is less dangerous when its use is prolonged. In regard to its vaunted cures of the angina of scarlet fever, or that of any other disease. I can only say that in my hands it has been a complete failure. Morphine may be used to control restlessness, and also, in conjunction with other means, to produce diaphoresis.

2. *Dropsy*.—In all cases in which the effusion is moderate, whether it be limited to the superficial cellular tissue, or invade also one or more of the large serous cavities, the treatment is substantially that recommended above. Should great œdema of the lower extremities exist, together with general anasarca, giving rise to distressing symptoms, and resist the faithful efforts to remove it by diaphoretics and catharsis, a few small punctures made with a sharp bistoury into the cellular tissue of the lower part of the legs will sometimes accomplish, by mechanical drainage, what we have failed to do with other means. Such punctures generally remain open for several days, and often excrete a surprising amount of the dropsical fluid. I do not remember having seen erysipelas or sloughing follow as a consequence of these punctures (a danger feared by some), although I have resorted to it many times, mostly, however, in chronic cases. Indeed, I believe the instances are rare in which this procedure will be found necessary in acute cases. An extensive anasarca will generally be borne with comparatively little discomfort if the thoracic organs are not involved, and it will ultimately yield as the kidneys recover. But so long as the dropsy exists to any great degree, it not only endangers the life of the patient from exhaustion, but also especially as a bad complication in case of any acute serous inflammation. (Edema of the lungs is best treated, locally, by repeated dry cuppings and by large hot poultices covering the entire thorax. Should hydrothorax or hydropericardium seriously threaten life, aspiration may be resorted to. Aspiration in hydrothorax seems not to be attended with

¹ A Text-Book on Physiology, p. 448. New York, 1880.

¹ Op. cit.

the same degree of danger from purulent change in the fluid, as in pleurisy with effusion of serum. The fluid usually remains unchanged after repeated tapplings. If *adema glottidis* occur and give rise to dangerous obstruction, tracheotomy should be performed without delay. I believe it is a very rare complication of this disease.

3. *Uræmia*.—The most common manifestations of uræmic poisoning in children are, great gastric irritation, painful and exhausting diarrhœa or dysentery, extreme restlessness. Convulsions rarely occur.

The treatment of these symptoms has necessarily been somewhat considered in the general management of the nephritis; for, of course, the same general principles apply throughout the course of the disease, whatever special symptoms may arise. The indications are, first, to eliminate from the system, so far as we are able, the poisons which are the cause of the symptoms and which the kidneys are powerless to remove, and, second, to enable the patient to tolerate, until the kidneys assume their functions, such portions of those poisonous matters as remain in the system in spite of our efforts to expel them. The proper course to pursue in order to fulfil the first indication has already been considered. There is one danger, however, to be borne in mind, both in the treatment of dropsy and uræmia, and that is the danger arising from hyperpurgation. I verily believe that quite a number of children are sacrificed in every epidemic of scarlet fever by the too heroic administration of cathartics—especially the preparations of mercury. Under the excessive use of cathartics, the irritability of the stomach is increased, nutrition is impaired, and the patient's strength fails, while transudation through the weak and thinned walls of the capillaries more than keeps pace with the fluid removed by the bowels. It is unwise, in my opinion, to carry cathartics beyond the inducing of two or three liquid passages a day.

To control gastric irritation a careful management of the diet is of primary importance. Whatever article of food or drink be given should be taken only in small quantities. A teaspoonful given every fifteen minutes or less will be retained when a tablespoonful every hour will be vomited. Koumyss, buttermilk, sweet milk with lime-water, clam broth, milk porridge, and grated smoked beef are among the nutrients most likely to be retained. If prostration be a prominent symptom, plain brandy with iced water or champagne may be indicated. From five to twenty drops of the U. S. solution of morphine given hypodermically, or by the stomach, and repeated every three or four hours, if need be, is almost a specific. Hydrate of chloral in from five- to fifteen-grain doses by the rectum in a small quantity—half an ounce to an ounce—of water sometimes acts most satisfactorily. A mixture of a few drops of chloroform with paregoric and syrup of acacia occasionally does well.

For the diarrhœa it is generally well to begin treatment by giving a small purgative dose of calomel and compound jalap powder, and then to hold it in check with a mixture of opium, tannic acid, and cinnamon water. It is not desirable, of course, to produce constipation, but only to modify the action of the bowels.

A very effective way of managing the dysentery is, first to give a large enema of hot water, so as thoroughly to wash out the rectum and relieve the congestion of the gut, in a measure, at least, and then to follow this by an enema of half an ounce of warm water containing a few drops of laudanum, according to the age of the child. These laudanum enemata may be repeated after each passage; the hot-water injections twice or three times a day. If the rectum will not retain the medicinal enemata, then opium in some form, either alone or combined with very small quantities of calomel, can be substituted. The *acetum opii* of the U. S. P. is an excellent preparation, and not likely to be vomited. No doubt these intestinal troubles depend on various pathological conditions, but they have a common etiology, and the most valuable remedy in all cases is opium. Extreme

restlessness in a certain proportion of cases is a painful and exhausting symptom. It usually yields promptly to hydrate of chloral, especially when this drug is combined with small doses of morphine. I believe that proportionably much larger doses of this drug may be given with safety to children than to adults. Chloroform and morphine increase its effect, a fact to be remembered when prescribing maximum doses.

Convulsions.—Although convulsions are so common in infancy and early childhood from the outset of other, often comparatively slight diseases, uræmic poisoning, even when profoundly affecting the nervous system, rarely produces convulsions. I have seen two instances of probable uræmic convulsions in new-born children, where the mothers suffered from uræmia both before and during labor. One reason why convulsions do not often occur in this condition is, probably, that the accumulation of the poison in the system takes place slowly, and, as may be shown in several other instances of diseases affecting the nerve-centres, the tolerance is much greater when the invasion is gradual. If this complication arise, and the convulsions recur in spite of efforts to eliminate the poison which causes them from the system, I am satisfied from my experience with uræmic convulsions in adults, that morphine given hypodermically is the most effective remedy that can be used. When, in 1870, at the New York County Medical Society, Dr. F. D. Lente advocated the hypodermic injection of morphine in puerperal convulsions, which, as he said, he believed nearly always depended on uræmia, his remarks met with a cold reception. Since that time, more especially since the publication of a paper on the subject by Prof. Alfred L. Loomis,¹ the remedy has been steadily growing in favor. Now it is rare to find an intelligent practitioner of medicine who does not advocate its use in obstinate cases.

The most common complications consequential to the nephritis are pleurisy, pneumonia, endocarditis, and cellulitis of the neck; less common are pericarditis and erysipelas. Pleurisy, the most frequent of all the complications, should be treated constitutionally in the first stage with morphine, in sufficient doses to relieve the acute pain, and, locally, by large hot poultices. If there be no general anasarca, a small blister may be applied over the seat of the pain before poulticing. If serous effusion follow in the second stage and cause severe dyspnoea, aspiration should be resorted to, but, unless the quantity of fluid be large, it is better to treat the case expectantly, for, as the kidneys resume their functions, the fluid generally begins to diminish.

In case the exudation be purulent at the outset, which it is very likely to be, or become purulent later, surgical interference should be delayed until the active stage of the nephritis subsides, unless embarrassment to circulation and respiration be great or septic fever threaten the child's life. If either of these emergencies arise, recourse should be had to aspiration. In a small proportion of cases, when fluid is removed in this way, the pleural cavity will not refill; but generally the relief is only temporary, and subsequent radical treatment by free incision into the pleural cavity and the insertion of a drainage-tube becomes necessary. In uncomplicated empyæmas I prefer to open the chest at once, and, in my experience thus far in children, the cases have uniformly terminated in recovery. I have never found it necessary to remove a portion of rib in any of these cases, and I believe it to be an entirely unnecessary and unjustifiable operation. I doubt whether any advocate of the practice would be willing to have a child of his own deformed by this procedure.

Pneumonia should be treated substantially as under other circumstances, namely, locally by hot poultices enveloping the entire thorax, and by the internal administration of diaphoretics, sedatives, and stimulants

¹ MEDICAL RECORD, vol. viii., p. 361.

when required. *Endocarditis* generally gives rise to little pain or constitutional disturbance, and its existence is frequently first suggested by physical examination. If the action of the heart become irregular or tumultuous, convallaria or digitalis and opium will be indicated early in the disease, and carbonate of ammonia in small doses if there be reason to believe obstructive exudation is taking place. *Cellulitis of the neck*, which began during the progress of the fever, not infrequently lights up afresh when the nephritis sets in, and goes on to suppuration. The most important point in the treatment of it is to make a free incision into the inflamed mass as soon as pus can be recognized, in order to prevent the burrowing of matter and extensive destruction of the soft parts. I have known of one instance of death from hemorrhage due to sloughing of the external jugular vein. *Erysipelas* should be treated on general principles, except that, perhaps, frequent doses of the muriate tincture of iron are especially indicated. *Pericarditis* is probably more frequently caused by scarlatinal rheumatism than by scarlatinal nephritis, but it occasionally occurs from the latter disease. It is sometimes secondary to a pleurisy, especially of the left side. Prof. J. Lewis Smith says,¹ speaking of the complications of scarlet fever: "Serous inflammation, especially that affecting the peritoneum, pleura, or pericardium, is a common complication independently of the rheumatic affection. It occurs during the desquamative period, etc." Are not these inflammations thus referred to often caused by an acute nephritis?

Aside from the general treatment of the causal disease of pericarditis, other remedies will be indicated according to the symptoms present. When the area of inflammation is small and the symptoms mild, special drugs are not required. Cardiac weakness will call for digitalis and stimulants. Pain, dyspnoea, and restlessness will be relieved by morphine or chloral and the local application of hot poultices. If, at a later period, a large effusion takes place, and the danger to life be imminent, aspiration will be demanded. Sudden or violent exertion is liable to be followed by fatal syncope, and hence quietude in bed should be maintained throughout the entire course of the disease.

EARACHE IN CHILDREN.²

By SAMUEL SEXTON, M.D.,

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It is probable that in no affection requiring prompt treatment for the relief of severe pains is there greater need of both scientific and practical knowledge of the subject than in children's earache. The urgency of the symptoms in these cases, however, would seem to often prevent so careful a study of their clinical history being made as their treatment requires, and they are, therefore, much too often regarded as exclusively local in their nature and treated accordingly. Were the excruciating pains in acute inflammation of the middle ear alone considered, local treatment would, indeed, seem to be imperatively demanded, almost to the exclusion of any attention to the remote causes usually present. But we should not be unmindful, however urgent the local symptoms may be, that when the causes of the disease have been ascertained we may then more surely, and very often even more expeditiously, relieve the patient by striking at the origin of the difficulty; thus a remedy applied to a carious tooth may cure an otalgia, a reversal of the practice of the ancients, who made application to the ear for the relief of toothache.

The occurrence of earache is well known to be most frequent at night, although it may announce itself during the waking hours, when it seems to be much better endured, probably owing to the fact that the nervous energies of the patient are then more active and the surroundings

more reassuring. It is usually during the night that the patient, on waking up from his first sleep, when less capable of enduring the pains of earache, gives way to his sufferings. It were better for him, too often, to have submitted in silence to his tortures than to have disturbed the sleeping household; for it will generally be found that with more energy than skill the patient's ear has been made the receptacle of a most indiscriminate variety of stimulant, anodyne, irritant or other substances; sometimes the visible parts will in this manner have been blistered, or even greater injury may have been done to the deeper structures. Again, in other cases, the do-

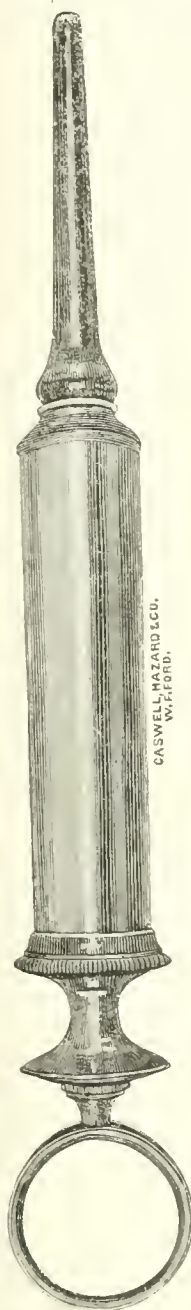


Fig. 1.

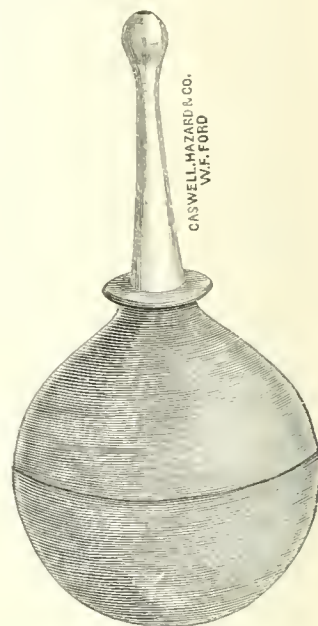


Fig. 2.

mestic economy is urged to its utmost capacity in poulticing, steaming, douching, fomenting or otherwise heating the ear. The methods pursued in these cases too often seem to depend on the number and individual views of the lay consultants present, and it is fortunate, if after any, or even all of these measures have been tried we do not find that the domestic treatment has converted what might have been a simple affair into a severe and probably protracted one.

Examination of the ear.—When the physician encounters a case of this kind it will often be found necessary to first bring order out of chaos before attempting to make an examination, but a little firmness on his part is usually quite sufficient to accomplish this, and to also tranquilize the patient. During the temporary lull which usually ensues, the patient may be held in the nurse's lap while the examiner promptly but gently proceeds to ascertain the extent and nature of any local lesions which may give rise to the earache.

Instruments employed in making examinations.—A head-mirror had best be employed, in order that both hands may be free for necessary manipulations. For the examination there will be required specula (I myself prefer those known as Gruber's), an effective metal or bulb ear-syringe, a vuleanite cotton-wool carrier, and a supply of absorbent cotton-wool. One should not omit to have a cup of quite warm water near by, that no time may be lost should any syringing be required. Hard rubber and

¹ Diseases of Children, fifth edition, page 195.

² Read before the Practitioners' Society of New York, April 6, 1883.

glass syringes should both be avoided in cleansing the ear; the former kind are very seldom found to work freely, owing to their imperfect construction. The calibre of these syringes is uneven and the vulcanized surface seems illy adapted to the purpose, on account of its offering too much friction to the packing. The glass syringe is of scarcely any service whatever.

Either of the syringes shown (Fig. 1, a brass syringe, and 2, a bulb syringe) in the cuts will be found to be free from the objections referred to above.

In these cases one must conduct the examination as expeditiously as possible, not forgetting that the parts to be examined are nearly always sensitive to the touch, and that the patient's fortitude is usually by no means great. If there be swelling and redness of the auricle or antiauricular parts, manipulations will be yet more painful.

Nature of discharges.—At first syringing had best be avoided, for fear of increasing the pains and discomfort; besides, any secretions lying in view should be inspected before removal, since the significance of their appearance is of value in diagnosis and treatment. Thus it is known that the cutaneous lining of the external auditory canal does not, under any circumstances, secrete mucus. Purulent secretion from the canal itself is comparatively infrequent, but a limited quantity is discharged from maturing furuncles, and can usually be seen escaping from the swollen wall of the canal. The serous constituents of the blood exude slightly in acute eczema and from wounds. But the diagnosis in all of these conditions is not difficult. There is one variety, however, of acute catarrhal inflammation of the middle ear which is liable not to be so readily recognized by the inexperienced observer in consequence of a coexistent exudative dermatitis confined to the inner end of the canal and the outer layer of the drum-head; the inflammation is generally superficial, the consecutive necrosis and exfoliation of the epidermis being associated with more or less whitish and somewhat inspissated exudative matter, which sometimes completely fills the inner end of the canal. In these cases the membrana tympani frequently escapes perforation.

In acute purulent inflammation of the middle ear the discharge is generally more free than in any of the conditions above alluded to; it is at first, in most cases, serous or sero-sanguinolent, but soon becomes mucopurulent. The mucous flocculi, observed more readily floating about in the water if syringing has been done, unerringly points to the existence of a perforation in the membrana tympani. Frequently the simple inspection of the ear, as described above, will suffice to establish a diagnosis upon which the treatment at this stage may be planned, since the clinical history as regards colds, etc., may afford sufficient data to remove all doubts, if any yet remain.

When it seems important to make a more complete examination of the ear, the canal may be gently syringed with quite warm water and afterward dried with cotton-wool wound about a proper carrier; or perhaps the latter appliance used as a mop may be quite sufficient for our purpose. If I may venture to recommend so unimportant an instrument as a cotton-wool carrier, I will here suggest the advantages of employing a polished vulcanite rod, properly shaped, for the uses to which a metal probe is sometimes put in cleansing the ear; it is light and will not injure the parts by its momentum when introduced into the organ. No care is too insignificant to occupy the surgeon's mind when manipulating the ear; the touch, the instruments, and every feature of the treatment should be of the gentlest kind; even the warming of the specula and other instruments employed, by holding them for a while in the closed hand or otherwise, should not be neglected.

When the canal has been freed of secretions, etc., its walls may then be viewed and in many cases the drum-head can also be seen; but when the latter is not visible, owing to accumulations and swelling of the canal's walls,

we may often observe a pulsating bubble in the discharge which wells up out of the middle ear. From this air-bubble there is a light reflex and the vibrations of the artery in the carotid canal impart the pulsations seen: this phenomenon indicates the membrane's perforation. Closure of the canal attended with pain may happen from several causes, as in consequence of circumscribed or diffuse inflammation, from dermatitis, or from the hard, dry scales which sometimes form subsequently from the exudative matter; from erysipelas or eczema; from collections of cerumen, and from the presence of foreign bodies.

Remote causes.—The above are conditions which are recognizable to the observer under proper illumination, but it very often happens that a patient will present himself where no such easily recognized cause will be found. On the contrary, the canal and drum-membrane will appear to be free of any disease while the child suffers intensely from earache. We have here to deal with a perplexing case of neuralgic otalgia, which may be due to dental irritation or to a draught of cold air falling upon the ear. I have seen cases of earache in midsummer induced by cold sea-air blowing into the ear, and the entrance of cold sea-water is also a well-known cause; these agencies are likewise sufficient to induce inflammation of the canal and middle ear.

In a very large number of the earaches of childhood the causes are to be sought elsewhere than in the hearing organ itself, and they will be found to depend, for the most part, on nervous sympathy; the most prominent are dentition, dental caries, and colds in the head. Thus nervous impulses propagated from regions remote from the ear may give rise to pains in the ear—neuralgic otalgia—without perceptible hyperemia, or the intensity of the congestion arising in a part so richly supplied with blood-vessels may manifest itself as an acute aural catarrh.

The effect on the ear of taking a severe cold in the head is by no means always dependent on an extension of the catarrhal inflammation from the upper pharynx along the Eustachian tubes, but it will be found that immediate aural inflammation may also be a consequence of the same influences that affect the pharynx; in fact, the throat, the Eustachian tubes, the middle ear, and the mastoid antrum and pneumatic cells of the mastoid may all be affected simultaneously from cold. During the prevalence of influenzas the ear is frequently thus affected.

Recurrent earache is an exacerbation during the course of chronic inflammatory processes in the middle ear, usually occurring as a consequence of taking cold; it is in such cases that the ear is said to "gather and break," or to "run off and on."

In the *exanthemata* earache manifests itself in a more virulent manner than usual, and while, owing to the particular dyscrasia present, the patient is more obnoxious to these attacks, the etiological conditions are similar.

The age at which earache occurs.—Earache may occur in children soon after their birth, from acute or chronic catarrh of the upper pharynx and middle ear. These processes are not usually painful, but may become so when the drum-head has been thickened. Painful aural catarrhs, however, are not common before the process of first dentition begins, and they are of exceptional occurrence after the second permanent molar tooth has been cut, which event usually happens about the twelfth year.

In some children earache is experienced from dental caries almost as soon as the first teeth are cut. My attention was drawn to the frequency of this condition many years ago, on examining the ears of the children of a public institution; and subsequently I made a more thorough study of the subject, during which the ears and teeth of some eighty children in the parochial school of the Church of the Assumption were examined. A large number of casts of the teeth of these children were taken, and scarcely any of them were found to be

free from dental irritation. An example is¹ exhibited in Fig. 3.

Oral irritation, it goes without saying, is extremely common throughout childhood, but sympathetic aural pains may not be experienced unless a cold in the head should supervene; the habit once established, however, the eruption of every tooth may become the signal for pains in the ear.

Catarrhal inflammation of the middle ear, which gives rise to most of the earaches experienced in childhood, may conveniently be divided into two forms: (1) The first is an affection of the mucous surface of the lining of the tympanum only, and is characterized by a greater or less flow of mucus or of serum into the tympanic cavity;

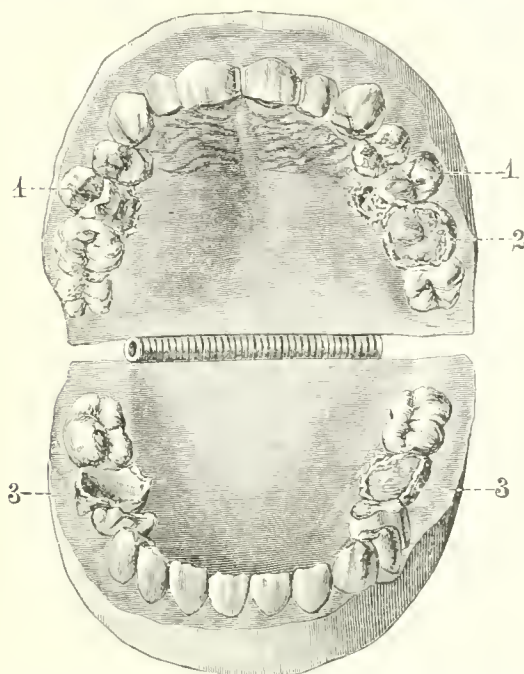


FIG. 3.—Casts of the teeth of a school-girl, twelve years of age; from the author's cabinet; the casts are represented as being held together by a hinge. 1, 1. The second bicuspid teeth of the upper jaw, both of which have been crowded out of place as they erupted by the remains of the fangs of the temporary second molar teeth; these fangs, which have been too long retained in the gums, are seen in the cut just inside the second bicuspid. The retention of the fangs, together with the crowded and irregular condition of the permanent teeth which have just been cut, gave rise to much irritation. This anomalous condition of the teeth is by no means an unusual occurrence where the teeth are neglected. 2, The left upper six-year molar tooth, which is very carious. 3, 3. The two lower six-year molars, both of which have been destroyed by caries. The little girl from whose teeth these casts were taken suffered from deafness and frequent attacks of pain in both ears, and, as she herself expressed it, "the decayed teeth had ached very much all around."

(2) the second form occurs along with or is consecutive to the first, and consists in an inflammation of the sub-mucous connective-tissue and of the periosteal layer of the membrane. The tympanal walls being everywhere invested by a membrane which possesses the double character of a mucous and periosteal membrane, the inflammatory process is attended by an abundant secretion and is characterized by its painfulness. The mucous layer, when swollen, very much reduces the size of the drum cavity, and thus also obstructs the entrance to the Eustachian tube through which the normal drainage of the parts takes place. In both stages, or varieties, of the disease spontaneous rupture of the membrana tympani may take place under the pressure of accumulated secretions sooner or later. The pains experienced are sometimes very slight when the membrane gives way early, but in some constitutions the disturbance is always attended with suffering. In a certain number of cases the attack now speedily subsides, and, if no injudicious interference prevents, recovery is rapid and complete. Where the onset, however, has been severe, and deeper tissues become more particularly involved, the pains are

more severe and continue longer, secretions in the meantime remaining free or ceasing altogether.

In earache the attack is frequently preceded by a rigor, and afterward alternations of chill and heat continue until the local disease is fully established. "The first thing a patient complains of, in the midst of these symptoms, are acute pains deep in the ear, which are described as pricking, burning, tearing, boring, and dragging. These pains are usually confined to one ear, and are aggravated by every motion of surrounding parts, as in chewing, sneezing, coughing, stooping, and the like."¹ In pure neuralgic otalgia there is not the same sensitiveness to motion, and in proportion to the predominance of this feature of earache will the patient manifest restlessness and a desire to toss about while in bed, or to walk or be carried in the nurse's arms.

The seat of pain in earache.—I have stated above that the tissues involved in inflammation of the middle ear consist of a membrane which performs the double duty of mucous membrane and periosteum. The sensitiveness of this structure is extremely great, for it is not only richly supplied with blood-vessels, but also wonderfully well provided with sensory nerves. These latter compose the tympanic plexus, a diagram of which is here shown.

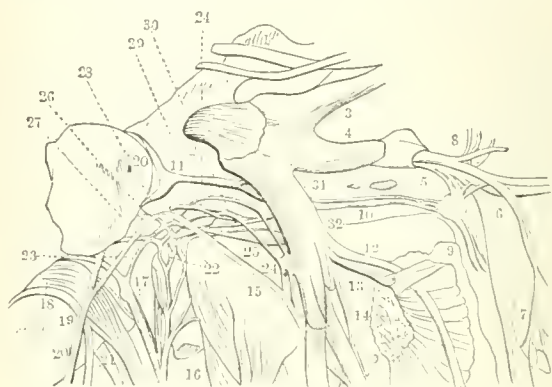


FIG. 4.—Diagram of the tympanic plexus (Rüdinger). 1, Oculomotor nerve; 2, trigeminal nerve, with the gasserian ganglion; 3, first branch of the trigeminal nerve; 4, second branch; 5, entrance of the same into the sphenopalatine fossa; 6 and 7, superior maxillary nerve; 8, sphenotympanic nerve; 9, descending palatine nerve; 10, Vidian nerve; 11, large superior petrosal nerve; 12, buccinator nerve; 13 and 14, pterygoid nerve; 15, chorda tympani nerve; 16, carotid plexus of the sympathetic; 17, petrosal ganglion of the glossopharyngeal nerve; 18, 19, and 21, vagus, accessory nerve of Willis, and hypoglossus; 20, facial nerve; 22, nervi carotico-tympanici; 23, tympanic, or Jacobson's nerve; 24, small superficial petrosal nerve; 25, nerve of the tensor tympani; 26, tympanic plexus; 27, branch for the oval window; 28, branch for the round window; 29, large, deep-seated petrosal nerve; 30, branch for the Eustachian tube; 31, division of the Vidian nerve into its two branches; 32, anastomosis of fasciculus of the Vidian nerve.

This anastomosis derives supplies from sources most extensive; thus by means of branches from the otic ganglion the inferior maxillary nerve is brought into intimate relations with it, and the petrosal ganglion of the glossopharyngeal nerve supplies the tympanic branch, or Jacobson's nerve, which constitutes a large portion of this anastomosis. The carotid plexus of the sympathetic sends a branch to the glossopharyngeal and thus establishes a communication between the ear and the superior cervical ganglion of the sympathetic nerve. Through Meckel's ganglion, by means of the Vidian nerve the superior maxillary of the fifth pair of nerves also is connected with the tympanic system. Besides these there are other connections which may be seen by consulting the diagram. In describing these parts Burnett² calls attention to the importance of bearing "these relations in mind when considering certain neuralgias in and about the ear, which might otherwise be puzzling."

Diagnosis.—Sufficient significance has already been given to the local and remote causes of earache, or rather the conditions that give rise to this symptom, to indicate their relative importance. In neuralgic otalgia it will often be found that there is an entire absence of local

¹ From the author's "Causes of Deafness among School Children," etc., Circulars of Information of the Bureau of Education—No. 5, 1881. Government Printing Office, Washington, 1881.

² Dufton on Deafness, pp. 47, 48. London, 1844.

³ Treatise on the Ear, p. 36. Philadelphia, 1877.

inflammation, and in this as well as in all painful affections where no sufficient local influences can be found, it is well to cast about and endeavor to discover any sources of reflex irritation, for treatment directed to the remote origin of the difficulty is in many instances the most effective and often of itself sufficient to cure the patient.

As regards the significance of pain in and about the ear, it is important to differentiate as between pain and tinnitus aurium in all cases. The noises in the head and the autophanous reverberations of the voice of the patient, symptoms alike confusing and distressing, are often even more unbearable than the pains; and when the two coexist, as they frequently do, they are indeed almost indescribably tormenting. Noises in the head may constitute the entire cause of distress in conditions where active treatment may not be required, and one should, therefore, keep this fact in mind when examining a case of children's earache, since the patient is frequently unable to distinguish between subjective and physical signs. In a long experience I have nearly always found it very difficult to obtain from patients a clear description of their sensations under these conditions. Not the least satisfactory have been the definitions sometimes obtained in the humbler walks of life, and the following terse and expressive phrases seem to most explicitly describe the feelings; thus a woman who once came to my clinic at the New York Eye and Ear Infirmary, in reply to my request to describe her symptoms, said that she had "roaring pains in the head," and on another occasion a patient, also a woman, described somewhat similar phenomena as being like a "noisy dizziness."

Respecting the sensations which are experienced in the ears during attacks of aural catarrh it may be said that, in addition to a greater or less degree of deafness, there is nearly always a feeling of the ears being "stuffed up," together with tinnitus like escaping steam, buzzing, ringing, and whistling sounds, etc.

Meningitis, which sometimes coexists in the more grave cases, either arising from the same common cause or consecutive to otitis media, is not always easily distinguishable from the latter affection, but fortunately in most cases the treatment is the same in either.

Duration.—Earache may continue several days in the acute state, always worse at night, before spontaneous rupture takes place, when there is immediate relief experienced in most cases. When a carious tooth is the cause of the trouble, its duration will be more indefinite. Under treatment, the attack may be cut short in many instances and nearly always may be ameliorated.

Treatment.—The desire to relieve pain in these cases generally leaves prospective measures to be last considered, and, indeed, the surgeon will usually find that local measures have been already carried to excess. It will by no means always be easy to proceed at once to make the necessary examination upon which a plan of rational treatment may be founded, where there are a number of anxious attendants who have already emptied into the sufferer's ear everything their resources could command before availing themselves of skilled counsel. It will usually be expected that the means at the command of the medical adviser will enable him to propitiate the disturbing spirit by the contribution of some new libation, unknown to common mortals; this requirement may be met where the condition of the canal admits of deep applications being made. A remedy that will in some instances be found serviceable for this purpose is belladonna; the deeper parts may be painted over with a small quantity of a mixture composed of equal parts of unguentum belladonnæ and vaseline, or four drops of a five-grain solution of the alkaloid sulphate of atropine may be instilled into the upturned ear by the surgeon himself, who can alone apply these remedies properly. They should be warmed before being used, and, it is needless to say, should not be wasted upon the outer portion of the canal. Of course it would be useless to make these applications

when the canal was not free of secretions. In a certain number of cases this medication will be found to be an efficient palliative, as in periostitis of the inner extremity of the canal, as shown by redness and swelling, and when the membrana tympana is inflamed; any considerable effect on the nerves more deeply situated in the tympanum is, however, not to be expected, unless, as might exceptionally happen, a few drops of the solution passed into the middle ear through a perforation in the drum-head.

Dry warmth, when grateful, may be applied, either as heated air conducted into the ear, or by means of heated pillows, etc. In some instances gentle fomentations or steaming may be employed, but active syringing, douching, steaming, poulticing, or even mopping out the canal, are all of them to be specially avoided, as they usually do more harm than good, and in very many instances are positively injurious.

Myringotomy.—Sometimes there is no discharge from the inflamed parts, and then the question of puncturing the drum-head arises. In regard to the necessity of this operation there has been much discussion among otologists, some authorities favoring its performance in nearly all cases, especially when the membrana tympani is much inflamed or is perceptibly protruded by the pressure of secretions. It is a matter, I believe, where a great deal of judgment is often required to be exercised, more, in fact, than is generally thought necessary. In my own experience I have found that a bulging or much-inflamed drum-head by no means always demands this procedure for the relief of the patient, for I have often found that under other treatment the pains and other inflammatory symptoms will speedily subside; secretions will be reabsorbed or partly escape through the Eustachian tube, the membrane will rapidly clear up, and all the parts assume a healthy appearance.

But occasionally the membrana tympani will be found to have been much toughened by previous acute or chronic inflammation, or the existing attack may have occasioned thickening of its inner mucous or outer cutaneous coat. If now it is found that there is undue and painful pressure of secretions whose escape is prevented by closure of the Eustachian tube, we shall be warranted in liberating them by means of myringotomy. But this operation is not always unattended by considerable pain, and, moreover, if well performed, not to be done without skill, and we should not, I am convinced, resort to it as a mere antiphlogistic measure, with the belief that, even if useless, it is at all events harmless. When the parts to be operated on are not well seen, the procedure is at best an unskilful stab, the consequences of which are not always favorable. When myringotomy is necessary, however, it should be promptly done, and usually while the patient is under the influence of an anæsthetic.

The employment of leeches in my own experience has not been satisfactory, and I have for a long time past ceased to use them. I am aware that custom still demands the use of these sanguinary worms in certain quarters, but I doubt not their usefulness has been much overestimated.

The remote abstraction of blood from the cheek in front of the tragus or, even from the concha, will not permanently relieve congestion of the deeper parts; and, moreover, it is not the stagnant blood that is withdrawn, but the more freely circulating fluid. In a certain number of cases, the bite of the leech seems to give rise to irritation, and what wonder that it does when we consider that its mouth, according to Baird, is provided with three jaws, and "each of these is armed on its edge with two rows of very fine teeth, which penetrate the skin by a motion resembling that of a semicircular saw." Besides the irritation from the bite, their appearance is calculated to frighten the child, and oftentimes the bleeding is arrested with difficulty.

Among the more valuable drugs which are serviceable in earache from any cause in which nervous excitability

is a feature, I know of none equal to aconite, gelsemium, or pulsatilla, five or ten drops being added to half a glassful of water, and given in teaspoonful doses as required.

In my own experience the relative efficacy of these remedies has been found to be about in the order mentioned above. In very young children, I give the preference to the pulsatilla. It is important in employing these drugs to secure a tincture made from the fresh plant.

The sulphurated lime, which I have long employed in affections of the ear, I still regard as of the greatest service. I have scarcely ever seen a case where this medicine produced nausea, although some persons who have given it a trial claim to have had an experience of this kind. I have so often described my own experience in the use of this drug that I will not repeat myself here. When the subject is too young to admit of the administration of pills, triturations may be employed.

No plan of treatment would be entirely satisfactory where an examination of the mouth and upper pharynx was neglected. Oral irritation may thus be found to consist in the eruption of teeth, caries of the teeth, irregularities, tartar, irritation from catarrh of the gums, periostitis and alveolar abscesses. The frequency of the occurrence of these conditions has been mentioned above; they require treatment and likewise often the assistance of the dentist. Under treatment the worst agonies of earache may be prevented, and very often our remedies act like a charm; but it must not be forgotten that the causes in a given case may not be so easily eradicated, and that treatment must be kept up for some time if we would entirely prevent a return of this tormenting disease. Catarrh and other affections of the naso-pharynx and Eustachian tubes also require like care, and sometimes must be treated actively.

The advantages of rest in acute purulent inflammation of the middle ear should never be lost sight of, and the patient should be kept indoors for several days. If the case be a severe one, he will be best off in bed for a time. Quiet ought to be maintained in all cases, for noises sometimes under these circumstances become exceedingly distressing. The evils of active treatment in these cases, by syringing, etc., have been alluded to, and it may here be urged that deafness as a symptom should not be treated; especially should inflation be avoided; the patient is to be cautioned even against violently blowing the nose. Of course in the later stages syringing and mopping may be more thoroughly practised and the cautious use of the air-douche may even be advisable. The well-known tendency of some drugs to cause or increase existing aural hyperæmia should warn us to avoid their indiscriminate use. First among these is quinine, which has long been suspected of causing deafness when administered in large doses in malarious diseases. The intense tinnitus aurium following its administration establishes the fact of an increased vascular action in and about the ear. The employment of ferruginous preparations seem to have a like effect, and doubtless there are many others which it were best to omit when the ear is inflamed.

During the existence of acute aural disease, the consequences of its early management upon the subsequent course and duration should be kept in mind, but the consideration of chronic processes here would lead me beyond the scope of the present paper, which has, I fear, already been unduly drawn out.

MAJALIS OR MAIALIS?—Dr. S. S. Wallian, of Bloomingdale, N. Y., asks for the authority upon which the spelling "maialis" is based. The spelling, according to Gray, is "convallaria majalis." It is so given by Webster. The use of "i" instead of "j" has no doubt been adopted because it is so spelled on the continent of Europe, and especially in France.

ON RAPID OR SUDDEN HEART-FAILURE IN ACUTE INFECTIOUS DISEASE, NOTABLY IN DIPHTHERIA AND TYPHOID FEVER.¹

By BEVERLY ROBINSON, M.D.,

NEW YORK. 1

FOR many years this subject has been one of peculiar interest to me. Already, when an assistant or house physician in the medical wards of a large city hospital, I had seen cases of this sort. They impressed me at the time, and gave me food for thought afterward. In the course and progress of chronic disease, too often do we see the heart become acutely embarrassed, even when no previous organic disturbance prevailed, and frequently a speedy and fatal termination closes the scene. But such instances, though painful to witness, do not specially command our attention, nor strike us even as remarkable. When a patient has been for a long while suffering from some severe chronic ailment, and his strength and vitality are evidently much impaired, that a complication should arise within the heart and occasion death, is what we have reason in a measure to expect, and if it occur not to be surprised. A like feeling may, indeed, prevail with respect to acute disease, especially if from the beginning it assumes a serious aspect, and proceeds surely from bad to worse. But there are numerous examples, and these are specially the ones we would dwell upon at some length, in which the disease has at no stage from the very beginning been of more than moderate intensity, and yet rapid or sudden death will occur, presumably due to the changes produced in the cardiac structure. Such cases are not new. Occasional reports of them may be met with in medical periodicals during many years in the past. And yet, so far as I know, they have never been considered collectively, nor has an entirely satisfactory explanation of their pathogeny been given, nor their therapeutic indications been made clear. To fill up in small degree this lacuna in practical medicine is the object of this paper.² Only one month ago, when visiting daily at St. Luke's Hospital, I had several cases of typhoid fever under my care. Amongst them, two patients presented grave symptoms throughout the duration of the disease. In one of these the fever lasted only two weeks, and at the end of this time death took place. Previous to the end there had been high temperature, marked nervous phenomena, and moderate diarrhœa. Finally, the lungs became much congested, the brain wandering, the pulse weak, rapid, and intermittent, the heart-sounds feeble, and the patient succumbed when she was extremely prostrated. An autopsy was not obtained.

In my second case, that of a young girl twenty-two years of age, a teacher, who had been under the care of Dr. Pallen some weeks before for intrapelvic cellulitis, there was evident malarial complication, which rendered the convalescence long and tedious. In this example the main cause for anxiety was referable to the heart. The temperature, with the exception of two or three passing exacerbations, was moderate during the continuance of the fever. There was little or no diarrhœa after the first week. No nervous complications arose, with the exception of great somnolence, due to congestion of the cerebral vessels, and the lungs remained intact, the respirations being always regular and of normal frequency; but the cardiac pulsations were, during three or four weeks from the time of entrance at St. Luke's (about fourteenth day of disease) extremely weak. They were clearly defined, however; there was no muffling, no abnormal bruits. Occasionally they were somewhat uneven and irregular, without perceptible intermissions. The pulse at the wrist was quite frequent, at times running up to one hundred and ten, one hundred and twenty,

¹ Read at a meeting of the Practitioners' Society, March 2, 1883.

² This was my object when I began this article *more than a year ago* (December 1, 1881), but circumstances have prevented my carrying out my intentions, and I now present it to the Practitioners' Society merely as a suggestive note in regard to an important and interesting matter of practical medicine.

or even one hundred and thirty pulsations; but wherein it was a source of solicitude was its extreme weakness. At times it was very depressible, thready, or completely disappeared under the palpation of my fingers exercising the most gentle pressure. This patient was treated with small and quite frequent doses of all the cardiac tonics—*nux*, *belladonna*, and *digitalis*. She had tonic doses of fluid extract of bark, stimulant in the form of brandy, as much as I considered proper to give, milk, meat extracts, raw or lightly boiled eggs, strong black coffee in doses of two ounces morning and afternoon, fluid extract of coca—in fact, my therapeutic armamentarium was exhausted in my efforts to raise this flickering life, and in the end I apparently succeeded, for my patient has now almost recovered and is walking about the wards. I say *apparently*, because for more than one week I could see no perceptible change in the patient's strength, and when she did show manifest improvement, I confess I was uncertain whether my medicines had occasioned it, or the disease, having reached its climax, had waned according to a natural law.

The third case to which I shall refer was one of which a short abstract will be found reported by me in the "Proceedings of the Pathological Society" for November 23, 1881. It was briefly as follows: The patient was a man thirty years of age who died suddenly during the progress of typhoid fever, at St. Luke's Hospital, on November 12, 1881. Death occurred on the nineteenth day of the disease. The patient's temperature had not been much elevated until the second day before his death, when it reached $103\frac{1}{2}^{\circ}$ F., and the pulse 120. Diarrhœa moderate in character. On November 9th and 10th he was delirious and weak; on the 11th semi-comatose, and on the 12th his breathing became very rapid without apparent cause; face and extremities not cyanosed, and he gradually sank and died at 9.15 A.M. At the autopsy there was enlarged and softened spleen, splenization of the lungs, fatty kidneys, swollen solitary follicles, and numerous ulcers scattered along the entire length of the ileum. The ileo-cæcal valve was thickened and extensively ulcerated. The feature of special interest was the existence of a long, slender, fibrinous clot attached to the aortic and mitral valves, and extending ribbon-like into the aorta. There was also an ante-mortem clot attached to the chordæ tendineæ. There was quite extensive granular degeneration of the muscular fibre of the heart.

Now then, to sum up these cases in a few words. With respect to the evidences of cardiac failure, we would remark, in the first case, that the other symptoms were such as to render the cardiac weakness only a part of the general portrait of the disease, which in this instance tended toward a fatal termination. In the second example the cardiac failure was considerable but not complete, and hence life held on, though trembling more than once in the balance. In the third and last example, although there were well-marked lesions at the autopsy of typhoid fever at the stage during which the patient died, yet the termination seems to me to be connected particularly with the condition of the heart. Some years ago, when a resident physician in a large children's hospital, I was called from my room to see a patient in the ward, a lad about twelve years old, convalescent from typhoid fever, who, while seated in bed and about to take a goblet from a shelf at the head of his bed and drink, suddenly became pale, fell back, and, without a struggle or any convulsive movement, immediately expired. In this example no sufficient explanation was afforded by the autopsy of the cause of death. There was no heart-clot, no pulmonary embolism, no evident degeneration of cardiac fibre, no alteration of the pulmonary structure. In the absence of recognizable cause, the heart was said to have been paralyzed and death the result. This, as you all admit, I am sure, was a lame and unsatisfactory conclusion. Such instances have in the last few years been connected with morbid alterations

in the pneumogastric nerves, or cardiac ganglia, when the muscular fibre has been shown under the microscope to be healthy in appearance—without granulations or fat-globules, and with the transverse striae well marked.

Instances of partial or complete heart-failure are even more frequent in diphtheria than they are in typhoid fever. In some of these cases where death has taken place within a few days of the inception of the disease, and where the extension and character of the false membranes in the fauces, the swollen condition of the infra-maxillary ganglia; the excessive pallor, or almost waxy hue of the integument; the somnolence and prostration of strength, all indicate a high degree of septicæmia—the heart may only share in the general downward march, and it is not noteworthy to emphasize especially the weakness, irregularity, or frequency of its beats, but occasionally, even with all the concomitant phenomena of gravest import, the cardiac action is relatively strong and but little impaired until a brief period, perhaps only a few hours, before the fatal termination. Such a case I attended with Dr. Morris J. Asch during the past winter (1881-82). The following is taken from notes kindly sent to me by Dr. Asch, with respect to our case:

Called to see Mrs. G— on October 15th. I found her with a red and swollen tonsil on the right side, and with some fever. The next day the tonsil was still inflamed, partially covered with a thin, gray film, and the uvula cedematous. The patient complained of dysphagia. Dr. Asch considered the case one of diphtheria. The next day there was swelling of the submaxillary glands, but the diphtheritic exudation was not extensive until a day or two later, when both tonsils, the uvula, and the whole of the soft palate were covered with a thick, gray membrane. At this stage I saw the patient in consultation with Dr. Asch. Two days afterward she died at 3.15 P.M. Dr. Asch saw her an hour and three-quarters before her death. At that time he found her in great distress and in a state of great weakness. "She sat up for me, however," he writes, "to spray her throat. When I left she was *bright*, though very weak. Her heart was beating feebly, and I urged the necessity of giving her stimulants at once. When I returned, at a little after three, she had just died. She had called her mother to her and given her a kiss, and expired. She died of asthenia." Dr. Asch adds, "There were no laryngeal symptoms, nor any pulmonary ones of a nature to have been looked on as serious. If the patient could have been tided over another day, I think the force of the disease would have been expended."

It will be understood from the above reading, and, in fact, it is so stated farther on in Dr. Asch's account, written to me at my request, that he considered this patient as having succumbed to intense *asthenia*. But what was the organ principally and fatally affected by the diphtheritic poison? Was it not clearly and indubitably the heart?

Still another case in which death took place this winter in a young married lady who had been a patient of mine, and whom I had cared for when the diphtheritic membrane first showed itself on her tonsils. At that time she was passing a few days in New York, and staying at one of our large city hotels. When I saw her at the hotel, and after careful examination of her throat, I urged her immediate removal to her home on Staten Island, where she was afterward under the professional care of Dr. Frederic Clarke, and also saw Dr. Austin Flint, Sr., in consultation. The following very interesting, graphic description of this patient was sent to me at my request by Dr. Clarke after her death. I take the liberty of narrating it in extenso: "I first saw Mrs. W—, Wednesday, November 2, 1881, and found her with a rapid, full pulse, face flushed, and a well-marked diphtheritic exudation on both tonsils, which rapidly extended in every direction. She did fairly well for the first six days, pulse strong and regular, with no dyspnoea or thoracic oppression. On the following

Wednesday, in my presence, she suddenly complained of pain in the precordial region, about over the valves of the pulmonary artery, and her face, which all along had been (with the exception of the first day) perfectly natural in expression and color, suddenly became of well-marked leaden hue, accompanied with a very distressed look, with some oppression; pulse weak, regular, and about 96, and she several times said she was choking. These symptoms soon passed over, and she was moderately comfortable until Friday last, but with a persistently weak pulse. About 11 o'clock, Friday, A.M., she was seized again with precisely the same symptoms, which were longer in yielding to remedies. In the evening she was bright, expression and color of face good, with pulse at 80 and regular, but *very weak*. Passed a fair night, not restless nor inclined to throw herself about the bed. She expired Saturday, 7.30 A.M., *very suddenly*, without any previous exertion, lying quietly on her back. At no time could I detect anything abnormal about heart or lungs. Signed, F. E. Clarke."

I may add that I was informed later by a sister of this lady that Dr. Austin Flint, Sr., saw her the evening before she died, and did not think at that time that there was any occasion for special anxiety with respect to the cardiac condition. Dr. Clarke, I am told, considered the complication which caused death directly to be the formation of an intra-cardiac thrombus. No autopsy was made.

In regard to cases of diphtheria and typhoid fever I will at once direct attention to the following observations, which I have time and again corroborated and verified in the dead-house: There is a marked difference in the condition of the heart of a patient dying of typhoid fever and of one dying of diphtheria. Although apparently similar in character, I have found the right heart ventricle and auricle in diphtheritic patients filled, as a rule, with a mass of fibrinous deposit, which seemed to have been formed some days prior to death. In several cases of death from typhoid fever, I have found the blood in the right heart liquid, and in the left heart coagulated fibrinous masses of small dimensions, which did not seem, however, to be the immediate cause of death.

The last case to which I would direct attention is the following: Somewhat more than one year ago I saw, in consultation with my friend Dr. F. H. Bosworth, a boy about five or six years of age who was suffering from diphtheritic laryngitis. The dyspnoea became so intense as to render tracheotomy necessary. During the night following the operation the tube became blocked up with blood and false membrane and threatened immediate suffocation. A young man, in this emergency, who was boarding in the house, applied his mouth to the tube and attempted by forcible suction to free it of its obstruction. A few days later this gentleman was taken ill with diphtheritic angina. The case was one of moderate severity and progressed favorably from day to day. The membranous deposit, after several days' duration, had in great part disappeared from both tonsils, and the patient, who was naturally a strong, robust man of twenty-five to thirty years, was seated in bed and well enough to be playing a game of cards with his nurse, so as to lessen the tedium of his forced confinement. Suddenly, without premonitory symptoms, he complained of a distressed feeling in the precordial region, became pale, his extremities cold, scarcely perceptible pulse at the wrist, and he fell back on his pillow in a synopal state of very alarming character. The nurse at once used all ordinary means (friction with mustard, hot bottles to feet and trunk, exhibition of considerable amount of brandy, etc.) to restore consciousness and vitality. After about three-quarters of an hour her endeavor was rewarded by seeing a manifest change for the better in her patient. I arrived shortly afterward, only to hear the detailed history of the accident and to recognize no sufficient cause in the heart or pulse to explain the symptoms which had taken place.

The patient continued to do well when, under analogous circumstances, three days later, the same occurrences were again remarked. On this occasion Dr. Austin Flint, Sr., was sent for at the same time as myself. Dr. Flint saw the case with me about one hour after the termination of the phenomena of the second attack. At this time auscultation of the heart revealed *absolutely* nothing abnormal, and palpation of the pulse showed it to be regular and of tolerably good volume. From this time onward the patient continued to make a good recovery, without intercurrent complication of any sort.

The explanation of the sudden cardiac failure in this and similar cases is difficult to give in a thoroughly satisfactory manner. In some, undoubtedly, cardiac thrombosis is the immediate cause. But whether in these instances the blood stagnates and finally forms coagula in the right heart, owing to a relative increase of fibrin, or because the cardiac contractile force is rapidly diminished and thus makes a predisposing condition of fibrinous deposit, it is very difficult positively to affirm. In certain examples where death has followed in diphtheria within a few days of the beginning of the attack, I have noticed a condition of granulo fatty degeneration of the muscular fibres. But even in these instances, and with a considerable knowledge of this subject, I do not recognize a morbid change more advanced than one finds in the majority of cases of acute febrile disease which terminate by death due to other causes. The pneumogastric trunks and the peripheral fibres, as well as the intra-cardiac ganglia, have been more than once examined carefully in such examples, without leading to the discovery of a change of structure sufficient in amount to account for the rapid and fatal issue. I am disposed to-day, in view of what I have been able to remark at the bedside, to recognize the fact that at times—not infrequently, in fact—there is a *sudden and considerable dilatation of the cardiac cavities, and especially of the right heart*.

Coagula may form under these circumstances, or, if the heart be immediately and strongly stimulated, the imminent stage may be tided over and only incomplete failure, with dangerous but not fatal symptoms, occur. The fact of the existence or non-existence, at the autopsy, of the coagulum in the right or left heart, which may also be of larger or smaller size, and of more or less consistence, is, doubtless, explained by the intimate blood condition which an advanced physiological chemistry can alone satisfactorily elucidate. In regard to the therapeutic indications, and as at present advised, they are few and simple.

First.—All unnecessary fatigue should be absolutely avoided during the duration of even the mild cases of diphtheria and typhoid fever. Patients should not be permitted to raise themselves in bed, to sit up but a very short while on any particular occasion, and then only when convalescence is well advanced. They should not be allowed to feed themselves or to perform any act which causes outlay of physical energy and which can be avoided by judicious nursing.

Second.—Cardiac tonics should be employed in *very moderate* doses from a relatively early stage of the disease, and particularly if there be even slight manifestations of cardiac failure, as shown by inequality or irregularity in force or rhythm of cardiac beats, or of the radial pulse, or indeed, by attacks in any manner resembling those to which I have referred.

Third.—In typhoid fever, as well as in diphtheria, I look upon black coffee as a very valuable stimulant, and therefore particularly urge its employment early in the course of the disease. Besides the above recommendations, I naturally incline strongly to the use of liquid nutriment in very concentrated forms. In regard to one drug so largely used by the medical profession generally, in the treatment of asthenic forms of acute disease, I am disposed to enter here a word of warning—and it is about the internal use of large doses of the tincture of the chloride of iron. This tincture is one of the most power-

ful styptics and astringents we possess, and is presumed to exercise these properties in the blood if it be absorbed. Now, then, to what extent, I have already asked myself on more than one occasion, is it responsible for the formation of intra-cardiac fibrinous coagula, particularly in diphtheria?

I here leave the very important subject presented in this paper for full consideration by the members of our society.

FOUR CASES OF OPIUM-POISONING.

TREATMENT BY ATROPIA AND THE FARADIC CURRENT —RECOVERY.

By SAMUEL S. WALLIAN, M.D.,

[BLOOMINGDALE, N. Y.]

APRIL 3, 1883, four men, J. W. L.—, C. C. T.—, A. B.—, and S. L. P.—, jointly drank from a bottle (supposed to contain whiskey and quinine) four ounces of tincture of opium (Phar. of 1870). Nearly half an hour elapsed before the nature of the mistake was fully realized.

By this time Dr. Rice and myself were both summoned. He, being nearer, arrived some minutes first, and very soon administered to each a very large dose of sulph. zinc, in solution, to which was added fifteen grains of ipecac. On my arrival he was mixing a second dose of the same, which was promptly swallowed by three of the unfortunates, without effect, save in the case of S. L. P.—, who vomited slightly. Advising further efforts at producing emesis by irritating the fauces, etc., I sent for my buggy case, which was at some distance, and after three of the victims had called for and swallowed a third large dose of the zinc and ipecac, I hastily prepared a solution of apomorphia mur.; and, as the impending narcosis was not yet perceptible in any one of the cases, I risked the injection of one-sixth grain subcutaneously into the arms of each. My anxiety lest this drug should also fail to procure emesis, in which case it would necessarily add to the approaching narcosis, was quickly dispelled. Within three minutes emesis was quite free with two, and moderately so with the other two.

Copious draughts of warm mustard and water were supplied, but it was soon evident that no further emetic effects could be secured. It was now 5.30 P.M., the poison having been swallowed not far from four o'clock.

Five grains citrate of caffeine were exhibited to each of the four, and ambulation resorted to vigorously.

Asking the druggist, from whom the drug had been—without fault of his—procured, to give me, as nearly as possible, the equivalent in morphia received by each patient, which he stated to be $4\frac{1}{2}$ grains, I prepared a solution of atropia, gr. j. to 3 ij., of which I injected, subcutaneously, ℥xij. (= gr. $\frac{1}{10}$) to each patient.

In case of A. B.—, who vomited a little earlier and more freely than the rest, complete narcotism did not ensue, and ambulation was kept up without great effort.

By 7 P.M. I repeated the dose of atropia, gr. $\frac{1}{10}$. Seeing no apparent effect from the two doses, aggregating $\frac{2}{10}$ gr. to each patient, and recalling the antagonistic ratio existing between atropia and morphia, as stated by Bartholow, viz., atropia, gr. ss. to morphia, gr. j., I prepared a solution double the strength of the former one, or, grs. ij. to 3 ij. Of this I exhibited ℥xxiv., hypodermically (= gr. $\frac{1}{10}$), to each of the three most under the influence of the narcotic. By this time—7.30—the pupils of the latter were contracted to a mere dot, narcosis was so fully established that they could not be roused by the most vigorous measures, and ambulation was entirely out of the question.

Respirations fell to 8 per minute; the pulses of all became fainter and slower until scarcely perceptible. Having sent for my battery I now applied a strong faradic current, one pole over the diaphragm and one at the nape of the neck. By carefully interrupting the current

at regular intervals respiration was gradually restored, but in each case the application had to be repeated as often as every ten minutes. Twice in the cases of J. W. L.— and C. C. T.— respiration was suspended for a space of two minutes each time, and the struggle seemed to the assistants to have become a forlorn hope. Gradually the antagonistic influence of the atropia began to assert itself; the pupils gradually relaxed, and by 9.30 P.M. the respirations were quite regular and $10\frac{1}{2}$ to 11 per minute. The three were now lying in a tranquil sleep, from which, however, they could not be roused by any effort. By 10 P.M. S. L. P.— showed signs of returning consciousness, swallowed some stimulants, and could be momentarily aroused. Pupils of all well dilated; respirations, easy and regular, 11 to 14 per minute; pulses, 70 to 95.

We now had all removed to more comfortable quarters, the two more fortunate subjects walking between two assistants.

Warmth was now applied more effectually than before—in fact, too zealously by some of the excited assistants, as some severe hot-bottle blisters abundantly testify!—but with the exception of occasional sips of brandy and ammonia, with beef-juice, no further treatment was deemed necessary. To the two who were already convalescent, milk and other nourishment were freely allowed.

By 4 A.M. it was evident that all were out of danger.

The effects of the antagonist, atropia, were visible for forty-eight hours or more, as shown by disturbance of vision, unsteady gait, hallucinations, harmless delirium, etc., which would seem to indicate that it was exhibited somewhat in excess of the requirements in the several cases.

Impossible as it was to estimate accurately just how much of the laudanum had been ingested by each, and how much ejected by emesis, this result was unavoidable.

I now think it would have sufficed had the third dose been limited to $\frac{1}{10}$, or even to $\frac{1}{20}$, gr.; yet Bartholow, as stated, and other good authorities, insist that it requires $\frac{1}{2}$ gr. atropia to antagonize one gr. of morphia.

If we assume, on their own and the druggist's subsequent statements, that the two worst cases received the equivalent of five to six grains of morphia each, and also assume that only one-third of this amount was ejected by the delayed and imperfect emesis, about four grains would require to be antagonized in each case. This, according to the authority quoted, would require two grains of atropia. The inference is, that not more than $\frac{1}{10}$ grain, and perhaps even $\frac{1}{20}$ grain, of atropia is sufficient to antagonize one grain of morphia.

No doubt the prompt use of apomorphia at a critical moment, the after administration of caffeine, and the vigorous application of the faradic current, contributed something to the success of the treatment; but it is evident that but for the timely use of atropia all other means would have failed to save life in at least two of the four cases.

HOT WATER IN THERAPEUTICS.—Several years ago I learned in my personal experience that no agent relieves nausea and vomiting so satisfactorily and promptly as water, as hot as can be drunk. Since then I have used it in a large number of cases, and it has been uniformly reliable. The following classification may be made of the cases in which it has been used: 1, Cases in which nausea and vomiting occurred at the outset, or during the course of acute febrile disease; 2, cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease; 3, cases in which they were produced by nauseous medicines (not emetics), at the time they were taken; 4, cases of acute gastritis, caused by the ingestion of irritants; 5, cases in which these symptoms were purely reflex; 6, cases of chronic gastritis; 7, cases of colic in newly born infants; 8, cases of flatulent distention of the stomach.—DR. DOUGLAS MORTON.

Progress of Medical Science.

REMOVAL OF CARIOUS PORTIONS OF THE VERTEBRAL BODIES.—Dr. Boeckel relates the history of a case in which he removed the carious portion of the bodies of two dorsal vertebrae, by means of the sharp spoon, with gratifying results. From his experience in this case and in operations upon the cadaver, the writer concludes that it is not so difficult as is usually supposed to reach the anterior portion of the spinal column. The resection of an inch to an inch and a half of one rib affords room enough for the finger to reach the bodies of the diseased vertebrae. The danger of wounding any of the great vessels lying in front of the spinal column is not so great as it seems, as the pus has already formed a sinus which serves as a guide to the diseased bone. The bodies of the lumbar vertebrae may be reached by an incision made at the outer border of the sacro-lumbalis muscle, as for nephrotomy. The same operation is indicated in gunshot wounds of the vertebral bodies. The difficulty in such cases lies less in the operation itself than in the uncertainty of the diagnosis respecting the location and extent of the injury to the bone.—*Schmidt's Jahrbücher*, March 14, 1883.

TRAUMATIC PARALYSIS OF THE QUADRICEPS MUSCLE.—Professor Lücke states that slight injuries sometimes cause a loss of function with rapid atrophy of the quadriceps extensor femoris. The electrical irritability is markedly diminished but never entirely lost. A passive effusion into the knee-joint occurs from relaxation of the capsule. In a similar affection of the deltoid there results, from loss of support, an apparent luxation. The author believes that many cases of so-called congenital dislocation of the hip are due to a like condition which obtains in the muscles about the hip. The prognosis of traumatic muscular atrophy when untreated is bad. But treatment, if undertaken early, is very successful. It consists in the application of a weak constant current at first, and the induced current later.—*Centralblatt für Chirurgie*, February 24, 1883.

UMBILICAL HERNIA OF A PART OF THE STOMACH-WALL.—A boy, thirteen years of age, had a tumor, about the size of a walnut and of a bright red color, at the navel. It was covered with mucous membrane, which secreted, upon being handled, a viscid fluid of acid reaction. The tumor, which was attached to the umbilical ring by a slender pedicle, remained always of the same size and was irreducible. No opening into the interior could be discovered. The mother stated that the cord had been of great thickness, and, near the navel, was funnel-shaped. It was ligated very close to the body. When the end came away the tumor was noticed. There had never been any food or fecal matters discharged from the navel, nor did the secreted mucus ever have a fecal odor. The pedicle was cut through, and the wound rapidly cicatrized. Dr. Tillmanns, who reported the case (*Centralblatt für Chirurgie*, March 3, 1883), believed it to be an ectopia ventriculi. He stated that the secretion possessed the power to digest fibrin, and further, the microscopical examination of the tumor showed it to be composed of gastric mucous membrane from the neighborhood of the pylorus. The portion of prolapsed stomach was cut off with the umbilical cord, this little piece being at the distal end. The opening into the stomach was closed probably at the time of birth.

TETANUS HYDROPHOBICUS.—The following case of a peculiar affection, first described by Rose, is related by Dr. Von Wahl (*Centralblatt für Chirurgie*, January 6, 1883). A man, forty-one years of age, while intoxicated fell down some steps, striking his forehead just above the right orbit. Very extensive ecchymosis of the right cheek followed. At the end of a week the patient felt

well, but on the ninth day lockjaw set in, there was right facial paralysis, and the right eye could not be closed. The left eye, on the contrary, was spasmodically shut, the teeth were pressed firmly together, and the muscles of the cheek, even on the paralyzed side, were as hard as a board. The sensibility of the skin on the right side of the face was somewhat diminished. The movements of the head were at this time perfectly free. On the following day it was necessary to perform tracheotomy on account of dyspnea, and on the day after that spasm of the right trapezius muscle appeared. The pupils at first responded slowly to light, but were now strongly contracted. The patient died of pneumonia. At the autopsy, the right vertebral artery was seen to be considerably smaller than the left; the right half of the pons was also smaller than the left, while the pyramidal and olivary bodies on the right side appeared broader and fuller than those on the left. There was no lesion (abscess or tumor) of the pons. There was no fracture of the cranial bones nor injury of the cranial nerves.

FEVER DEPENDENT UPON FECAL ACCUMULATION.—A rise of temperature is often observed in women after childbirth or ovariectomy, which subsides after a free movement of the bowels. In addition to the fever there are frequently symptoms of peritoneal irritation—pain on pressure, meteorism, elevation of the diaphragm, cyanosis, and rapid pulse. To explain these symptoms, Dr. Küstner instituted a series of observations upon women after ovariectomy (*Zeitschrift für klin. Medicin*, vol. v.). He found that the temperature rose when the fecal matters had passed into and distended the rectum. By reason of increased peristalsis and from direct pressure of the distended rectum, the wounded surfaces were disturbed and a resorption of the secretions induced. This gave rise to fever. Perhaps also the retained feces caused a more rapid decomposition of the secretions. The same explanation will answer also for similar conditions in the puerperal state, and the author asserts that peri-uterine exudations are often due to the same cause.

THE TUBERCULAR NATURE OF DIABETIC PHTHISIS.—Drs. Immermann and Rüttimeyer report in the *Centralblatt für klinische Medicin*, of February 24, 1883, a case of phthisis in a diabetic subject, in which tubercle bacilli were found in the lung-cavities. Though convinced of the tubercular nature of that particular case, they are not prepared to formulate general conclusions from one observation. They state, however, very truly, that the more often tubercle bacilli are found in the lungs or sputum in similar cases, the more certainly will the etiological identity of diabetic phthisis and ordinary pulmonary phthisis be established. And further, the more certainly the tubercular nature of diabetic phthisis is proven, just so certainly will the greater frequency of phthisis in the subjects of diabetes demonstrate that the constitutional conditions in this disease are favorable for the reception and development of the parasite.

A SIMPLE METHOD OF PRODUCING LOCAL ANÆSTHESIA.—Dr. Cheize relates (*Moniteur de la Polyclinique*, March 25, 1883) a simple procedure adopted by him in a case of ingrowing toe-nail, requiring immediate operation, at a time when he had no apparatus at hand. He saturated a little piece of lint with ether and placed it on the toe. He then projected the air from an ordinary pair of hand bellows upon the lint until the ether was evaporated. This was repeated two or three times, when anaesthesia was so complete that the nail was removed without the patient's knowledge.

INFLUENCE OF ANEMIA ON THE ELECTRICAL IRRITABILITY OF THE CEREBRUM.—From a series of experiments upon dogs, conducted in Munk's laboratory in Berlin, Dr. Orschansky formulates the following conclusions: 1. The abstraction of less than one-seventh of the total volume of blood of the animal does not modify

the excitability of the psychomotor centres of the cerebrum. 2. The loss of one-seventh to one-fifth of the entire volume of blood increases the irritability. The abstraction of a greater quantity causes a gradual diminution of excitability until it is finally lost completely. At the same time there is a flattening of the convolutions and the pulsations of the brain cease. 3. During the period of increased irritability, the animal is restless and agitated. As the irritability is lessened he becomes quasi-narcotized, though the power of voluntary movement remains. 4. These changes are not dependent upon the lowered blood-pressure. 5. They are caused by the induced anemia, which seems to act through lowered nutrition of the brain.—*Deutsche Medizinische Zeitung*, February 8, 1883.

CONSTITUTIONAL TREATMENT OF CHRONIC UTERINE DISEASE.—A forcible plea in behalf of constitutional measures in the treatment of chronic womb troubles is entered by Dr. Boislinière in the *St. Louis Courier of Medicine*, April, 1883. He concludes his paper by the following practical suggestions:

"The late excessive tendency to specialize has led us to attach, in uterine affections, too great an importance to the lesions and not enough to the general condition. The morbid influence of the constitution on the uterus should be considered first, and the reciprocal influence of the uterus on the organism should be considered as secondary. The uterus does not lead an isolated life in the organism, but it is only a link in that harmonious chain constituted by all the organs, and if the action of that chain be disturbed, there will be suffering in every organ constituting the chain. There will be suffering in the uterus, as well as in any other organ, but not more."

OPERATIONS FOR CATARACT IN THE SUBJECTS OF CHRONIC DISEASE.—Dr. Armaignac opposes the commonly entertained opinion that operative measures should be avoided in cataract occurring in individuals suffering from any cachexia. He has examined the records of a number of operations for the cure of cataract performed in his clinic, and he states that he has yet to meet with a failure in patients suffering from either diabetes, albuminuria, cancer, or malaria. In every case the cure was at least as rapid as it is usually in healthy subjects, and it occurred without inflammatory reaction or complication of any sort. Some of the operations were performed in the last stages of the general affection.—*Revue Médicale*, March 17, 1883.

ADDISON'S DISEASE AND THE SUPRARENAL CAPSULES.—From a study of the literature bearing upon this subject, Dr. Carl Burger arrives at the following conclusions: The suprarenal capsules are, from their structure, to be classed among the blood-vascular glands, and have no important vital function to perform. They stand in no causal relation to the bronzing of the skin. This dark-coloring of the skin occurs not only in Addison's disease, but may accompany a variety of cachexiæ. Disease of the suprarenal capsules is not infrequent, and often runs its course without any of the recognized symptoms of Addison's disease. The greatest variety of lesions of the capsules may be seen in different cases of Addison's disease. Addison's disease depends upon an affection of the semilunar ganglia and of the solar plexus. This affection is usually caused by some disease of the suprarenal capsules, most frequently a tubercular inflammation. Disease of the semilunar ganglia and solar plexus may arise from lesions of other organs than the suprarenal capsules, or may even be idiopathic. The symptoms of Addison's disease may thus be present without any lesion of the suprarenal capsules.—*Allgem. Med. Central-Zeitung*, March 14, 1883.

GLYCOSURIA AFTER REMOVAL OF THE MAMMÆ.—M. Paul Bert related, at a recent meeting of the Société de Biologie, the effects produced by the ablation of the

mammæ of a pregnant goat. After the birth of the kid, the urine of the goat was found to contain a very considerable amount of sugar. Owing to irritation, caused by vain attempts of the kid to suck, a large phlegmon arose in that region. The sugar at once disappeared from the urine. Similar experiments made about the same time, by MM. Bert and De Sinéty, upon pregnant guinea-pigs, were attended with negative results.—*Gazette des Hôpitaux*, March 20, 1883.

EFFECTS OF THE INTERNAL ADMINISTRATION OF GLYCERINE.—Dr. Tisné speaks highly of glycerine as a therapeutic agent internally administered. He states (*Gazette des Hôpitaux*, March 17, 1883) that it causes no irritation to the mucous membrane of the digestive tract beyond exciting a slightly increased peristaltic movement. It exerts a beneficial effect upon nutrition, increasing the weight and palliating many of the distressing symptoms in phthisis, such as loss of appetite, diarrhœa, night-sweats, and insomnia. Its action upon the liver is manifested by an increase in size of the organ and by a more abundant flow of bile. It has a diuretic effect and increases the excretion of urea, the chlorides, and the phosphates. The alkalinity of the urine is diminished, and if any pus be present in this fluid it is greatly lessened in amount.

ECLAMPSIA NUTANS.—Dr. Gantiez relates a case of salama convulsions which he witnessed in a child, seventeen months old. The attacks were preceded by a period, varying from a few seconds to a minute, during which the child presented an absorbed air, seeming to be a little apprehensive, but not agitated. The eyes were raised and fixed, and there was a little pallor. Then suddenly any toy that was in the hand was cast away, the head was flexed upon the thorax and the trunk upon the pelvis. At the same time the shoulders were slightly raised and the arms thrown forward with the hands extended, as if to prevent a fall. These movements followed each other with great rapidity, sometimes as often as thirty times in succession, but usually only eight or ten times. After the attack the eyes were filled with tears, and there was an expression of astonishment upon the child's countenance. He was easily comforted and soon resumed his play. The attacks occurred about eight times a day, and since they began, at the age of nine months, had never missed a day. Bromide of potassium had failed to exert any controlling influence over the disease.—*Revue Médicale*, March 3, 1883.

PUERPERAL INFECTION THROUGH EROSION OF THE NIPPLES.—The possibility of septic infection through wounds of the nipples, as well as through wounds of the genital apparatus, has hitherto received but scant notice. Professor Kaltenbach regards this occurrence as probable, arguing from the etiological relation between erosions of the nipple and mastitis, and from the beneficial effects claimed by Hausmann to follow the treatment of the fissures by carbolic acid. Spiegelberg has shown the possibility of mastitis arising from infection through the nipples and openings of the lacteal ducts. Kaltenbach goes further, and regards every case of mastitis as of septic origin. The necessity of the greatest possible cleanliness of the mouth of the child, the hands of the nurse, and the nipple itself is self-evident.—*Deutsche Med. Zeitung*, March 1, 1883.

INFLUENCE OF ERYSIPELAS UPON SYPHILIS.—Dr. Strack relates several cases in which the disappearance of gummy tumors was promoted by an intercurrent attack of erysipelas. He thinks this beneficial influence is exerted in two ways. The first effect is that which erysipelas exerts in common with other acute fevers. The second is to be referred to the local inflammatory processes. The increased flow of blood to the diseased parts causes a breaking down of the cell-infiltration, which becomes thus more readily absorbed.—*Centralblatt für Klin. Medicine*, March 3, 1883.

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ELIGIBILITY OF DELEGATES TO REGISTRATION AT THE NEXT MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

At the last meeting of the New York Academy of Medicine the following unqualified statement was made:

"The New York Academy of Medicine is the only chartered medical society in the State of New York, which is entitled, through its delegates, to recognition, either in the American Medical Association or in any of the State Medical Societies in the Union. I wish that fact to stand fully before the mind of every Fellow of the Academy." (See report of the proceedings in *THE MEDICAL RECORD* for April 28, 1883, p. 472.)

There is a legal aspect of this statement which should not be entirely overlooked.

In the plan of organization of the Association it is stated that members shall hold their appointment either as delegates, members by invitation, or as permanent members. "The *delegates* shall receive their appointment from permanently organized State Medical Societies, and such county and district medical societies *as are recognized by representation in their respective State Medical Societies*, and from the Medical Department of the Army and Navy of the United States, and the Marine Hospital Service of the United States." ("Transactions American Medical Association," vol. 33, p. 618.)

Manifestly this clause means that only such county and district medical societies are entitled to representation in the association as are entitled to representation in their respective State Medical Societies. It is equally evident that the county and district medical societies stand upon the same level; that no privileges are granted to the one which are not extended to the other; and that the basis of representation exists in the words "entitled to representation in their respective State Societies."

According to this interpretation of the clause regulating membership in the American Medical Association, the societies in the State of New York, prior to 1882, entitled to representation in the Association, were the Medical Society of the State of New York, and the several county societies, together with the district medical societies which were entitled to representation in the State Medical Society.

There is only one medical society in this State which belongs to the class denominated district medical societies, and entitled to representation in the State Medical Society, namely, the New York Academy of Medicine.

This medical society derives its right of representation, by delegates, in the American Medical Association solely from the fact that it is entitled to representation by delegates in the Medical Society of the State of New York. The only relation which the New York Academy of Medicine sustains to the American Medical Association is that of a district medical society. It stands upon the same level, in that respect, with the county medical societies, and in common with them obtains the right of representation in the American Medical Association by the fact that both are entitled to send delegates to the State Medical Society. The statement then, that "the New York Academy of Medicine which has no connection with the State Society, except that it is empowered to send delegates to that body," does not unfold the close relationship existing between these two bodies and reveal the real dependence which the former has upon the latter with reference to representation by delegates in the National Association.

The question now arises, what are the conditions which exclude representation in the American Medical Association? These are found in Article IX. of the By-Laws, which reads as follows: "No State or local medical society, or other organized institution, shall be entitled to representation in this Association that has not adopted its Code of Ethics; or that has intentionally violated or disregarded any article or clause of the same" ("Transactions American Medical Association," volume 33, page 629). In the light of the clause in the plan of organization, already quoted, it is plain that the following interpretation of the above by-law must be admitted. No State or local medical society, or other organized institution—that is, no State, county, or district medical society—shall be entitled to representation in this Association that has not adopted its Code of Ethics; or, that has intentionally violated or disregarded any article or clause of the same.

This interpretation is sustained by the decision of the Judicial Council, at the last annual meeting of the American Medical Association, touching the action of the Medical Society of the State of New York in 1882, which says: "Having fully examined the Code of Ethics adopted by the New York State Medical Society at its annual meeting in February, 1882 [as furnished by the Secretary of said Society], the Judicial Council find in said Code provisions essentially different from, and in conflict with the Code of Ethics of this Association, and therefore, in accordance with the ninth by-law of the American Medical Association, they unanimously decide that said New York State Medical Society is not entitled to representation by delegates in this Association" ("Transactions American Medical Association," vol. 33, page 60). Accordingly, at the annual meeting of the Association, held at St. Paul in 1882, the delegates from the Medical Society of the State of New York were refused admission; but the delegates from the several county medical societies and the district medical society (the New York Academy of Medicine) were not excluded and were permitted to register. The legitimate inference is that they were permitted to register and become members of the Association because there was no evidence that the several societies which they represented had not adopted the Code of Ethics of the American

Medical Association, or had intentionally violated or disregarded any article or clause of the same.

If this be the true inference, we may still infer that those county societies and district medical societies which have adopted the Code of Ethics of the American Medical Association, and have not intentionally violated or disregarded any article or clause of the same, are yet entitled to representation in that body.

It has been said, and the inference was allowed among the members at the meeting at St. Paul, that the delegates from the county societies and the district medical society of the State of New York were admitted merely *as a matter of policy*, believing that the action of this State Medical Society would be repealed at the annual meeting in February, 1883. We do not believe, however, that the Judicial Council is a body that has been, nor will be, governed in its decisions by policy when the policy conflicts with the laws of the Association.

It is a matter of fact that all the county medical societies in the State adopted the Code of Ethics of the American Medical Association, and it is also a matter of fact, that only a very few have modified their by-laws in this respect, so as to make them conform to the system of Medical Ethics of the Medical Society of the State of New York. Indeed, a large number of the county medical societies have done more than has been done by the New York Academy of Medicine even, and have shown their hostility to the new Code, as it is called, by instructing their delegates to vote for its repeal, and for the re-enactment of the old Code. Why should not they be entitled to representation in the American Medical Association as well as the New York Academy of Medicine, whose delegates have, with a single exception, uniformly voted either for the new Code or against resolutions which provided for the re-enactment of the old Code? What has lifted this medical society into the elevated position among its peers in which some of its Fellows have sought to place it? There are, possibly, special reasons.

If policy or expediency is to govern the decision of the Judicial Council, certainly the delegates from the county medical societies and the district medical society will be received at the forthcoming meeting of the American Medical Association, the same as they were last year. For, the same argument, on the policy side, holds now as it did in 1882, namely, that the question *is not yet settled* in the Medical Society of the State of New York, because an amendment to the by-laws will be called up for action at the Annual Meeting in 1884, and if adopted, will repeal the action taken in 1882 and sustained in 1883, and besides, the opposition to the new Code is much more formidable and determined than it ever has been.

From the policy standpoint, therefore, we fail to see that the New York Academy of Medicine is the only medical society in this State entitled to representation in the American Medical Association. But it may be said that because the county medical societies are in affiliation with the State Medical Society, they are bound to make their by-laws conform with those of the State Medical Society, and are therefore cut off from representation. This is an argument, however, which those who believe that the New York Academy of Medicine

is the only medical body in the State entitled to representation, by delegates, in the American Medical Association, cannot safely employ. It proves too much. For, if it be true that the county and district medical societies are cut off from representation in the American Medical Association, by reason of the action of the State Medical Society, then is the New York Academy of Medicine cut off as certainly, because, without reference to its disavowals, it has been, and is now, in affiliation with the Medical Society of the State of New York. It has sent its delegates to the State Medical Society, has taken no action looking toward their withdrawal, depends upon the State Medical Society for its right of representation in the American Medical Association, has failed to even attempt to instruct its delegates to vote for the re-enactment of the old Code, and therefore its delegates should not be received if the delegates from county medical societies are refused admission.

A CITY OF DISPENSARIES.

THE subject of the abuses connected with medical charities in Philadelphia was made the subject of a paper and discussion before the Philadelphia County Medical Society, recently. Dr. J. W. Walk, who read the paper, said that there were in Philadelphia thirty-two free dispensaries, which treated in one year 161,019 cases, or about one-fifth of the entire population. Dr. Walk was disposed to think that the dispensary system was a pernicious one, injuring both the profession and the public. He referred to a previous attempt to secure reform made three years ago, and which had proved futile. There had recently been organized a "provident dispensary," modelled after the institutions in London. It remained to be seen whether this would turn out a success.

The statement of Dr. Walk's, that Philadelphia has thirty-two dispensaries, is a surprising one. It places Philadelphia at once at the head of all the cities in the Union in the matter of these institutions. New York City, with a population one-third greater, has only twenty-two, and many of these do very little work. Nine dispensaries in this city treat nine-tenths of the patients. On the other hand the actual amount of free dispensary service is about the same for both cities. In New York, a quarter of a million of persons are treated at the dispensaries annually, which is one-fifth of our population.

There are many abuses connected with this form of charity and we trust that Philadelphia will be able to inaugurate some effectual measure of reform.

PAINFUL CONGESTION OF THE LIVER IN THE EARLY STAGES OF ALCOHOLISM.

BUT little has been written concerning the early stages of hepatic disease in hard drinkers. The symptoms at this time are insignificant, or, at any rate, are not troublesome enough to disturb the equanimity of persons that are not habitually solicitous about their health. Dr. Mathieu was led to examine the liver carefully in a number of patients who already presented some of the early signs of alcoholism. In no instance were there any subjective symptoms of hepatic disorder, yet there was always an in-

crease of liver dulness of about one inch above the normal. There was at the same time some tenderness on pressure. In the majority of cases examined there was also a slight enlargement of the spleen. The author regards this enlargement, combined with tenderness on pressure, as indicative of a congestion bordering on inflammation. It will, in time, pass into true inflammation, which may, according to circumstances, assume the form of general hepatitis, or of one of the varieties of cirrhosis.

THE ETIOLOGY OF PERNICIOUS ANÆMIA.

PROFESSOR FRANKENHÄUSER has made the rather startling discovery that pernicious anæmia is caused by bad teeth. He claims to have found in the blood of pregnant women suffering from pernicious anæmia little, round, very active bodies, about one-tenth the diameter of a blood-corpuscle, and furnished with a scarcely discernible tail. Besides these there were other objects, longer than the preceding, without tails and more sluggish, which seemed to be in a state of transition into double-celled bodies. The smaller bodies were exceedingly active, resembling spermatozoa in their rapid movements. As he never found these micrococci in the blood of pregnant women not the subjects of pernicious anæmia, it seemed to the author most reasonable to conclude that there was some connection between them and the disease. The next question to determine was in what way these little strangers found entrance into the blood. The most promising field for investigation was now the liver, an organ which he had for a long time regarded, on clinical grounds, as the disease centre. And the investigator was not disappointed, for he found in the liver-cells, near the left lobe, in severe cases of the disease, a great number of multicelled filaments. These, he thought probable, had worked their way from the intestine up through the ductus choledochus and biliary ducts into the liver-cells. Thence they forced an entrance into the capillaries in such numbers as to stop the circulation, or at least to offer a very great impediment to it.

Here, we claim, they change their form and get a tail and then pass out into the general circulation. We see in their presence in the liver a ready explanation of the icterus which occurs in pernicious anæmia. As far as the investigator's researches have yet gone they have led him to the belief that the origin of these organisms is to be found in a fungus growing in carious teeth. All the patients whom he examined had dental caries and a fetid breath. Hence he concluded that the frequency of pernicious anæmia in pregnant women was to be explained by the fact that women in this condition often had bad teeth. And further, since almost the entire population of Zurich is afflicted with unsound teeth, an explanation of the unparalleled frequency of the disease under question in that city is afforded. The dependence of fatty heart upon the same conditions appears to Professor Frankenhäuser, to be not only possible, but even probable. If this most promising field of investigation be cultivated with sufficient energy and imagination, it may yet come to pass that the dentist, with his ounce of prevention, will take rank as the greatest benefactor of the human race.

News of the Week.

TESTIMONIAL TO MR. ERNEST HART.—A testimonial to Mr. Hart, editor of the *British Medical Journal*, was recently presented to Mrs. Hart at the Grosvenor House by express permission of the Duke of Westminster. The testimonial was a portrait of himself, and was presented to him by Mr. Spencer Wells, President of the Royal College of Surgeons, and treasurer of the fund. The testimonial was a fitting and deserved recognition of the invaluable service rendered to the medical profession of England by Mr. Hart.

A FORTUNATE HOSPITAL.—St. George's Hospital, London, is shortly to come into a legacy of \$100,000.

THE AMERICAN PSYCHOLOGICAL JOURNAL.—This is a new quarterly journal issued by the National Association for the Protection of the Insane and the Prevention of Insanity. It is edited by Dr. Joseph Parrish, with A. A. Chevallier, and Drs. W. W. Godding, C. L. Dana, H. H. Bannister, and J. C. Shaw, associates. The publishers are P. Blakiston, Son & Co., Philadelphia. The first number is certainly a most promising one, containing original articles from such well-known names as J. Milner Fothergill, Norman Kerr, William Julius Mickle, W. W. Godding, C. K. Miles, Walter Channing, Crothers, H. Marion Sims, and others. The publishers have done their work excellently.

THE JOURNAL OF COMPARATIVE MEDICINE AND SURGERY.—This journal has appeared enlarged and under charge of a new publisher. It has established itself as the leading journal in America, on matters of comparative pathology and physiology, as well as in veterinary medicine. It contains a great deal of practical interest to all medical men.

THE NEW YORK NEUROLOGICAL INFIRMARY.—An institution bearing this title, and having for its object "the gratuitous treatment of the poor for all diseases of the nervous system," has been incorporated in this city. Dr. J. L. Corning, Dr. M. Josiah Roberts, and Messrs. Sidney Green, John T. Sherman, and Benjamin Crane have been elected trustees for the first year.

THE INDIANA STATE MEDICAL SOCIETY meets in Indianapolis, on May 8, 1883.

A RECIPROCITY-ANNUITY-BOND ASSOCIATION has been organized in Chicago, with branch offices in St. Louis, Detroit, and Pittsburg. The *Indiana Medical Journal* commends it, and says it is organized by and for physicians. It pays annuities for ten years or more. We should advise our readers to examine the institution very carefully before putting money in it.

SIR ERASMUS WILSON appears to have gone daft in his last effort of philanthropy. He wishes to raise funds for the erection of a statue to John Brown, late first waiter to Queen Victoria.

AN ELECTRIC HEAD-LIGHT.—M. M. Paul Hélot, surgeon to the Rouen Hospital, and Q. Trouvé, have devised an electric lamp to be worn on the forehead, in the examination of cavities. The light is very intense, and will last for hours.

A REGULAR PHYSICIAN.—The following, says the *Indiana Medical Journal*, are the favorite prescriptions of a so called regular physician of Indianapolis, and a member of the County Medical Society, who practises his trade, we will not say profession, in the northeast part of this city:

R. "Lung Remedy," which properly translated means "Mrs. Rhorer's Lung Remedy."

R. "Simmon's Liver Regulator."

R. "My Pills."

R. "My Tonic."

THE MARYLAND MEDICAL JOURNAL will be published weekly, commencing May 3d. We congratulate our contemporary upon this evidence of its well-deserved success.

THE PRESBYTERIAN EYE, EAR, AND THROAT CHARITY HOSPITAL, of Baltimore, whose new building was recently dedicated, is supported in a somewhat novel way. Each of the Presbyterian Churches in the city in succession takes charge of the hospital for a month, paying all expenses. When a congregation is too small to bear the expense, two are united.

The hospital has accommodations for twenty in-patients.

BILL TO REGULATE THE DISTRIBUTION OF BODIES AMONG MEDICAL COLLEGES.—A bill to regulate the distribution of bodies from public hospitals, prisons, morgues, etc., among medical colleges has passed the State Senate.

THE WEST VIRGINIA MEDICAL SOCIETY will hold its annual session at Grafton, May 16, 1883.

THE AMERICAN MEDICAL ASSOCIATION meets at Cleveland, O., June 5th, 6th, 7th, and 8th.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION holds its fifth annual meeting in this city, at the Academy of Medicine, May 21st, 22d, and 23d. The sessions begin at ten o'clock A.M.

A CASE OF ADIPOCERE.—The *Cincinnati Medical News* vouches for the following: "There is on exhibition in Cincinnati, at the present writing, the body of a woman who died in 1859, near Dupont, Indiana; and, after remaining in the grave until last November, for a period of *twenty-three years*, her grave was opened, that her remains might be reinterred in the Wesleyan Cemetery, near Cincinnati. She was the mother of a Mr. Robert Leitch, of the printing works, 12 West Eighth Street, Cincinnati. When the coffin was reached, in the process of disinterring, although made of common poplar, not a durable wood, it was found in almost perfect condition, the wood seeming to be firm and solid. When lifted from the grave the immense weight was remarked. On reaching the depot in this city, it required six men to lift it from the car to a wagon. A glimpse at the interior showed the cause of the great weight. The body was found to present a normal form and shape; and, although black, the outline was almost perfect. There was the head, with its sunken eyes, withered nose and chin, hair along the edge of the forehead; the body flattened, and somewhat spreading; the upper part of

arms lying alongside of the body, and the lower portion of them with the hands placed across the body. The arms and hands, as they lie across the body, indent it. Only the bones of the fingers are remaining. The abdomen is considerably flattened, the sides bulging considerably. The mammary glands of the breast are easily outlined. The thighs and legs preserve their contour, but seem enlarged. The blackened appearance is caused by the burial garments adhering closely to it, their fibres being easily distinguished. The present weight of the body, we understand, is about five hundred pounds. The deceased, when living, weighed about two hundred, and was seventy-three years old.

QUARANTINE.—On account of the reported existence of yellow fever in Cuba and other southern islands, the National Board of Health has decided to establish quarantine stations on the Southern coast earlier than usual this year.

A MOVEMENT AGAINST COUNTER-PRESCRIBING.—A daily paper is authority for stating that a movement has been set on foot in this city by medical men, which has in view the prevention of apothecaries and drug clerks from prescribing for patients and from copying the prescriptions of physicians—a practice which has become very common in some quarters of the city. It is proposed, as the most feasible mode of giving authority to the protest and declarations of the profession, that action shall be taken by the County Medical Society, and that the registered members of that body shall pledge themselves to withdraw their patronage, and to use their influence to induce patients whom they attend to withhold their prescriptions from stores whose proprietors are known to be in the habit of recommending patent medicines or of compounding potions without medical authority. According to numerous observers, while most of the larger and more important drug stores in the city refrain from all such practices, others are managed by men who style themselves physicians or doctors, and spare no pains to obtain patients, even going so far as to make criticisms on prescriptions sent to them by regular practitioners, with a view to impair confidence in them and to divert the fee for prescribing into their own pockets.

A BOSTON ENTERPRISE.—We have received a circular which states that "To show the value of nutrition in developing life the — — Food Co. have established a free hospital of seventy beds." Forty beds for diseased and orphan infants; thirty beds for women with chronic disease.

THE JACKSONIAN PRIZE OF THE ROYAL COLLEGE OF SURGEONS has been awarded to Mr. Anthony A. Bowlby, F.R.C.S., for an "Essay on Wounds and other Injuries of Nerves, their Symptoms, Pathology, and Treatment."

COMPELLED TO RESIGN.—It is reported that Dr. Joseph W. Howe, late Professor of Clinical Surgery at Bellevue College, has been compelled to resign that position in consequence of the stand he has taken in favor of the new Code of Ethics. It is said that several other gentlemen connected with this college have recently been obliged to change their views or keep silent regarding them.

THE BALTIMORE MEDICAL COLLEGE, which was started two years ago on a "Christian" and co-educational basis, has, says the *Maryland Medical Journal*, abandoned both these features, "Not that it loves Cæsar less," but it prefers substantial success to the propagation of ideals.

THE MICHIGAN STATE MEDICAL SOCIETY holds its annual meeting at Kalamazoo, May 8th, 9th, and 10th.

KENTUCKY STATE PHARMACEUTICAL ASSOCIATION.—The regular annual meeting of the Kentucky Pharmaceutical Association will take place at Lexington, Ky., Tuesday, May 22d, at 3 P.M. As the new pharmaceutical law comes up for discussion, a large attendance is requested, and all members are urged to bring as many new members as possible.

DR. LYON PLAYFAIR has received the Knight Commandership of the Order of the Bath.

THE BRAZILIAN GOVERNMENT has awarded a gratuity of \$1,750 to Dr. John Baptist Lacerda for his discovery of the antidotal virtues of permanganate of potash in relation to snake-poisoning.

PROFESSOR T. H. HUXLEY and Mr. J. Tomes have been elected Honorary Fellows of the Royal College of Surgeons.

STATE IDIOT ASYLUM AT SYRACUSE.—Dr. Henry B. Wilbur, Superintendent, since the foundation of this institution, died suddenly, May 1st. He was a pioneer in the education of idiots in this country.

DR. RICHARD JOSEPH, formerly of Marblehead, Mass., disbursing officer of the Department of the Interior, died of heart disease, May 1st.

COLLEGE COMMENCEMENT—MORE DOCTORS.—The first Annual Commencement of the Woman's Medical College of Baltimore was held May 1st. One graduate, a former pupil at the Woman's Medical College in New York, received a diploma. A nucleus of this kind frequently yields many fold.

DR. ORTON, of Milwaukee, accused of producing an abortion upon his intended bride, was, on April 28th, discharged by the Judge of the Criminal Court.

FLORIDA AS A HEALTH-RESORT.—The *Atlanta Post-Appeal*, speaking of the recuperative powers of Florida, says that when the invalid's first week's hotel bill is presented he usually says, "I guess I'm well enough to start for home this afternoon."

THE PHARMACEUTICAL EXAMINATIONS.—The following were the successful candidates at the pharmaceutical examinations held in Montreal, April 27th: *Major Students*.—Charles E. Scarff, Alpheus Davidson, E. Leonard, Alex. Robert, Ernest G. Swift, A. Dugal. *Minor*.—A. E. Holden, L. Flannigan, Joseph H. Noad, R. A. Kerry, A. R. Read, F. Baker, J. L. Beaudry, W. Punchard, M. B. Rice, and F. G. Daniel.

THE ARGENTEULI PRIZES.—The highest of these (\$1,200) has been awarded to Dr. H. J. Bigelow, of Boston.

THE NEW SMALL-POX HOSPITAL.—The Board of Health has advertised for bids preparatory to a contract for the building of a boiler-house adjacent to the new

small-pox hospital at North Brothers Island. Connected with the boiler-house, which is to furnish steam for warming the main building, will be a laundry, a kitchen, and sleeping rooms for the "help." The hospital has four wards, each having ample space for sixteen beds, though, in cases of emergency, a third row of eight beds can be added without any serious overcrowding. It is proposed soon to erect an administration building, where the doctors, matron, and trained nurses will live, and also another pavilion as soon as needed. The hospital cannot be occupied until the heating apparatus is complete, and the island is supplied with Croton water, which is about to be done by the Department of Public Works. With a view to beautifying the surroundings, as well as to afford future protection to the buildings from the high winds that occasionally sweep over the island, one hundred young elms have been planted there, to which additions will be made at a future time. It is intended to make this spot as attractive as possible to those unfortunate ones, who, by reason of a loathsome disease, are involuntary exiles from their friends and homes.

A BAD LUNACY BILL.—Mr. Austin Abbott calls attention in the *Times* to the very bad features of Assembly Bill No. 636, for amending the lunacy laws,—a bill which has a strong backing. If this bill becomes a law, we are told that one can be taken and confined in an asylum upon a certificate made by two qualified physicians (made without consultation between them), and indorsed by the approval of only a Justice of the Peace within the county, in which the alleged insane person resides, without judicial examination on his part other than of the contents of the certificate. He "may" take evidence, but is not required to. Upon such a certificate a person so confined may, without further authority, and at any time within thirty days, be removed from one asylum, public or private, or home, or retreat to another, and with no restriction against removal beyond the State. It is easy to imagine the task which the friends or counsel of a person thus committed in *ex-parte* proceedings would have in endeavoring to trace him from asylum to asylum, for there is no provision for any public record of the proceedings.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, of which there is a medical section, meets this year at Rouen, August 16th to 23d.

A MEDICAL FRAUD EXPOSED.—The *Therapeutic Gazette* has with great completeness exposed the fraudulent character of "a retired missionary, returned from South America, whose sands of life had nearly run out;" but who had sufficient vitality to put on the market a precious specific for erring but noble young men. It cost, says the *Gazette*, about two cents a box, and it was selling for \$3.50.

HOMO NEVADENSIS.—California scientists are serious, says *The Times*, in their speculations concerning the so-called fossil human footprints found in the sandstone of Nevada, near the State prison quarry. Dr. Harkness, the explorer in these footprints, is confident that he has discovered a new species of the *genus homo*, and he sub-

mits the following description of his scientific find: "Homo Nevadensis (Harkness): Length of track, 18½ inches; width at ball of foot, 8 inches; width of heel, 6 inches; average length of step, 27 inches; length of stride, 54 inches; width of trackway, 18 inches; angle with the median line, about fifteen degrees. Each track is modified in form by a sandal or other protection to the foot." It has been suggested by rival persons that the prehistoric and giant man was only an early emigrant to California from St. Louis or Chicago, a foot 18½ inches long being no novelty in either of those cities, according to their own newspapers.

DR. GEORGE B. HAWLEY, seventy-two years of age, for many years a prominent physician of Hartford, Conn., died April 19th.

INSPECTION OF THE THROAT WITHOUT INSTRUMENTS.—Dr. Samuel W. Francis, of Newport, R. I., writes that very often it is difficult to depress the tongue of a patient who is suffering from sore throat, diphtheria, follicular tonsillitis, or other affections of the fauces, etc., and suggests that they be told to open their mouth, in front of a good light, and simply, but with force, say: *Arh! Barrh!! Varrst!!!* LIFE—enunciating each word some few seconds. Dr. Francis has tried this, and not only obtained an excellent view, but the different positions of the uvula and surrounding parts, greatly assisting the diagnosis and treatment of the disease.

M.D. OR M.B., IN GREAT BRITAIN.—Dr. Parks, of Ashton, R. I., in an interesting letter commenting on "Our London Letter," says that the correspondent is wrong in some particulars as to the mode in which English practitioners are designated. For instance, he says "only university graduates *can* call themselves Dr. (M.D. or M.B.)." This is true as regards M.D. He being a *Doctor* of Medicine can call himself Doctor, while the M.B. being only a *Bachelor* not a Doctor, *can*, in common with all other gentlemen, only call himself Mr. He also states that physicians are not *nearly* all graduates, and do not style themselves Dr.; the vast majority of them being licentiates of one or other of the Colleges of Physicians of London, Dublin, or Edinburgh, and as such are only *entitled* to the designation of plain Mr.

THE NASHVILLE MEDICAL SOCIETY.—Dr. J. L. Watkins writes that the "parturient stress" is over, and that this Society is the outgrowth of the late meeting of the State Medical Society. Its officers are Dr. N. D. Richardson, *President*; Dr. W. J. McMurray, *Vice-President*; Dr. J. L. Watkins, *Secretary and Treasurer*. The Society will meet twice a month, and has every hope and evidence of success.

ARMY SANITATION IN INDIA.—Dr. Cunningham, in his report concerning the health of the European army in 1881, says that, although the rate of sickness was high, the ratio of mortality was less than in former years. This result he attributes to improved sanitation and greater attention to the health of the soldiers. The largest number of deaths occurred from enteric fever; cholera ranks second. In Bengal the rate of mortality from enteric fever was 2.62; Bombay, 2.83; and Madras, 0.58 per thousand.

THE BACILLUS OF TUBERCULOSIS.—In the *Centralblatt für Klinische Medizin*, April 14, 1883, Finckler and Eichler express the opinion that other bacilli than the tubercular, stain blue, and do not yield the color to nitric-acid washing; that the bacilli of tubercle offer greater resistance to the reagents than do other micro-organisms; that nitric acid may so completely remove the color that pure water will not restore it, however prolonged the bathing; and finally, that the claim that Bismark brown does not affect them is not strictly accurate.

CHLOROFORM IN MIDWIFERY.—Dr. Fancourt Barnes, in the *British Medical Journal*, expresses the opinion that the reason why chloroform is so well borne in midwifery lies in the condition of the heart during pregnancy, namely, that of hypertrophy, developed during gestation.

ABSENCE OF THE CHARACTERISTIC ERUPTION IN TYPHOID FEVER.—Dr. Whipple, of London, related at a late meeting of the Clinical Society two cases of typhoid fever in which there was found, at autopsy, the characteristic intestinal lesion, but the typhoid eruption was not found; on the other hand, an eruption was present which resembled that of scarlet fever. He does not object to the view that scarlet fever and typhoid fever are frequently concurrent.

CORROSIVE SUBLIMATE AS AN ANTISEPTIC IN MIDWIFERY.—Dr. Tarnier recommends that the genital region be washed and injected with corrosive sublimate (1 to 2,000) and that the mattresses and napkins be disinfected by the same fluid, during the process of labor.

THE INDEPENDENT PRACTITIONER.—Dr. Leigh H. Hunt has resigned the editorship of this journal.

ROYAL COLLEGE OF SURGEONS.—At the recent pass examination for the diploma of membership, the candidates were given two hours in which to answer three out of four questions in midwifery and diseases of women. One of the questions was as follows, and evidently it was sufficiently broad to occupy one-fourth of the time allotted: "In what circumstances is the operation of craniotomy indicated, and how would you complete the delivery when the head has been perforated?"

Reviews and Notices.

LECTURES ON ORTHOPEDIC SURGERY AND DISEASES OF THE JOINTS. By LEWIS A. SAYRE, M.D. Second Edition, pp. 569, with 324 illustrations. New York: D. Appleton & Company.

THE first edition of this work has been before the profession since 1876, and has been considered, as it purported to be, a record of the views and procedures advocated by its author, rather than a critical review and résumé of all the principles and practices comprised in orthopedic science. The edition just issued possesses the same general features and has been enlarged and more fully illustrated, so that it may be considered a compendium of the present views and methods advocated by the distinguished author. A large number of illustrative cases are cited, some of the chapters are rewritten and brought up to the present time, and fifty-two new engravings have been added, so that the work may be considered as complete. The chapters upon Spondylitis and Lateral Curvature will be particularly welcome to the profession at the present time, as they em-

body the views of the author upon the use of the Plaster Jacket in these affections, and contain many valuable suggestions regarding its application and practical uses, together with a defence of its employment as a method of treatment. The objections to the jacket are fully considered and refuted, and the indications for its employment are laid down with the exactness of experience.

The book contains thirty-two chapters, of which five are devoted to the consideration of diseases of the hip-joints, and a table of seventy-two cases of exsections of the head of the femur, performed by the author, is added, the table having been compiled by his son, Dr. L. H. Sayre—the latest operation recorded having taken place in December, 1882.

Of Hutchinson's method for the hip, he states, "I am therefore reluctantly compelled to abandon this plan of treatment, although, when first proposed, I gave it a most cordial endorsement before I had any practical experience with it," and cites a case to illustrate the principles involved.

An illustrated frontispiece, drawn by Dr. Heitzman, and illustrating a section through an exsected hip joint during the process of reproduction, is not the least of the attractive features of the book.

Taken as a whole, the book will prove a valuable addition to the library of the general practitioner, as well as the orthopedist, both as a work of reference and as a guide to the principles and practice pertaining to this much-neglected branch of surgery, and it should meet with the general commendation it deserves.

A SYSTEM OF HUMAN ANATOMY, INCLUDING ITS MEDICAL AND SURGICAL RELATIONS. By HARRISON ALLEN, M.D., Professor of Physiology in the University of Pennsylvania. Section IV., Arteries, Veins, and Lymphatics. 4to, pp. 458. Philadelphia: H. C. Lea's Son & Co. 1883.

SECTION IV. of this admirable work, treating as it does of the vessels of the body, is of peculiar interest to the practitioner. The author goes over the whole ground with his usual thoroughness, discussing the various regions not only from an anatomical, but from a clinical, point of view. This latter element of the work gives it a unique and peculiar value, as the subjects discussed are made of equal interest to the surgeon and physician. The descriptive text is terse and accurate, omitting no detail and giving due prominence to important facts, and due consideration for leading principles. The illustrations, which show a great improvement over those in the previous sections, are not as numerous as they might be. Still the excellent descriptions in the text more than make up for the deficiency. The illustrations of the venous circulation are particularly good, and are well colored.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION, Part iii., Vol. ii., Surgical History. Prepared under the direction of JOSEPH K. BARNES, Surgeon-General United States Army, and D. L. HUNTINGTON, Surgeon United States Army. First issue. 4to, pp. 986. Washington: Government Printing Office, 1883.

THE present volume completes the surgical series of the Medical and Surgical History of the War of the Rebellion. Continuing the general scheme of series, the treatment of regional injuries of gunshot origin is continued, leading off with those of the lower extremities. The succeeding chapter gives an interesting account of miscellaneous gunshot injuries, then follow facts general and statistical relative to the nature, peculiarities, and effects of the missiles and projectiles, and the graver attending complications. Under the latter heading are considered secondary hemorrhage, erysipelas, pyæmia, gangrene, and tetanus. The chapter on Anæsthetics in military practice is an exceedingly interesting and instructive one, embodying as it does a wide experience,

under all possible conditions, of surgical operations. The historical sketch of the medical staff, and a description of the *materia chirurgica*, give a very fair statement of the great resources on the field and in hospital which were so efficiently utilized during the late war. The methods of field, railway, and water transportation of the wounded are given in necessary detail, and serve to prove what can be done in promptly caring for the wounded, even on the largest possible scale and in the face of what might generally be considered as insurmountable obstacles. The particular value of this noble volume to the general surgeon centres more particularly in those portions which treat of the result of gunshot fractures in the lower extremities. Under the respective headings of injuries to hip, thigh, knee, leg, and foot, are grouped a mass of facts concerning the characters of fractures in these localities, their methods of treatment and results, the accuracy and value of which cannot be overestimated. The painstaking accuracy with which the various facts of history are summarized, and the deductions which are drawn therefrom, reflect the highest credit upon the accomplished author of the present volume. Here come in also the discussion of amputations in all situations and under all conditions, giving the results in a mass of statistics, the value and accuracy of which have never before been equalled. The careful study of these statistics will serve to settle many facts heretofore in doubt, and will mark the value of new lines of practice which must always redound to the credit of American surgery. It would be useless to attempt to formulate the conclusions arrived at. Such would be impossible short of noticing each chapter by itself as an independent volume, for such each chapter could be consistently considered. The illustrations, photo- and chromo-lithographic, are fully up to the previous standards, which is saying everything for them. The wood-cuts are also admirably executed. Dr. D. L. Huntington, who has prepared the present volume, has satisfactorily discharged the great responsibility imposed upon him, and has in every way shown himself the worthy successor to the late lamented surgeon, George A. Otis, whose name is also justly and appropriately placed upon the title-page of this monumental volume.

LABOR AMONG PRIMITIVE PEOPLES. Showing the Development of the Obstetric Science of To-day from the Natural and Instinctive Customs of all Races, Civilized and Savage, Past and Present. By GEORGE J. ENGELMANN, A.M., M.D., Professor of Obstetrics, Post-Graduate School of Missouri Medical College, St. Louis. 8vo, pp. 227. St. Louis: J. H. Chambers & Co. 1883.

THE second edition of this work comes to us revised, enlarged, and rearranged. As we have already said, it is one of the most interesting and instructive volumes that can be placed in the hands of student or practitioner. It represents an immense amount of research, which is utilized in the direction of making this one of the most practical obstetrical guides ever presented to the profession. It contains a large number of illustrations, representing the natural and instructive customs of the primitive races during the parturient act. The medical man who studies nature as he finds her will gain many a useful hint by the perusal of Dr. Engelmann's entertaining history.

HAND-BOOK OF VERTEBRATE DISSECTION. By H. NEWELL MARTIN, D. Sc., M.D., and WILLIAM A. MOALL, M.D. Part II. How to DISSECT A BIRD. Pp. 174. New York: Macmillan & Co. 1883.

IN reviewing Part I. of this series we commented upon the object aimed at in them. The present volume is equally good with the first, and was, perhaps, still more needed. The directions are carefully given, and the illustrations, though not numerous, are sufficient.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, April 6, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

DR. BEVERLY ROBINSON presented to the Society a case of

LARYNGEAL PARALYSIS, ILLUSTRATING ALSO SYPHILIZATION BY BÖCK'S METHOD.

The patient was a German, aged forty-two, and had lived in Copenhagen. Twenty-five years before he had contracted a chancre, which appeared about ten days after coition. About three weeks later, an eruption on the body appeared. He went to Professor Böck's hospital, and was put under treatment. He was first inoculated in three places on the chest with syphilitic virus; six days later the vaccination was repeated; it was then repeated every third day, three vaccinations each time. They were made upon the chest, arms, and legs. Gradually the inoculation effects became weaker, and finally the virus produced nothing but a superficial scab. The whole process lasted about three and one-half months. During that time he was obliged to lie flat on his back; he suffered intensely and would not, he said, "go through it again for a million dollars."

Since that time, however, he had been perfectly well, and had never noticed any symptoms of having syphilis, although he had taken no medicine. He had married, and his wife had had several healthy children and no miscarriages.

As regards the throat trouble, examination showed that the fauces are intensely congested and marked by a large number of varicose veins. The uvula large, infiltrated, and evidently quite relaxed. The epiglottis was red; the posterior third of the true vocal cords had a pink coloration.

In phonation, the free margin of the left vocal cord presented a half oval excavation very appreciable to the eye, as reflected in the small laryngeal mirror. This excavation was probably due to paralysis of the tensor muscles on the same side of the larynx.

The interesting feature, said Dr. Robinson, in the case, to be determined, beyond the fact of the patient being a notable example of Professor Böck's plan of treatment, is whether or no the intra-laryngeal paralysis be proof of a syphilitic deposit, possibly of gummatous nature, in the intrinsic muscles of the vocal organ.

In view of the limited localization of the paralysis, of the man's general excellent physical condition, and of his inability to recognize elsewhere any pathological lesion capable of explaining the localized laryngeal paralysis, the speaker was of the opinion that this must be received as the most *probable* explanation, and, notwithstanding the fact that the patient had only had few and very mild symptoms at any time, of constitutional syphilis.

DR. SAMUEL SEXTON read a paper, entitled:

EARACHE IN CHILDREN.

[The paper is published in full on page 480.]

The paper being open for discussion, DR. R. F. WEIR, referring to the question of paracentesis for the relief of pain in acute otitis media, said that, in his experience, the external canal often became swollen and paracentesis was a difficult and painful process. It was better, as a rule, especially in children, to let the drum alone. In adult subjects he performed the operation oftener. For the pain he used morphine and atropine, with injection of hot water, pouring the water into the ear—not syringing it. He had abandoned the use of leeches, for the reasons given by Dr. Sexton.

DR. BEVERLY ROBINSON had seen relief from the application of leeches in children, when nothing else did any good. He had also seen a great deal of relief from the application of the continuous douche. In some instances he had seen salicylate of soda in large doses relieve aural pain.

DR. KINNICUTT said that his experience was confirmatory of Dr. Weir's. In the earache of children the simple pouring of hot water into the ear would often suffice, the child falling asleep during the process.

DR. ABBE frequently used the old-fashioned remedy of laudanum on cotton, and it was generally satisfactory. If necessary, he gave an anodyne internally.

DR. SEXTON said that he very seldom had to use anodynes to children, but often gave them to adults to bridge over the night. He thought that large doses of narcotics tend to make the trouble worse sooner or later. Warm water was often beneficial, but if poured directly down upon the drum-head it might do harm, and hot air (from hot salt or sand-bags) would accomplish just as much.

DR. NICOLL had obtained very satisfactory results from the use of hot water in the shape of the douche.

DR. WALKER spoke of the relief sometimes obtained with adults by shutting the mouth, holding the nose, and making a forcible expiration so as to drive the air into the middle ear. Good effects were observed also by the reverse method, making an inspiratory movement so as to suck the air from the tubes.

DR. SEXTON said that this latter process had often to be done methodically by adults in order to clear up the ear. It was often supplemented by swallowing at the end of the inspiration.

DR. A. A. SMITH had been in the habit of using warm douches, and the application of heat in the form of hot salt bags. He frequently found it necessary to give in addition a full anodyne. In one case he had blown chloroform vapor into the ear with good result.

A discussion was opened by the Society upon the paper read by Dr. Beverly Robinson, entitled

NOTE ON RAPID OR SUDDEN HEART-FAILURE IN ACUTE INFECTIOUS DISEASE, NOTABLY IN DIPHTHERIA AND TYPHOID FEVER.

[The paper is published in full on page 484.]

DR. H. F. WALKER had had cases similar to those described by Dr. Robinson, especially cases of diphtheria. His patients, however, had never been completely out of danger. In a case of diphtheria, the patient had reached the ninth day; he was doing well in the morning, at night he was dead. In another case death was still more sudden. There seemed to be heart paralysis, but no post-mortem was made.

DR. F. P. KINNICUTT, said that in the various acute infectious diseases, in diseases accompanied by high temperature, as well as in pericarditis and endocarditis, pathological research has demonstrated the very frequent existence of a parenchymatous myocarditis. The inflammatory process may be diffused or circumscribed; the cardiac muscle becomes swollen and pale in color; numerous minute granules, partly soluble in acetic acid, make their appearance in the muscular fibre, the transverse striæ become indistinct and finally disappear. This process may proceed to a condition of true fatty degeneration.

In typhoid fever we have clinical evidence of the existence of degeneration of the heart-muscle, in the impairment or absence of the impulse and of the first sound of the heart; and in individuals dying of the disease a degeneration of the kind which I have described is found to be the rule. Have we not in this fact a rational explanation of both the gradual heart-failure which obtains so frequently in this disease and of the sudden or acute cardiac paralysis?

The inflammatory affection of the muscular fibre is necessarily attended with more or less dilatation of the

heart; a sudden movement or unusual exertion may well be sufficient to produce a correspondingly rapid *increased* dilatation with fatal syncope. In diphtheria, a fatal heart-paralysis, it seems to me, may be ascribed, in a certain number of cases, to a like pathological process; in others, to a paralysis referable to a lesion of the nervous system. To the latter class are especially to be referred those cases of sudden death occurring during apparent convalescence from the disease.

DR. C. L. DANA said that the French observers had recognized the fact that in acute infectious disease the poison sometimes especially attacks the heart. In the descriptions of typhoid fever a "cardiac form" had been described.

Sudden deaths from heart-failure, in persons apparently doing well, occur also in other diseases, as in acute nephritis and in pneumonia. The speaker had seen instances of this kind.

DR. ROBINSON said that in typhoid fever we find granular and fatty degeneration of the heart, but he had not observed that this degeneration was any more marked in persons who had all along had symptoms of cardiac weakness than in others who did not die directly from heart-failure.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR

(Continued from p. 443.)

DR. G. L. PEAODY presented on behalf of a candidate a specimen of *fibroma* of the *sciatic nerve*.

He also presented specimens illustrating

THE LESIONS IN SYPHILIS OF THE BRAIN, LUNGS, AND KIDNEYS.

"The patient, an Englishman, fifty-five years of age, first consulted me in January of last year. He was a drinker of beer and a smoker, whose general health had always been good. Three years previously he had had a chancre followed by a rash upon the body, soreness of the throat, falling out of hair, pain in the crests of the tibiae and other manifestations of syphilis. At the time of his infection, and subsequently up to the present, he says he has had no treatment for his malady, nor has he felt much need of relief. Ten days before consulting me he had a sudden sharp pain in the head posteriorly on the right side. It soon left this side and went to the left occipital region when it persisted obstinately. This was also accompanied by a severe sore throat. The pain in the head was much aggravated by the recumbent position and deprived him of sleep, except such as he could enjoy in the sitting posture. At this time there was also marked loss of power on the right side, notably in the right hand, but also, though to a less extent, in the right leg and thigh. He complained also of a sensation of formication in both extremities on this side. I examined the fundus of his eyes at this time with the ophthalmoscope and found it normal on each side. The tendon reflex was normal on both sides.

"Under the use of iodide of potassium in increasing doses—a drachm and a half three times a day having been finally reached—all these distressing symptoms gradually passed away and he was able to resume his work. I cautioned him at this time never to neglect the warning which a recurrence of any of these manifestations ought to convey to him. Late in May he again presented himself for treatment in precisely the same condition in which he had been when he first came under observation, except that the pain in the left occipital region was more severe than before. My warning had not been regarded, and his pain had returned two weeks before his coming this time to me.

"Iodide of potassium was again faithfully tried, but

without avail, even in the same large doses as before. After some days he was given mercury in combination with it, and then he began again slowly to improve. Convalescence this time was much more tardy than before, and, in fact, it was nearly two months from the beginning of the second attack until he was entirely free from pain. He did recover, however, completely, so far as his subjective symptoms are concerned. His wife tells me, however, that he became morose and sullen and continued so as long as he lived.

"I again warned him as before, not to allow any such symptoms, should they recur, to go a day untreated; and he promised, as before, that my warning should not be disregarded.

"About the end of August he was again attacked in a similar way, and he again neglected to apply for relief until his symptoms had existed two weeks. This time they seemed more severe than ever before, though the pain, however, was on the right side. It was described by him as a sharp pain, very severe, diffused over the posterior part of the right side of the head. forcible palpation and gentle percussion over the head in this situation gave him much pain. He was at this time distinctly, though to a slight extent, hemiparetic on the left side.

"The glands in his groins were slightly enlarged and the crests of the tibiae were slightly roughened. This time, in my absence from town, he was treated by a colleague by iodide of potassium, but in smaller doses than those to which he had been accustomed. The largest amount given in any one day was a hundred and twenty grains divided into three doses. Opium, morphine, and bromide of potassium were also administered at times to relieve his pain, which was even more severe than usual.

"Having been very apathetic at first, he soon became dull and stupid. In a few days stupor deepened into coma; he became unable to take his medicine; coarse râles were heard over his chest; he coughed a little in his comatose condition and his temperature began slowly to rise. His pulse and respiration soon became rapid; and, nine days after he had come under observation, he died with a temperature of 107°, having been comatose during the last three days of his life.

"I made the autopsy twenty hours after death. The calvaria was observed to be unusually thin. The convolutions presented the usual appearances of senile atrophy, the fissures beneath them being deeper and wider than in middle life, and there being a large amount of serum in the meshes of the pia mater in these situations. The arteries at the base showed a few small patches of atheroma. In the fissure of Sylvius on the right side was a thin yellowish mass surrounding the middle cerebral artery, extending about one-third of an inch along the vessel. The thickness of this mass was nowhere as great as the diameter of the vessel itself, but it was quite evident that the calibre of the vessel had been reduced by the pressure thus exerted. The corpus striatum on this side was distinctly softened, and in this situation the roof of the ventricle was loosely adherent to its floor.

"The microscopic examination of sections made through the middle cerebral artery and the surrounding mass is of considerable interest. The yellowish mass is found to be partly in the adventitia of the vessel and partly external to it. In the adventitia it presents the appearance of a densely aggregated mass of small round cells with a small amount of fine fibrous stroma between them. External to this the material presents a granular and amorphous appearance.

"Within the vessels in these sections is also seen a new growth—a somewhat crescentic-shaped growth—of connective tissue from the intima. This is a good illustration of the form of endarteritis obliterans, which was formerly ascribed only to syphilis. It is now known to occur under various other conditions. I have myself found it in the cerebral arteries in subjects in whom there was no reason to suspect syphilis, as well as in syphilitics, though less frequently. I have also found it in the arte-

ries of the kidneys in chronic diffuse nephritis, and in the lungs in chronic phthisis when no indication of syphilis existed. Recently I have found the same form of endarteritis in two malignant tumors, both epitheliomata, the one of the tongue and the other of the antrum. The lungs of this subject presented several small syphilitic growths surrounded by areas of catarrhal pneumonia. The right kidney contained on its surface a similar growth. Both kidneys showed the lesions of diffuse nephritis, not far advanced.

"I place under the microscope sections of the middle cerebral artery surrounded by the gummy growth, and showing in its interior the lesion of endarteritis obliterans in two places; also a section through one of these growths in the lungs, together with the zone of pneumonia surrounding it.

"The special interest in this case is in the coincidence of these two cerebral lesions at the same point in the course of an important artery. I do not think that either one alone would have interfered with the blood-supply sufficiently to produce cerebral softening and death, but together their influence could not be long withstood."

DR. VAN SANTVOORD presented

A UTERUS UNICORNIS

removed from the body of an infant seven months old. The organ was conical in shape, and on the left side the Fallopian tube and the ovary presented a normal appearance. On the right side the ovary was located in the right iliac fossa, and the Fallopian tube was correspondingly displaced outward, and terminated in a club-shaped, fleshy mass, one-fourth of an inch in thickness at its extremity, which extended toward the uterus and gradually lost itself in the broad ligament just at the upper end of the cervix. There was no opening in the uterus corresponding to the Fallopian tube on the right side, although the tube itself was pervious. The club-shaped muscular mass represented the right horn of the uterus. There was no septum in either the cervix or the vagina.

SUBPERIOSTEAL HÆMATOMA.

DR. VAN SANTVOORD also presented a dried specimen illustrating subperiosteal hæmatoma occurring on the skull of an infant, a foundling in the Randall's Island Hospital. There was no history. Over the right parietal bone an elastic fluctuating tumor was found, when the child was first seen, with its edges hard and elevated, and what felt like a depression beyond the borders of the tumor. The child died of marasmus when twenty-two days old.

DR. HEINEMAN presented a specimen illustrating

CEREBRAL HEMORRHAGE, OSTEO-FIBROMA OF UTERUS, AND PYELO-NEPHRITIS.

"The patient, aged sixty, was admitted to Mount Sinai Hospital March 16, 1883, in a semi-conscious condition. At eight o'clock in the morning she was found on the floor of her room with the right side of her body paralyzed. She was apparently conscious when found, though unable to speak.

"On admission patient is inclined to sleep. She can be roused, but is dazed and yawns. There is slight difficulty in deglutition; cannot speak, but answers intelligently by a nod of the head after being thoroughly roused. Has right hemiplegia. Slight systolic aortic murmur. Arteries slightly thickened. On the succeeding day her temperature rose to 101° F. There was marked anæsthesia of right upper extremity; fingers were flexed; there was slight anæsthesia of the right lower extremity. There was retention with overflow of urine.

"The patient subsequently became more rational, but did not regain her power of speech; her paralysis continued; her bowels remained constipated; she passed urine involuntarily at times; her axillary temperature, taken daily, was always slightly higher on the paralyzed side. Two days before death she began to pass bloody

urine, and with a temperature of 99° F. she continued to fail, and died March 27th, on the twelfth day of her attack.

"The autopsy revealed in the brain considerable exudation of serum beneath the pia matter. Effusion of recently clotted blood was found in the left corpus striatum and optic thalamus, the brain-tissue about the clot being softened. Heart: Slight thickening of aortic and mitral valves. Lungs emphysematous; were moderately cedematous and congested. Liver and spleen were normal. Kidneys: In the left kidney the mucous membrane of the pelvis was reddened and inflamed and coated with blood; the kidney-tissue was atrophied, the pelvis and ureter dilated. In the right kidney the pelvis was enormously dilated and filled with fluid blood and urine. The mucous membrane of the pelvis was coated by recent exudation of fibrin and pus: the calyces were dilated, the kidney-tissue atrophied. Bladder: The mucous membrane was reddened, inflamed, and covered by exudation of fibrin and pus. Uterus: The posterior wall contained an enormous submural fibroid, which had increased in size so as to completely fill the cavity of the pelvis. It had undergone calcareous degeneration, being converted into bony tissue. The uterine tissue was stretched in a thin layer over its anterior surface. The cervix was normal, and the ovaries had preserved their normal relation to the fundus uteri, and were normal."

Dr. Heineman, on behalf of a candidate, presented a specimen which showed *several needles in the omentum*.

DR. BEVERLY ROBINSON presented a specimen, for which he was indebted to the courtesy of Dr. DeWitt C. Romaine, who also gave the following history and remarks:

PLACENTA WEIGHING THREE POUNDS IMMEDIATELY AFTER EXPULSION.

"The patient was born on an English vessel in the Atlantic Ocean, thirty-two years ago. Her previous history presented some points of unusual interest. During her girlhood she had always been delicate, was easily fatigued, suffered much from intense headaches, pains in her back, loins, and thighs; had a constant profuse leucorrhœal discharge, but *never menstruated*. Her mother, becoming alarmed at the absence of this function, consulted many physicians, who prescribed iron, quinine, and various other tonics, but all to no purpose. Although having never experienced a single monthly flow, she married at the age of nineteen, and bore her first child one year later, the weight of which was pronounced by the attending physician to be twelve pounds. Several months after this birth, the patient noticed that her leucorrhœal discharge increased in amount, once monthly, emitted an exceedingly offensive odor, and, as it issued from the vulva, presented a rust-colored appearance. These peculiar discharges occurred during a period of about eight months, when she again became pregnant, and was delivered in due time of her second child, whose weight, she says, was fifteen pounds. A third, fourth, fifth, sixth, and seventh birth occurred at intervals of little more than one year, the product of each being unusually large children. Her eighth confinement took place in November, 1881, when Dr. Romaine delivered her of a still-born child in an advanced state of putrefaction, the weight of which, taken immediately after birth, was ten pounds. Following this birth there was a period of seven months during which the patient enjoyed fairly good health, and the last four months of which she had a regular monthly flow having a duration of three days. This, she said, was the first time in her life that she had her courses as other women have them. She again became enceinte, for the ninth time, and was delivered by Dr. Romaine of her ninth child, with the forceps, March 23, 1883. The weight of this child was seven pounds, while the secundines, immediately after expulsion, weighed three pounds.

"Remarks.—The case is interesting with reference to four points :

"First.—Postponement of menstruation until several months after the birth of the first child.

"Second.—Menstruation occurring only twelve times in twelve years.

"Third.—Birth of nine children during a period of twelve years.

"Fourth.—Placenta weighing three pounds while child weighed but seven pounds."

STRICTURE OF THE URETHRA—CHRONIC DIFFUSE NEPHRITIS.

DR. FERGUSON presented specimens accompanied by the following history : The patient was a male, forty-four years of age, a native of the United States, and a book-binder by occupation. He had a stricture of the urethra for twenty years, for the relief of which he was operated on, by perineal section, four years ago. The wound never healed completely, and since that time he had retention of urine several times, symptoms of cystitis, and all the urine passed through the fistula which remained open after the operation. He was admitted into the St. Luke's Hospital on January 29, 1883. One month previous to this date he had several attacks of paroxysmal dyspnoea which were relieved by treatment.

On admission he had marked dyspnoea and cedema of the legs. Urine was 1.016, alkaline in reaction, and contained ten per cent. of the column of albumen. He was put on milk diet, acetate of potassium, and digitalis. He improved slowly and left the hospital much benefited by his treatment, passing sixty ounces of urine a day, on February 26th. He was readmitted on March 15th. He said soon after his return home the cedema reappeared, his urine became scanty, and he suffered from dyspnoea, constipation, and dyspepsia.

His urine at this time was 1.014 in specific gravity, alkaline in reaction, and contained thirty per cent. of albumen and many pus-cells. Treatment did not relieve his symptoms. On the 18th he showed evidence of mental derangement. Urine continued scanty and contained a large amount of albumen.

He failed gradually and died on March 27th. During the last week he was often delirious, both during the day and night. Toward the close pulmonary cedema developed, and he was comatose for several hours previous to his death. His temperature was always normal, his pulse 114, and respiration 32 per minute.

Autopsy on March 28, 1883. The vessels at the base of the brain were thickened, the brain was anæmic but otherwise normal. There were thirty-eight ounces of serum in the right pleural cavity, and eight ounces in the left. The heart was moderately hypertrophied. The lungs were congested and intensely cedematous. Kidneys : The right kidney was normal in size, its surface was granular, marking indistinct, and much fat in the convoluted tubules. The left kidney weighed only one ounce. Its surface was granular, both cortex and pyramids markedly atrophied and cystic. There is a close stricture of the left ureter, which admits a probe not quite one-sixteenth of an inch in diameter. The ureter above the stricture is moderately dilated. The right ureter is normal. The bladder is enormously hypertrophied and distended. The prostate gland is moderately hypertrophied. There is a stricture at the bulbo-membranous junction which does not admit the passage of any instrument. Anterior to this stricture the mucous membrane of the urethra is rough in places, and at certain points in the course of the tube its calibre is slightly narrowed. At a point one inch posterior to the stricture there is an opening in the floor of the urethra through which a probe passes downward and forward through the perineum. Externally this fistulous opening is at the junction of the scrotum and perineum, and admits a probe one-sixteenth of an inch in diameter.

The Society then went into executive Session.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CONTAGIOUS DISEASES ACTS AND THEIR REPEAL—
DR. FARR—REWARDS TO MEDICAL MEN—MR. SPENCER
WELLS—OCCLUSION OF CEREBRAL VESSELS BY OIL.

LONDON, April 21, 1883.

A bomb-shell has fallen among the ranks of those who support the Contagious Diseases Acts of 1866 and 1869. Mr. Stansfeld's motion in the House of Commons last night, to the effect that the House disapproved of the compulsory enforcement of the Acts, was carried by a majority of 72—the numbers being, for the motion, 182; against, 110. Such a large majority could scarcely have been anticipated, even by the most sanguine enemies of the Acts, but the fact of the Government being divided in opinion amongst themselves probably gave considerable encouragement to the abolition party. Mr. Gladstone was not present, but his son (Mr. Herbert Gladstone) voted with the majority. None of the medical members spoke on either side. As a body, the profession is certainly in favor of the Acts as they now stand, on the ground that they have undoubtedly lessened disease. A few medical men are against the Acts, and of late public opinion has been growing against them, chiefly on moral grounds. The various religious organizations have done a good deal to foment an agitation against them. Many army surgeons and chaplains are of opinion that not only are the Acts hygienically satisfactory, but that they have actually lessened immorality in the districts where they are in force, especially juvenile prostitution. The opinion of the House of Commons as expressed last night is doubtless the death-knell of the Acts, at any rate in their present form. Legislation is slow in this country, so a change in the law is hardly to be expected this session, which is perhaps fortunate, as it will give time to members to consider the subject more carefully. It is satisfactory to find that the Acts have, in general, been carried out carefully, and without any of the brutalities of which the French police have been guilty. Some of the latter, described in this month's number of the *Westminster Review*, are positively sickening.

Death has again been busy amongst us. One of its latest victims is Dr. William Farr, who has just died at the ripe age of seventy-five. In him has passed away one who may justly be described as the founder of our present system of "Returns by the Registrar-General." The importance of this work it would be difficult to exaggerate. Almost all our present knowledge of vital statistics is due to Dr. Farr. Our insurance companies owe him an immense debt of gratitude, for he placed no key upon his knowledge, but the results of his enquiries were published for the free use of all, and from the information supplied in Dr. Farr's tables many of them have constructed their scales. The head of the statistical department, he was for many years regarded as the virtual "Registrar-General," the latter post being merely a sinecure, and when a few years since the post became vacant, and Dr. Farr applied for it, loud and widespread was the indignation amongst the profession that Dr. Farr should be grudged his well-earned reward. The office was bestowed on a political puppet, and Dr. Farr retired from the work which he had founded and successfully carried on for so many years. The only honor he ever received was a paltry C.B., a dignity which, when bestowed, seldom leads to anything higher. Dr. Farr was not merely a government official; he was in early life a journalist and contributed several papers to the literature of hygiene. A testimonial was got up by public subscription and presented to him on the occasion of his retirement from public life.

Curiously enough, in the very week of his funeral a discussion on rewards for public services has been going on in the Houses of Parliament, the occasion being the

Egyptian campaign and its leaders. The profession has always complained of imperfect recognition, and when as now, a medical man receives some honor or reward it is usually the case that the favored recipient is the holder of some Court appointment, and is thus brought into contact with those who prefer a medical attendant with a handle to his name. Such is the case with Mr. Spencer Wells, who has just received a baronetcy. Mr. Wells is now President of the English College of Surgeons, and no one will grudge him his reward for much good work in the past. It is, however, a significant fact that he is also Surgeon to the Queen's Household.

At the last meeting of the Pathological Society, Dr. Handfield Jones exhibited some microscopic specimens which excited some interest, and to examine which a special committee has been appointed. They seemed to show that atheroma of the larger cerebral vessels may lead to blocking of the smaller, by globules of oil.

OUR PARIS LETTER.

TYPHOID FEVER—RESTRAINT UNDER PRETENCE OF INSANITY.

(From our Special Correspondent.)

PARIS, April 13, 1883.

THE long and yet inexhaustible discussion on typhoid fever at the Academy of Medicine has at last been brought to a close, but before it was so it had merged into a war against microbes, and in the *mêlée* poor M. Pasteur was rather severely handled. Professor Peter led the attack and contested the correctness of M. Pasteur's views respecting his inoculation for the mitigation or prevention of certain diseases, as they were performed under circumstances so different and on animals so dissimilable in their nature. Moreover, they could not stand the test of clinical experience in human medicine, whatever may be the results among the lower animals. Even among the latter, he said, it was questionable whether inoculations as practised by M. Pasteur were of any real value, as, to acquire a certain amount of immunity, it was necessary that the inoculations should be performed at short intervals, and during the whole lifetime of the subject. Besides which, Professor Peter did not believe that the microbes were the real agents of disease; that is, they had no pathogenetic power inherent in themselves, but that they were the simple vehicles of virulent or infectious diseases, so that the same microbe may transmit different diseases in passing from one organism to another. M. Bouley, the eminent Professor of Veterinary Medicine, stood up as the champion of Pasteur's views, and although he was most eloquent in his response to Professor Peter, yet it cannot be said that his arguments were sufficiently convincing, and the Academy, weary, no doubt, of the interminable discussion on typhoid fever, has appointed a commission to formulate conclusions, which simply means they have had enough on the subject, and I think your readers too.

In continuing their researches on the inherent properties of oxygenated water, or the peroxide of hydrogen, on the animal organism, which has been proved to possess antifermentative or antiseptic properties, MM. Paul Bert and Regnard lately submitted a paper at the Biological Society, demonstrating the action of oxygenated water on albuminoid substances, and found that when shaken together with the white of egg the latter becomes incoagulable by heat, but retains its coagulability by the other agents of coagulation. The substance thus formed constitutes a variety of albuminose, which behaves like albumen, but only in a minor degree. The same result is obtained with the albumen of the blood. In treating fibrin with oxygenated water, the new substance becomes incoagulable by heat or nitric acid, but coagulable by the other agents of coagulation. This, then, is a new modification of albuminoid substances, and the authors expressed a hope that these results will induce chemists to make further researches and

be able to explain the different properties of albuminoid substances, which will prove of great value in the diagnosis and therapeutics of certain affections.

A recent "cause célèbre" of illegal or unjustifiable "sequestration" has created some sensation in this country, on account of a young lady who was removed by force from her own home and placed in a "Maison de Sante," or private asylum, under the pretence of insanity, to which effect a certificate was given by an ordinary physician. The case was brought before the police court, and Dr. Legrand du Saulle, one of the leading alienists of this country, was directed to re-examine the presumed lunatic. The purport of Dr. Legrand du Saulle's report did not quite refute the tenor of the medical man's certificate, but he asserted that, although the mental condition of the patient was below the normal, yet it did not necessitate her being removed to a lunatic asylum. The young lady was in consequence set at liberty and the charge of illegal sequestration was brought against those who were concerned in the act. The medical man who signed the certificate was severely reprimanded for having acted with such levity, as the certificate was granted only on one visit, which lasted but a few minutes. The principal agents have been remanded for the Court of Assizes, as sequestration is considered not a misdemeanor but a crime, the police court being therefore incompetent to give judgment in the case. This unsatisfactory state of things drew the attention of the authorities to the law of 1838, which is considered very defective. According to this law any citizen, on the simple certificate of a physician, whether he be the regular medical attendant or not, may be confined in a mad-house. It is said that the tenor of the law referred to gives the doctors too great latitude, as the power thus vested in them may be abused. No doubt it has been, as in the case under notice, and will be again, but it is the opinion of some alienists, that however lax that law may appear, yet it is not sufficiently rigid, as there are a great number of lunatics at liberty whose place would be better in an asylum. Dr. Legrand du Saulle, a high authority on the subject, has calculated that there are twelve hundred lunatics who go about the streets at the present moment, and in a very interesting work by the same author he made the startling statement that three-fourths of those who spoke at public meetings, particularly of a political character, were not of sound mind. For instance, a great number of the "communists" were insane or on the border-land of insanity, as shown by their acts, and whether insanity is contagious or not, there can be no doubt that, judging from recent events, there are other people besides French communists or anarchists who are manifestly affected with the malady.

In connection with the above I may mention that Dr. Legrand Du Saulle has been appointed principal physician to the infirmary for lunatics attached to the Prefecture of Police, in the room of Dr. Laségue deceased. This infirmary is intended for the reception of people out of their mind, whether they are really or only suspected to be so. Here they are detained for twenty-four hours, during which time they are visited by the physician and disposed of according to circumstances. It appears from a report lately published that, on an average, there are three thousand individuals who are annually taken to this infirmary.

ANÆSTHESIA FROM GALVANIZATION OF THE SUPERIOR LARYNGEAL NERVE.—Brown-Séquard states that it is sometimes possible to produce complete general anæsthesia by galvanization of the superior laryngeal nerve. In the anæsthesia as produced in a dog, irritation of the brachial plexus elicited no expression of pain. Another effect of galvanization of this nerve is an extraordinary acceleration of the respiratory movements. At the moment of the irritation of the nerve, the respiration, which was calm and slow, counting about 12 to the minute, suddenly rose to 120 or 130 respirations per minute.—*La Tribune Médicale*, March 11, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 21, 1883, to April 28, 1883.

CLEARY, PETER J. A., Major and Surgeon. So much of par. 10, S. O. 273, November 23, 1882, from this office as directs him (then captain and assistant surgeon) to report in person to the Commanding General, Department of Dakota, is revoked, and upon the expiration of his present sick leave of absence, to report in person for assignment to duty in the Department of the Missouri. S. O. 95, A. G. O., April 25, 1883.

HOPKINS, WM. E., First Lieutenant and Assistant Surgeon. Now on leave of absence in New York City, to be relieved from duty in the Department of the East, and assigned to duty in the Department of Arizona. S. O. 95, par. 7, A. G. O., April 25, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending April 28, 1883.

PARKER, J. B., Surgeon, ordered to the Torpedo Station, Newport, R. I., vice Surgeon WM. J. SIMON, detached and waiting orders.

SIMON, M. H., Passed Assistant Surgeon, detached from the Naval Hospital, Chelsea, Mass., and ordered to the Naval Hospital, Yokohama, Japan, vice Passed Assistant Surgeon C. BIDDLE, detached and ordered to the Richmond.

AUSTIN, A. A., Passed Assistant Surgeon, from the Richmond and ordered home.

BRYAN, J. H., Assistant Surgeon, ordered to report May 1st for examination for promotion.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 1, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
April 24, 1883.....	17	6	141	5	166	51	2	0
May 1, 1883.....	13	7	153	4	167	54	2	0
<i>Deaths.</i>								
April 24, 1883.....	0	2	20	3	26	26	1	0
May 1, 1883.....	1	3	23	4	22	17	1	0

Of the few cases of small-pox occurring this year, an unusually large proportion have been either of the confluent or hemorrhagic variety, causing a proportionally large death-rate. Twenty-one cases of typhus removed from St. Stephens Home up to May 1st.

Whole number of deaths reported for week ending April 21st, 630, of which 84 were from pneumonia.

ALUMNI ASSOCIATION OF BELLEVUE HOSPITAL MEDICAL COLLEGE.—At the annual meeting, held at the College on April 21st, the following officers were elected for the ensuing year: *President*, F. A. Castle (re-elected); *First Vice-President*, V. P. Gibney; *Second Vice-President*, W. T. Alexander; *Recording Secretary*, R. Van Santvoord; *Corresponding Secretary*, R. Newman; *Treasurer*, W. H. Katzenbach; *Historian*, F. A. Castle.

Managers to serve until 1884: J. D. Bryant, F. A. Castle, W. A. Ewing, F. E. Hyde, G. R. Kent, W. T. Lusk, R. Newman, J. R. Taylor, C. Terriberry, R. M. Wyckoff. *To serve until 1885*: E. S. Bunker, L. J. Godon, G. Griswold, E. M. Lyon, E. A. Maxwell, J. B. Messemer, J. J. Van Voorst, W. R. Varick, D. L. Wallace, T. Wilde. *To serve until 1886*: G. W. Bull, T. H. Burchard, V. P. Gibney, E. C. Harwood, A. M. Jacobus, C. A. Leale, A. V. B. Lockrow, L. H. Sayre, A. A. Smith, L. M. Yale. *To serve until 1887*: W. T. Alexander, F. H. Bosworth, F. S. Dennis, W. H. Katzenbach, S. N. Leo, J. P. Munn, L. Putzel, G. H. Swezey, R. Van Santvoord, W. G. Wylie.

THE HANDS AND MUSCLES OF PRIZE-FIGHTERS.—A trainer and sporting man discusses in the *Sun* the subject of prize-fighters' hands: "I have seen, in my experience, that the smaller the hand, if in proper condition, the more execution it does as a general thing, particularly in dealing chopping blows. A small, hard hand often cuts like a knife, whereas powerful, big hands and huge muscles behind them may knock a man down without hurting him much. And this thing of getting up very big muscles is liable to be carried to extremes, and to do more harm than good. The training and development of muscle has a tendency to draw up and tighten the sinews, and to make the muscles act more slowly. What a pugilist needs is quick, natural muscle, and small, hard hands for it to punish with. Heenan's hands were of quite a moderate size, and would have been small but for the blacksmithing work he did in his youth. That spread them. Yankee Sullivan had a very small hand and a small arm, but there wasn't a wicked fighter in the world. He was really an eleven-stone man when in condition, though he looked like a man of twelve stone. John Morrissey had a good-sized hand and short arms. But he wasn't any criterion to go by in any way. Tom Hyer did not have a large hand in proportion to his size. He was six feet two inches, you know, in height, one of the most formidable-looking men ever seen, and, for his size, his hand was even small.

"It is a very important thing to get the hands in good condition before a fight. To do that if they are pulpy and soft, we sweat them as much as possible and rub them, to work off the superfluous flesh and fatty tissue. Then, about two weeks before the time for the fight, we begin pickling the hands. This is deferred as long as possible because it is a very disagreeable operation. It gives a very disagreeable feeling to the hands, and if you incautiously touch your eyes with fingers that are undergoing the pickling process, you will hurt them severely. The pickle is composed of vinegar, alum, horseradish, saltpetre, and tan water, all boiled together. When a man's hands were inclined to be very fleshy, we used to put in a little copperas also, which cuts down the flesh very rapidly. That, however, was only in extreme cases. When a man has come in from his afternoon exercise, had his bath, rub down, and supper, then for a while before he goes to bed he has to sit and soak his hands in a pot of that pickle, rubbing them hard at the same time. Soon they get hard and almost as rough as a nutmeg grater. Once a day is enough. It takes some time after the operation for the hands to get fleshy and soft again, much longer than it does to bleach them to a decent color again."

BLEEDING COUP-SUR-COUP IN PNEUMONIA.—Not long ago Professor Hardy, in his clinic at La Charité, protested against the unreasonable prejudice against all venesection which has taken the place of its former extravagant adoption. His audience seemed almost astonished at his presenting to them a case in which he had performed bleeding for pneumonia three times in the twenty-four hours, and that in the very theatre in which Bonillaud formerly so warmly advocated the *coup-sur-coup* practice, since almost forgotten. The subject of the case was a man of thirty-seven years of age, of good constitution, and in the enjoyment of good health until four

days prior to admission with well-marked signs of acute, fibrinous, lobar pneumonia of the left side. In presence of this case of uncomplicated pneumonia occurring in a man in the prime of life and of good health, and who had no morbid antecedents except two similar attacks some years before, Professor Hardy ordered 400 grammes of blood to be drawn at once, 400 in the evening, and 300 next morning, so that 1,100 grammes were taken in the twenty-four hours, and a somewhat abundant epistaxis followed some time after the last venesection. After the third bleeding the condition of the patient was greatly improved. The oppression of the breathing was relieved, and the cough and expectoration were sensibly modified, the temperature descending first to 39° and then to 38° Cent. Next day all fever had entirely ceased, the temperature being 36.8° , the pulse 80, and the respiration 18; the cough had disappeared, and the expectoration, which persisted awhile, was white and fluid. The local signs decreased in like manner, so that on the second day there scarcely remained a slight dulness and obscurity of respiratory sound at the base, respiration being quite normal throughout the rest of the lung. This rapid disappearance of the local signs was, in fact, one of the most special and remarkable facts of the case, when we remember how frequently such signs are found to persist for several days after the complete disappearance of fever and the general symptoms. In this case the disappearance was almost simultaneous; and Professor Hardy attributes this favorable result to the bleedings practised after the method of his great predecessor. But while treating the patient in this manner, Professor Hardy had the case of a colleague under treatment, in which the conditions of the patient's general state and local lesion were quite different, and in which blistering, Todd's alcoholic mixture, tonics and reconstituents were the means required, and were followed by complete success.—*Medical Times and Gazette*.

DIET AND RESISTANCES TO INFECTION.—Professor Feser, of Munich, has been making some examinations on animals, with a view to establishing the connection believed to exist between diet and the liability to infection. In the trials he has made on rats inoculated with the poison of cattle distemper, he demonstrated the fact that the animals which had been fed upon a vegetable diet were quickly attacked by the disease, while those which had been fed exclusively on meat resisted the effects of the inoculation. In recording this fact, a leading English journal in connection with the European leather trade, attributes to the greater amount of vegetable diet, in the shape of bread, beer, etc., taken by wool-sorters between Saturday and Monday the greater frequency of cases of outbreak and the aggravation of disease during this period. We fear that the above theories will not hold good when widely applied to man.

EXPERIENCES OF THE NAVAL MEDICAL DEPARTMENT WITH SOME NEW REMEDIES.—In the spring of 1882 the Bureau of Medicine and Surgery distributed a number of new remedies to various stations with the request that they be tried and the results reported. The following report was given regarding some of them by Dr. Hudson, at a meeting of the Naval Medical Society:

Cascara Sagrada.—Dr. Dean, Naval Hospital, Philadelphia, reports: "This is a reliable and unirritating laxative and cathartic, but the fluid extract is nauseous and objectionable; the cordial is, however, much less so." Dr. Gorgas, Naval Academy, says: "It is a certain cathartic, and in small doses an excellent laxative. In a case of chronic constipation in a child of four years this remedy afforded perfect relief." Dr. Bloodgood, Naval Hospital, New York, observes: "It possesses undoubted virtues as a mild cathartic, and is not of unpleasant taste."

Cascara Amarga.—Dr. Bloodgood has tried this in several cases of consecutive syphilis, but without any perceptible results.

Stigmata Maidis.—Dr. Dean reports that this was tried in several cases of chronic cystitis, and, while they were not cured, the results were favorable in mitigating the severity of the symptoms. Dr. Gorgas was able to speak very highly of it as a demulcent and diuretic. Dr. Bloodgood states that in cases of acute and chronic cystitis its action was not remarkable.

Quebracho.—Dr. Gorgas used this remedy in several cases of asthma, and in one only was there marked benefit, but the relief here was immediate and complete. Dr. Dean states that temporary relief followed in some cases, while in others there was no result. Dr. Bloodgood found that in cases of cardiac hypertrophy, with dyspnoea, in which it was tried, there was no relief.

Piscidia Erythrina (Jamaica Dogwood).—Dr. Sudards, Naval Hospital, Norfolk, Va., finds this agent to be slightly anodyne in its effects in mild cases of neuralgia, and in large doses it produces sleep. Dr. Dean tried it in three cases in full doses; no effect in two, and sleep induced in the third; it did not appear reliable as a hypnotic. Dr. Bloodgood found only negative results.

Yerba Santa.—Tried by Dr. Dean in several cases of chronic bronchitis and asthma, with no decided benefit. Dr. Bloodgood reports like results in cases of chronic pneumonia and secondary syphilis.

Manaca.—Dr. Bloodgood states that this was carefully tried in cases of chronic rheumatism. Full doses produced severe headache, diarrhoea, tenesmus, and bloody stools, but there were no beneficial results.

Sanguis Bovis Exsiccata.—This was tried by Drs. Dean and Bloodgood without benefit; the latter reporting nausea from its use.

ANGINA PECTORIS SUCCESSFULLY TREATED WITH NITRO-GLYCERINE.—Dr. Jacob Frank, of Buffalo, N. Y., relates the history of a married woman, aged thirty-one, mother of three healthy children, who had for six years suffered intensely from attacks of angina pectoris. Dr. Frank does not say whether there was any organic heart trouble. She was treated with morphine and various other remedies, but without success. Dr. Frank at first applied the faradic current over the pneumogastric, and got relief. During the next attack, however, this failed. The patient was then put upon nitro-glycerine, $\mathfrak{M}\mathfrak{j}$. of the one per cent. solution gradually increased to $\mathfrak{M}\mathfrak{v}\mathfrak{j}$, t. i. d.; then decreased. The patient has had no further attack. Dr. Frank writes: "During the course of this treatment a rather curious phenomenon occurred. After she had been taking this nitro-glycerine for about six weeks, aphthae broke out on the tongue, mouth, and fauces. The medicine was stopped, and these ulcers treated with borax, etc., after which the treatment was again resumed." Dr. Frank gives the usual explanation of the curative action of the drug.

LOUISVILLE SCHOOL OF PHARMACY FOR WOMEN.—Dr. J. P. Barnum writes us that there is a school of pharmacy for women in Louisville, and that it is well endorsed, and has already a fair attendance. He further writes: "The object of the school is to thoroughly educate women as practical apothecaries, and by this means open to them another avenue by which they may obtain a livelihood. That woman is eminently fitted for this business the writer can testify from personal experience, having made the practical test in his own business. He has found female assistants equal to those of the other sex in everything except physical strength, while they are very far superior in delicacy of manipulation, accuracy, and neatness in a multitude of details, which tend to make the prescription either attractive or unpleasant to the eye, and agreeable or nauseous to the palate of the sick."

THE TREATMENT OF ERYSIPELAS WITH WHITE-LEAD PAINT.—Dr. William W. Reese, Brooklyn, N. Y., writes: "A note on page 420 (from *The Lancet*) of the last number of THE MEDICAL RECORD (April 14th), on the treatment of erysipelas with 'white lead paint,' suggests to me to give some of my experience also with this local ap-

plication during the past fifteen or eighteen years, which may possibly induce some other practitioners to give the benefit of the treatment to their patients, as well as save themselves some solicitude at times and a good deal of trouble.

"Reasoning as to the sedative and other properties of the carbonate of lead and the peculiar character of the diseased surface, I began the local application of the article, in a case of the disease developed on the face and head, with a patient about sixteen years old; and have continued to employ it in all cases since, whether idiopathic or traumatic, and invariably with satisfactory results, in ages varying from that already mentioned to over seventy years—not, of course, disregarding the indications pretty generally to be observed for the employment of a mercurial purgative in the beginning and tonics subsequently.

"The lead mentioned must be ground up very finely with flaxseed oil *only*, and after the manner of house-carpenters, and applied with a soft brush over and a little beyond the affected surface of both face and head, and renewed whenever it should get rubbed off. There need not be any fear of injurious absorption *through* the diseased skin. Unless the hair on the head be very thick, it need not be thinned for the purpose of applying the paint. As evidence that the lead will not injure the hair (a consideration or fear that might create resistance with some persons), one patient, who was over seventy years of age, and had had a very thin crop on the top of the head, exhibited, some months after getting well, a greatly increased supply, and of his own growth."

Dr. N. O. D. Parks, of Ashton, R. I., writes: "Two days after reading in *The Lancet* the article to which you refer in your last issue from Mr. Barnwell, of Charing Cross Hospital, London, on 'Rapid and Successful Treatment of Erysipelas,' I was called to a child, who about a week previously had received a burn on the back of the right hand. When I saw him there was a sore about the size of a silver dime, from which started a dusky erysipelatous blush all over the hand and about two-thirds up the back of the forearm, partially encircling it in front with great swelling and fever and intense pain in the affected part. Tongue very foul, temperature 101.4°; pulse, 108. I painted the entire reddened surface, and about three inches beyond, with a thick coating of white-lead paint, enveloped the limb in cotton-wool, and prescribed tinct. ferri chlor. The next morning I was delighted to find the child playing about, tongue clean, temperature 97°, pulse 84, and he has continued well ever since.

"A writer in a subsequent number of *The Lancet* calls attention to the fact that this treatment is by no means new, at least as relates to burns and scalds, and refers to Wood & Bache's United States Dispensatory (1858, p. 601), where will be found the following: 'It (plumbi carbonas) is recommended for scalds and burns by Professor Gross; and Dr. Henry, of Iowa, bears testimony to its efficacy. The white lead is first brought to the consistency of cream by linseed oil, as in making common white paint, and then brushed over the inflamed surface. Its external use, however, is viewed by many practitioners as dangerous, on account of the risk of absorption, but the occurrence of bad effects is rare.'

"It will be seen that I did not trust to the efficacy of the white-lead paint alone, but I think the rapidity of the cure may be justly attributed to it."

THE PAPER ANGEL CASE.—The case of Miss Gannon and the paper angels, which has lately come up in the courts again, was described in full in *THE RECORD* some time ago. It illustrated a curious form of hysteria, combined probably with the hypnotic state.

REPORT OF TWENTY-NINE CASES OF TYPHOID FEVER.—Dr. J. T. Deemer, of Manorville, Pa., sends us the notes regarding twenty-nine cases of typhoid fever treated by him in private practice during the past year. All the

cases were either of severe or medium type of severity. The *mortality* was three, or about ten per cent., which is a favorable showing. The deaths were, one from perforation of the bowels, two from exhaustion. They occurred in cases above the age of twenty years.

Relapses occurred in three cases. Of the twenty-nine cases twenty were adults.

Hemorrhages occurred in several cases. In two cases there were seven hemorrhages, but recovery took place under the use of ergot and turpentine.

Persistent diarrhoea was met with in two cases, of which one died. The other recovered under the use of morphine and sulphate of copper.

Ordinarily for the diarrhoea bismuth, with a little opium controlled, was sufficient. In both cases of bad diarrhoea, beef-essence had to be discarded.

Tympanites was present in about two-thirds of the cases, for this turpentine emulsion was used with good effect.

The *temperature* ranged in most cases from 102° F. to 105° F. The treatment for reducing the temperature was quinine and mineral acid, with sponging morning and evening. The mode of exhibition of quinine was about two grains every second hour, combined with either nitro-muriatic or arom. sulph. acids.

Stimulants were used in nearly every case, from four to eight ounces of whiskey in twenty-four hours, as indicated by the heart's action. Whiskey and brandy were preferred. Wines being too bulky. The diet consisted of beef-essence, rice, water, tapioca, milk, etc.

In the most cases quinine acted most happily, in a few cases it seemed to cause cerebral trouble.

One case was complicated with *articular rheumatism*. In this case there were no cardiac symptoms of rheumatism. Salicylic acid and quinine were used, and the case recovered after a lingering illness. One case was complicated with *pneumonia*, but the patient recovered.

Three cases were complicated with *bronchitis*, one of these was one of the fatal cases before enumerated. The local applications to the bowels used were inunctions, with lard and turpentine, in some cases where much tenderness existed, light warm poultices were applied.

The causes seemed clearly traceable to bad drinking-water, which undoubtedly was contaminated with fecal impurities from privies in close proximity to the wells from which the water was obtained. Two nurses contracted the disease.

The above treatment has been compared side by side with other modes of treatment in the hands of other physicians, and has been found to yield as good results as any.

A CORRECTION.—The name of the author of the article entitled "A Novel Mode of Cleansing the Vault of the Pharynx," published in *THE RECORD* of April 28th, was by mistake printed Dr. G. Fairfax Whitney, instead of Whiting, as it should be.

We have been requested to insert the following as a special favor to the signers:

"TO THE MEDICAL PROFESSION OF THE STATE OF NEW YORK:—We, the undersigned, ex-presidents of the New York Academy of Medicine, desire to record our approval of the action taken by the Academy at the Stated Meeting of April 19, 1883, reaffirming the ethical clause of its by-laws, and our indorsement of the course pursued, by request of the Council of the Central Organization of the New York State Medical Association as presented at this meeting by Dr. Austin Flint, Jr. WILLARD PARKER, M.D., President New York Academy of Medicine, 1856.

JAMES ANDERSON, M.D., President New York Academy of Medicine, 1861 to 1867.

AUSTIN FLINT, M.D., President New York Academy of Medicine, 1873 to 1875.

SAMUEL S. PURPLE, M.D., President New York Academy of Medicine, 1875 to 1879.

NEW YORK, April 30, 1883."

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Original Lectures.

THE DETERMINATION, BY THE GENERAL PRACTITIONER, OF THE NECESSITY FOR WEARING GLASSES.¹

By D. B. ST. JOHN ROOSA, M.D., LL.D.,

PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL, SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL; PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE UNIVERSITY OF VERMONT.

LECTURE I.

GENTLEMEN—I suppose that most of you will be general practitioners of medicine. Even if some of you are to become specialists, you will be general practitioners for some time before you enter upon special practice. As general practitioners you desire to know the things which are essential to the successful filling of such a position. Some of this knowledge I attempt to teach in the ophthalmological course in this college. To-day I begin a series of three lectures on the conditions of the eye which require the use of glasses. I propose to speak only in a way in which the average general practitioner may fully understand. You may, therefore, dismiss from your minds any notion that I am lecturing to men who have already taken some instruction in ophthalmology, or who have attended special courses of instruction in hospitals where diseases of the eye are treated.

I presume only, that you are medical students of one or more year's standing, that each one of you has a knowledge of the anatomy of the eye, that all of you have a general knowledge of its physiology, and that each one of you knows something of the laws of light as at present understood.

If you are deficient in any of these respects, these lectures, whatever they may accomplish under other circumstances, will do you but little good. He who knows nothing whatever of the theory of the manner in which undulations of the atmosphere produce what is called light; who knows nothing about the bending of rays of light when they pass from one medium into another; who knows nothing about the cornea, sclerotic, optic nerve entrance, the retina, and so on, will profit but little from what I shall have to say. It is in the attitude of a good general student that I expect the hearer to stand, and I hope he will go out from these three lectures enabled to give a correct opinion in a given case as to whether or not the patient would probably be benefited by properly chosen spectacles.

The necessary apparatus for the oculist embraces quite a large variety of glasses. I have brought my working-case here simply for the purpose of showing to you what is used by those who make diseases of the eyes a specialty. I do not expect that you will attempt to use one so large. Here it is, as it is in daily use. With it we may correct every impairment of vision that is dependent upon an error in refraction or accommodation of the eye.

On this side is a set of concave glasses extending from those of two inches focal distance to those of sixty inches focal distance. On this side is a set of convex lenses. Here is a series of prisms ranging from two degrees to fourteen degrees. Here is a disk with a small central aperture, and here is one without the central

opening. Here is a colored glass. Here is a tape measure.

There is a frame for holding a pair of glasses, and here is one for holding two pairs of glasses, so that we are able to make combinations, change the axis of the glasses, and so forth. Then there is a series of the lenses not ground from spheres, but from cylinders, cylindrical glasses, glasses for correcting the defect of vision known as astigmatism. With these you have, so far as glasses go, an outfit for the man who wishes to correctly fit any conditions of the eyes that may require spectacles. But we will put this large case aside. We do not need it for our present purpose. It will be impossible for the general practitioner to equip himself with sphygmographs, ophthalmoscopes, laryngoscopes, test-glasses, and all the appliances which the knowledge of the nineteenth century has rendered necessary for special experts. You will, however, have no right to the name of good general practitioners, unless you are able to say, in a given case, whether it be one of hypermetropia, myopia, presbyopia, or amblyopia.

Let us study the case before us and from it learn the method by which you are to work. You will go to your village where you are to begin the practice of medicine, and where there is no specialist. Let us suppose that a woman brings her child to you for some examination with regard to its eyes. You shake your head at once as you see that the eyes are not red, there is no opacity of the cornea, the pupils are movable, and you say, "Madam, I do not know anything about eyes, and I prefer not to meddle with them."

"But, Doctor, do you think I can do anything for my child? What shall I do? She cannot see as well as the rest of the children. Do you think she is going to be blind?" You will find it to your advantage and it will add to your self-respect to be able to answer these questions, and you should be able to do so correctly, and put your would-be patient's mind at rest.

You will have in your office a set of test-types, for you can get these by an expenditure of twenty-five cents. I will show you a sample. I will not attempt to tell you the history of these test-types; that you can find in any of the special books on affections of the eyes. They are known as Snellen's test-types, from the name of the distinguished Dutch oculist who provided them for the profession. You will assume from what you have heard and what is stated in the books that this large letter "A" should be seen at a distance of two hundred feet, by a person whose vision is normal. The letter in the next line should be seen at a distance of one hundred feet, and so on until you reach the bottom line of letters, and that should be read at a distance of twenty feet. Here, then, you have an arrangement by means of which you can find out whether or not there is any loss of vision. This is the first step to be taken in the examination, no matter what the defect in vision may actually be. Persons are often said to be blind when they see moderately well, and are said to see very well when they see very badly, or scarcely at all, but with a card like this hung up across the room at the distance of twenty feet or less, you will be able to determine accurately whether or not the vision in a given case is deficient. You may not have a room twenty feet long. If not, perhaps an adjoining hall may be added, or you may apply the test at the distance of sixteen or even twelve feet; but these are difficulties which will quickly be overcome if you are in earnest concerning

¹ Delivered at the University Medical College, Session of 1881-82.

your investigation. The state of bewilderment some general practitioners are in when examination of an eye is mentioned, is only to be compared to the dismay which comes over the mariner when he finds himself in a dense fog, and when he fears that the next moment he may run upon the shore. There is no need for this bewilderment. The means for learning these things about the eyes are perfectly simple. All that is necessary is a well-lighted room, a set of test-types, and a patient complaining of his or her eyes, and we are ready to begin a scientific investigation of the vision.

Our little patient's name is Maggie; she is twelve years of age. Let us allow her to tell her own story. She complains of pains in her eyes, which come once in a while through the day. They generally occur when she is reading and studying, for she is a school-girl. Without doubt the same pains would occur were she writing or sewing, or doing any similar work which engaged the eyes steadily.

She recollects that her eyes began to pain her about two years ago, but does not remember whether they troubled her before that time or not. She locates the pain in what we know as the *orbicularis palpebrarum* muscle. She says that her eyes begin to pain her whenever she looks at her book or any near object for ten or fifteen minutes.

We will first do what should always be done in every case, namely, inspect the eyes. The eyelashes are perfectly free from secretion. The cornea is perfectly clear. I shut her eyelid over the eyeball, and then remove it and allow the light to come in quickly, and I see that the pupil moves. I evert the lids and find that they are healthy. Her eyes, then, are apparently, to the external view, normal, and yet she complains that she cannot use them steadily for any length of time without suffering pain. We have found a symptom, and only a symptom. That symptom is pain upon any continued use of the eyes. It has existed more or less for two years, and occurs chiefly when the little patient attempts to read. The name of that symptom is *asthenopia*, or weak sight. The definition of *asthenopia* is inability to read, write, sew, etc., continually without pain or discomfort. Thus we have gone in a circle. What is the cause of this *asthenopia*? Can we find it out? If so, how? You might say: "I cannot go any further; it will probably require the ophthalmoscope to ascertain the condition of the eyes. Doubtless she has commencing atrophy of the optic nerve; or amaurosis; or, forgetting that young people seldom have glaucoma, you may say perhaps this is a case of glaucoma, and you only breathe with freedom when some specialist or some other general practitioner assumes the responsibility of the case." But suppose you do not say so; and on the contrary assume that the probable cause of this *asthenopia* can be determined without a knowledge of the ophthalmoscope, or the appearance of the optic nerve or of the retina. At any rate, let us see how far we can go without these instruments of precision. In the first place we will measure twenty feet from this chair where Maggie will sit, and at that point the card on which are Snellen's test-types will be held. I ask in this instance that twenty feet be measured in order to carry out the form of examination with absolute correctness and see whether this patient can read the bottom line of letters at this distance.

But, after all, it is only approximately correct. There are but few absolute truths in this world. There are but few statements which are not modified by circumstances. For example, I hold in my hand another test-type in which the letters are of the same size as in Snellen's, but they are a little closer together, and, as a matter of experience, it is a little more difficult to see them at a distance of twenty feet; but I will not dilate upon this trifling fact, because it may lead to confusion in your minds.

Can a given patient have a very serious disease of the back part of the eye, considerable optic-nerve or retinal trouble, and still be able to read the letters in the

lower line at the distance of twenty feet, or, as oculists say, who has vision $\frac{20}{20}$ or normal? We may safely answer this question in the negative, and say that, as a rule, these conditions being fulfilled, there is no serious disease of the back part of the eye, nor of the refracting media, the cornea, or the lens, or the vitreous. Yet this, after all, is a statement which is only approximately true. It is generally true. The exceptional cases which you will occasionally meet with you will soon learn to place by the side of these ordinary ones, and you will soon come to the making of a correct diagnosis in them. We will therefore assume, as a general rule, that a person who can read $\frac{20}{20}$ has perfect vision, and we may exclude disease at the back part of the eye. We have already assumed that you do not use the ophthalmoscope, and we shall not be able to go further without this assumption.

It is essential in this scientific experiment, as in all others, to exclude, so far as can be done, all possible sources of error. It is a wise thing, therefore, not to keep these test-types hung where the child can see them, even for the five or ten minutes that you are conversing with the mother or friend, for a bright child may learn all these letters within that space of time, and when you come to your testing, may assume to read them readily at any distance.

It is also proper to test each eye separately, because the eyes may not be alike. We will therefore cover Maggie's left eye by holding a bit of pasteboard closely in front of it, and then ask her to read. [The patient reads.] She reads all these letters readily at the distance of twenty feet, and we can say, so far as the right eye is concerned, that she has no serious disease at the back part of it. The vision of the right eye is normal: V. R. E., $\frac{20}{20}$. [The right eye was then covered, and the patient asked to read letters in different lines at random, in order to avoid the possible error of having committed them to memory.] The vision of the left eye is normal: V. L. E., $\frac{20}{20}$.

We are now no further in our study of the case than we were before, except that we are able to say that the child has no very serious disease at the back part of the eye, and she is not going to be blind from her present trouble. These are certainly somewhat important facts. Let us take another step. We have been told that there is a condition of the eyeball in which it is too short from before backward. You have already seen a diagram by which lectures upon this condition have been illustrated, and here you may see it again.

You have been told that the rays of light which come from objects at an infinite distance are practically parallel; that an eye of the right length does not need to exercise muscular strength in order to unite these parallel rays so that they make an exact focus upon the layer of rods and cones of the retina, where the image is received.

You will also remember that there is a ciliary muscle, represented in this diagram, which acts in a certain way upon the capsule of the lens so as to allow it to become thicker. Objects situated at a distance from the eye of less than twenty feet emit divergent rays. These are the two rays of light we find in nature. Those coming from an infinite distance are practically parallel, those from a point near at hand are divergent. The rays of light which come from an illuminated landscape one-fourth or one-half a mile distant or one hundred feet or twenty feet away are practically parallel. The rays which come from a book read at the ordinary distance at which it is held from the face, or at any distance less than twenty feet, are divergent. These are the *only* rays which nature exhibits. We may have convergent rays by the aid of lenses. This child has been receiving parallel rays, which came from illuminated objects situated twenty feet distant from her eyes, and she has been able to read the letters in the bottom line. Are you ready to assume, now, because she has done that, that her eyes are of the

right length? You cannot safely assume that, because she may have been making an effort, such as the properly shaped eye does not make, in order that vision may be clear. In other words, she may have been using her ciliary muscle in order to thicken this lens and increase the refractive power of the eye. By that effort she may have been able to see $\frac{3}{8}$, and yet her eyeball may have been too short from before backward. Yet she by muscular effort may have made it practically longer.

As general practitioners we can now exclude short-sightedness, or myopia; and we can also exclude amblyopia, because her vision is $\frac{3}{8}$; she is certainly not presbyopic, for that is a disease of accommodation occurring from lapse of years. What kind of defective sight has she? We have reached, by exclusion, the diagnosis that she is in one of two conditions: 1, that her eyeballs are exactly of the right length, that she is emmetropic; or 2, that her eyeballs are too short, and by using her ciliary muscle she has been making her lenses long enough to enable her to focus these parallel rays. She may have latent hypermetropia. How am I to find out which one of these two conditions is present? We have a test which will enable us to answer that question with certainty. Here is a case of glasses which costs some ten or twelve dollars. It contains glasses for answering the question that has arisen concerning the sight of this girl. By means of the test-types and these glasses you can answer the question. Is she hypermetropic, that is, are her eyeballs too short, and is she obliged to constantly use her ciliary muscles in order to see clearly, even at a distance; or is she emmetropic, that is, has normal eyes, and does the asthenopia or weak sight depend upon some general condition of the system, such as anæmia, want of general muscular tone, or the like?

If I put a convex glass over the eyes of a person whose vision is accurate and normal, who has never suffered from weak sight, a glass which increases the refraction of the eye, it has the same effect as if the eye is entered and the lens thickened. The eye will not then be adapted for parallel rays and a "blur" will occur, clearness of vision will be interfered with. We know that fact practically, and we explain it by saying that the normal eye is in a state of rest while looking at an infinite distance, and does not need any assistance to the ciliary muscle. If we put a glass upon it which makes the eye slightly too long, slightly myopic, there will be a blur, because the image will not be accurately focussed.

Let us apply our test. I will first use this lens, No. 60, a glass of sixty inches focal distance.

It will make a difference in vision at once when placed before the normal eye. It may or may not make a difference in the vision of our patient. [Glass applied and patient asked to read.] She says that the bottom line of the test-type is clearer than without this glass. That result might be a delusion, as perhaps she may have obtained the idea from what has been said or from the mere fact of a glass being put upon the eye, that we expect her to see better; but we will go on and apply a glass that has a 48-inch focal distance.

Some authorities say that a hypermetropia of $\frac{1}{8}$ is not to be regarded. Practically I agree with that statement, and also that if we find hypermetropia of $\frac{1}{8}$ it is not always to be regarded, because, as has been shown by examination of eyes under atropia by myself, and the eyes of young children as examined by Dr. Ely, most people are hypermetropic. Donders stated that fact a long time ago, although he did not bring forth the special proof. You may accept it as a fact that the larger proportion of eyes are slightly hypermetropic, and there are more eyes hypermetropic than myopic.

But when a glass of 48-inch focal distance is required for distinct distant vision, or when it is tolerated, and the sight is just as good with it as without, we may fairly assume that the patient who thus requires or tolerates a glass is hypermetropic, for when the ciliary muscle is put at rest by atropia it will be found that there is a latent

hypermetropia added to that found before this occurred. But there are some persons, as I have shown by experiment, who even when their ciliary muscles are set completely at rest by the instillation for some days of a four-grain solution of atropia, will not tolerate any glass, but reject every one, having clearer vision without it.

Now I will add this glass, having a 48-inch focal distance. She says at once that the letters are not so clear as without the glass.

I will now have her keep looking at the test-types while I arrange another glass, and I do that in order that she will keep up the exercise of the ciliary muscle. I now put upon the eyes No. 40, and she says that she sees clearer than with either of the glasses tried. I will not consume time by extending the examination further, for we have demonstrated that she has hypermetropia, her eyeballs are too short, and although she can see $\frac{3}{8}$, she is using unnatural muscular force in order to do it. We will therefore order for her a pair of convex glasses with 40-inch focal distance and see what the effect will be upon the symptoms of which she complains.

It is probable that she will soon allow her ciliary muscle to give up its excessive work, and let the lens in front of the eye serve to thicken the lens within it. This rest to the muscle may, and probably will, relieve the symptom of pain, fatigue, etc., caused by its undue or excessive action.

The case is one of *facultative* hypermetropia. It is not *latent*, for then the patient would have rejected all glasses until atropia or a drug with similar effect had paralyzed the ciliary muscle. Her vision is $\frac{3}{8}$ *with* and *without* convex glasses. It is not *manifest* hypermetropia. Then the patient would have seen well at a distance only *with* convex glasses.

You have spent twenty-five cents for test types and twelve dollars for a case of glasses. You have shown that these troublesome symptoms, blurring of the sight, watering, burning of the eyes, depend in this case not upon straining to see through a cloudy medium (an opaque cornea or a cataractous lens), or a vain effort to get a sharp image on an inflamed or hemorrhagic retina, but upon undue exercise of an overweighted ciliary muscle, and you have made a diagnosis in an obscure case.

I will finish the lecture by presenting a case which furnishes a striking contrast with the one which we have just examined. This is a case which the general practitioner could not make out, unless he had had some special training, and I put it in contrast with the other in order to show you where is *the dividing line between the knowledge that may be expected from a general practitioner, and that demanded from one who gives special and perhaps exclusive attention to diseases of the eye.*

This young man has had inflammation of the right eye, which has practically destroyed it so far as vision is concerned. There is general staphyloma of the cornea and only that perception of light which oculists call quantitative. The left eye has not been injured, but the sight is weak, and he is naturally anxious to know whether it has undergone any change in consequence of sympathetic irritation or inflammation. We look at it, and see that it does not water, it is free from redness, the pupil moves well, but he has the symptoms of asthenopia enumerated in connection with the other case. He can read next to the bottom line; that is, his vision is $\frac{3}{8}$. I take up my general practitioner's case of convex and concave glasses and am not able to make him see $\frac{3}{8}$, and I begin to be alarmed. I say that he has lessened sight in that eye with a bad condition of the fellow eye, and I send him off to a specialist, and that is well enough.

Now I will put a convex cylindrical glass before his eye, a glass of which the general practitioner is not bound to know anything, except as a matter of general professional information. I take one of 48-inch focal distance—I have already reached this by a series of

experiments with the patient—and I find that his vision reaches $\frac{2}{3}$. This is a cylindrical glass, the one used in correcting astigmatism.

The asthenopic symptoms do not depend upon the irritation of the other eye, but upon the same cause as that just given in the case of the little girl—undue action of the ciliary muscle in endeavoring to focus an image. But this eye, unlike that of the little patient, is too short in but one meridian (hypermetropic astigmatism). Her eye was too short in all meridians (hypermetropia). The latter condition is easily ascertained by a general practitioner educated in the last ten years. The former may properly be left for correction, if not for detection, to a specialist.

We can say, in this case, that there is no sympathetic irritation or inflammation. Sometimes people are supposed to have sympathetic irritation when they are merely affected with an error of the refraction of the eye. The latter fact is sometimes only discovered after a dangerous accident has occurred.

TUBERCULOSIS IN INFANTS.¹

By J. LEWIS SMITH, M.D.,

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THESE specimens exhibit the lesions of acute miliary tuberculosis occurring in a child. The history of the case is as follows:

James —, aged ten months, was taken sick January 16, 1883. He was returned to the New York Foundling Asylum January 20th. He was apparently well-nourished and was wet-nursed. He had a severe cough, with dullness on percussion, and large and small râles in both lungs. The respiration was increased in frequency, and was shallow. Diagnosis, broncho-pneumonia. The child continued to grow weaker, the dullness became more and more marked, and he died at 4.15 A.M. January 24, 1883.

The autopsy was made by Dr. W. P. Northrup, pathologist. The body was well nourished.

Brain.—A few tubercles were found scattered over the surface in the pia mater; otherwise normal.

The *spinal cord* was normal.

The *lungs*, both external and cut surfaces, were thickly studded with large, well-defined tubercles. The bronchial glands were large and cheesy, and one contained a thick creamy fluid. The portions of lung-tissue between the tubercles were mostly consolidated, and presented the appearance known as "raspberry jam." There was one cheesy nodule, about the size of a hickory-nut, at the anterior edge of the right upper lobe.

The *heart* was normal.

The *liver* contained tubercles about half the size of those seen in the lungs.

The *spleen* was of normal size, but contained tubercles in abundance.

The *kidneys* showed five or six large tubercles in the cut surface.

The *stomach* was normal.

The *intestines*.—The mucous membrane of the small intestine was congested and showed occasional ulceration of the solitary follicles; some of the solitary follicles in the large intestine were also ulcerated. The ulcers were shallow, and had thickened edges.

The *mesenteric glands* were enlarged and cheesy.

Besides these specimens, I have others removed from the body of a phthisical child who died at the age of seventeen months. He had the following history:

Joseph —, a twin, aged seventeen months, was sent out to board in September, 1881. He was always a feeble child, and the record states that he suffered from cholera infantum in December, 1881. He returned to the asylum January 24, 1883, and died four hours afterward.

The autopsy was made by Dr. W. P. Northrup, pathologist. Marked emaciation. The brain was normal. There were cavities in the upper lobes of both lungs, containing thick, greenish-yellow fluid. The bronchial glands were enlarged and cheesy. A few small, transparent tubercles were seen on the surface of the lungs. The heart was normal. Small tubercles were scattered sparsely through the liver. The spleen, the kidneys, and the stomach were normal. The mesenteric glands were enlarged and cheesy. The small intestine showed ulceration of the lowest Peyer's patch, and occasionally ulceration of solitary glands. Similar ulcers were found in the large intestine.

Remarks.—Tuberculosis in young children is more common among the city poor than those are probably aware who observe diseases chiefly in the better walks of life. Two post-mortem examinations at the same time of tubercular children implies this frequency. In the etiology of tuberculosis in children two important factors occur. First, inheritance; secondly, the occurrence of caseous material in some part of the system. The child of a tubercular parent, as is well known, is much more liable to tubercles than is one of healthy parentage. The tendency to it appears to be greater when the mother is suffering from it than when the father is the invalid. If the mother have advanced consumption, her child is apt to begin to cough when a few weeks old, and sometimes when only a few days old, although it may have been born of full size and plump. As tuberculosis advances the more rapidly the younger the age, the child thus affected is apt to perish before the mother. Such cases have now and then occurred in my practice.

Much attention has recently been given to the theory of the infectiousness of tuberculosis—a theory that is gaining ground by observations which appear to substantiate it, and by the probable discovery of the tubercule bacillus by Koch. Certainly the fact that wives who are devoted to their consumptive husbands, sleeping by their sides, and perpetually inhaling their breath, now and then contract the disease—contract it apparently more frequently than those who are not so exposed—lends support to this theory. It seems probable that tubercular particles, to which, perhaps, bacilli are attached, exhaled from tubercular lungs, and lodging in the lungs of the exposed individual, may excite by their irritation the cell-proliferation, which produces the tubercular neoplasm. If this theory be true, as seems probable, we would expect that infants who are held in the laps of diseased mothers or nurses, and whose lungs are delicate and susceptible to morbid influences, would be especially liable to be attacked, and the journals have recently published the case of a midwife in a European town who had confirmed tuberculosis, and had been in the habit of blowing into the mouths of new-born infants under her care. A considerable number of these infants perished with tuberculosis, while those in the practice of another midwife who was healthy escaped.

Another, and in my opinion the common mode in which tuberculosis arises in children, is from cheesy foci. The child takes inflammation from some cause, perhaps from exposure to cold, and on account of feebleness of system or a pronounced cachexia, the inflammatory products do not resolve. Remaining in the system, they undergo caseous degeneration, and caseous material furnishes the conditions, as is well known, in which the tubercular neoplasm often originates. Detached caseous particles lodged in the tissues excite the cell-proliferation, which produces the tubercle. Hence in post-mortem examinations we so often find a cluster of tubercles around caseous matter.

The two sets of specimens before us show the ordinary anatomical characters of tuberculosis in infancy.

We know the rule in the adult, that tubercular matter first appears at the summit of the lung and extends downward, the amount of tubercle being greater at the apex than elsewhere and at a more advanced stage. At

¹ Presented at a Stated Meeting of the New York Pathological Society, January 24, 1883.

the apex we find softened tubercles, and sometimes tubercular cavities, while in the central and lower part of the lungs we find either no tubercles or tubercles disseminated and recent. In the infant, on the other hand, miliary tubercles are disseminated throughout the lungs, nearly the same in size and appearance in every part, with surrounding healthy lung-tissue. Hence the difficulty in making a diagnosis except at an advanced stage, for we do not obtain dulness on percussing the chest, until at a late period, when inflammations have arisen to consolidate the lung at some point, and on auscultation we only observe a rough or rude respiration. In the tubercular infant, as a rule, the bronchial glands are enlarged and cheesy, with softening of some of them in their interior. The so-called bronchial phthisis plays an important rôle in many cases, producing various severe symptoms. Hyperplastic or caseous bronchial glands by pressure on a bronchus, cause narrowing of its lumen, and consequently more or less obstruction to the respiration; or by ulceration and discharge of caseous and softened gland substance into a bronchus, or into the lower end of the trachea, it produces a troublesome irritative cough. These glands sometimes also produce distressing, even dangerous symptoms, by pressure on important nerves, as the laryngeal, or important veins, as the innominate. In some cases which I have observed, the return circulation from the brain has been so obstructed from this cause as to produce dangerous cerebral symptoms. Extreme passive congestion occurred in the intracranial veins and sinuses from this cause.

These specimens also show another well-known fact in reference to the tuberculosis of early life, to wit: the tendency to generalization of the tubercles. They appear in the pia-mater, especially at the base of the brain, where they often give rise to tubercular meningitis. In one of the specimens before us tubercles were present in this location, but they had apparently produced no symptoms. Miliary tubercles appear almost as frequently in the spleen as in the lungs, and in as great number relatively to the size of the organ. They are found less frequently upon the surface of the liver, and less frequently still upon the surface of the kidneys. As in the cavity of the chest, miliary tubercles often occur in the connective tissue under the pleura, distinctly seen through this membrane, and raising it slightly, so that they occur under the peritoneum in any part of its extent, parietal, visceral, or omental, where they frequently produce localized peritonitis. They occur, also, not infrequently in the mucous membrane of the intestines, causing ulceration and a troublesome diarrhoea. Ordinarily, also, the mesenteric glands undergo great enlargement and caseous degeneration like the bronchial, but they are not so frequently softened.

The tubercles being thus widely disseminated in the system of the infant do not ordinarily give rise to any prominent local symptoms till they produce inflammation around them. Hence the difficulty of making a positive diagnosis at an early stage. We infer the presence of tubercles from the general condition, from the wasting, poor appetite, loss of strength, and the cough, but cannot say positively, as in the adult, that tuberculosis is present until the disease is pretty well advanced. The sputum is scanty, and is swallowed, hæmoptysis does not occur, but by and by we observe dulness on percussion over some part of the chest, due to pneumonic solidification, excited by tubercles, and this persists, for the inflammation kept up by such a cause does not resolve. Whenever the symptoms due to tubercular meningitis or bronchial phthisis arise, the diagnosis is of course easy.

Whenever, therefore, I am called to a young child with a chronic cough and wasting, I do not wait for a more accurate diagnosis, but if there be no diarrhoea to contra-indicate it, prescribe cod-liver oil with the hypophosphites, frequently adding the syrup of the iodide of iron, since the strumous cachexia is so apt to be present, with probably caseous substance, in some part. Such

a case requires the utmost attention to the hygienic management, pure air, nutritious, and easily digested diet, into which milk enters largely, the juice of meat or meat-broths, prepared at a temperature of 100°, so as not to coagulate the albumen. A favorite prescription in two of the asylums of this city for these infants with chronic cough and wasting, whether or not tuberculosis be diagnosed, is the following, to be taken between the doses of cod-liver oil:

R. Ammon. carbonat.,
Ferri et ammon. citrat. āā. gr. xxiv.
Syrupi simplici ʒ iij.
M.

Dose, one teaspoonful every two or three hours to a child of one year.

Original Articles.

WHAT IS THE RATIONALE OF TRACTION AND COUNTER-TRACTION IN THE TREATMENT OF HIP DISEASE?

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As suggested by Dr. L. M. Yale,¹ the word traction should be used instead of extension, when reference is made to the common method of applying mechanical treatment in hip disease. Whatever form of apparatus is used, the object sought is traction. This cannot be secured, however, in any case except by the simultaneous development of counter-traction. If the extension and counter-extension (tractive and counter-tractive) apparatus is used, counter-traction is made against the inferior surfaces of the os innominatum. If the weight and pulley are used, it is found in the friction which the body makes with the surface on which it lies, and partly in the weight of the body if the limb is elevated. If the patient is standing, the affected limb being pendent, and its weight tractive, then counter-traction is found in the pressure made by the head of the sound femur on the floor of its acetabulum. Manually, traction may be made on the condyles of the femur and counter-traction on the prominences of the pelvis, and it is conceivable that in certain cases favorable to the experiment, the contracted muscles may be thus opposed or "counter-acted" while passive motions of the joint are made.

The reasons which lead to a substitution of the word traction for extension also lead to the use of the expression traction and counter-traction. This term will therefore be employed in the present paper, which is to be a brief inquiry into the validity of some of the accepted theories offered in explanation of the efficacy of this form of treatment.

When we view the application of traction to a case of hip disease, an obvious incident is the apparent drawing away of the thigh from the trunk. The inference has been made that the usefulness of the application depends on the separation of the head of the femur from the floor of the acetabulum. It is an interesting question whether this separation can be affected in the cadaver. The experiments of Barwell² and Morosoff³ sustain the negative, and those of Koenig and Armand⁴ the affirmative. It is probable that both sides are partly right, and that the facts have been indicated by Dr. Edward H. Brad-

¹ Dr. Yale writes: "The word extension is objectionable because of its obscurity, since it is used as the opposite of flexion." (MEDICAL RECORD, January 12, 1878, p. 27.) The point thus made had been aptly illustrated in the discussion which took place in the New York Academy of Medicine (Am. Med. Times, April 27, 1861, p. 279), when Dr. Bauer was credited with the very early use of extension (traction) in hip disease, although his method really consisted in the reduction of flexion followed by fixation. (N. Y. Journal of Medicine, September, 1853, p. 173, the method of Bonnet and of Hilton.)

² Diseases of the Joints, pp. 336-342, London, 1861. American Edition, 1881, pp. 16-18.

³ Quoted by Charles Monod, Arch. Gén. de Médecine, p. 718, June, 1878.

⁴ Jules Armand: Thèse de Paris, pp. 30, 31, 33, 34, 1878.

ford,¹ whose experiments show that in some conditions of development, and perhaps of disease, this separation is possible with ordinary effort, while in other conditions it cannot be effected by extraordinary force.

The question of the therapeutic value of attempting to separate these surfaces has also given rise to varying opinions, some writers believing that it is an important part of mechanical treatment. Dr. L. A. Savre is reported as holding this opinion,² but I do not find it expressed in any of his valuable writings on this subject, and the weight of contemporary authority is decidedly opposed to such a view, if we may judge from the following quotations: "It is not possible for the two articular surfaces to be directly separated by an extension so insignificant" (Bauer).³ "I do not believe it (the drawing out of the head of the bone) occurs, or ought to occur, nor do I believe it would be anything but harmful if it did occur" (C. Fayette Taylor).⁴ "This separation is scarcely possible under any amount of force likely to be employed by a surgeon" (Yale).⁵ "I do not believe it possible, by any amount of extension that can be applied, to separate the inflamed and swollen interior surfaces of the joint" (Hutchison).⁶ The united opinion of these authorities is an assurance that separation of the articular surfaces is not an adequate explanation of the efficacy of traction and counter-traction.

Fixing our attention still further on traction as applied to a case of hip disease, there is, in addition to an apparent drawing away of the limb from the trunk, an apparent antagonism between two forces, that of reflex muscular action and that of traction. There is thus produced an apparent counteraction of the muscles surrounding the joint, and the inference has been made that upon this depends the efficacy of traction and counter-traction. I believe, however, that their usefulness is entirely independent of the alleged counteraction of the muscles.⁷ While taking this ground I retain the highest possible appreciation of this mode of treatment, and find a satisfactory explanation on other grounds. Leaving to another occasion the consideration of the question whether "a fractional degree of fixation," such as is secured by traction and counter-traction is not the true explanation, it will be sufficient in this paper to critically consider the statement that traction and counter-traction owe their usefulness to the counteraction of the muscles.

That this opinion is widely entertained is evident from the following quotations from writers of note, American and foreign, who have considered this method from a practical point of view. "It is obviously of importance in treatment (1) to keep the surfaces at all times from contact, and (2) to control the muscles." "This constant contraction of muscles passing over a joint should always be counteracted." "The India-rubber spring counteracts that force which presses the bones too violently together." "To overcome the injurious pressure from irritated muscles is imperative." "The object of extension is to overcome reflex muscular action." "The object of such appliances is merely to

relieve the joint from pressure, by permanently extending the morbidly contracted muscles."

A proposition drawn from the above expressions, no two of which are from the same authority, may be worded as follows: Traction and counter-traction are useful in hip disease because of their power to counteract the muscles which are injuriously contracting around the joint. If it can be proved that they have not this power, or if undue importance has been ascribed to the action of the muscles in question, then the reason of the efficacy of this form of treatment must be sought elsewhere. Although I believe that the muscles cannot be thus counteracted to any practical degree, it is impossible to give a demonstration from the nature of the case. All that can be done will be to present certain reasons for disbelief, leaving the question to the judgment of the reader.

There should be no obscurity in regard to the meaning of the term "to counteract the muscles." If the joint were fixed the muscles would in a certain sense be counteracted, because they would be prevented from action. But this is evidently not the meaning of the term. Nor does it apply to the effect of extension (the opposite of flexion), which would indeed counteract the flexor muscles, or to the effect of flexion, which would counteract the extensors. The term is evidently used with reference to all the muscles surrounding the joint, and it signifies to make traction on them in such a way as to prevent their contraction (or at least to obviate its pressure effects) by the direct application of a force acting in an opposite direction.

It is evident that a contracting muscle can be counteracted only when traction is made on the bone in which it is inserted. In the case of the hip-joint it is necessary to obtain a secure hold of the femur, and a little consideration will show that the ordinary method of grasping the femur by adhesive plasters applied to the skin is very imperfect. If our adhesive plasters could be applied directly to the bone, or if it were admissible to use a device like Malgaigne's hooks for the treatment of fracture of the patella, we might perhaps hope to make such traction on the bone as to counteract the muscles. The shaft of the femur may be said to occupy the middle of a cylinder of elastic integument, the space around it being filled with a jelly-like mass, composed mainly of relaxed muscular fibre and loose connective tissue. It is not denied that a slight amount of traction is thus exerted on the femur, but it is unreasonable to suppose that in circumstances so extremely unfavorable it is strong enough or steady enough to counteract the muscles which directly move the joint.¹ If the great muscular masses of the thigh and hip were in a state of rigid contraction the case would perhaps be different, but these muscles are, with few exceptions, in a relaxed condition in acute disease. In the thigh the adductors are probably the only muscles which are found in sustained contraction. The sartorius, gracilis, quadriceps extensor, the three hamstring muscles, and the tensor vaginae femoris are found (in acute disease) relaxed and atrophied. The reason for this exceptional condition of the adductors is perhaps to be found in the fact that they alone of all the muscles thus far enumerated have their origin in one osseous member of the joint and their insertion in the other, an arrangement which may make them more liable to reflex action, the result of *ostitis* near the joint. The *psaos magnus* has its origin above the *os innominatum*. The only muscles, then, which move the joint and have their origin and insertion immediately above and below it, besides the adductors, are the *iliacus*,

¹ Boston Medical and Surgical Journal, p. 465, November 11, 1880.

² Discussion in Surgical Section, New York Academy of Medicine (MEDICAL RECORD, p. 544, December 6, 1879).

³ American Medical Times, p. 345, May 25, 1861.

⁴ MEDICAL RECORD, p. 290, September 1, 1867.

⁵ Loc. cit.

⁶ J. C. Hutchison: Contributions to Orthopedic Surgery, p. 9, New York, 1880. Mr. Howard Marsh believes that separation is impracticable (British Medical Journal, p. 99, July 28, 1877).

⁷ Because reflex muscular action—"vigilance musculaire" *Verneuil*. "If handled a little roughly, all the muscles will be upon their guard" *Davis*, American Medical Monthly, p. 323, November, 1862—is an important clinical feature and of great assistance in diagnosis, it does not follow that it is the chief element in the pathology and the point against which our local therapeutics are to be directed. There are occasions in practice when direct counteraction of muscular fibre is feasible and important, as in the cramps of the extremities in cholera and the nocturnal cramps of the sural muscles. In the treatment of stumps immediately after amputation, painful twittings may be prevented by traction (R. F. Weir, MEDICAL RECORD, p. 51, April 1, 1867). In Buck's extension for the treatment of fractures traction is believed to be useful by directly controlling the spasmodic twittings of the muscles (*ibid.*, p. 50). After excision of the hip the muscles may doubtless be contracted by a tractive force. But all these cases are so radically different from acute hip disease that an argument cannot be drawn from them. After excision or fracture the muscles are in a position peculiarly suggestive of the propriety of traction, because their points of origin are abnormally approximated to each other.

⁸ H. O. Thomas: Diseases of the Hip, Knee, and Ankle Joints, p. 10, Laverpool, 1875.

¹ Mr. Howard Marsh says: "I suppose the greatest amount to which the surface of the head of the femur can be separated from that of the acetabulum cannot be more than about the tenth of an inch. And it is very difficult to preserve efficient extension and counter-extension within this range; for the parts cannot be acted upon as if they were parallel metal plates to be adjusted by a screw; they must be controlled through the agency of perineal bands and strapping fixed upon the skin, and all these are apt to give when they are subjected to constant traction; and if they yield, though it be but slightly, they soon, in the aggregate, lose this tenth of an inch of extension which they should maintain, and then the articular surfaces come again into firm contact" (British Medical Journal, p. 99, July 28, 1877).

pectineus, glutei, gemelli, obturators, and quadratus femoris. The glutei are, as a rule, relaxed and atrophied. The gemelli, obturators, and quadratus femoris are simple rotators, acting only in horizontal directions. By this process of exclusion we have left as muscles liable to sustained contraction and proper subjects for counteraction the iliacus, the pectineus, and the adductors. Considering the secondary position of these muscles, when compared with the immense muscular masses of this region, it does not appear that counteraction is imperatively demanded for the protection of the joint, even if the mechanical difficulties above pointed out did not exist.¹

It is difficult to explain the efficacy of traction in hip disease on these grounds, while an easy and reasonable explanation is found in the opinion of M. Verneuil,² that fixation is of prime importance, joined with a recognition of the fact that traction and counter-traction furnish the best solution of the difficult problem of the fixation of the hip-joint.

Before concluding, however, it is necessary to review two theories which have been advanced for the purpose of explaining more fully how the alleged counteraction of the muscles promotes recovery.

The first was proposed by Dr. Henry G. Davis, who believed that the muscles could be counteracted by an apparatus which should at the same time allow the joint to perform its normal motions. He wrote: "I can but consider it highly beneficial to keep up motion of the joint, yet not allow of friction upon the diseased surfaces."³ This idea has been adopted by a number of eminent writers. One of them who declares that "motion is just as essential to a joint as light is to the eye,"⁴ advocates a "plan by which extension could be maintained that would remove pressure from the acetabulum and the head of the femur, and at the same time permit motion of the joint." Another has devised a combination of a plaster-of-Paris jacket with a hip splint, by which he claims that "extension and counter-extension and mobility of the affected limb are made feasible." Another has devised a splint in which "the movements of every joint of the limb is most perfectly secured; that at the hip especially not being in the least interfered with by the counter-extending force." Still another form of apparatus secures "mobility of the joint with extension," and a recent most instructive writer frankly admits that "up to the present day (1882) no effectual appliance to secure these results (motion and avoidance of articular pressure) had been afforded." The device which he advocates, although very ingenious, has not as yet perhaps been sufficiently tested by time to prove its superiority.

The idea entertained by these authorities is that the muscles can be counteracted by an apparatus which shall permit the ordinary motions of the joint. There are great mechanical difficulties in the way of the practical application of this idea. If traction and counter-traction are applied in the line of the thigh and the trunk, it is difficult to conceive that the same amount of force can be maintained through all the variations of flexion, extension, adduction, and abduction.⁵ The difficulty depends partly on the irregular shape of the inferior surface of the bony prominence made up by the body of the ischium and the rami of the ischium and pubes. As motion of the limb is made in different directions, different facets of this prominence, more or less removed from the lower end of the femur, are successively presented to the pressure of the counter-tractive part of the apparatus. If the facet

presented is prominent, traction will be more severe, if depressed, less severe. And even if we imagine the bony surface reduced to a mathematical point, presenting the same resistance to counter-traction from whatever direction it comes, there is a further difficulty in the fact that the point of counter-traction (ischiatric tuberosity) is on a lower level than the point of motion (acetabulum), the effect of which arrangement is that motion will make a change in the distance between the point of counter-traction and the point of traction (lower end of femur) with, of course, a change in the degree of traction. To prevent these variations it is necessary to make the point of counter-traction identical with that of motion, and on reflection it will be found that in this way alone, which is of course impracticable, can mobility be maintained with equable traction.

It has been supposed that the use of India rubber would facilitate the practical development of this idea. Dr. Davis himself, in 1860, described an ingenious apparatus partly constructed of this material, but this device failed to secure general adoption, and none of its successors has as yet proven its value.⁶

It is, indeed, desirable to adopt some theory in accordance with which traction and counter-traction may be transferred from empirical to rational medicine, but it surely is not necessary to adopt an explanation which is burdened with so many mechanical impossibilities.

The other theory also owes its origin to the fertile and ingenious mind of Dr. Davis.⁷ He formulated it in 1860, as follows: "When I speak of extension I do not apply the term to confining the limb in a given position, but to the process by which the soft parts are kept continually upon the stretch, whether by means of a weight or some elastic material, the result of which process upon the muscular fibre is to weary it and thus put it at rest."⁸ This idea has been entertained by a number of writers, American and foreign, from whom the following quotations are made: "It (India rubber) appears, by its unvarying, constant, and yet not unyielding power, to tire out the muscles." "By this force (continuous extension) the muscles are tired out and soon made to capitulate." "We must carry extension until the muscles relax, and then we must maintain the extension until they lose their irritability and the inflammation in the joint has been given time to become retrogressive." "The object of continued extension is to paralyze the muscles." "When the muscular contractions are completely overcome, and the muscles are thoroughly tired out, but little extension is needed." "The object of extension is not, as generally supposed, to separate articular surfaces, but to overcome reflex muscular contraction, and by relaxing the muscular rigidity to prevent undue pressure of inflamed articular surfaces." "Forcible traction being applied in the axis of the thigh, the muscles are fatigued and overcome and rendered incapable of contraction." "If prolonged and powerful traction be applied to a muscle, it will, after resisting for a time, at length yield and fall into relaxation." "We must overcome the contractility of the muscles governing the joint."

The idea contained in these quotations, no two of which are from the same writer, is that traction and counter-traction are curative because they deprive the muscles of their contractility. Muscular fibre may lose

¹ That the pathological facts do not call for the counteraction of the muscles in hip disease has been shown in a preceding article. See N. Y. Medical Journal, pp. 1-17, July, 1882.

² Verneuil teaches: 1, that prolonged fixation is powerless alone to produce ankylosis; 2, that the best way to prevent ankylosis is to combat inflammation; and 3, that fixation of a diseased joint is an antiphlogistic of the first importance (Bull. et Mém. de la Soc. de Chir. de Paris, pp. 510, 511, 1879).

³ New York Journal of Medicine, p. 420, November, 1859.

⁴ This proposition was questioned by a distinguished opponent, who said: "Light is for the eye in a healthy state, but in disease light should be excluded" (American Medical Times, p. 311, May 11, 1861).

⁵ Mr. Marsh says: "If the perineal band be adjusted when the limb is extended, it will become loose when the limb is flexed" (loc. cit.).

⁶ Dr. Davis, who employed an elastic perineal strap, described his invention as follows: "Quite at the top and inside of the splint is an eye, through which runs the catgut attached to the two ends of a perineal or extending band, and forms part of it when the whole is applied to the patient: the catgut, passing through this eye unconfined, allows the upper portion of the splint to traverse back and forth without disturbing the perineal band. All that portion of the splint that passes above the hip-joint has a motion of which the joint is the centre. By this management, allowing the catgut to traverse in the eye of the splint, the perineal band is not disturbed by any motions of the limb, and all irritation from motion is avoided" (American Medical Monthly, p. 264, April, 1860).

⁷ Referring to "artificial muscles," Dr. Davis in 1856 wrote that "when contracted muscle is to be overcome, it (India rubber) stealthily wearies it until it silently comes off conqueror" (Am. Med. Monthly, p. 330, May, 1856). In 1859 he related a case of hip disease in which, on the application of continued traction, the muscles became "worn," so as to allow the head of the bone to come down upon the inferior portion of the acetabulum" (N. Y. Journal of Med., p. 418, November, 1859).

⁸ Am. Med. Times, p. 149, September 1, 1860.

its contractility from rupture or from degeneration, but that it surrenders this high endowment to the application of traction is, to say the very least, extremely questionable. If an elastic force be used the muscles to which it is applied would probably increase in size and vigor from the exercise. If an unyielding force be used we have already seen how great are the mechanical difficulties to be overcome. But if it were possible to grasp the femur and maintain unyielding traction, the amount of stretching is necessarily limited by the ligaments of the joint, and furthermore is extremely minute when compared with the elongation to which the muscles are accustomed in the ordinary motions of the joint. When, for instance, the thigh is extended on the trunk the flexors are of course relaxed and lengthened, and this normal lengthening is so great that it is unreasonable to suppose that the minute degree of stretching which traction and counter-traction produce can determine any important change in the qualities of the muscular fibre.¹

It thus appears that this theory also contains points of fatal weakness.

Which of these essentially different theories shall we adopt? Shall we say that the hip splint secures mobility with traction or deprives the muscles of their contractility? Authorities are clearly divided. The fact that there are two current explanations calls for caution before the adoption of either and suggests the possibility that neither is the true one. And if this possibility were to become a certainty, and if fixation were recognized as the key to the efficacy of traction and counter-traction, these conditions would not lessen the value of the hip-splint or materially diminish the credit of those who have illustrated American surgery by its invention and use.

ELECTROLYSIS IN THE TREATMENT OF ORGANIC STRICTURE OF THE URETHRA.

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THE desideratum in the treatment of organic stricture of the urethra has been an operation that would effect a radical cure, thus avoiding to the patient the disagreeable necessity of introducing a sound at certain intervals (perhaps for a lifetime), as is now demanded by the recognized operations. Although my individual experience in the treatment of these cases by electrolysis is limited, I have uniformly obtained results so flattering that in defence of the operation I take the liberty to present an abstract of them.

The somewhat meagre literature of this subject is so unsatisfactory and conflicting that it seems to me to be the duty of those who may have applied this method of treatment to offer in evidence their experience. Should this be done, the operation would soon be accorded the position it deserves—either that of more general recognition by the profession (which I believe it will have) or a more general condemnation. The great variance of opinion on the value of this operation is well illustrated by two articles, one appearing in the *New York Medical Journal* for December, 1871, by Professor E. L. Keyes, the other in the *Archives of Electrology and Neurology*, for May, 1874, by Dr. Robert Newman. Respectively one reports uniform bad results from its use, and unqualifiedly condemns; while the other reports uniform good results and most heartily commends the operation. As the opinions of these two distinguished men may be said to be representative of the opinions of most others who do, or do not favor the operation, perhaps a cursory review of them would not be out of place. Dr. Keyes says: "I operated upon ten cases, and from that amount of ex-

perience, cannot but condemn the operation *in toto*. The operation is disagreeable, often very painful, the pain sometimes lasting several days, and vesical symptoms were always aggravated when they pre-existed." In all but one of Dr. Keyes' cases the patient is reported as having refused further operation or disappeared before observations were completed.

In the remaining case the treatment was abandoned. Granting that the operation is disagreeable and painful as conducted by him, is there not something of inconsistency in so summarily condemning the efficiency of the operation when viewed from a purely curative standpoint? To the use of potential currents, prolonged applications, and too short intervals between applications I think Dr. Keyes' failures may be fairly attributed. The distinctive feature of Dr. Newman's treatment, as compared with that of Dr. Keyes, is the use of *very mild* galvanic currents, "just perceptible to the patient." The current is passed but from three to five minutes. No force is used in the manipulation of the bougie and long intervals, two to four weeks, advised between applications. As with others, the negative pole is used for the insulated bougie, while the positive pole is applied to the thigh through the medium of a sponge. Dr. Newman reports over thirty cases, all of which resulted successfully. To the adoption in the main of his principles of treatment I ascribe the successful results obtained in the following cases. However, some allowance may be made for the fact that with one exception, my cases were uncomplicated and of large calibre.

CASE I.—C. W. D.—, aged twenty-six; single. First gonorrhœa at twenty-one; second and last attack contracted at about twenty-five, since when he has had a constant muco-purulent discharge. Otis bougie No. 12, American scale. (Here I may remark, to prevent repetition, that all measurements hereafter given in this report will conform to the American scale.)

January 5, 1880.—No. 13 held lightly against the stricture and current from ten cells passed for five minutes, when the sound passed on into the bladder.

January 19th.—No. 13, after one minute's application, passed and was followed by No. 14, which also passed easily after three to five minutes.

February 10th.—No. 14 passed without grasping. No. 15 passed after five minutes' application.

March 6th.—Patient called to say that he had had no symptoms from his trouble for the past three weeks. On examination I can discover no induration, and as No. 15 passes without grasping, this number representing the maximum calibre of his urethra, he is discharged recovered.

CASE II.—B. S.—, aged eighteen; unmarried. Two gonorrhœas, the last six months since. This case, in all essentials being a duplicate of No. I., I will not further detail it, suffice it to say that the recovery was complete.

CASE III.—J. J. H.—, aged thirty-one; married. This case is of interest from the fact that the stricture developed from a bastard gonorrhœa, and could not have been induced by potential injections, as they were never used. While out on a duck-shooting excursion in the fall of 1879 was severely chilled. Took considerable diffusible stimulants. Coition with wife on his return (who had a leucorrhœa consequent upon an anteflexion of the uterus) was followed by a "bastard clap," which, as he modestly remained away from a physician, has continued to grow worse, until at this examination, February 1st, I find him with a resilient and irritable stricture which admits with considerable grasping No. 13. No. 14 passes under the effect of electrolysis in about six minutes, with some pain.

February 13th.—Nos. 14 and 15 pass after five minute intervals with inconsiderable pain.

March 7th.—No discharge. No. 16 passed under mild current from ten cells.

April 10th.—No. 16 Van Buren's sound passed with-

¹ Traction applied to the flexors by extension, as opposed to flexion, is not of course relied on to deprive the muscles of their contractility, because in this case there would be the obviously absurd application of traction to one set of muscles, the flexors, and relaxation to their opposites, the extensors.

out battery. No perceptible induration. Consequently discharged.

CASE IV.—W. L.—, aged nineteen; unmarried. Third gonorrhœa. Cannot explore urethra, as it is a case of congenital occlusion with hypospadias three-fourths of an inch posterior to the frænum. With a long, narrow, and straight bistoury, made an artificial urethra to admit a section of a No. 12 English catheter, which is fortified with a tin canula inside to prevent its collapse. This is kept *in situ* nearly two weeks, until February 21st, when I explore his urethra to find a tortuous stricture, about three-fourths of an inch long, occupying that portion of the urethra just anterior to the bulbo-membranous junction. No. 8 passes with considerable pain, also No. 9, after about ten minutes with rather strong current from twelve cells. Well-marked chill during the night, but no untoward symptoms after. On the fifth day a cast of the urethra one-half inch in length comes away.

March 5th.—No. 9 passed with some pain. Twelve cells.

March 24th.—Passed Nos. 9, 10, and 11 within fifteen minutes. Twelve cells. Considerable pain. Some febrile reaction during night and next day. Another small urethral cast comes away.

March 28th.—Some cystic irritability with consequent frequency and ardor in micturition. Under treatment these symptoms rapidly subside.

April 15th.—Passed without pain of note Nos. 11 and 12. Ten cells.

May 10th.—Passed easily Nos. 12 and 13.

June 3d.—Passed Nos. 13 and 14.

June 27th.—Passed Nos. 14 and 15. No pain.

July 15th.—Dolbeau's operation was performed for cure of the hypospadias. Result successful.

July 30th.—Slight narrowing of urethral calibre at point of last operation. Passed No. 15. Ten cells.

August 20th.—No. 15 Van Buren's sound passes easily without the aid of battery. Patient discharged.

CASE V.—P. H. M.—, aged thirty-five; married. Fell from hay-loft eight months since, striking the perineum on an inch board. Examination this day, April 1st, reveals an annular stricture of the membranous urethra, which will pass a No. 9 bulbous bougie, with current from ten cells. No. 10 passes after five minutes.

April 20th.—Nos. 10 and 11 pass without trouble or pain worthy of consideration.

May 12th.—Nos. 11 and 12 pass easily. Patient says he can now hold his water from three to five hours, and it comes away in a good stream. When commencing treatment was obliged to urinate frequently, proof positive that in this case, at least, vesical irritability was not aggravated by the treatment by electrolysis.

May 28th.—Pass easily Nos. 12 and 13. Patient declares himself cured.

June 20th.—Pass Nos. 13 and 14 with ease.

July 18th.—Pass No. 14 Van Buren sound without the aid of the battery. Patient discharged.

CASES VI. and VII.—April 16th.—Two young men, aged respectively twenty and twenty-one, both unmarried, came to me for treatment. I humored their request and examined and treated them together. Together I will report them also, as one will answer equally well for the other and some time will be saved. Both attended the same camp-meeting in the fall of 1879, and both, as they rather inelegantly but tersely expressed it, were "burnt" by the same woman. Both tried the abortive treatment for gonorrhœa and failed. Both, as examination proved, had a double linear stricture of the pendulous urethra, in each of which a No. 12 bougie was admitted. Passed with ten-cell current No. 13 on each.

May 1st.—D— and P— came together. Passed on each No. 14 with mild current of ten cells. No pain complained of by either.

May 20th.—D— and P— report decided improvement in their symptoms. Passed on each No. 15. Ten-cell current.

June 2d.—Pass on each, D— and P—, No. 15 Van Buren sound without the aid of battery. No induration discoverable in either case, and as this number represents the normal calibre of their respective urethras, both are discharged recovered.

CASE VIII.—May 30th.—F. E. S.—, aged fifty; married; wants to be relieved of his impotence, he says; gives history of gonorrhœa five years since. Has mucopurulent discharge, etc. Found stricture of No. 9 calibre at bulbo-membranous junction; passed No. 10 with mild current from ten cells; complains of some pain. After operation a considerable flow of muco-pus and cheesy matter occurred which had evidently been dammed back in the vicinity of the orifice—Cowper's duct—by the undisturbed stricture; advise abstinence from any attempt at sexual intercourse.

June 23d.—Nos. 11 and 12 passed without considerable pain within fifty minutes.

July 15th.—Patient reports a good degree of sexual vigor returned; pass Nos. 12 and 13 with ease.

August 6th.—Patient reports progress; pass Nos. 13 and 14.

September 1st.—Pass Nos. 14 and 15 with usual mild ten-cell current without trouble. No. 15 being the normal calibre of his urethra, nominally discharged him, highly gratified with his returned health and virility. Told him to come for final examination in course of five or six weeks.

CASE IX.—August 22d.—M. B.—, aged twenty-eight; married. Had first gonorrhœa five months since, which still continues to trouble him; meatus admits No. 9, freely cut this. Further examination reveals stricture of No. 12 calibre two inches posterior to the meatus; pass No. 13 with mild current from ten cells; no untoward symptoms.

September 19th.—Can detect very little thickening; pass No. 14; current as usual.

October 2d.—No thickening; pass No. 15 and discharge him.

It will be noticed that all of the above cases were discharged recovered from one year to eighteen months since. By recent communication I find that in no case has there been any return of stricture symptoms. This, I think, justifies me in the claim that a complete and radical recovery was effected in each case.

In view of these results, and the fact that of the more than fifty cases I have treated by other methods, mainly gradual dilatation, twenty-one per cent., owing to neglect of instruction given or other cause, have returned within six months for further advice. I deem the above nine cases treated by electrolysis a substantial argument in favor of more extensive employment of the operation in question.

A HISTORICAL CASE OF ACQUIRED AUTOMATISM.—The venerable pianist, Franz Liszt, says the *Times*, has ceased to play in public on account of the stiffness of his finger-joints. The fact recalls the method by which he used to keep his fingers supple, a method which is also an interesting illustration of acquired automatism. It was his custom for more than forty years to read a mass immediately upon rising in the morning, and when that duty was finished to seat himself at the piano. So seated, he placed on the rack in front of him, not a musical composition, but some new work of French or German literature, first being careful to mark the number of pages which he intended to read. Then for a long time, sometimes for two or three hours, he would continue to read his book and practice scales. On one occasion, being asked if the reading did not interfere with the playing or the playing with the reading, he replied: "Oh, no, the playing of the scales is entirely mechanical with me, and simply exercises the fingers; I give all my mind to the reading, very much as do our good ladies who knit stockings and read at the same time."

Progress of Medical Science.

SYPHILITIC REINOCULATION.—Dr. Scavenzio relates the case of a woman, thirty-five years of age, who was under treatment by the iodides for some of the tertiary manifestations. All at once she was seized with a feeling of general malaise, and in a short time presented a diffuse syphilitic roseola and sore throat. In seeking a cause for these new symptoms, Scavenzio ascertained that the woman had had an indurated ulcer at the entrance of the vagina, four months previously, which was followed by a non-suppurating inguinal adenitis. The iodides were stopped and injections of calomel given subcutaneously. Under this treatment the new symptoms promptly subsided. The author does not believe in an acquired immunity against syphilis. He is inclined to admit the possibility of auto-inoculation, which, he thinks, would explain the great irregularity in the course and duration of the disease, and also its liability to relapses.—*Lyon Medical*, March 25, 1883.

THE REPARATIVE PROCESS IN CARTILAGE.—Dr. Gies opened the knee-joint in young dogs under strict antiseptic precautions, and excised a piece of the articular cartilage, taking care not to wound the bone beneath. The operation was never followed by the slightest inflammatory reaction. After the animals were killed the wound in the cartilage was seen to be surrounded by an "atrophic zone," in which the cells were degenerated or had disappeared. Around this was a "proliferating zone," characterized by enlargement and segmentation of the cartilage cells and an increase in the number of nuclei. In no instance was there the least trace of a reparative process. Incised wounds of the cartilage, even after five months, showed no tendency to union. Here also, as in the case of actual loss of tissue, were seen the atrophic and hypertrophic zones parallel to the fissure. In a second series of experiments, the knife with which the cartilage was incised was previously dipped in a putrid infusion. The results now obtained were the same as those of other experimenters who operated without antiseptic precautions. Proliferations from the inflamed synovial membrane filled the wound in the cartilage with round and spindle cells. Presently cartilage cells appeared in the newly formed tissue, and in three months the wound was entirely filled with hyaline cartilage, so that scarcely any trace of the former injury could be discerned.—*Centralblatt für Chirurgie*, February 17, 1883.

REMOVAL OF WARTS BY CAUTERIZATION.—Dr. Cellier recommends the following treatment for warts in the *Journal de Médecine et de Chirurgie Pratiques* for March, 1883. The base of the wart is transfixed by an ordinary pin, care being taken not to pierce the healthy tissue beneath. Then, the skin being protected, the head of the pin is held in the flame of a candle. In a few minutes the wart becomes white and fissured, and comes away on the point of the pin. The procedure is said to be painless as well as bloodless. The curious assertion is made by Dr. Cellier that it is necessary to remove but one wart on the hand, and all the others (sometimes even a dozen or more) will disappear without treatment.

ARSENICAL PARALYSIS.—Dr. C. K. Mills relates a case of paralysis following arsenical poisoning in a young man twenty-four years of age. The patient was in good health prior to the time of eating the food which contained the poison. The first symptoms were repeated attacks of vomiting and a sense of great prostration. The bowels were confined. Six days after the arsenic had been taken a sensation of aching and numbness about the knees was complained of. This extended gradually toward the feet. Three days later the same sensations were experienced in the hands. Paralysis of the legs soon set in, and there was also some loss of power in the forearms. The patient's condition now remained station-

ary for two or three weeks, when he began to suffer great pain. The pains began in the knees and gradually invaded the legs and feet. Two days later the hands were affected in the same way. The following was his condition ten weeks after the poisoning: There was no brain symptoms and no disturbances of sight, hearing, taste, or smell; emaciation was marked; paralysis below the elbows was not complete, the extensors and supinators being most affected; there was somewhat less power in the right limb than in the left; the elbows were flexed at right angles and could not be wholly extended without causing pain in the flexor tendons; both legs were completely paralyzed below the knees; the knees were not flexed; the bowels were torpid, and for a few days there was a little dribbling of urine, but this soon passed away; farado-contractility was abolished in all muscles below the knees; above the knees the faradic reaction was greatly diminished, but not wholly absent; the muscles below the knees would not respond to weak galvanic currents; to medium currents they responded, but showed the reactions of degeneration. In the upper extremities farado-contractility was decreased, but not lost. To the galvanic current the reaction of degeneration was present, but not so decidedly as in the legs; the patellar reflex was abolished; the cremaster reflex was marked; irritation of the right lower extremity, as far down as the malleolus, caused retraction of the right testicle, and occasionally of both. Irritation of the left thigh and leg caused a less vigorous retraction of the left testicle, and occasionally, a moment later, slight retraction of the right testicle also. Irritation of one limb never caused retraction of the testicle on the opposite side only. The fingers and forearms were hyperæsthetic, but there was inability to distinguish between one and two points of the æsthesiometer. This condition was more marked in the feet and legs. Dr. Mills concludes from his analysis of this case that in arsenical paralysis we have to deal with a diffused myelitis, decided motor, trophic, and sensory bilateral phenomena being present.

IMMUNITY OF ANIMALS FROM SYPHILITIC INOCULATION.—Professor Neumann has made a number of attempts to inoculate animals with syphilis, but without success. The experiments were made with the greatest care, the virus being taken directly from the diseased person and introduced into the body of the animal. The animals experimented upon were kept under observation for a considerable period of time after the inoculation. In no case did any results obtain other than those which would naturally follow the introduction of an irritating material into the tissues. Nothing that bore any resemblance to a chancreous tumor was observed. The animals employed in these experiments were three apes, three rabbits, a horse, a hare, a white rat, a marten, and a cat. The total number of inoculations was fifty-four. Neumann concludes from these experiments that we must regard syphilis as distinctly a disease of man.—*Med. Central-Zeitung*, January 24, 1883.

OPERATIVE MEASURES IN ACUTE PERITONITIS.—Dr. Reibel relates the case of a child, eight years of age, suffering from acute idiopathic peritonitis. The disease having resisted all treatment and the child being apparently about to die, it was determined to open the abdomen with a view to removing the fluid and washing out the peritoneal cavity with a solution of carbolic acid. The meteorism was intense. No fluid was found in the abdominal cavity. In prolonging the incision, a loop of intestine was punctured, as evidenced by the escape of gas and intestinal fluid. The wound was washed with carbolic acid and covered with a layer of antiseptic cotton. The following day the little patient was nearly free from pain and was able to retain a little milk. The temperature had fallen from 104° to 101° and the tympanites was almost entirely relieved. The loop of intestine was adherent to the abdominal wall, and there had been no escape of fluid into the peritoneal cavity. The patient

made an excellent recovery. Inspired by his success in this instance, Dr. Reibel formulates the following rules for the surgical treatment of peritonitis in cases where life is threatened, by an extreme degree of tympanites: 1. Open the abdominal wall by an incision about an inch in length. 2. If adhesions have formed between the two layers of the peritoneum, make a little puncture in the presenting loop of intestine. 3. If there are no adhesions, cover the wound with a carbolized compress and wait a few hours until adhesions form, before opening the gut. 4. In the latter case, if the meteorism be urgent, a few punctures may be made with a fine trochar at once. The author does not regard the puncture of the intestine through the abdominal wall, as ordinarily practised, as of much utility. He thinks that the intestinal walls have lost their elasticity through overstretching and cannot expel the gas through a fine canula.—*Journal de Médecine de Paris*, February 17, 1883.

LIPOMA OF TRAUMATIC ORIGIN.—The following case is related by Dr. Kölliker in the *Centralblatt für Chirurgie* of March 17, 1883: A man was struck upon the left shoulder by a brick falling from a considerable height. When seen a few hours later, there was a tumor of about the size of a fist, formed of extravasated blood, over the outer third of the clavicle. This was reabsorbed in about six weeks. Three weeks later the patient presented himself again on account of a lipoma, which was growing rapidly, in the exact location of the previous ecchymosis. The tumor was removed shortly afterward and measured one inch in height by two and one-half inches in width. Kölliker thinks that possibly there may have been a small lipoma in this situation previous to the injury, though the patient denied positively ever having himself noticed a tumor there.

FATAL PURPURA HEMORRHAGICA.—Dr. Rongon relates the following case in *L'Union Médicale*, No. 17, 1883. A naval officer, sixty-four years of age, had suffered for several years with glycosuria in a mild degree. In the summer of 1882 he received a severe shock in learning of the sudden death of his daughter. Other troubles weighed upon his mind, and he became very despondent. Soon afterward he was seized with a profuse hæmaturia. This was followed by a deep hemorrhage in the scapular region. Purpuric spots made their appearance upon the abdomen and thighs. A few days later a sudden increase in volume of the right lower extremity was observed by the medical attendant, the left limb remaining of normal size. This was supposed to be due to hemorrhage, and the supposition was confirmed the following day by the discoloration of the skin. Hæmaturia and extravasations in various parts of the body continued until the death of the patient in syncope, thirty-seven days after the first symptoms had manifested themselves.

COLD ABSCESS OF THE TONGUE.—A woman, thirty-five years of age, presented herself with a swelling upon the right side of the tongue. The tumor was the size of a walnut, soft and fluctuating, and not painful on pressure or manipulation. It had appeared, without any known cause, four months previously, had attained its present size in about a month, and then remained stationary. The patient's general health was excellent. Dr. De Brun incised the tumor, which gave exit to a quantity of thin pus. The sac was dissected away and the wound closed with sutures. Union was complete in a few days.—*La France Médicale*, No. 14, 1883.

PURULENT INOCULATION IN THE TREATMENT OF GRANULAR LIDS.—Dr. Terrier formulates the following conclusions to an article on this subject in the *Revue de Chirurgie* for February, 1883: 1. Purulent inoculation is a good method of treatment of old conjunctival granulations with pannus. 2. It is indicated where the pannus is thick. But corneal ulcerations and *pannus tennisi* are contra-indications to its employment. 3. In pannus,

granular or not, affecting one eye, the procedure is to be practised with the greatest care lest the sound eye be inoculated. 4. The pus to be used is that of *ophthalmia neonatorum*. When this cannot be obtained gonorrhœal pus may be employed. 5. No attempt should be made to abort the induced ophthalmia, but it should be treated judiciously, with a view to prevent permanent injury to the cornea. 6. Sulphate of copper, nitrate of silver, yellow precipitate, ointment, or calomel insufflations are frequently indicated in order to complete the cure. 7. In exceptional cases it will be necessary to resort to syndectomy or iridectomy.

SPONTANEOUS GANGRENE IN A YOUNG SUBJECT.—A young man, twenty-four years of age, of healthy appearance, entered the Charité Hospital, suffering from gangrene of the lower extremity. The lower part of the left leg for about three inches above the malleoli was of a livid hue. The foot was of a purplish black color, and the skin upon the dorsal surface was raised in a dark bleb. The temperature of the foot was 72°, while that of its fellow was 96°. Sensibility of the affected member was lost. At the commencement of the trouble there was some fever and anorexia. But this soon passed away, and with the return of appetite the general health seemed good. The origin of the affection was obscure. There was no history of traumatism, but the patient stated that a few months previously he had been obliged to work while standing on the wet ground. About six or eight weeks before his admission to hospital he began to feel a sensation of numbness and formication in the left leg. Soon afterward he found that he was unable to bear his weight upon this limb. The patient appeared to be in excellent general health, and no dyscrasia was discoverable to account for his condition. Examination of the urine gave negative results. By way of exclusion, Dr. Berger was led to attribute the gangrene to an acute arteritis, induced by the prolonged action of damp cold to which the patient had been exposed.—*Gazette des Hôpitaux*, No. 14, 1883.

THE SPLEEN AS A BLOOD-PRODUCING ORGAN.—Dr. Korn has conducted a number of experiments to determine the part played by the spleen and bone marrow in the formation of red-blood corpuscles. He practised repeated small blood-lettings upon pigeons. Changes in the blood after this procedure were constant. It became of a darker color, clotted more readily, and contained a greater number of white corpuscles. The bone-marrow was more red, contained less fat, but presented a very large number of undeveloped red-blood corpuscles. These results were the same whether the spleen had been extirpated or not. When present, this organ was anæmic. Dr. Korn concludes from these experiments that the spleen performs no function in the reproduction of red-blood corpuscles in birds. And in this he is in agreement with Neumann, who has arrived at the same conclusions in respect to animals.—*Deutsche Medicinische Wochenschrift*, No. 6, 1883.

CLIMACTERIC DYSPEPSIA.—Mr. Prangley, in the *British Medical Journal*, describes a form of dyspepsia which he terms climacteric. It occurs in women between the ages of forty and fifty. The symptoms are those of great nervous depression, with pain on the top of the head, noises in the ears, hot flushes and chills, with curious sensations in the abdomen. The dyspeptic symptoms are those of precordial distress, with palpitation, costive bowels, coated tongue, and foul breath. The treatment consists of the administration of bismuth, bicarbonate of potash, and ammonia, adding valerian if the nervous symptoms predominate, followed by quinine, strychnia, and dilute nitro-muriatic acid.

QUARANTINE ON TEXAS BORDER.—The health officers of Brownsville, Texas, have arranged with the Mexican authorities to establish a quarantine at Bagdad.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CENSORSHIP OF MEDICAL COLLEGES.

THE Illinois State Board of Health has established a reputation as censors of the standing of medical colleges and for energetic work in the matter of regulating the practice of medicine. Despite some serious charges with regard to its action toward the Columbus Medical College, we believe that the Board deserves the good name that it has obtained. Its rulings as to the status of our country's numerous medical institutions have been productive of considerable good. At its recent quarterly meeting the Board resolved to recognize the Indiana Eclectic Medical College and the Joplin Medical College, and not to recognize the diplomas of the United States Eclectic College of this city.

The Secretary, in commenting upon the work of the Board in its relation to medical practice, says:

"Since the last meeting many letters have been received from colleges, both in this and in other States, asking specific information as to whether the Board would recognize diplomas if issued to certain students under the circumstances as detailed. A number of inquiries, both official and personal, have also been answered concerning the standing of colleges in various parts of the country, and the value of their diplomas in this State as entitling to practice. This correspondence marks an increasing sense of accountability in the teaching or educational department, and of its responsibility under the law. If this sense can be sufficiently quickened it may correct some of the evils arising from the want of an examining body independent of the colleges, and there is reason to hope for such result in the progress already made."

The Secretary then refers to the fact that many medical colleges by no means carry out even the minimum requirements announced in their catalogue. Dr. Rauch says:

"As a result of my own official experience during the past six years, I think it entirely within bounds to say that a strict adherence to their advertised requirements is the exception among colleges rather than the rule. In fully three-fourths of those which have come under my observation there have been irregularities of more or less gravity."

We have every reason to believe that there is no exaggeration in the above statements. The announcements made by many medical colleges too often possess the same literary style and moral value that we find at-

tached to patent medicines. In fact, it seems as if the profession greatly needed a body of censors who should inspect our colleges and compare the glittering statements in their circulars with the cold actuality. College corporations are sadly in need of some reminder that the moral law includes them as well as the individual doctor.

In the report to which we have alluded several illustrations of the difference between the letter and the spirit of college catalogues are given:

"An official proceeding required that Dr. —, a graduate of one of the most popular and widely known colleges in the country, detail his acquirements in pharmacy. He was asked what experience he had had in compounding medicines, and replied that he had had none. 'Did you not put up prescriptions under your preceptor while a student?' 'No, sir; I didn't have any preceptor.' 'Why, I supposed that medical colleges required that their graduates should have read or studied medicine under a preceptor for three years. How did you get through? How did you graduate?' 'Well, I attended two courses of lectures, paid the fees and got my diploma.'"

The following communication from Dr. — was received by the Secretary:

—————, ———— Ill.

To the Secretary State board of health Dear Sir I sent you my diploma early last March and have not heard from it since did you receive it or do you know anything about it I am becoming quite anxious concerning its safety My diploma is from ———— Medical College ———— dated ———— 1882 I also sent you a letter containing a one dollar bill to pay for the certificate If you will give me the information I request I shall be greatly obliged to you

Your's very respectfully

————— M. D.

In the annual announcements of the college which issued this diploma, among the regular requirements for graduation one is stated to be "such primary education as is clearly requisite for a proper standing with the public and the profession;" and another that "he must have pursued the study of medicine three years."

Continuing his argument upon this subject, the Secretary makes the following strong statement: "Aside from its legitimate function as a medium of information to the student concerning his studies, the annual announcement, so lavishly scattered throughout the country, is often prostituted to advertising the college and the claims of the individual members of the faculty, in terms and manner differing little, if any, from those of the ordinary advertising quack. In the course of the past six years I have carefully examined nearly all the announcements issued in this country, and do not hesitate to say that many of them are of such a character that if a private practitioner had been guilty of publishing a professional card making such claims and couched in such terms, he would have been expelled from almost any medical society for a gross violation of ethics."

It is scarcely necessary to emphasize the importance of the foregoing. It means that the physicians who are annually flooded with college circulars must read many of them at least with large reservations—a fact which is not creditable to the medical teachers of our country.

THE DIAGNOSTIC SIGNIFICANCE OF VENOUS PULSATION.

THE existence of pulsation in the jugular veins has usually been regarded as of evil prognostic import. It has been held by some authorities to indicate tricuspid regurgitation. Others see in it a sign of insufficiency of the venous valves alone. The former regard it as a ventricular pulse, the latter as one caused by auricular contraction. Nearly all, however, have been agreed in the assumption that it is due to a backward current in the veins. And all have admitted a failure in the venous valves. Bamberger and others even went further, and asserted that the real cause was to be found in a defective auriculo-ventricular opening.

A very careful sphygmographic study of the phenomenon in question has been recently made by Dr. Franz Riegel (*Volkman's Klinische Vorträge*, March 13, 1883). As a result of his labors the author is led to oppose both these views. He contends that a true venous pulse, not transmitted from the neighboring artery, may and often does exist in health. This pulsation is produced not by a backward, but by a forward current. It is caused by the auricular diastole. The blood being drawn in from the distended veins by the suction force of the dilating auricle, there is produced a partial collapse of the vessels, which become again distended during the auricular systole. So that this pulse, indicative of no disease, is really but the expression of the alternately hastened and retarded flow of blood to the heart.

This normal venous pulse may be readily differentiated from that of tricuspid regurgitation by the time of its occurrence. It beats alternately with the carotid pulse. The auricular diastole occurs at the time of the ventricular systole, and consequently the period of arterial fullness corresponds with that of venous collapse. The venous tracing of tricuspid insufficiency begins to ascend prior to the ventricular systole, reaching its highest point just after that of the arterial tracing has been attained. At the ventricular systole the blood is forced backward into the auricle, as well as forward into the pulmonary artery, and the former being thus filled from the ventricle, its diastole causes no venous collapse. It is only when the ventricular diastole occurs that the pressure upon the veins is relieved sufficiently to cause a sinking of the sphygmographic curve. This is the pulse of tricuspid regurgitation, as it occurs when the heart beats with full strength. When the cardiac contractions are weak, a modification of the tracing is observed. In such cases the ventricular contraction is insufficient to fill at once the dilating auricle, and we have a momentary fall in the venous curve. The auricle is more rapidly filled, however, than under normal conditions, and we see in consequence a second rise in venous pressure, the second fall occurring only at the ventricular diastole. The jugular pulse of tricuspid regurgitation with a weak heart is therefore dicrotic.

Still another venous pulse is noted by Dr. Riegel. It is met with in cardiac and pulmonary affections which lead to engorgement of the right side of the heart. The tricuspid valve is here normal, and consequently the pulse corresponds exactly in time with that occasionally seen in healthy individuals. It is a very distinct pulsation, and this is its characteristic. And it is only by its

greater size that it is to be distinguished from the normal pulse. These investigations were conducted apparently with great care, and the conclusions derived therefrom are doubtless correct. But as to their practical value in a diagnostic sense there is room for doubt. Very few practising physicians, we imagine, are provided or will provide themselves with the delicate and expensive apparatus necessary for recording simultaneously the carotid and jugular pulsations. And although the author gives directions for making these observations by the aid of touch and sight alone, the possibility of error in judging of minute fractions of time is too great to render such observations of much value.

THE LATE STATE LEGISLATURE.

THE State Legislature which adjourned last week was, so far as matters of medical interest are concerned, most remarkable for what it failed to do. There are two bills in particular which the profession will regret to learn failed to become laws. These were, the bill providing for a State Board of Medical Examiners, and another making better provisions for the commitment and care of lunatics. There were three bills presented bearing upon this latter subject, and all were lost through some delay, or inadvertance, none of them reaching the stage when they could fairly be beaten in legislative session. A bill abolishing coroners' juries shared the same fate.

It is unfortunately the fact that all bills which contemplate some reform and improvement are most difficult to carry, for, while many are agreed that they are admirable, no particular individual is sufficiently interested to urge the matter systematically. The medical profession is greatly in need of competent representation at Albany.

Among the three or four hundred bills which became laws, there are none which have any medical or sanitary matters, if we except the law which prohibits the manufacture of cigars in tenement houses, and that which regulates the farming out of infants.

It is, perhaps, a matter of congratulation that at least no bad bills were passed, and particularly that no charters for cheap medical schools were given. Some credit is due the Committee on Legislation of the State Medical Society, that this latter was prevented.

PETER AND PASTEUR.

THE opposition to Pasteur and his doctrines has hitherto proceeded chiefly from across the Rhine. It has very promptly been attributed, by his own disciples at least, to national jealousy and Teutonic prejudice. But now an attack has been made upon him from within the camp, and he has been challenged by his own countrymen to substantiate his claim of having materially advanced the science of medicine. At a recent meeting of the Académie de Médecine, Dr. Peter varied the monotony of the customary discussion of typhoid fever, by branching off upon the germ theory of disease and the practical value of Pasteur's researches. He did not attack the germ theory itself; nor would he deny that the discoveries of this investigator had led to most useful and practical results in both obstetrics and surgery. It was to minds inspired by the theories of Pasteur, he said, that we owed the conception of antiseptic surgery. A prevalence

of the same ideas had led to the adoption of certain precautions by means of which puerperal fever had become a far less common disease than in former times. Having said this much, however, he had said all. Further praise would be but flattery.

He maintained that the discovery of the material elements of contagion had, thus far at least, thrown no light upon the pathological anatomy, the evolution, the treatment, or, above all, the prophylaxis of contagious diseases. What, asked M. Peter, is the ultimate object of Pasteur's methods? To attenuate the virus by the action of air and of time, and then to vaccinate with this stale and weakened contagion. Now this is not vaccination at all, he went on to say, but inoculation—a much more serious matter. For the weakened virus is very uncertain in its effects, and is likely to create new centres of contagion. It may even, notwithstanding its "attenuation," induce a mortal disease. The first inoculation, with virus of greatest dilution, does not confer immunity, as Pasteur himself admits. And the second, with strong virus, often kills the animal whose prospective safety it was intended to insure. The admission, by Pasteur himself, that the vaccination was protective only for a limited time, was commented upon in a jocose strain by the speaker, and he pictured to his auditors the woes of the future man, forced to protect himself anew every year, by a course of vaccination, against a multitudinous variety of ravenous bacteria. M. Peter confessed with a chuckle that he had designedly turned the discussion in the Academy from typhoid fever to germs, and he expressed himself as confident of victory in the battle which was now fairly begun. His argument against the utility, or indeed the safety, of Pasteur's vaccinations was a strong one, and was supported by numerous facts. But arguments may be fallacious, and facts are apt to be variously interpreted. Yet, as M. Bouley announced his intention of speaking in defence of this doctrine, in which he is an ardent believer, the discussion bids fair to become an interesting one.

CAN THE MEAN DURATION OF HUMAN LIFE BE PROLONGED?

A most important deduction has recently been made regarding the possibility of extending the duration of human life. In a paper read before the London Statistical Society, Mr. Noel A. Humphreys discussed the question: Has the duration of life in England increased during the last thirty years? It is now nearly thirty years since the late Dr. Farr published his "Life Tables," based on statistics covering a period from 1838 to 1854. His conclusions were that the mean after-life-time of males at birth was 39.9 years, and that of females 41.9 years. According to the new tables presented by Mr. Humphreys, covering the period from 1876 to 1880, this life-period is now for males 41.9 years, for females 45.3 years, representing a prolongation of life of about two years, or a five per cent. increase.

The statistics, when further analyzed, show also that over two-thirds of this prolonged life is for the working period between the ages of twenty and sixty years, thus apparently refuting an assertion which has been widely circulated, that the improvement effected by science consists "in the prolongation of the passive endurance

of life rather than an extension of the power of true vitality, or any increase of the opportunity for good work and for intellectual enjoyment."

These conclusions are, as is remarked by the *British Medical Journal*, well calculated to encourage sanitarians, and to give a fresh impetus to the propagation of the gospel of prophylaxis.

It would be interesting to learn, however, how much of this increase is due to preventing zymotic diseases and how much to an actually greater vital stamina. We suspect that the zymotic factor is the chief one in securing the present favorable results.

News of the Week.

HOSPITAL FOR CONTAGIOUS DISEASES IN BROOKLYN.—Brooklyn Health Commissioner Raymond will address a communication to the Board of Audit at the meeting of that body, to be held on Tuesday next, recommending the insertion in the tax budget of an amount sufficient to erect suitable structures for the treatment of persons afflicted with contagious diseases, and whose means will permit of their paying their own expenses.

THE REJECTION OF DR. CHARLES F. CHANDLER AS PRESIDENT OF THE BOARD OF HEALTH OF THIS CITY.—On Wednesday, Mayor Edson nominated Dr. Charles F. Chandler as President of the Health Board. The nomination was rejected by the Board of Aldermen by a vote of 13 to 10. Mayor Edson, in common with many other friends of sanitary reform, believes that the rejection was due to personal enmity caused by fidelity to duty. Dr. C. had been a faithful officer, and in the exercise of his authority as such naturally gave offence to some who would not willingly submit to sanitary regulations.

THE STATE BOARD OF HEALTH at Albany on Wednesday elected Dr. E. M. Moore, of Rochester, president, and Dr. Elisha Harris secretary. The president reappointed all the committees of last year.

DR. MAURICE KRISHABER, well known as a laryngologist, recently died in Paris.

THE UNIVERSITY OF PENNSYLVANIA has arranged for a voluntary fourth-year course in its medical department.

THE NORTH CAROLINA STATE MEDICAL SOCIETY will meet at Tarborough on Tuesday, May 15th.

REGULATING THE PRACTICE OF MEDICINE IN NEW JERSEY.—The New Jersey Legislature has passed a supplementary act compelling the registration of all persons practising medicine in that State. The provisions for regulating medical practice are now very complete.

THE CARE OF THE INSANE IN PENNSYLVANIA.—It seems that, ever since last January, when it was announced by a Philadelphia editor that the insane of his State were beautifully and lovingly cared for, a succession of charges against various insane asylums and the State lunacy laws have appeared. The latest refers to the Blockley Almshouse at Philadelphia. The mortality among the insane occupants being very great, the matter was investigated by Dr. Richardson. He reports that the sewage from nearly one hundred persons was dumped into the cellar

from which the air-supply was drawn. He also found that the buildings were not properly warmed, the reason being that the boilers were in such a condition that the inspector refused to permit a sufficiently high temperature to be carried to produce the necessary heat.

"We should be glad to know," says *The Sanitary Engineer*, "who is responsible for this disgraceful condition of things. Have they another 'Tewksbury' establishment in Philadelphia?"

DEATH OF DR. HENRY B. WILBUR.—Dr. Henry B. Wilbur, Superintendent of the State Idiot Asylum at Syracuse since its foundation, who died suddenly at the asylum May 1st, aged sixty-three, was a native of Welden, Mass., and the pioneer educator of idiots in this country. He established the first asylum in his own house in 1848. He took charge of an experimental station at Albany in 1851, and of the State institution in Syracuse three years later. He was a graduate of Amherst College, and a physician in his early life. In late years he had been actively concerned in lunacy reform, and was for several years President of the National Association for the Prevention of Insanity and the Protection of the Insane.

MEDICAL COLLEGE OF VIRGINIA.—The Court of Appeals of Virginia, in the case of a petition for *mandamus* to compel the old Board of Visitors to the Medical College of Virginia to surrender to the newly appointed Board full possession of the buildings, property, etc., has rendered its opinion, which is, that Governor Cameron had no authority to appoint a new board under the charter granted the college years ago; that he can only fill vacancies as they occur by death, resignation, removal from the State, etc.; that the Legislature alone has power in the premises to authorize the dismissal of the old, and the appointment of a new board, etc.

This puts the management, says the *Virginia Medical Monthly*, practically in the same hands that it has been in during the past.

THE SUPPORTERS OF BRAND.—Twenty-two physicians of Lyons who believe in and practise the "Brand" method of treating typhoid fever, have tendered M. Bouley a banquet for his eloquent defence of this method, and of Pasteur and experimental medicine, before the French Academy of Medicine.

Reports of Societies.

MEDICAL SOCIETY OF PENNSYLVANIA.

Thirty-fourth Annual Session, held at Norristown, Pa., May 9, 10, and 11, 1883.

(By Telegram to THE MEDICAL RECORD.)

THE delegates had not arrived in sufficient numbers on Wednesday morning to make the opening session of the Thirty-fourth Annual Convention of the Medical Society of Pennsylvania other than the medium for the transaction of routine business.

The Society was called to order at nine o'clock, in Music Hall, the opera house of Norristown, by its President, DR. WILLIAM VARIAN, of Titusville, who made a few appropriate remarks.

In the absence of Rev. Jos. McCaskey, who was expected to offer an opening prayer, the divine blessing was invoked by REV. MR. TWEDELL, of Norristown.

The list of delegates was then read by the Secretary, DR. WILLIAM B. ATKINSON, of Philadelphia, about forty responding to their names.

ADDRESS OF WELCOME.

An address of welcome was then delivered by DR. HIRAM CORSON, of Norristown, after which the Committee on Arrangements reported the programme.

REPORTS OF DELEGATES AND COMMITTEES.

The report of the delegates from the Society of Pennsylvania to the American Medical Association at St. Paul last year, signed by Dr. William Varian, the chairman of the delegation, was then read and adopted. Dr. Marshall was introduced as a representative of the Delaware State Medical Association. Dr. William B. Atkinson, of Philadelphia, the Committee on Publication, then reported that the proceedings of the last meeting of the Association at Titusville had been duly printed.

PRELIMINARY MEDICAL EXAMINATIONS.

The report of DR. O. H. ALLIS on schedule of subjects for preliminary medical examinations was then read. After some debate, it was referred to a committee of one from each county society.

The reports of the various county medical societies were then read and referred. As an amendment to the printed rules, it was resolved that they be so amended as to allow a suspension of the rules by a two-thirds vote of the members present.

ENDORISING THE CODE OF ETHICS OF THE AMERICAN MEDICAL ASSOCIATION.

Under the head of New Business, Dr. H. H. Smith, of Philadelphia, offered the following:

Resolved, That the State Medical Society of Pennsylvania reaffirms its approval of and adhesion to the Code of Ethics adopted by the American Medical Association.

Resolved, That organized opposition by a local society and by individuals to the Code approved by the medical profession of the United States is rebellion against the constituted authorities, and should be so treated.

Resolved, That the Secretary be instructed to forward a copy of these resolutions to the Committee of Arrangements at Cleveland, O., for presentation to the Association.

DRS. W. ATLEE and F. WOODBURY, of Philadelphia, and E. PALLER, of Athens, spoke on the resolutions, in the passage of which much interest was manifested. The resolutions were carried, after which thanks were returned to Dr. Corson for his address.

DR. BENJAMIN LEE, of Philadelphia, made some remarks upon the affection known as

WRITERS' CRAMP,

or writers' palsy. He considered that these were two distinct affections, the one a true cramp, the other a paralysis, or rather an exhaustion of certain muscles of the arm and hand. Both were recognized by physicians as being very intractable, especially when they have existed for a considerable length of time. A number of appliances have been invented to enable persons suffering from them to hold and use the pen. Dr. Lee presented two such, one a modification of his own of the instrument devised by the famous French surgeon, Velpeau, which he considered as more applicable to those cases in which exhaustion or paralysis was the prominent feature. It consisted of a pear-shaped piece of wood, to be held in the palm of the hand, with a shank passing down to the end of the index finger, to which are attached metallic rests for the fingers and thumb and rings to hold the first two fingers firmly in the instrument; the pen is held below the index finger in very nearly the ordinary position. The other had been introduced to the profession by Professor Nussbaum, of

Munich, during the past year, and is called by him bracelet for writers' cramp. In Dr. Lee's experience it was especially adapted to those cases in which a true cramp is the prominent feature of the case. The one exhibited was imitated from a pattern sent from Germany and made under the inventor's direction. It consisted of a thin band of hard rubber, about an inch and a half broad and large enough to take in the thumb and three fingers when stretched out quite straight. On the back of this band the pen was attached in such a way that its direction to the paper and length could be regulated. Professor Nussbaum's theory was that the extensors of the fingers were the seat of the disease and not the flexors, as usually supposed, and he believed that this appliance would, by compelling the extensors to act, not only prove a means to enable the patient to write, but also aid in curing the disease. Dr. Lee read an extract from a letter from a patient who had been using this bracelet for several months, in which he testified to the ease with which he was enabled to write by its means. Specimens of the patient's writing, both with and without the bracelet, were shown and fully sustained his favorable report.

At the opening of the afternoon session, DR. WILLIAM M. WELCH, of Philadelphia, read by request his voluntary paper on the

WEARING OUT OF VACCINE PROTECTION

and the efficacy of revaccination, Dr. James Tyson, who was to deliver the opening address of the afternoon, not having arrived at that hour. The substance of the address of Dr. Welch, who is the physician in charge of the Municipal Small-pox Hospital, was as follows:

Jenner's belief in the identity of small-pox and cow-pox has led to experiments by Thiele, Bodcock, Voight of Hamburg, and others who have successfully transformed variola virus into vaccine in the body of the bovine animal.

The belief in the identity of variola and vaccinia led to the idea that they can be communicated to a person but once in a lifetime. Jenner believed that vaccination was as complete a preventive of small-pox as one attack of that disease was of another. Learned Medical Societies, in the early part of this century, emphatically denied with Jenner the necessity of revaccination. However, although very many physicians still believe in the absolute efficacy of early vaccination, which leaves a well-defined cicatrix, I am convinced of the fallacy of this, and propose to show, first, the susceptibility to small-pox, however thoroughly destroyed by vaccination, may subsequently return; second, revaccination can be depended on to destroy this return of susceptibility to the disease.

The first epidemic of small-pox that occurred after vaccination was in general use appeared in Scotland, in 1818. This epidemic, however, did not convince the profession of the necessity for revaccination, though it gave rise to the term varioloid. In 1824, another such epidemic, attacking many persons vaccinated in early life, appeared all over Europe.

The British Government began the employment of public vaccination in Ceylon before 1819, but in that year as well as in 1830, 1833, and 1836, a violent epidemic overspread that island, attacking many who had been vaccinated. Between 1824 and 1835, 3,839 cases occurred in Copenhagen, of which 3,093 occurred among persons who had been vaccinated, although the death-rate among the latter was only 2.13 per cent.

The statistics of small-pox hospitals show that a large proportion of cases occur among persons who have been vaccinated in early life. In 7,326 admissions to the London Small-Pox Hospital from 1855 to 1865, 78 per cent. occurred after vaccination. In my own experience, during the great epidemic of 1871-2, 2,377 cases were admitted into the Philadelphia Municipal Hospital, of which 68 per cent. occurred in persons vaccinated in early life. In the epidemic of 1880-81-82, there were 1,059 ad-

missions, of which 54 per cent. were post-vaccinated cases, the proportion being 14 per cent. less than before, owing to the greater use of vaccination in Philadelphia at that time.

I shall also show that this deterioration of vaccine protection is progressive, increasing up to a certain period of life with the length of time since vaccination. Between January 1, 1871, and May 1, 1883, I observed 2,507 cases of post-vaccinal small-pox. Under the age of five years there were 10 cases and 2 deaths, from 5 to 10 years there were 46 cases and 8 deaths, from 10 to 15 years there were 99 cases and 8 deaths, from 20 to 25 years there were 745 cases and 96 deaths. The percentage of deaths in the total number of 2,507 cases was 16.89 per cent. It is evident, therefore, that while at first affording almost complete protection, as children approach the age of puberty there is very great deterioration of vaccine protection. The tables prove that the maximum number of post-vaccinal cases occurs at the period immediately following puberty.

I am also convinced that vaccine virus not only loses much of its vigor through a long series of human transmissions, but also suffers in the durability of its prophylactic power.

When a public vaccinator in Philadelphia, from 1867 to 1870, I found it necessary to visit my patients, for the purpose of collecting crusts for future use, on the fourteenth or fifteenth day after inserting the virus. The appearance of the vaccine scar always determines, as a general rule, the character of the vaccination a person has received. A permanent scar, distinct as if stamped with a die, shows proper vaccination. As a general rule there is a direct relation between vaccine cicatrices and the prophylactic power. The protection which results from vaccinia of short duration is not so durable as that which results from vaccinia of a perfectly typical character. Long humanized virus produces less favorable results than bovine lymph or that of recent humanization.

Successful revaccination modifies, of course, the resulting vaccinia. As varioloid differs from small-pox, so does the vaccioid resulting from revaccination differ from true vaccinia. Every epidemic has proven the virtues of revaccination, the time for which is shown by the tables from which extracts have already been made. Vaccination is nowhere so carefully performed as in Germany, and there the efficacy of revaccination has been proven. In the twelve years of my experience no one connected with the Municipal Hospital who was properly revaccinated had the small-pox. If vaccination be effectually performed in infancy, and revaccination at puberty, we would begin to realize that small-pox may be extirpated from the earth.

DR. R. L. SIBBETT, of Carlyle, then read a voluntary paper on "Obstetrical Notes." He was followed by DR. HUGH HAMILTON, of Harrisburg, who read a paper with many charts upon artificial infant alimentation, in which he recommended mixed healthy cow's milk neutralized with bicarbonate of soda and with an addition of one or two tablespoonfuls of good cream, according to age, heated to 55° C. (131° F.), and sweetened with a freshly made syrup of milk sugar.

ADDRESS ON MEDICINE.

DR. JAMES TYSON, of Philadelphia, Professor of Pathology and Morbid Anatomy in the University of Pennsylvania, was then called upon to deliver his address on "Medicine," the substance of which was as follows:

Perhaps the most important form of hæmaturia and hæmoglobinuria resulting from general causes is that due to malarial poisoning.

The first complete report of an undoubted instance of this affection appears to have been published by Dressler in 1854, although incomplete and uncertain cases were reported prior to this date, one as early as 1832 by Elliotson. Two degrees of the disease are met with—a milder form, in which other symptoms as well as the

hæmaturia are less pronounced, and of which instances occur in the Middle States as well as the South and West of this country; and second, a more malignant form, attended by great prostration, vomiting, etc., yellowness of the skin, along with copious discharges of bloody urine.

While a majority of cases of malarial hæmaturia are intermittent many are continuous, and of my seven cases, only two were distinctly intermittent. One of these cases I published in a clinical lecture in the Philadelphia *Medical Times* as far back as September 1, 1871.

The pathology of malarial hæmaturia consists, as yet, chiefly of theoretical deductions. We can only conclude that the malarial poison acts upon the blood and blood-vessels, impairing the integrity of both. This goes so far, occasionally, as to produce an actual destruction of blood-disks, and always so alters the capillaries that they permit the transudation of blood-elements ordinarily retained.

The treatment is distinctly that of malarial disease, and I have seldom seen more brilliant and satisfactory results than have followed the use of quinine, in a case accurately determined; although such results are not invariable, and I have known the disease to resist for a long time the most thorough and judicious use of anti-malarial remedies. Usually, however, I take hold of a case of this kind with considerable confidence; when there are distinct remissions, my practice has been to administer sixteen to twenty grains of sulphate of quinia, in the usual manner of anticipation of the paroxysm in intermittent fever, from three to five grains every hour until the required amount is taken. The whole amount may be taken in two doses, or even in one dose. Where there is no distinct remission I more usually direct three to five grains every three hours until the hemorrhage ceases or decided cinchonism is produced.

The second more serious form of this disease, as it appears in the tropics and in the southern part of the United States, is characterized by such increased intensity of all the symptoms that it may be well called "malignant." Singularly, however, the disease has seemed to be much more prevalent during the last fifteen years. My attention was first called to it in September, 1868, when I received specimens of urine and the history of some cases from Dr. R. D. Webb, of Livingston, Alabama, who wrote also that it was not known in that part of his State, at least prior to 1863 or 1864.

The treatment for the breaking of the paroxysm is pre-eminently quinine, or quinine with mercurials, and although this does not always succeed, there seems to be no other remedy. It has been given hypodermically. The nausea has been controlled by morphia and lime-water, by carbolic acid and by creosote. In addition restorative measures are necessary, including the free use of stimulants. Turpentine has been used in large doses, it is said, with advantage in Alabama.

R. H. CHASE, Superintendent of the male department of the Norristown Asylum, then read a very interesting address on

INSANE ASYLUMS IN SOME OF THEIR RELATIONS TO THE COMMUNITY.

He alluded to and ridiculed the sensational stories of the confinement of sane men in insane asylums, which he thought utterly impracticable. He mentioned the case of Dr. Sevin, of Erie, whose story of his confinement in Dixmont, resulted in the legislative investigation of that institution; and another which came under his own observation. He said such charges reflected on men and institutions which were an honor to the State and deserved better things. The sensational charges made in such cases were contrary to common sense.

DR. DE F. MILLARD then read an address on

SIMPLE METHODS OF TREATMENT OF CLUB-FOOT,

giving practical illustrations on a living subject of the nature and use of proper mechanical appliances. The use of

gypsum as a setting and of elastic force were commended. The utility of the forms of rubber known as "printer's blanket," "gum soling," and of gutta-percha when moulded in hot water, as well as of sole-leather as supporting bands was then shown. All these papers were referred to the Committee on Publication.

In the general discussion of the papers, DR. STEWART, of Erie, said that if a one-hundredth part of what was published about Dr. Sevin were true it would cast odium on every institution for the insane in the United States. He would stake his professional reputation that Dr. Sevin was insane when committed to Dixmont. He had never made any complaint to him, Stewart, when the latter had visited him, and was still insane to-day.

DR. WILLIAM ULRICH, of Chester, said that the only paper which had been read at the recent meeting of the Society for the Protection of the Insane in Philadelphia, which favored the popular sentiment that sane persons are confined in insane hospitals, was by Dr. Heber Newton, of New York, and his paper met with such a savage reception that he did not think Dr. Newton, who was not a physician, would venture soon to seek notoriety outside of New York.

DR. HIRAM CORSON, of Norristown, said there were some cases of sane people confined in asylums, and he knew of harmless people who might well be at home, but who are in asylums. In some cases husbands pay largely to have their wives confined. There should be a home for convalescents in connection with every asylum, a home which is not a hospital or an asylum.

DR. ULRICH said that physicians did not always distinguish between insanity and drunkenness. He knew of one man in Philadelphia who was committed as insane (when drunk) thirteen times and discharged as cured thirteen times.

DR. SCHULTZ, of the Danville Asylum, said the laws of Pennsylvania made it very easy for a patient to get out of an asylum. He showed how outside parties could get a man out of an asylum, but did not show how a patient could get out, if unlawfully confined, without powerful outside aid.

DR. CORSON again spoke of the difficulty with which a woman could get out of an asylum. He had been trying to get a married woman out of a Pennsylvania asylum for a year and a half; her sister wanted her out to live with her; her so doing would benefit the sister and would be a saving of twenty dollars a week to the husband, yet the husband, the power behind the trustees, would not let this woman out, and no one could say how she could get out, though she was mild, intelligent, harmless, and cultivated.

An adjournment was had about 4.30 o'clock, until 7.30 o'clock.

ANNUAL PRESIDENTIAL ADDRESS.

Quite a number of the citizens of Norristown, the visiting medical men and ladies gathered in the Court House at 8 o'clock to hear the annual address of the President of the Society. Dr. Varian was introduced by Dr. Addinell Hewson, of Philadelphia, First Vice-President of the Association. The substance of Dr. Varian's address was as follows: The Medical Society of the State of Pennsylvania was organized thirty-five years ago in Lancaster. Now there is an active living society in almost every one of the sixty-six counties of the State, with a total membership in the State Society of nearly eighteen hundred. The main objects of the great Society are now to obtain efficient Legislation in behalf of State Hygiene, the proper draining, building, and lighting of dwellings, and legislation for hospitals for the insane, feeble, and sick.

But charlatantry, superstition, and ignorance still roam almost unchecked throughout Pennsylvania. Its physicians and people need a State Board of Health. It is time that, in regard to burial, sentiment should yield to common sense. All refuse matter, whether animal

or human remains, should be cremated. Let the crematory take the place of the cemetery. Again, how can the inebriate be restored to moral, mental, and physical health, thus reducing crime sixty or so per cent.? The penitentiary has proved ineffective. The asylum, in its proper development, will doubtless answer the question.

In the great question of vaccination there should be expert inspection and control of animal vaccine as a protection against diseases scarcely less to be dreaded than small-pox itself.

In the matter of medical education, a Chair of State Medicine and Hygiene should be established in every medical school, and three full years of attendance should be required before a diploma is granted.

The action of a medical society of a neighboring State in throwing down the barriers which have been so long maintained between the science of medicine and legalized dogmatism, received from you at your last session an expression of unanimous disapproval. The renewal of that action demands a renewal of your disapproval.

MICHIGAN STATE MEDICAL SOCIETY.

Eighteenth Annual Meeting, held at Kalamazoo, Michigan, May 9 and 10, 1883.

(By Telegram to THE MEDICAL RECORD.)

THE Michigan State Medical Society began its eighteenth annual meeting May 9th, in the Kalamazoo Academy of Music, President GEO. TOPPING, M.D., of Dewitt, in the chair.

ADDRESS OF WELCOME.

After prayer by the REV. GEO. F. HUNTING, the HON. E. W. DEVOE, President of the Village, gave an address of welcome, to which President TOPPING responded briefly on behalf of the Society.

REPORT OF EXECUTIVE COMMITTEE.

DR. FOSTER PRATT, Chairman of the Executive Committee, gave his report. He announced that all the medical gentlemen with their ladies were invited to a reception tendered by the citizens of Kalamazoo and by the local medical society at the Burdick House, on Wednesday evening. He also read an invitation to the gentlemen from Superintendent Palmer to visit the Michigan Insane Asylum, and another from the president and secretary of the village to inspect the various departments of the village.

REPORTS OF COMMITTEES.

The Secretary, DR. GEO. T. RANNEY, read his annual report, and also that of the Committee on Publication. The present number of members of the Society is two hundred and sixteen.

DR. SMART, the Treasurer, reported a balance in the treasury of \$429.26.

ANEURISM BY ANASTOMOSIS.

DR. WM. BRODIE reported a case which had recently come under his observation. The patient, a healthy German woman, aged forty-seven, still menstruating, mother of several children, slipped one day upon the sidewalk, striking upon the back of the head. She was stunned by the fall, but soon recovered therefrom. She had not noticed, however, a swelling over the occiput, which slowly increased in size. When Dr. Brodie first saw the patient this swelling had reached the size of a goose-egg. He discovered several smaller tumors over the scalp. Auscultation revealed a bruit. There were no pulsations. A bistoury, plunged into the tumor carefully, allowed a free escape of arterial blood. The wound was closed, erysipelas set in, and it seemed at one time impossible to save the patient's life. She recovered from this, however. The diagnosis of diffuse aneurism was

made. For treatment, pressure was not considered expedient. Ligation of arteries was rejected on account of the free anastomosis of the arteries involved. Electrolysis was advised, but the patient did not wish to try it at present.

DR. GEO. RANNEY read the list of applications for membership.

In the afternoon session THE PRESIDENT read the annual address. He lauded the work of the State Board of Health, and urged the profession to assist them in their efforts to control disease. He called attention to the rapid increase in the proportion of doctors to the population, and in that connection lamented the State support of medical schools. He remarked that the low lecture fees was an inducement to men to enter the profession who would otherwise be content in humbler spheres. The free hospitals in connection with the schools treated at public expense many who were perfectly able to pay for treatment. The portion of the president's address relating to the University was referred to a committee to report upon on Thursday.

DR. C. J. LUNDY, of Detroit, read a paper upon

ERRORS OF REFRACTION AND THEIR RELATION TO CONSTITUTIONAL SYMPTOMS.

He gave a series of cases in which patients complained of headaches, such as have been generally thought to be due to uterine disease, consisting of pain in the vertex and at the lower occipital region. In all of the cases related, after fitting proper glasses to the eyes, the other symptoms disappeared. He also spoke of errors of refraction causing retinal congestion. He called attention to the fact that many persons wear colored glasses for retinal hyperæmia, which is made worse thereby, when if the errors of refraction were corrected they would not need the colored glasses.

DR. CONNER, in discussing the paper, mentioned two cases which had come under his observation. In one physician astigmatism had so excited the brain as to produce insanity, which disappeared after wearing glasses. In the other, after correcting errors of refraction, epileptic attacks had grown less severe and less frequent.

DR. T. W. REYNOLDS read a paper on

TIMELY CATHARSIS.

He recommended the use of cathartics in the early stages of lobar pneumonia; he had aborted an attack of rheumatism by free catharsis, the same result had been reached in one case of trifacial neuralgia, and in the delirium following cranial injuries. He recommended three drops of croton oil in water; he used the same for puerperal mania, violent hysteria, and uræmia. He did not discuss the abuse of cathartics. For mild action he recommended a glass of warm water, or a cup of coffee in the morning. In the discussion following, attention was called to the fact that free catharsis did not necessarily imply that the bowels had been emptied; in one case mentioned about a peck of fecal matter had been removed after catharsis.

(To be continued.)

THE TWELFTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, April 4, 5, 6, and 7, 1883.

PROFESSOR V. LANGENBECK, PRESIDENT, IN THE CHAIR.

(Special report for THE MEDICAL RECORD.)

THE President, DR. VON LANGENBECK, opened the Congress with the report of the committee on the award of the prize offered by the Empress for the best essay upon "Experimental Investigations upon the Etiology of Diphtheria, and Practical Conclusions derived therefrom." The Committee reported that of twenty-three competing essays, only a few were in any way worthy of considera-

tion; and even the essay to which the prize was awarded was worthy of it only in its first part, and accordingly it was for this part only that the prize was given. The author was Professor Heubner, of the University of Leipzig.

On motion of DR. BARDELEBEN, Professor von Langenbeck was re-elected President of the association.

After the election of officers the scientific work of the Congress was begun by DR. KOCHER, of Berne, who read a paper entitled

EXTIRPATION OF BRONCHOCELE AND ITS RESULTS.

The chief difficulties met with in the operation were the avoidance of injury to the recurrent laryngeal nerve and the arrest of hemorrhage. The author advised the ligation of the veins prior to that of the arteries. Dr. Kocher did not now perform tracheotomy, as advised by Rose, for he considered it a harmful procedure as tending, through incision of the cartilages, to increase the bend of the trachea caused by the lateral pressure of the goitre. It was allowable only in case the danger from suffocation was imminent. He held that the total extirpation of the goitre was injurious to the organism, especially during the period of growth, and he thought there was some relation between so radical a measure and cretinism or idiocy. The unfavorable results of the operation were seen in a feeling of weakness and a constant chilliness, in slowness of thought, of speech, and of movement, and also in a swelling of the hands, feet, abdomen, and especially of the face. These latter gave to the patient the appearance of one suffering from Bright's disease, though there was no albuminuria. There was anæmia in a high degree, as evidenced by microscopical examination. To this ensemble of symptoms the author gave the name of *cachexia strumipriva*, while the anæmia following the extirpation of the spleen is but temporary and appears immediately after the operation, this *cachexia strumipriva* is a progressive and truly pernicious anæmia, which is developed only some time after the operation. The author concluded from this that the thyroid gland was a blood-producing organ, or at least that it aided in the formation of blood. He thought also that possibly it was a regulator of the cerebral circulation. The atrophy of the trachea following the operation was worthy of note. It was probably due to the ligation of the superior and inferior thyroid arteries. In conclusion, he stated that, as a rule, the gland should never be totally, but only partially, removed. His conclusions were based upon a study of one hundred and two operations.

A second paper on

EXTIRPATION OF THE THYROID GLAND

was read by DR. BARDELEBEN, of Berlin. The author confined his remarks to a short report of four cases of goitre, recently operated upon by him, as he feared the paper prepared by him would appear insignificant after the one just listened to. He denied that unfavorable results necessarily followed upon the total removal of the tumor, as in two of his cases he had met with unequivocal success. On the contrary, he thought that the very cachexia observed by Kocher would have appeared had no operation been performed. He had never had recourse to tracheotomy. He opposed the theory that extirpation of the spleen and thyroid gland, as being blood-forming organs, was of evil influence upon the organism. He had removed the spleen and thyroid gland in a dog several years before, and had observed no unfavorable consequences.

DR. MAAS, of Freiburg, presented the third paper, entitled:

CHANGES IN THE TRACHEA INDUCED BY BRONCHOCELE.

He had never observed a connective-tissue degeneration, such as is described by Rose. He had, however, met with a bending of the trachea caused by the tumor,

and by reason of which tracheotomy was rendered necessary. He had also seen two cases of posterior dislocation of the trachea caused by unilateral goitre. Whenever these patients bent the head forward, asphyxia arose. Both were cured by extirpation of the goitre. Dr. Maas had never performed tracheotomy in the operation for removal of goitre, nor had he ever performed the latter operation except in case of urgent necessity. In 522 cases of goitre treated by him, he had excised the tumor only 23 times. In all the other cases he had obtained a diminution in the size of the tumor by treatment with iodoform.

DR. MAAS also read a paper on

THE ALKALOIDS OF DECOMPOSITION.

He referred to the investigations of Thiersch, Bergmann, and others, and stated that he also, by a process, the principal steps of which he described, had found alkaloids of very poisonous properties in decomposing animal matter. These substances were found in a body as early as twenty-four hours after death; they were present in great quantity. The author had found three alkaloids of differing action. The first, in very small dose, induced a most marked tetanus, and in larger doses caused the death of the animal in thirty or forty minutes. The action of the second resembled that of morphia, and the third simulated strychnia in its effects. These researches would indicate that we may have diseases following a wound which are referable to poisoning from the alkaloids in question.

DR. VON BERGMANN remarked that in the preceding Congress he had noted the difference between a putrid infection caused by the poison of decaying animal matter and septicæmia induced by the presence of microorganisms in the blood.

DR. MAAS stated that Brieger had obtained an alkaloid by treatment with amyl alcohol, whose action exactly corresponded to that obtained by himself.

DR. BOEGEHOLD, of Berlin, presented an article on

INJURIES OF THE THORACIC DUCT.

This was followed by a report by DR. BRUNO SCHMIDT, of Leipzig, on

THE RESULTS OF HERNIOTOMY SINCE THE INTRODUCTION OF THE ANTISEPTIC METHOD.

In 308 cases of strangulated hernia, operated upon in various hospitals from 1875 to 1881, the mortality was 36.6 per cent. The mortality of operations undertaken previous to the introduction of Lister's method was 45.8 per cent., showing a difference of only 9.2 per cent. In spite of any antiseptic precautions, he thought the mortality would always correspond to the severity of the operation. The field of the operation was itself a septic one, and such precautions could reduce the proportion of deaths no further. In view of these facts the removal of the immediate danger of death only should be attempted, and the radical operation should not be ventured upon. In the case of gangrene an artificial anus should be made, and only after an interval should the suture of the gut and its reposition be attempted.

DR. GUSSENBAUER, of Prague, differed very decidedly from the author. He stated that the results of 160 operations, collected by one of his assistants, made an excellent showing for antiseptics. The results depended not so much upon the nature of the operation as upon the condition of the cases operated upon. Even a simple reposition of the intestine might eventuate fatally if peritonitis were already present.

DR. ZELLER, of Berlin, related

A CASE OF MELANURIA,

occurring in Von Bergmann's clinic. The patient, a man forty-three years of age, was suffering from multiple

melanotic sarcoma of the skin, and died, six weeks after coming under observation, with cerebral symptoms. The urine was clear, of a dark brown color, and contained a large amount of hydrobilirubin. He thought the coloring matter of the urine was to be referred to two sources. One was the coloring matter of the blood or bile, the other the substances formed in the digestion of albumen in the intestine.

(To be continued.)

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Eighty-fifth Annual Convention, held at Baltimore, April 24 and 25, 1883.

(Special Report for THE MEDICAL RECORD.)

(Concluded from p. 467.)

MEDICAL BIBLIOGRAPHY—TARNIER'S FORCEPS—ANTI-PYRETIC EFFECTS OF CARBOLIC ACID AND ASTRINGENT INFLUENCE OF RUBUS PROCUMBENS—ACTION OF ALCOHOL ON THE HEART—SUBCUTANEOUS NERVE-STRETCHING—INCREASING USE OF NARCOTICS—SPONTANEOUS COW-POX IN BALTIMORE COUNTY—NASO-AURAL CATARRH AND ITS TREATMENT—ELECTION OF OFFICERS.

DR. JOHN S. BILLINGS delivered the annual oration, choosing for his subject "Medical Bibliography." He gave a historical review of medical bibliographical work, and then described the library at Washington, its objects, and the future plans regarding it.

In the Section on Obstetrics and Gynecology, DR. WILLIAM T. HOWARD read a paper on Tarnier's forceps, which he highly praised.

In the Section on Materia Medica and Therapeutics, DR. JOHN S. LYNCH presented a paper entitled "Observations on the Antipyretic Effects of Carbolic Acid, and upon the Astringent Influence of Rubus Procumbens." Carbolic acid in large doses (gr. v., q. two to four hours), was thought to be highly potent as an antipyretic in essential and inflammatory fevers. He combined aconite with it. Typhoid fever rarely lasted over fourteen days, if treated with this drug. In septicæmia and in hectic phthisis it was also recommended.

Rubus procumbens, or dewberry root, was a drug which had never failed him in diarrhoeas of all forms. It was a specific for the summer diarrhoea of infants. The dose for adults was a drachm of the fluid extract.

PROFESSOR H. NEWELL MARTIN read a paper entitled the "Direct Action of Alcohol on the Heart." The reader had experimented upon the isolated mammalian heart, and upon a man previously a total abstainer.

First, from a Marriott's flask defibrinated blood was fed to the heart, then blood containing absolute alcohol, and after this good blood again. The results of these experiments demonstrate: 1. Alcohol in the above doses has no influence on the pulse. 2. As regards the work done by the heart in a minute, blood containing one-eighth per cent. of alcohol is without effect, at least for five or ten minutes; but blood containing one-fourth per cent. of alcohol nearly always, and that containing one-half per cent. always greatly diminishes the work done. If the supply of alcoholized blood be not too long continued, the heart can be recovered by feeding anew with pure blood. 3. The diminution of work is due to an alteration in the elasticity of the cardiac muscle, in consequence of which the heart swells out so that even in its systole it nearly or quite fills the pericardial bag. Hence in diastole it cannot dilate farther to receive a fresh supply of blood. 4. If the pericardium be removed, the above doses of alcohol are without effect on the work done, at least for a considerable time; the heart, however, swells enormously and beats in a quite unphysiological manner, never obliterating its ventricular cavities in systole.

DR. J. D. ARNOLD read a paper upon "Some Forms of Laryngeal Paralysis."

DR. R. B. GUNDRY read a paper on "The Prognosis of Insanity," which was very well received.

DR. J. W. CHAMBERT read a report upon the subject of "Subcutaneous Nerve-stretching for Sciatica." The author concluded that in most cases the operation was promptly efficacious.

DR. TIFFANY exhibited a girl, aged thirteen, from whom he had excised the upper jaw from the left incisor to the second right molar tooth, for a sarcomatous tumor originating in the socket of an undeveloped right lateral incisor.

DR. G. HALSTEAD BOYLAND read a paper upon the "Increasing Use of Narcotics"—opium, chloral, bromide of potassium, etc.—and the evils resulting therefrom, and urged the need of legislation to regulate their sale. After reviewing the legal status of the subject in other States and countries, he proposed a law rendering it unlawful "to sell, give, or dispose of any poison or poisonous substance, except upon the order or prescription of a regularly authorized practising physician, under penalty of a fine not exceeding \$25 for the first offence, nor \$50 for each succeeding offence." The act not to extend to wholesale dealers.

DR. ST. GEORGE W. TEACKLE, State vaccine agent, related the facts connected with a case of spontaneous cow-pox in Baltimore Co., and the result of experiments with crusts obtained therefrom. This alleged vaccinia appeared about the middle of January last upon the udders of a herd of Alderneys on a farm about six miles from Baltimore. Four cows were affected. Careful investigation excluded all possibility of inoculation.

DR. JOHN N. MACKENZIE read a very elaborate and valuable paper on "Naso-Aural Catarrh and its Rational Treatment." The author insisted upon the great frequency of reflex cough as a symptom of disease; in his experience it has become so common that he has long since ceased to regard it as a curiosity. *His clinical experience furnishes abundant proof that the cough occurs only when from a local pathological process, or ab-extra stimulation, irritation of the turbinated corpora cavernosa of the nose exists.* He has furthermore succeeded experimentally in localizing the area of reflex excitability in the mucous membrane covering these erectile bodies. Repeated experiments also show that all parts of this sensitive area are not equally susceptible to irritation, and that the cough is most constantly produced by artificial stimulation of the membrane clothing the posterior end of the inferior turbinated bone, and that of the erectile body on the septum immediately opposite. In other words, there exists in the nose a reflex sensitive area analogous to that discovered in the larynx by Stoerk, Vulpian, and others. Apart from its physiological interest the practical importance of this fact in a diagnostic and therapeutic point of view is sufficiently obvious; in it is found the explanation of many obscure cases of cough which heretofore have received no satisfactory solution, and its recognition, therefore, is the key to their successful treatment.

Dr. Mackenzie describes further on a forceps he has invented for the removal of adenoid growths.

The following officers were elected: *President*, Dr. Richard McSherry; *Vice-Presidents*, Drs. W. Stump, Forwood, and John S. Lynch; *Recording Secretary*, Dr. G. Lane Taneyhill; *Assistant Recording Secretary*, Dr. Robert T. Wilson; *Corresponding Secretary*, Dr. W. F. A. Kemp; *Reporting Secretary*, Dr. Richard H. Thomas; *Treasurer*, Dr. Judson Gilman.

On motion of DR. WILLIAM LEE, a resolution was adopted reaffirming allegiance to the Code of Ethics of the American Medical Association.

After the adoption of a vote of thanks to the authorities of the Johns Hopkins University, and a complimentary vote to the late President, the Faculty adjourned *sine die*.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 11, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. W. M. CARPENTER presented, in behalf of a candidate, a specimen of *ovarian cyst*.

DR. J. A. WYETH presented a specimen which illustrated

THE CAPABILITY OF THE JUGULAR VEIN FOR DISTENTION.

It was taken from a subject injected with plaster-of-Paris, and the vessel, just at the point where the common carotid is crossed by the omohyoid muscle, had a circumference of about three inches. The point of interest in the specimen was that the veins become distended when free circulation is obstructed, and thus the internal jugular may become so distended that it will overlap the arteries, and hence easily be wounded in cutting down upon the common carotid artery for purposes of ligation.

Dr. Wyeth also presented the tooth of some animal that probably lived in one of the former geological periods. It was sent to him by a former student from Randolph, Tenn., who found it on a sand-bar in the Mississippi River.

DR. WM. P. NORTHRUP presented a specimen of

CIRRHOSIS OF THE LIVER IN A CHILD FOUR AND ONE-FOURTH YEARS OF AGE.

The child died at the New York Foundling Asylum of scarlatina and diphtheria. Autopsy showed hob-nailed liver, and for this lesion the case was reported. The history was furnished by Dr. G. M. Swift, House Physician.

January 19th.—Whooping cough.

January 30th.—Eruption of scarlatina.

February 6th.—Diphtheritic membrane in the pharynx, profuse discharge from the nose; later, croup and extensive sloughing of pharynx. Death occurred eighteen days from the appearance of the scarlatina, and nine days from the appearance of the exudation upon the walls of the pharynx.

Autopsy eleven hours after death.—Body, well nourished; excoriations about lips, nose, and ears. Brain, normal. Pharynx, sloughing; naso-pharynx in like condition. Larynx: Epiglottis and its folds cedematous; chink nearly closed when viewed from above; diphtheritic membrane over inner surface. Trachea: granular fibrin upon a deeply congested base. Lungs: moderate general edema; scattered lobules of broncho pneumonia; bronchi deeply congested. Heart: about one ounce of clear fluid in the pericardium; heart-tissue normal; ventricles in diastole, filled with dark- and light-colored clots. Liver: somewhat diminished in size, thicker than normal, shortened in antero-posterior measurement, edges rounded; upper surface distinctly mammillated and tuberculated ("hob-nailed"), marked with dilated vessels; in the depressions the capsule has a translucent, gelatinous appearance; color of liver *café-au-lait*; consistence firm and unyielding, "cries" when cut with a knife; cut surface shows an indistinct reticulation, the spaces enclosing an area about the size of a millet-seed; gall-bladder moderately distended with light-green bile. Spleen: size small; outer surface normal; when cut, shows dry tissue thickly studded with Malpighian bodies, which appear somewhat enlarged and white. Kidneys: congested; firm; size normal. Stomach: uniform redness; increase of mucus. Intestines: mesenteric glands somewhat enlarged; dusky. Small—Peyer's patches congested, and in lower portion of ileum swollen; contents normal. Large—solitary follicles enlarged; white; contents dark, grumous.

Microscopic examination.—A section transverse to and including the upper surface of the liver gives a crenate margin. Within the depressions of this margin the capsule is thickened, and at the lowest point the thickened capsule sweeps down into the substance of the gland, and following the distribution of the portal system

invades the whole organ. It envelops single acini and groups of acini, but manifesting no tendency to invade the lobule except at the surface of the liver, where the process seems to have been more active and of longer standing. There is also a moderate increase of connective tissue about the intra-lobular veins. The liver-cells are everywhere in a condition of fatty infiltration, uniformly from periphery to centre; nuclei are distinct; cell-bodies are finely granular, outlines usually well defined.

In the interior of the liver the connective tissue is well organized. Near the upper surface there is a free sprinkling of lymphoid cells upon a background of organized connective tissue. The veins and arteries are not obliterated, and there is no increase of bile canaliculi remarked by some observers. In the spleen there is a slight increase of connective tissue. This, however, is difficult to maintain; it is on the border-lands between a normal and pathological condition.

After the autopsy the records of the institution were searched, and the following additional information gained: The child entered the house when one day old. "Condition fair." "Condition," uniformly reported, "good" till May, 1882, when she was adopted by French parents, with whom she lived four or five months, and was returned in good condition. This was about two months before death. There is no history of syphilis, and in this case the records are unusually satisfactory. The child's health was always good. She was regarded a very "clean child," bright, active, and attractive. During her stay with the French parents there is no reason to think she was abused or indulged in irritating food or drink.

Remarks.—"In the 'Transactions of the Pathological Society of London' for 1876 I find three cases of cirrhosis of the liver in children. Dr. T. Griffiths reports a case. He remarks, in conclusion, 'This is an excellent specimen of a cirrhotic liver from a child ten years of age, without any evidence whatever, on the most careful and satisfactory inquiry, of its having been produced by the use of alcoholic drink or irritating food of any kind. Neither is there a particle of evidence of hereditary syphilis, of previous history of rickets, diseased bone, or chronic abscess.'

"Dr. W. Cayley reports a case of a female child, six years of age. No history of syphilis or drink. No illness since whooping-cough at nine months of age. He found changes akin to those in the liver in brain, heart, stomach, spleen, and kidneys.

"Murchison reports a case in a boy nine years of age. 'After the boy's death it was ascertained that his father kept a low public-house, and that the boy had been in the habit of drinking a good deal of wine and water, especially between meals. While in hospital he took stimulants with a readiness quite unusual in children.'

"He concludes: 'So far as my experience goes, I have never met with a typical example of hob-nailed liver (as distinguished from other forms of contracted liver) after death, at any age, in which there could be made out a clear history of moderation in the use of alcohol. In early life it is not improbable the activity of the liver may render it more liable to suffer from alcohol or other irritating ingesta than adults.'

"In the above cases the children suffered from the ordinary symptoms of cirrhosis, and all were tapped several times.

"Dr. J. Wickham Legg ('St. Bartholomew's Hospital Reports,' vol. xiii., 1877, page 148), in a very able *résumé*, reports two cases of his own—one in an infant of seventeen months. The prominent symptom during life was purging, and just before death symptoms of tubercular meningitis. Death was due to the latter. He remarks: 'No symptom to suggest a special attention to the liver was present.'

"Another was a boy twelve years of age, whose symptoms suggested typhoid fever or tuberculosis, and yet neither tubercle nor ulcer of Peyer's patches was found.

'In either case,' he adds, 'almost superhuman sagacity would have been needed for the diagnosis to have been made aright.' On examination, the livers were found to be in condition of ordinary cirrhosis, very similar to that of adults, 'bands of connective tissue about the acini; connective tissue studded with lymphatic cells.' Liver-cells granular in one case, fatty in the other.

"Dr. Samuel Wilks reports a case of syphilitic cirrhosis in a child one month old. Surface of liver was smooth, resembling fibrous tumor; secreting cells were unchanged.

"Dr. Frederick Taylor reports ('Transactions of the Pathological Society of London,' 1880) a case of a child five years of age. No evidence in life or at post-mortem examination of syphilis; evidence as to alcohol incomplete. 'On one occasion (the child) admitted he knew the difference between brandy and gin and liked them, and that he had often had them at night.'

"In the 'Transactions of the Pathological Society of London,' for 1881, is reported a case of a boy nine years of age with congenital hydrocele, and later ascites. No history of syphilis in parents. The child was often sent to bring the ale for father and mother, and it is said he often took a 'sip of ale.' He says: 'The history of morning sickness—the splenic engorgement, the nausea, appearance of the liver, are in favor of alcohol being the cause.' Of nineteen cases mentioned by Legg, ten were girls and nine boys. Of fifteen cases the ages were between seven and thirteen years, three between five and six years, and one of seventeen months. He quotes F. Weber for a case of cirrhosis in a stillborn child (no mention of syphilis in this case).

"As to the causes of cirrhosis of the liver in children: 1. French and German authors agree with Murchison that before and during the first dentition cirrhosis other than syphilitic is rare. 2. After the first dentition the most frequent cause is undoubtedly the use of alcohol; irritating food may cause it (Murchison and Niemeyer). 3. Legg says: 'It seems to me a highly probable conclusion that cirrhosis may arise independently of excess in alcohol.' In his twelve-year-old case the symptoms were of a grave general disorder, high temperature (103 to 104°) and delirium. There was no jaundice, no ascites. This case showed cirrhosis of liver, pleurisy, and parenchymatous nephritis. Cayley's case showed changes in brain, heart, stomach, spleen, and kidneys, of similar nature.

"Hillier reports a case of cirrhosis in which were also pericarditis and pleurisy. He suggests that 'cirrhosis may be the expression of some general disease of the lymphatic tissue throughout the body.'

"Dr. Hayden, in the *Dublin Journal of Medical Science*, reports a case of cirrhosis in a boy of fourteen years, complicated with 'cirrhosis' of kidneys, with pleurisy and pericarditis.

"Dr. Thomas Olivier in the *British Medical Journal*, reports a case in a female infant three months old. Parents both temperate; no history of syphilis. He adds: 'Syphilis will not, however, explain all cases of cirrhosis of the liver, even in the young.'

"One author, already quoted, says: 'The view that cirrhosis is due solely to an intemperate use of liquors, seems hard to sustain, when it is considered that not only domestic animals but wild animals suffer from cirrhosis.'

"Briefly to summarize: 1, The anatomical appearances are in no way distinguishable from the cirrhosis of adults; 2, from birth to two and one-half to three years in cases of cirrhosis of the liver the presumption is in favor of syphilitic origin; 3, later than three years of alcoholic origin; 4, in many cases it seems fair to regard it as a general disease."

DR. J. C. PETERS said the records of the Society showed that specimens of cirrhosis of the liver had been presented which were removed from the bodies of children ten, twelve, and fourteen years of age; the majority of them were females, and in none was there a history of excess in the use of alcoholic drinks.

DR. HEINEMAN remarked, in commenting upon the admirable *résumé* of Dr. Northrup, that the explanation suggested by some as an etiological factor in cirrhosis of irritative articles of diet, as well as of drink (alcohol), was perfectly rational. Intestinal dyspepsia was a common enough disease in young children and adults, and there was no reason why repeated and long-continued irritation of the duodenum, accompanied as it was often by functional liver derangement might not in some cases be followed by structural lesion.

Functional disorders were, with the light of physiological chemistry, beginning to be considered as manifestations of real cell changes, which it is true were not always recognizable after death, just as were congestion and even slight catarrhal inflammation not always to be recognized post mortem. The fact stated by Dr. Northrup, that it is only in children over three years of age that cirrhosis is found independent of syphilitic or alcoholic origin, possibly helped this theory, since, as was just stated, it was at and after this age that dyspepsia became so common an affection.

DR. J. LEWIS SMITH remarked that in the *Revue de Médecine* for July and October last, Dr. Lancereaux described three varieties of cirrhosis, the alcoholic, syphilitic, and malarial. In the syphilitic the liver is deeply furrowed. It is not attended by ascites or icterus. In the malarial variety the liver is firm and it presents a slightly granular surface. In alcoholic cirrhosis the liver is contracted, hard, and nodulated, or it is somewhat enlarged, with smooth or granular surface, and the microscopic examination shows hyperplasia of the connective tissue, and fatty degeneration of the gland-cells.

In young children we can exclude alcoholism as a cause of cirrhosis, and if there be no history of inherited syphilis, may we not in these cases of obscure etiology regard malaria as the cause? Certainly in and about New York malaria is an important and common factor in the causation of disease. An abstract of Lancereaux's paper appears in the *London Medical Record* for March 15th.

CONGENITAL SYPHILIS—SECONDARY TUBERCULOSIS.

DR. L. E. HOLT presented the lungs, spleen, and portion of liver and kidneys removed from a boy four and a half years of age, who died on April 5th, at the Sixty-third Street Institution, and for the specimens he was indebted to the courtesy of Dr. Ripley. The boy first came under Dr. Holt's observation on February 16th of this year, with the following history: His family history was negative; he was one of four children: two were healthy, one died early in infancy. This child, when four weeks old had an eruption on the skin and also had snuffles, was backward in its development, and was unable to walk alone until it was three years old. It had suffered from cough, had had irregular fever, no sweating at night, had a chronic nasal catarrh, abdominal pain, and constipation. The child was feeble, its face pinched, and it had a fetid discharge from the nostrils, which had also excoriated the upper lip. The cervical glands were considerably enlarged on both sides, and there was also enlargement of the jugular veins. The upper incisors were absent entirely; the lower incisors were in a condition of caries. The chest was decidedly rachitic, and the extremities of the long bones were enlarged. On the right index finger was an onychia which had existed two or three weeks, and the left great toe was the seat of dactylitis. The abdomen was greatly distended, and the abdominal veins were enlarged and tortuous, but there was no fluid in the peritoneal cavity. The liver was considerably enlarged, as also was the spleen. The temperature was 103° F. No satisfactory examination of the lungs could be obtained. The child was referred to Dr. Ripley at the Polyclinic, who found consolidation at both apices, general bronchitis, and on the right side behind, evidence of a small cavity about the size of a walnut. The patient was placed upon the mixed treatment, with the addition of cod-liver oil, iron, and tonics, which were

kept up about one month without any improvement. The febrile movement continued, the temperature once reached 103.5° F. When Dr. Holt saw the child last, on March 23d, all the symptoms were aggravated. There was, however, no fluid in the abdominal cavity. Commencing onychia was seen upon every finger of the left hand, and upon the fingers of the right hand. The child continued to have fever, the temperature ranging from 100° to 101° F. with considerable pain and tenderness in the region of the liver. Physical signs were more pronounced on the right side of the chest, and later the evidence of a small cavity was found on the left side anteriorly. Examination of the urine was negative, except once, when a trace of albumen was found. There were no head symptoms at any time. Toward the termination of the case the patient had diarrhoea, but had no vomiting at any time. Death occurred by slow asthenia.

At the autopsy small cavities were found in the apices of both lungs, with surrounding consolidation. There were pleuritic adhesions on both sides. The heart was normal, also the pericardium. The omentum was adherent, but it contained no tubercles, nor were tubercles seen on the surface of the intestines. The liver was enlarged and contained yellowish nodules, varying in size from that of a pea to a pin's head, and situated about the bile-ducts. Miliary tubercles could be seen sparsely scattered over the surface of the organ. The spleen was considerably enlarged, and firm and adherent to the surrounding organs. Scattered through the tissue of the organ were very numerous nodules, which resembled those seen in the liver, very firm and hard, but there were no tubercles seen upon the surface of the organ. The kidneys showed nothing abnormal to the naked eye. It was impossible to say what the nature of the nodules in the liver and spleen was without a microscopical examination.

The case was interesting, because it showed—first, quite a clear history of congenital syphilis, and, second, pretty conclusive evidence of the development of tuberculosis which seemed to have come on as secondary to the syphilis.

The specimens were referred to the Committee on Microscopy.

CARCINOMA OF THE BREAST.

DR. L. H. SAYRE presented a mammary cancer with axillary glands, removed from a patient fifty-three years of age. There was no history of cancer in the family. Six weeks ago a lump appeared in the left breast, which gradually increased in size, and two weeks ago he removed it by making an elliptical incision. The operation was performed under the antiseptic spray. The wound had entirely healed.

AMPUTATION AT THE KNEE.

DR. SAYRE also presented a leg removed from a female patient sixteen years of age, who had a fair family history. When eighteen months old she was attacked with disease of the knee-joint, which continued for about three years, and resulted in complete bony ankylosis with the usual deformity of flexion, subluxation, and rotation outward. The leg was flexed at a right angle with the thigh. The patella was completely fused, and the articular surfaces of the tibia and femur were also completely ankylosed. It was decided to amputate in preference to attempt *brisement forcé*, for the reason that the ankylosis was so firm it would probably be impossible to break it up; but if able to break it up, there would be great danger of rupturing the popliteal artery. In the event, however, of being able to avoid that accident, the limb would probably be useless for the reason that the joint surfaces had probably become destroyed. Amputation was preferred to Buck's operation of removing a wedge-shaped section, for the reason that the limb was already three and a half inches shorter than its fellow, and the patient has not yet attained her growth. Con-

sequently exceedingly high support for the foot would be necessary, which would give more inconvenience than would an artificial limb. Amputation was selected, and was performed by making a modification of Stephen Smith's operation. In this case it was found impossible to disarticulate the joint, and it was therefore necessary to saw through the head of the tibia. The operation was performed under the spray, the wound was closed with sutures, and an antiseptic dressing applied. Three days after the operation the dressings were removed, the sutures taken out. There was no secretion of pus, the temperature had not been elevated above $100\frac{1}{4}^{\circ}$ F., and the pulse had not risen above 102.

DR. GARRISH said that Dr. Valentine Mott made it a rule never to operate for removal of a cancer until the integument became ulcerated.

DR. GIBNEY remarked that he had met with numbers of limbless people who came to the hospital with irritable stumps and broken artificial limbs, and in many cases it would seem that resection of some kind in adult life, at least, would have been a better mode of procedure. He therefore asked Dr. Sayre if he would have performed amputation had the patient obtained her entire growth?

DR. SAYRE replied that he thought the artificial limb would be more advantageous to the patient than a high shoe or other support.

DR. WYETH thought that an osteotomy would have been less dangerous than amputation, although amputation is not, as a rule under such circumstance, a dangerous operation. He thought that, on the whole, if an osteotomy had been accomplished successfully, and the limb placed in the desired position, it would have been better, so far as utility is concerned, than an artificial limb. He believed that he should have tried osteotomy, straightened out the limb, and endeavored to utilize the leg and foot. Again, if amputation had been necessitated, he thought it was recognized as more favorable to utilize the normal tissues which have been accustomed to pressure, and therefore to save some of the tissue below the knee to form a basis for the support of the artificial limb.

DR. SAYRE remarked that the cicatrix in this case was entirely behind and in the popliteal region, and that its lowest part was an inch and a half above the end of the stump.

DR. GIBNEY asked concerning the per cent. of mortality in knee-joint amputation and resection.

DR. WYETH replied that twenty-five per cent. of the cases of resection of the knee-joint terminate fatally; that the mortality after amputations in which the wounds were sewed up was twice as great as in those cases in which the amputation was left open. He then referred to the fact that at one time he looked over the history of several hundred cases in Bellevue Hospital, and found that in every other amputation the patient died. Dr. Dennis reported fourteen cases in which the operation was performed by the late Prof. James R. Wood, and all of the patients recovered. All the stumps were treated openly. He knew of over one hundred cases which were treated in the same way, and in none of them did septicæmia or pyæmia cause death, and the rate of mortality was far below that of amputations treated by the closed method. Recently he had made seven consecutive amputations. The wounds were treated openly, and all the patients recovered. Amputation at the knee-joint for disease is fatal in about one in seven cases.

EMBOLIC PNEUMONIA—THROMBOSIS OF THE UMBILICAL VEIN.

DR. J. LEWIS SMITH presented the lungs removed from an infant which died at the age of fifteen days. There was nothing unusual in the condition of the child until it was about one week old. It became feverish and fretful, and on examining carefully for the cause of this trouble evidence was found of inflammation at four

different localities under the skin, circumscribed cellulitis, little nodules about half an inch to an inch in diameter. The child began to fail soon after, and died at the age mentioned. At the autopsy there was found in the lower lobe of the left lung on the posterior aspect, a small nodule of pneumonic consolidation. On opening this its interior presented a grayish appearance, of the wedge-shape, characteristic of embolic pneumonia. Around this wedge-shaped portion of consolidation the lung presented a hyperæmic appearance, as is common in this form of pulmonary inflammation. It was believed that there would be found somewhere in the body a thrombus, and further examination revealed what seemed to be the true source of the pulmonary disease and the cellulitis, namely—a softened thrombus in the umbilical vein. This vein contained a purulent looking liquid which under the microscope was found to be simply softened thrombic material to the amount of five or six drops. The question might be asked why, if this was the source of the embolic pneumonia, do not embolic inflammations occur more frequently in the newborn. The clot in the umbilical vein evidently remains undisturbed *in situ*, under ordinary circumstances, since there is no propulsive power acting upon a thrombus in this vein, as is the case in the systemic veins when thrombi form. It is usually, no doubt, absorbed within the vein, or it enters the circulation gradually and in a different state so as to do no harm. But we can easily understand how, by rough handling of the child, especially by sudden and firm pressure on the abdomen, as in tossing, a portion of the thrombus might enter the circulation and produce such inflammations as were present in this case. Some years ago he presented to the Pathological Society specimens from a young infant, showing numerous abscesses. The cause may have been the same as in this patient, but it was not at the time suspected.

DR. JOHN C. PETERS then made a preliminary report on scarlet fever in horses, after which the Society went into executive session.

THE CAUSE AND CURE OF CHOLERA INFANTUM.—Dr. A. E. Walker, of Mount Liberty, O., sends us some judicious criticisms upon "Henoch's Lecture on Cholera Infantum," published in "Wood's Library of Standard Medical Authors, for 1882." Dr. Walker believes that high temperature is not given its proper importance as a cause of disease. "One other fault I find in his lecture is that his cases of cholera infantum appear to have assumed a chronic form (figuratively speaking). He says that when we are called to see a patient suffering an attack of cholera infantum on the second or third day of the disease, we can administer such remedies as he indicates. Now, in this part of the world (it may be entirely different in Berlin) a physician is scarcely ever called upon the second or third day after the attack has begun, unless it is for the mother of the babe who is suffering from nervous shock caused by the sudden death of her child. As I understand cholera infantum, it is very sudden in its onset and the majority of cases die within thirty-six hours if left to the curative efforts of nature."

Dr. Walker thinks that Henoch's treatment would be valueless in a vast majority of cases. He recommends, in the place of it, the plan adopted by Professors D. N. Kinsman and Pooley, of Columbus, O. These gentlemen commend injections of ice-water, cold compresses to abdomen, and in addition to this Dr. Pooley advises the use of sub. nit. bismuth in the following doses: he takes enough bismuth to make a tolerable thick cream, using aqua dist. as the vehicle; of this he gives from one-half to one teaspoonful about every four hours until choleric discharges cease.

Dr. Walker writes: "This plan of treatment, I believe, is destined to become the treatment *par excellence* in cases of cholera infantum."

Correspondence.

MEDICAL CONTROVERSY AND THE NEWS-PAPERS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: One of the evils following the effort of a part of our profession to change our Code, is the tendency of the discussion to be diverted into the newspapers. Is it wise to yield to this tendency? Both Codes condemn it. The first sentence of the New Code says: "It is derogatory to the dignity and to the interests of the profession for physicians to permit their opinions on medical questions to appear in the newspapers." If any physician, prompted by a spirit of individual liberty, allows himself to disregard this teaching, he ought, certainly, for the dignity and interests of the profession, to be very careful not to overstep the bounds of truth, while purporting to narrate simple facts. Dr. Abram Jacobi—than whom few cultivators of medical science, or disciples of humanity, have reached a higher eminence in the profession—has, unfortunately, fallen into a mistake of this kind, in his letter to the German physicians, published in the *New York Tribune* for May 3, 1883. He says: "The New Code was confirmed, after long discussion, by an increased majority, at the meeting of 1883." Of course the facts are the reverse of this. In 1882 the vote stood fifty-two to eighteen; majority, *thirty-four*. In 1883 the vote was one hundred and five to ninety-nine; majority, *six*.

Doubtless, friends of the American Code, and at the same time friends of Dr. Jacobi, may find some other mistakes, or perverted influence, in this letter, so conspicuously published. It may not be best to descend to minor criticism in matters of this kind; but, plainly, a friendly critic is justified in calling attention to an error of this magnitude and import, and in respectfully requesting the author to have it publicly corrected.

T. H. SQUIRE, M.D.

ELMIRA, N. Y., May 5, 1883.

DOES THE RETENTION OF DEAD TEETH IN THE JAWS EXERT AN UNFAVORABLE INFLUENCE ON HEALTH?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The report of the proceedings of the April meeting of the Practitioners' Society in THE RECORD of May 5th, in which the discussion of my paper on "Earache in Children" appears, omits some remarks that were made respecting the retention of pulpless or "dead" teeth in the jaws. I should not desire the publicity afforded by the columns of THE RECORD for a special communication regarding this matter, were it not to draw greater attention to the probable bad effect on health from keeping "dead" permanent teeth indefinitely in the mouth. Every one is naturally reluctant to part with any of their teeth, however greatly impaired they may be, so long as they can be made to serve a useful purpose, unless, indeed, toothache cannot be prevented; and I am, moreover, quite well aware that many practitioners are not unmindful of their patients' interests in this regard, and that, in the treatment of diseases seeming to be influenced by dental irritation, the management of the teeth is very properly relegated to the more competent care of competent dentists. But we ourselves very often encounter dental disturbances in our patients, the harmfulness of which is not suspected by them, so long as pain is absent, yet we very well know from experience that they constitute important causative factors in certain diseases. Thus, when it is found that teeth have, in consequence of death of the pulp, been deprived of an important source of nutrition—the only remaining source of nourishment being through the periosteal connection—their vitality is frequently so much impaired that their

entire separation from the jaw is usually only a question of time. If it is sought to retain these defective teeth by means of fillings, we are met by the fact that this cannot always be effectually done, inasmuch as the death of the parts, with greater or less speed, still goes on, and the products of pathological processes, small though they may be, cannot be considered as entirely free from danger to the patient when absorbed. The presence of fillings in these cases is an effectual barrier to the natural escape of deleterious products, unless, indeed, alveolar abscesses form. The "dead" tooth may be in a certain sense regarded as a foreign body, and the occurrence of periostitis, as is well known, may give rise to greater or less irritation; thus may either an acute or a chronic process be set up, the former causing pain or alveolar abscesses, or both, while the latter may continue almost indefinitely with, for the most part, scarcely any pain.

But these appliances are not always intended to serve the purpose of stopping cavities only, for mechanical skill, in a certain branch of dentistry, has made it possible for the operator to permanently attach gold or amalgam mounts to teeth, the crowns of which have yielded to the ravages of caries, in such a manner as to offer very useful substitutes. These metallic substances, some of which are very large, are not, I fear, always harmless when continuously worn in the mouth.

Now, while I am very far from recommending that all pulpless ("dead") teeth should be removed, yet I believe that in many instances they cannot be retained without injury to the patient. I am quite sure that I have seen many recoveries in my aural practice quickly follow the removal of a defective tooth. I shall be glad if others who have had opportunities for observation would contribute their experience to the literature of this subject.

Yours sincerely,

SAMUEL SEXTON, M.D.

New York, May 7, 1883.

New Instruments.

A NEW INSTRUMENT FOR LIGATING THE UTERINE ARTERY.

By CLINTON CUSHING, M.D.,

PROFESSOR OF GYNECOLOGY, COOPER MEDICAL COLLEGE, SAN FRANCISCO, CAL.

In September, 1881, I essayed the removal of the entire uterus through the vagina on account of epithelioma of the cervix. At the outset of the operation I undertook to ligate the uterine artery upon either side of the cervix, and between the cervix and the ureter, just above the vaginal vault. I used for this purpose a strong curved needle and a heavy needle forceps, and was enabled, after several failures and much difficulty, to pass a ligature above the artery, and thus ligate it before any incisions were made in the tissue around the cervix. The operation was then carried out according to the original plan, without the loss of blood, and the operation was followed by recovery.

In looking over the literature of pelvic surgery, I was surprised to find no mention made of any plan by which the uterine artery might be ligated, whether for the control of hemorrhage or for ablation of the uterus.

I at once began a series of experiments upon the cadaver, with a view of determining some method best suited to ligating the uterine artery from the vagina, and without opening the abdomen. After making several dissections I became convinced that the only point that the artery could be reached without endangering the ureter was midway between the body of the uterus and the ureter.

To understand clearly what I am about to say, it must be remembered that the uterine artery furnishes at least four-fifths of the blood supply to the uterus; that it arises

from the internal iliac artery at the point of its bifurcation, and passes inward along the lower edge of the broad ligament, and reaches the uterus just above the cervico-vaginal junction, where it sends off the circular artery of the cervix, and then passes upward along the side of the uterine body, sending off numerous tortuous branches to that structure, and finally anastomosing with the ovarian artery, an exceedingly small vessel.

The uterine artery is about the size of the radial, and can be felt with the finger through the roof of the vagina in thin subjects, its pulsations being clearly perceptible. The ureter passes over the brim of the pelvis about one inch to the side of the promontory of the sacrum, and extends downward and slightly inward beneath the pelvic peritoneum, just external to the utero-saral ligaments, reaching the connective tissue of the broad ligaments about three-fourths of an inch laterally from the cervix, where it passes behind and in close juxtaposition to the uterine artery. The ureter then passes forward between the bladder and vagina, opening into the bladder about one inch in front and below the cervix uteri. In studying Savage's plates, one is led to suppose that the ureter is

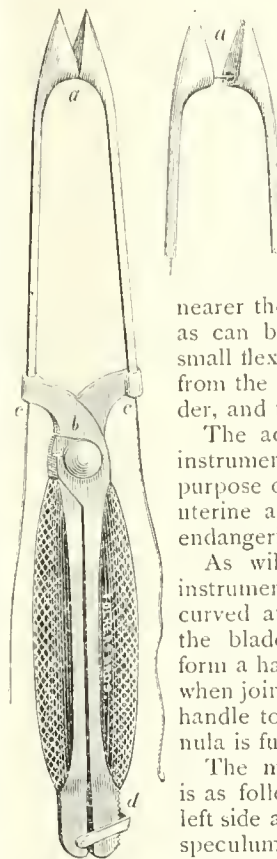
nearer the cervix than is really the case, as can be easily proven by passing a small flexible bougie through the ureter, from the brim of the pelvis into the bladder, and then studying the parts *in situ*.

The accompanying cut represents an instrument that I have devised for the purpose of passing a ligature around the uterine artery from the vagina without endangering the ureter.

As will be seen, each blade of the instrument consists of a small canula, curved at its terminal end, so that when the blades are united and closed they form a half circle, and the two canulas when joined represent a closed tube from handle to handle. The end of each canula is furnished with a trocar point.

The method of using the instrument is as follows: Place the patient on the left side and introduce a large-sized Sims' speculum; seize the cervix with a strong vulsellum, draw it down slightly, and steady it; now take one of the blades and pass it through the roof of the vagina a third of an inch to the side of the cervix, and a third of an inch back of the median line running from the cervix to the side of the pelvis; pass the canula into the tissue of the broad ligament until the opening *a* of the canula has entered one inch, keeping the point of the trocar within a half inch of the body of the uterus. Now introduce the other blade in front of the cervix and to the side in a similar manner, and close and lock the handles of the instrument, and the curved ends of the canulas come together in the connective tissue of the broad ligament above the uterine artery, and between the ureter and the uterine body. Now take a piece of steel wire, No. 23 gauge, made quite sharp at one end, and with a loop at the other for the attachment of a ligature, and pass it around through the canula and draw the ligature into its place. The sharp end of the wire pierces any portion of the connective tissue that may become engaged between the ends of the canulas. The blades are now unlocked and removed separately, and the ligature is left in their track, and by tying it firmly the artery is perfectly controlled, and much the larger part of the blood supply to the uterus is cut off.

The cut represented is one-half the size of the original instrument.



It has occurred to me that by ligating these arteries in cases of uterine fibroids, that their growth would be checked and atrophy follow, and I expect at some future time to report the results of the experiment. The ligation of these arteries, as the first step, renders the ablation of the entire uterus comparatively easy to those who are practically familiar with this branch of surgery. Whatever the disease or operation that causes serious uterine hemorrhage, this method of procedure may prove of service.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 28, 1883, to May 5, 1883.

BAILY, JOSEPH C., Major and Surgeon. To be relieved from duty in the Department of California and assigned to duty in the Department of Texas. S. O. 102, par. 12, A. G. O., May 3, 1883.

TILTON, HENRY R., Major and Surgeon. To be relieved from duty in the Department of the Missouri and assigned to duty in the Department of the East. S. O. 102, par. 13, A. G. O., May 3, 1883.

CRAMPTON, LOUIS W., Captain and Assistant Surgeon, now awaiting orders. To proceed without delay to Fort Wayne, Mich., and report to the commanding officer for duty at that post. S. O. 73, par. 2, Department of the East, April 30, 1883.

PAULDING, HOLMES O., Captain and Assistant Surgeon. To be relieved from duty at Fort Sidney, Neb., and assigned to duty at Fort Douglas, Utah. S. O. 42, par. 1, Department of the Platte, April 25, 1883.

PERLEY, HARRY O., Captain and Assistant Surgeon. To be relieved from duty in the Department of the East and assigned to duty in the Department of Dakota. S. O. 102, par. 14, A. G. O., May 3, 1883.

SPENCER, WM. G., Captain and Assistant Surgeon, now awaiting orders. Assigned to duty in the Department of the East. S. O. 102, par. 12, A. G. O., May 3, 1883.

WORTHINGTON, JAMES C., Captain and Assistant Surgeon. To be relieved from duty in the Department of the East and assigned to duty in the Department of the Missouri. S. O. 102, par. 14, A. G. O., May 3, 1883.

BIART, VICTOR, First Lieutenant and Assistant Surgeon. To be relieved from duty in the Department of the Missouri and assigned to duty in the Department of Dakota. S. O. 102, par. 13, A. G. O., May 3, 1883.

MACAULEY, CASTER N. B., First Lieutenant and Assistant Surgeon. To be relieved from duty in the Department of the East, and assigned to duty in the Department of Dakota. S. O. 102, par. 12, A. G. O., May 3, 1883.

STRONG, NORTON, First Lieutenant and Assistant Surgeon. Upon expiration of leave of absence, to be assigned to duty at Fort Thornburgh, Utah. S. O. 42, par. 2, Department of the Platte, April 25, 1883.

BYRNE, CHARLES B., Captain and Assistant Surgeon. To be relieved from duty in the Department of the South and assigned to duty in the Department of the Missouri. S. O. 102, par. 12, A. G. O., May 3, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending May 5, 1883.

LAW, H. L., Passed Assistant Surgeon. Detached from the Navy Yard, League Island, Pa., on 10th inst. and ordered to the Yantic.

HARVEY, H. P., Passed Assistant Surgeon. Detached from the Yantic on reporting of relief and ordered to Naval Hospital, Chelsea, Mass.

SENIOR, WM. J., Surgeon. Ordered as member of a board at Naval Academy.

MCCLEURG, W. A., Passed Assistant Surgeon. Detached from the Naval Academy on the 15th inst. and ordered to the Dale.

DIEHL, OLIVER C., Assistant Surgeon. Detached from the Naval Academy and ordered to the Constellation.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 8, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
May 1, 1883.....	13	7	153	4	167	54	2	0
May 8, 1883.....	5	8	166	9	170	44	1	0
<i>Deaths.</i>								
May 1, 1883.....	1	3	23	4	22	17	1	0
May 8, 1883.....	0	5	28	9	24	25	2	0

The total mortality for the week ending May 5, 1883, was 703, of which 91 were from pneumonia.

WOUNDS OF THE ABDOMEN AND ABDOMINAL SURGERY.—Dr. S. D. Seelye opened a discussion upon the above subject before the Medical and Surgical Society of Montgomery County, Ala., March 3d. Dr. Seelye described the relative fatality of wounds of the different viscera. He said: "Wounds of the stomach give the highest rate of mortality. Dr. George A. Otis, in the 'Medical and Surgical History of the War,' calculates, after careful sifting of all the literature on the subject which his great facilities could give him access to, that the mortality from wounds from this viscus is nearer ninety-nine per cent. than Percy's estimate, which was seventy-five per cent. Comparatively uncomplicated wounds of the liver show a mortality of sixty-six per cent. Without giving the percentage of mortality in wounds of the kidneys, it is enough to say that they are not among the most fatal of such wounds, provided that only one is injured and free drainage can be maintained. Wounds of the bladder show a favorable result as compared with wounds of other viscera. Wounds of the intestines, next to those of the stomach, are the most fatal. Yet these latter present differences according to location of wound. Injuries to the ascending and descending colon are less fatal than those of other portions of the bowels. This we might expect when we remember that posteriorly these portions are, through a part of their course, uncovered by peritoneum on their posterior surface." Dr. Seelye's conclusions were expressed by the following: "Is it enough that we examine the little hole made by the bullet, and, as Abernethy said nature does in these cases, 'Shakes her head and leaves the patient to his hopeless fate?' Is not aggressive surgery the true conservatism in these cases? We doubt not the time will soon be when the surgeon will open up the abdomen, examine the nature of the injuries, tie bleeding vessels, sew up wounded gut, clean out extravasated matter, excise spleen, if necessary, and do anything and everything to help nature repair the injury, as we do in external wounds." The views of the speaker were concurred in by most of those who took part in the discussion.

THE SALE OF PATENT MEDICINES IN JAPAN.—It is stated in the first report of the Central Sanitary Bureau of Japan, just issued, that the Government has established a public laboratory for the analysis of chemicals and patent medicines. The proprietors of patent medicines are bound to present a sample, with the names and proportion of the ingredients, directions for its use, and explanations of its supposed efficacy. During the year there were no fewer than 11,904 applicants for license to prepare and sell 148,091 patent and secret medicines. Permission for the preparation and sale of 58,638 different kinds was granted, 8,592 were prohibited, 9,918 were ordered to be discontinued, and 70,943 remained still to be reported on. The majority of those which were authorized to be sold were of no efficacy, and but few were really remedial agents. But the sale of these was not prohibited, as they were not dangerous to the health of the people. If similar regulations were put in force in this country, it is probable that the sale of several patent medicines would be put a stop to.

OLD FOGYISM.—The profession in America labors under another drawback which will hamper it for some time to come, namely fogyism, within its circles and outside public opinion, which is too often prone, as far as medicine is concerned, to consider only one phase of the subject and that the worst. What an outcry would go up from some of our teachers themselves and the public generally if a patient were stripped, especially a woman, before a class, for the purpose of studying a skin affection! Yet that is the way that patients are handled here. And if they were not so examined, in many instances it would be impossible to make out a correct diagnosis, as is daily exemplified here.—*Vienna cor. of The Quinologist.*

THE ANCIENT OPERATION FOR CIRCUMCISION AMONG THE JEWS.—Dr. S. Wiltshire (*Medical Press and Circular*) thus describes this operation: "The operation is always performed on the eighth day after birth. Two seats are prepared in the morning with silken cushions, one for the godfather, who holds the child, the other, as they say, for the Prophet Elias, whom they suppose to assist invisibly. The person who is to circumcise brings the necessary appliances—the razor, styptics, linen fillet, oil of roses, to which some add a shellful of sand to catch the blood, and put the prepuce in when removed. A Psalm is sung till the godmother brings the child, attended with a crowd of women, and delivers it to the godfather, none of them entering the door; the godfather, being seated, sits the child on his lap, then the Mohel, or circumciser, taking the razor and preparing the child for the operation, says with a loud voice: Blessed be Thou, O Lord, who has enjoined us circumcision. And on so saying cuts off the thick skin of the prepuce, and with his finger-nails tears off another finer skin remaining, sucking the blood by putting the penis into his mouth for two or three seconds and then spitting out into a glass of wine. Then he lays dragon's-blood on the wound with powder of coral and other styptics to arrest bleeding, and staunch any blood that might flow. Over all he places a fillet or compress saturated in oil of roses, and then binds up the whole; that being done, he takes a glass of wine, and blessing it, adds another benediction for the child."

THE SEQUELÆ OF TRACHEOTOMY.—Mr. Ross read a paper on "Sequelæ of Tracheotomy Occurring after Closure of the Tracheal Wound," before the Edinburgh Medico-Chirurgical Society recently, in which he pointed out that some important lesions tending to cause tracheal stenosis may occur as a result of the operation of tracheotomy, without manifesting their presence till some time after the tracheal wound had healed. Notes were given of the case of a young woman, who had undergone the operation at the age of eighteen months for the removal of a hook from the larynx. She now suffered

from occasional attacks of dyspnoea. The laryngoscope showed a catarrhal condition of the mucous membrane, with a great want of development of the vocal cords. At the bottom of the internal cicatrix, there was what appeared to be a diaphragmatic membranous stricture, which occluded more than one-half of the tracheal lumen—a condition which has been described once or twice as occurring after cut throat, but not hitherto, so far as is known, after the longitudinal tracheal wound. Mr. Ross also referred to the interesting question which has been stirring the minds of French surgeons recently: "What becomes of children who have successfully undergone the operation of tracheotomy?" Very few adults are seen with the tracheal scar, in whom the operation has been done in childhood.—*N. E. Medical Monthly.*

THE ATTACKS AGAINST NEW YORK PHYSICIANS.—I do not write to defend our specialists, however, who can, no doubt, take care of themselves; but only for fair treatment toward them and toward the profession of New York. It seems to me that there is no call for so much violent feeling and vituperative language. The profession is not going to be destroyed or disintegrated, as has been intimated. I do not think that we are victims of moral decay. I find it perfectly safe to mingle freely with my neighbors. The view in this city, I think, is, that by removing a restriction that had been a dead letter, we have placed ourselves in a better light before the world; have removed an affront and a stimulus to homœopathic progress, and have only set aside a technical morality which infringed on the individual's rights without elevating him in return. We believe that the true work for professional elevation lies in securing a higher educational standard, better trained minds, a more scientific spirit, and a greater technical skill in our midst. We believe that this work can be better done without the embarrassment and reproach caused by the restrictive Code. We believe that skilled and learned physicians, obedient to the laws of God and the dictates of common morality, are what the profession needs. Why cannot the profession at large admit that we too in New York may, perhaps, be honest and earnest in our views. And is it not barely possible that the American Medical Association has been a little hasty in cutting off from its membership a State like New York, because of an honest disagreement in by-laws?—*Cor. Chicago Medical Journal and Examiner.*

A LOUISVILLE SUIT, brought by Dr. Vance of that city, for recovery of fees for professional services, has excited considerable interest. Some four or five medical men in that ethical centre testified that Dr. Vance had performed an improper operation. The jury found in favor of the plaintiff.

DR. F. W. PUTNAM, of Binghamton, N. Y., writes us a letter regarding the new Code, in which he makes the point that it forbids regular physicians to advertise, thus tying their hands, yet places the irregulars who do advertise on a level with the regular profession.

The homœopaths have a code which is nearly identical with that of the American Medical Association. It ought to keep them from advertising.

COTTAGE HOSPITALS.—Two hundred and fifty cottage hospitals are now in successful operation in England, relieving about fifty thousand patients annually, who contribute to the hospital at least one-sixth the cost of their maintenance. If this system could be generally introduced into this country, a large class would be provided with hospital accommodations who are now deprived of their advantages, and many of whom would be willing to pay a small sum weekly for the medical care and nursing thus provided. A large outlay is not required, for the necessary building need not be expensive. In England, the average cost of cottage hospitals, having a capacity of about eight beds, is from \$4,000 to \$6,000 each. In the experience of Dr. L. W. Baker, a capacity of twenty-five

beds for children, \$5,000 will about cover the expense of land and building; of course the cost of construction will vary with the location, but there is surely no town of ten thousand inhabitants and upward too poor to establish and maintain one of these small institutions.

MORTALITY IN NEW YORK DURING THE PRESENT YEAR.—Dr. F. A. Burrall writes to correct what he, by a misunderstanding, considers an error in our editorial on "Pneumonia in New York" (MEDICAL RECORD, March 31st). We stated that for January and February the weekly mortality from *pneumonia*, not the total mortality, was greater than in 1882. The context will show this.

THE ADVERTISEMENT OF QUACK MEDICINES IN RELIGIOUS JOURNALS.—Dr. E. Ingalls, of Chicago, writes us, referring to the above subject: "In happy contrast with the course of the *Watchman*, and many other nominally religious papers, is that of the *Christian Register*, of Boston. The *Register* has kept its pages clean. The editor told me not long since that the paper might have received fifty thousand dollars for such advertisements had it not declined to insert them."

THE ARKANSAS STATE MEDICAL SOCIETY holds its Eighth Annual Session at Little Rock, May 30th and 31st.

CHLOROFORM BREATH IN GASTRIC DISTURBANCE.—There is a symptom of gastric disturbance in children which I have never yet seen mentioned in any text-book, French or English, and yet it is almost invariably constant and generally to be met with at the *début* of the affection, so that it may be considered as a sure premonitory sign, I mean that of the breath, which smells as if the child had freely inhaled chloroform. I have always found that this "chloroform breath" not only commenced with the gastric disturbance, but continued during the whole period of the malady, and that its cessation indicated also a cessation in all the other general symptoms, fever, vomiting, etc., and consequently a return to health. I have remarked this peculiar odor in children of every age, and once in a grown-up person; it was then very strongly marked. I do not pretend to be bringing to light anything new, but I have never heard this peculiar symptom alluded to anywhere.—*Medical Press and Circular*.

THE LANCET ON BICYCLES.—A writer in the *London World* says: "I seldom read *The Lancet*, because when I do I generally discover that if I do not give up something or other I shall die before a week is over. Just now this alarmist organ is explaining to bicyclists that they are storing up for themselves many fearful maladies. Not satisfied with airing this trash, *The Lancet* goes on to express a hope that bicycles should be taxed, in order to prevent, so far as is legislatively possible, young men destroying their constitutions by riding on them. This is, indeed, protection with a vengeance. Were everything which *The Lancet* condemns taxed, we should be in a fair way of paying off the national debt in a few years. Unfortunately for *The Lancet*, bicyclists are so lost to all proper sense of science as to enjoy better health than before they took to their machines."

TREATMENT OF FURUNCLES.—It is well known to-day that the matter of furuncles is inoculable spontaneously, and it is considered that this spontaneous inoculation is encouraged by the softening of the epidermis from the employment of the poultice so often used in this affection. The primitive boil becomes thus the point of departure for secondary ones, which manifest themselves in the neighborhood. To prevent this inconvenience M. Labbé had the idea of employing successively for the dressing of furuncles a solution of chloral or phenic acid, but he perceived that this dressing, which was undoubtedly antiseptic, did not hinder the softening of the epidermis; it was thus he had recourse to collodion, a layer of which he placed around the furuncle. The result an-

swered to his expectations, for no secondary evil appeared. M. Pasteur discovered the microbe of the furuncle, which he found situated at the summit of the pustule. However, it will be borne in mind that secondary evils do not always depend on auto-inoculation, but often are the result of a diathesis at present not well understood.—*Medical Press and Circular*.

AN INTERESTING DECISION REGARDING THE PLEA OF INSANITY.—In a murder case appealed from Clarke County, the Supreme Court of Indiana has made a ruling that has attracted wide attention. The defence in the case was the insanity of the prisoner. On the trial the judge charged that the law presumes sanity in all cases, and the burden of overthrowing the presumption is upon the person who alleges insanity; but if the evidence given by defendant has been sufficient to raise a reasonable doubt of his sanity, then the general question is presented to the jury whether or not the crime was committed by him while responsible for his acts. If a reasonable doubt exists as to the defendant's sanity, he is entitled to the benefit of the doubt.

The Supreme Court says: "The proposition that the burden was upon defendant of creating by affirmative evidence as to his sanity is erroneous. The burden was upon the State to establish, beyond a reasonable doubt, every material averment in the indictment. One of these was malice. There can be no criminal intent when the mental condition of the accused is such that he is incapable of forming one, and the burden is upon the State to prove that when the offence was committed the mental condition of the defendant was capable of forming an intent. The burden is upon the State."

THE FINANCES OF THE BRITISH MEDICAL JOURNAL.—The Financial Statement of the British Medical Association for the year ending December 31, 1882, is an interesting document as showing the earnings and expenses of a great medical organization. The total expenses for the journal are somewhat over \$50,000. The various expenses of the Association ran the sum up to about \$80,000. The receipts from subscriptions and advertisements amount to above \$70,000, leaving a balance of over \$10,000 profits. The expense for the editorial work and for contributors amounts to \$13,000.

ITALIAN MEDICAL MEN IN PARLIAMENT.—Seventeen medical men have been chosen members of the Italian Parliament at the last general election. Among them are Drs. Bacelli, Panizza, Semmola, Sperino, and Tommasi-Crudeli.

UNIVERSITY OF VIENNA.—The number of students in the medical faculty of the University of Vienna during the session recently ended was 1,750, against 1,412 in the corresponding period of last year.

PASTEUR.—On the reassembling of the French Chambers, the government intend submitting a bill to raise Dr. Pasteur's yearly pension from 12,000 to 25,000 francs.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.—The fifty-first annual meeting of this Association will be held at Liverpool, July 31, August 1, 2 and 3, 1883. Dr. William Strange will preside. An address in surgery will be delivered by Mr. Reginald Harrison, and one in pathology by Dr. C. Creighton. The business will be conducted in ten sections.

THE FREEDMEN'S HOSPITAL AT WASHINGTON, D. C.—The First Comptroller of the Treasury, in examining the accounts of Dr. Josephs, late disbursing clerk of the Interior Department, has discovered certain irregularities in connection with the accounts of the Freedmen's Hospital. It is alleged that part of the appropriation for clothing for that institution was paid out for salaries of officers. The amount paid for salaries in excess of the appropriations for that service is not stated.

The Medical Record

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NEW YORK, MAY 19, 1883

Whole No. 654

Original Lectures.

THE DETERMINATION, BY THE GENERAL PRACTITIONER, OF THE NECESSITY FOR WEARING GLASSES.¹

By D. B. ST. JOHN ROOSA, M.D., LL.D.,

PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL; PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE UNIVERSITY OF VERMONT.

LECTURE II.

GENTLEMEN—We are again to assume that we are general practitioners, with a fair knowledge of the anatomy of the eye, and that we are armed with a case of glasses, comprising lenses which run from *five* to *sixty* inches focal distance, and that we have a set of test-types. With these aids we are to determine, in a given case, whether the condition is such as may be diagnosticated by us; and, if diagnosticated, treated. I begin with a case of which I know as little as you do, never having examined it. This patient is twenty-four years of age, and he consults a doctor on account of his eyes. He says that he sees specks before his eyes, that the eyelashes are falling out, and that the inside of the lids feels rough when he is going to sleep. He can see at a distance; it does not trouble him to read; his eyelids look well. There is a slight blepharitis, a little more than hyperæmia. There is an excess of secretion from the Meibomian glands, and the hair-follicles are in an unhealthy condition. As general practitioners we have seen it stated, on fair medical authority, that people who do not wear glasses when the anatomical length of the eyeball demands them, sometimes suffer from blepharitis or conjunctival catarrh. We are therefore on the look-out to see if any of the cases of this kind that occur in our practice may not be due to a failure to wear glasses to correct hypermetropia, myopia, and astigmatism.

Having inspected the lids, cornea, iris, and conjunctiva, our next step will be to determine, by means of the test-types, what the vision is. We find that the vision of the left eye (V. L. E.) is $\frac{2}{20}$ —that is, he miscalls some letters of those that should be seen at twenty feet, but he names the most of them correctly. The vision of the right eye (V. R. E.) is $\frac{2}{20}$. We now know that this patient has slightly defective vision in his left eye, but we have not yet determined whether it is myopia or hypermetropia; nor do we know but that there may be added another condition, known as astigmatism. How shall we begin in order to find out whether it is myopia or hypermetropia? If we place convex glasses before his eyes, if he is myopic, he will reject them, because they will make his vision worse. They make the myopia worse by increasing the existing anatomical defect—that is, elongation of the diameter of the eye from before backward. For, as I said in the preceding lecture, a convex glass placed in front of the eye is but adding to the convex lens inside of the eye, and increases its refractive power.

With both eyes open, the patient makes but one mistake in reading the bottom line at twenty feet. Now we will put a convex glass before the eyes, and he says at once that he is sure his vision is made worse, but not very much so. The glass which I use is one of forty-

eight inches focal distance. I will next use a glass which is of sixty inches focal distance, and if he is myopic his vision will be made worse even with this weak glass. He does not see worse, but better. He now makes out all the letters, he says, and therefore he is not myopic. He is probably hypermetropic, and probably would get on better with a pair of convex glasses. But his case is not like that of the little girl whom we prescribed for last week, and who could see equally well with or without glasses, and equally well with glasses of considerable power.

This is a case where the patient sees normally with a very weak glass, and not quite normally without one, and it differs in degree from the one seen last week. It is a case of *manifest* hypermetropia, because he sees better by the aid of the convex glass. There may be a larger degree of hypermetropia concealed. Can we, as general practitioners, go farther? We now know that he has a certain amount of hypermetropia, but it is so small that it is not to be practically considered, if there is no more. Can we, without the ophthalmoscope, find out if there be any more? As general practitioners we must know that there is an agent, the sulphate of atropia, which, when put into the eye, will paralyze the ciliary muscle, and if there is any concealed hypermetropia, that it will exhibit it. Of course, we then come at once to another kind of hypermetropia. We have already demonstrated a manifest hypermetropia, and a hypermetropia that is called facultative, or, so to speak, voluntary. A case of manifest hypermetropia of a very slight degree we are now discussing. In it vision is only normal, *i.e.*, $\frac{20}{20}$ by the aid of convex glasses. Facultative hypermetropia was demonstrated last week. In this last-named form vision is equally good with or without convex glasses.

It may be that the sulphate of atropia will reveal a degree of hypermetropia, which is entitled to consideration, and which requires glasses of 36- or 30- or 24-inch focal distance to correct. In order to get full paralysis of the ciliary muscle we must use a solution of *four grains* to the ounce of water, for several days in succession, not less than *two* days, better still from three to five days, dropping in a drop *three* times a day, and then, if the patient sees better with, than without a convex glass, the glass with which he sees best at a distance is the glass measuring the hypermetropia, which has been concealed.

From what we have read as general practitioners, we know that we have a right to suspect a certain degree of concealed or latent hypermetropia in any case where there is a slight manifest or even a facultative hypermetropia. In other words, the total hypermetropia, or the true refraction of the eye, is not usually revealed unless the ciliary muscle be put completely at rest. Let us prescribe for our patient, however, on the basis of what we have learned to-day. If, however, the blepharitis be not relieved by the weak glass, we may then use the atropine to determine if there be such a concealed defect, and that we are justified in using a stronger one.

It would be possible to measure the refraction by using an ophthalmoscope, but this instrument is not necessarily in the hands of the general practitioner, and we ignore its use for our present purpose of diagnosis.

I will now test each eye separately with the finest type, and see whether the defective vision in the left eye may not be due to lesion in the cornea. He reads the finest print fluently, at more than six inches from the eye, and the proof is almost positive that his trouble is one of refraction, and that his other trouble, consisting of a mod-

¹ Delivered at the University Medical College, Session of 1881-82.

erate form of conjunctivitis, is secondary to the strain of the ciliary muscle. Over and over again, I have seen such cases cured, for the time, by the aid of atropia alone.

In conjunction with treatment by glasses, you may advise him to keep his eyelashes clean by the use of a solution of bi-carbonate of soda, one drachm to eight ounces of water, which will dissolve the dried mucus, and that is about all he requires except the glasses.

MYOPIA.

Our next patient is a man of twenty-six years of age, who says he cannot see at a distance; as a student he could not read letters upon the blackboard, but he can see to read fine print. It suggests itself, then, if he cannot see at a distance, cannot recognize places or faces, cannot read letters upon a blackboard at the distance from it that a student ordinarily sits, and still can read fine type, that he may have manifest hypermetropia, which would impair vision for distance, without interfering with vision of objects a few inches from him.

We may make a test at once with fine type, for we have physiological knowledge that will enable us, without glasses, without any aid except test letters, to determine as to the probabilities in his case.

The physiological fact which we call into service, is what is known relating to *accommodation of the eye*. We know that this accommodative power is exercised by the action of the ciliary muscle upon the crystalline lens. We know, from our knowledge of optics, that the rays of light coming from a near point are divergent, and the nearer the object is to the eye, the more divergent are the rays. We know that it will take a thicker lens to cause divergent rays to come to a focus upon the retina than those that are parallel; that it will require more muscular power to cause the lens to become thicker, so that the divergent rays which pass through will focus exactly on the perceptive layer. We also know, from anatomical and physiological knowledge, that a short-sighted eye is longer, from before backward, than a hypermetropic eye; and that it is also longer than the normal eye.

We see, then, that if a person starts with an eye which is too long, when he comes to read fine type, when he comes to look at objects near at hand, he has an advantage over the person who has eyes of the right length, or who has eyes that are too short. The inference is that if this man is myopic, he will be able to read fine type nearer to the eyes than if he is hypermetropic or emmetropic, because divergent rays do not trouble him. The myopic eye, or the one that is too long, is adapted to them, whereas the normal eye is adapted to parallel rays, and the hypermetropic eye is adapted to convergent rays.

Now we know from observation carefully made and corroborated and laid down in tables, that the nearest point of exact vision for fine print of an eye which is normal, at twelve years of age, is $2\frac{2}{3}$ inches, and as we increase the age the near point becomes farther off, because the power of the ciliary muscle weakens in time, and also because the lens itself becomes more rigid than in youth. At twenty-five years of age, therefore, we find that the near point is 4 inches; at forty-five years 8 inches, and at sixty years of age the near point is at 24 inches.

In contrast with this, notice the near point for the myopic eye. At the age of sixteen years it is $2\frac{2}{3}$ inches, and at the age of forty years it is the same. The near point does not change; does not recede; and this is a great advantage for reading, sewing, and the like. If this man, twenty-six years of age, has a near point, a great deal nearer than a person of the same age whom we know *not* to be near-sighted, we shall at once suspect that he is myopic.

You will always have the means for testing whether or not this be true. That is, you will test for the near point of some person of the same age, who sees perfectly at a

distance, and then compare the result with that obtained by testing the eyes of the person who is suspected to be near-sighted or myopic. The man whom I now examine, who says that he has always been able to see objects clearly at a distance, reads fine type at the distance of $4\frac{1}{2}$ inches, and you see that it corresponds pretty well with the figures given in Donders' table. He is of the same age as our patient whose near point for the same object is $3\frac{1}{2}$ inches. The probabilities, therefore, are that he is myopic. In order to assure ourselves of the absence of errors in observation, I will put a glass before the eyes which I am quite sure will not do him any good.

Before doing this let us test his vision. [Test-types used.] We find the vision in the left eye (V. L. E.) $\frac{1}{200}$; and in the right eye (V. R. E.) $\frac{1}{200}$. We have also seen him read fine type fluently, and we do not believe that he has neuro-retinitis, detachment of the retina, amaurosis, or cataract. He is probably myopic; and I conclude he is considerably so because his lack of vision is so great and his near point is so near. I will now put on a *weak convex* glass. He says that his vision is made a little more indistinct. I will next put on a concave glass of thirty inches focal distance, which practically shortens the eyeball considerably. With this glass he can make out "A," the first letter of the test-types. We have raised his vision to $\frac{2}{200}$. Now I will make a long leap in choice and use a glass of sixteen inches focal distance. His vision is now raised to $\frac{3}{200}$. I next use a concave glass of eleven inches focal distance, and his vision is raised from $\frac{3}{200}$ to $\frac{4}{200}$. Shall we stop there? Oh, no.

We have skipped over two or three numbers in our trials. In myopia we give the *weakest* glasses that will fully correct the error. *In hypermetropia we give the strongest glasses which will fully correct the error. The danger is in giving too weak glasses in hypermetropia, and too strong glasses in myopia.* Why? Because there is in some eyes, under strain in constant work, a kind of accommodative myopia; that is, the ciliary muscle is not at rest in a myopic eye any more than in a hypermetropic eye, and there may be an excessive action or spasm of that muscle, which increases the myopia by unduly thickening the lens, and if you are not careful you may give too strong glasses. It is better to give a myopic patient a glass under than over the exact degree. The glass which will do our patient the most good is probably number 12, a little weaker than 11, which raised his vision to normal or $\frac{4}{200}$.

In young persons especially, accommodative myopia is very common. It is not safe to prescribe concave glasses for them, without first paralyzing the ciliary muscle by the use of atropia.

This, then, is a case of myopia, and we have made our diagnosis without the aid of the ophthalmoscope. Upon the basis of this examination, I will now go on and say to you what the general practitioner should know concerning myopia.

Myopia may be a congenital condition or it may be acquired. Its anatomical basis consists of an elongation of the antero-posterior diameter of the eyeball. The great problem of heredity occurs in the discussion of myopia. If the father and mother, one or both, are myopic, will the children be myopic? Some of them will; probably not all of them. In some of them there will be a return to the normal type, a tendency which, according to Darwin, will always preserve the human race from degeneration to any great extent. I speak of this fact because of those who are fearful that the human race is gradually undergoing degeneration, and finally will succumb to the assaults of civilization, and that at last we shall all be myopic, that our grandchildren will uniformly have detachment of the retina and other consequences which flow from myopia. No; the laws of heredity, whatever they are, may be overcome—may be shorn of some of their power by circumstances. The child born with eyeballs too long may be encouraged in early

life to look only at large objects, to play with good-sized toys, to always live in a well-lighted room, discouraged from reading by twilight, encouraged to shoot, and to play games which involve looking at a distance, and so forth. In other words, circumstances may control his hereditary tendency to a certain degree, and may finally overcome in the race, to a large extent, the myopic tendency which may have been transmitted to us. The myopic tendency which has come upon the German people, until it is nearly a scourge, might be modified if the Germans could be induced to banish their abominable type, cease the everlasting writing upon most trivial subjects in offices and bureaus everywhere, and place themselves under conditions favorable to overcoming the tendency. In other words, if they would imitate their Anglo-Saxon neighbors across the channel, do a little more hunting and driving and riding, and work less in enclosed gymnasias and exercise halls.

But there is an acquired myopia. Children are born into the world with eyeballs too short, and by a reversal of the proper conditions of life their eyeballs may become too long. Suppose that I wish to produce elongation of the eyeball, how can it be done? I would do this: I would allow the child to play with only the smallest toys, train him in picking up pins, in looking out finely printed names on a map, and I would be careful to get the most illegibly and finely printed books for him to read; set him at work in the evening by the aid of a tallow dip, or by the light of a wood-fire; in the daytime have him sit as far away from the light as possible; see that the light used for reading or work is shaded by the arm; see that all outdoor occupation is neglected; discourage his playing at ball with other boys; see that he is fed with farinaceous food only; that he is washed once in four weeks, if at all; has insufficient clothing in the winter and is overclad in the summer. In other words, make his condition as hard as possible; place him in a position so that when he looks upon a book he will have to strain his utmost to get an image upon the retina; and in a large number of cases I think you will produce myopia. How would it be done? This straining to see in a poorly developed child would fill the blood-vessels in the ciliary region, would prevent the return of venous blood, and there would be congestion. The next step would be the stage of softening, and then the coats of the eyeball would yield, and elongation sufficient for our purpose will have been accomplished. A one hundred and twentieth of an inch is a great deal in an eyeball.

This is myopia; this is elongation of the eyeball, either congenital or acquired. The old notion was that myopia depended upon change in the curvature of the cornea. That is a kind of acquired myopia which occurs in certain diseases, occurs with conical cornea, so called, and after an inflammatory affection of the cornea; but it is not the myopia which we are considering. It is not the myopia to be remedied by glasses, to be diagnosticated and prescribed for by the general practitioner. The latter, the true myopia, depends upon elongation of the entire eyeball from before backward.

As general practitioners, you will be called upon to see to the building of school-houses, to the admission of light, and to the nutrition of the children. Prevention of disease is to be the function of the medical man of the future. The curing of disease will always remain his dire alternative where it cannot be prevented. Your greatest efforts should be directed toward the prevention of disease. The ignorance of the community, and the insuperable insolence with which some of our officials receive sanitary plans made for them, the political corruption of every age and time, are obstacles which will prevent you from carrying out your purposes, even if you were sufficiently skilled to obviate every disease. Thus there will always be, besides accidents, plenty for you to do in the way of treatment. Nevertheless, I say again, your great work as practitioners in the future will be in the prevention of disease. In the prevention of myopia

there is a great field before us. It would be very sad for this country if we came into the condition in which Germany exists with reference to myopia, even if there go with it the culture and scientific acquirements which have made Germany so easily first in many of the great movements in the scientific world. To become a myopic nation, even with such a reward, would be paying too great a price. A myopic eye is a diseased eye, the hypermetropic eye is an undeveloped eye. The emmetropic eye is the normal eye, but it very seldom exists. But the dangers from the myopic eye are much greater than those from hypermetropia. The chief danger to a myopic eye is that changes in the light-perceiving portion, the image-forming portion of the eye, the retina, may render it unable, even with the greatest muscular exertion and under the most favorable conditions, to form an accurate image. These changes will be due to the increasing softening and elongation of the eyeball, and the constantly acting congestion which precedes it. The elongated eyeball is also in danger, from sudden exertion, of being fatally injured, as to sight, by detachment of a portion of the retina. We are, therefore, very anxious as sanitarians to diminish the amount of myopia.

Long ago Mr. Ware, who wrote on myopia first of all of those who have said so much on the subject, discovered that it was very rare in the English Foot Guards, and experience shows that it is very rare in England as compared with Germany, for reasons already mentioned. I predict that it will never become a scourge in this country, because of the tendency among our people to use the rod and gun, to ride upon horseback, and to work up our boundless facilities in the way of open-air exercise. Thus I return to the statement, that you as sanitarians must attempt to prevent myopia by advice to your patients.

Our patient here has a sound retina, for he has perfect vision with glasses. Just now, it is a little troublesome for him to wear glasses perhaps, but upon the whole it is an advantage. He will have the advantage of those who are emmetropic when time has made his hair gray, weakened his ciliary muscle, and made his lens a little harder; for then his long eyeball will stand in good stead for him, and he will read the newspaper with ease without glasses. And this is all the advantage there is in myopia. In myopia glasses are not needed for reading in old age. As to the popular notion that it decreases, it is utterly incorrect. An eyeball once elongated remains of the same length. A spasmodic myopia may exist, and that may diminish, but not a myopia that depends upon the pathological changes I have mentioned.

PERNICIOUS JAUNDICE.—The following case is related by Dr. Verdalle in the *Journal de Médecine de Bordeaux* of April 1, 1883. A young man, nineteen years of age, of temperate habits and of good physique, was admitted to hospital complaining of nothing but excessive lassitude. He had marked jaundice with clay-colored stools, but there were no nervous symptoms and no fever. The liver was normal in size and not tender on pressure. Laxatives and Vichy water were prescribed, and no further attention was paid to the case, it being supposed to be one of simple catarrhal jaundice. Five days later there was vomiting, which was controlled by simple remedies. Four days after this, suddenly, during the night, the patient became wildly delirious, in which condition he remained until the morning, when coma set in. There was absolute unconsciousness, reflex movements were abolished, the pupils were dilated, the pulse was sixty and regular, and the temperature was sub-normal. Death ensued the following night. The autopsy revealed acute interstitial hepatitis. The liver was of normal size, and showed upon its surface and within its substance a number of irregularly shaped spots of a bright yellow color. There were numerous small ecchymoses upon the gastric mucous membrane. The brain and meninges presented no traces of inflammation.

Original Articles.

SUCCESSFUL LUMBAR COLOTOMY IN AN INFANT OF TWO MONTHS.

By GEORGE R. FOWLER, M.D.,

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ANNIE S—, two months old, was brought to my office on December 6, 1881, with the following history: The mother, who has borne four well-formed and healthy children, states that while pregnant with this child, and when about five months advanced, she cared for another child suffering from an ischio-rectal abscess, which was opened by my assistant, Dr. Beasley, near the margin of the anus. The patient, an otherwise well-developed child, at birth exhibited no subjective symptoms of any malformation; although the parents now recall that but very small and purely liquid feces were discharged up to within two weeks, when these ceased. It was noticed that urine was voided, up to this time, when no fecal matter was found upon the napkin, and likewise that a stain of feces occurred when no urine was voided. Examination reveals a distended abdomen, tympanitic except over the transverse and descending colon. The navel is protruding, and the superficial abdominal veins are enlarged and prominent. There is no anus. No trace of a recto-vaginal fistula can be discovered, although such must have existed.

On December 7th, the child under chloroform, assisted by Drs. Beasley and King, I attempted to find the opening between the vagina and gut, through which the fecal matter had escaped. Failing in this, I divided the tissues posterior to the vagina in the median line directly back to the point of the coccyx. The dissection was then carried carefully upward until the peritoneal cavity was reached, above the cul-de-sac of Douglas. At a point about midway between the ostium vaginae and the upper limit of the vagina posteriorly a membranous septum was found, dividing the canal into an anterior and posterior cavity; it was thought that this latter was the one leading to the rectum, but patient search failed to reveal any opening. In this emergency I performed colotomy through the left loin as follows: The child was placed upon its right side, and the outer border of the quadratus lumborum muscle made out as far as practicable; this latter was found to be attended by some difficulty, on account of the extreme youth of the subject. The oblique incision, recommended by Bryant, was then made, about one and one-half inch long, beginning at the supposed site of the outer border of the quadratus lumborum muscle and extending obliquely downward and forward. The skin and superficial fascia, a portion of the latissimus dorsi, the external oblique, internal oblique, and transversalis muscles were divided in turn, and the transversalis fascia exposed. Upon incising the latter, the lower border of the kidney was brought into view, lying at the bottom of the wound. It was found necessary to divide the peritoneum before the colon could be reached; this being done the latter rose prominently into sight, and was easily identified. Having taken the precaution to pass a ligature through the walls of the colon and given the same in charge of an assistant, I incised it for a distance of about three-fourths of an inch in a direction parallel to its long axis; a sponge wrung out of warm carbolized water was held over the anterior angle of the wound to prevent fecal matter from passing into the cavity of the peritoneum. Upon opening the intestine there escaped a quantity of feces and gas. The edges of the opening into the gut were now stitched by interrupted sutures of silk to the incision in the integument, care being taken to frequently wash away the fecal material which from time to time oozed from the opening during this stage of the operation. Owing to the traction made upon the colon, the anterior angle of the incision into the perito-

neum slipped inside the abdominal cavity, and could not be secured; the posterior angle was included in the sutures uniting the intestine to the skin. Several times during the operation the little patient stopped breathing, and frequent efforts at resuscitation were necessary; these consisted of artificial respiration by Sylvester's method, slapping the precordial region, inhalation of nitrate of amyl, inverting the patient, and upon one occasion the hypodermic injection of gin, the only available stimulant; this latter was found to be rapidly efficacious, probably owing to the pain produced by its irritating qualities.

A large cup-shaped sponge, wrung out of carbolized water and held in place by a napkin, was the only dressing employed for the wound in the loin; the perineal wound was dressed with carbolized oakum after thorough cleansing with 1 to 40 carbolic solution. The little patient was placed in its mother's arms, where it soon rallied from the chloroform and after an hour slept comfortably. The sponge was directed to be changed frequently, as there issued almost continually from the artificial anus large dejections of a natural yellow color. The carbolized oakum dressing over the perineal wound was ordered to be changed, and the parts bathed with 1 to 40 carbolic solution, whenever soiled by the urine. The following is the record of the further progress of the case:

December 7th, evening.—Pulse, 140; temperature, 100° Fahr.; child crying lustily and is quieted by nursing. Ordered two drops of deodorized tincture of opium to be given every hour when in pain.

December 8th.—Pulse, 160; temperature, 102½° Fahr. Patient is moderately under the influence of the opiate. Size of abdomen much diminished; large quantities of fecal matter of the consistence of putty is coming away with gas. Perineal wound glued together by plastic exudation.

December 9th.—Pulse, 120; temperature, 98½° Fahr. Has rested quietly with but a single drop of the deodorized tincture of opium during the last twenty-four hours. Bowels moved through artificial anus four times during the same period. Suckles well; mother thinks that a slight fecal stain occurred upon the dressing over perineal wound.

December 10th.—Pulse, 120; temperature, 98½° Fahr. Child rested well during the night; looks bright and natural this morning. Bowels have moved three times during last twenty-four hours and has taken but one drop of the deodorized tincture of opium during that time. Tissues around opening slightly reddened. Good union of the edges of the incision in the colon to the integument.

December 11th.—Pulse, 120; temperature, 98½° Fahr. Patient's condition, so far as can be determined, exclusive of the opening in the loin, is perfectly normal. Ordered carbolized cerate for the edges of the opening in the loin. The mother showed me a stain upon the lower napkin which is undoubtedly that of fecal matter; thus far, however, the napkin has been also wet with urine.

December 12th.—Pulse, 125; temperature, 98½° Fahr. Slightly uneasy; removed sutures; wound healthy. Bowels move through artificial anus four or five times in twenty-four hours. Lower wound united perfectly. Discharged cured so far as operation is concerned.

I subsequently attempted to find the termination of the rectum by passing flexible bougies through the artificial anus; these were arrested at about the site of the sigmoid flexure. Further operative procedures were deemed inadvisable. The child is strong and healthy, and seems to suffer no inconvenience from the artificial anus.

Remarks.—This is one of those rare cases in which there seems to have been a fecal fistula terminating into the vagina, conjoined with absence of both rectum and anus. Cases in which a fistula opens into the vagina

exits are commonly those in which the rectum is present, and may be regarded as the cases most favorable for operation, excepting, perhaps, those cases of the malformation in which there is simply absence of the anal opening, and in which the bulging gut can be plainly felt and seen through the integument or occluding membrane. From the fact that fecal matter had come away early in the patient's history, when no urine stained the napkin, and that, per contra, urine had been voided when no fecal stain accompanied it, it was reasonable to suppose that I had to deal with one of those cases in which the rectum was present, the fecal fistula opening into the vagina, the anus only being absent. Such being the case it would have been comparatively easy, upon locating the opening into the vagina, to have passed a curved director into the rectum through the opening, directing its point downward and backward, and upon this as a guide, made the necessary opening for the purpose of establishing an anus in the normal situation. The fact that the urine and feces were voided separately was an almost positive indication that the case was not to be classed among those in which the fecal fistula opened into the bladder or urethra. It was, therefore, with the greatest confidence that I expected to be able to relieve the patient by the simple operation above indicated. The event proved, however, that I had to deal with one of the most difficult, as well as rarer forms of the deformity, and the question as to what was best to do in such an emergency at once arose. Exploratory operations, such as I performed, *i.e.*, that of incising the tissues in the median line and following the curve of the coccyx, and dissecting carefully upward in the hope of finding the cul-de-sac in which the gut sometimes ends, as frequently fails as it succeeds; unfortunately it is not devoid of danger as well, for diffuse inflammation of the sub-peritoneal cellular tissue and peritoneum generally bring about a fatal issue. Again, in such an operation, there is no certainty that the rectum, even if it exist at all, lies in the median line, and a dissection may be carried up alongside of the gut, so as to open into the peritoneal cavity, or a trocar may be plunged into what appears to be the bulging cul-de-sac at the bottom of the wound, and only a protruding fold of peritoneum be perforated. Thus it may occur that the intestine is near at hand, and yet be missed entirely.

Although in this case an attempt was made to find the rectum by dissecting up the perineum, yet I believe that such a course should not generally be followed. The uncertainty of finding the gut, the possibility of a fatal issue resulting from traumatism inflicted upon the peritoneum and its underlying connective tissue, and the liability to hemorrhage from some of the branches of the internal iliac artery, all combine to render the procedure an exceedingly hazardous one. Taking everything into consideration, therefore, I think that the advice of Holmes should be followed, and in cases in which no guide to the actual presence and location of the gut exists, as, for instance, a fecal fistula through which a probe can be passed into the rectum, the operation of colotomy should be at once performed. This operation is not more dangerous than the exploratory one through the perineum, and possesses the advantage of relieving the patient's immediate wants; it is also comparatively easy of performance.

What I consider of the greatest importance, however, is the immediate performance of colotomy in the class of cases under consideration, and a point that suggested itself to me at the time when I attempted, in this patient, to pass a flexible bougie through the artificial anus in the hope of locating a rectal pouch, is the feasibility of making available the opening in the colon for purposes of diagnosis. A sound or guide may be passed through the latter downward and backward, thus demonstrating indubitably the presence or absence of a rectum; in the former case the sound will form an infallible guide upon which to direct the incision for the establishment

of an anus in the normal location. Should such prove successful, the opening in the colon can be closed at once, or at a subsequent operation. On the other hand, should it be discovered that no rectum exists, the patient will have been saved from the dangers attending the uncertain exploratory operation, and the operation of colotomy, to which it must finally submit, be already accomplished.

That the child in this case had attained the age of two months before serious symptoms of intestinal obstruction occurred is worthy of note. The explanation most reasonable is that, in the earlier part of its existence, the feces, being almost purely liquid, readily found their way through the fistula; even then, according to the mother's statement, the discharges were only sufficient to merely stain the napkin in small spots. Later on, as the fecal matter became more solid, it could not find its way through the opening, and gradually accumulated; in consequence of this the track of the fecal fistula gradually contracted until it became so small as to be undiscoverable. That the fistula, in some instances, may be sufficient during early existence, and yet not fulfil the requirements of later life, is shown in a case of Mr. Lane's, at St. Mary's Hospital, London, in which the patient lived to the age of four and a half years.¹ By this time the intestine, from the insufficiency of its outlet, had formed an immense pouch which filled the whole pelvic, and encroached considerably upon the abdominal cavity. Ricord relates two cases in which the opening into the vagina was sufficiently large to answer all the purposes of an anus; the subjects, both females, reached adult life and apparently suffered but little inconvenience from the malformation. In these cases the fistula and its opening must have been large, and a sphincter muscle developed around the latter.

In the matter of the influence of maternal impressions upon the arrest of development in this case I have very little to offer, except to express my disbelief in such influences. The period at which this influence was supposed by the mother to have been instrumental in affecting her offspring was too late in intra uterine gestation to have preceded the time when the anus and rectum, separately developed, meet and coalesce to form the complete intestinal canal.

THE TEMPERATURE OF SCARLATINA.—Drs. Kuvshinsky and Pastor have undertaken a large series of observations on the course of the temperature in scarlet fever, and have concluded therefrom as follows:

1. In a vast majority of the cases, the temperature, after a lysis on the sixth to the tenth day, remained normal during the next three to eighteen days (mostly fourteen days), and then again rose to febrile figures (in some cases to 104° F. and above). Within one to five days it again gradually returned to the normal. In some few cases there were observed similar tertiary elevations of temperature, generally on the thirty-fourth to the thirty-sixth day of the disease.
2. Simultaneously with these secondary elevations of temperature, there were almost invariably found some other characteristic morbid phenomena, as swelling of the lymphatic glands (mostly cervical), more or less pronounced renal affection, reappearance of a diffused angina, inflammation of the endocardium, extreme weakness of pulse, and, lastly, in four cases, reappearance of the scarlatinal rash with subsequent desquamation. Considering the facts stated, Drs. Kuvshinsky and Pastor arrive at the conclusion that re-elevations of temperature in the course of scarlet fever, being far from accidental, are caused by the scarlatinal infection itself. The latter, therefore, in common with some other infectious diseases, shows a disposition to run its course with greater or lesser oscillations in the development of various symptoms of the pathological process.

¹ British Medical Journal, p. 845. 1858.

ON THE
IMPORTANCE OF RECOGNIZING THE CON-
DITIONS KNOWN AS STHENIC AND AS-
THENIC, IN DIFFERENTIATING THE CAU-
CASIAN AND AFRICAN RACES; AND IN
DISEASES GENERALLY.

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THERE are two good old words with explicit significance, which were much and properly used for the most part by our grandfathers in the profession, that seem to have lost their value in a great measure in the estimation of some of our modern teachers and writers upon medical subjects, which might be profitably restored to their former prominence and importance in our professional literature of the present day. Should this brief communication, therefore, produce no other beneficial result than that of recalling attention to their significance and their peculiar fitness to occupy an enduring place in our nomenclature, and thus to keep the two widely separated and almost diametrically opposite states or conditions of the human organism in health and in disease, always prominently and perspicuously before the medical mind, a most important step will have been taken toward wiping away some of the flimsy drapery with which certain morbid conditions have been sought to be clothed by a few modern writers, and many of the hair-breadth distinctions between diseases, attempted to be made by others, bridged over or annihilated altogether. The import of the good old Greek, *sthenos* and *asthenos*, stands out in bold relief before the mind of the medical philosopher, of much practical experience in the profession, whenever he is called to the bedside of disease. And like the Pillars of Hercules, they must ever mark the entrance into the great sea of successful professional practice, where their significance is obeyed as it should be. It is not, therefore, claiming too much for those words to add, that a correct knowledge of the conditions which they represent, establishes the only true basis, or foundation, upon which an accurate diagnosis can be formed, and consequently a correct therapeutics instituted in the treatment of diseases. The value and importance, then, for the revival and a more general use of those terms in our discussions and treatment of the thousand ills to which flesh is heir, must be obvious to the intelligent mind upon a moment's consideration; particularly as they may be readily observed as intimately associated with the action of morbid agents in the development of disease, and sometimes, if not frequently, important factors as predisposing, and, possibly, even the exciting causes of certain diseases in either race, and among many conditions of mankind. But there is absolute necessity for the use of these words, if we would appreciate at their proper value certain *normal* or natural states and conditions as we find them existing in the *primordial* types of the genus homo. And long experience has satisfied my mind completely that professional success of a high order is unattainable where the Caucasian and African races are contemporaneously attended either in hospital or private practice, without heeding the natural tendency of disease to a sthenic state in the white and an asthenic condition in the negro race. This state of things is conspicuously marked in endemic and epidemic visitations, when the two races are under the action of the same morbid agent or influence for a certain space of time. The natural and radically distinct differences and peculiarities, anatomical and physiological, which exist between the negro and the white man, have been already sufficiently referred to in a previous article in this journal, when speaking of the primordial races of man; and hence it will only be necessary to say a few words, a little further on in this paper, on the effect of *materies morbi*, and the action of therapeutic agents

upon the respective races to render the entire matter clearly intelligible to the reader.

As both the white man and negro are exotic, and have resided contemporaneously in this country for a sufficiently long period of time under the same and similar climatic, hygienic, and physical surroundings to be equally well known, they are, therefore, in a suitable condition to be studied in regard to their predisposition to, and their ability to withstand, the influences of morbid agents, when acting as chief factors in the development of endemic and epidemical diseases. Whilst presenting some leading facts in support of the foregoing premises, I shall take occasion to introduce the action of therapeutic agents, as being fully in harmony with the laws which establish and control diversity in the races to which they apply; and thus develop the utility, not to say imperative necessity, for carefully regarding the sthenic and asthenic conditions as factors of the highest value in the diseases to which the races are liable. And, therefore, the absolute demand for a modification of treatment in the Caucasian and African races when suffering from the same disease. To what has been said already of the *status* of the two races must now be added the distinctions of age and sex, in order that the parallelism may be rendered as complete as possible, and thus the differentiations be perspicuously brought forth and made of practical advantage to the profession in a clearer presentation of the value of symptoms and signs at the bedside. As already intimated, the white and black races are not equally hable to impressions from morbid agents and influences.

Thus, to *Cholera*.—For twenty or more years preceding the late civil war, cholera occurred from time to time, endemically, among the negroes on the rice plantations of South Carolina and Georgia, assuming even epidemic proportions as it extended to adjacent or contiguous plantations; and though the overseers and their subordinates, and sometimes the owners or proprietors of the estates and their families even, remained upon the plantations continuously during such visitations, they enjoyed almost complete immunity from the disease. The negroes all the while manifesting the chain of phenomena so characteristic of Asiatic cholera in a malignant form.

Second.—Yellow Fever.—As that disease prevailed epidemically in the cities of the South, in ante-bellum times, the white, or Caucasian race, was the material upon which it seemed pleased to feed; and the fairer the type, all other things being equal, the greater the fatality of the disease; while the African, or negro race, was nearly exempt from its ravages. In my own experience, in the treatment of hundreds of yellow fever patients, I never saw a case of black vomit in a negro.

Third.—Malaria.—Whilst he was liable to be attacked with remittent and intermittent fever, the negro was very far less exposed to the effects of malaria than the white man, under the same circumstances.

Fourth.—Inflammatory Diseases.—The negro suffered much less frequently from inflammation of the serous and fibrous tissues than the white race, and much less also from troubles of that kind in the mucous surfaces; and though attacked with pneumonia to a considerable extent, when it appeared to prevail epidemically in the South, he did not suffer in the same ratio with the white man, though far more exposed to inclement weather and atmospheric vicissitudes. The parallelism and differentiations of the diseases to which the two races are exposed might be extended almost indefinitely; but it is thought that a sufficient number of facts have been adduced to satisfy the wishes of any who might be pursuing this branch of professional inquiry, and I will therefore hasten on, as fast as practicable, to the other salient points adverted to in the earlier portion of this paper. Any, and as far as I know, every disease that affects the white and negro races, in common, assumes a *lower grade of action* much sooner, under the same circumstances,

in the latter than in the former race, when that state is not conspicuously obvious *ab initio*. Again, I feel quite sure that I can state, with great accuracy and propriety of language, that the converse of the foregoing observations is true of diseases generally in the white race—certainly so when contrasted with morbid conditions as found in the former race. Hence, it would seem to be logically certain, that while a disease might exhibit a higher or lower grade of action, in either the Caucasian or the African, under certain circumstances, and at different times, the law depending upon difference in race is, that the type of disease in the white race is sthenic, and it is asthenic in the negro, under the same, or as nearly as possible the same, circumstances. These types will of course suffer modification or exaltation, and become more or less sthenic or asthenic, under different or varying influences; all of which are, however, too well known or easily recognized by the profession generally to require that more should be said in that connection. But these facts do not lessen the value of the preceding statements in any way, regarding the tendency of *all* diseases to assume a sthenic or an asthenic type, whether they occur in the white or negro races.

The constancy of the action of this law was strikingly exemplified in my experience in the South during the civil war, both in regard to the symptoms of disease and the treatment necessary for the two races, under as nearly the same circumstances as it is possible for them to appear. A proper appreciation of the foregoing facts is necessary in order that therapeutic applications may be judiciously and properly made in the treatment of diseases. In fact, it may be safely said that this most important consummation cannot be certainly reached in any other way. To illustrate its value, I will state a few facts that have been repeatedly observed in my professional experience. Thus, sedatives and depressants and antiphlogistics generally, whilst often called for in the treatment of acute and recent cases of disease, and manifest such prompt and decisive benefit when applied in the Caucasian, as a rule produce no good results in the negro, unless they should be used with great caution, and then suspended promptly upon the slightest evidence of depression taking place; and it may be safely said that such remedies are often productive of positive harm in his case. This fact is particularly and strikingly exemplified in the effects of bloodletting and in the action of *veratrum viride*—two of the most potent sedatives and at the same time valuable agents where their action is called for in the white race, are almost always attended with harm in the negro, and especially so when carried to the extent found useful and necessary in the Caucasian. Thus, no agents act more satisfactorily or philosophically in the subduction of acute inflammatory symptoms in the white race, or are more urgently called for in the scientific treatment of such cases, than bloodletting and arterial sedatives; and yet, if they are resorted to for a similar purpose in the negro, the greatest caution and circumspection are imperatively demanded in order that harm shall not result from their use. In the rare cases in the negro which seem to warrant active antiphlogistic treatment, tonics and stimulants are required at an early period in their management. Opium and its preparations are badly borne by the African, as a rule, and the same is true, in an equal degree, of the entire narcotic class of remedial agents in their action upon his organism.

This is an exceedingly interesting branch of professional inquiry, and though the field is so inviting as to tempt me to detain the reader much further in the presentation of many other valuable facts gleaned in it during more than two decades of active practice upon and near the rice plantations of South Carolina and Georgia, where, I may add, that in ante-bellum days the material and the opportunities for turning it to practical and valuable account were of the most abundant character, yet it seems necessary that, after a few more words or

statements of closely allied facts, this hastily written article should be brought to a close.

The hybrid—mulatto—is a factor of considerable importance to physicians who encounter him in practice to much extent. But when he is considered as partaking of the structure and *nature* of his progenitors in a nearly equal degree, it will be readily perceived that he occupies a place intermediate, or between the Caucasian and African races, in other respects also. His immunity and his susceptibility to the diseases of his progenitors, and his impressability to the action of therapeutic agents, is also of an intermediate grade between that of the races from which he sprang.

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INEBRIETY FROM OBSCURE PHYSICAL CAUSES.

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IN THE MEDICAL RECORD of last October, I gave the notes of a number of cases of inebriety, in which the causes were unknown, even to the physicians familiar with the cases. This paper attracted much attention, and I have received a large number of letters from physicians and others relating to it. Many of these letters were histories of similar cases, or the personal narratives of the experience of the writers, who were victims, or of patients or relatives; and all are eloquent in appeal for help and advice what to do. I propose to present some of these cases, as an argument for a medical and scientific study of inebriety, above the levels of the theories of reformers and clergymen. These notes are mere outlines of cases that are familiar to every physician, and cover an almost unknown realm of pathology, psychology, and therapeutics.

The following cases are evidently the histories of the writers, and are found to be truthful from other evidence than the authors':

A. B—, born of healthy parents, and brought up on a farm. After several years of school teaching, alternated with studies at an academy, and working on the farm, he studied medicine and graduated with honors, receiving a prize. Soon after he married and settled in the country. At this time he was healthy, vigorous, and temperate from principle. Ten years after he had become a prominent, prosperous physician. He fell through the ice of a river one cold winter night, and was with difficulty saved from death. A severe attack of pneumonia followed, with a long convalescence. From this time he suffered from violent beating of the heart, with every excitement and overexertion. He began to use spirits for this nervousness, and found relief. A year later he was intoxicated and obliged to use spirits regularly to prevent this nervous state. After this (in his opinion) a series of troubles began, which came directly from his enemies, and culminated in poverty and disgrace. His wife died, and he was a chronic inebriate, and after a few years of great irregularities, was sent six months to prison. He served out his time, and has resumed practice, greatly improved in health, and is now temperate. He writes that his inebriety began from some physical condition, and that through the treachery of friends he was made worse.

From other sources I ascertained that soon after the attack of pneumonia, he drank to great excess at intervals, associated with low people, and gambled. A total change of character and impulse followed. Before he was honest, frank, and generous; now he was treacherous, secretive, and thoroughly unprincipled in conduct. He forged notes, became a tramp, and after six months' imprisonment seems to have recovered, and began to live a temperate life.

In all probability, the pneumonia was followed by heart-strain, or acute asystolism, for which spirits was a

sedative. Inebriety followed most naturally. The train of events which culminated in inebriety was physical; the nature and character of this change, and the moral paralysis which seem to follow, were largely unknown. The partial recovery following a period of forced abstinence in prison is very significant of what might have been accomplished by an early recognition and treatment of his case.

C. O. — writes me that his father died of consumption before his birth, and no other heredity is present in the family. He was always hale and strong, graduating from Yale College with some prominence as an athlete. After a long medical training he was made demonstrator of a medical college, and six years later became a full professor. He was temperate in all things except smoking. One day he became accidentally intoxicated in his lecture room, and soon after was forced to resign. He began life in a frontier city, became reckless, lost all ambition, and drank to great excess. He was finally taken to an insane asylum, where, after two years' treatment, he was given a position on the staff, and for many years has been constantly gaining in strength and vigor. From his statements, confirmed by a physician who was intimate with him, it appears that two years before he was seen intoxicated in public he drank brandy at night for its sedative effect. He was engaged writing a book, and after the active duties of the day were over he would spend most of the night in his library. He would become so nervous and restless that he could not sleep. Various remedies were tried, but at last brandy and ether was found most effectual. He failed in all his efforts to give up the use of this drug at night, until at last he appeared publicly intoxicated. He writes that inebriety began from neurasthenia and heart exhaustion, following excess of tobacco, and general neglect of healthy living.

This is no doubt correct. He inherited a defective organism and was an impulsive, nervous man, very strongly impressed by the surroundings. Had his malady been recognized in the early stages, and the treatment been prompt and effectual, a life of great usefulness might have been preserved.

An eminent physician writes of his son, who is free from any inherited defect, but who uses spirits to great excess every two or three months, spending the intervals in great exertions to prevent the further use. He was educated as a clergyman. After graduating at the seminary he was called to supply a church at a famous watering place, and was very ambitious to make a good impression and secure a call to a city church. He succeeded, but before he was ordained drank to intoxication in public. From this time he has lost all ambition and interest in the future. For a few weeks after the paroxysm of intoxication he is very active in his desire to get well and help others. His father is convinced that his inebriety is from purely physical causes. He traces it to general neglect of exercise, overwork, and failure to sleep. He thinks that he began to use spirits in the seminary for a tonic, and used it quite freely while supplying the pulpit, but always at night.

A physician reports this case: A gentleman of wealth, education, and high standing in the community, will frequently drink to excess and associate with the lowest company, in the vilest places, and in a most public way. This will last for ten days, after which he will recover and live a most exemplary life for an indefinite time. He is married, has a family, and attends church regularly. No history of heredity can be traced, but a few years ago he was defeated for Congress, much to his disappointment. He suffered soon after from an attack of asthma and fever, with a long, slow convalescence. He used spirits freely during his illness as a medicine. After recovery he was greatly irritated in the settlement of some business, and drank to excess for the first time. He was temperate up to this point, and after the paroxysm of drink will regret keenly his conduct, and make efforts to

regain his lost energy and reputation. The physician writes: "Although I cannot clearly make my belief apparent to others, yet I am convinced that he is suffering from some pathological change and disease, which began, or burst out, after his disappointment, and the fever which followed from it. I am also sure that he is more or less powerless to help himself, and needs positive medication and active treatment."

In another case reported to me by a physician: A strong, healthy farmer began to drink after recovery from a severe wound of the foot, in which he had lost much blood, and was laid up for three months. His wife died at this time, and he became gradually a notorious inebriate, spending all his property, and living an abandoned life. The exhaustion, and probably the shock, from the hemorrhage and death of his wife, acting by reflex action, broke up the normal integrity of some nerve-centres, and inebriety was only an expression of this state.

A New York physician writes: "I have a patient who never drinks except after sexual intercourse. If this is prolonged he becomes very stupid from drink, and cannot recover until he is taken to some hotel or hospital and carefully treated for two or three weeks. He has very little sexual desire, and after its gratification suffers from great depression, and a nameless agony of both body and mind, which only spirits can remove."

The wife of a physician writes of her husband, who is a confirmed inebriate, that his drinking dates from the time of her illness and injury from an accident; that for two weeks he was greatly excited, supposing she would not get well, and blaming himself for the accident. Working all day and sitting up every night, neglecting to eat or sleep regularly, and using spirits to keep up. From this time he has used spirits, and although he declares that he will and can abstain, never succeeds, or attempts it.

A noted medical teacher describes the case of his brother, which in substance is as follows: Insanity existed in the grandparents, and moderate drinking in the parents. This case was a gentleman of superior education, of correct, temperate habits, and an ambitious, proud man; but naturally very nervous and impulsive. He excelled as an orator and lecturer, and for several years occupied a prominent place on the lecture platform. Then suddenly he gave up this work and began to study law. At this time he had a severe attack of scarlatina, was disappointed in marriage, and lost most of his property in stock speculation. After admission at the bar, he began to practise in the police court among the lowest cases. A change of ambition and character was noticed. He drank regularly, and lost pride in appearance, associated with low people, became a politician, and served in the city boards. His character for honesty changed, and he became low and unscrupulous in his recognition of right and wrong. His drinking increased, and finally he was sent to prison. The doctor writes: "I am convinced that the inebriety, with change of character, ambition, and habits, all following a succession of physical and mental troubles, came from disease. He was thirty-four years old when this decline began, and the inherited predisposition undoubtedly formed the favoring soil which encouraged the growth of inebriety, and general failure of all normal brain-action."

These cases might be multiplied to fill a volume, both from my own observation and from correspondence. I am satisfied they are very common, but from want of study are passed by as poor victims of a vice which may be controlled at will. Now and then a physician, who becomes familiar with all the details of the history of a case, will recognize the presence of disease; but as this is not sustained by the prevailing opinions of the profession and general public, he has no incentive to defend such views. It is not moral cowardice, but simply absence of sufficient evidence and study of cases that prevents many physicians from urging that inebriety is

always a disease. While they are personally convinced of the truth of this fact, a public defence of it must be from clinical study, and evidence that requires time and effort to obtain. The frequency of these cases, and the general ignorance of their nature and character at present, will be a cause of great wonderment in the future.

The blundering efforts of law and religion are most disastrous to the inebriate and his malady. Inebriety, and what to do with the inebriate, is a purely physical problem which only physicians are capable of determining. The inebriate is a literal lunatic, flitting up and down the border-land where the twilight and night of mental darkness unite. Like the lunatic, the malady from which he suffers may only affect some parts of the brain, giving the appearance to the casual observer of strength to control and ability to realize all the relations of life. Hence he is always under a mask, which his disordered impulses are ever ready to maintain. Delusions of capacity to stop the use of spirits any time follow to the end of life.

The inebriate is not an enemy of society or civilization, but the victim of physical conditions—a child, a sick man, a ward of the State, needing physical care and treatment to be helped back to health and his natural place in society. To-day he is separated by a great gulf from rational recognition and treatment, and physicians only can cross this space and solve the problem. The physician should study the inebriate and define his disorder, the nature and degree of his rights and responsibility, as well as the means to remedy and remove his malady. Inebriety is not a vice or crime, but a disease to be cured by treatment. How this statement can be made an apology for inebriety and so become a *nightmare* of objection to any one, is difficult to understand. The fact that inebriety is a disease increases the responsibility of the victim and both his friends and the community to use the means for recovery. To call small-pox a disease is no apology for the victim or lessening of responsibility to use all means for restoration. To call a man insane gives no encouragement to insanity, or renders him less amenable to exact, rational treatment. In this shadowy territory clergymen and reformers lay down theories that are accepted as truths. But the march of science has carried this subject beyond the realm of morals and mystic remedies. The question of to-day is what shall we do? What means and remedies can we apply that will reach these cases? The physical nature of inebriety is clearly established wherever the subject is examined. The full acceptance of this fact will reveal the way by which a large percentage of these cases can be permanently restored to health and usefulness again.

OVARIAN CYST CURED BY INJECTION OF WINE.—Dr. Pedrini (*Gazz. Med. Ital. Lomb.*) gives the details of this case: The patient, thirty-nine years of age, was seized, after a day's washing in cold water, with acute pain in the abdomen. A few days afterward a small movable lump was noticed in the left ovarian region. The lump steadily and slowly increased for fourteen months, when it suddenly became much larger, threatening to prove fatal by asphyxia from the pressure it caused. The lungs were congested, with diffused bronchial catarrhal sounds, and the lower limbs were œdematous. The patient was very emaciated. A large trocar was thrust in at the lower third of a line drawn from the umbilicus to the anterior inferior iliac spine; seventy-two litres of a serous citrine-colored liquid were gradually withdrawn. A litre of white wine was then injected through the canula, and allowed to remain for an hour. There was sharp reaction and fever, which for a week imperilled the patient's life. She, however, made a good recovery and regained entirely her former good health, with no sign of the return of the tumor (after six years).

Progress of Medical Science.

PERCUSSION OF THE COLON IN DIARRHŒA.—Diarrhœa depending upon fecal accumulations in the lower bowel (*diarrhœa paradoxa*) is a well-known condition, the treatment of which by laxatives is of long-recognized utility. The diagnosis, however, between this form of diarrhœa and that other whose location is, more strictly speaking, in the small intestine, has often presented considerable difficulty. In an article upon this subject, in the *Deutsche Medicinische Wochenschrift* of February 14, 1883, Dr. Goedicke advocates the systematic practice of abdominal percussion in all cases of diarrhœa. He was led to adopt the practice in this wise: Several years before, when a young army surgeon, his suspicions were often aroused by the number of soldiers coming to him with the complaint of diarrhœa. In order to detect the malingerers, he made use of percussion of the colon, reasoning that in genuine diarrhœa the descending colon should be empty, and therefore give a tympanitic percussion note. He was surprised, therefore, to find that the contrary was usually the case. In most of the men in whom diarrhœa actually existed, as was ascertained from the reports of the infirmary orderlies, the percussion note of the descending colon was dull. The investigations now undertaken led him to the following conclusions: 1. In a healthy individual, with normal movements, if we percuss the colon, we shall find that the left iliac fossa usually gives a flatter note than the right. 2. In patients suffering from diarrhœa the greater dullness may be on either side, but is usually, in otherwise healthy persons, on the left. 3. The same condition obtains in children. 4. Whenever there is tenderness on pressure, it is found on the same side as the greater dullness. 5. The term "dullness" is to be understood as relative and not necessarily absolute, for the percussion note on both sides may be actually tympanitic if the colon be distended with gas. The author asserts that by far the more common form of diarrhœa is that excited by fecal accumulation in the large intestine. It is this variety which is characterized by increased relative dullness in the left iliac fossa, and in which opiates and astringent remedies are contra-indicated. In the other form of diarrhœa the trouble is in the upper bowel, and here the percussion note upon the right side is more dull, or less tympanitic, than that on the left. It is in these cases that the ordinary diarrhœa medicines find their application. Dr. Goedicke concludes by urging the practice of abdominal percussion in every case of diarrhœa, where possible (it is always possible in children, and it is in children that the knowledge of the true nature of the trouble is of the greatest importance). And he states his conviction that the more general this practice becomes, the less frequently will opium be employed in the treatment of diarrhœa.

SPASM OF THE GLOTTIS.—A very troublesome laryngeal spasm is sometimes provoked in sensitive subjects by local applications of irritant substances, either as liquid or powder. This spasm arises, according to Dr. Max Schaeffer (*Deutsche Med. Wochenschrift*, No. 2, 1883), by reason of a series of involuntary inspirations, so that when the trachea can contain no more, the air is forced into the œsophagus. He formerly attempted to overcome this by the induced current, but discovered by chance a much more simple and effective method. He holds the patient's mouth and nose and prevents any further inspirations. By this means he asserts that the spasm is speedily overcome.

SUBCUTANEOUS OSTEOTOMY.—Dr. Borchers has collected the statistics of sixty-one osteotomies performed upon thirty-seven patients by Dr. Von Muralt in the Eleonorenstift at Zurich, from 1876 to 1881 (*Correspondenz-Blatt für Schweizer Aerzte*). Of this number,

forty-eight operations were performed for bow-legs, and seven for knock-knees. Suppuration followed in nine cases, the balance progressing exactly as in simple fracture. There were two deaths, one from acute miliary tuberculosis, the other from a relapse of morbus coxarius following osteotomy for the correction of deformity at the hip. Esmarch's bandage was applied, and the operations were performed under antiseptic precautions. A straight incision, two-fifths of an inch in length, was made through the soft parts directly to the bone, which was chiselled completely through. The wound was not syringed out, nor was any drainage employed. The deformity was then corrected, a Lister dressing applied, and over that a plaster bandage. The limb was then elevated and the tourniquet removed. The temperature after the operation usually rose to 100° or 101° . The average length of treatment was forty days. The result of osteotomy for rachitic curvatures was in every case favorable. In genu valgum, tibial osteotomy was performed, as the principal deformity affected that bone. The results, as regards reduction of deformity and restoration of function, were good. The author thinks the operation is justifiable in all cases of rachitic deformity of the lower extremities in which hardening of the bones has taken place.

DENTAL FORMATION IN THE NASAL CAVITY.—Dr. Max Schaeffer relates the following case in the *Deutsche Med. Wochenschrift*, No. 2, 1883: A gentleman had for some time experienced a slight obstruction in one nostril. Examination revealed the presence of a hard, roundish, movable body, which was attached to the floor of the nostril about one inch from the anterior opening. It was removed by the snare, and was found to be a perfectly formed canine tooth, a little over an inch in length. The anterior portion was covered with enamel, and its little root presented a layer of cartilage. There was no bony alveola. The patient had all his teeth.

PERMANENT ASTHMA.—Professor Germain Sée does not accept the generally received notion of asthma as being always manifested by paroxysms of short duration, but holds that it is also met with as a disease characterized by permanent dyspnoea. He regards asthma, whether paroxysmal or permanent, as a condition made up of three elements—nervous, catarrhal, and emphysematous, either one of which may predominate and give its characteristic to the disease. It is when the latter element, emphysema, assumes an undue degree of prominence that we have the condition which the author denominates permanent asthma. It corresponds to what Waters, in his work on emphysema, characterizes (erroneously, according to Professor Sée) as primary idiopathic emphysema. This distinction which the author seeks to establish between emphysema and emphysematous asthma is, he asserts, of great importance in determining the proper treatment. His method, for which he claims excellent results, consists in the exhibition of full doses (thirty to forty-five grains per diem) of iodide of potassium. Under its continued use for some length of time, the asthmatic exacerbations disappear and the permanent dyspnoea is greatly lessened, if not entirely controlled. It is sometimes useful to add from three-fourths to one and one-half grain of opium to the daily dose of the potassium salt, to prevent iodism.—*L'Union Médicale*, March 6, 1883.

THE ORIGIN OF RESPIRATORY MURMURS.—Chomikoff and Kotovshchikoff having repeated the experiments of Aufrecht and Halbertsma, and completed a series of experimental researches of their own, conclude as follows: 1. Aufrecht's theory is incorrect; that is, the bronchial respiratory murmur does not in the least depend upon the movements of quiescent air-columns within the lung. 2. The bronchial murmur originates exclusively in the larynx; the friction of the air against the walls of the large bronchi does not give rise to these

sounds. 3. The vesicular respiratory murmurs are of a compound nature. A large part of them have a laryngeal origin; that is, the bronchial murmur originated in the larynx, while passing through the normal tissues of the lungs, changes its characters, and is heard on the lung-surface as a vesicular murmur. The remaining part of the vesicular sounds originates on the periphery of the lung, but the authors are not as yet able to elucidate its mechanism.

A NEW FUNCTION OF THE SEMICIRCULAR CANALS.—A new function of the semicircular canals has been recently suggested by Dr. M'Bride of Edinburgh (*Lancet*, February 17, 1883). The connection of these canals with the organ of hearing has been a constant enigma to modern physiology, which can discern in them no other end than that of subserving the maintenance of equilibrium and giving information as to the position and movements of the body. This function could, it is suggested, be as well performed if the canals had no relation to the organ of hearing. Their relation to it implies that they have some other function, and this Dr. M'Bride believes is to produce, through the ampullar nerves, reflex rotation of the head and eyes toward the point from which a sound proceeds, and, further, to co-ordinate and brace the muscles necessary for escaping from a danger of which sound is the first indication. The theory is, from its anatomical basis, necessarily insusceptible of direct proof. It is, however, known that irritation of the canals causes movement of the head and eyes toward the side irritated; and in pigeons a loud sound, as a pistol-shot, will cause a rotation of the head. But the effect of the discharge of a pistol is scarcely comparable to those sounds which are the usual stimuli to the auditory apparatus. The reflex phenomena produced by a sound in an uninjured animal may be equally well explained by the hypothesis that the afferent impression is through the cochlear part of the auditory nerve. At any rate, the experiments of Ferrier seem to show that when the cerebral centres of hearing are destroyed, reflex movements can only be evoked by loud sounds made close to the animal—a fact which renders it probable that the apparently reflex movements which are produced in the normal state by slight sounds are the result of true auditory sensation.

HOW TO GIVE SANTONIN.—Lewin finds fault with all the usual methods of administering santonin. According to him it should be given in its least soluble form, *i.e.*, in that form in which it will be the least readily absorbed, as the effect desired is not a general, but a local one. An oily solution of santonin undergoes, according to his experiments performed on animals, not the slightest absorption in the stomach, so that under no circumstances is any trace found in the urine. Almost any kind of oil may be employed, cocoa-nut oil, olive-oil, cod-liver oil, or castor-oil. He recommends that three grains of santonin be mixed with two ounces of oil and given in four doses. He thinks that a useful addition to the above would be that of an oil contained in santonica, the *oleum cinæ æther.*, for the reason that all ethereal oils have been shown to act as poisons on the lower forms of animal life.

THE CAUSE OF HYSTERICAL TYMPANITES.—Ebstein regards the rapidly developed tympanites in an hysterical attack as due to incontinence of the pylorus. In this way the air which is swallowed during the attack passes directly through the stomach into the intestines. In two cases in which this phenomenon was observed the distention of the entire abdomen was greatly increased immediately upon the introduction into the stomach of an effervescent mixture. The author regards this insufficiency as a pathological condition, although Kussmaul asserts that a relaxed pylorus is the normal state when the stomach is empty.—*Centralblatt für Klinische Medizin*, March 31, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

WE have received several inquiries concerning the number of delegates which county societies are entitled to send to the American Medical Association. According to the plan of organization (see "Transactions American Medical Association," vol. xxxiii., p. 618) "each State, county, and district medical society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; provided, however, that the number of delegates from any particular State, Territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of this Association."

According to the by-laws of the Association all societies entitled to representation have adopted its Code of Ethics, and therefore the members of these several societies have signed the Code of Ethics of the American Medical Association. The number, then, is left, practically, as given in the first clause—"one delegate for every ten of its regular resident members," etc.

The number of delegates, therefore, from the county and district medical societies in this State, entitled to representation, may be very large. For example, a society which has adopted the Code of Ethics of the American Medical Association, and can send delegates to the State Medical Society, may send fifty delegates if it has a resident membership of five hundred. Will the delegates be admitted? Presumably, if there is no evidence that the society which they represent has "intentionally violated or disregarded any article or clause of the same" (that is, the Code of Ethics of the American Medical Association). The question, however, has not yet been acted upon by the Judicial Council.

SUDDEN DEATH DUE TO CEREBRAL INHIBITION.

UNDER the name of inhibition, Dr. Brown-Séquard designates the arrest or suspension of function in a nervous centre, muscle, or nerve—an arrest which takes place without visible organic change, following immediately upon irritation of some point of the nervous system more or less distant from the part in which the effect is observed. It is to cerebral inhibition that the author attributes a form of sudden death, called formerly by him death without agony, which is analogous to the sud-

den loss of intellectual activity that occurs in epilepsy. This death is easily produced in animals by a simple prick of the ventricle of Arantius in the floor of the fourth ventricle. The animal falls motionless at once with complete loss of consciousness. The heart continues to beat, but respiration is arrested. The reflex action of the cord is increased. The cause of death is nowhere apparent. At least, there are no visible changes to account for it. In the absence of any other explanation, Dr. Brown-Séquard arrives at the conclusion that loss of cerebral function and activity, in certain cases, is the pure effect of inhibition proceeding from some more or less distant irritation.

THE END OF THE DEBATE IN THE ACADEMY OF MEDICINE OF PARIS.

FOR six months the learned members of the Academy of Medicine of Paris have been discussing the question whether typhoid fever should be treated by cold baths, by quinine, by salicylic acid, by carbolic acid, or should not be treated at all. The debate was brought to an end, on April 24th, by M. Peters, who summed up, in a somewhat pessimistic spirit, the results of the long battle of words.

It has been shown, he said, that we possess no specific treatment for typhoid fever, but that this disease is to be treated symptomatically in accordance with the indications.

This appears to be a small result, truly. Almost any intelligent American physician would have said the same last December before the debate began. Yet the influence of the discussion may prove useful in checking the ardor of those physicians who imagine that in cold water or carbolic acid they have at last found something which is really applicable to, and efficient in, all cases. In other words, the debate has given strength to the rational therapeutics of the disease. Nor need any one say that because there is no specific for typhoid fever, the physician cannot do much in the way of treatment. There are, on the contrary, few diseases in which intelligent watchfulness and care are so likely to prove helpful.

M. Peters, in concluding his speech, replied to Pasteur—who was absent. The speaker reiterated his former charges regarding the uncertainty, inutility, and danger of animal vaccinations by the Pasteur method. We need not go over his arguments, however, since no new facts of consequence were presented. The question at issue must be settled by practical tests in the laboratory and on the farms.

THE COMING MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—Dr. X. C. Scott, of Cleveland, O., Chairman of the Committee of Arrangements, desires us to make the following announcement:

The next annual meeting of the American Medical Association will be held in Cleveland June 5th to 8th inclusive. All railroads west of Pittsburg, Salamanca, and Buffalo, east of Chicago, and south of Cleveland, will carry delegates, and members of their families, at one full fare, and return them on certificate signed by me as Chairman of the Committee of Arrangements (certifying that they have been in attendance at the meeting of the Association) at one cent per mile.

The Trunk Lines east of Buffalo, Salamanca, and Pittsburgh, and lines west of Chicago, have refused to make any reduction. The rates per diem at the hotels will be : Kennard House, \$3.00 ; Weddell House, \$3.00 ; Forest City House, \$2.50 to \$3.00 ; American House, \$2.50 ; Hawley House, \$2.00 ; Striebing House, \$2.00 ; Clarendon House, \$2.00 ; and Prospect House, \$2.00.

THE FIFTH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, which meets in this city May 21st, 22d, and 23d, has a very elaborate programme laid out. On the first day seven papers will be read, on the second day seven, and on the third day eight. Among the more novel subjects to be treated of are : Chorea of the Larynx, Photographing the Larynx, Smell Hygienically and Medico-Legally Considered, Reflex Phenomena of Nasal Disease, Researches on the Tension of the Vocal Cords.

The Annual Dinner will be given at Delmonico's on the evening of May 21st, and there will be a theatre party and supper the next night.

Reports of Societies.

MEDICAL SOCIETY OF WEST VIRGINIA.

Sixteenth Annual Meeting, held at Grafton, West Virginia, May 16 and 17, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE sixteenth annual meeting of the Medical Society of West Virginia convened in the court house, in Grafton, W. Va., at two o'clock, on Wednesday, May 16th, the President, DR. W. B. ALLEN, of Morgantown, in the Chair.

Prayer was offered by the Rev. F. P. ROBERTSON, of the Baptist Church, in Grafton. The roll, called by DR. S. L. JEPSON, of Wheeling, the Secretary, was answered by twenty-seven members. The

ADDRESS OF WELCOME

was delivered by DR. A. L. GRANT, of Grafton, the chairman of the Committee of Arrangements, and the Hon. J. W. MASON welcomed the delegates on the part of the citizens. Dr. R. B. Stover, of Richmond, Va., and Drs. J. F. Baldwin and H. G. Landis, of Columbus, O., were recognized by the Society as delegates from sister societies. Dr. J. F. Baldwin replied to his acceptance at some length, congratulating the Medical Society of West Virginia on its State Board of Health.

ADDRESS OF THE PRESIDENT

DR. B. W. ALLEN, of Morgantown, the President, read an address touching on many matters, but referring particularly, and with some severity, to

THE RECENT BREAK IN THE MEDICAL PROFESSION IN THE STATE OF NEW YORK.

He also referred to the

NEGLECT IN THE PRELIMINARY MEDICAL EDUCATION OF YOUNG PHYSICIANS,

as evinced by the prevalence of several epidemics of small-pox throughout the State. He advocated, with much ability, the creation and sustenance of a medical department in the University of the State of West Virginia, at Morgantown.

DR. J. E. REEVES, of Wheeling, called the attention of the Society to the fact that a ruling, at one of its early meetings, prevents the election of a man to the State Society unless in good standing in his County Medical Society. He thought this ruling very unjust and, after argument, moved that the former resolution be repealed.

DR. G. BAIRD, of Wheeling, also spoke against the

old ruling, which was sustained in quite an animated speech by DR. J. M. LAZZELL, of Fairmont, who moved that DR. REEVES' appeal be laid on the table. It was, however, put to the vote and carried by the Society.

DR. R. W. HALL, of Mannington, from the

COMMITTEE ON EPIDEMICS,

reported no severe general epidemic to have existed in the State, but nearly all the epidemic diseases to be present. The paper referred to pneumonitis, naso-pharyngitis, influenza, scarlatina, rubeola, variola, varicella, pertussis, parotitis and typhoid fever, discussing all these diseases, and typhoid fever at length, strongly arguing for the contagiousness of this disease, and citing cases in support.

The discussion on the paper was opened by DR. J. S. REEVES, who recommended the use of

ERGOT AS A PREVENTIVE OF HEMORRHAGE,

and also as an antiphlogistic agent.

DR. R. B. STOVER, of Richmond, Va., had also noticed a reduction of temperature following the use of one drachm of Squibb's fluid extract of ergot, every three hours, in both pneumonia and typhoid fever.

DR. A. GERSTELL, of Keyser, thought typhoid fever a purely germ disease, which could only be taken from the introduction into the system of fecal matter.

DR. T. L. JEPSON, of Wheeling, thought that the discussion propounded three questions, which, with their answers, were as follows :

First.—May the disease arise *de novo*? The facts which he had obtained from a perusal of the report of the Massachusetts State Board of Health prove that it does.

Second.—Is it contagious? The fact that not a doctor, nurse, or patient, had been known in all his hospital practice to take disease from undoubted typhoid fever cases, proves that it is not.

Third.—What remedies are indicated? Statistics on the therapeutics of typhoid fever show the uncertainty of the action of any one reputed species. It requires a stupendous array of confirmatory cases to establish the success of any drug as a specific in this disease.

DR. J. M. LAZZELL instanced a case occurring in his own practice as going to show that typhoid fever is communicable. He had known it to occur twice in the same person.

DR. J. F. HAMILTON, of Columbus, O., spoke strongly in favor of the

DE NOVO ORIGIN OF TYPHOID FEVER.

He treated his cases with milk and lime-water.

The Secretary read his report, which was accepted. The Treasurer's report showed a balance on hand of \$115. The Board of Censors passed upon the following list of

CANDIDATES FOR ADMISSION TO THE SOCIETY.

C. F. Johnson, T. F. Landman, C. M. Frizell, A. P. Nathans, J. H. Silvey, E. M. Baird, J. L. Nixon, C. V. Henry, J. C. Lawson, and G. L. Bomberger. These gentlemen were all elected members.

THE ARMY MEDICAL MUSEUM AND LIBRARY.

DR. JAMES S. REEVES, of Wheeling, introduced the following preamble and resolutions, which were adopted unanimously by the Society, viz.:

Whereas, The collections known as the Army Medical Museum and Library of the Surgeon-General's Office, located in Washington, D. C., are recognized among the most complete and valuable of their kind in the world, and as their practical usefulness has been abundantly demonstrated by the interest with which they are regarded by the medical profession, both at home and abroad, and :

Whereas, By reason of the insecurity and unsuitability of the building in which they are now placed they are in constant danger of damage or destruction, from which would ensue irreparable loss, therefore :

Resolved, That in the opinion of the Medical Society of the State of West Virginia, the inestimable value of these

collections demands from Congress such fair consideration of the merits involved as will secure an appropriation of sufficient amount to provide a fire-proof building, of an ample size and suitable construction, for the present and future uses of the Museum and Library.

Resolved, That the Army Medical Museum and Library of the Surgeon-General's office are inseparable in object and interest, and only capable of the greatest usefulness when under one control and management; that this Society views with regret and disfavor any attempt to separate the two; dismemberment must result in injury to both.

Resolved, That Congress would meet the wishes of the medical profession of the United States by appropriating suitable sums of money for the support, care, and increase of the collections, viz.: not less than ten thousand dollars annually for the library, and five thousand dollars for the museum.

Resolved, That the work now in progress under the direction of the Surgeon-General of the army, entitled "An Index Catalogue of the Library of the Surgeon-General's Office," is also one in which the medical profession of the United States is greatly interested, and should receive the substantial aid and encouragement of Congress with a view to its speedy and certain completion.

Resolved, That a copy of these preambles and resolutions be forwarded to each senator and representative of our State, requesting his special aid and co-operation in the matters herein specified.

The meeting then adjourned for the day. The Rev. W. A. Shipman, of Grafton, delivered an address at 7.30 P.M. in the Court House, on "Materialism." At 9 P.M. a grand ball was tendered to the visiting physicians by the citizens.

A report of a case of

PERITONEAL HÆMATOCELE

was read by DR. R. W. HALL, of Mannington, W. Va.: Dr. G. L. McIntire, of Grangeville, W. Va., requested me to see in consultation with him Mrs. R—, stating that the patient was about thirty years of age, a multipara, and had enjoyed good health until about four weeks previous, when she had metrorrhagia and sent to Dr. McIntire for medicine. The doctor sent her the usual remedies and she was, as she thought, well in a few days. After a little more than two weeks elapsed, she became very nervous, had considerable nausea and occasional rigor. This condition continued for a little over a week, gradually getting worse, and pain was present in the hypogastrium. She became very restless, the nausea became more marked until emesis occurred. On rising one morning she observed for the first time that she had a tumor about the size of a child's head in the lower part of the abdomen. This condition caused her considerable alarm. In a few days it became very tender to the touch and she observed it to be increasing rapidly in size. She then sent for Dr. McIntire, who, thinking the case of a serious nature, requested consultation. I saw the patient Friday evening. Upon examination found tongue coated with a light fur; pulse, 90; respiration, 24; and temperature, $101\frac{1}{2}^{\circ}$. Dr. McIntire informed me that the pulse had been normal as well as the temperature up to the evening I saw the patient. I found in the hypogastrium, to the left of the median line, a round tumor about the size of a two-year old child's head, hard and exceedingly tender to the touch. A digital examination, per vagina, revealed the uterus slightly prolapsed, but no other evidence of disease. After a careful consideration of the case we diagnosed hæmatocele, and to make the diagnosis certain, we took a hypodermic syringe, pushed the needle into the tumor, and drew out some of its contents, which were fluid and had the appearance of prune-juice. Recognizing this as blood in a partial state of decomposition, the diagnosis was thus proved correct. Owing to the large quantity of fluid, we could not hope that relief would come to the

patient by nature's slow process of absorption, and to avoid the great danger feared from septicaemia, we advised the evacuation of the tumor. The patient consenting, on Sunday morning, two days later, we drew, by means of the aspirator, ninety-six ounces of fluid, resembling in color prune-juice, and having quite an offensive odor.

The patient expressed herself greatly relieved; all the tenderness and pain had vanished as if by magic. We directed that an antiseptic treatment be pursued, together with astringents, and that Dr. McIntire see the patient daily. The patient soon had general peritonitis. By Dr. McIntire's skilful management she finally recovered, and at this writing enjoys good health.

DR. D. P. MORGAN, of Clarksburg, read a paper on

THE ABUSE OF ERGOT IN OBSTETRIC PRACTICE.

The teachings of college professors and of text-books on obstetrics of how and when to give ergot in labor are various and very conflicting. One will tell us to give ergot when the pains are slow, another to give it to overcome inertia during the first stage of labor, and another that it shall never be given during the first or second stages of labor; another will tell us it is little less than murder to give it while the child is viable, another advises us to give it only to expel a retained placenta or to control post-partum hemorrhage, while still others advise us to use it only as a prophylactic against hemorrhage, or to give it to prevent after pains, etc. Now this is all confusing, more especially to the younger members of our profession, and I shall, after noticing very briefly its action on the uterus during labor, try and formulate a few rules as to when it shall not be given. Now it is desirable to ascertain, if possible, the true effects of ergot on the muscular fibres of the uterus, and on the foetus within the uterine cavity. It usually produces in a uterus at term or in labor a strong tonic contraction, which differs from the natural rhythmical contraction, which is followed by a period of relaxation, in being of a continuous or tetanic nature, and if the dose be repeated often, or a sufficient quantity given, a continuous and powerful tetanic contraction is usually produced, which is participated in by all the uterine muscular fibres, and the contents, be they fetal, placental, or blood clot, are held as in the jaws of a vice instead of being normally expelled, and thereby often proving fatal to the child by compressing the cord and thus cutting off the fetal circulation.

The so-called hour-glass contraction is evidently a form of tetanic contraction, similar to that produced by ergot. Again, the action of ergot is not uniform. It may act on a part, or upon the whole organ, it may act upon one set of the muscular fibres and not on the others. It may produce such a powerful tetanic contraction as to drive a head too large into a pelvis too small or deformed, and thus produce impaction with all its fearful consequences. It may, and has produced all the lacerations possible, from rupture of the uterus, with escape of the foetus into the abdominal cavity, to that of the perineum, with great shock, loss of blood, etc. It has produced pelvic cellulitis and peritonitis; it has produced gangrene and sloughing of all the soft tissues in the pelvic cavity. It very frequently produces laceration of the cervix uterus; it has produced such extensive sloughing of the vagina as to result in contraction, destroying the entire vaginal canal. The safety of the maternal tissues and the life and health of the child depend upon a regular relaxation after each successive contraction of the uterus, as well as the recession of the presenting foetus, and when such contraction, relaxation, or recession are replaced by a tetanic, or continuous contraction, injury to either mother or child, or both, is apt to result. And yet, in the face of all the facts, very many physicians daily use ergot without any especial object or aim as to its results, they merely feeling the necessity of giving something, or doing something. Now

I claim that in giving ergot during the first stage of labor we commit malpractice. But in what does this malpractice consist? It is this: Ever since Dr. Stearns, of Saratoga County, N. Y., in 1807, had his letter published in the *New York Medical Repository*, and even unto the present moment, many, very many physicians will attend a given case of labor, the usual examination is, or is not made, perhaps the usual inquiry as to the condition of bowels, bladder, etc., is made, how long the lady has been in pain, frequency of pains; how long intervals intervene, etc. The physician perhaps finds the os dilated as large as a twenty-five cent coin, or larger, with moderate pains and long intervals. He is in a hurry, besides he feels that he must do something, gives a teaspoonful of the liquid extract of ergot, or its equivalent of tincture, wine, or infusion, or a hypodermic injection of ergotine, waits twenty or thirty minutes, gives another dose, and another, until the uterus is thrown into a furious state of contraction, with scarcely any relaxation. The result will probably be a dead child with some one or more of the serious injuries above mentioned to the mother.

Well, when shall we give ergot in cases of labor? First, never till the uterus is thoroughly dilated or dilatable and the perineum is thoroughly relaxed and the pelvis properly shaped, and it is better not given then. Secondly, not till the head has passed the perineum and continued inertia exists. Thirdly, to secure contraction in post-partum hemorrhage, and then not till the uterus is emptied of placenta clots, etc., by other means; and in this case continued pressure over the fundus, after the method of Criede for expelling the placenta, is much better; besides, the intra-uterine injection of very hot water is superior to ergot and will not produce the nausea, vomiting, and prostration, as is frequently done by ergot. Hence ergot is not necessary at all during the first stage of labor. It should only be given in the second stage when the os uteri is dilated and the perineum relaxed, and then only in conditions of continued atony; and here abdominal bandages, stimulants, quinine, etc., will overcome this atony in almost all cases, and with much more ease, safety, and satisfaction than ergot or any similar remedy. Ergot is unnecessary in post-partum hemorrhage, except in small tonic doses of ten to twenty drops every half, one, two, or three hours, and even here we possess in the hand a safe, rational, quick, easy, ever ready remedy, to be used in the manner before mentioned. In the Bethesda Hospital, in Dublin, the use of ergot as an oxytocic before delivery has been prohibited by the trustees. Finally, it has serious disadvantages and it is very questionable whether the risks to both mother and child do not more than counterbalance any advantages attending its use, or, in other words, it were probably better that it had never been given in labor before the uterus was emptied.

The second day's session convened in the Court House at 8.30 A.M.

ENDORING THE CODE OF THE AMERICAN MEDICAL ASSOCIATION.

Immediately after the offering of prayer the following preamble and resolutions were moved by DR. D. H. MORGAN, of Clarksburg:

Whereas, The medical profession of West Virginia views with deep concern and regret the confusion and discord which have resulted in the State of New York from the action of the State Medical Society in renewing allegiance to the code of ethics of the American Medical Association, under which all State and other auxiliary societies have so long and harmoniously worked together for the common good; and

Whereas, Certain medical journals and specialists, under the specious plea of "liberality," humanity, and advancing civilization, have used and are still using every effort to bring about and maintain such a degree of opposition to the National Code as shall completely

separate the said State Medical Society of New York from affiliation with all loyal organizations in other States, thus rendering it independent of and antagonistic to the American Medical Association; therefore

Resolved, That the Medical Society of the State of West Virginia again declares and reaffirms its willing allegiance to the time-honored notion and code of medical ethics as the great common law, and the only safe and proper guide for the physician in the midst of the conflicting interests with which he is beset in daily practice and in his interests with his fellows.

Resolved, That the delegates from this society to the American Medical Association, at its forthcoming meeting, be and they are hereby instructed to resist, by their votes and influence, all attempts which may be made to change or modify any of the provisions of the code, or to in any other way compromise the dignity, standing, and influence of the profession.

Resolved, That this Society recommends to the medical profession of West Virginia, that they support, by their subscriptions, only such medical journals as recommend their patients to such specialists, and direct their students only to such medical colleges as have shown, by their unequivocal attitude, their representation, the demands of true humanity, their recognition of the pure and unselfish aspirations of our calling, and their loyalty to the high and noble interests of rational medicine.

Resolved, That a copy of these preambles and resolutions be forwarded to the Permanent Society of the American Medical Association.

The resolution was unanimously adopted.

A JOURNAL FOR THE SOCIETY.

The following was then read:

Whereas, The Medical Society of the State of West Virginia is growing in numbers and increasing in usefulness, as is evidenced by the superior quality of the papers, so far read, and by the interest manifested on medical subjects generally in the State, and

Whereas, Our State has a law regulating the practice of medicine, and establishing a State Board of Health which is not surpassed, if even equalled, by any similar law in any of the States, and

Whereas, The Society, and the profession at large in the State have no medium of communication on medical and public health subjects, except the annual meeting of the Society;

Whereas, The State Board of Health and the Medical Society should be in perfect harmony and be enabled to interchange opinions and suggestions upon public health subjects, therefore be it

Resolved, That this Society elect annually three members, which shall constitute a Committee on Publication, whose duty it shall be to associate with themselves an editor, which committee and editor shall publish a quarterly medical journal under the auspices of this Society, and, if practicable, in conjunction with the State Board of Health, which committee and editor, in addition to publishing through the different numbers of the journal (after being approved, passed, and read before this Society), may insert original articles, reports of cases, communications, selections, translations, medical and sanitary news, etc.

DR. J. M. LAZZELLE, of Fairmont, spoke against this plan, as did also DR. J. FRIZELLE, of Wheeling. Moved to be referred to the Committee on Publication. Carried.

MR. F. HOWELL, of Clarksburg, read a report of a

CASE OF ESOPHAGOTOMY FOR THE EXTRACTION OF A SILVER FIFTY CENT PIECE

swallowed, by recovery, with suggestions as to the conditions under which the operation is justifiable.

The following conclusions were reached by the author, First, when a foreign body has become lodged in the

"cervical" portion of the "oesophagus," and has resisted a fair trial for its extraction or displacement, its removal should be at once affected by incision. Second, when a foreign body has become lodged in the "oesophagus," determinable within a finger's length below the upper end of the "sternum," and has resisted a thorough trial for its extraction or displacement, its extraction should be at once attempted by incision. Third, when a foreign body has become lodged in the "oesophagus" at a point beyond a finger's length below the upper end of the "sternum," or in extreme cases, even at the cardiac contraction, and its position can be pretty definitely ascertained, and its character, size, shape, etc., are known or have been pretty definitely determined to be such that it could not, without great danger, work its way outward, or pretty readily become dislodged or loosened by ulceration and pass onward, and it has resisted the most careful and thorough efforts for its extraction or displacement, its extraction should then be at once attempted by an operation.

DR. JOHN FRIZELLE, of Wheeling, read an intolerably lengthy and monotonous column of manuscript, touching on

THE TERRIBLE DANGERS ATTENDING THE USE OF TOBACCO,
ALCOHOL, ETC.

About an hour was consumed in the elimination of this humanitarian effort. Its effect upon the delegates was disastrous.

The paper was referred to the State Board of Health, with the request that they publish it in their proceedings.

NATIONAL BOARD OF HEALTH.

DR. W. F. VANKIRK, of Grafton, offered the following: *Whereas*, The National Board of Health, by its efficiency and faithful discharge of official duty, has won the confidence and endorsement of the most expert sanitarians both in this country and Europe, and of the medical profession, generally, in the United States; and

Whereas, This society deems it of the greatest importance that the strong arm of the general Government shall be exercised to prevent the introduction of contagious disease into the United States from foreign ports, and there spread from State to State; to co-operate with and aid State and municipal boards when such domestic authorities are unable to control or stamp out epidemic diseases among the people; therefore,

Resolved, That this Society requests the senators and representatives in Congress from West Virginia to use their influence to accomplish such legislation as will secure the perpetuity and usefulness of the National Board of Health in preventing the importation of foreign pestilences and their spread among the people; to co-operate with and aid State and municipal boards of health, when such boards are unable to control and suppress pestilences which are afflicting and killing the people; to encourage investigations concerning the sources and causes of disease among the people, and clothe the central power and authority with a sufficient appropriation of money to enable it to discharge the important trusts committed to its care in a matter creditable alike to the general good of the medical profession of the United States.

Adopted.

DR. S. L. JOHNSON, of Wheeling, read a paper on

PUERPERAL FEVER, WITH SPECIAL REFERENCE TO TREATMENT BY EXTRA-UTERINE ANTISEPTIC IRRIGATION.

He combated the specific theory of causation, and advocated the septic or toxæmic nature of the disease. He suggested that when "puerperal" fever arose apparently from erysipelas or scarlatina it was due to the fact that an atmospheric state was produced by these diseases predisposing to putrefaction of lochial discharges.

He recommended the following classification of grave puerperal diseases: 1, Puerperal inflammation; 2, puer-

peral fever, septicaemia, or toxæmia; 3, zymotic diseases in puerperal women; and gave the following rules for antiseptic irrigation of the uterus: 1, What must be done only by a physician; 2, must be preceded by vaginal irrigation; 3, must be done by gravitation and not by injection; 4, fluid used must be as warm as the body temperature; 5, a free exit from uterus must be secured; 6, concentrated solutions must be avoided.

A discussion ensued at this point as to the use of ergot in labor. DR. S. G. LANDIS, of Columbus, denied the "oxytocic" properties of ergot in his experience, and deplored its use in any of the stages of labor. He thought it acted simply as a nauseant, nauseants being well known to cause contraction of the womb.

DR. R. B. STOVER, of Richmond, spoke at some length in support of Dr. Landis's remarks. DR. J. GREGG, of Quet, Del., was also in the habit of conducting his cases of labor without employing ergot.

MISSOURI MEDICAL ASSOCIATION.

Twenty-sixth Annual Meeting, held at Jefferson City, Mo., May 15 and 16, 1883.

(By Telegraph to THE MEDICAL RECORD.)

ADDRESS OF WELCOME—URGING APPROPRIATION FOR FIRE-PROOF BUILDINGS FOR NATIONAL MEDICAL LIBRARY—DISCUSSION OF THE CODE—THE USE OF THE WORD ALLOPATH—REPORT ON GENITO-URINARY SURGERY—ELASTIC LIGATURE IN SURGERY—THE PROGRESS OF MEDICINE—STANDARD FOR THE EXAMINATION OF STUDENTS.

THE twenty-sixth annual meeting of the Missouri Medical Association opened Tuesday afternoon, May 15th. The Address of Welcome was delivered by Governor Crittenden. He criticised the Code of Ethics and prophesied the abolition of the Code and of the American Medical Association itself. He paid a handsome tribute to the memory of Dr. Hodgins, late President of the Association.

PRESIDENT GORE protested against breaking down the Code of Ethics.

Resolutions were adopted urging upon Congress appropriations for a fire-proof building for the Medical Library and publishing index catalogue.

DR. G. M. DEWEY read a paper, "Remarks with Reference to the Code," which led to an animated discussion.

DR. TODD, of St. Louis, introduced a resolution condemning the use of the word allopath.

DR. FORD, of St. Louis, presented a long report on "Genito-Urinary Surgery," discussing strictures, litholapaxy, etc.

DR. TRADER, of Sedalia, read a brief paper on "The Elastic Ligature in Surgery."

DR. ALLEN reported from the Committee on Medical Legislation the history of the bills passed by the last Assembly.

On Wednesday, May 15th, DR. LESTER presented a report on "Progress of Medicine," referring specially to the bacillus tuberculosis, and the treatment of typhoid fever and of rheumatism by the salicyl compounds. This elicited an extended discussion.

DR. J. W. BRENT read a paper on "Force."

DR. T. POLLOCK, of St. Louis, presented a paper on "Jequirity in Ophthalmia," giving personal observations.

DR. HOLLEY, of Kansas City, presented an abstract of an extended paper on "Pathology and Classification of Tumors."

DR. WARTH's paper on "Spontaneous Evolution" was read by title.

DR. B. F. WILSON, of Salisbury, read a paper on "Bacteria," denying that they can affect normal tissues. This paper was fully discussed in the afternoon.

THE PRESIDENT gave an address recalling some points in the progress of medicine, but showing how far short of

our wishes is that progress, noting also defects of medical education in practical points.

DR. T. J. NORRIS presented a long report of the Committee on Medical Legislation, with letters from prominent physicians in this State and elsewhere. The paper was partly read, and referred without discussion to the Committee on Publication.

DR. ALLEN proposed a resolution containing a recommendation to the Board of Health to fix a certain standard for the examination of students grading from medical schools, and requiring publication of questions and answers. After some irregular discussion an adjournment was had without action on the resolution.

ILLINOIS STATE MEDICAL SOCIETY.

Thirty-third Annual Meeting, held at Peoria, Ill., May 15 and 16, 1883.

(By Telegram to THE MEDICAL RECORD.)

THE Thirty-third Annual Meeting of the Illinois State Medical Society was called to order May 15th, at 10 o'clock by the President, DR. A. T. DARRAH, of Bloomington, who made an address of welcome on behalf of the Committee of Arrangements and the citizens of Peoria, which was responded to by DR. WILLIAM HILL, of Bloomington.

After the routine of business, the arrangements for the reports of the various committees was made, making provision for voluntary reports in connection with the same.

The morning session concluded with the reading of the Annual Address of the President.

Reports on the Practice of Medicine were offered by Drs. N. S. Davis, of Chicago; B. M. Griffiths, of Springfield, and J. F. Todd, of Chicago, which were received. These reports were discussed by several members, among others Drs. S. C. Plummer, of Rock Island; J. P. Walker, of Mason City; D. Prince, of Jacksonville, and B. F. Crummer, of Warren.

The report on Necrosis showed that death had not invaded the members' ranks during the past year.

DR. BOOTH presented the report of a special

COMMITTEE ON MEDICAL EDUCATION,

expressing the desirability of separating teaching and the conferring of diplomas, criticising severely the American system of medical education, and warmly recommending the creation of an

EXAMINING BOARD SEPARATE AND DISTINCT FROM ANY AND ALL MEDICAL COLLEGES.

This caused considerable discussion, the point being generally conceded that the existence of separate examining boards is greatly to be desired.

PROFESSOR W. HAY, of Chicago, as chairman of a special committee, submitted a report relative to the

COMMITMENT OF THE INSANE,

and submitted a brief of a bill to be recommended to the Legislature. The report was accepted, and the committee was continued for two years.

At the Wednesday morning session, reports on Surgery were given by Drs. E. Owen, of Chicago, and J. T. Stewart, of Peoria. The latter related a case of

EXSECTION OF THE UTERUS, OVARIES, AND GREATER PORTION OF THE POSTERIOR WALL OF THE VAGINA, WITH RECOVERY.

DR. VERITY, of Chicago, exhibited an ingenious and simple device for

SUSPENSION DURING THE APPLICATION OF THE PLASTER JACKET.

DR. DAVID PRINCE, of Jacksonville, exhibited an apparatus for evacuation of the bowels, and

DR. J. S. WHITMIRE showed a new spring truss for

which he claimed certain advantages of simplicity and universality of application.

DR. N. HOLTON, of Smithfield, reported a case on the

SPONTANEOUS DISLOCATION OF A KIDNEY

to the anterior part of the abdomen, with a reduction of the same.

The Treasurer, DR. J. H. HOLLISTER, having completed his twentieth year of service, tendered his report through Dr. N. S. Davis, requesting at the same time to be released from service.

The appointing of the Nominating Committee and the discussion of the Reports on Surgery concluded the morning session.

At the Wednesday afternoon session the following resolutions were presented from the Special Committee on Recommendations on President's Address:

Whereas, The Illinois State Medical Association take much interest in

URGING AND PROMOTING THE FORMATION OF THE STATE BOARD OF HEALTH,

and the results of its work since its organization fully justifies the expectation of its friends in protecting the people from professional ignorance and imposition from epidemic diseases and various other causes prejudicial to life and the promotion of a higher standard of medical education, thus placing Illinois in the front rank in this respect among her sister States, this rule being largely due to the personal sacrifices of members of the board, the appropriations made by the State having never been sufficient to carry out the duties imposed on the board by law; therefore be it

Resolved, That in the opinion of this Society, it is the duty of the Legislature of this State to make such appropriations as will enable the board to carry out the important duties assigned it by the acts creating the State Board of Health and the act to regulate the practice of medicine.

Resolved, That a copy of this preamble and resolutions be sent to members of the Legislature now in session. Adopted.

DR. PRINCE, of Jacksonville, and DR. CHENOWETH, of Decatur, and DR. E. S. NORRIS then read papers on gynecology.

THE REPORT OF NOMINATING COMMITTEE

was then presented and adopted.

President—Prof. Edmund Andrews, Chicago; *First Vice-President*—David Booth, Sparta; *Second Vice-President*—Geo. W. Nesbitt, Sycamore; *Treasurer*—Walter Hay, Chicago; *Members of the Judicial Council (for three years)*—Robert Boal, Peoria; Herbert Judd, Galesburg; L. G. Thompson, Lacon; *Committee on Practical Medicine*—J. C. Frye, Peoria; J. W. Hensley, Yates City; N. S. Reed, Chandlerville; *Surgery*—Roswell Park, Chicago; D. S. Booth, Sparta; J. D. Whitley, Petersburg; *Obstetrics*—S. R. Crawford, Monmouth; Ellen A. Ingersoll, Canton; C. Duhadway, Jerseyville; *Gynecology*—W. S. Caldwell, Freeport; L. H. Corr, Carlinville; A. F. Rooney, Quincy; *Ophthalmology and Otolaryngology*—J. P. Johnson, Peoria; Robt. Tilly, Chicago; P. H. Garretson, Macomb. Place of meeting, Chicago, 1884.

During the afternoon session a communication from the Missouri Medical Association, asking that the time of meeting of one of the associations should be changed, was received. The Missouri association was considerably invited to make such change.

Reports on Drugs and Medicine were submitted by Drs. S. J. PITNER, of Jacksonville, and HERBERT, of Galesburg.

After the conclusion of the afternoon session, the delegates were invited to partake of a carriage excursion in the suburbs, and a promenade reception was given in the evening.

INDIANA STATE MEDICAL SOCIETY.

Thirty-third Annual Session, held at Indianapolis, May 8, 9, and 10, 1883.

W. H. BELL, M.D., PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

MEDICAL PAPERS READ—THE NEW YORK CODE IN INDIANA—INSTRUCTING DELEGATES TO AMERICAN MEDICAL ASSOCIATION—ELECTION OF OFFICERS.

OVER two hundred members of the Society were present. The Secretary, Dr. E. S. Elder, reported that the Society was larger than ever, numbering now over 1,200 members. During the past year 44 members had been suspended, 2 expelled, which shows that Indiana doctors are rather uncontrollable, or that the censorship is rigid.

Papers were read by Dr. S. E. Earp, of Indianapolis, on "Typhoid Fever," Dr. G. F. Beasley, of Lafayette, on "A Case of Gunshot Wound in the Knee," Dr. J. M. Green, of Stilesville, on "Typhoid Fever," and by Dr. T. B. Harvey, of Indianapolis, on "The Laceration of the Cervix Uteri." Dr. Mary J. Thomas, of Richmond, read a paper on "The Medical Education of Women of the State," advocating the removal of the restrictions of sex in the reception of students by the colleges.

The paper was really a plea for co-education in the Indiana Medical College. Dr. T. B. Harvey, in reply, said that co-education in that college was impracticable at present.

Dr. George Sutton read a paper on "Human Parasites."

Dr. George Rowland, who had previously posed as an ethical reformer by introducing resolutions condemning the New York Code and its originators, read a paper on "Medical Legislation," which excited the charge of plagiarism. Dr. Boyd, of Dublin, said that it was nearly identical with a paper read by himself two years ago, which paper had been lost by the Secretary.

A paper by Dr. Worrell and one by Dr. Gaddy were read by title.

A resolution was adopted, instructing the delegates from Indiana to the American Medical Association to vote against any change in the Code of Ethics, so far as consultation with irregulars was concerned.

A resolution was adopted, allowing Dr. T. M. Stevens to spread upon the record of the county his defence from the charges made by the State Health Board against him as its secretary, and on account of which he had been deposed.

The following officers were elected for the ensuing year: *President*—Dr. S. E. Munford, of Princeton; *Vice-President*—Dr. Wm. H. Shulse; *Secretary*—Dr. E. S. Elder, of Indianapolis; *Assistant Secretary*—Dr. G. W. Burton, of Mitchell; *Treasurer*—Dr. G. W. H. Kemper, of Munich.

The Society adjourned to meet in Indianapolis on the second Tuesday in May, 1884.

THE SOUTH CAROLINA MEDICAL ASSOCIATION

Held its thirty-third annual session at Yorkville, April 25th and 26th, the President, Dr. F. F. Gary, in the Chair. The annual address by the President was upon the subject of the State Board of Health, which is the State Medical Association. Resolutions endorsing the National Board of Health and asking for a quarantine station at Sapelo Sound were passed.

A committee consisting of Drs. Bralton, Taylor, and Taber, appointed to investigate the subject of anæsthesia, reported with the following conclusions: 1. That for more than fifty years the inhalation of sulphuric ether as an excitant has been common in some parts of Georgia, though not practised in the colleges. 2. That Wilhite was the first man to produce profound anæsthesia, which was done accidentally with sulphuric ether in 1841. 3.

That Long was the first man intentionally to produce anæsthesia for surgical operations, and that this was done with sulphuric ether in 1842. 4. That Long did not by accident hit upon it, but that he reasoned it out in a philosophic and logical manner. 5. That Wells, without any knowledge of Long's labors, demonstrated, in the same philosophic way, anæsthesia by the use of nitrous oxide gas in 1844. 6. That Morton, desiring to use the gas in dentistry, asked Wells to show him how to make it in 1846. 7. That Wells referred Morton to Jackson, as the latter was a scientific man and an able chemist. 8. That Jackson told Morton to use sulphuric ether instead of gas, as it possessed the same properties and was as safe and easy to get. 9. That Morton, acting upon Jackson's suggestion, used the ether successfully in the extraction of teeth in 1846. 10. That Warren, Haywood, and Bigelow performed important surgical operations in the Massachusetts General Hospital, October, 1846, on patients etherized by Morton, and that this introduced the practice throughout the world.

Dr. A. A. Moore read a paper reporting cases to show that chloroform tended to increase the danger from hemorrhage during labor. Dr. T. P. Bailey read a paper on hemorrhagic malarial fever, a form much resembling yellow fever. Dr. John Forrest read a paper on boryglyceride, commending it as an antiseptic in surgery, diphtheria, and ulcers. Dr. J. J. Chisolm, of Baltimore, read a paper in which he urged the use of spectacles by children suffering from optical troubles.

The following officers were elected: *President*—Dr. R. A. Kinloch; *Recording Secretary*—Dr. John Forrest; *Corresponding Secretary*—Dr. H. D. Frazer.

The Association adjourned to meet at Florence, April 22, 1884.

THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Held its Sixteenth Annual Meeting at Meridian, April 4th, 5th, and 6th. Numerous papers were read, among them one by Dr. R. S. Toombs, on a case of "Gin-Saw Injury of the Hand, Forearm, and Elbow-Joint," in which the arm was saved after a very extensive injury. Dr. John Brownrigg showed an apparatus for securing counter-extension in fracture of the femur, a close-fitting jacket being substituted for the perineal band; Dr. Brownrigg also showed an apparatus for the treatment of Barton's fracture. Dr. W. E. Todd read a paper on a case of "Hysterical Convulsions in a Woman with Anteflexion and Endocervicitis Cured by the Galvanic Current." Dr. Mabry read a paper on "Puerperal Convulsions," Dr. Guise a paper on "Veratrum Viride in Puerperal Convulsions," Dr. D. L. Pharis a report on epidemic orchitis, which had occurred during the past year. The following officers were elected: *President*—Dr. J. M. Greene, of Aberdeen; *Vice-Presidents*—Drs. S. N. Walker, and Dr. McCallum; *Recording Secretary*—Dr. W. E. Todd, of Clinton; *Assistant Secretary*—Dr. J. F. Hunter, of Jackson; *Corresponding Secretary*—Dr. M. S. Craft, of Jackson; *Treasurer*—Dr. Robert Kells. The Society adjourned to meet at West Point the first Wednesday in April, 1884.

THE TEXAS STATE MEDICAL ASSOCIATION

Held its Fifteenth Annual Meeting at Tyler, April 24th, 25th, 26th, and 27th, over one hundred members being present. The annual address was delivered by the President, Dr. S. F. Starley, of Corsicana. It was voted that the "Transactions" be published in pamphlet form instead of in the Galveston *Medical and Surgical Record*. Among the papers of interest read was one by Dr. Johnson, who reported the case of a girl six years old, who had menstruated ever since the first week of life. Dr. E. J. Beall and Dr. W. A. Adams reported the case of a large indolent ulcer cured by sponge-grafting. Dr. D. M. Ray read a paper in which he described a very novel

method of removing pins, etc., from the stomach. He gave the patient, who had swallowed a pin, a mixture of mush and cotton; he then produced emesis and the pin was expelled.

The following officers were elected: *President*—Dr. A. P. Brown, of Jefferson; *Vice-Presidents*—Drs. T. H. Nott, J. D. Osborne, and Frank Allen; *Secretary*—Dr. W. J. Burt, of Austin; *Treasurer*—Dr. J. Larendon, of Houston. The Society adjourned to meet next year at Belton, on the last Tuesday in April.

THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

Held its Thirteenth Annual Meeting in San Francisco, April 18th and 19th. The President, Professor L. C. Lane, delivered an address, taking for his subject the climate and diseases of Guatemala, which country he had just visited. He stated that the deaths from phthisis were proportionately very small, being about eight per cent. on the whole mortality. Goitre prevails, but without cretinism. There is a small colony of lepers. The practice of medicine is carefully regulated, and hardly any quackery prevails. Dr. Lane says: "In passing along the streets one is struck with the almost total absence of medical signs; and even if one is seen, it is in characters so small as to be illegible at a short distance." Guatemala has a tolerably good medical college with about one hundred students. The scientific work of the Society was chiefly in the form of reports on the various special branches. Thirteen of these were made, and about the same number of original papers was read.

The Board of Examiners reported that eighty-eight licenses had been given during the year. The Board of Censors recommended the expulsion of Dr. P. D. McD. Miller, *alias* Dr. Francis St. Clair Miller, on the ground that his diploma had been fraudulently obtained. The recommendation was adopted.

An exhibition of the gastroscope was given by Dr. J. O. Hirschfelder.

The Society voted to have the next annual session cover three days.

The following officers were elected: *President*—Dr. Ira E. Oatman, of San Francisco; *Four Vice-Presidents*; *Treasurer*—Dr. F. W. Hatch; *Permanent Secretary*—Dr. W. A. Briggs, of Sacramento; *Assistant Secretaries*—Dr. Thomas Ross and John Wagner. A Board of Censors and Examiners were also elected.

THE SECOND GERMAN CONGRESS OF INTERNAL MEDICINE.

Held at Wiesbaden, April 18, 19, 20, and 21, 1883.

PROFESSOR FRERICHS, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

The number of physicians present upon the opening day was over two hundred, the list including well-known representatives from Berlin, Breslau, Bonn, Würzburg, Göttingen, Tübingen, Kiel, Jena; also from Prague, Vienna, St. Petersburg, Copenhagen, Bern, and Zurich.

The Congress was opened on the morning of the 18th (Wednesday) with an address by the President, PROFESSOR FRERICHS. The speaker congratulated the association upon its rapidly attained success, called attention to the need of a renewed interest in internal medicine, which had threatened to be overtopped by other and minor specialties. He said that the present Congress had three specially important questions to discuss: 1, The germ theory of tuberculosis; 2, the nature, prevention, and treatment of diphtheria; 3, the abortive treatment of infectious diseases.

At the close of the President's address, Drs. Biermer and Liebermeister were elected Vice-Presidents.

The scientific work then began with a paper by PROFESSOR RÜHLE, of Bonn,

UPON THE INFLUENCE OF THE DISCOVERY OF THE TUBERCLE BACILLUS UPON THE PATHOLOGY OF TUBERCULOSIS.

The author gave a history of the various experiments and observations which culminated in Koch's discovery of the bacillus. He reviewed and endeavored to answer the arguments against the view that the bacillus is the specific cause of phthisis. Accepting it as a cause, he urged the use of disinfection, isolation, and antiseptics in the treatment and prevention of the disease. His conclusions were: 1, Human tuberculosis is an infectious disease; 2, the bacillus discovered by Koch is its special cause; 3, the fact that pulmonary tuberculosis may be transmitted from man to man by contagion is established; the exact method is not certainly known; 4, tuberculosis in man and animals is identical; 5, the therapeutics relate chiefly to prevention, but the best methods of prophylaxis cannot yet be formulated.

Professor Rühle's remarks were received with much applause.

He was followed by PROFESSOR LICHTHEIM, of Bern, who agreed in the main with the preceding speaker.

DR. FRAENTZEL, of Berlin, related the results of the experiments made in connection with Koch and Gaffky with the

ANTISEPTIC METHOD OF TREATING PHTHISIS.

They had employed inhalations of menthol camphor, naphthalin, anilin, etc., but with negative results.

PROFESSOR KLEBS, of Zurich, believed it demonstrated that bovine tuberculosis was communicable to man. He thought that a certain predisposition must exist in order that contagion occur, and reaffirmed his old view that the intestinal tract was often the place where the infective virus entered.

PROFESSOR HILLER, of Berlin, had made injections into the lung tissue (in cases of phthisis) of corrosive sublimate, bromide of ethyl, and alcohol, but without any result.

DR. SCHOTT, of Mannheim, recommended salicylate of sodium and sulphurous acid as antiseptics in tuberculosis.

DR. ZEIGLER, of Tübingen, described his views of the way in which the tubercular virus enters the system. He thought that the entrance occurred through three channels, viz., the blood-vessels, the lymphatics, and the lungs. In accordance with this we may distinguish

THREE TYPES OF TUBERCULOSIS.

When it enters by the blood-vessels we usually have general miliary tuberculosis, but in rare cases, especially in children, tuberculosis foci are formed in the lungs, making the disease resemble a localized tuberculosis.

The second form, in which the lymphatics take part, is that which is generally produced by inhalation. A tubercular lymphangitis is excited. The tubercular foci thus formed enlarge, then soften, and their products may be carried further (1) by the lymph paths, or (2) by the blood-vessels, causing an embolic tuberculosis, or finally (3), directly along the bronchi. In this way, or by direct infection, we find developed the third type, or bronchial tuberculosis.

PROFESSOR RÜHLE, in concluding the discussion, called attention to the fact that not a voice had been raised against the view that tuberculosis was an infectious and parasitic disease.

A debate was opened on the second day by PROFESSOR GERHARDT, of Würzburg, on

DIPHThERIA: ITS PATHOLOGY, CONTAGIOUSNESS, THERAPY, AND PROPHYLAXIS.

The speaker reviewed the history of diphtheria, and showed how our knowledge of its infectious and contagious character had gradually been obtained. He

believed in the essential identity of croup and diphtheria. He gave an interesting account of an epidemic of diphtheria among the hens in a village of France. Among 2,500, 1,400 died of diphtheria. One thousand chickens hatched from their eggs died within six weeks. A diphtheritic hen bit an hospital attendant, who soon developed a diphtheria.

Diphtheria, the speaker believed, depended upon the presence of micro-organisms, but these probably carried or generated some chemical poison. They varied in character and appearance, a fact which accounts for the varying course of the disease. The differentiation of various kinds of diphtheria, in accordance with the special micro-organism, was the future problem for the pathologist.

He discussed the question whether the membranous exudate in scarlatinal sore-throat was truly diphtheritic, and was inclined to think it was not.

As regards therapeutics the indications were two: First, the loosening or removal of the membrane, by vapors with lime-water or lactic acid, by pilocarpin or papayotin (which latter he recommended as useful). Second, the attack upon the cause of the disease with antiseptics.

(To be continued.)

THE TWELFTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, April 4, 5, 6, and 7, 1883.

PROFESSOR V. LANGENBECK, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

(Concluded from p. 524.)

THE morning session of the second day was occupied with the presentation of cases.

EXCISION OF TARSUS, REPRODUCTION OF BONE.

DR. LAUENSTEIN, of Hamburg, presented a woman, fifty-four years of age, from whom he had removed the greater part of the tarsus of the right foot, on account of caries, nearly two years before. The under portion of the os calcis, as well as its neck and head, the scaphoid, three cuneiform, cuboid, and tarsal ends of the fourth and fifth metatarsal bones were excised. In addition, the remaining part of the calcaneus was scooped out. The patient could stand at the end of five months, and could at present walk for half an hour without fatigue. There was good reproduction of bone, and the foot was less than half an inch shorter than its fellow.

DR. WÖFLER, of Vienna, presented a report, with specimens, upon

RESECTION OF THE SMALL AND LARGE INTESTINES.

In a case of a woman, fifty-two years of age, the attempt was made to remove a large tumor of the abdomen by laparotomy. Upon opening the abdomen, however, the tumor was seen to be a fibroma of the mesentery. So closely attached was it to the small intestine, that it was found necessary to cut out a strip of the latter, over three feet in length, before the tumor could be removed. The patient died in collapse.

A second case, in which a piece of the transverse colon, six inches in length, was removed with a cancerous tumor, made a good recovery. This was the second successful resection of the transverse colon which the speaker had been able to find. In conclusion, Dr. Wöfler described the steps in the operation of gastro-enterotomy as recommended by him, and detailed the indications therefor. The operation should be attempted in all cases of cancer or ulcer of the pylorus, in which the patency of the opening is impaired by the new growth.

DR. LAUENSTEIN stated that he had made a gastrointestinal fistula in a case of advanced cancerous steno-

sis of the pylorus, but there was no relief of the vomiting or constipation.

DR. SCHÖNBOM, of Königsberg, related a case in which there was

A BALL OF HAIR IN THE STOMACH IN A YOUNG GIRL.

An anæmic girl, suffering also from lateral curvature, had complained for three years of severe gastric pains. Examination after eighteen months revealed the presence of a tumor in the left side of the abdomen, freely movable, of an oblong, kidney shape, about the size of a man's fist, and painful on pressure. The diagnosis lay between a tumor of the spleen or omentum and a floating kidney. The fact that the pain was greater at night and when at rest argued against the latter supposition. The removal of the tumor was determined upon because of the constant vomiting and decreasing strength of the patient. The tumor was found to be a bundle of matted hair lying free in the stomach. It was removed and the patient recovered. She stated that four years previously she had been in the habit, for about a year, of biting off the ends of her hair and swallowing them, with the object of thereby acquiring a clear voice. The mass of hair was black in color and of a kidney shape, or of the shape of the contracted stomach. The patient was a blonde, and the dark color was probably caused by the iron which had been taken. The reporter could find but seven similar cases on record. All of these died either from peritonitis or from uncontrollable vomiting. Death in one case occurred through hæmatemesis.

At the afternoon session Dr. WÖFLER presented an elaborate paper on

THE EXTIRPATION OF BRONCHOCELE,

which he had been unable to read the previous day. There was no further discussion of the subject.

DR. RIEDEL, of Aix-la-Chapelle, presented a report upon

THE RESULTS OF THE BISMUTH TREATMENT OF WOUNDS IN THE CITY HOSPITAL AT AIX DURING THE FIRST QUARTER OF 1883.

His results correspond pretty closely with those obtained by Kocher. He had followed very nearly the directions of the latter, except that he had not employed secondary suture (*Secundänaht*), but rather primary suture and drainage. The bismuth was found useful not only in fresh wounds and operations, but also in cases where suppuration had already occurred. The most beneficial action of this substance seemed to reside in its dryness and tendency to repress secretion, whereby primary adhesion of the wounded surfaces was promoted and septic infection avoided. The author had added to his clinical observations numerous experiments upon animals, which all tended to show the value of this method. He never observed any symptoms of poisoning. Although bismuth was a good antiseptic, still, like the other antiseptics, it was not absolutely unfailing. He had observed erysipelas (during an epidemic) although this method was strictly carried out. He had tried a mixture of bismuth and corrosive sublimate, but even then had had one case of erysipelas. Dr. Riedel desired to hear from the members if they had found corrosive sublimate to be protective against erysipelas. If so, he thought he could recommend the combination with bismuth, in spite of his want of success in one instance. The discussion was postponed until the next session.

The scientific work of the afternoon session of the third day began with a discussion of

THE BISMUTH TREATMENT OF WOUNDS.

DR. KOCHER thought he need only say that further experience had increased his confidence in the value of this method in promoting union by first intention.

DR. VON LANGENBECK had had but little experience in

operative surgery since leaving Berlin, and it was difficult to judge of the value of a procedure of this nature from the results obtained in a small number of cases. In the instances in which he had used it, however, it had served him so well that he could only praise its action. He also, as Dr. Riedel, departed slightly from the rules proposed by Kocher. He closed the wound at once by suture, inserting a drainage-tube, but removed the latter not later than the second day. In one case especially the result was so beyond expectation that he could attribute it to nothing else than the bismuth. It was that of the extirpation of a cavernous angioma situated on the inner side of the thigh. The resulting wound was one apparently most unfavorable for healing by first intention; it was a large, deep hole, whose walls were formed of muscles moving with every change of position of the body. The surface was sprinkled with water holding bismuth in suspension, a drainage-tube was inserted, the edges of the wound were exactly approximated by suture, and over all was applied a bismuth compress. The drainage-tube was removed on the second day, and the wound healed throughout by first intention, without any secretion. He had never seen such a result with other antiseptics, except when deep sutures were used. He would never fill a cavity with bismuth for fear of toxic effects. There was one disadvantage of bismuth as compared with iodoform, that it was impossible with it to obtain healing by a scab.

DR. ISRAEL had had a case in which he regretted his employment of bismuth. It was one of carcinoma of the breast. He amputated the breast, following Kocher's rules strictly in every particular. The wound healed beautifully in ten days, but the patient developed a gangrenous stomatitis, from which she suffered for eight weeks. The same patient presented herself some weeks later because of numerous nodules, about the size of a cherry, which she had noticed in the neighborhood of the cicatrix, and which she feared were cancerous in nature. An exploratory incision showed them to be composed of little collections of bismuth. To a remark of Langenbeck, that it was evident that he had made too free use of the bismuth, Dr. Israel answered that he had followed Kocher's directions implicitly.

DR. HAHN had obtained excellent results from the employment of bismuth, and had never seen stomatitis. He had noticed the beneficial action of the substance in stopping hemorrhage.

DR. KÜSTER, of Berlin, then read a paper upon

THE TREATMENT OF MAMMARY CARCINOMA.

The author condemned the practice of some surgeons who amputated the entire gland for every new growth of whatever nature. In doubtful cases he thought it better to first make an exploratory incision. If the malignancy of the tumor was established, the entire breast should be removed, as well as the axillary glands, even though the latter could not be felt to be enlarged. He had collected the statistics of 132 cases, in 15 of which the mammary gland alone had been removed. Of the latter, 13 died within a short period, from a return of the disease; in 2, a second operation was performed. In the remaining 117 cases the axillary glands were extirpated, with a result of 21.5 per cent. of cures, after a lapse of over three years, and 20.17 per cent. free from a return at the end of two years. In every instance the axillary glands were submitted to a microscopical examination, and in but two cases were they found free from disease.

A somewhat heated discussion followed.

DR. GUSSENBAUER said that he went further, and removed the supraclavicular glands as well as those of the axilla. As far as his observation went, there was scarcely a surgeon who did not extirpate the axillary glands in every operation for the removal of mammary cancer, and therefore he could not discover that Dr. Küster's paper contained anything new.

DR. VON LANGENBECK thought it was of little use to

remove the supraclavicular glands, for when they became involved the disease had usually invaded other organs also.

DR. ESMARCH not only took out the axillary glands but advised amputation of the arm in cases in which the arteries and nerves were involved in the new growth. He had done so in one instance, and his patient was now in good health, free from any return.

DR. VON LANGENBECK approved of this course. He himself had cut away the diseased vessels, nerves, and muscles in three cases. One was cured, one died of a return of the disease, and the other from gangrene of the arm. In future he should prefer to amputate.

DR. KÜSTER, in concluding, expressed his gratification in learning that Dr. Gussenbauer was so convinced of the necessity of extirpating the axillary glands; but he could assure him that there were many surgeons who did not think it necessary to resort to such a radical procedure in every case; and if his remarks were effective in convincing them of their error, he would not regard his labor as having been in vain.

DR. HEUCK presented some statistics concerning

THE OPERATIVE TREATMENT OF CANCER OF THE RECTUM,

in which he showed the successful results of a total extirpation of the tumor by the knife.

DR. KÜSTER then read a second paper upon

THE USE OF IODOFORM IN OVARIOTOMY.

Upon the conclusion of the operation, after the abdominal cavity was thoroughly cleansed, all the presenting portions of the intestine were wiped with a sponge which had been dipped in iodoform, and then shaken to remove all excess of the powder. Thus the peritoneum was covered with a very fine layer of iodoform, enough to insure antiseptis, and not so much as to give rise to toxic symptoms through absorption. An iodoform tampon was also placed in the vagina. The patient made a rapid recovery without the least inflammatory reaction. The speaker also recommended iodoform in collodion, as a simple and effective antiseptic application in wounds of the face, and of other parts on which the ordinary dressings were retained with difficulty.

The only paper read at the last session of the Congress was one by DR. ZABLUDOWSKI, of Berlin, entitled,

THE PHYSIOLOGY OF MASSAGE.

The author based his conclusions upon a number of experiments upon men, in different physical conditions, upon rabbits, and frogs. His investigations led him to believe that nearly all the bodily and mental functions could be influenced by the various kinds of massage. The weight of the body is reduced in corpulent and thin persons, but is increased in those of medium build. Capacity for work and bodily strength is increased. The mental processes become more active, and sleep is rendered more sound and regular. The frequency of the pulse is lowered, motility is favored, and sensibility is blunted. These effects would serve to explain the value of the method in affections of rheumatic and neuralgic nature. Massage also favors resorption, and hence is useful in many surgical diseases of the limbs and joints. The speaker warned his hearers not to attempt to substitute massage for orthopaedia. The former may well precede mechanical treatment, as it renders the ligaments more supple and promotes the absorption of extravasations and pathological exudations. In conclusion, he said that massage should be performed by strong and active men, to whom some knowledge of anatomy and physiology was necessary; without this knowledge massage might well be productive of more harm than good. Medical men should superintend this method of treatment in the individual cases, and should endeavor to avoid a routine treatment for all conditions.

After the transaction of some general business the Congress adjourned.

MEDICAL SOCIETY OF PENNSYLVANIA.

*Thirty-fourth Annual Session, held at Norristown, Pa.,
May 9, 10, and 11, 1883.*

(Special Report for THE MEDICAL RECORD.)

(Continued from p. 522.)

SECOND DAY—MORNING SESSION.

THE Society was called to order by the President, DR. VARIAN, at 9.20 o'clock.

The meeting was opened with prayer by the REV. H. M. KIEFFER, of the Reformed Church of the Ascension.

The following gentlemen were named as

MEMBERS OF THE NOMINATING COMMITTEE

from their respective counties: Adams, A. Knowell; Allegheny, T. J. Gellever; Armstrong, R. S. McCurdy; Blair, W. R. Finley; Bradford, E. P. Allen; Bucks, Joseph Foulke; Cambria, W. B. Towman; Carbon, A. J. Donnelly; Centre, P. S. Fisher; Chester, E. Jackson; Clearfield, S. C. Stewart; Crawford, G. O. Moody; Cumberland, R. L. Sibbett; Dauphin, Hugh Hamilton; Delaware, I. N. Curtin; Erie, I. L. Stewart; Huntingdon, A. B. Brombere; Indiana, William Ansley; Lancaster, J. A. E. Reed; Lackawanna, I. W. Gibbs; Jefferson, W. B. Gibson; Lycoming, J. W. Young; Mifflin, A. Rothcock; Montgomery, S. N. Wiley; Montours, S. Shantz; Northampton, Charles McIntyre; Philadelphia, W. G. Porter; Schuylkill, J. S. Kaland; Snyder, J. F. Kanawald; Venango, S. G. Snowdon; Warren, F. A. Shubert; Westmoreland, J. A. Fulton; York, W. S. Rowland.

THE ADDRESS IN [SURGERY]

was then read by DR. A. CRAIG, of Columbia, who reviewed the progress of that science within the past few years. He advocated the use of the knife as an expedient when all other methods of treatment had failed. He dwelt at considerable length on the treatment of the various forms of fracture.

DR. S. W. GROSS, of Philadelphia, read a paper on

THE THOROUGH REMOVAL OF CARCINOMA OF THE BREAST.

The speaker illustrated his method, which consists in thorough excision and the removal of all the diseased tissues liable to produce recurrence of the malignant growth, by offering the results of fifteen cases occurring in his own practice, seven of which were perfect cures; three of the subjects operated upon by Dr. Gross were brought upon the stage and the cicatrices pointed out to the audience. These scars seemed to move free over the underlying tissues, and in one of the cases, that of a rather fleshy woman, the wound made by the operation, which was originally as large as a dinner-plate, had closed up perfectly.

Dr. Samuel D. Gross, of Philadelphia, and Dr. John L. Atlee, of Lancaster, were invited to take seats on the stage, but declined the honor.

DR. WM. PEPPER, of Philadelphia, was next introduced, amidst applause. His paper was entitled

A CONTRIBUTION TO THE CLINICAL STUDY OF TYPHLITIS AND PERITYPHLITIS.

He said that from his observations he found that the cæcum and the ileum are the seat of very frequent disease. He is convinced that cases of

TYPHLITIS CAN SAFELY BE TREATED WITHOUT THE USE OF LAXATIVES

for several days, and that much harm has often been done, even by the use of mild laxatives. This class of cases partake more of the nature of a surgical than medical disease. The time for performing the operation cannot be definitely stated; but if after eight or ten days signs of inflammation become apparent, an incision

may be made into the bowels. He gave a description of the symptoms and treatment of numerous cases which had been under his treatment.

DR. E. A. WOOD, of Pittsburg, spoke on an

UNAVOIDABLE MALFORMATION THAT SOMETIMES ACCOMPANIES OUTWARD DISLOCATION OF THE FOOT.

He drew models on the blackboard to illustrate his remarks, which were instructive and entertaining.

DR. J. C. WILSON, of Philadelphia, read his voluntary paper on

THE TREATMENT OF PURULENT PLEURAL EFFUSIONS.

According to Dr. Wilson, the treatment of patients suffering from collections of fluid in the pleural cavity, is capable of exceeding favorable results which tend to diminish human suffering and prolong life. The physical signs of such effusions relate, first, to the actual condition of the lung, and, second, to the relative displacement of that organ by pressure. These inflammatory fluid exudations are first fibrino-serous, and second purulent. The hypodermic needle is generally used for the exploratory puncture, but Dr. Wilson prefers the aspirator. In adults after aspirating the pus rapidly reaccumulates. A thoracic fistula should be established as soon as possible. The dangers to life are many: the patient may perish from exhaustion, or from heart-clot, the lung may not expand, necrosis may occur, or gangrene of the lungs or tuberculosis supervene. The real dangers attending the operation are puncture of the lungs and collapse. A preliminary withdrawal of a portion of the pus should be made by aspiration. Morphia, and other stimulants may be given prior to the operation, and salts of ammonia should be administered internally during the treatment. There should only be one puncture made; the external air need not be excluded; a short needle, not exceeding two inches in length, should be used for the puncture, and the cavity should be washed out by means of a ball syringe, and a system of soft-rubber tubing once or twice a day. Of five cases treated in this way, three fully recovered, one died of heart-clot, and one is at present under treatment. Dr. Wilson introduced a young man to show the position of the drainage-tube in the body.

DR. CHARLES K. MILLS, of Philadelphia, read a voluntary paper on

THE MEDICAL SERVICE OF INSANE HOSPITALS.

The substance of his address was as follows: The number of resident physicians in State asylums is entirely too small. There should be an individual examination of every patient. Governor Hoyt's new law makes admirable provisions, but they are impracticable with the present force of physicians. Let steps be taken to provide means to carry out the supervisions of Governor Hoyt's bill. The physicians and attendants are required to do too much routine work. Why not have unpaid resident physicians or internes? The opportunity for study, etc., would be of incalculable advantage to young physicians in their first year after graduation. The number of surgical operations and examinations which such an experience offers are wonderful, as shown by the statistical tables of the Norristown Asylum. There should be in every large hospital or asylum a board of consulting physicians, in deed and not only in name. Each of the board should have a distinct task. Dr. Mills believed that the measures of the Hoyt Committee would do much good.

Some remarks on scarlet fever by DR. E. O. BARDWELL were read by title, and ordered to be referred to the Publishing Committee.

Under new business, DR. C. B. NANCREDE gave a history of a case of carcinoma of the breast which had come under his charge.

DR. LEE made some remarks with reference to addresses on surgery.

The Corresponding Secretary next read his report.
DR. HIRAM CORSON then offered,

A COMMUNICATION FROM THE PHILADELPHIA ANTI-VIVISECTION SOCIETY

protesting against vivisection, and asking that the State Society take some action on that subject.

DR. E. A. WOOD, of Pittsburg, spoke against the paper. He alluded to the poisoned sausages which the Pittsburg policemen throw to stray dogs, causing them to die in great agony. Why did not the society turn its attention to that subject?

The following gentlemen were appointed a committee to act upon the resolutions of the Anti-Vivisection Society: Eskridge, Wood, Keen, and Little.

The following resolution was offered by Dr. W. W. Keen, of Philadelphia.

Resolved, That the Medical Society of Pennsylvania, in view of the very urgent need of

ENLARGED FACILITIES FOR VIVISECTION,

both in the medical schools of Pennsylvania and also by physicians throughout the entire State, a privilege now denied them, most earnestly urge upon the Legislature of Pennsylvania the passage of

THE PENDING ANATOMY BILL.

The resolution was carried.

DR. S. D. GROSS, of Philadelphia, then offered a resolution which was read by the secretary,

TOUCHING THE REMOVAL OF THE MEDICAL LIBRARY AND MUSEUM OF THE SURGEON-GENERAL'S OFFICE TO A FIRE-PROOF BUILDING,

and requesting that resolutions be passed by this Association favoring that removal. These resolutions were adopted by the Society.

COMMITTEES ON MEDICINE, SURGERY, AND GYNECOLOGY.

DR. JOHN CURWEN, of Harrisburg, presented the following resolution: That the President of this Society be requested to appoint a committee of three members on each of the following branches: Medicine, Surgery, Diseases of Women and Children, Ophthalmology and Otology, Nervous Diseases, Insanity and Idiocy, to prepare a series of questions calculated to obtain the history, symptoms, and treatment of the different forms of disease, that when these questions are prepared they be sent to the different members of the Society throughout the State with the request that each member fill out in full one specified case of disease in the list of questions sent him and return the same to the chairman of the committee of that branch; so that by this means

A COLLECTIVE INVESTIGATION OF THE DIFFERENT FORMS OF DISEASE

may be made and thus a more thorough account be obtained of the facts bearing on the disease in all its different stages, and when these answers have been received the different committees shall arrange the facts and present them to this Society. Adopted by the Society.

SECOND DAY, AFTERNOON SESSION.

The Nominating Committee reported the following names for officers for the ensuing year:

President—H. H. Smith, Philadelphia; *First Vice-President*—Ellis Phipps, New Haven; *Second Vice-President*—H. B. VanValseah, Clarefield; *Third Vice-President*—J. W. Kerr, York; *Fourth Vice-President*—S. S. Schultz, Danville; *Permanent Secretary*—William B. Atkinson, Philadelphia; *Recording Secretary*—M. S. French, Philadelphia; *Corresponding Secretary*—J. G. Lee, Philadelphia; *Treasurer*—Benjamin Lee, Philadel-

phia; *Additional Members of the Committee of Publication*—Hugh Hamilton, Harrisburg; James Tyson, Philadelphia; C. S. Turnbull, Philadelphia; *Members of Judicial Council*—A. Rothrock, McVeytown; G. O. Moody, Titusville; William Pepper, Philadelphia. The society to meet next year in Philadelphia. John B. Roberts, Chairman of the Committee of Arrangements; his associates to be selected by the Philadelphia County Medical Society.

Resolved, That this committee recommends that the Publication Committee be instructed to have the transactions of the Society printed and ready for distribution within three months from the date of the final adjournment of the Society.

A resolution was offered by the Secretary and adopted by the Society, providing that the President and Permanent Secretary fill any vacancies occurring in the national and various State delegations.

THE ADDRESS IN OBSTETRICS

was read by DR. G. O. MOODY, of Titusville. The speaker referred at some length to the various means for the prevention of abortion. He advocated the early use of the forceps. When greater reliance is placed upon the use of the forceps and less upon the administration of ergot much better results will ensue. On obstetrics, he spoke of the uses and abuses of Tarnier's forceps; he concluded that this instrument was one of unquestionable value. He then passed to a consideration of the various therapeutical appliances and remedies for the treatment of puerperal convulsions, support of the perineum, etc.

Other papers read were "Address in Hygiene," by Henry Leffman, of Philadelphia; "Our Asylums and Our Insane," by Sayres, of Pittsburg; "Surgical Expedients in Emergencies," by R. J. Levis, of Philadelphia; etc., etc.

DR. BENJAMIN LEE, the Treasurer, offered the following report of the Society's financial condition: Balance on hand May 11, \$1,965.68; receipts through year, \$2,269.91—total, \$4,235.59. Expenses during year, \$1,871.75. Balance on hand, \$2,363.84.

The same gentleman, as chairman, also offered the following: The committee appointed at the last meeting of the Society to memorialize the Legislature of this State with reference to

AMENDING AND CODIFYING THE LUNACY LAWS.

now on our statute books, beg leave to report that soon after their appointment the government of the State anticipated their proper action by appointing a commission for the very purpose contemplated in the resolution. They therefore considered that further action was unnecessary and beg to be discharged.

The report was adopted.

DR. WILLIAM T. LITTLE, of Philadelphia, read a paper upon

REFLEX UTERINE DISEASE FROM IRRITATIONS OF THE EYE,

in which, after tracing the irritations of the eye from the uterus, as described by Professor Forster, of Breslau, he next traced the influence of the eye upon the nervous system and various organs as described by S. Weir Mitchell, of Philadelphia. He desired to report a case where a chain of reflex symptoms extended to the uterus impairing its function, and relative sterility ensued and lasted for twelve years. This case also presented various nervous and physical symptoms.

The subject of

THE HIGHER MEDICAL EDUCATION

was discussed at some length at the close of the day's proceedings, by Drs. S. D. Gross, James Tyson, William Ulrich, etc.

In the evening receptions were held at their homes by the members of the Montgomery County Medical Society.

THIRD DAY—MORNING SESSION.

The third day's session was called to order at 8.30 on Friday morning by PRESIDENT VARIAN, and a blessing invoked by the REV. A. J. WEDDELL, of Norristown.

The new order of business was then called for, and DR. E. J. JACKSON, of West Chester, moved the adoption of the following :

Resolved, That at each annual meeting the President appoint one member to deliver, at the next yearly meeting, an address on "Ophthalmology and its Relation to General Medicine."

DR. W. S. LITTLE, of Philadelphia, moved to amend by adding the subjects Otology and Laryngology.

The resolution and amendment were both warmly discussed until DR. W. T. BISHOP, of Harrisburg, demanded that the regular order of the day be called.

The President sustained his point and introduced DR. JOHN CURWEN, of Harrisburg, who delivered

THE ADDRESS ON MENTAL DISORDERS.

It is most assuredly a subject demanding the most earnest and persevering investigation by the profession to trace out the cause of the peculiarly intractable character which mental and nervous disorders have lately assumed, to discover, if possible, the reason why they are so. In such investigations it is desirable and important to keep constantly before the mind the error into which all are likely to fall, of confounding cause and effect, and thus nullifying the correctness of the results to be attained. No one doubts but that physical diseases are transmitted from parent to child. That we cannot explain the reason does not invalidate the fact, and to endeavor to discover that reason should be our prime motive. In certain families part of the children will be found to have not only the physical peculiarities of one parent, but also that parent's mental idiosyncrasies, while the other children will have all the physical and mental traits of the other parent. In many cases actual disease may be transmitted from parent to child, and this tendency may be traced back through several generations.

To the indulgence in intoxicating drinks is unquestionably due much of the moral depravity, want of true principle, and attendant mental inability to exercise proper self-control, or to resist certain forms of temptation, which characterizes the rising generation. In this fact of the impaired physical condition of the mother also lies the explanation of the great difference sometimes observed in certain members of a family who seem to be constituted diversely (mentally and morally) from the other children. During the period of gestation the mother should be enlivened by cheerful scenes and impressions of every kind, so that the mind may be led into bright and healthful thoughts.

During infancy and early childhood the greatest care must be given to the child's physical condition, so that it may be strengthened for that course of discipline and school education through which all should pass. The necessary activity of the first few years of life needs to be regulated, not restrained. The child should not be kept at school too closely, as this form of restraint has the double effect of increasing the child's irritability and its dislike of its lessons to be learned. Too close an application at an early age is apt to strain the mental powers, and in this way retard development. The steady, continuous influence of a good example will do more than precept upon precept to impress upon the mind of the child the important lesson that true happiness is always to be secured. A true and healthful education consists in such a cultivation of each of these states that one shall not preponderate over the other. Ample and regular nutrition is essential to the proper growth and development of the body. Next in importance to nutrition must be ranked sleep, to recruit the exhausted powers. Those who do the best work and the largest amount of it are

those who carefully observe these requirements. Observation has clearly shown that those who make the greatest apparent progress in early life are not those who hold out to the end, while those who are more slow are more sure to retain and better able to make use of that knowledge. Bodily and mental habits have also a decided influence on the functions of the different organs.

The following voluntary papers were then read : "Diagnosis, Prognosis, and Treatment of Mitral Constriction," by Dr. J. T. Eskridge, of Philadelphia ; "Lithæmia," by Dr. J. B. Walker, of Philadelphia ; "Clinical Notes on the Use of Convallaria Majalis," by Dr. E. T. Bruen, of Philadelphia.

The resolution offered at the opening of the morning session by Dr. Edward T. Jackson was then adopted.

DR. HENRY LEFFMAN, of Philadelphia, on behalf of the Philadelphia County Medical Society, presented an amendment to the Constitution of the State Medical Society, the purport of which was that hereafter no paper should be read before the Society unless it had been previously read before a county society, and by them referred to the State Society.

Action on this amendment was postponed for one year.

The resolutions of respect adopted by the Montgomery County Medical Society on the death of Dr. David Shrack, of Jeffersonville, were read and ordered to be printed in the Transactions.

At eleven o'clock the Society adjourned, and were conveyed by a special train to the State Hospital for the Insane in the Southeastern District of Pennsylvania, situated just outside the city limits. The members were accompanied by their wives and daughters. Arriving a little before twelve, an hour was spent in a tour of some of the male and female wards, the resident physicians acting as guides. No one could fail to be impressed with the great cleanliness everywhere apparent.

The area covered by the buildings is immense. There are now nine hundred and sixty inmates, male and female, black and white, yet there is no indication of crowding.

After doing justice to a substantial and well-arranged cold collation, in a long hall of one of the new buildings, the Medical Society re-convened in the Asylum Chapel.

DR. MAYNE, a trustee of the Asylum, spoke briefly, and, while hoping that the results of the inspection had been satisfactory to the visitors, expressed, nevertheless, the firm intention of the managers of the institution to persevere to the end in the course which they are now pursuing.

In some respects, he continued, the Norristown Hospital for the Insane is different from, and in advance of, the other similar institutions in the State. Its leading physician, or superintendent, is not burdened with its material interests, and is not forced to cater, or make contracts for coal, wood, provisions, etc. In another respect, also, it is generally conceded that the Norristown Asylum is managed in a more progressive spirit—it has an independent female physician at the head of the female department, of powers equal to, and coordinate with those of the male physician in charge.

At the conclusion of Dr. Mayne's remarks Dr. Wm. Thompson, of Philadelphia, was invited to occupy a seat on the platform and participate in the proceedings.

The Secretary then read an invitation from the physicians of the Philadelphia Hospital for Skin Diseases for the Society to visit that institution that evening.

INCREASE OF MEDICAL STAFFS IN INSANE ASYLUMS.

DR. B. LEE read a resolution to the effect that the State Medical Society, after listening to the able papers on insanity which had been read at its present session, resolve that the popular idea that sane persons are incarcerated in insane asylums is an unworthy aspersion on the medical profession, and that the State Legislature be made to feel the necessity of making such appropriations for these institutions as will warrant the increase of their medical staffs.

The paper expected from Dr. M. Landesburg, of Philadelphia, on "Stretching the Optic Nerve," was not read, owing to that gentleman's absence.

One of the most novel and, to the general profession, most interesting papers presented during the session was that then read by Dr. J. M. ANDERS, of Philadelphia, on the

HYGIENIC MANAGEMENT OF CONSUMPTION,

in which he claimed that the effect of plants on the atmosphere of houses is not only beneficial, but almost a specific preventive in cases of incipient consumption. House plants exhale a great deal of aqueous vapor, and may so increase the humidity of the atmosphere to any desired extent. It is now known that flowering plants emit ozone, and so the atmosphere of the living rooms may be very beneficially medicated. Half of all cases of consumption are known to be preventible, and persons threatened with this disease have, in all known cases, escaped it as long as they lived and worked among house or hot-house plants. Thirty Philadelphia florists, who work from ten to sixteen hours a day among hot-house plants, had been found to confirm this theory to a remarkable extent. In a consumptive family of a father and two sons, the father and one son were healthy until they abandoned their business as florists, but died almost immediately afterward. The other brother, after working all his life among growing plants, went into the "cut-flower business," and died in less than a year.

Other striking cases were cited. Dr. Anders spoke of the purifying influence of house plants on the air, and the relief and amusement afforded an invalid in caring for them. They should be kept in a living- or sleeping-room of not less than 12 x 20 feet, with a southern exposure, and arranged so that the sun would strike them. A temperature of from 68° to 74° F. should be maintained in the room, and soft, thin-leaved plants, with large foliage, should be chosen, such highly scented flowers as the tuberose being excluded.

Resolutions of thanks to the Montgomery County Medical Society, the officials of the Norristown Asylum, etc., were passed.

DR. E. H. WOOD, of Pittsburg, made some remarks on insane asylums, speaking in the highest terms of praise of the management of the Norristown Hospital.

DR. VARIAN, before resigning the chair, made the following appointments for the annual meeting of 1884, in Philadelphia: Address in Medicine, Dr. W. H. Daly, Pittsburg; Address in Surgery, Dr. J. B. Roberts, Philadelphia; Address in Obstetrics, Dr. J. Price, West Chester; Address in Hygiene, Dr. J. G. Lee, Philadelphia; Address in Mental Disorders, Dr. Alice Bennett, Norristown.

After thanking the members for their kindness and courtesy, Dr. Varian then yielded his place to the new President, Dr. H. H. Smith, of Philadelphia, who adjourned the Society after a few words of thanks.

In the evening a reception was tendered the members by the Philadelphia Polyclinic and School for Graduates at its rooms at the southeast corner of Thirteenth and Locust Streets, Philadelphia. Many ladies were present as well as a number of invited guests.

A large delegation of the members also visited the Philadelphia Hospital for Skin Diseases, No. 923 Locust Street, and were received by Dr. J. V. Shoemaker and his assistants. Refreshments were served in the parlor of the hospital.

THE SITE OF THE INITIAL LESION OF SYPHILIS.—In 120 male patients examined by Mr. Bernard (*Liverpool Med. Chir. Jour.*, January, 1883), the site of the initial lesion was—the furrow, 53 times; the inner prepuce, 57; the outer prepuce, 10; the free margin, 2; the corona, 31; the glans, 10; the sheath, 18; the meatus, 6; the frænum, 6 times; and the urethra once.

MICHIGAN STATE MEDICAL SOCIETY.

Eighteenth Annual Meeting, held at Kalamazoo, Michigan, May 9 and 10, 1883.

(Special Report for THE MEDICAL RECORD.)

(Continued from p. 522.)

SECOND DAY, MORNING SESSION.

THE Michigan State Medical Society resumed its session at Kalamazoo, Mich., at 9.30 A.M., Thursday.

THE COMMITTEE ON ADMISSIONS

reported favorably upon over fifty names.

The application of Dr. George A. Hendricks was reported on adversely. He had issued a circular letter, which he had sent wherever he thought it safe, urging attendance at this meeting, evidently for electioneering purposes.

After a heated discussion his case was referred to the Judicial Council.

From the first there has been an effort on the part of a few to capture the Society for Professor McLean of Ann Arbor.

Many came up under the impression that the University and Professor McLean were to be attacked, but seeing how matters stood refused to support McLean for the Presidency.

DR. TYLER presented the report of the Committee on Nominations.

PROFESSOR VAUGHN, of the University, offered as a substitute a full set of nominations in the McLean interest. Several of the most prominent nominees of the substitute list refused to accept, and the committee's list was elected.

DR. A. F. Whelan, of Hillsdale, was then unanimously elected *President*. The other officers are: *First Vice-President*, H. Tupper, Bay City; *Second Vice-President*, J. S. Hamilton, Tecumseh; *Third Vice-President*, H. B. Barries, Ionia; *Fourth Vice-President*, Augustus Keiser, Detroit. The *Secretary* holds over another year. *Judiciary Council*, Foster Pratt, Kalamazoo; H. B. Sank, Lansing; S. P. Duffield, Dearbornville.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

H. C. Wyman, J. B. Book, Wm. Brodie, L. Connor, H. O. Walker, L. Shirly, Detroit; E. E. Dunsler, A. B. Palmer, W. F. Breakey, Ann Arbor; Foster Pratt, Kalamazoo; A. R. Smart, Hudson; J. H. Bennett, Coldwater; J. Andrews, Pawpaw; S. S. French, Battle Creek; C. H. Lewis, Jackson; F. H. Owen, Ypsilanti; Y. M. Hurd, Pontiac; Hugh McCall, Lapierre; A. F. Hagadorn, Bay City; J. H. Jerome and L. D. Bliss, Saginaw; W. U. Smart, Grand Haven; S. R. Shepherd and C. V. Beebe, Manistee; W. E. Dockery, Pentwater; M. A. Duckinson, East Saginaw.

The following papers read by title were referred to the Committee on Publication: "Plaster-of-Paris as a Surgical Dressing," by H. O. Walker; "Water and its Relations to Health and Disease," by J. R. Post; "Etiology of Urethral Inflammation," by H. J. Reynolds. Dr. H. B. Baker, of the State Board of Health, read

A PAPER ON DIPHTHERIA.

He claimed it was epidemic. The death-rate appeared as a wave, more fatal in cold months, but not necessarily in cold years. Did not seem to be much influenced by known conditions of filth. Length of waves between points of greatest mortality in city, five or six years; country, fourteen. More fatal in children.

DR. PRATT called attention to the subject of exposure, and DR. WORCESTER related the history of a series of cases which occurred in the asylum.

DR. BRODIE considered simple diphtheria non-contagious, malignant, or contagious. Diphtheria was always complicated with scarlatina. He thought placarding houses did no good but harm, by alarming the people.

DR. SMART reported a case in which a brass glove-

button had been carried in the ear of a patient for thirty years without having been discovered, though the patient had a purulent otorrhœa all the time.

DR. WARD read a poetic effusion, entitled "Pro Bono Professorium."

The committee to whom the President's address was referred brought some questions before the society for discussion.

PROF. PALMER called attention to

THE HIGH REQUIREMENTS OF THE MEDICAL DEPARTMENT OF THE MICHIGAN UNIVERSITY.

He denied that the professors were unprofessionally advertised, and that they took time for themselves which belonged to the University.

After further speeches by Professor McLean and others the matter was referred for publication.

Grand Rapids was decided upon as the place for the next meeting.

After seating the new President, and passing the usual resolutions of thanks, the Society adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 25, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. CARPENTER, in behalf of a candidate, presented microscopic sections of carcinoma of the breast.

DR. KUCHER presented what he believed to be a portion of

THE SAC OF AN ECHINOCOCCUS,

which came from a patient whom he saw with Dr. Bradbury, a woman, fifty years of age, who five years ago had what was supposed to be an ovarian cyst. She was examined by Professor Schroeder, who doubted that the cyst was ovarian. Although it increased in size rapidly it was not operated upon. Shortly afterward the patient had an attack of pleurisy, and during that sickness she discharged from the rectum a slimy, gray fluid, which gave her very great relief. On examination the tumor in the abdomen had disappeared, and afterward she felt quite well. Six months ago she came to this country, and one week ago she discharged from the rectum the mass which Dr. Kucher presented. On the following day she was up and felt very well, except that her abdomen was somewhat tender to the touch. On examination he found the liver increased in size, and in the lower part of the abdomen a tumor about the size of two fists. Otherwise the patient feels quite well. The material discharged from the rectum had been washed and made completely clean before Dr. Kucher saw the specimen. He had examined it microscopically, and found it to be a structureless membrane, which led him to the conclusion that it was a portion of the sac of the echinococcus, although he was unable to find any hooks. He thought there was a sac somewhere in the abdominal cavity, that a communication with the intestines had been established, and that a portion of the sac had been discharged. He was unable to say whether the echinococcus had originated in the liver or not, although that organ was considerably enlarged. Perhaps it was from the omentum, as occurred in Dr. Schnetter's case, reported a few years ago.

DR. WACKERHAGEN presented a specimen of

CARCINOMA OF THE BREAST

with the following history: Mrs. C—, aged sixty-two years, widow, born in Ireland, came under his care on March 24th. In July last she noticed a small tumor in the right breast, but as it caused no inconvenience, she did not consult her physician, Dr. Rooney, until November, when it had grown as large as a medium-sized orange. She was then suffering some pain from the growth, but would not consent to an operation for its re-

moval. After this time the tumor grew more rapidly, the patient suffering severely from lancinating pains. The patient was anæmic and somewhat emaciated, but had always enjoyed good health. The operation was performed on March 27th. The longest diameter of the tumor extended diagonally upward and outward, involving the axillary glands, and had formed attachments to the axillary vessels and nerves. The body of the mass extended upward, involving a considerable portion of the pectoralis major. It also extended about one inch below the lower border of the breast. The entire tumor was firm, resisting, and surrounded by fat, which also penetrated deeply and lay between the fibrous bands in large quantity. The weight was nineteen ounces.

There was very little hemorrhage during the operation.

She rallied from the effects of the anæsthetic, complaining of severe pains in the wound; pulse rapid and feeble. A hypodermic injection of morphine was administered, followed by stimulants. After resting quietly for three or four hours, she awoke, complaining of severe pain and difficulty in breathing. Stimulants were continued, but the patient gradually sank, and died about eight hours after the operation.

Post-mortem examination not permitted.

DR. W. P. NORTHRUP presented a specimen, with the following history:

TUBERCULAR ULCER OF COLON—GENERAL TUBERCULOSIS.

Female; two years eight and a half months old; New York Foundling Asylum. The case was entered on outdoor book in the spring of 1882, as "bronchitis and enteritis;" in January, 1883, "diarrhœa." Was returned to the house January 15, 1883, "pale, restless; no vomiting, no diarrhœa, no febrile movement." Drank but little. Sent out again to nurse. Returned three days later, the nurse saying that the child would not take food. Convulsions. Died 3 P.M., June 18th.

Symptoms of bronchitis and diarrhœa and "delicate" condition extend back about one year.

Autopsy, January 19, 1883.—Body: Well nourished; skin clear and clean. Larynx and œsophagus: Normal. Lungs: Bronchial glands cheesy and large; left, congested, scattered lobules of pneumonia, adherent at apex by few fine adhesions; right, slight amount congestion. Liver, spleen, and kidneys: Normal. Intestines: Mesenteric glands enlarged, some as large as a hickory nut, and cheesy in centres. Small—Peyer's, patches of lower half of ileum ulcerated; edges raised and rounded; deep excavation in centre; in upper half the patches are congested, dusky, not raised. Large—Large ulcer in cæcum, about $\frac{3}{4}$ by $1\frac{1}{2}$ inch, extending obliquely across axis of gut; another similar ulcer near the middle of the colon extends nearly vertically across the axis of the gut; this is smaller than the first. Of these ulcers the borders are thickened uniformly for some distance around, the whole intestinal wall being involved; the bases are coarsely granular, sunken; margins are extensively undermined, so that they appear rounded and crenate or puckered. On the peritoneal surface covering the region of the ulcers are numerous miliary tubercles. Scattered about the mucous membrane of the colon are numerous enlarged solitary follicles.

On cutting the lungs, subsequently, they were found studded with miliary tubercles.

Microscopic examination of the ulcers of the colon shows numerous tubercle granula with many giant-cells. The induration about the ulcer is due to infiltration of tubercle-tissue. The ulcers in the small intestine show no tubercle tissue. Numerous sections from different ulcers were examined to make this statement satisfactory.

The interest in this case is mostly pathological. Though general tuberculosis is of frequent occurrence,

tubercular ulceration of the intestines is not frequent, and an ulcer like the specimen was unique in his experience.

DR. NORTHRUP also presented a specimen of
CHRONIC FOLLICULAR COLITIS IN A CHILD TEN MONTHS OLD,

with the following history. Male child; ten months old; New York Foundling Asylum. October 27, 1882, entered in out-door department; "condition poor; papular eczema; face thin, peaked; whines." "Marasmus." Returned December 26th; "condition miserable; continues to grow worse." Remained in house one week; diarrhoea constant; nothing peculiar about stools.

Autopsy, January 6, 1883.—Body: Emaciated, otorrhoea; both pinnæ deeply ulcerated and excoriated; excoriations about buttocks; sprue on tongue in abundance, less on gums and buccal surfaces; weight eight pounds two ounces. Brain: Normal. Lungs: Bronchial glands slightly enlarged; left, small amount pneumonia in posterior portion; old adhesions over sides and front; right, extensive pneumonia in lowest lobe posteriorly; pleura thickened; no adhesions. Heart: Normal; weight, one ounce. Stomach: Normal. Intestines: Small, normal; mesenteric glands skirting them normal; large, throughout whole extent sprinkled with clean-cut, circular, "punched-out" ulcers, involving mucous coat; these ulcers are about like solitary follicles in distribution, and seem to have removed the follicles by ulcerative process; mesenteric glands skirting the large intestine, large and hard; contents of colon, dark greenish, and apparently for most part made up of curdled milk and mucus. Kidneys: Urates in straight tubes; the tissue appears normal. Liver: Normal; weight, six ounces and two drachms. Spleen: Normal.

Microscopic examination.—The lungs show ordinary broncho-pneumonia. Colon shows simply follicular ulcerative colitis; the solitary follicle is wholly removed by the process; surrounding tissue not involved; some follicles are just breaking down, though most are in an advanced stage.

TEMPERATURE IN URÆMIA.

DR. J. C. PETERS referred to a case of chronic Bright's disease, in which the patient had suffered so little that she had not seen a physician, but was suddenly seized with difficulty of breathing, and died within three minutes. At the autopsy there was found evidence of well-marked oedema of the lungs and of chronic disease of the kidneys.

DR. VAN GIESON asked if it was not unusual to have low temperature in the uræmia of Bright's disease. Had not the elevation of temperature in uræmic poisoning been regarded as a guide in making a differential diagnosis?

DR. RIPLEY said that a few years ago attempt was made to establish as a fact that the temperature in uræmic coma is elevated, while in apoplexy it is lowered, thus furnishing a ready means of making a differential diagnosis between these two conditions. After a little time, however, exceptions were noticed, and it was also determined that the temperature in apoplexy varied considerably according as it was taken immediately, quite soon, or several hours after the stroke. On the other hand, it was found that the temperature in uræmic coma did not always rise, that sometimes it fell toward the close of life, and occasionally reached a very high point.

DR. VAN GIESON said that he had made a large number of observations in cases of uræmic coma and had invariably found the preagonistic temperature above the normal. In the last case, two hours before death, the temperature reached $106\frac{1}{2}^{\circ}$ F. He could imagine that in cases of apoplexy there might be possibly some interference with the heat-centre which would give rise to

elevation or other changes in temperature, but he believed that in the majority of cases of uræmic coma the preagonistic temperature would be found considerably above the normal, whereas in cases of atheromatous degeneration of the arteries the temperature is usually low.

DR. RIPLEY said that with the general statement made by Dr. Van Gieson he agreed, and only wished to say that elevation of temperature did not invariably occur in uræmia, and that, in his opinion, a differential diagnosis could not be based safely upon the temperature alone. It might be said that, as a rule, the temperature in uræmia is elevated.

DR. CARPENTER referred to cases, seen in hospitals, of well-marked uræmic poisoning and coma, in which the temperature was not elevated, and special attention had been directed to them because of this fact, the visiting physicians regarding them as evidence against the claim that the temperature is invariably elevated in uræmic coma.

(To be continued.)

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL COUNCIL—PROPOSED NEW EDITION OF THE PHARMACOPŒIA—THE LONDON HOSPITALS AND THEIR FINANCES—THE LONDON COLLEGE OF PHYSICIANS AND ITS FELLOWSHIP.

LONDON, April 28, 1883.

THE Medical Council is now holding its general meeting, having commenced its deliberations last week. One of the most interesting items is the announcement that the Council have appointed a committee of three pharmacists to prepare a new edition of the British Pharmacopœia. It is proposed to omit three drugs and add twenty-nine. Other changes are at the same time to take place, with a view to increased accuracy. It is proposed to assimilate it somewhat to the United States Pharmacopœia, by substituting the use of proportional parts, wherever possible, for that of specific weights and measures.

The simultaneous appeal made by two large London hospitals—St. George's and the London—for funds, has drawn considerable attention to the financial state of these institutions. A few of them, such as Guy's and St. Bartholomew's, are so richly endowed that they have little need to appeal to outside charity. It is far otherwise with most of them. The London Hospital, our largest metropolitan hospital, having nearly eight hundred beds, has just made an appeal for £150,000 to enable its work to be carried on for five years. A few years ago a similar appeal was made. Standing as it does almost alone in the midst of a population of two millions the calls upon it are indeed great. Still, it would appear that no pains are taken to check the indiscriminate hordes of out-patients applying for relief. It has the largest and the hardest worked staff in London. The out-patient department in all our hospitals stands in need of reform. It has been suggested that the out-patient department of hospitals should be, to a large extent, closed, and provident dispensaries established in the vicinity to which out-patients should be drafted, being there placed under the care of local medical men who would receive salaries for their services.

The London College of Physicians is rapidly losing ground with the profession. It has lately put itself in opposition to the medical bill in a manner that has called down the animadversions of all the journals and many of its own members and fellows. But it has throughout its long history been obstructive. So this is nothing new. Many years ago it refused its fellowship to obstetric practitioners on the ground that they performed operations. This is not now the case, but still of late years I have

heard much discontent at the cliquism displayed in electing to the fellowship. I should explain that there are three orders, viz.: Licentiates, quite a new grade started in 1869 for general practitioners; members, who are *bona fide* physicians and admitted by examination only; fellows, who are chosen from amongst the members by election only. Nominally, the existent fellows elect the new ones to the number of eight or ten yearly; really, the council elect, for they, sitting in secret conclave, prepare a list which the fellows always pass. It is believed by many that nepotism and favoritism reign supreme. I often hear that the only way to get promotion is to toady some of the officials in some way. I know that relations and protégés often get promoted while abler men are passed over—men who despise toadyism and are left out in the cold. As a surgeon I can look on and smile. Last week a new list appeared of members elected to the fellowship, and it is astonishing to peruse it. Some are good men and none can be objected to, only that others more distinguished are passed over in favor of their juniors. One does not like to single men out, but I may say that there are men who have been for years physicians to large hospitals, teachers in our medical schools, honored officers of medical societies, distinguished officers in the public services, and others with many other claims who have been passed by. Many names could be mentioned that are well known both on the Continent and in the United States, and are everywhere respected, but their holders are simply members and have been so for years. To show you how real is the grievance, I may say that two medical men lately picked out from the official list of members in ten minutes no fewer than sixty who had joined since 1859 who could be said to be fairly deserving of the honor of the fellowship—if, indeed, it be an honor. Many of them can justly be said to be far superior to men who have been made fellows, and comparing them with the latest list of promotions, any ten of the sixty would make as good a show. This was not so much to be wondered at when a weak man like Bennett was President, but better things were expected from Jenner, who has the credit of being a strong man and one disposed to do what is right.

THE ANTAGONISM OF MORPHINE AND ATROPINE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In a valuable communication which appeared in THE MEDICAL RECORD of May 5th, Dr. Wallian gives the details of four cases of opium-poisoning treated in part by the administration of atropine. In his remarks on these cases, Dr. Wallian inadvertently commits me to a statement which is not justified by anything I have said or published. His expression is, "recalling the antagonistic ratio existing between atropia and morphia, as stated by Bartholow, viz., atropia, gr. ss. to morphia, gr. j.," etc. In another place in the same communication he again says: "Yet Bartholow, as stated, and other good authorities, insist that it requires one-half grain of atropia to antagonize one grain of morphia." In my "Manual of Hypodermatic Medication" (4th ed., p. 227), and in my "Cartwright Lectures" on this topic, as also in my "Treatise on Materia Medica and Therapeutics" (4th ed. See articles on opium and on belladonna), I have very distinctly stated that the ratio of antagonistic action is about one-twentieth or one-twenty-fourth grain of atropine to one grain of morphine.

The importance of such a mistake must be my excuse for troubling you with this communication, and for calling in question the statements of Dr. Wallian, whose otherwise excellent paper well deserves careful examination. Before closing I must thank a former pupil, Dr. C. W. King, now on the staff of the Cleveland Asylum for the Insane, for calling my attention to Dr. Wallian's

error. As a "constant reader" of THE MEDICAL RECORD. I must have seen this paper, nevertheless, in the course of the week after its appearance. Thanking you in advance, I am, my dear Dr. Shradly, very truly,
ROBERTS BARTHOLOW.

PHILADELPHIA, May 10, 1883.

MEDICAL CONTROVERSY AND THE NEWSPAPERS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Under the heading "Medical Controversy and the Newspapers," you publish on page 528 of your issue of May 12th, a letter from Dr. T. H. Squire, of Elmira. His acknowledged reputation in the profession for both scientific attainments and superior morals render it necessary that I should take notice of it. Thus I ask you to publish the following statement: I never knew, until I was informed of it by Dr. Squire's letter, that the *Tribune* of May 3d published (a translation of) my letter addressed to a large number of German physicians of the city and State. This letter was printed on April 10th, and mailed to every individual German physician in New York, Brooklyn, and Richmond County, also in Albany, whom I knew, or knew to be German. Most of the city letters were enclosed in a two cent envelope. Many of the letters were directed and mailed by a clerk, who may have sent a few to such whose names (taken from the register) may have appeared to him to be those of "German" physicians. A few copies were also sent to friends in the counties, with the request to distribute them amongst the German physicians, if any there were. A solitary copy was given by me to a medical friend in this city, who was not a "German," but demanded that copy from me. Thus it follows that my letter was a personal one in every instance, and not meant for the newspapers at all. Where the *Tribune* obtained its specimen, or who made the translation for it, I cannot know.

The purpose of my letter is best illustrated by its final remarks: "It is far from me to try to prejudice you. What I desire to impress upon you is but this, that you may not commit and bind yourself without an accurate examination of the subject (viz., the Code question). The question is not one of the relation of medical science to medical sects, for that question no longer requires an answer—but of our, your, individual relation to the sick, of conscience, and of the personal independence guaranteed to each citizen by the usage and the laws of the commonwealth. It is my main object to request that you may, in regard to the subject under consideration and the general interests of the medical profession, grant such attention and co-operation as any community—professional, municipal, or State—is entitled to expect from every educated and thinking member and public-spirited citizen."

In view of the fact that of the large number of German physicians but very few give the required attention to, and co-operation in public affairs—a fact best substantiated, if by nothing else, by the small number of German names appearing in the lists of our medical societies—I think every public-spirited man in the profession, no matter of what code party, ought to welcome every attempt at rousing them from their apathy and indifference, which are the more intolerable the higher the scientific accomplishments of very many amongst them.

In regard to the tone and contents of my letter, I claim that no statement of any man who has taken a decided party stand on any question, could be more quiet or impartial.

The correction of Dr. Squire's, in regard to the "majorities," I accept. I am glad he found nothing else to object to. After all it is a great satisfaction to be one of the "one hundred and five."

Very respectfully yours,

A. JACOBI, M.D.

NEW YORK, May 15, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 5, 1883, to May 12, 1883.

BARTHOLF, JOHN H., Captain and Assistant Surgeon. The extension of leave of absence granted April 3, 1883, further extended four months. S. O. 105, par. 8, A. G. O., May 7, 1883.

BILLINGS, JOHN S., Major and Surgeon. By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, O., June 5, 1883. S. O. 105, par. 10, A. G. O., May 7, 1883.

FORWOOD, WM. H., Major and Surgeon. By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, O., June 5, 1883. S. O. 105, par. 10, A. G. O., May 7, 1883.

SMITH, JOS. R., Major and Surgeon. By direction of the Secretary of War, to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held at Cleveland, O., June 5, 1883. S. O. 105, par. 10, A. G. O., May 7, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 15, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria	Small-pox.	Yellow Fever.
<i>Cases.</i>								
May 8, 1883.....	5	8	166	9	170	44	1	0
May 15, 1883....	0	5	132	4	163	39	0	0
<i>Deaths.</i>								
May 8, 1883.....	0	5	28	9	24	25	2	0
May 15, 1883.....	2	4	30	6	25	19	0	0

The total mortality for the week ending May 12, 1883, was 668, of which 94 were from pneumonia.

THE TWO DOCTORS.—The following is told of Dr. Channing (*Medical and Surgical Reporter*): "The reverend doctor and the medical doctor were both at a party in Boston one evening, and, some one being taken ill, the man of medicines, Dr. Walter Channing, was summoned. The servant entered the room where the brothers were seated, and said, 'Dr. Channing is wanted.' 'Which Dr. Channing?' said Walter, the physician; 'the one who preaches, or the one who practises?'"

NEWPORT MEDICAL SOCIETY AND THE CORONER QUESTION.—In behalf of the committee appointed to consider the present system of coroners the undersigned would respectfully report: That the coroner system, as usually constituted, of non-medical men, is not in accordance with the advanced intelligence and needs of the present time; and that, even when the coroner is a medical man, the antiquated encumbrances of the system are so decided as to occasion very serious disadvantages. Therefore the committee recommend the replacement of the whole system of coroners by that of the medical examiner, as in the State of Massachusetts; and as a means toward this end that a special committee, to con-

sist of Drs. Rives, McKim, and Fisher, be requested to prepare a draft of a law in accordance with the Massachusetts statutes, incorporating therein the slight modifications suggested by Dr. Alfred Hosmer, President of the Massachusetts Medico-Legal Society. The committee further recommend that the said draft, when accepted by this society, be presented in its behalf, by the President and Secretary to the State Assembly, with the prayer that it be made the law of Rhode Island; and that a copy of the draft and petition be communicated to the State Medical Society, with the request that it at once take concurrent action. All of which is respectfully submitted. SAMUEL W. FRANCIS, M.D., Chairman; FRANCIS H. RANKIN, M.D., of Committee.

A QUACK ARRESTED.—Dr. O. C. Gage, of New York, who has extensively advertised himself as the man so celebrated for his wonderful cures in New Hampshire, was arrested at Dover, N. H., May 5th, at the instance of a medical student, who charged him with practising medicine without a license from some medical society of the State.

GOOD WORK AND BAD IN MEDICINE.—The following graphic sketches of two types of professional workers are from a recent address of Dr. Andrew Clark :

In the work of the younger members of our profession I see, or at least I think that I see, greater care, patience, and accuracy in observation, a more rigorous fidelity in the record of therapeutical experiments, wiser caution in speculation, graver deliberation in judgment, a growing frankness in the confessions of oversights and errors, increasing severity in the sifting and testing of their own conclusions, a readier effacement of personality in the work, less unseemly eagerness for mere priority of publication, a deepened sense of the responsibilities of premature speech and writings, a rapidly abating bitterness in the conflicts of opposing views, a more robust and manlier spirit of scientific life, and less reluctance in making admission that there is no unconditional truth in the results of our inquiries—no finality in our finished work—no creed in medicine.

But, for one competent and conscientious worker there are ten incompetent and unconscientious, and who in divers ways hinder our progress and spoil our present possessions. Intolerant of the patient and painful toil of the true worker, acute in power of superficial observation, gifted with a certain showy versatility, quick at catching hold of new ideas, ingenious in guessing, crude in experiments, loose in therapeutic trials, hasty in speculation, strong in dogmatic assertions, accomplished in the transfiguration and use of other men's work, finding what they want wherever they seek, unhindered by difficulties, facile in speech, ready in writing, thirsting for notice, such men, now, alas! not uncommon in medicine, beget papers so quickly that they can have no necessary relation to time, observation, or thought, and flood our literature with their unworthy if not unvarnished lucubrations.

The favorite hunting ground of such men is therapeutics, and their favorite sport is the catching of new remedies, the putting of them to new uses, and the setting forth of their successful results. These men discern no difficulties and have few failures; they can illustrate their successes by scores of cases, and explain them by the most ingenious theories. There is scarcely any limit to the extent or the variety of their achievements; and, as they flaunt along in the fulness of self-satisfaction, they look down with pitying condescension upon those in the strait and narrow way, who conscientiously toil with small success in seeking after truth, but who, nevertheless, missing the praise of men, find strength and solace in the sacred search.

THE NUMBER OF FEMALE MEDICAL STUDENTS in the University of Paris in 1880-81 was 52, in 1881-82 it was 39; of whom 10 were French, 11 English, 5 Americans, and 9 Russians.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 23, No. 21

NEW YORK, MAY 26, 1883

Whole No. 655

Original Lectures.

THE DETERMINATION, BY THE GENERAL PRACTITIONER, OF THE NECESSITY FOR WEARING GLASSES.¹

By D. B. ST. JOHN ROOSA, M.D., LL.D.,

PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL; PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE UNIVERSITY OF VERMONT.

LECTURE III.

GENTLEMEN: You will very often hear patients say that their eyes have been overused, and that for this reason their vision is deficient. I think experience is rather against the likelihood that great use of the eyes necessarily impairs the sight. The best eyes, like the best brains, are those which are used most. The use of eyes forms no exception to the general rule that the organs of the body are the better for employment. They are all the better for being used under proper conditions. The fact that an eye has become presbyopic, does not at all prove that that eye has been overused. Very indolent people, who seldom overtax their eyes, sometimes have very poor sight. In practice, I never regard it as intrinsic evidence that a man has been a very great student merely because his eyes have given out. I must have other proof than the existence of useless eyes. The function of adapting the eye to vision at different distances is called accommodation, and the employment of it will not necessarily injure the eyes. Therefore you are often to encourage this ordinary action of the eyes as a curative means. The continuous employment of the eyes upon fine objects, without breaking the tedium of it, is sometimes harmful. But all of you must know men and women who, while using their eyes constantly in what are called trying employments, never are troubled with asthenopia or with inflammatory affections of the eyes. Long ago exact observers showed that watch-makers and others, who used one eye at a time, and almost constantly, have just as good eyes as mechanics who scarcely use their eyes, or as the idle men about town who read nothing but the newspapers, and of these very little. Remember, if you please, as a preface to your knowledge about the eye, that ordinary eyes are better for being used.

I have talked to you concerning hypermetropia and myopia, and there remains, of the forms of disturbance of vision to be discussed in these lectures, the condition known as presbyopia, or far sightedness.

Fortunately, I am able to show you, to-day a case which illustrates not only hypermetropia but also presbyopia. Perhaps the general practitioner might ask what is the difference between conditions which require the same remedy?

Hypermetropia is an error in the refraction of the eye, that is to say, the hypermetropic eye has not sufficient refractive power. The myopic eye has a refractive power that is too great. The presbyopic eye may be either hypermetropic or presbyopic, or it may be *emmetropic* or of normal refraction. *Presbyopia is a failure of accommodation.* It is a condition that does not necessarily have anything to do with an error of refraction. What-

ever the refraction of the eye, presbyopia must occur if more than forty years of life are passed.

If a person is hypermetropic, he has an eyeball that is congenitally too short from before backward, and he needs convex glasses. If a person has reached the age of forty years or over, and is no longer able to read the finest type at a convenient distance he also needs convex glasses.

Now, you ask what is the difference between these two conditions? Are they identical? By no means.

The little girl present at our first lecture has the condition known as hypermetropia. She has an error of refraction. The refractive power of her eye is insufficient. In the man present at the second lecture, one of my staff, who has myopia, the refraction is too great, the rays of light that enter the eye are bent too much. In the latter case the eye is too long, in the former case it is too short. Your lecturer has passed beyond the age of youth, he has turned the corner, which means that he is among middle-aged men, and he has become presbyopic in the natural course of things. But my eyes were never hypermetropic. I could always read the bottom line of the test-types, since these tests have been suggested, at twenty feet, and the weakest convex glasses before my eyes blur my distant vision throughout. Besides, the fundus of my eyes was examined by an expert ophthalmoscopist, and said to be emmetropic; that is, my eyes when at rest are adapted to parallel rays. But the time has come when, although I can still read the bottom line with perfect distinctness, my accommodation is beginning to fail, and I cannot read fine type at eight inches from my eyes. I will show you the nearest point at which I can read "Jaeger No. 1," or "brilliant" type. According to Donders' table the near point of a man of forty-four should be eight inches. But I find that it is often at nine or ten inches, in an average light. When the near point has come to be farther off than eight inches, presbyopia is reached. The near point of your lecturer, for *brilliant* type in this light at the age of forty-four is nine and one-half inches.

This recession of the near point, from the weakness of the ciliary muscle, and from the loss of the elasticity of the lens, describes far-sightedness, or presbyopia.

But, on making a test in your presence, I find that in this fair light mine is nine and one-half inches. I think it is usually found as far off as that in an emmetropic eye past forty-three years of age. In practice, when the near point of vision for fine objects is beyond eight inches, there begins to be inconvenience in reading fine print (unless the illumination is exceedingly good), in sewing, in detecting foreign bodies on the cornea, in short, in any use of the eyes on near and small objects. This change always comes as a surprise.

We are very apt to ascribe the results of failure in the power of the ciliary muscle and senile rigidity of the lens to other causes than the real one. When a person talks much of the poor type they have nowadays, of bad gas, and has at the same time reached forty or forty-five years of age, an examination of the distance of the near point, and the application of weak convex glasses will often clear up the mystery of the change that has come over the sight.

Myopia and hypermetropia are errors of refraction; emmetropia, the normal condition of refraction; presbyopia, an error of accommodation, and it appears as life advances. It does *not* depend upon flattening of the cornea, it does not depend upon alteration in the length

¹ Delivered at the University Medical College, Session of 1881-82.

of the eyeball from before backward. It depends, as I have already intimated, upon diminished power in the ciliary muscle. The inevitable processes of time have begun. The ciliary muscle is no longer able to contract as vigorously at forty as at twenty-nine years of age. In addition, this perfectly transparent lens, with its capsule and its tubular contents, has become less yielding.

These are the two factors which have rendered the presbyope unable to thicken his lens by muscular contraction; that is, to perform the act of accommodation with the same vigor as he did when he was a younger man. The presbyope, for certain occupations, at least, such as reading the finest type, etc., is doomed to the necessity of seeking artificial aid by means of glasses. But I will now show you the case of which I spoke, which combines an error of refraction with this error of accommodation; that is, a case in which both hypermetropia and presbyopia exist. It is a case perfectly within your capabilities of diagnosing with these test-types, and with this case of glasses. Pleasant and profitable as it may be to use the ophthalmoscope to determine an error of refraction, it is not necessary in this case. This woman is fifty years of age, and has worn glasses about fifteen years. She began to wear glasses, then, at the age of thirty-five, a period in life at which she had no right to wear glasses as a presbyopic person. What is technically known as presbyopia does not begin until after forty years of age. The near point never recedes in a healthy eye farther than eight inches, that is, there is no natural change in the accommodation until after forty years of age. We are, therefore, at once interested in her statement that she began to wear glasses at the age of thirty-five years. She first used them for reading, and she does not remember having used them before that time. We have discovered that the error in this case is not myopia, because the patient who wears glasses for reading at thirty-five years of age, but does not wear them for looking at objects at a distance, is certainly not myopic. Myopia does not necessarily require glasses for reading, unless the myopia is of a very great degree. We have discovered, then, that the condition of her eyes differs from myopia. She has not worn glasses for going about the streets or in her ordinary avocation.

Let us next test her vision by means of the test-types. We find that V. R. E. is $\frac{2}{300}$, and V. L. E. is the same, $\frac{2}{300}$, and with both eyes open her vision is a little clearer than with either one blinded.

Now we will try and find out what kind of glasses she has been wearing. How can that be done? Simply passing them between the fingers does not amount to much, but with my case of glasses and test-types I can tell exactly. I take the glass that has been worn, shut one of my eyes, hold it before the other several inches away, and then look at the test-types, and I find that everything is blurred; the glass obscures my vision. It may be a concave or a convex glass that does this. If a convex glass, a concave glass will certainly neutralize it. So I will take up a concave glass of thirty inches focal distance and put it before this glass, and now I can see a glimmer of the letters. That shows that I am going in the right direction, and the glass which the patient has been wearing is undoubtedly convex. If I had added a *convex* glass it would have increased the indistinctness of my vision.

I put on another concave glass, correcting the glass worn by the patient until I can see the large letters distinctly and in their natural size.

With a concave glass of twelve inches focal distance, put before the glass being corrected, I see the letters larger than they should be, as the glass is still more convex. I wish to have a glass that will make these letters look as though seen with the naked eye. By the next trial I find that No. 11 neutralizes the patient's glass, and I see the letters as though looking through a plain glass. The glass worn by the patient is undoubtedly convex, and the number is probably 10. The patient now tells us that she was ordered to buy No. 10.

I have now settled, beyond question, that she is not myopic if she can read with this convex glass. You will please notice where she is holding the book, although wearing a convex glass, in order to read fine type; it is at a distance exceeding eight inches. At the distance of sixteen inches she can pick out letters. But the glass is too weak; it does not correct the condition of things there. She has something more than presbyopia. She is not myopic. Now what is she? She must be hypermetropic and presbyopic.

In the next place, let us correct her hypermetropia. Let us put on a pair of glasses which makes the eyes of the proper length for distance. If I find that she reads with a glass having a twelve-inch focal distance, but that this does not enable her to read from eight to twelve inches, her glass is not strong enough for near objects. Even a presbyope, in the beginning of his trouble, can read at nine or nine and a half inches. The rule in fitting glasses for presbyopia is to order a glass with which fine type, No. 1 Jaeger (brilliant), can be read at eight inches from the eye; of course it can then also be read at a greater distance.

I will try one eye at a time. I will put on a No. 14 convex glass with the view to correcting her hypermetropia, which is of a different form from that seen in the little girl presented at the first lecture, who could see with or without glasses. Here is a patient who cannot see well at a distance without glasses, and we will now see if she can do any better with them. With her right eye she can read, aided by a glass having fourteen inches focal distance, the bottom line at twenty feet. This is a case of *manifest* hypermetropia. Her vision is not distinct at a distance, unless aided by a convex glass. The left eye is very much like the right. With a convex glass of fourteen inches focal distance her vision becomes normal; her hypermetropia is converted into emmetropia.

Now about her reading. If you have followed me carefully in this course of lectures, you are able to say whether she will need a stronger glass to read with or not. She is not particularly concerned about her distance vision, or she would have had glasses for that purpose long ago. She has not worn glasses habitually. Very comfortable and clear vision for all ordinary purposes is consistent with an inability to read the bottom line of Snellen's test-types at twenty feet. $V = \frac{2}{300}$. If patients have never had more visual power than $\frac{2}{300}$ or $\frac{2}{400}$, they do not always appreciate $\frac{2}{300}$. One of my myopic and astigmatic patients, a lady, whose vision was made normal by glasses which she began to wear for the first time when she had reached middle life, complained that objects appeared too distinct with them, and that "the beautiful haze" was taken away from the scenery of the world.

Another, however, also a lady, under the same circumstances, after having walked down Broadway, and having looked at the shops with her new concave cylindrical lenses, turned about and walked immediately up again, saying that she had never enjoyed the street before.

It is an interesting fact that some patients who have not worn glasses habitually, do not estimate them as having much advantage, even if they do not see well without them. Certain myopes, who can scarcely see large objects *six feet away* from them, will say that they see perfectly well, and object to using glasses, and positively state that they do not care to see any better. They will even deny, after their vision is increased from say $\frac{2}{300}$ to $\frac{2}{200}$, that they see practically any better. The fact is that these tests by letters at a distance, do not furnish to all patients satisfactory subjective evidence of visual power. That is only found out by tests with small type near at hand, and by looking at familiar objects. This patient has no special inconvenience in looking at a landscape. This fraction, $\frac{2}{300}$, does not express her real vision. If she could not see to read or sew, she would be inconvenienced. Now, does she need thicker glasses for reading than for looking at a distance? If so,

a glass of fourteen inches focal distance will not answer. Look at this diagram, and then you will be able to tell me. Here is illustrated an eye of the same kind we are studying; the eyeball is too short, and a glass has been put in front of it to bend the rays of light so that they will take the course indicated by these dotted lines. Now, suppose I change these rays to those coming from an illuminated page, or from a lady's sewing—change their direction so that they are no longer parallel but divergent, does it take a thicker lens to focus divergent than parallel rays? Certainly it does. We need more refraction; a greater breaking up of the rays of light. If this patient requires a glass with a focal distance of fourteen inches to see objects illuminated by parallel rays, she will need a stronger glass to read objects illuminated by divergent rays.

I proved to you, a few minutes ago, that a glass with ten inches focal distance was not strong enough, because she could not read No. 1 test-type nearer than sixteen inches, and indistinctly. I will take a glass having six inches focal distance, I think, because I have found that the near point recedes further than eight inches, which is the dividing line between presbyopia and emmetropia even with the glass. To correct the presbyopia and bring it back to the normal, it is necessary to give a glass with which she can read the finest type at eight inches. The glass that will correct her hypermetropia, added to that ordinarily used by a presbyope of her age, will be the one which will enable her to read fine type at eight inches. This will be one of about seven inches focal distance in her case. I try one of seven inches focus.

She fancies it is rather strong; but with that fancy we are not to be particularly impressed, but we are to prescribe that glass with which she can see No. 1 easily at eight to twelve inches, which will be the one generally needed for fine work in the evening, when the light is not perfect. Then you can allow a little for other work, giving a weaker glass for daylight.

I therefore prescribe it and one of fourteen inches focal distance for going about at work, if she chooses to wear it.

We might imitate Dr. Franklin, and have a glass made after his suggestion, the upper part of which would be of fourteen inches focal distance, for looking about, and the lower part of seven inches focal distance for fine work.

This is a typical case illustrating manifest hypermetropia, to which has been added presbyopia, and the general practitioner may be perfectly competent to diagnose this condition. When vision can be made $\frac{2}{3}$ with a glass, or the person can read the finest type without a glass, it is not necessary to have an ophthalmoscope nor a large case of glasses in order to diagnosticate these conditions of refraction and accommodation, and to prescribe for them. I see from different neighborhoods, where the general practitioner has paid no attention to the advance made by a knowledge of the different spectacles required for the improvement of vision, case after case that has been neglected, which should be treated successfully by some of the recent graduates from the University or Bellevue or the College of Physicians and Surgeons. Some practitioners are so absorbed in the diagnosis of pneumonia, which can be readily made out, that they have had no time to attend to the little and more obscure matters that might enable them to relieve many persons from serious inconvenience and even danger. I hope that, with your test-types and glasses, you will, before dismissing them, at least see whether or not it is within the bounds of your knowledge and experience to correct the condition of their eyes. I have shown you three typical cases, and you should, as general practitioners, be competent, without any special knowledge, except that which I have indicated, to diagnosticate and prescribe for them with correctness.

There is one interesting point in this patient's case. Hypermetropia may remain latent for years and years,

and finally the eyes break down, and it becomes manifest. This patient may have been able, as a school girl, to read $\frac{2}{3}$; but, as time went on, her ciliary muscle weakened, the natural refractive condition of the eyeball appeared, and she was no longer able, by any extra amount of force she possessed, to make the lens thick enough to see parallel rays, and she then needed glasses for a distance.

I remember the case of a judge who came to me in great distress, saying that he was becoming blind; that he was no longer able to see the lawyers in front of him. He had worn glasses for several years for reading, and had always been able to see at a distance, and I found that his entire blindness depended upon hypermetropia, which had suddenly become manifest, so that he was obliged to wear convex glasses for distance. For years, by an extraordinary strain upon the ciliary muscle, he has been able to see distinctly at a distance, but his accommodative power suddenly gave out one day while in court, *hinc illæ lacrymæ*.

FACULTATIVE HYPERMETROPIA.

This gentleman, one of your number, complained of asthenopia; that is, weakness of vision. The first thing I did was to find out whether or not he could read the bottom line at twenty feet. He was able to do so without glasses. But he complained that he was unable to continue to read; that the eyes watered, etc. I found that he could see just as well at a distance, that is $\frac{2}{3}$, with glasses having thirty-six inches focal distance, and I made my diagnosis, without an ophthalmoscope, that it was a case of facultative hypermetropia, voluntary hypermetropia; that is, he is hypermetropic or not, as he chooses. I said to him, "Your trouble is because you are using your ciliary muscle too much. You are using it to see objects at a distance, and also for reading. In a natural condition you are only required to use it in work upon near objects. If you will put on convex glasses and relieve your ciliary muscle from some of the strain, if my diagnosis is correct, if no general condition exists which causes paralysis of accommodation, you will be able to get on very comfortably." He is wearing the glasses, and he says that he can read without inconvenience. With the glass of thirty-six inches focal distance we have relieved the ciliary muscle, which was busily engaged in thickening this lens; in other words, we have relieved the strain upon it, and the asthenopia disappears. It is a case of facultative hypermetropia relieved by the use of convex glasses for the near point. This patient will become like the patient who has just gone out. The time will come when he will not be able to see the bottom line at twenty feet; will not be able to adjust parallel rays to an exact focus, and then he will have manifest hypermetropia, and require convex glasses for distance as well as for objects near him.

CHLOROFORM NARCOSIS DURING SLEEP.—Dr. S. Murrill, of West Liberty, Ia., writes: "In your issue of April 28, 1883, I have read with interest an article on chloroform narcosis during sleep, and I contribute my item of experience. I was requested to remove a tooth from a little girl, Mabel D—, aged five, daughter of Herbert and Almira D—, who now reside in the village of Potsdam, N. Y. The child was nervous and afraid, and would not allow me to even look at the tooth. I approached her while sleeping, put her under the influence of chloroform, and extracted the tooth, which was a front upper one. There was very little hemorrhage. The child showed no signs of awakening. I watched her for some time, and she quietly slept on until morning. Some time the next day she noticed the tooth was gone, but had no knowledge of when or how it had taken its departure. I would suggest that Dr. John H. Gardner, would try it again. It succeeded in my solitary case, and that is the only time I have had occasion to try it."

Original Articles.

IS 'THE BLOOD A LIVING FLUID?'

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THE question, Is the blood a living fluid? announced as the subject for discussion at this meeting, is, to the physiologist at least, if not to the pathologist, a most interesting one, since it involves some consideration of living matter in general and the characteristics by which it is distinguished both from matter which has never lived and from that which has ceased to live. The so called vital functions, common to all grades of living matter, vegetable as well as animal, may be briefly stated to consist in such an interchange of materials between any organism and its environment as serves to maintain the chemical and structural integrity of that organism.

The life of the various tissues of any complex organism, though in some sense distinct from that of the organism as a whole, may nevertheless be defined in identical terms with that of the body of which they form a part. Says Professor Huxley: "The preservation of the life of the tissues from moment to moment is a physiological act consisting in successive and simultaneous degenerations and regenerations of parts." In other words, vital processes are *nutritive* processes, nutrition and denutrition going on to some extent simultaneously, though by no means with always equal steps. But these two processes—nutrition and denutrition of tissues—though mutually dependent, stand in very different relations to the functions of the organism *considered as a unit*. The processes of assimilation are concerned solely with the welfare of the tissues, as tissues. The activities of the organism, considered as a unit, are accomplished by means of denutrition, *i.e.*, the retrograde metamorphoses of individual tissues or parts of tissues, which thus complete their functions only in dying—the potential energy stored up in the assimilation of materials obtained from food becoming kinetic in their breaking down. Thus the production of secretions, the movements of respiration, the activity of the heart as an organ of the circulation, the voluntary movements, emotion, volition, and thought, are all immediately dependent on the breaking down of certain constituents of the various tissues concerned. Work means waste, and the measure of the activity of any living mechanism is to be found in its excretions. Thus, increased muscular exertion is accompanied by increased escape of CO₂ in the expired air, and intellectual work adds to the labor of the kidneys in eliminating the greater amount of excrementitious salts thereby added to the blood. That tissue-waste during any given period is not, however, necessarily commensurate with the matter at the same time assimilated by any given tissue is proved by the whole history of metabolism in the body.

It may be said, probably without fear of contradiction, that the processes of nutrition are localized in cells—that the cell alone is the essentially vital structure; and there exist biologists (notably Beale among the English) who limit vital activity, in their belief, to certain parts of the cell, mainly the nucleus, which they regard not only as the chief agent in the reproduction of the cell but in its nutrition also, the outlying portions consisting largely of formed material in which nutritive changes have ceased. It is, nevertheless, through changes in this formed material, rather than by the activity of the living matter, that the function of the tissue is accomplished. Whether or not the views of Prof. Beale and his followers be wholly accepted, it must be admitted that only certain parts of the tissues of any complex organism are, strictly speaking, living. The heart of the oak is physiologically dead, playing a purely mechanical rôle in the life-history

of the tree, whose vital processes are carried on in other parts of its structure.

This is an extreme example of a principle which holds good, though to a less extent, in animal organisms; and a large part of the tissues which make up the bodies of adult animals have, in a great measure, lost their resemblance to the living formative protoplasm from which they were derived.

It is only certain portions of cartilage and bone, for example, which have the power of reproducing new tissue out of pabulum; the other parts consist of formed material which has no reproductive power and which serves a purpose as purely mechanical as that of the heart of a tree.

So in the case of the actively secreting glands, it is the formed products of their nutritive activity which break down to supply the characteristic organic constituents of their respective secretions which then serve their purpose in the body. So also the glycogenic function of the liver is completed only when the glycogen, built up as a part of the hepatic cells, breaks down into the sugar necessary for maintaining the normal constitution of the blood. To what extent these principles may be applied to the chief active tissues—the muscular and the nervous—it will be difficult to determine until more is known of the *modus operandi* of these tissues; it may, however, at least be doubted whether biologists are in a position to refute the theories of Dr. Beale in denying life to everything but bioplasm.

But probably the real question before this Society is somewhat more restricted in its scope than the one just considered, and may be stated as follows: Can the blood be regarded as a true tissue, having a definite origin, structure, and function; also undergoing phases of growth and decay, of repair and waste, like the solid tissues of the body?

In this inquiry, the first point to be established is what constitutes a tissue.

If we restrict our statement to the more simple forms of nerve and muscle tissues, all tissues may be described as alike consisting of cells and an intercellular substance or matrix. The various kinds of cells are also marvelously alike—tissues differing far more in respect to their intercellular substance than in their cells. The cartilage cell, the bone-cell, the connective-tissue corpuscle, the epithelial-cell, the non-striated muscle, and the nerve-cells, may all be described in terms almost identical. May the blood also be regarded as consisting of cells and an intercellular substance differing from cartilage—for example, in having a liquid instead of a solid matrix?

In other words, is the red-blood corpuscle (which, for brevity's sake, I will designate as a *hamacyte*) a true cell? If it be admitted that the hamacyte is derived from the leucocyte and represents the adult stage of the white-blood corpuscle, the question is at once answered in the affirmative; for the white-blood corpuscle (first discriminated from the red by Hewson) is well-known as a living, amœboid cell; it has been seen by Klein to multiply by simple division, and its curious movements (first observed by T. Wharton Jones in the blood of the skate¹) have since been watched by many eyes; these are evidences of life which cannot be adduced in the case of many cells which are nevertheless considered as belonging to living tissues. Moreover, whether the red bodies be recognized as arising from the white, or, as claimed by Hayem, from certain intermediate corpuscles (designated by him as *hæmatoblasts*, and by Klein as *microcytes*) or from some as yet undiscovered source, they have a definite form and chemical composition which they maintain in the midst of a plasma differing materially from themselves, since they contain all the iron of the blood, and a large proportion of the fats as well as of the phosphates and the potassium salts, while the chlorides and sodium salts predominate in the plasma.

¹ A Paper read before the Montgomery County Medical Society.¹ Philosophical Transactions, 1846

These cells also perform a definite physiological function. What more can be said of any cell in support of its claim to being considered as the active element of an anatomically distinct and living tissue?

The complex body of any of the higher animals may be regarded as consisting of tissues, all of which have not only been developed by and differentiated from the original protoplasm of the fertilized ovum, but each of which corresponds in its perfected function to some one of the fundamental properties of protoplasm, to the manifestation of which, in a highly developed degree, it is especially devoted in the interests of the organism as a whole, on the important principles first spoken of by Milne-Edwards as the *physiological division of labor*. Each tissue, nevertheless, retains in its own private interests, as it were, vestiges of many of the other properties belonging to their common ancestor. Thus, all the tissues are assimilative to the extent of keeping up their own nutrition; all are to some degree irritable; all are capable of reproduction of their own kinds of cells, and so on. To what extent can these statements be applied to the blood? What property of protoplasm is specialized in this fluid, and what common protoplasmic properties does it retain?

Pflüger has said that "albumen lives" (that is, becomes protoplasm) "when it begins to take in oxygen"—a power exalted to the highest degree in the hæmacyte, which, to this extent, not only establishes its own claim to being regarded as a living cell, but that of the blood to a place among the true tissues.

The fully developed, non-nucleated, red-blood corpuscle in its state of formed material has undoubtedly lost the power of reproduction—a power which belongs to all tissue-cells—but that it has this power at some stage of its existence scarcely requires proof.

In the embryo the first red corpuscles are derived from mesoblastic cells of the vascular area, and they increase by simple division; at a later stage of embryonic life, hæmacytes are produced by transformation of leucocytes (which probably arise in the liver and spleen and pass thence into the blood) and by transformation of connective-tissue corpuscles; in the spleens of adults, also, as well as in the large capillaries of the red medulla of the bones, small nucleated red corpuscles, similar to those seen in the embryo, have been observed (Rollett). Both von Recklinghausen and Golubew have watched the actual conversion of colorless into colored cells in blood drawn from the body of a frog and kept in suitable conditions of moisture and warmth. The proofs of this transformation in human blood are, it must be admitted, indirect, and dependent on analogy and reasoning rather than upon actual observation. Among these indirect proofs may be mentioned the fact that although leucocytes are constantly being poured into the blood from the lymph-ducts, appearing in excess after any special influx (as following a full meal), their number nevertheless maintains a remarkable uniformity in proportion to the hæmacytes. The rapid regeneration of red blood after hemorrhage, which appears to be promoted by the administration of iron in connection with a generous diet, also admits of the same explanation, while in the blood of leucæmic patients *nucleated* red-blood corpuscles are often found presenting the appearance of the nucleated embryonic blood-corpuscles of mammals and of man (Rollett); and since the red corpuscle is not known to reproduce itself in the blood of adult animals, notwithstanding numerous and careful observations on this point, we must conclude that it constitutes a later stage in the life of some other cell which has the reproductive power—and the probabilities are immensely in favor of its derivation from the leucocyte of the lymph and the blood.

The same conclusion may be drawn from considerations of another and perhaps higher character. If it be admitted that the numerous homologies of structure existing between man and the lower animals, taken in connection

with the significant facts of human and comparative embryology, throw a powerful light on man's ancestral history and on his kinships, both near and more remote, with the lower forms of life throughout the entire animal series, then the same must be admitted in regard to the origin and descent of the red-blood corpuscle. The blood of most invertebrates is colorless, its white nucleated cells resembling the earliest corpuscles of human blood. The blood-cells of the lower (the oviparous) vertebrates, though colored, are nucleated like those of human blood in its second embryonic phase. The blood of the young, also, of all mammalia (except the human) has nucleated red corpuscles, the nucleus disappearing only when the mammal has reached the adult stage, its corpuscles being then homologous with those of human blood in its third and last phase. It thus appears that the corpuscles of human blood, originating from cells of the blastoderm as colorless, nucleated, reproductive, amœboid cells, later giving rise to colored cells which still retain the nucleus, and finally appearing as fully differentiated, highly colored, non-nucleated, non-reproductive, and non-contractile corpuscles, pass through various successive stages which establish their resemblance to those of the blood of all the lower animals represented by the invertebrate, the oviparous vertebrate, the young mammalian, and the adult mammal types, reaching their full perfection about the middle of foetal life.

The leucocyte may then be regarded as the original cell-element of the blood, the hæmacyte having been specialized for the more successful performance of the respiratory function.

White blood has undoubtedly the power of absorbing a certain amount of oxygen, illustrating the general law of absorption of gases by fluids; and in those exceptional cases of colored blood in invertebrates (as in certain annelides described by Milne-Edwards in 1838, in several molluscs reported by Harless and von Bibra in 1847, and in various other groups especially investigated by Dr. Ray Lankester¹) the capacity of such blood for absorbing oxygen is undoubtedly increased by its coloring matter, since, when red, it contains hæmoglobin, and when of other colors, substances capable of acting as oxygen-carriers, some of which—notably the hæmocyanin (Frédérique) of the blue blood of the octopus—contain copper, which may be supposed to take the place of the iron in hæmoglobin. In most of these cases the coloring matter is found, not in the corpuscles, which are white, as in other invertebrates, but in the plasma, which thus adds a special respiratory to its other general nutritive functions. The fluid which circulates in the water-vascular system of the sea-urchin, and which undoubtedly serves the same purposes as the blood of higher animals, contains richly colored nucleated amœboid cells, the coloring matter of which is readily oxidizable and de-oxidizable, and therefore well adapted for respiratory purposes.

These and numerous other facts which might be cited, did time and your forbearance permit, all favor the supposition that blood is primarily a nutritive fluid which may or may not possess special respiratory power; in all the higher animals, however (beginning with the craniate vertebrates), the principle of the physiological division of labor is doubly illustrated in the blood by the differentiation of the hæmacytes for the performance of the respiratory function—a specialization of its general function of nutrition; and how well these bodies (which consist of almost pure hæmoglobin) are adapted to their work is shown by the fact that a given bulk of human blood is capable of taking up from ten to thirteen times as much oxygen as an equal bulk of water can do. That this power belongs to the hæmacytes is thrice proved: 1, By comparison with white blood; 2, by the fact that blood-serum has no greater power of absorbing oxygen than has pure water; and 3, by the fact that solutions of hæmoglobin out of the body readily combine with oxygen.

¹ A Contribution to the Knowledge of Hæmoglobin. Proceedings of Royal Society, 1872.

The avidity of the hæmacytes for oxygen is only equalled by the readiness with which they surrender it when they reach the tissue capillaries under the influence of the change in external pressure of this gas to which they are there exposed. This delicate balance of physical and chemical forces is a marked characteristic of living matter; were it not so, development and physiological progress would be impossible. Since life consists in the continuous reactions of organized matter in response to the actions of the various forces of its environment, the grade and quality of the life of any organism will depend on the sensitiveness of the matter of which it is composed. The more delicate the balance of its forces, the more ready are its reactions and the more complete its adaptations to the environment—the more assured, therefore, the continuance of its life.

Thus the hæmacytes, through the facility with which their hæmoglobin is oxidized in the lungs and the chemical instability of the resulting oxyhæmoglobin, are not only most admirably fitted for the performance of their important function, but also afford a conspicuous illustration of the living state of matter.

The blood differs, it is true, from other tissues in seemingly performing a variety of duties—the corpuscles having one office, the respiratory, and the plasma another, that of conveying dissolved and liquid nutriment to all the solid tissues, affording at the same time a means of ready escape for their numerous gaseous and other soluble waste materials; but these various offices (of which the latter may be regarded as merely incidental to the liquid character of the plasma) have a single object, viz.: the nutrition of the tissues.

A great advance was made in the principles of nutrition when Liebig's classification of foods as *plastic* and *respiratory* came to be regarded as unphysiological, and it was shown that the tissues are the seat and immediate source of all the energy, including heat, which is liberated in the body—that food, therefore, must become a constituent of some tissue before it can serve as a source of energy. The same is probably also true of respiratory oxygen, which first serves in the building up of the oxyhæmoglobin of the arterial blood-corpuscle; and the supposition that respiratory oxygen acts solely in the tearing down of tissues, thus becoming the agent in the liberation of their stored-up energy, is undoubtedly a false one.

The celebrated experiments of Pettenkofer and Voit, from which it appeared that more oxygen was consumed during sleep than in an equal number of waking hours, carbon dioxide elimination being at the same time greatly diminished, go far to prove that respiratory oxygen, like nutritive material in general, is assimilated in the restoration of exhausted tissues, especially the nervous.

Numerous observations have shown also that the activity of muscle tissue is not immediately dependent on oxidation, since excised frog's muscle will continue to contract for a considerable time in an atmosphere free from oxygen, when artificially stimulated. Not oxygen, but the *nerve-centres* supply the normal stimuli by which the energies of all the other tissues are liberated, their own energy being set free in automatic action (so-called), or through the influence of the various external forces transmitted to these centres by afferent nerve-fibres; and respiratory oxygen, in common with other constituents of the blood, is without doubt appropriated in the building up of those highly complex substances by the explosive decomposition of which the energies of both nerve and muscle tissues are liberated.

The blood has therefore, *par excellence*, a single function—that of supplying nutriment, gaseous as well as liquid, to the solid tissues; and to what extent its life-sustaining power depends on the hæmacytes is shown by the rapid occurrence of asphyxia (in three to five minutes in the dog) when their function is seriously interfered with, as well as by the facts of transfusion, since whipped blood containing these bodies retains all its restorative properties, while mere serum has no immediately reviv-

ing power; and although the importance of the plasma in nutrition must not be overlooked, the highest place (as in other active tissues) must be accorded to the fully developed adult cells—the oxygen-carrying hæmacytes.

We next inquire whether the activity of the blood, like that of the other tissues, is accompanied by waste.

That the red cells die in great numbers (finding a grave, as many believe, in the spleen) is a necessary corollary of the conclusion that the lymph-cells are being constantly converted into these bodies; otherwise, the red cells would be disastrously increased in number. The various pigments, also, found in the bile, the urine, etc., give evidence of having been derived by retrograde metamorphoses from the coloring matter of broken down corpuscles, which thus escapes in both the solid and fluid excretions. That a portion of the iron is retained in the spleen in some peculiar proteid compound¹ is probable, perhaps serving for the perfecting of the new cells which are supposed to have their birth there.

The marked chemical similarity which exists between blood and muscle, long ago procured for the former the *soubriquet* of liquid flesh. The proportions of water in the two substances are about the same, and the same salts abound in muscle-tissue, which have already been mentioned as predominating in the red-blood corpuscles. Red muscle gives the spectrum of hæmoglobin, and crystals of hæmin may be obtained from it by appropriate means (Kühne). But the researches of Kühne have disclosed other still more interesting points of resemblance, and the ultimate muscle-fibre is now described as consisting of an elastic tube, the sarcolemma, filled with liquid or semi-liquid contents, the muscle plasma, capable (like the plasma of the blood) of spontaneous coagulation at ordinary temperatures and separating into clot and serum—the process being similarly accelerated by contact with foreign matter, by whipping, etc. The myosin which constitutes the clot, though not identical with fibrin, has many properties in common with it, while the albumen of muscle-serum (the most abundant of its proteid constituents) is apparently identical with the serum-albumen of the blood.

Liberation of heat, which takes place not only during the contraction of living muscles but in rigor mortis (a state of coagulation shown by Prof. Hermann to be in all likelihood an extreme condition, of which every contraction is a partial illustration), also accompanies coagulation of the blood. There is a similar change from an acid to an alkaline reaction during the contraction and the rigor mortis of muscle and in the coagulation of blood.

Were it desired to carry the parallelism between these tissues still further, the solid doubly refracting bodies contained in the muscle-plasma—the sarcous elements, which appear under the microscope to be especially concerned in the phenomenon of contraction—might be compared to the solid corpuscles of the blood floating, in like manner, in the fluid plasma; but perhaps too little is known of the nature and function of the sarcous elements to afford grounds for an analogy, nor would it greatly strengthen the resemblance. More significant, perhaps, are the nuclei embedded in small masses of granular protoplasm, which, in the frog, may be found at varying depths in the substance of the fibre, but in mammalian muscles are generally situated just beneath the sarcolemma.

These nucleated masses of protoplasm, taken in connection with the distinctly cellular character of the more simple non-striated muscle-tissue, reveal the morphological unity existing between this tissue and all the other tissues of the body.

Kühne, in 1859, was the first to compare the amœba and the vorticella with the muscle-fibre in respect of their excitability and death changes; and the unity of the contraction exhibited by these microscopic proto-

¹ See Foster's Test-Book of Physiology.

plasmic creatures and the highly specialized muscle-tissues of the higher animals may be regarded as established.

Thus, through the hæmacyte of the blood in its amoeboid contractile stage as a leucocyte, the resemblance between these two tissues is made complete.

Before leaving this division of the subject, however, I beg your sufferance in calling attention to still another point in this analogy which involves the reference to a purely hypothetical substance—the so-called *inogen substance* of Prof. Hermann—the probable existence of which, as the result of the final synthesis of the contractile material, he offers as an explanation of certain remarkable facts, viz.: the marked increase of non-nitrogenous excretions and the equally conspicuous non-increase of *urea* which accompany muscular activity. This substance (the constituents of which in contraction are supposed to become disassociated to the extent of liberating carbon-dioxide and sarcolactic acid without the breaking down of its proteid part, which is thus spared to recombine with fresh supplies of non-proteid materials in the construction of new *inogen substance*) finds its analogue in the oxyhæmoglobin of arterial blood, which appears as reduced hæmoglobin in the venous blood, ready to reunite with more oxygen in the lungs, the previous supply of this element having escaped from the hæmacytes without further chemical disturbance of the proteid compound with which it was combined—loosely, it is true—nevertheless in a real chemical union; and the plausibility of Prof. Hermann's theory is, to my mind, greatly strengthened by this analogous phenomenon of the red-blood corpuscle.

Dr. Foster, in his valuable and charming book, for which the student of physiology can hardly be grateful enough, in introducing the subject of the blood, speaks as follows: "In regarding blood as tissue, we come upon the difficulty that it, unlike all the other tissues, possesses no one characteristic property. The receptive tissues pour into it the material which they have received from without, the excreting tissues withdraw from it the things which are no longer of any use; and the irritable, the contractile, and indeed all the tissues seek in it the substances (including oxygen) which they need for the manifestation of energy or for the storing up of differentiated material, and return to it the waste products resulting from their activity. Its real usefulness lies not so much in any one property of either its corpuscles or its plasma, as in its nature fitting it to serve as the great medium of exchange between all parts of the body."

It has already been shown (unless I overestimate the significance of the various facts cited and the importance of the arguments employed) that the differences in these numerous offices of the blood are more apparent than real; moreover, transferring our attention for a moment from the processes of nutrition to those higher phases of animal life known as sensation, emotion, volition, and thought—an equally broad and comprehensive view may be taken of the various functions of nervous tissue. Exposed through the terminations of innumerable nerve-fibres (the different varieties of which are as universally distributed among the other tissues as are the capillaries themselves) to an environment which may be indefinitely extended by the microscope and the microphone on the one hand, and by the telescope, the spectroscope, and the telephone on the other, the central nervous organs are played upon by all the forces of the external world. Changes are thereby set up in these centres, of the nature of which we know little (except that they are accompanied by the liberation of heat with elimination of carbon dioxide and other products of tissue activity), changes, however, which are capable of modifying the action of every other tissue in the body through the return threads by means of which these central organs are brought into communication with all the other organs.

Not only this, but "striking the electric chain where-with we're darkly bound," which links all sentient beings

in a common brotherhood, vibrations from these central organs thrill through the magnetic touch, sound from the vocal cords, or, more subtly still, flash from the speaking eye, and penetrate to the conscious centres of many thousands of other similarly constituted beings. Nor does nervous tissue forfeit its character as a true tissue in thus serving as a *medium of exchange* in comparison with which the exchanges of the blood seem trivial.

From every point of view, then—whether of origin and development, of structure and function, or of analogy with other tissues—the blood must be regarded as a *true tissue*; originating, in common with the other tissues, from the cells of the blastoderm; consisting, like other tissues, of structural elements and an unstructured matrix; maintaining its chemical and structural integrity by the processes of nutrition common to all tissues, and, like other tissues, subserving the interests of the organism at large through the performance of its own particular function.

A SUCCESSFUL CASE OF SPONGE-GRAFTING.

By W. G. THOMPSON, M.D.,

NEW YORK.

DURING a recent service in the Bloomingdale Insane Asylum a patient suffering from acute mania came under my charge. Several days before admission, his wife had been instructed by his physician to "blister his back with mustard." This she had done with an heroic zeal which resulted in the removal of the deeper layers of the integument at intervals over the greater part of the lumbar region! At one point, a little above the left buttock, a deep and extensive slough was formed which separated in a few days, leaving a granulating ulcer with sloping sides, $1\frac{1}{2}$ inch deep, 2 inches wide, and $3\frac{1}{4}$ inches long. As the patient's temper was none of the best, it was important that this source of irritation should be removed as speedily as possible, and I accordingly tried sponge-grafting to hasten the granulating process. Not having time to prepare the sponge by removing the silicates and cretaceous salts in the manner suggested by Dr. D. J. Hamilton, I used an ordinary fine-grained sponge, thoroughly washed, and soaked for twenty-four hours in acid. carbol., 1 to 20. From the periphery of this sponge were cut a dozen pieces from one-fourth to one-third of an inch square, which were closely applied to the floor and sides of the ulcer. The *peripheral* surfaces of these pieces were placed in contact with the ulcer, because the spiculae are larger and more branching there than in the interior, and consequently the fragments were more likely to adhere like burrs until the granulations should grow into them. The wound was cleaned with acid. carbol., 1 to 40, and powdered with iodoform. A compress was placed over the grafts and a bandage applied.

Next morning the patient had torn off the dressing, and only one graft remained *in situ*. The grafts were replaced, and instead of a bandage, broad strips of adhesive plaster were employed to secure the compress. The wound discharged pus freely, and for the first six days it was cleaned with acid. carbol., 1 to 40, and the dressing was renewed every twelve hours. After this it was only necessary to reapply the dressing once in twenty-four or thirty-six hours. Five of the grafts adhered well after forty-eight hours, and those which came away with the dressing (owing to the restlessness and interference of the patient) were replaced, so that at the end of a week the entire dozen were quite firmly adherent, and those which had been first applied could not be pulled off with a forceps without giving some pain and using considerable force. At the edges of the grafts the granulations could be distinctly seen pushing their way into the interstices of the sponges and forming little bridges from the walls of the ulcer. At the end of a fortnight the sponges had been raised to a level with the surrounding integument, and most of them had become

very much smaller, while one or two seemed to have been completely absorbed.

After three weeks the ulcer had almost entirely healed, and the grafts which had not become absorbed or dissolved, perhaps in part by the pus, were gradually removed with scissors as the skin grew inward to meet them.

From the situation of the ulcer and the restlessness of the patient, who was constantly walking about, it would have been impossible to maintain the grafts in position had they not early become very firmly attached.

The granulations sprouted up with such vigor that one could almost see them grow, and the healing was no doubt completed in less than half the time that would have been required without the support and stimulus afforded by the grafts; and had the sponges been elaborately prepared, the result could not have been more satisfactory.

DEATH FROM VACCINATION.

By HORACE M. SIMMONS, M.D.,

BALTIMORE, MD.

IN view of the universal interest which must attach to such a subject, I avail myself of a little space in the columns of your wide-spread journal in reporting a case of death superinduced by vaccination. The extent to which small-pox prevailed in our city during the past winter, requiring the most prompt and energetic measures to suppress it, afforded ample opportunity for observation and experimentation in proving the efficacy of vaccination as a prophylactic. No sooner had general compulsory vaccination been inaugurated than the ravages of the disease began to abate. During the prevalence of small-pox in this city in 1873 similar measures were instituted with equally apparent results. Other cities have had a like experience. It would seem that such incontrovertible evidence should convince the most skeptical; nevertheless, there are those among us who deny the efficacy of vaccination as a prophylactic, and denounce it as a most pernicious practice, the outgrowth of barbarism and superstition. The occurrence of so unfortunate a case as we are about to relate only affords the opposition element more plausible grounds for their arguments, and makes them more bitter in their denunciations.

In the discharge of my duty as a city vaccine physician, I visited the house of Michael R—, and vaccinated all the inmates whom I did not deem sufficiently well protected from previous vaccinations. The date of this occurrence was January 20th. On February 23d, on my second visit to this locality, I repeated the operation where it had not been successful in the first instance. Among the number was a white female infant nine months old, apparently in perfect health, whose arm bore no signs of the previous operation. Accordingly I repeated it, using this time the National virus which I had obtained from the Health Department. The operation was performed in the usual manner, by making the abrasion about one-sixth of an inch in diameter, with the pointed end of the quill, without drawing blood. (I would state here that I did not follow these directions in every instance, as sometimes I would make the abrasion much more extensive. But I never employed the lancet while using either the National or Chelsea virus, both of which were furnished us by the Health Department; nor did I use the same point a second time.) Nothing unusual was noticed until the ninth day after the operation, when the child became fretful and showed signs of fever, accompanied by swelling of the lymphatic glands of the neck and axilla. Simultaneously, a measles eruption developed over the abdomen and extremities. The arm appeared to be paralyzed, and was somewhat swollen, especially in the region of the axilla, while the skin presented a rough, chafed appearance, and was dotted with ecchymosis extending almost to the hand.

The scab had assumed a dark reddish hue, with contracted margins and depressed centre, and did not present the characteristic appearances of a genuine vesicle. The contiguous glands, together with the parotid and submaxillary, became involved, and showed signs of suppuration. Convulsions supervened, with an aggravation of all the other symptoms, on the third day of the attack, being the twelfth after the operation, and the child died on the thirteenth day.

No constitutional taint could be discovered in the parents or grandparents, all of whom are living and in good health. The peculiar circumstances attending this case render it difficult to account for the unfortunate result. This is the first case known in medical annals where a child has died of vaccination in Baltimore. In my daily rounds as vaccine physician, numerous instances were recounted to me by the laity in which they attempted to depict the horrors of vaccination. I discredited these reports, believing them to be fabrications devised by those who deny the efficacy of the Jennerian method, or who wished to oppose it from some other point of view. Upon further investigation, however, I have derived information from authentic sources, showing conclusively that vaccination is by no means free from danger. I shall not encroach upon your valuable space in relating the details of cases, but suffice it to say that the principal abnormal deviations consisted for the most part of erysipelas, pyæmia, gangrenous ulcers, suppurations, glandular involvements, eruptive disorders, etc.; though, perhaps, some of these complications may have occurred coincidentally, and not as the result of vaccination. The operation may have acted only as an exciting agent in arousing a latent predisposition to the disease. On the other hand, cases have occurred, no doubt, where the disease was on the point of outbreak, and not the result of any exciting cause. The following instance is recorded: For some reason a proposed vaccination was postponed; in the interval the infant developed an inherited syphilis. In this case, as in all other troubles that happen to appear after vaccination, the parents would have been only too happy to avail themselves of a convenient scapegoat for their own infirmities.

As to what may be regarded the most formidable complication following the operation of vaccination, I am unable to say from personal experience. *Apropos* to the subject, however, I shall quote briefly from a few eminent authorities. In Hardaway's "Essentials of Vaccination," erysipelas is spoken of as a comparatively rare although one of the most serious complications of vaccinia, or rather of vaccination. Dr. Ballard makes a wise distinction between erysipelas *after* vaccination and erysipelas *from* vaccination. He points out that the disease may occur as a consequence of the prevalence of general erysipelas, or may be due to sanitary defects in the house of the patient. Dr. J. Lewis Smith observes that the vaccination acts often merely as an exciting cause, not from any deleterious property in the virus itself, but just as an equal degree of inflammation might be produced from a cut, burn, or other indifferent agency. On the other hand, the virus itself may be the direct exciting cause. Vaccinal erysipelas may commence immediately after the operation, or it may wait upon the development of the vesicle, or be delayed until the fall of the crust.

Excluding those cases of erysipelas in which the vaccination has been merely an accidental factor, it is stated that the disease is prone to occur from use of revaccination lymph, from spurious primary cases, or from lymph taken at too late a period of the vesicle, or, finally, from lymph which has become partially decomposed. The course of the vaccine vesicle is sometimes interfered with by mechanical influences, such as scratching, rubbing of the clothes, etc. The inflammation under these circumstances is apt to be increased, and suppuration may occur. The scab which results is composed of large yellowish crusts unfit for use in vaccination. Inflammation and suppuration of contiguous lymphatic glands are some-

times an annoying, although not generally a serious, complication. Hebra states that occasionally swelling of the parotid and submaxillary glands occurs after vaccination, attended with rather abundant salivation. In children of a vitiated constitution, when the inflammation surrounding the vesicle has been intense, circumscribed abscesses may occur. Mr. Savory reports a case of pyæmia following about the ninth day after vaccination which resulted in death. Dr. Day records the case of a patient who had wasting of the deltoid and paralysis of the arm, which he regarded as consequent upon vaccination.

The foregoing facts would lead us to the conclusion that we may reasonably expect, as *unavoidable*, a small percentage of mortality, with other untoward results, consequent upon the operation of vaccination. In view of this fact, it behooves us, as intelligent and faithful physicians, to exert our utmost endeavors in combating and overthrowing those wide-spread notions which are the outgrowth of skepticism and incredulity, and which are so prejudicial to the cause we espouse and to the well-being of human-kind. It is only through a more extensive dissemination of knowledge upon this subject, derived from a careful observation of facts, that we shall be able to refute those absurd theories which have already gained favor with the unenlightened. Such incontrovertible evidence is needed to restore the confidence of the wavering, and to disabuse the public mind of those preconceived and unwarranted conclusions which have been so universally propagated by the opponents of vaccination.

558 WEST FAYETTE STREET.

A CASE OF PARALYSIS OF THE ARM, FOLLOWING VACCINATION.

By J. H. POOLEY, M.D.,

PROFESSOR OF SURGERY IN THE TOLEDO MEDICAL COLLEGE.

EUGENE S—, German, married, aged twenty-two. He is a finely developed, athletic young man, and has always been perfectly healthy.

On August 5, 1880, he was vaccinated on the left arm at the usual situation, the insertion of the deltoid muscle, with the so-called bovine virus. A large number of persons—about fifty—were vaccinated at the same time, and with the same virus, in none of whom did any untoward results follow.

S— had a very sore arm; the vaccine pustule became a large, deep ulcer, with a wide-spreading areola of dusky redness, indurated, painful, and tender.

The lymphatics in the axilla were exceedingly painful, and enlarged to such an extent that it was thought at one time they would inevitably suppurate. He had also pretty severe constitutional reaction, with high fever and slight delirium.

About September 1st, when both the local and constitutional symptoms were decidedly on the decline, he got up one morning and found his left arm completely paralyzed. Though he had formerly been in the habit of sleeping with this arm thrown up under his head, he had not, of course, done so for some weeks, owing to its painful condition.

I first saw him on December 1, 1880; his condition then was as follows: The left upper extremity was still perfectly paralyzed. When lifted up, and then let go of, it dropped to his side like a lifeless and inert mass; he had not the slightest power to move it, nor any part of it, not even a finger. There was also complete anæsthesia and analgesia; he could not tell when it was touched, or distinguish between ice and boiling water. A pin thrust into the limb, or small incisions, were entirely unnoticed.

This anæsthetic region extended completely up the arm, and quite up to the top of the shoulder, also over the pectoral region half-way to the sternum, and behind

as far as the spine of the scapula, ending quite abruptly at these points. The limb continued to be well-nourished, not even measurement showing any difference in the size of the two arms, but I thought the muscles were decidedly flaccid and deficient in tone.

I could detect no difference in the pulsation on the two sides, and the temperature was the same in both axillæ. The electrical excitability of the paralyzed muscles was good. The vaccination sore had been well some time, there was no enlargement in the axilla, and his general health was first-rate. The palm of his left hand was constantly wet with perspiration, even in the coldest weather, while the other was quite dry; there was some of the well-known "glossy-skin" appearance about the fingers, but no causalgia, or pain of any kind. A few herpetic or eczematous vesicles were distributed about the roots of the nails.

He had no pain of any kind, anywhere, when I saw him, but had previously had, in addition to that caused by his sore arm and axillary swelling, darting, lightning-like pains the whole length of the limb, together with tingling and pricking sensations.

I advised the hypodermic use of strychnine into the paralyzed arm, in gradually increasing doses, till some toxic effects were produced, together with massage, and faradic electricity.

I saw no more of him till about a year afterward, when I met him accidentally, and found that he was quite well, and had been for some months; he said that he began to improve soon after I first saw him, and attributes his recovery mainly to the electricity.

This is certainly a very interesting case, and perhaps not quite easy of interpretation, though my own opinion was, and is, that it was a neuritis of some of the nerves of the axillary plexus, perhaps all of them, brought about by pressure and extension of inflammation from the enlarged lymphatics.

The entire absence of more grave general symptoms, and the peculiar phenomena of the sweating palm, glossy skin, and vesicles about the nails, seem to me to establish the diagnosis. As to the treatment, we must not forget the element of time, and very likely he would have recovered with this alone, but what we did was at any rate in the right direction, and could do no harm.

TOLEDO, O., May 18, 1883.

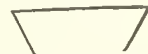
SUTURE-CLAMP COAPTATION.

A NEW METHOD FOR CLOSING WOUNDS.

By J. H. CIPPERLY, M.D.,

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To the means ordinarily employed in repairing a lacerated or incised wound—bandages, adhesive strips, surgical pins, and the various sutures—another, a new and facile method, is obtained with what I am pleased to call, in the want of a better term, a suture-clamp. Made of hard silver wire, bent at acute angles at both ends, the extremities of the arms sharpened to a point, the instrument is pictured thus:



One hand supports the severed parts together, while the other introduces a clamp, penetrating one lip at a time, and introducing a clamp at regular distances until the coaptation is complete. Their position is retained by the tight grasp of the skin and tissues on the arms of the clamps, supplemented by the inclination of the arms toward each other. A moment's consideration of the advantages of this method: the most striking are the ease and rapidity with which you close the wound. A single instrument is all there is at hand; you do away with needle, wire, needle-forceps, scissors, and the trouble accompanying them. In the closure of the wound there is less constriction to the lips than results in the use of

sutures or pins, where the swelling often causes a tearing out; thus is aided the better work of repair. The arms of the clamp sustain both walls, so that the deeper parts of the wound conjoin, and there is less opportunity for the pocketing of blood and pus, and more rapid healing. Again, there is the minimum of pain attending their introduction and they are removed without pain, and may be used again. Made of various sizes (usually required but three or four), their application is general. With short arms they may be used in scalp wounds and over bony places. In wounds where there is contusion and laceration and gaping, long clamps reaching across will produce a partial union at least, otherwise not attained. The first application was made in the case of an injury where the toes and portions of the metatarsal bones were removed, a buzz-saw accident leaving a single flap from the plantar surface of the foot, and rather short to cover the exposed bones. Five clamps were applied that closed the wound, and were allowed to remain six days, when adhesive plaster was brought into play, as the wound was healing by granulation. In this first instance their ready, time-saving usefulness was at once clearly demonstrated. This occurred in March, 1882, and I have since made use of them repeatedly, and with the uniformity of repeated satisfaction in their success.

Suture-clamp for wounds.—I. Is a new method.

II. Is made of hard silver wire by preference.

III. Has advantages: 1, Of rapidity in application; 2, of a single instrument at hand; 3, of less constriction; 4, of better coaptation; 5, of but little pain on introduction and removal; 6, that it may be used again; 7, of partial union in gaping wounds.

IV. First used in March, 1882.

DOUBLE IDENTITY AFTER TREPANNING.

By J. N. McCORMACK, M.D.,

BOWLING GREEN, KY.,

PRESIDENT OF THE KENTUCKY STATE MEDICAL SOCIETY, AND MEMBER OF THE STATE BOARD OF HEALTH OF KENTUCKY.

C. W.—, an American farmer, aged twenty-three years, was brought to me in March, 1881, for examination as to his mental condition, that I might testify before a jury, which his friends had requested, as they desired to send him to a lunatic asylum. He was brought from the country in an open wagon by his wife and two friends, and from them was learned the following history: When fifteen years of age, and while engaged as a "striker" in his father's blacksmith-shop, he was struck on the head with a pointed hammer and felled to the floor, was unconscious for several hours, gradually recovered, and after a few weeks, suffered no noticeable inconvenience from the injury, although a marked depression of the skull remained. This occurred in Allen County. Two or three years later he came to the community in which he now resides, was married when nineteen years of age, purchased a farm shortly afterward, and all this time presented no mental peculiarity which was sufficiently marked to attract attention. Six months before he was brought to me he began to complain of pain and tenderness in the seat of the old wound, and about the same time began to exhibit indications of mental derangement. At first he was morose and sullen, but later became maniacal and difficult to restrain, and for several weeks had had no lucid interval. He had eaten but little, his sleep had been much disturbed, and he had lost strength and flesh rapidly. At the time I saw him he was emaciated and cachectic in appearance, with furred tongue; pulse, 110; temperature, 98°. He was very nervous and impatient of restraint, and presented all the symptoms of acute mania. There was a deep depression, about the size of a silver quarter, at the junction of the sagittal with the coronal suture, and the scalp in the vicinity of the depression was so sensitive that it was examined with great difficulty. The man was

evidently in no condition to be sent to an asylum, and was returned to his home a short distance in the country.

On the following day the operation of trepanning was performed in the presence of Drs. Porter, Murray, Neale, and Meredith. At first a section of bone was removed with a large trephine, and as this did not include all the internal depression, a second section was taken out which slightly lapped into this; still a corner remained, which was removed with bone forceps. The membranes were not injured, and the dura mater appeared healthy. The wound was closed, except at the posterior part, which was left open for drainage. The recovery was rapid, and the relief of the mental derangement was immediate and permanent. He gained strength and flesh rapidly, and in a few weeks appeared to be in perfect health.

Immediately following the operation were developed those curious mental phenomena which gave special interest to the case. The man seemed to be impressed with the idea that he had just recovered from the effects of the blow on the head, and although he talked freely of his history up to the time of the accident, seemed to have no recollection of any event of his life from this time until he was relieved by the operation. He said that he did not know his wife, or that he had a wife; his neighbors were strangers to him, and his business transactions in connection with the purchase of his farm could only be understood after an examination of the deeds and full explanation. He seemed to be entirely ignorant of his former surroundings, and had to learn the roads of his neighborhood like any other stranger. Some of his friends were sceptical in regard to these things, and many tests were made of their truth. His answers were frank and candid, and he always said that he was totally unable to recall anything occurring in this period of his life. When it is remembered that while a man of fair intelligence, that his education was very limited, and that he had never heard of a similar case, it is more difficult to believe that he could manufacture and be consistent in such a story than to believe the story itself. His friends all concurred in saying that there had been a marked change in his general demeanor since the operation. While always industrious and sober, he had been rather boisterous and turbulent in disposition, which was in striking contrast with his quiet manners since the operation. It is to be regretted that the man was not highly intellectual and accustomed to describing his methods of thought, as the interest of the case would be greatly increased by minute mental details.

GONORRHEA OF THE RECTUM.—Thiry (*Presse Méd. Belge*) believes in the reality of gonorrheal inflammation of the rectum, an affection which is not recognized by many authors. In support of his opinion he relates the following case: A woman, aged twenty-four, a clandestine prostitute, was admitted into the Hôpital St. Pierre, Brussels, complaining of weight and shooting pain in the pelvis, pain in defecation, and a constant thick discharge from the bowel. Walking also was difficult. On examination, there was a well-marked funnel-shaped depression of the anus, the anal folds were obliterated, and the sphincter was weak and dilated. A vaginal speculum of ordinary size passed easily and without causing pain. On washing away the abundant thick discharge, the lower portion of the rectum was seen to be acutely inflamed and studded with bright red points, which bled when wiped with wool. The follicles in the rectal folds were enlarged and discharged pus. The patient confessed that she had had relations with men who were suffering from clap. Solution of borax was used locally at first; afterward red cinchona bark was applied to the mucous membrane, and, finally, an injection of oak-bark was used. Under this treatment, combined with sitz-baths, and the internal administration of iron, the woman recovered in about three weeks.

Progress of Medical Science.

PECULIAR DISTURBANCE OF THE CAPILLARY CIRCULATION.—At a recent meeting of the Harveian Society, Dr. Broadbent showed a patient who was suffering from a peculiar disturbance of the capillary circulation. Eight years ago he had a sunstroke, which for a time rendered him insensible; previously to this, he had frequently suffered from pain in the occipital region and vertigo, which since that time had been much aggravated. Seven weeks ago, while looking over a bridge, he was seized with a sudden and violent pain in the back of the head, and intense giddiness, upon which supervened unconsciousness, lasting for fifteen minutes; since that time he had had many similar attacks, as many as three or four a week. He was a man aged forty-six, somewhat deaf, and with a confused manner when spoken to. The patellar tendon reflex was increased, especially on the left side, ankle-clonus was absent; there was slight loss of sensibility in the lower extremities. On speaking to the patient a blush appeared on the face, which extended over the chest and back, and lasted several minutes, leaving a mottling of the skin which somewhat resembled roseola. The *tache cérébrale* was unusually well marked, a line of vivid redness appearing in the track of the finger-nail drawn over the skin; myoidema was also present, though not in so marked a degree as when the patient first came under observation. Dr. Broadbent stated that this was a condition occasionally seen when the nervous system was broken down by overwork and strain. The *tache cérébrale* was most frequently seen in tubercular meningitis, but it was often present in other acute cerebral diseases, and sometimes in enteric fever; its recurrence in association with prostration of the nervous system without fever was interesting. He was reminded of cases in which artificial urticaria could be produced by very slight irritation, but he had seen this in robust health, and it appeared to be congenital. Myoidema was most common in phthisis, and in the late stage of enteric fever, and was generally indicative of wasting under fever. In the case before the meeting, however, there was no history of any febrile condition. It might possibly have been due to insufficient food, which, during the siege of Paris, had given rise to myoidema on a large scale. Dr. Broadbent had once seen this condition in a single muscle, the right trapezius, in a case of aneurism of the aorta.

ARE PHTHISIS, BRONCHITIS, AND PNEUMONIA EPIDEMIC DISEASES?—At the last meeting of the Epidemiological Society (*British Medical Journal*, April 21, 1883), Dr. Longstaffe presented an interesting report touching the above question.

The author explained that his object was to examine the Registrar-General's returns in such a way as would make clear their bearing on the solution of the question propounded. As in previous papers relating to summer diarrhoea and the diseases allied to erysipelas respectively, he exhibited diagrams graphically representing the death-rates for England and Wales from the diseases in question, and certain others in various ways allied to them, during a period of twenty-five years. He also showed the same death-rates in London for thirty-three years, compared with a curve expressing the number of cold days in each winter. One diagram showed that the death-rate curve of phthisis deviated very little from a straight line, resembling in this respect those for cancer, apoplexy, paralysis, convulsions, and fractures. The curves of tubercular meningitis, and to a less degree *tabes mesenterica*, resembled the phthisis curve. The death-rate from phthisis had fallen twenty per cent. during the last twenty years. The bronchitis curve exhibited considerable fluctuations, but, on the average, it had risen eighty-one per cent. during twenty years. Pneumonia gave a curve closely resembling that of bronchitis in many respects, but the average mortality had fallen twenty per cent.

The total mortality from all diseases of the respiratory organs, together with phthisis, showed an increase of five per cent., indicating that probably many deaths formerly returned as due to phthisis or pneumonia were now classed with bronchitis. Pleurisy appeared to be more allied to rheumatism than to respiratory diseases. From the curves relating to deaths in London, it appeared that bronchitis and pneumonia corresponded with the coldness of the winters, but not so closely as might have been expected. Phthisis was but little affected. Curves derived from Messrs. Buchan and Mitchell's paper on "The Influence of Weather on Mortality," showing the average weekly fluctuations of the death-rates from various causes in London during thirty years, strongly confirmed the author's conclusions, with the single exception of *tabes mesenterica*, which gives an entirely different curve from that of phthisis. In another diagram were exhibited the weekly fluctuations of the deaths from bronchitis and pneumonia during the last five winters in London, and their relation to cold; also the same for phthisis during two of the winters. This diagram showed clearly that the death-curve of pneumonia had a general correspondence with the death-curve of bronchitis; but it differed in two particulars: the fluctuations were much less, and while it rose in the autumn as rapidly, it fell in the spring more gradually. The author's main conclusions were these: 1. The mortality statistics of England and Wales did not give any evidence in favor of the view that phthisis is communicable; but they showed, on the other hand, that weather had very little influence on the death-rate of phthisis. 2. While bronchitis and pneumonia were both greatly influenced by meteorological conditions, it was difficult to explain by those conditions only all the phenomena. 3. Common catarrh was a communicable disease; and it was probable that very many cases of bronchitis and pneumonia might be looked upon as complications of that or some similar disease of mild character when uncomplicated. 4. The different incidence of bronchitis and pneumonia on the two sexes pointed to some difference in the causation of the two diseases. 5. There would appear to be some common factor in the causation of phthisis and tubercular meningitis.

A NEW SIGN OF PREGNANCY.—Dr. Jorissenne claims to have discovered a new and certain sign of pregnancy, even in the first months. It consists in an unchanging frequency of the pulse, in the three positions of standing, sitting, and lying. Normally, the pulse-rate varies in these three positions, but in pregnancy, even at the first month, this variation is not observed. The same condition, he states, is observed only in cardiac hypertrophy. Other changes in the genital apparatus, such as tumors, are not marked by this phenomenon. An explanation of this peculiarity is thought by the author to be either in changes in the blood, producing disturbances of the circulation, or in hypertrophy of the heart. The latter is asserted to be a physiological condition in pregnancy by many authors, but denied by others.—*Deutsche Medicinal-Zeitung*, March 8, 1883.

ERGOT AS A PREVENTIVE OF THE POISONOUS EFFECTS OF SALICYLIC ACID.—Dr. Schilling recommends the administration of ergot in conjunction with salicylic acid or quinine, to obviate the unpleasant effects of those drugs. He had observed, in a number of cases in which large doses of salicylic acid were taken, a marked congestion of the external auditory canal and *membrana tympani*. He was thus led to give ergot to cause a contraction of the vessels, and obtained in every case a cessation or notable diminution of tinnitus and deafness. The dose of ergot (aqueous extract) should be about one-tenth that of the salicylic acid. The antipyretic effect of the latter is not weakened by the ergot. Like favorable results were obtained by combining ergot with quinine.—*Allgem. Med. Central-Zeitung*, March 21, 1883.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE ACTIONS AND USES OF ATROPIA.

ONE of the physiological effects of atropia is diminution or arrest of various secretions. Thus dryness of the mucous membranes of the throat, mouth, and nares has been noted after the ingestion of this drug. The secretory function of the skin is also suspended. Therapeutics has taken advantage of this moderating action on secretion. Thus, in the treatment of coryza, Dr. Gentilhomme, of Geneva, taking his departure from the fact that atropine diminishes the secretion, even causes dryness of the nasal mucous membrane, prescribes pills, containing each one-half milligramme of sulphate of atropine. At the onset of the coryza one pill is taken, and in an hour's time the sneezing will have ceased, the secretion will have disappeared, and the respiration become free. Sometimes a quarter of a milligramme ($\frac{1}{40}$ grain) is sufficient to produce this result. In chronic bronchitis the same favorable result has been obtained. In profuse salivation, from mercury, pregnancy (reflex salivation), etc., Gabler has derived benefit from atropine in minute doses; he prescribes powders of atropine, containing each one-quarter of a milligramme rubbed up with white sugar; one powder may be taken every four hours till the physiological effects of the drug are experienced.

This same authority has prescribed atropine with success in catarrhal diarrhœa, giving from one-fourth to one-half a milligram every five hours till toxic manifestations appeared. There is, perhaps, no better remedy with which to combat the profuse night-sweats of phthisis. As an anhydrotic it has a high place in the practice of physicians all over the world. Dr. J. Milner Fothergill recommends doses varying from the seventy-fifth to the fiftieth of a grain. Vulpian ("Clinique Méd.," p. 338) advises pills of sulphate of atropine, each containing one-half milligramme. Of these, two pills, one hour apart, in the evening. If this is not sufficient, give another about the middle of the afternoon. It is rare, he says, that more than three pills a day are necessary.

Bartholow, who prefers atropine to any other remedy for night-sweats, is much in the habit of prescribing a pill of $\frac{1}{20}$ of a grain three times a day; besides acting as an anhydrotic it facilitates respiration.

That well-known sedative action which atropine exercises on the peripheral terminations of nerves, and on the elements of the nerve-centres, may, irrespective of any supposed constrictive effect on the vaso-motors—which is an effect by no means constant—explain the use of

this medicament in affections of the cerebro-spinal nervous system characterized by phenomena of excitation, such as pain, spasm, convulsions, epilepsy. By this sedative action Gabler (also Trousseau and Pidoux) account for the remedial efficacy (so often noted) of belladonna and its alkaloid in rheumatismal and other inflammations of the spinal cord and its membranes. Under the influence of this drug, the pain and numbness and contracture of the extremities often give way rapidly.

In nocturnal incontinence of urine, atropine, by allaying irritability of the muscular fibre of the bladder, or producing stupefaction of the mucous membrane of that viscus (eminent authorities, as Gabler, believe that both effects are brought about as the result of the physiological action of the drug) proves an invaluable remedy. One grain of sulphate of atropine may be rubbed up with one hundred grains of white sugar and divided into a hundred powders. Of these, one may be taken at bedtime by a child twelve years old. Or one drop may be given at bedtime of the solution of sulphate of atropine of the British Ph., which consists of two grains sulphate of atropine to half a fluid ounce of distilled water. If this should be inefficacious, the second night two drops of the solution may be administered, which will, without doubt, give the physiological effect of the medicament. The dose must gradually be increased according to the necessity of the case.

In pertussis, one of the best remedies is sulphite of atropia, and, given according to Bartholow's formula, it is sure to give relief in the spasmodic stage where there is profuse bronchial secretion. One grain of sulphate of atropine is dissolved in an ounce of cherry-laurel water; of this two drops may be given three or four times a day. We have used this remedy with advantage in whooping-cough in the form of spray; the liquid in the atomizing cap of a spray-producer or steam atomizer being charged with five drops of Bartholow's solution. Atropia has a remarkable sedative or stupefying effect in irritable nerve-terminations when applied locally, and the quantities of the medicament that may be used with benefit are really infinitesimal. The above solution makes a good liniment in painful neuralgias, but must not be rubbed about the orbit for obvious reasons.

These are some of the uses of this valuable medicament. We have not referred to its use as a local anodyne and mydriatic in ophthalmic practice; probably no drug is in higher repute with ophthalmologists.

Properly managed, there is scarcely a remedial agent in the *Materia Medica* that will be of such real service to the physician, but it needs to be used with great care and judgment.

TRANSFERRED IMPRESSIONS AND "TELEPATHY."

ALMOST every physician, during the course of his professional life, hears stories regarding clairvoyance. Some individual has had a vision or dreamed a dream which is subsequently found to have represented, most marvellously, actual objects or persons that were at the time far away.

An organization in London has been investigating the alleged phenomena of this class, endeavoring to apply scientific methods to their study. The *Nineteenth Century* and the *Fortnightly Review* have at different times

published some of the results of this work. Quite recently the latter journal has published an article by Mr. Edmund Gurney and Mr. Frederick W. M. Myers, claiming very positively that the mind may at certain times be capable of receiving impressions through other channels than those of the various senses; in other words, that the so-called *clairvoyance* is an actual physiological fact. The phenomenon is described as a transference of impression, and is somewhat different from thought-reading, no evidence being here given that a train of ideas or an intellectual process can be thus "transferred."

The authors in question have collected a large amount of what they consider evidence for their view, this evidence consisting in stories told to them by persons whose character they in most cases have investigated.

The number of these stories is, we are told, enormous, and they all tend to prove the same thing, so that even if singly they might be doubted, collectively their weight as evidence is overwhelming.

In describing the phenomena certain technical terms are adopted. The person who receives the impression is called the percipient, the person who causes it, the agent. Now it is found that when the transference takes place, one or other of the persons is generally in an abnormal or unconscious condition; *e.g.*, in a state of trance or of sleep, or at the point of death, or under the influence of some powerful emotion. The cases are therefore classified in accordance with the condition of the agent or percipient. As an example of the class of phenomena alleged to be real we append the following:

"One Sunday night last winter, at 1 A.M., I wished strongly to communicate the idea of my presence to two friends, who resided about three miles from the house where I was staying. When I next saw them, a few days afterward, I expressly refrained from mentioning my experiment; but in the course of conversation one of them said, 'You would not believe what a strange night we spent last Sunday,' and then recounted that both the friends had believed themselves to see my figure standing in their room. The experience was vivid enough to wake them completely, and they both looked at their watches, and found it to be exactly one o'clock.' (One of these friends has supplied independent testimony to this circumstance.)"

We have ventured to furnish our readers this account of the work of these gentlemen because of the strong endorsement that has been given to it, and because of its important physiological and pathological significance. If it could be proved that the mind can perceive through other agencies than the senses, it would establish a fact which would antagonize the present physiological theories (based upon evolution) of the development of these senses; for it is now believed that they were developed in order to enable the animal to adapt himself to his environment. They were made *by* the environment primarily, rather than *for* it, and in the history of animal evolution there are absolutely no data which enable us to account for the development of a supersensual perceptive power.

The evidence collected by Messrs. Gurney and Myers is not of the kind, as so far presented, to bring positive conviction, despite their positive claims. The stories,

many of them, are second hand; they are for the most part told by women, and sometimes by children. Some of them were first narrated a hundred years ago. The element of unconscious exaggeration appears to be taken but little into account. Furthermore, the possibility of coincidence is of itself almost enough to explain them. Thousands upon thousands of dreams and visions, impressions and presentiments are occurring constantly. We hear from those which turn out to be true, but not from the others. Despite all this, however, the inquiry is a most interesting one, and if it finally ends in explaining in any way the extremely numerous stories of thought-reading and clairvoyance, a large element in the world's uneasiness will have been removed.

News of the Week.

THE ANNUAL MEETING OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS—DONATION OF TEN THOUSAND DOLLARS.—The Cartwright Prize of five hundred dollars of the Alumni Association of the College of Physicians and Surgeons of this city, was awarded to Dr. Walter Mendelsohn, for an essay entitled: "Circulation in the Kidney during Fever." The experiments upon which the essay was based were performed at Leipzig under the direction of Cohnheim. It was voted to advertise the Cartwright Prize more extensively in the future, for the purpose of securing more and better competing essays.

The president announced that Mr. James T. Swift had given, under certain conditions, the sum of ten thousand dollars to the association as a fund for the purchase and care of physiological apparatus, to be used by and under the care of the professor of physiology of the college. The sum is given on condition that the college secure a new building in which shall be a suitable room for the apparatus in question. The fund is established in memory of Mr. Swift's brother, the late Dr. Foster Swift, formerly assistant professor of obstetrics in the college.

The Alumni Association now possess six different funds for various objects. Three of them amount to about ten thousand dollars, and one to nearly twenty thousand dollars. It is, therefore, probably the richest association of the kind in the country. Effort is being made to increase the fund for the support of the physiological and pathological laboratory. Most of the work in this laboratory is that of elementary instruction in histology and morbid anatomy, and it is to be regretted that it does not or cannot offer opportunity for higher scientific labors.

The association re-elected its present officers.

THE MOSES TAYLOR HOSPITAL.—The work on the new Moses Taylor Hospital, which is to be built on an eminence overlooking Scranton, Pa., on ground given by the Lackawanna Iron and Coal Company, is to be begun about June 1st, under contracts based upon plans made by Mr. Carl Pfeiffer of this city. A group of buildings in the Queen Anne style has been planned to cost \$300,000. It is expected that Mr. Percy D. Pyne and the heirs of the Taylor estate will add \$200,000 to the endowment fund given by Moses Taylor, and it is ru-

mored that the Delaware, Lackawanna and Western Railroad Company, and the Lackawanna Iron and Coal Company will arrange to further increase the endowment by \$1,000,000.

REGULATING THE PRACTICE OF MEDICINE IN MINNESOTA.—We have received a copy of the law which has recently been enacted regulating the practice of medicine in Minnesota. It provides that the Faculty of the Medical Department of the Universities of Minnesota shall organize as a Board of Examiners. All persons who practise medicine in the State must present their diplomas to this Board for verification, or if they have no diploma must submit to examination in order to receive a license.

There is nothing said regarding the character of the diploma, which presumably need only be a medical diploma from a medical college of any kind.

A DOCTOR WITHOUT A LICENSE.—Dr. O. C. Gage, who was arrested at Dover, N. H., for practicing medicine without a license from a New Hampshire medical society, has been discharged without costs. The defendant showed that a license was refused him only because he advertised in papers and did an itinerant business.

The inference is that the laws against charlatany in New Hampshire are very weak.

QUARREL AMONG THE JOHNS HOPKINS TRUSTEES.—A minority of the Trustees of the Johns Hopkins University, led by Mr. Garrett, have published a circular stating that the funds and work of the University have not been properly directed. It is claimed that the buildings should be erected at Clifton, outside the city, also that too much money has been spent in salarizing professors. These charges are denied.

DISEASE IN CONNECTICUT.—The April report of the State Board of Connecticut shows an increase in respiratory and malarial diseases. Measles is quite prevalent. One case of small-pox occurred not long ago.

THE DEATH OF DR. BENJAMIN WILLS RICHARDSON, of Dublin, is announced. Dr. Richardson was a physiologist and histologist of high repute. This is not Dr. Benj. Ward Richardson, of London, who is perhaps more widely known.

FIRE IN THE HARVARD MEDICAL SCHOOL'S NEW BUILDING.—A fire took place in the new building of the Harvard Medical School recently, but it was confined chiefly to the amphitheatre, the building being fire-proof. The damage amounted to about \$2,000, which does not fall on the college, as the building had not been handed over to the trustees.

NEW INSANE ASYLUMS.—Geneva, Ill., has appropriated \$12,000 to erect a county insane asylum; also Racine, Wis., is going to have an insane hospital.

DR. W. E. QUINE, one of the ablest professors of the Chicago Medical College faculty, has resigned his chair.

REMOVAL OF THE UNITED STATES MARINE HOSPITAL AT BEDLOE'S ISLAND.—The temporary buildings on Bedloe's Island, now used as a United States marine hospital, being insufficient for the purposes required, the hospital authorities have leased the Seamen's Retreat at

Stapleton, Staten Island, from the Marine Society. A few alterations will be necessary in the new quarters, but in most respects the buildings at Stapleton, which are of stone, are greatly superior to the temporary ones on Bedloe's Island. The grounds of the Seamen's Retreat are very fine and extensive, and have a large water front.

FORBIDDING THE SALE OF TOBACCO TO BOYS.—The New Jersey State Legislature has passed a law forbidding any person, knowingly, to sell cigarettes or tobacco in any form to any minor under sixteen years of age.

Reports of Societies.

CONNECTICUT MEDICAL SOCIETY.

Ninety-second Annual Convention, held at Hartford, Conn., May 23 and 24, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE Ninety-second Annual Convention of the Connecticut Medical Society was held at the City Hall, Hartford, Wednesday May 23d, commencing at three o'clock.

The President, DR. WM. G. BROWNSON, after welcoming the Society and alluding to the results they should endeavor to achieve, presented the following suggestions for consideration.

PRESIDENT'S ADDRESS.

That a committee should be chosen to report on the legal status, and a revision of the charter and by-laws, the term of office of the Secretary, which should be permanent, and like topics. A board of councillors was advised, to be made up of all ex-presidents, who should be a board of censors also, and procure suitable literary exercises, etc. An increase of fellows was advised to correspond with the increased membership of the Society. He announced, with regret, that from press of other duties Dr. Chamberlain could not longer serve as secretary, and spoke of the prosperity of the Society during his eight years' service; notwithstanding the loss of eighty-five members by death, the Society had gained over a hundred members, and the balance in the treasury had never been more satisfactory. All was largely due to his labors as the chief executive officer of the Society. The increase of new remedies was mentioned as unduly large, and stated that the temptation to use them to the exclusion of reliable remedies was often carried so far as to result in detriment to the patient. He advised a committee of four to report on new remedies. The tendency to exalt specialists at the expense of the general practitioners was deprecated. He commended, in the highest terms, the results achieved by the State Board of Health, particularizing many special points. The vexed question of the code of ethics was gracefully touched upon, with the conclusion that soon it would be abolished, having outlived its usefulness, but that time was not yet.

On motion of Dr. Wile committees were elected to carry into effect the recommendations of the President, and they reported appropriate measures.

The committee on the

SOCIETY'S CHARTER

was, on motion of Professor Carmalt, selected by the Fellows from each county, who each proposed one member, this committee to report to a special meeting at the call of the President.

There was a lively discussion on the need of any charter and upon the relations of the society to the Medical Institution of Yale College by Professors M. C.

White, S. G. Hubbard, and Dr. C. W. Chamberlain and others.

The Committee on Unfinished Business reported a by-law assigning duties to county censors, which was adopted.

The Committee on Miscellaneous Business reported, in reference to voluntary papers, that it was the duty of the Committee on Publication to decide upon their publication or rejection, but it should be upon the merits of the papers solely.

The Treasurer reported an increase of \$40 in receipts from those of last year, a decrease expense of \$76, and a balance of \$638—an increase of \$200 over that of last year very nearly.

This increase was due largely to Dr. W. S. Holmes, of Waterbury, who had collected all the arrears in his county. There was about one hundred dollars due nearly all collectable, if not all.

OFFICERS ELECTED.

The Nominating Committee reported the following officers who were duly elected: *President*—Dr. E. B. Nye, of Middletown; *Vice-President*—Dr. B. N. Comings, of New Britain; *Treasurer*—Dr. E. P. Swasey, of New Britain; *Secretary*—Dr. S. B. St. John, Hartford; *Committee on Matters of Professional Interest*—Drs. W. C. Wile, J. H. Grannis, and E. C. Kinney; *Disseminator*—Dr. N. E. Worden; *Alternate*—W. H. Holmes.

When

THE DELEGATES TO THE NEW YORK MEDICAL SOCIETY was reached it was moved to

LAY THEIR NOMINATIONS ON THE TABLE,

which was carried, after a short discussion or rather brief statement of the reasons for such action, which was, in brief, viz., the attitude of the New York Medical Society toward the American Medical Association.

PROFESSOR S. G. HUBBARD presented the report of the Committee on the Revision of

THE LAW RELATING TO CORONERS.

He stated that there had been no definite plan agreed upon, but all the members had worked hard and efficiently, each in their own way, and the result was one the Society and State might well be proud of, as the need of such action was notorious.

DR. CHAMBERLAIN spoke of the work done by Drs. Porter and Cleaveland, both of which had, at their own expense, visited Boston several times to learn the details of the working of the Massachusetts law, and thus secured all the results of their experience. The law apparently was an improvement over that law in many respects, while like it in most essential respects.

DR. PORTER presented copies of the law to the Society, and spoke of its peculiar points of merit.

The Committee on Honorary Members reported the name of Dr. John I. Billings favorably, and he was elected unanimously.

Dr. J. E. Reeves, of Wheeling, West Va., and Professor T. A. Emmett, were proposed for honorary membership.

The following were elected members of the Committee on revision of the charter, etc.: Dr. C. W. Chamberlain, Professor W. H. Camall, Dr. F. N. Bramman, Dr. G. F. Lewis, Dr. H. W. Bull, Dr. E. A. Hill, Dr. G. W. Burke, Dr. A. R. Goodrich.

THE ARMY MEDICAL MUSEUM AND INDEX CATALOGUE OF SURGEON-GENERAL'S OFFICE

were endorsed emphatically in a series of resolutions, which the secretary was directed to send to every member of Congress from this State. The general idea of a medical register of New England, as proposed by the Massachusetts Medical Society, was endorsed in general, without entering into details.

Dr. W. C. Wile, Professor W. H. Camall, and Dr.

Charles Gardiner, the Committee on Increase of Fellows, and making ex-Presidents a Board of Counsellors, etc., reported that the by-laws should be so changed as to accomplish this. That the secretary should receive yearly fifty dollars, the treasurer twenty-five dollars, and that the number of Fellows should be increased by seventeen, so that fifty-five should be elected in place of thirty-eight, as now. They also advised that the secretary should be a permanent office. The report was accepted, and the proposed amendments referred to the next Convention for action.

It was voted that the annual tax should be two dollars, payable on and after June 1st; also that seven hundred copies of the proceedings should be published.

The Committee on Business reported favorably on the following, which were passed.

AMENDMENT TO BY-LAWS: THAT NO VOLUNTARY PAPER BE PUBLISHED THAT HAD NOT BEEN READ BEFORE SOME COUNTY SOCIETY.

By rule, this lays over a year.

Resolved, That the Legislature be memorialized by the Secretary to pass a law that

NO PROPRIETORY OR PATENT MEDICINE BE SOLD

in this State, unless there was plainly printed upon the label the formula, with a heavy penalty if the contents do not prove true to formula.

Resolved, That no resolution shall be received by the Secretary unless it be plainly and legibly written.

That all persons making remarks upon any subject should write them either before or after delivery, and that the Secretary be directed to procure, at expense of the Society, lap-tablets for this purpose.

The Auditing Committee reported the treasurer's report correct.

It was voted that each county society elect two fellows to serve on the Nominating Committee, the second as alternate; also that each such society elect alternates for every fellow.

The Society then adjourned.

Wednesday evening, the Hartford Medical Society gave a reception at the United States Hotel, which was largely attended, and proved a pleasant occasion.

Thursday was the general meeting for literary exercises, commencing at 9 A.M.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

The Fifth Annual Congress, held in New York, May 21, 22, and 23, 1883.

MONDAY, MAY 21ST—FIRST DAY—MORNING SESSION.

THE Association met in the Hall of the New York Academy of Medicine, and was called to order at 10 A.M. by the President, DR. GEORGE M. LEFFERTS, of New York.

The Secretary, DR. D. BRYSON DELAVAN, of New York, then called the roll.

The following Fellows were in attendance: M. J. Asch, New York; F. H. Bosworth, New York; S. H. Chapman, New Haven; J. Solis Cohen, Philadelphia; W. H. Daly, Pittsburg; T. A. De Blois, Boston; F. Donaldson, Baltimore; J. H. Douglas, New York; W. F. Duncan, New York; L. Elsberg, New York; T. R. French, Brooklyn; W. Gleitsman, New York; U. G. Hitchcock, New York; E. Holden, Newark; F. H. Hooper, Boston; E. F. Ingals, Chicago; F. L. Ives, New York; W. C. Jarvis, New York; S. Johnston, Baltimore; R. H. Kealhofer, St. Louis; F. I. Knight, Boston; S. W. Langmaid, Boston; R. P. Lincoln, New York; G. W. Major, Montreal; E. C. Morgan, Washington; D. N. Rankin, Alleghany; Beverley Robinson, New York; J. O. Roe, Rochester; C. Seiler, Philadel-

phia; A. H. Smith, New York; and Clinton Wagner, New York.

The ex-Presidents of the Association were invited to seats upon the platform.

The PRESIDENT then delivered

THE ADDRESS OF WELCOME,

in which he greeted his colleagues and fellow-workers with cordiality and extended to them the right hand of fellowship and a most hearty welcome.

With reference to an inaugural address, Dr. Lefferts departed from a custom sanctioned by long usage, and omitted it, believing that the time thus usually spent could be much more profitably consumed in scientific discussion. A few words of congratulation were then said concerning the marked prosperity of the Association, the fact that the constitutional limitation of membership had already been reached, urging emphatically that the limitation should not be extended, and suggesting that it was no more than fair that the few drones which were in the hive should give place to those who were willing to assume the work and responsibilities of active fellowship.

After thanking the Association for the honor conferred upon him by electing him to the high office, the President referred to the social influence of the organization, bade his fellow-workers God-speed, and then proceeded to the regular order of business, which was the reading of papers.

A motion, limiting the time to be occupied by each speaker participating in the discussions to five minutes, was adopted without dissent.

DR. GEORGE M. LEFFERTS then read a paper on

NEW FACTS IN LARYNGOLOGY.

He directed attention to the following class of cases, of which he had seen two: A gentleman, young, strong, free from any abnormality of the heart, lungs, or kidneys, is sitting at the dinner-table, and at a certain point in the conversation, suddenly has a slight attack of spasmodic cough, falls from his chair, is completely unconscious; almost immediately rises, and resumes the conversation at the point where it ceased. Is there any relation between this slight cough and so grave a result as complete unconsciousness and a fall? This is not the first attack. Several had occurred during the past eight years, and repeated partial attacks of unconsciousness, lasting for a few seconds, but then passing away entirely. There is an incomplete history of hereditary neurosis. There is no evidence of convulsive movements during the attacks. The face becomes suffused. Examination of the larynx reveals a normal appearance; the pharynx is granular, and the uvula is not elongated. A second instance of the same affection had been seen by Dr. Lefferts, and these were the only two cases with which he had come in contact during his entire practice. In the second case there was no history of neurosis. The patient's sister was decidedly neurotic.

These cases had been called laryngeal vertigo by Charcot. In looking up the literature of the subject, he had been able to find the records of only seven published instances. Of the etiology Dr. Lefferts asked special consideration. Charcot believes them to be due to irritation of the centripetal laryngeal nerve, and that they are somewhat analogous to the cases of vertigo of Menière's disease. On the other hand, Dr. L. C. Gray questions the accuracy of this position, and believes that the two affections alluded to by Charcot are unlike. This author also substitutes for the term laryngeal vertigo, the term laryngeal epilepsy, at the same time stating that the affection differs from the ordinary epilepsy in the important fact that it is readily amenable to treatment. Is the disease a form of epilepsy? To substantiate that Dr. Gray claims that it is necessary to prove that the affection does not occur except in instances in which there is present a decided neurotic condition. An analysis of the cases already published seems to show that

it does not, but the rule is not absolutely invariable. Dr. Lefferts thought that Charcot's views seem not to be proved. On the other hand, is Gray correct; is the disease a form of epilepsy?

DR. L. ELSBERG, of New York, did not agree with either Charcot or Gray concerning the nature of these cases, but regarded them as cases of spasm of all the adductor muscles of the larynx, and to this completeness was due the brief duration of each attack and the safety of the patient.

DR. F. I. KNIGHT, of Boston, suggested that the etiology might be some disturbance of the respiratory function, as it was well known, for instance, that prolonged and rapid inspiration sometimes results in unconsciousness, showing simply that it does not require a neurosis or a neurotic tendency to produce unconsciousness.

DR. G. W. MAJOR, of Montreal, believed that the disturbance in the larynx was possibly one of the auræ involved in epilepsy.

DR. E. F. INGALS, of Chicago, suggested that the brief unconsciousness was very similar to the pseudo-apoplexy of fatty degeneration of the heart, suggesting that perhaps the cases referred to by Dr. Lefferts were in some way associated with disturbance of the respiratory centres.

DR. S. JOHNSTON, of Baltimore, thought the point made by Dr. Knight was a good one, and that possibly the attacks of vertigo might be due to rapid respiration.

DR. LEFFERTS, in closing the discussion, said that he agreed more especially with the suggestion that the laryngeal spasm was probably a variety of aura of epilepsy.

DR. S. W. LANGMAID, of Boston, then read a paper entitled

A COMMON FORM OF VOCAL DISABILITY RESULTING FROM PATHOLOGICAL PROCESSES—THE PHENOMENA USED TO DEMONSTRATE THE FALSITY OF ONE SYSTEM OF VOICE-TRAINING.

The form of vocal disability referred to was that seen in actors and singers, where an inability suddenly developed itself to sing above a certain note in the scale, or there was a sudden break in the voice. The voice is good for all notes within the conversational register. An interesting feature in these cases is the fact that laryngoscopic examination enables us to say exactly at what point in the register the voice will fail, and therefore is of service in indicating to the singer that music may be arranged accordingly, and is also of service to actors in the fact that they may be warned with reference to the occurrence of the accident when their voices are raised to a certain pitch. Dr. Langmaid believed that the cause of the affection is in most cases a fatigue of the vocal organs produced by unusual efforts, with or without some catarrhal inflammation of the mucous membrane. Ordinarily, the best artists are the subjects of the affection because from them are demanded the best, and most prolonged efforts. The history of the case almost always revealed unusual vocal effort, or, perhaps, only ordinary use of the voice has been demanded during physical prostration. There is slight injection of one or both vocal cords, or there may be none at all; the position of the cords is that of relaxation; the glottis fissure is simply elliptical or open through the entire extent; in other words, the ordinary laryngoscopic appearances of vocal fatigue, such as have been described by Dr. Cohen in his work on "Diseases of the Throat." Besides, Dr. Langmaid had noticed in typical cases that there was nothing unusual in the appearance of the larynx until, as the patient is made to sing from below upward, a certain note is reached, and then a change in the position of the cords becomes well-marked, and instead of a progressive closure of the glottis, especially of the posterior position, a sudden relaxation takes place; the cords receding; the vibrations are slight. The point at which this occurs in soprano and tenor voices is the ninth in the scale, in the key of C; that is, Ra above

Do, or D above C. In contralto and bass voices it occurs in the seventh in the scale.

The treatment of this condition belongs in part to the laryngologist, but mostly to the teacher. Dr. Langmaid was not aware that this condition of relaxation had been spoken of as a result of a school of training. That the strength of the voice might be restored he had reason to know by experiments. In conclusion, he stated that the results, in as far as examination of the larynx was concerned, were those of disability of the vocal cords from straining of the voice, the same as when there is an intentional form of misuse of the voice in attempting to sing falsetto at a degree of the scale where the normal tone is called for.

DR. C. SEILER, of Philadelphia, assented in general to Dr. Langmaid's paper, but he did not quite agree with him as to the production of the paresis of the laryngeal muscles being entirely due to the misuse of the voice. He had found in a large number of cases a peculiar inability to produce certain tones of the voice, which came on gradually and not suddenly, and finally terminated in a break in the voice. In the majority of these cases he had found enlargement of the pharyngeal tonsil, narrowing of the resonance space in the naso-pharynx. In a case which he had under treatment, the voice had materially improved after removal of the hypertrophied pharyngeal tonsil, and the improvement had been much more marked, he believed, than it would have been had the case been one of simple paralysis.

DR. W. H. DALY, of Pittsburg, referred to two cases which had come under his notice, like those described by Dr. Langmaid. In one there was no active disease of the naso-pharynx, the larynx appeared normal, there was no evidence of malformation, and certainly there was no enlargement of the pharyngeal tonsil. He believed that the patient was suffering from fatigue of the laryngeal muscles, especially of the adductors, and advised cessation of work. In the second case he found slight local difficulty, the lodgment of a film of Pittsburg's favorite soot upon one of the vocal cords. After this was removed he found a slight injection of the mucous membrane. The soot was removed and the hyperemia reduced, but after all this had been accomplished there was some loss of power in the vocal muscles when they were called upon to sustain high notes. He believed that even in robust cases something more than local treatment was necessary, and was satisfied that ergot especially, nux vomica, and other active nerve-stimulants would be sufficient to raise the vital action and assist in restoring the power to the muscles.

DR. G. W. MAJOR, of Montreal, said that the last patient referred to by Dr. Daly was under his care in his city, and on examination he found a condition of the larynx very much like that described by Dr. Langmaid, which he attributed to strain in the use of the voice. He ordered rest, together with the internal use of strychnia.

DR. DALY remarked that he saw the patient immediately after she came from Montreal.

DR. LANGMAID, in closing the discussion, thought that in certain cases hypertrophy of the pharyngeal tonsil might possibly be an efficient cause in the production of this condition, but at the same time this fact did not militate against the theory which he had advanced. Anything which diminished the naso-pharyngeal space, of course, would be serious to one who had always had free space there. He had used galvanism and nux vomica with benefit, although he had not tried ergot, which he believed was a favorite remedy with Dr. Daly, but he should hereafter resort to it with pleasure. Dr. Langmaid also stated that Dr. Elsberg, since the reading of his paper, had directed his attention to the fact that Mandel had described this class of cases, and had directed attention to the same point alluded to by himself. Until Dr. Elsberg directed his attention to this fact, he was not aware that the special method of comparison which he had mentioned had ever been adopted.

The PRESIDENT then appointed as *Nominating Committee*—Drs. Knight, of Boston; Asch, of New York, and Daly, of Pittsburg.

Auditing Committee—Drs. Johnston, of Baltimore, and Morgan, of Washington.

Dr. U. G. Hitchcock, of New York, was then appointed teller, and the Society elected as Fellows Drs. C. W. Chamberlain, of Hartford, Conn., and John N. Mackenzie, of Baltimore.

The President also read an invitation extended from the Philadelphia Laryngological Society to the members of the American Laryngological Society to attend their regular meeting, to be held on Friday, May 25th. The invitation was accepted with thanks.

The Association then adjourned, to meet at 3 P.M.

FIRST DAY—AFTERNOON SESSION.

The Association was called to order at 3 P.M. by the President.

The first paper was read by DR. FRANK DONALDSON, of Baltimore, on

THE DESTRUCTION OF NASAL POLYPI BY CHROMIC ACID.

The author remarked that the points to be aimed at in the treatment of nasal polypi were their prompt and rapid removal with as little pain and small a loss of blood as possible, and in a manner to prevent their recurrence. He then referred to the three methods ordinarily resorted to for this purpose, and spoke of their advantages and also of their disadvantages. The forceps, the oldest method and most generally employed, is attended with great pain, considerable loss of blood, and often with ulceration of the adjacent structures. It is very effective if the pedicle is removed near its insertion. The sensibility of the mucous membrane can be somewhat diminished by the use of the spray of ice water containing salt, although the mucous membrane cannot be rendered so insensitive that the use of the forceps will be rendered painless. The advantages of this method are, comparatively short time occupied in the operation and the frequent non-recurrence of the growth. The author then made mention of cutting forceps, snares, and other mechanical apparatus for the removal of polypi, directing special attention to Jarvis' completed instrument. According to his experience, however, it is not an easy matter to get hold of the pedicle with any snare, and, according to his experience also, if the snare only is resorted to, the growth almost invariably returns. After speaking of the use of the galvano-cautery, he directed attention to the use of caustics, and stated that they had been abandoned very largely because they frequently injured the adjacent tissue. Glacial acetic acid injected into polypi destroys them, but when it touches the mucous membrane it inflames it and causes great pain, and destroys a part of it, although its irritant properties can be easily neutralized by spraying the part by aqueous solutions. The agent which he had employed most satisfactorily and most successfully was either minute crystals of chromic acid or a solution of one hundred grains to the ounce. It is a powerful escharotic, does not cause pain, its application is not followed by hemorrhage, and when properly used its action can be perfectly controlled. It is also an antiseptic and a disinfectant, more than all the acids or metallic salts which had been tried. Its action is prompt and not penetrating. His mode of application was, first, to moisten the mucous membrane with a lead lotion to protect it, and then taking the paste with a glass rod, very thin and pointed, stick it into the centre of the polypus as far as possible, and by turning the rod wipe off all the acid in the growth itself. The growth crumbles at once, and is removed without pain and without hemorrhage with the forceps. Sometimes irritation follows the local application, but the lead water, if effectually applied, protects the adjacent structures.

After the application of the acid, if it is desirable, the snare can be used with greater precision than before. It can be used in both varieties of gelatinous polypi. In the treatment of fibromata it is valuable, but not to the same degree as in the gelatinous polypus. He wished to be distinctly understood that he did not recommend it to the exclusion of surgical methods, but he had found it effective as an aid to them by destroying the substance of the neoplasm, in making the surgical operation less painful and less bloody, if it was subsequently to be employed, and it was also a very valuable adjuvant as a supplementary application for destroying the insertions of the growth and thus prevent their reformation.

DR. W. C. JARVIS, of New York, referred to a case of marked deviation of the septum, in which, after its removal, he discovered that the mucous membrane at the root of the nostril was covered with small polypi, which were gelatinous in appearance. These were removed with a very fine wire and subsequently the attached bases were touched with chromic acid. The point which he wished to make was that a return of polypi was to be accounted for not so much on the supposition that they returned from the roots of the stump which was left, as from the polypoid tissue which surrounded the pedicle, and that the application of the chromic acid after the surgical procedure was not so much for the purpose of killing the roots of the large polypi as in preventing the growth of the embryonic polypi, which would enlarge if permitted to remain.

DR. W. F. DUNCAN, of New York, thought that a permanent cure could be effected only by the removal of a portion of the turbinated bone from which the polypi spring; and, according to his experience and observation, unless this was done there had been a recurrence in as much as eighty per cent. of the cases, from one to five years after the growth had been removed by any other method.

DR. C. SEILER, of Philadelphia, spoke with regard to the pathology of nasal polypi. He had invariably found that the gelatinoid variety was a localized hypertrophy of the mucous membrane covering the turbinated bone, which has undergone myxomatous degeneration. According to his experience, the escharotics had given rise to more pain than had the use of the cold-wire snare, provided that the wire écraseur was tightened slowly. Further, he had found that if all the polypi are removed there will be no recurrence. He does not believe that a tumor grows from the stump, but that what appears afterward is a new formation, with localized hypertrophy the same as in the original growth, undergoing myxomatous degeneration. He had never experienced any difficulty in adjusting the snare about the base of a polypus. He preferred the use of the galvano-cautery to any chemical application.

DR. W. H. DALY, of Pittsburg, had used chromic acid, but not exclusively, and had devised a modification of the ordinary scoop, a curette without a fenestrum, made of different sizes, and upon the concave surface the copper was picked up so as to make little meshes sufficiently deep to hold fine crystals of chromic acid. He had found this a very convenient method of applying the remedy to small growths. According to his experience, however, it mattered very little as to what caustic was used, as he had obtained equally satisfactory results with acid nitrate of mercury, and glacial acetic acid.

DR. DONALDSON, in closing the discussion, remarked that he had used all other caustics which had been recommended, but he preferred the chromic acid. He did not wish to say that the pedicle could not be removed with the snare, but that the insertion of the growth could be removed better and more thoroughly with the snare, after chromic acid had been used.

DR. F. I. KNIGHT, of Boston, then read a paper on

CHOREA LARYNGIS,

in which he first directed attention to the close relation

existing between chorea and hysteria. The object of the paper was to call attention to the different kinds of cases which have been reported as chorea laryngis, and to invite discussion upon the same. Chorea laryngis was probably but one of the many manifestations of a general affection. There were three varieties which had been described. First, that in which not only the adductors of the larynx were involved, but the expiratory muscles of the chest are affected, characterized by cough occurring in paroxysms, accompanied with more or less vocal sound, the barking or crowing character of the cough sometimes occurring suddenly, sometimes at particular periods of the day, usually affecting patients between eight and fourteen years of age—these were the leading symptoms mentioned. On examination of the larynx in these cases only structural changes were discovered. The second class of cases were those in which the muscles of the larynx alone had been affected, particularly the thyrohyoid muscle. The author of the paper then reported one case of chorea of the adductors of the larynx without any affection of the expiratory muscles, and hence no effort at coughing. In this case there was a peculiar ticking in the head which the patient heard and which he could hear, and which he identified as a clicking together of the vocal cords. He believed that it was a unique case, at least was in his experience, and, so far as he had been able to find, in literature; that is, a case in which the spasm was rhythmical, and in which it continued during sleep. Third, and which did not, strictly speaking, belong under the head of chorea laryngis, those cases in which the expiratory muscles alone were affected.

DR. LANGMAID, of Boston, spoke of the extraordinary rhythmical movements of the vocal cords in Dr. Knight's case.

DR. E. C. MORGAN, of Washington, referred to a case occurring in a girl ten years of age, associated with chorea manifestations of the expiratory muscles. The rhythmical movements were entirely absent during the night in his case. The most interesting feature was the barking, crowing cough during the daytime, occurring nearly as often as every five or ten minutes. There was no disturbance of articulation. After exhausting nearly all remedies he had obtained the best results from the use of Fowler's solution and monobromide of camphor.

DR. E. F. INGALS, of Chicago, referred to a case in which there was a peculiar rhythmical movement of the levator palati muscle with a clicking sound with each contraction of the muscle. This certainly did not come from the larynx, and he had attributed the clicking noise to the movement of the muscle which opens the Eustachian tube in some way.

DR. LANGMAID then recited the history of a case in which the crowing, barking noise was the most distressing symptom, and after close observation it was found that it was preceded by opening the mouth. He first endeavored to produce a moral effect upon the patient, and then told her that the moment when her mouth opened to close it, which she readily carried out and it succeeded effectually in stopping the peculiar cough.

DR. E. FLETCHER INGALS, of Chicago, then read a paper on

THE TREATMENT OF LARYNGEAL PHTHISIS.

There are three prominent indications: First, to relieve pain; second, if possible to cure the disease; and, third, failing in either of these, to modify the course of the affection and prolong the patient's life. He believed that these indications could be met successfully in quite a proportion of cases. Pain can generally be relieved by topical applications, even though internal medication is of but little avail. The second indication is met best by the combined topical and internal medication. In the third place, we may succeed in modifying or relieving pain, and enable the patient to swallow, and so pro-

long life. Dr. Ingals then gave the history of a few cases which illustrated that the indications mentioned could be satisfactorily fulfilled. He recited the history of two cases which illustrated that laryngeal phthisis can be cured when the pulmonary complications are improving. One favorite local application which he had employed was a combination of carbolic acid, morphia, and tannic acid. He had used eucalyptol with benefit in several cases. In his hands iodoform had given but little or no relief from pain, and had failed to produce any perceptible curative effect. His conclusions were that we may meet the first indication better by topical applications than by any other means, and that we may confidently expect to give relief in a considerable proportion of cases. Second, that a limited proportion of cases may be cured by local and general treatment, the former sometimes being the most important factor. Third, that in many fatal cases life may be prolonged by local applications which relieve the patient from the exhaustion of the pain and irritating cough, and at the same time allow digestion of food.

DR. WILLIAM C. JARVIS, of New York, then read a paper entitled

THE HEALING OF ULCERS IN LARYNGEAL PHTHISIS.

He prefaced his remarks with a reference to the incredulity of the medical profession regarding the cure of phthisical ulcers in the larynx. This was partly due to the fragmentary histories of the cases reported, insufficient evidence, and claims for cure based upon peculiar methods of treatment. The history of one case was given in which the phthisical ulcers had entirely healed. The evidence of the physicians and specialist from whom the case had been transferred and the appearances described by the author of the paper demonstrated conclusively advanced laryngeal phthisis. The lungs had been examined by experts and co-existing pulmonary phthisis discovered. Treatment was explained in detail. It consisted locally in the frequent use of fine alkaline sprays. Atomized alkaline fluids were employed for cleansing. Local sedation was practised and iodoform freely used. Constitutional remedies were considered of importance, to quiet cough, favor cicatrization, promote sleep, relieve restlessness, and to nourish the enfeebled body. Climatic change was considered necessary. By carefully employing these mild means, a patient threatened with death from extreme pain in deglutition, was restored to health and comfort. One vocal cord had been almost entirely eaten away, firm cicatricial tissue forming the excavation. He showed there was analogy between certain forms of phthisical ulcers in the larynx and simple superficial sores in the mouth; that these buccal ulcers were sometimes produced by the irritant action of perverted secretions upon slight wounds. In these cases a pellicle of shellac varnish or simple eschar was sufficient to protect and heal the ulcer. If the lesion occurred on a part in frequent motion it was converted into a painful ulcer, producing discomfort in deglutition and a train of symptoms resembling those found in certain cases of laryngeal phthisis. He believed the incipient wound might be caused by violence, like a cough, injuring the friable and thickened laryngeal tissue.

Constant motion and acrid pulmonary discharges completed the analogy. He considered certain forms of phthisical ulcer, easily recognized by certain peculiarities described by him, curable. Far advanced ulcer, involving extensively the hard structures of the larynx, invariably proved fatal.

A new laryngeal powder-blower, invented for treating ulcerations of the larynx, was exhibited.

DR. S. JOHNSTON, of Baltimore, referred to one case which he had observed *from the beginning*. His diagnosis was sustained by Morell Mackenzie during his late visit to this country. The first appearance was that of white puncta, which resulted in ulcers that coalesced; physical examination of the chest negative; the epiglottis

presented the usual cocked-hat appearance seen in laryngeal phthisis. The ulcers entirely healed under internal treatment with inhalations twice daily, from a steam atomizer, of a solution of sulphate of zinc, one grain, and carbolic acid, two grains, and at the end of a month there was a well-marked cicatrix.

DR. F. DONALDSON, of Baltimore, said that great relief could be afforded not only by sprays, antiseptic inhalations, and local applications of iodoform, but he regarded it as important to sustain the nutrition of the patient by the use of the stomach-tube when there is difficulty of swallowing. He had repeatedly seen apparently phthisical ulcers at least heal under treatment by the local measures just mentioned.

DR. F. H. BOSWORTH, of New York, spoke of the confusion still existing concerning diagnosis of laryngeal phthisis or tubercular ulcers. He thought that no ulcers should be regarded as tubercular except those which were attended by a peculiar boggy inflammatory swelling, most frequently upon the arytenoid cartilages, ventricular bands next, rarely upon the vocal cords, and in a still less proportion of cases upon the epiglottis; the ulcer is covered with bright yellow spots, and never secretes anything except ropy mucus. He had certainly cured cases of laryngeal phthisis, and by the mild plan of treatment which he recommended several years ago, and described by Dr. Jarvis—cleansing, application of morphia, and also the local use of iodoform, done every day until the patient is absolutely comfortable.

DR. J. SOLIS COHEN, of Philadelphia, thought that recovery took place in some cases, but that it could not be said beforehand which they were. "They get well in spite of us." He regarded the absence of pus as one of the most important diagnostic features of phthisical ulcers of the larynx. Tubercular ulcers in the lungs healed, why not in the larynx? He saw no reason why they might not.

DR. F. I. KNIGHT, of Boston, referred to cases in which the local symptoms disappeared, although there was a steady failure in the general condition of the patients. They healed by the constant application of cold carbolic acid spray—two grains to the ounce of water—with frequent applications of morphia and sugar. He thought it was the constant cleansing process that was, after all, the essential factor in the treatment. Although it was well recognized that tubercular disease of the larynx was frequently arrested, as is also seen when the lungs are invaded, we are unable to say in which cases such a result is to occur, and not much encouragement could be held out to the patient, even if it was arrested. He wished to have the question of the influence of climate on these local conditions discussed.

DR. M. J. ASCH, of New York, said that in all the cases of laryngeal phthisis in which he had seen good results follow treatment there had appeared evidence, before the patients were dismissed, that the ulcerations were syphilitic in character, although pulmonary disease also existed.

DR. R. P. LINCOLN, of New York, believed that iodoform in the treatment of ulcers of the larynx associated with phthisical manifestations in the lungs was chiefly beneficial not in the early stages of the inflammation, when there was an unbroken surface, but later. Keeping that idea in mind, perhaps the discrepancy concerning the effect produced by the drug might be removed. He also believed that the beneficial influence of sprays, etc., was increased by the addition of a few drops of the essence of peppermint to the solution, an agent especially cooling to mucous membranes.

DR. G. W. MAJOR, of Montreal, thought that the best local application was atmospheric, although under the general plan of cleansing, etc., relief and, for the time at least, an arrest of the process might be secured.

DR. W. F. DUNCAN, of New York, spoke of the value of the mild plan of treatment mentioned by Dr. Bosworth, and said that in the last sixteen or seventeen cases which

were under the observation of Dr. Bosworth and himself, all terminating fatally, the laryngeal symptoms disappeared entirely, and so far the patients were comfortable.

DR. KNIGHT said that according to his experience, while patients in the incipient stage of pulmonary phthisis were benefited by living in a rarefied atmosphere, those suffering from laryngeal complications were made worse by such a change.

DR. INGALS said that in one of his cases there was none of the boggy tumefaction referred to by Dr. Bosworth. Yet it seemed to him to be reasonable to conclude that when a patient has well-developed pulmonary phthisis and laryngeal symptoms develop, they are also due to the same cause, and that the ulcers in those cases are tubercular. For his own part he had not found the boggy swelling present uniformly. He regarded time as the most important element in the treatment. As suggested by Dr. Cohen, some of these patients, so far as the larynx is concerned, will get well if they have an opportunity. As to whether any of his cases were syphilitic or not, he thought the pulmonary signs justified his diagnosis. With regard to climate, he did not send his patient to Colorado on account of his laryngeal affection, but for the pulmonary trouble, and believed that a dry atmosphere was unfavorable for laryngeal ulcers.

DR. JARVIS thought that no difficulty should be experienced in differentiating between syphilitic and phthisical ulcers. He was unable to see how mere inhalations could produce any curative effect upon these ulcers.

DR. F. H. BOSWORTH, of New York, then read a paper entitled

PARESIS OF THE CONSTRUCTOR MUSCLES OF THE PHARYNX
SIMULATING SPASMODIC STRICTURE OF THE OESOPHAGUS,
WITH REPORT OF CASES.

The histories of five cases were given, which illustrated the myopathic affection, what we had been taught to regard as myopathic paralysis, neurotic in character. Dr. Bosworth believed that the affection was essentially muscular and could be best explained by the general law that muscles which are overworked show a tendency to break down, and this tendency is especially marked if they are situated just beneath a diseased mucous membrane. The author of the paper then spoke of the inherent tendency in certain muscles of the larynx to become the seat of myopathic paresis. His cases were treated with rest, strychnia, salt-water bathing, etc., and all the patients except one recovered.

DR. COHEN, of Philadelphia, regarded this class of cases as essentially hysterical, certainly the majority of them as they had occurred in his practice. He had obtained the greatest success by placing a nurse over the patient and insisting that food should be swallowed.

DR. LANGMAID, of Boston, had had the best success in their treatment by passing bougies, beginning with a very small one and advancing gradually to one of large size.

DR. KNIGHT of Boston, had had similar cases, but there was no loss of electro-muscular contractility. He had felt that in most cases the difficulty was due to hyperæsthesia and was best overcome very much in the way mentioned by Dr. Langmaid.

DR. BOSWORTH said the question of hysteria was excluded in his cases because there was unquestionable sluggishness of the muscles and anæsthesia when touched with the probe.

The Association then adjourned to meet at 11 A.M. on Tuesday, May 22d.

TUESDAY, MAY 22D—SECOND DAY—MORNING SESSION.

The Association was called to order at 11 A.M. by the President.

DR. THOMAS R. FRENCH, of Brooklyn, read a paper
ON PHOTOGRAPHING THE LARYNX.

The paper was illustrated with photographs and ap-

paratus. The conclusions arrived at were the following: 1, That better photographs have been taken with stationary apparatus than last year; 2, a camera has been so adapted that it can be held in the hand and be quickly placed in position; 3, photographs are taken instantaneously by a trap shutter; 4, parts reflected in the larynx are alone exposed; 5, photographs can be taken without the patient's being aware of the object of the procedure; 6, photographs of diseased conditions can be taken (first time on record); 7, photographs of the posterior nares have been taken (first time). Several of the Fellows spoke in commendation of the work of Dr. French.

A paper on

CONGENITAL TUMORS OF THE LARYNX,

by DR. H. A. JOHNSON, of Chicago, was read by Dr. Mackenzie, of Baltimore. The paper contained the report of five cases.

DR. KNIGHT, of Boston, stated his conviction that, from the natural history of papilloma in children and from the sequences of the operation, the best mode of procedure in such cases is to avoid thyrotomy; simply perform tracheotomy and let the growth alone until the child is old enough to allow operation through the mouth, at all events, is given opportunity for spontaneous expulsion of the neoplasm. Thyrotomy is pretty sure to injure the voice permanently. There is also a great chance for the growth to return, and unless urgent indications existed he would avoid this operation.

DR. COHEN, of Philadelphia, doubted whether congenital papilloma of the larynx occurred so frequently as some had imagined. His own opinion was that the occurrence of these growths, congenitally, in the larynx, was exceedingly rare. Papillomatous tumors are very apt to develop in the larynx after the occurrence of measles, diphtheria, whooping-cough, etc., and even after ordinary catarrhal inflammation, all of which are diseases of childhood, and may appear very early in life.

With regard to treatment, any operation in the cervical region, whether it opened the air-passages or not, is liable to be followed by pneumonia. Perhaps the reduction of the temperature of the pneumogastric nerve from exposure might have something to do with the result; therefore it might be possible that better results would be obtained by operating in a warm room and taking precaution to maintain the temperature of the parts at as near the normal as possible. He was opposed to the ordinary operation of thyrotomy unless there was urgent necessity for it. The impairment of the voice, however, he regarded as a secondary consideration, if life could be saved by the operation. The chief danger, in his opinion, was that if a large quantity of cicatricial tissue existed, it would interfere with the enlargement and proper changes in the larynx, which occur normally at about the time of puberty, and in that way permanently impair the patient.

DR. MAJOR, of Montreal, reported two cases. In one the child still wears the tracheotomy tube and is doing very well. The operation was performed in 1880. The other patient died without the benefit of any operation. He believed that thyrotomy, even at the peril of injuring the voice permanently, was preferable to opening the cricothyroid membrane.

DR. DUNCAN, of New York, gave the history of two cases; in one the child died of suffocation; in the other Dr. Fred. Lange performed tracheotomy, subsequently thyrotomy, and the child recovered entirely, although with a somewhat impaired voice.

A paper on

LARYNGEAL PARALYSIS FROM ANEURISM,

by DR. WILLIAM PORTER, of St. Louis, was read by title. The Association then adjourned to meet at 3 P.M.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS.

Stated Meeting, April 26, 1883.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. R. TAUSZKY read a paper entitled

HOW TO SECURE THE BEST POSSIBLE PHYSICAL CONDITION
AFTER PARTURITION.

The author of the paper began with the question, Why is it that almost every woman as soon as she becomes a mother begins to suffer from some form of pelvic disease? In support of the words "almost every woman," he referred to the very large percentage of gynecological cases in which the morbid condition present could be traced directly to childbirth, and then asked the significant question, By what means can the occurrence of these conditions be prevented? To the influence of the old term "meddlesome midwifery" he believed that a part of the explanation could be traced, but he regarded meddlesome midwifery scientifically applied as one of the most effectual means of preventing the conditions under consideration. Hygienic and antiseptic midwifery under intelligent direction, even though it be subjected to the term "meddlesome," should be practised in every case of normal labor. Although at the present time it is so practised by most surgeons it is not, unfortunately, carried out to an equal extent by obstetricians. How is this method to be carried out in cases of normal labor? First of all, the accoucheur should be careful to cleanse his hands with soap and water, remove all foreign particles from beneath the nails, and then wash the hands in either a three per cent. solution of carbolic acid, or, what is probably more available, pure vinegar, and afterward oil the hands with carbolized oil of the same strength of carbolic acid mentioned. All instruments and articles used about the woman should be cleansed and disinfected by similar means. Just prior to confinement, or early in the first stage of labor, the bowels should be freely moved by an enema, repeated if necessary. The bladder should be emptied, and if catheterization is necessary the urine should be drawn with a soft Nélaton catheter which has been thoroughly cleansed in boiling water and afterward disinfected. The vulva should be bathed with some antiseptic solution, such as a very weak solution of carbolic acid, perhaps with the addition of a small quantity of glycerine, or with a solution of thymol.

The author recommended careful dilatation of the cervix with the fingers. He also spoke of the advantage which might accrue from gently pushing up the anterior lip of the cervix above the symphysis. Tough membranes also may be ruptured with great advantage. He recommended the use of chloroform, especially in primiparæ, not carrying the anæsthetic, however, to the production of full unconsciousness. The forceps in very many cases, if judiciously used, were advantageous rather than disadvantageous, and should be used rather than allow the head or shoulders to press unduly, for any considerable length of time, upon the perineum.

The cord should not be tied until the umbilical vessels cease to beat. Dr. Tauszky regarded this as a point of practical importance. He also recommended Crede's method of expression of the placenta. The genital passages should be carefully examined after removal of the placenta, and all slight lacerations or wounds should be closed, and the same rules adopted as in the treatment of wounds of soft parts elsewhere, and they should be carefully covered with some antiseptic dressing, such as the application of iodoform, etc. He recommended the use of the abdominal binder. He claimed that the child should be applied to the breast at the earliest moment, believing that the material which it derived in this way from the mother was more beneficial to it than any article which could be administered; and at the same time it

was beneficial to the mother in exciting or maintaining uterine contraction. In multiparæ he recommended the administration of a drachm of ergot after the delivery of the placenta. He believed that ergot in a normal labor should never be given before the expulsion of the child. According to his experience after-pains, when the case was managed according to the plan outlined above, scarcely ever occurred. Should they occur of course they should be controlled by the use of anodynes.

In the management of the puerperal condition careful disinfection should be strictly observed. The thermometer should be used twice daily in the axilla. The breasts and the nipples should receive careful attention. He recommended the following as an application for excoriated nipples.

R. Balsam Peru..... grm. iv.
Olei amygdal..... grm. vj.
Aque rosæ..... grm. xxxv.
Mucil. acac..... grm. vj.

Mix, and apply after each nursing, the nipples being carefully cleansed.

Dr. Tauszky laid special stress upon the occurrence of hemorrhage after parturition, and remarked that a little hemorrhage after parturition is very dangerous, and should be arrested. He took the strong position that the accoucheur should be regarded as guilty of malpractice who would permit a slight quantity of blood to escape from the genital organs of a woman for days after parturition. He maintained that not a single drop of blood should appear after the completion of the third stage of labor; that the napkins when removed should be perfectly free from color; that should they be colored the physician should at once institute an examination with reference to the source from whence the blood came, and set about arresting it.

The bowels need not be moved until the third day after labor. It is not necessary, is often dangerous, is even fatal sometimes to use intra-uterine carbolized injections once or twice daily up to the second day, even after natural labor. He believed that such injections should be used only when the lochia are offensive, and febrile movement has developed. When the lochia are offensive and there is some fever present he invariably syringes the vagina several times a day with a disinfectant solution, but intra-uterine injections post-partum are necessary only in cases of internal violence, such as sometimes attends the manual separation of the placenta or the use of the forceps. When such injections are used, he preferred thymol or simple water to carbolized water, which could be introduced either through a soft catheter or the exceedingly convenient tube invented by Dr. Chamberlain. The injections might be repeated until the fetor of the lochia was either markedly diminished or entirely corrected.

Dr. Tauszky protested against the teachings of Dr. Goodell, of Philadelphia, with reference to the parturient woman being permitted to assume the upright position within three days after labor. He believed that the doctrine was a dangerous one, and unwarranted, and maintained that the recumbent posture should be kept, changing occasionally from side to side, for at least eight days after normal delivery, and especially until the uterus has returned to the pelvic cavity. Dr. Tauszky then referred to his experience on the frontier while in the army, and stated that it was not only among the civilized, but also among the savages, that women suffer from diseases peculiar to their sex, and stated that gynecological affections among the squaws were not at all uncommon. He attributed a large percentage of these conditions to early rising after parturition. He then detailed the history of a case which terminated fatally, and, as he believed, chiefly because of the early getting up of the patient.

For pelvic peritonitis, in case it developed, he regarded cold applications as the best that could be employed, but more especially in the early inflammatory stages. Both

the pain and the hyperæmia were lessened by the use of cold. At first the applications must be repeated very frequently.

Dr. Tauszky then exhibited some of Lieter's (of Vienna) devices for reducing intra-pelvic temperature, which consisted of metallic cylinders three-fourths of an inch to an inch and a quarter in diameter, and two inches in length, within which were coils that terminated in two extremities which projected from the extremity of the metallic bulb, and to which india-rubber tubes could be attached that conducted the water from a fountain above through the bulb into a basin below. He also exhibited a small device of the same kind which could be used for the application of cold to the cervical or intra-uterine canal.

After fever has disappeared warm baths or sitz baths could be resorted to, but he believed that the use of warm injections for peritonitis were dangerous.

Discussion on Dr. Tauszky's paper was opened by Dr. W. M. CHAMBERLAIN, who said he agreed entirely with the author of the paper in the idea of observing scrupulous cleanliness in the management of cases of labor, and believed there was truth and force in the idea. One statement made by Dr. Tauszky, however, struck him as a remarkable one, and one to which he could not subscribe; that is, that the attendant should not be content with himself or his patient, and should not leave her so long as there was any hemorrhagic flow from the vagina. Certainly that conflicted with his own experience and his ideas upon the subject. He expected always a hemorrhage, slight, it is true, but an intermittent flow of blood for from twenty-four to thirty-six hours after labor, and had not been concerned if it passed beyond that measure. He had never recognized, when proper cleansing of the vagina had been employed, that this slight amount of hemorrhage had been productive of any harm. He thought it was natural, almost necessary, and should not be interfered with except to prevent it from becoming excessive.

With regard to the dangers of septicæmia, he had read, as probably most had, the paper of Dr. Thomas, detailing some striking cases of septicæmia in which remarkable results had been obtained from washing out the puerperal uterus. Other writers also had related somewhat similar cases. The idea involved in Dr. Thomas' paper seemed to be that puerperal septicæmia means retention of morbid matter or the formation of morbid matter within the cavity of the uterus, and that that is the essential cause of puerperal septicæmia. Doubtless it is a very frequent, probably the most frequent cause, and in such cases the indication is to wash out the uterus if the cavity can be easily reached. But Dr. Chamberlain believed there were other causes which should be also recognized, for example, breach of the surface anywhere within the entire length of the genital canal, occurring in labor, may allow the entrance of septic matters into the lymph and blood; also any surgical operation in the non-parturient patient may become like occasion of septicæmia and peritonitis. He had certainly seen many cases of puerperal septicæmia which could properly be correctly assigned to lacerations of the perineum and vulva. If there were in addition retention of the secundines and development of morbid products in the cavity of the uterus, all the conditions of septic infection would be present.

As to intra-uterine injections, he would show a specimen tube, employed by himself and many others, and known as Chamberlain's tube. It should be, and generally had been, made of soft or unannealed glass, which was not easily broken. It is eighteen inches long, seven-eighths of an inch in diameter, rounded and closed at the entering end, and perforated on all sides by counter-sunk holes. To the other end a syphon-tube of india-rubber connected with a two-quart wash-bottle is attached. A one per cent. solution of pure carbolic acid (Schering's is the best) was employed. The tube should be passed without the aid of the guiding finger, and, he

believed, greatly simplified irrigation of both uterus and vagina. Care should be taken to leave no fluid remaining in the cavity of the pelvis.

Intra-uterine injections practised upon every lying-in woman would probably be mischievous, and is an unwarranted interference, which nothing except a septic condition of the uterus would justify. The indications that a septic condition is present are the fetid condition of the lochia. The existence of septicæmia is not an indication for washing out the uterus, unless the cause can be located within the uterus. It may be an indication for washing out the vagina, but not the uterus. He had never attempted to introduce his tube and wash out the uterus after the organ had undergone advanced involution. He thought the case which Dr. Johnson cited at a recent meeting of the New York Academy of Medicine was one in which the uterus had ceased to be septic and the occasion for the use of the instrument had passed away.

With regard to intra-vaginal irrigation for anti-febrile purposes, and the use of the cold coil to the abdomen, he had nothing special to say. He had already presented the subject to the Academy of Medicine about a year ago, and to the Medical Journal Association about eight years ago. It is probably not so strikingly efficient as is Kibbee's cot, but its use is so simple and so efficient that it can be adopted with very great and positive advantage in all cases where Kibbee's cot could not be made available. The idea of intra-vaginal cooling also occurred to him at the same time, but he had not practised it. He believed, however, that it was legitimate, and possibly a very valuable extension of the same idea. With his preference for india-rubber over metallic substances he should have continued to use rubber coil inasmuch as it may be difficult at times to secure the metallic tube, and the same idea could be accomplished with rubber tubing in an equally satisfactory manner.

Dr. JEWETT, of Brooklyn, said he endorsed the idea already advanced by the author of the paper, and sustained by Dr. Chamberlain, that the first and most important element in the care of puerperal cases was cleanliness. To promote this end it had been his practice to use the carbolyzed vaginal douche immediately after labor, using a two and a half per cent. solution immediately after the completion of the third stage of labor. From this practice he had seen no evil results. He also ordered the use of the vaginal douche every three or four hours for the first two or three days after confinement. With regard to intra-uterine injections, if had not been his practice to use them except where the vaginal douche has been tried and failed. He used the vaginal douche first, and if it did not immediately bring down the temperature, if evidence of septic infection were present, the intra-uterine douche was then in order. Dr. Jewett was inclined to the opinion that in the majority of cases puerperal septicæmia originates in wounds of the vagina and cervix. He thought, therefore, that the vaginal douche was usually sufficient. The objection to the frequent use of the intra-uterine douche was the liability to produce some traumatism, or to open some new avenue for absorption. The results, however, obtained from well-observed clinical cases must ultimately decide concerning its use.

With regard to the matter of rest after delivery, it had been his practice to keep the patient quiet in bed from twelve to fourteen days, and although the woman might be then allowed to assume the upright position, he always counselled that she should remain quiet during the third week. He was inclined to agree with the writer of the paper concerning Dr. Goodell's views, and thought that if Dr. Goodell examined his patients a year after labor he would find more or less evidence of the evils of the practice. Dr. Jewett believed it was important to secure the early and complete contraction of the uterus as soon as possible after the delivery of the child. In his practice, therefore, the third stage of labor rarely ex-

ceeded five to seven minutes, while most obstetric authorities advised that fifteen to twenty minutes, perhaps more, be allowed to elapse before the delivery of the placenta and completion of the third stage of labor. He believed it to be important that the third stage of labor be completed as promptly and as thoroughly as possible by stimulating at once the natural powers of the uterus. He would not approve of any method which favored the formation of deep thrombi in the structure of the uterus. He favored expression of the placenta, believing that the essence of the manipulation was compression during contraction; that is, the process was merely supplementing the natural powers instead of replacing them.

DR. BURRALL believed it to be a general principle that the more perfect the woman's health is, who is about to bear a child, the greater the probabilities were that she would accomplish her task with the greatest safety, and therefore it seemed that the care of the puerperal woman and the prevention of puerperal accidents should begin during pregnancy. Treatment of the puerperal woman preparatory to labor should begin several weeks before the expected confinement, and should be of such a character as to place the system in the best general condition possible. He thought the internal use of antiseptics before labor, perhaps for four, five, or six days, was reasonable. The functions of all the organs should be carefully examined, and such means taken as might be indicated to put them into the best possible condition. He also believed that the statement with regard to the proper use of the forceps during labor made by the author was very judicious. External pressure and the use of ergot immediately after labor he believed to be proper to avert hemorrhage. It had not been his practice to shorten the third stage of labor so much as had been mentioned by Dr. Jewett. He thought that sometimes more satisfactory results could be obtained by some delay than by the immediate completion of the third stage. He agreed with Dr. Chamberlain concerning the occurrence of a small amount of hemorrhage after delivery, and in that respect differed with the author of the paper. He thought that a little more than the usual quantity of sanguinolent discharge after labor was not specially disadvantageous, but rather otherwise. The use of antiseptic injections and douches he believed to be indicated after delivery of the placenta. With regard to the application of ice to the abdomen and intra-uterine injections, the necessity for their use usually arose at about the same time during the puerperal state; that is, upon the rise of temperature, which is usually accompanied with a fetid lochial discharge. Under these circumstances nothing produced more satisfactory results sometimes than the use of intra-uterine injections.

DR. JEWETT referred to another point which he had omitted to mention, that is, the examination of the patient at the end of the third or fourth week after delivery before she is discharged, with reference to possible lacerations of the soft parts or of the cervix, which occurred during labor and had been overlooked.

DR. BURRALL emphasized the point just made by Dr. Jewett. He also favored the use of the binder for two or three weeks after confinement. He also said that he could not endorse the views advocated by Dr. Goodell concerning the upright position, more especially for those whose pelvic organs are weak and need support.

DR. BROWN remarked concerning vaginal injections immediately after delivery, that it did not seem to him they were necessary in all cases. It seemed to him that neither the vagina nor the uterus was necessarily in an unhealthy condition at this time, and that nature provides for some of these conditions by the escape of more or less blood from the genital passages. He did not believe that such discharges necessarily implied an unclean condition, and therefore that their arrest was essential. He disliked to disturb the patient for such a purpose; further, he did not believe it was necessary to remain by the bedside of the patient until the

hemorrhage had entirely ceased. Dr. Brown then spoke of difficult labor possibly due to cicatricial formations succeeding manual removal of an adherent placenta and injury to the uterine walls.

With regard to antiseptics before labor, it did not occur to him that they should be administered, or that either pregnancy or labor should be looked upon as necessarily a sickness. He therefore did not see the utility of beginning a course of disinfectant treatment before labor commences.

DR. CARPENTER asked Dr. Tauszky if he wished to be understood as saying that not a single drop of blood should be seen in the discharges after the completion of the third stage of labor.

DR. TAUSZKY replied that no bleeding whatever should take place after labor; that not one single drop of blood should be seen.

DR. JACOBUS asked Dr. Tauszky how long he was accustomed to remain with the woman after labor.

DR. TAUSZKY replied that sometimes not more than ten or fifteen minutes; sometimes longer. When the uterus was once firmly contracted it had, according to his experience, remained in that condition and hemorrhage did not occur.

DR. JACOBUS remarked that Dr. Tauszky's experience differed entirely from his own, and that according to his observation a certain amount of hemorrhage had invariably taken place after the completion of the third stage of labor; sufficient, at least, to give the napkins a greater or less blood-stained appearance; further, he believed that this occurred in all cases.

DR. BURRALL then exhibited specimens of the

KOLA NUT.

The nut was introduced to the attention of the profession in England some eight years ago, and had been said to contain a combination of several properties, as the active principle of cocoa, coffee, and coca. It had been said to contain two per cent of caffeine. It had also had a good reputation as an agent for overcoming the appetite for alcoholic drink, and its reputation as an article for procrastinating desire for food was well known.

The Section then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 25, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 558.)

CHRONIC DIFFUSE NEPHRITIS—CIRRHOTIC AND FATTY LIVER—FATTY DEGENERATION OF HEART, WITH HYPERTROPHY AND DILATATION—CEDEMA OF LUNGS—CALCAREOUS ARTERIES OF BRAIN—CEREBRAL SOFTENING.

DR. J. LEWIS SMITH presented specimens, with the following history: The patient was a woman, forty-five years of age, who was admitted into Charity Hospital, in nearly a moribund state, on April 16th, under the care of Dr. Walter L. Carr, House Physician, who furnished the following records: She was cyanotic at the time of admission, and her pupils, which were unequally contracted, did not respond to light. The skin was dry and harsh; limbs cool and somewhat cedematous; pulse, 90, not strong; respiration, 44; vaginal temperature, 96° F. She seemed to comprehend questions, but answered in a very slow and hesitating manner; said she had no headache, had vomited some on the previous day, and that her bowels were constipated.

The respiratory movements were increased; no vocal fremitus could be detected; percussion resonance over anterior part of chest good, except at left apex; posteriorly resonance rather dull, especially low down. Upon left side of chest respiration blowing in character in the entire lung, and expiration prolonged, but not

distinctly bronchial. Breathing on the right side similar to that on the left, but not so loud; no râles heard in any part of the chest. The heart-sounds were normal but weak. The urine, removed by the catheter, had a specific gravity of 1.020, was dark-colored, slightly cloudy, and contained ten per cent. of albumen. In it was a large number of small hyaline casts and a few large ones, with some granular matter.

The patient complained of pain on the right side of the abdomen, a little below the ribs. On palpation the abdomen was found resistant and hard, and the percussion dulness extended downward from the normal liver space to a line just above the umbilicus. The dulness extended to the left over the transverse colon. No indentation could be made. Abdomen not tympanitic, nor distended. Deep percussion sound over the lower part of the tumor resonant. 7 P.M.—Vaginal temperature, 97° F.; respiration, 24; pulse, 86. 10 P.M.—Pulse, 88; temperature, 97° F.; respiration, 24. She was restless, moaned often, and finally became more and more somnolent till her death, about eighteen hours after admission.

She was treated by purgative doses of elaterium, by digitalis, hot-air baths, alcoholic stimulants, etc.

At the autopsy a small amount of straw-colored fluid was found in the pleural cavities; no adhesions; lungs congested and oedematous; heart dilated and hypertrophied, dilatation predominating; walls of the heart more yellow than normal, and under the endocardium on the right side are irregular yellowish spots; trabeculae flattened, and the spaces between them enlarged; free border of mitral valve thickened; walls of left ventricle one-half inch thick; tricuspid orifice largely dilated. Kidneys: Diminished in size; capsules tear the surface on stripping; surface finely granular, and of a more yellow color than normal; section shows a general atrophy; in pyramids, radiating whitish striae; columns of the tubules more narrow than normal, and wavy appearance exaggerated; intertubular spaces enlarged, and of a reddish color, contrasting with the yellow color of the tubules; Malpighian bodies not recognizable.

Liver: Weight, 3 $\frac{1}{8}$ lbs.; increased in breadth, and diminished in thickness; old local thickening of capsule; surface slightly lobulated and firm; lobules small and irregular. This organ is cirrhotic and fatty. Spleen: Slightly enlarged and firm. Stomach and intestines: Apparently normal. Brain: Meninges cloudy; a large right vertebral artery, and very small left vertebral, so that the basilar is formed apparently almost entirely from the right vertebral; arteries at base of brain, both the large and small, are atheromatous. On the left side a large softened spot appeared in the upper anterior portion of the optic thalamus. Another similar softening a little lower than this, slightly involving the middle third of the internal white capsule. Two or three similar spots were found in the white portion of the hemisphere, and one in the pons Varolii on the left side. These spots were yellow.

Remarks.—"The liver, in regard to the state of which some doubt has been expressed, has been examined microscopically by Professor Welch, with the following results: 'It is fatty and moderately cirrhotic. There is a new growth of connective tissue, which, although only moderate in amount is unmistakable. There are patches of atrophied liver-cells. I think that the evidences of cirrhosis are to be made out with the naked eye, there being already a granular appearance on the surface, and a distinct lobulation on the cut section.'

"This woman, though in middle life, had disease of a fatal nature in nearly every important organ. There was a group of structural changes, such as we would expect to find only in advanced age. No doubt a life of debauchery, privation, and hardship renders men and women of the class to which this woman belonged prematurely old.

"The brain-softening was interesting, as it occurred on

the side in which the vertebral artery was abnormally small, and it seemed probable that the diminished blood-supply sustained a causative relation to it. What appeared before death to be an abdominal tumor was the right lobe of the liver, which lay unusually low and was prominent.

"The most conspicuous symptoms, and also death, appeared to be due more to the Bright's disease than to any other of the many lesions. Dr. Smith called attention to the subnormal temperature, which was constantly three or four degrees below that of health, during the time that she was under observation."

DR. JOHN F. RIDLON presented a specimen with the following history:

CHRONIC OSTEITIS OF THE SHOULDER-JOINT.

George G— was admitted to St. Luke's Hospital, April 3, 1883; twenty-three years old; single; a polisher, and a native of the United States. Service of Dr. Chas. McBurney.

He was indebted to Dr. Hunter, House Surgeon, for the history. Previous history good; parents healthy; no one in family has had phthisis, carcinoma, or syphilis. Patient has had gonorrhœa twice—last attack two years ago; never had a chancre; never injured or strained his arm in any way. About a year ago he first noticed stiffness and weakness at the left shoulder-joint, followed by pain on motion, but no pain while at rest. Next came noticeable atrophy of the muscles of the shoulder and arm. Three months ago an abscess appeared at the inner and front part of the arm, at the border of axilla, and pain became severe. Two months ago this abscess was opened, and has been discharging copiously since. He has lost in strength and weight; has cough and night-sweats; appetite poor.

Examination showed some cedema of entire arm, atrophy of shoulder and upper arm muscles: two sinuses, with edges undermined, at inner anterior surface of arm, near border of axilla, into which a probe passes toward the joint four inches, touching bare bone. Joint motion in all directions limited, almost completely, by reflex spasm.

April 21st.—Patient etherized; joint motion free in all directions, producing grating sensation. The joint was then laid open, a quantity of pus evacuated, the head of the humerus excised, half an inch more of humerus removed, glenoid cavity scraped out, cavity cleansed with 1 to 20 carbolic solution and peat dressing applied.

Dr. Ridlon presented the specimen with reference to two points: First, the futility of opening abscesses connected with osteitis in a joint before the walls have become very thin. He believed it to be best to either wait in this way or allow the abscess to open spontaneously. In cases which had been left to themselves, he had seen the abscesses disappear entirely. Or when they had been left to open themselves, and the patient received ordinary good food and tonic medicines, the discharge began to diminish, as a rule, in the course of six or eight weeks, and in the course of three months was only slight.

The second point was the fact that it was very easy to make a mistake where there is no motion at the joint in supposing that there is ankylosis, and it is injurious to give ether simply as a diagnostic test, because in these cases where the head of the bone and the cavity in which it rests are bare, and the surfaces are covered with granulations, such a procedure cannot do otherwise than make the joint worse.

DR. RIPLEY asked concerning the age of the patients and the joints included in Dr. Ridlon's statement.

DR. RIDLON said he referred to cases of osteitis of the hip, knee, ankle, wrist, and elbow, and to cases of Pott's disease; in other words, he would make the restrictions quite general. In some cases, of course, the abscesses may be pointing in unfavorable situations, and it may be desirable to make a counter-opening to turn the discharge in some other direction.

DR. RIPLEY thought that abscesses of the different joints, particularly of the ankle-joint, were most successfully treated by opening them, and establishing free drainage. Bryant, of London, had advocated free opening into joints for inflammation, and had reported most remarkable success, especially in young subjects. With regard to the question of examining patients' shoulder or other joints under ether in cases of suspected disease of the joint, he would say that, despite the temporary lighting up of new inflammation, it was the proper mode of treatment to be adopted. The first thing to be secured in surgical and medical practice was a correct diagnosis, and if ether was necessary to accomplish this, it should be administered. He thought that the restrictions mentioned must be taken with considerable modification.

DR. RIDLON remarked that Dr. Ripley's statement did not apply to the view he had intended to express. He did not wish to object to opening into joints, but simply to express the opinion that with abscesses connected with joints the patients were better off when *as abscesses* the swellings were let alone than when opened.

As to the administration of ether for purposes of diagnosis, it certainly was justifiable if diagnosis could not otherwise be made, but it seemed to him, however, that in all cases where there was osteitis to any great extent, giving rise to a condition which resembled that found in hip-joint disease, it was unnecessary to give ether for the purpose of making a differential diagnosis.

DR. RIPLEY remarked that so far from being correct was the last statement made by Dr. Ridlon, that a few years ago a child, brought from the South, was seen by one of the most prominent surgeons of the city of New York, now deceased, and whom all respected, who refused to make a diagnosis without not only etherizing the patient, but cutting into the joint. He wished simply to emphasize the point, that if the joint be manipulated with care, the patient being under the influence of ether, and subsequently being kept quiet, certainly no permanent evil is likely to result.

THE PRESIDENT expressed himself as being somewhat surprised with regard to the restrictions announced by Dr. Ridlon, inasmuch as it had been regarded as a correct rule in surgical practice to evacuate pus wherever it could be found. Of course there might be some particular contra-indications with regard to not only these cases, but also with reference to resorting to anæsthetics for the purpose of making a differential diagnosis. He was sure, however, that he had opened joints and evacuated pus in several cases with good results, and he had also broken up adhesions around joints at different times without any bad results.

DR. RIDLON said, according to his experience in the orthopædic department at St. Luke's Hospital, that in the cases in which the abscesses had been opened the joint had discharged more profusely, and for a longer time, and the patient had grown weak more rapidly than where under similar conditions the opposite course of treatment had been pursued. The statement which he had made was simply the result of observation, and not the result of any theorizing. During the last two years he had had under observation probably between two and three hundred cases.

DR. RIPLEY asked what the ultimate result had been, so far as the joint was concerned, when treated according to the method suggested.

DR. RIDLON replied that sooner or later, in the majority of cases, the patients recovered with ankylosis, and the condition of the joint had never been seen; and in most cases which terminated fatally it had been impossible to obtain an autopsy.

THE PRESIDENT remarked that even in cases of cold abscess it had been customary to evacuate the pus and hyper-distend them according to Callender's method, and that good results had been obtained.

DR. RIDLON referred to a case which came under his observation at St. Luke's Hospital, in which an abscess

accompanying hip-joint disease was opened as soon as it became quite prominent, pus was evacuated, the cavity was thoroughly distended with carbolic solution, and a Lister dressing applied in its most thorough detail for about three months and a half; the discharge never being allowed to be exposed to the air. This was in the autumn of 1878, and the sinuses are still open and discharging.

Considerable discussion then followed concerning the indications and contra-indications for surgical interference in joint affections, especially with reference to operations when there is evidence of waxy change, involving the liver and kidneys and other organs. The prevailing sentiment was that resection and other surgical operations were justifiable even though there was evidence of waxy degeneration of the kidneys and of the liver, because in quite a large number of cases good results had followed operations performed under these circumstances.

The Society then went into executive session.

MISSOURI MEDICAL ASSOCIATION.

Twenty-sixth Annual Meeting, held at Jefferson City, Mo., May 15 and 16, 1883.

(Continued from p. 548.)

DR. E. M. NELSON read, on Wednesday evening, by special appointment, a brief

SKETCH OF THE LIFE OF DR. JOHN T. HODGENS, whose death occurred so shortly before the last meeting that no opportunity was afforded for the preparation of any biographical sketch. As a token of respect to the subject of the sketch the vote referring the paper to the Publication Committee was taken by standing.

DR. SCHENCK, of St. Louis, read a very interesting paper comparing

VITAL AND HEALTH STATISTICS OF THE MALE AND FEMALE SEX,

and showing that female lives are in reality better risks for life insurance than are male lives.

A lady was here introduced and permission granted to her to speak to the Association upon

THE SUBJECT OF TEMPERANCE, she being a representative of the Sons of Temperance.

DR. ALLEN, of the Special Committee on Conference with Kansas and Illinois Associations, reported a motion

CHANGING THE DATE OF THE ANNUAL MEETING from the third to the second Tuesday of May, so as to allow delegates from this Association to attend the meetings in the adjoining States, both of which meet on the third Tuesday.

A resolution was also passed for the appointment of delegates to those meetings.

DR. N. W. HARRIS then read a paper on

GLAUCOMA,

recounting the history of his own case, the doctor's vision having been so impaired that the paper was read for him by DR. PREWITT.

Another paper on the same subject was read by DR. TIFFANY, of Kansas City. This was illustrated by colored drawings which were placed upon the wall behind the reader.

On Thursday morning DR. DICKENSON, the Corresponding Secretary, reported the receipt of copies of the "Transactions" of North Carolina and Minnesota State Societies. It was ordered that all papers offered by gentlemen not present in person to read them, be read by title and referred to the Publication Committee.

DR. ALLEN then read the

PAPER ON ALCOHOL,

which he was directed at last meeting to present at this time. A committee of three was ordered to be ap-

pointed to investigate and report at the next meeting with reference to the relations of alcoholism, insanity, and crime.

The following papers were read by title: "Injuries to the Head," by Dr. R. F. Brooks, Carthage; "Case of Congenital Encephaloma," by Dr. J. H. Duncan, Columbia.

The special order of the day was then taken up, and the following officers elected: *President*—Dr. E. H. Gregory, of St. Louis; *Vice-Presidents*—Dr. O. A. Williams, of Morgan County, Dr. John H. Duncan, of Boone County; Dr. J. D. Griffith, of Jackson County; Dr. T. J. Norris, of Macon County; Dr. C. H. Hughes, of St. Louis. *Recording Secretaries*—Dr. A. H. Ohmann Dusmenil, of St. Louis; Dr. D. V. Wales, of Jasper County. *Corresponding Secretary*—Dr. N. F. Essig, of Clinton County. *Treasurer*—Dr. C. A. Thompson, of Cole County.

THE NEXT MEETING OF THE ASSOCIATION

will be at Sedalia.

A resolution was adopted approving the record of the National Board of Health, and urging upon Congress the appropriation of necessary funds for the efficient work of this Board.

MISCELLANEOUS PAPERS.

DR. N. M. BASKETT read a paper entitled "Some Suggestions on Sanitation."

DR. W. A. HARDAWAY read a valuable paper reporting ten years' experience in the use of electricity in the treatment of diseases of the skin.

DR. T. E. POTTER, of Cameron, read a paper entitled "Therapeutics of Ergot and Ergotin in the Reduction of Spleen and Fibroids of the Uterus."

DR. C. A. TODD, of St. Louis, read an abstract of a paper on

ANTISEPTIC TREATMENT OF SUPPURATIVE OTITIS BY THE DRY METHOD.

The dry method consists in cleansing the ear with absorbent cotton, and applying an antiseptic powder. No syringing is allowed; no drops are instilled. This treatment was first published by Dr. Todd, in a paper presented to this Association in 1880, after he had tested it for some time, and fully demonstrated its value in his aural clinic at the Missouri Medical College. Dr. Todd was the first to recommend the use of borax as an antiseptic powder instead of boracic acid, and other insoluble or slightly soluble powders.

DR. W. P. KING, of Sedalia, read a paper on "Vaginitis," detailing seven cases which he had treated. He regarded the affection as purely local, and believed that the excision of carunculae myrtiformes would be curative in almost all cases. In the discussion upon this paper Dr. Schenck took the position that several of the cases reported by Dr. King were not cases of vaginitis as defined by Dr. Sims, but merely hyperæsthesia of the vulva, dependent upon local inflammatory conditions.

The following papers were then read by title: "Report on Malarial Diseases in Children," by J. P. Kingsley, M.D., St. Louis; "Intestinal Obstruction," by J. Geiger, M.D., St. Joseph; "Report on Railroad Injuries," by F. M. Johnson, M.D., Kansas City.

The usual votes of thanks were passed to citizens, Committee of Arrangements, the railroads, the press, and the retiring President.

The Association then adjourned for one year.

TASTELESS MEDICINES.—An old colored man saw a sign in a drug store which read "Tasteless Medicines." Looking in at the "pizenmixer," as he called him, he said: "Dat am de bes' advice I ever got—taste less medicines," and hurried away, just in time to dodge a package which was thrown after him.

ILLINOIS STATE MEDICAL SOCIETY.

Thirty-third Annual Meeting, held at Peoria, Ill., May 15 and 16, 1883.

(Continued from p. 548.)

THE report on obstetrics was read by Dr. E. L. Herriott, of Jacksonville, with supplementary reports by Dr. G. W. Jones, of Danville, and Dr. E. A. Ingersol, of Canton. The report was discussed by Drs. Holton and Corr. The report on ophthalmology was presented by Prof. S. J. Jones, and supplementary report by Dr. McKinney, of Barry.

In the report on ophthalmology the results of examinations of Chinese and Japanese showed them to be peculiarly exempt from the defect of color-blindness. The discussion on ophthalmology was participated in by Dr. G. W. Jones, of Danville, and Drs. Crawford and Tilley.

Volunteer papers on miscellaneous subjects; nominations, and votes of thanks constituted the closing session. The miscellaneous papers were read by Dr. J. Murphy, of Peoria, Dr. L. G. Thompson, of Lacon, and Dr. Reber, of Shelbyville.

DR. N. S. DAVIS expressed the feeling of dissatisfaction which has always existed among those who have had to report on the practice of medicine from the want of reliable data from which to base conclusions, and moved that the chairman be requested to appoint one member from each county to obtain and furnish such data to the Committee on the Practice of Medicine.

A special vote of thanks was tendered to Dr. J. H. Hollister for his twenty years of faithful and efficient service as Treasurer of the Society.

The Committee on Necrology requested the privilege of correcting the statement that no deaths had occurred, the corrections will appear in the "Transactions."

The retiring President, who was not relieved by the President elect, gave a brief address in response to a vote of thanks, and the meeting adjourned to meet in Chicago, May, 1884.

A CONFIDENT CORRESPONDENT.—Dr. J. O. Davy, of Springfield, O., is safe in prophesying the following: "In one of the February numbers of the *Medical Age* is an article on typhoid fever, in which the writer gave expression to the following sentiment: 'Typhoid fever is a disease which is uncontrolled and uncontrollable, and any one who says he can abort an attack or cut short the disease after it has passed the forming stage is either a knave or a fool!'

"Has not the doctor placed himself in similar situation to the animal that attempted to make a sky-rocket of a locomotive? Well! the result was in no way commendable to the animal for his judgment. It is very true the medical profession of the world of to-day regard the sentiment quite correct and endorse most heartily his strong diction, but all that will not prove the truthfulness of his assertion any more than the maledictions which were hurled at Galileo proved that the world was flat. A thing may be regarded impossible to-day and next year quite practical. Within the next five years typhoid fever will be controlled almost as easily as remittent or marsh fever of to-day. A patient can be gotten into a convalescent condition in from four to six days after the following symptoms are fully developed: temperature, 105°; pulse, 100 or 120 per minute; the nervous symptoms with delirium well marked; tongue, dry, cracked; articulation, quite indistinct; bowels, tympanitic, tender, and gurgling; diarrhea of ochre-colored stools, etc. Ninety per cent. of such cases can be gotten up and about their rooms in from twelve to eighteen days by proper medication. Fully ninety per cent. of cases of typhoid fever can be aborted if medication is properly commenced before the patients take to their beds. True, this sounds like the prattle of one suffering from mental hallucinations, but time will tell who are in the fog."

Correspondence.

A CASE OF WANDERING NEEDLES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR : The following brief account may be somewhat interesting as illustrating the behavior and one of the varied courses taken by foreign bodies introduced into the gastro-intestinal tract.

R. V—, thirty-three years of age ; seamstress by occupation ; born in Switzerland ; was first brought under observation one year ago, at the State Emigrant Hospital, Ward's Island. When admitted to that institution she had been suffering from acute colicky pains for the previous three or four weeks, referred to the lower part of the abdomen and the vagina, and in consequence was unable to assume an erect position or walk, except with marked increase of the pain.

Upon examination a narrow body about two inches in length was discovered imbedded in the abdominal wall, one inch below the umbilicus and somewhat to the left of the median line, fairly movable among the surrounding tissues and causing great pain when manipulated ; vagina exquisitely sensitive to touch, and examination on this account not admissible.

Signs of inflammation shortly appearing, with increase of the symptoms, the patient was etherized, antiseptic precautions taken, and the body cut down upon and removed by Dr. George M. Tuttle. It proved to be an ordinary sewing-needle, about one inch and a half long, slightly rusted, black and oxidized, lying one-half inch below the surface, in the substance of the rectus abdominis muscle.

The symptoms now subsiding, appeared again shortly afterward, the pain being referred to the left inguinal region, from which situation two others were removed at different times, however, but both lying parallel to, and close to Poupart's ligament. After this nothing more was discovered, although when discharged slight abdominal pain still remained.

Patient was admitted to the Mount Sinai Hospital in February, 1883, one year after the above ; one needle, it is said, having been removed in the meantime at one of the city dispensaries. With this exception there had been comparatively little discomfort till within the preceding two weeks, during which time she had suffered from constant vomiting, with severe epigastric pain, having taken little or no nourishment.

When admitted, her general condition was very poor. Pulse imperceptible at the wrist ; respirations hurried and irregular ; extremities cold ; temperature normal ; general abdominal pain complained of, and tenderness in this region well marked. Other examination negative with the exception of slight enlargement of the liver ; vomiting occurred several times. Patient sank rapidly, and died eight hours after admission.

Autopsy showed fatty liver to have caused death. Movable kidney upon the right side was also present. This could be displaced, anteriorly, to the median line, and below as far as the crest of the ilium. Imbedded in the great omentum, opposite the umbilical region, were found six needles, and likewise in the omentum, opposite the lumbar region, two were discovered. These, measuring 39 mm. in length, were blackened and corroded. The sharp points had disappeared, and they were firmly fixed, evidently surrounded by some inflammatory products, which had served to encyst them in their new situation. One needle had made its way through the parietal peritoneum and lay partly imbedded in the rectus abdominis muscle. Here the omentum was firmly adherent to the anterior abdominal wall, showing that some adhesive inflammation had accompanied its perforation of the parietal peritoneum and omentum. In the pelvis, over the femoral ring, upon the left side, the border of the omentum, which extended down to this region, was thickened by old inflammation,

and firmly adherent to the peritoneum of the pelvic wall. Two needles were here met with, which had found their way through the peritoneum in part, and projected into the substance of the psoas and iliacus muscle. Everywhere the needles presented the same corroded appearance, and could not be disturbed from their position without positive laceration of the surrounding tissues.

Nowhere were there any signs of recent inflammation. As to the exact length of time the needles had been present but little definite knowledge could be ascertained. One, however, is known to have been swallowed about six years ago.

Three years since, the patient was in the service of Dr. Pastolozzi, of Zurich, during which time a needle was removed by incision (one having been previously pressed out with the fingers). Similar symptoms were presented, and relief likewise obtained after removal. At this time it was learned that epigastric pain and oppression had been prominent since her nineteenth year, with also the occurrence of frequent vomiting, the vomited matter frequently containing considerable blood. Menstruation had always been regular, and there seemed to be no connection between it and the attacks of pain, the latter occurring at intervals of from eight days to two weeks, and lasting from one to two hours.

In all, therefore, it seems that six needles were removed ; the first at least three years after one was known to have been swallowed ; the last somewhat over two years later, and these are all described as being similar to those found on autopsy.

JOHN VANDER POEL, M.D.,
House Physician, Mount Sinai Hospital, N. Y.

Navy News.

Official List of Changes in the Medical Corps of the Navy for the week ending May 19, 1883.

CORWIN, WILLIAM A., Surgeon. Detached from the Receiving Ship Colorado and granted sick-leave for three months.

CRAWFORD, M. H., Passed Assistant Surgeon. Detached from the U. S. Ship Pinta and ordered to the Navy Yard, League Island, Pa.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 22, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 15, 1883.....	0	5	132	4	163	39	0	0
May 22, 1883.....	4	4	128	8	170	41	0	0
Deaths.								
May 15, 1883.....	2	4	30	6	25	19	0	0
May 22, 1883.....	0	1	32	7	27	14	0	0

The total mortality for the week ending May 19, 1883, was 728, of which 70 were from pneumonia.

ON EXTRACTING DECAYED TEETH AS A PREVENTIVE, OR CURATIVE EFFECT OF ILL-HEALTH.—Dr. G. W. Brandon, of Milford, Neb., writes : " In looking over THE

MEDICAL RECORD of May 12th, I see a communication from Samuel Sexton, M.D., of New York. In speaking of the extraction of decayed teeth, or teeth that from any cause are suffering from death of the pulp, I, too, have noticed the bad effect produced upon the system, in one instance that I recall, especially.

"Mrs. S. J. W.—, a lady about thirty-four years old, who had always enjoyed the best of health previous to her present trouble, was suffering almost continually with neuralgia (facial), also dyspepsia, and, as she termed it, sick headache and nervous prostration, loss of sleep, irregularity of the bowels, etc., etc., so bad that she was compelled to keep her bed for days at a time. She had employed several physicians, but realized no benefit from treatment, only temporary. She finally drifted into my office. Upon examination, I could detect no constitutional disturbance that I could attribute her trouble to. But upon noticing her foul breath I requested an examination of her teeth, which I found in a bad condition, several rotted down, others with the gum falling away, and so on. I requested her to have the offending members removed. She objected, said it would hurt, and went to another physician for treatment, but eventually returned, when upon reassuring her it would be a great help, she consented to the operation. I extracted all irritated or irritating teeth, when she asked me if I was not going to prescribe for her. I informed her I was not. I saw her some three months after, when she informed me that since the operation she had enjoyed splendid health, and had suffered less in the three months last past than she had any one day for five years previous, said her health was never better; at the same time showing me another tooth that was slightly decayed, said it did not ache, but no more bad teeth for her, and requested me to extract it, which I did. Now, I do not presume to say all cases will be as decided as the one just mentioned, but I do believe that in a great many cases we can relieve disease and do justice to our patients, as well as the profession, by considering these small but none the less aggravating conditions."

VITAL STATISTICS IN WISCONSIN.—The State Legislature of Wisconsin has passed a law requiring the organization of health boards and appointment of local health officers throughout the State; also the compulsory notification, by physicians, of contagious diseases. Active measures are being taken by the Secretary of the State Board to carry the law into effect.

"A NOVEL MODE OF CLEANSING THE VAULT OF THE PHARYNX."—Dr. J. O. Webster, of Augusta, Me., writes: "A paper with the above title, in THE RECORD of April 28th, leads me to report my own case. I can easily, with the tip of my tongue, sweep the entire vault of the pharynx, insert it for some distance into the posterior nares, and slightly into the mouths of the Eustachian tubes, and am in the constant habit of dislodging mucus by its means. This power I gradually acquired when a boy, by trying to dislodge mucus from behind the soft palate with my tongue. This was at last accomplished, with great difficulty, but the tongue became daily more pliable, and can now be used as stated above. The frænum linguæ was never cut."

FRACTURE OF INTERNAL EPICONDYLE OF HUMERUS.—Dr. J. W. Pryor, of Lexington, Ky., sends us the history of the following rare case: "October 18, 1882, Willie S—, aged twelve years, while wrestling with a playmate fell with the right arm semiflexed behind the body (the position in which fencers usually hold the left arm), the internal epicondyle receiving the force of the fall, as proved by the manner in which the arm was held, according to the testimony of the lad, the ecchymosis proving his statement. He could flex, extend, supinate, and pronate the arm with perfect freedom and little or no pain. The small knuckle of bone was freely movable, and crepitus very distinct. I was positive the fracture

did not extend into the joint. I saw the case about an hour after the injury; there was no swelling at that time. Dr. Stucky, who saw the case, agreed with me that it was a true fracture, and not a diastasis of the internal epicondylar epiphysis. We put the arm in an elbow-splint, bandaging from the hand to a short distance above the elbow. The boy did not return to my office until the fourth day from the injury. I found that the mother had removed the bandage and that the elbow was slightly swelled and quite painful upon flexion. I directed the mother to keep up passive motion. At the present time (six months since fractured), the arm has perfect motion. The internal epicondyle is slightly displaced toward the hand and enlarged, showing there had been a large deposit of callus about the situation of the break."

MEDICAL SOCIETY OF NEW JERSEY.—The one hundred and seventeenth annual meeting of the above Society will be held in Congress Hall, Atlantic City, on Tuesday and Wednesday, June 12th and 13th, commencing on Tuesday at four o'clock P.M.—William Pier-son, M.D., Secretary.

PROFESSOR ROBERTS BARTHLOW, M.D., LL.D., of Jefferson Medical College, has been elected Dean of the College in place of Dr. Ellerslie Wallace, who has been forced to resign on account of ill health.

BROMIC ETHER IN WHOOPING-COUGH.—Dr. Squire recommends a solution of bromic ether in water (1 to 200) for administration in whooping-cough, as well as for angina pectoris and spasmodic pain.

A CASE OF POLYORCHISM was observed in Bulgaria, in a farmer eighteen years of age. There were three testicles, two being on the right in the scrotum, one above the other.

WHY SOME SUBJECTS ARE STUDIED SO MUCH.—Dr. Da Costa has said: "If one has not too much to do he writes a short paper on phthisis; if one has little to do he writes a long paper on phthisis; if one has nothing to do he writes a book on phthisis." The same writer says: "Gynecologists, as a rule, part their hair and their names in the middle, and never die until they have invented pessaries and speculums innumerable."

A MEDICAL EPIGRAM.—It was Garrick who wrote the epigram on Sir John Hill, viz.:

"For physic and farces
His equal there scarce is;
His farces are physic,
His physic a farce is."

READING BIOGRAPHIES.—Dr. B. W. Richardson, in recommending to students the reading of biographies, says: "A man who will begin as a student to learn the lives of great men of the past, and will pass from one life to another regularly until he has made as many of the great ones of the past his bosom friends as he can, will at all times be miles in advance of other men who have made no such friendships."

CHLORATE OF POTASSIUM IN ULCERATING EPITHELIOMATA, in fine powder, is said to yield excellent results when dusted over the surface of ulcers and ulcerating epitheliomata. The surface should be cleansed and the powder dusted thickly on twice a day. This, it is claimed, relieves pain and promotes healing.

CASTOR-OIL AND GLYCERINE.—A mixture, which is of an agreeable flavor and in which the nauseous smell of the oil is efficiently disguised, can be made thus:

R. Ol. ricini.....	3j.
Glycerini.....	3j.
Tr. aurantii.....	℥xx.
Tr. senegæ.....	℥v.
Aquæ, cinnam.....	5 ss.

This forms a beautiful emulsion, is easily taken, even by children, and if administered at bedtime will produce a gentle motion the following morning.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 23, No. 22

NEW YORK, JUNE 2, 1883

Whole No. 656

Original Articles.

ANGULAR ANCHYLOSIS OF FEMUR AT THE HIP-JOINT.

TREATED BY SUBCUTANEOUS DIVISION OF THE SHAFT AT THE TROCHANTER.

BY STEPHEN SMITH, M.D.,

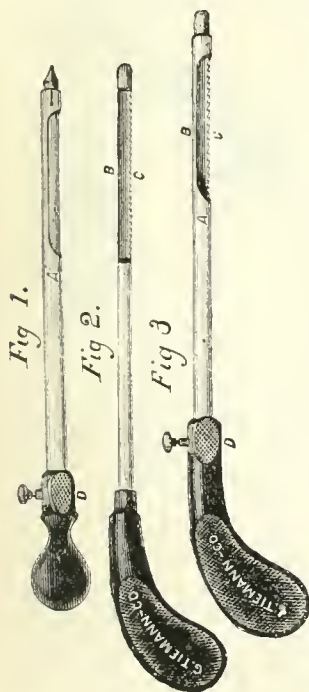
PROFESSOR CLINICAL SURGERY, UNIVERSITY MEDICAL COLLEGE, NEW YORK.

THE patient was a young lady who suffered from disease of the hip-joint in early life, which resulted in ankylosis at an angle of about forty-five degrees. A year or two previous she had been under the care of the late Dr. James R. Wood, who endeavored to straiten the limb by force, but did not succeed. I gather from her statement that he did overcome the flexion somewhat, but that fact is not clearly made out. At the time when she first applied to me there was no perceptible motion obtainable at the joint, on the most careful trial.

The operation proposed was division of the femur just at the small trochanter, and the method selected was subcutaneous section with the fenestrated canula saw of

Dr. Geo. F. Shrady. This saw has great advantages over any other form of bone-saw in this, that by working in a canula, the tissues beyond the bone are not liable to be injured by the point of the saw as it is moved backward and forward. The saw is described as follows by Dr. Shrady :

The instrument consists of a trocar, fenestrated canula (Fig. 1), and a staff (Fig. 2), with handle and blunt extremity. A portion of this staff at a short distance from the extremity is flattened, one edge (*B*) being made into a knife-blade, and the other edge (*C*) being provided with saw-teeth. This staff (Fig. 2) is intended to replace the trocar in the canula after the latter is introduced. When in position (Fig. 3), either the saw (*C*) or the knife (*B*)



edge of the shaft, according to the way the latter is turned, corresponds with the opening in the canula. The saw or knife can then be worked to and fro within the canula by a piston-like movement, the canula being steadied by grasping the flange (*D*) at its base. If it be necessary to work the instrument as an ordinary blunt-pointed sheathed saw or knife, the shaft can be fixed in the canula and made into one piece by a thumb-screw in the handle. The portion of the canula at the back of the opening is made extra strong and is of the same thickness as the blade, so that in sawing there is no stoppage to the passage of the instrument through any thickness of bone. The soft parts are protected

from injury, no matter which way the instrument may be worked. The saw-blade is blunt at its extremity, and is guarded on all sides except on its limited cutting surface. The same may be said of the knife. The working of the saw to and fro in the canula is sufficient in sweep to insure the division of any bone having a diameter less than the length of the cutting edge. Still, as this process is much slower than when the saw is used in the ordinary way, it is perhaps better to restrict its employment to operations on the smaller bones, to cramped localities, and to situations where there is special danger of wounding some neighboring vessels. All that is necessary in using this saw is to thrust the trocar and canula into the limb, the fenestra of the canula being alongside of the bone upon which the operation is to be performed. The trocar is then withdrawn, the staff introduced in its place (Fig. 3) and worked as already described. The instrument is made of different sizes, to suit the different purposes for which it may be employed.

As one of the liabilities after the simple division of the bone is the displacement of the lower fragment from contact with the upper portion, so as to endanger non-union, I decided to attempt to overcome that tendency by making a half tenon and mortise by which the fragments would lock. This was easily effected by dividing the bone partially on the posterior and anterior surfaces, the incisions being separated half an inch or more, and



Fig. 4.

breaking the intermediate portion. The object sought to be accomplished is apparent from the following illustration (Fig. 4). Placing these two pieces in the position which the bone would assume after division, the relations of the fragments are shown in Fig. 5. If this

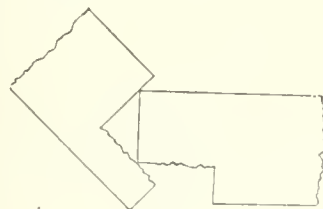


Fig. 5.

conception of the operation is applied to the case in hand the following illustrations (Figs. 6 and 7) will correctly represent the procedure and the results.

The operation was as follows : The left thigh being the affected limb, the patient was placed on her right side, which brought the left trochanter prominently upward. Selecting a point corresponding with the small trochanter, a sharp-pointed knife was introduced to the bone. Along the track of the knife Shrady's saw, sheathed in the canula, was passed, flatwise, until the blade of the saw was placed against the posterior surface of the femur at the point where section was to be made. The saw was then turned upon its axis so as to bring the teeth upon the bone. I attempted at first to hold the canula firmly, and work the saw in it, but found so much

difficulty that I finally worked the whole as a common saw. The difficulty of fixing the canula seemed to be due to my inability to hold the canula firmly (the instrument being without the extra handle, *vide* Fig. 8), and to a bending of the canula in the track of the saw when the saw was withdrawn, which interfered with its return. It is possible that particles of soft tissue were also drawn into the canula, which prevented the saw from returning along the track. The saw, however, worked satisfactorily with the canula to guard its point. After penetrating to a depth supposed to be a little more than half the diameter of the bone, the saw was withdrawn from the posterior surface and passed along the anterior surface, flatwise, about half an inch below the line of section of the posterior wall of the femur. Turning the saw to the bone, the section was made to a depth believed to be nearly on a line, in the long diameter, with the greatest depth of the posterior

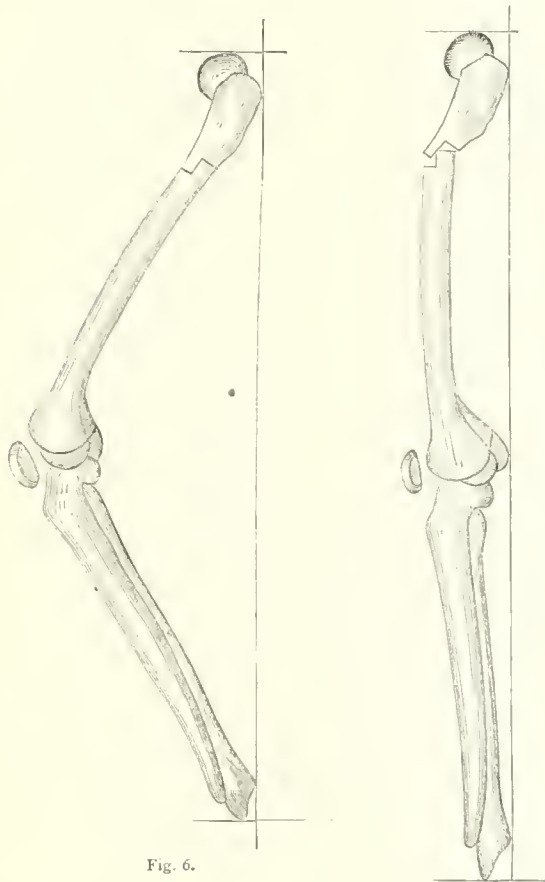


Fig. 6.

Fig. 7.

section. This fact was determined by inserting two probes in the cuts. At this point I proposed to stop, and apply the plaster dressings, and break the intervening bone as the limb was brought down into the straight position. Some of the gentlemen present did not think that I had divided the bone sufficiently to insure fracture, basing their opinion upon the few movements which I had given to the saw. The truth was that the saw had cut the bone much more rapidly than they had supposed, for, on re-entering it, and making two or three passages, the bone separated in my hands.

The bone being divided while I held the limb, the assistants applied the plaster-of-Paris dressing. During the adjustment of the dressings, the lower fragment of the femur twice slipped out of its interlocked position with the upper fixed portion, but it was readily replaced, and when returned remained quite firmly in the notch prepared for it. The limb was brought into the straight position while the plaster was yet moist. It soon hardened, and then the dressings formed a splint, encasing two-thirds of both thighs, hips, and the lower half of the

body. A fenestrum was cut out at the seat of the wound of the thigh. The wound had been hyperdistended with carbolized water, and then hermetically sealed.

The patient did well for two days, when menstruation began with great nervous excitement, which induced restlessness, sleeplessness, apprehensions of danger, and loss of appetite. It was more than a week before these symptoms subsided, when a superficial abscess was found to have formed, which extended down the external part of the thigh nearly to the knee. It discharged freely through the original wound, and by means of compressed sponges, accurately applied and firmly bandaged, soon closed. It could not at any time be made out that the abscess penetrated to the divided bone, and from the rapidity with which it closed there can be no doubt that it was altogether superficial.

The union of the bone progressed satisfactorily, and in about the usual period which is required for the consolidation of a fracture at this point, the patient was able to get up, and begin to use her limb. She now walks without any support, erect as she would with a healthy limb, and with but a slight halt.

The advantages of this method of operation, if any, are: 1, The subcutaneous nature of the wound; 2, the precision with which the bone can be divided at the desired point; and 3, the definitely fixed position which the fragments necessarily assume with relation to each other immediately on the division of the bone.

The only embarrassment experienced was the effort to work the saw in the canula. Failing in this, the saw and canula were worked together, and, as the saw cut a groove sufficiently large to receive the canula, there was no difficulty in very quickly dividing the bone. The danger, however, of contusing the tissues on the inner side of the bone, by the end of the canula, is necessarily considerable, but in this case I am satisfied that the harm done did not interfere with the union of bone, nor the healing of the wound. Still it would be well to avoid the risk. On explaining the operation of the saw to Dr. Shady, he modified the canula by making the fenestrum so small as only to expose the teeth of the saw (Fig. 8). As the teeth cut a groove which the canula readily follows, the canula, thus strengthened, will enable the saw to work easily in it, and at the same time will follow the saw in its section of the bone. This saw seems to me now to be the perfection of its class.

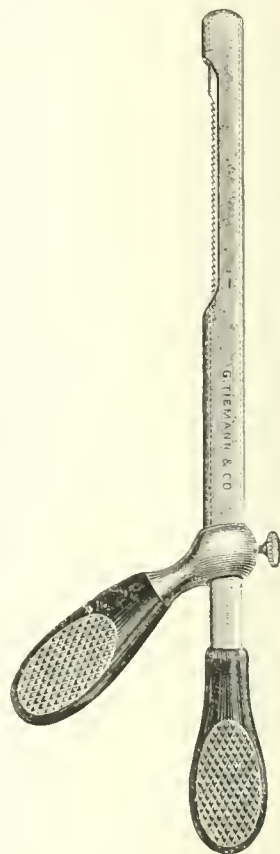


Fig. 8.

A MODERN MIRACLE.—The *New Orleans Picayune* says that a medical man in New Orleans, who is fond of his little joke, called on a colored minister, and began to catechise him: "Why is it," said he, "that you are not able to do the miracles that the apostles did? They were protected against all poisons and all kinds of perils. How is it that you are not protected now in the same way?" The colored preacher responded promptly: "Don't know about that, doctor. I 'spect I is. I've taken a mighty sight of strong medicine from you, doctor, and I is alive yet."

CONVULSIVE AFFECTIONS IN CHILDREN AND THEIR TREATMENT.

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CHILDREN, from infancy to the age of five years, are especially liable to convulsive attacks, and those beyond that age, when of a highly nervous organization, are frequently affected. This peculiar susceptibility to convulsions is supposed to be owing to the highly irritable nature of the growing cerebro-spinal system. It is moreover largely influenced by certain inherited tendencies, especially affecting the nervous centres, which act in the nature of predisposing causes.

Convulsions in children occur as a complication and often as a symptom of numerous diseases. They may also be produced by local-mechanical irritation. In general terms they may be said to depend for their primary cause upon an irritation of certain nerve-centres in the medulla, modified, perhaps, by a want of control on the part of certain inhibitory centres, which in the young child are not fully developed. This irritation may be produced directly by the action of the blood under certain conditions of quantity and quality, or indirectly through reflex transmission of peripheral impressions. The secondary or immediate cause may be said to be due to the peculiar susceptibility of the medulla to disturbance produced by the quality of blood flowing to it; and this may be influenced either by chemico-vital changes of that fluid occurring in the body at large, or by the quantity of blood supplied, which supply is controlled by the action of local vaso-motor mechanisms upon the heart and upon the calibre of the blood-vessels in distant parts. This quality consists in either an excess of carbonic acid or a deficiency of oxygen in the blood supplying the brain.

Convulsions produced in animals by the inhalation of carbonic acid gas are an illustration of the one, and convulsions from a large and sudden loss of blood an illustration of the other.

I therefore propose to arrange the convulsive affections of children under two grand divisions, viz.: those due to peripheral or local irritations, and those due to central or circulatory causes.

I do not recognize the class of convulsions in children commonly called essential, for where no assignable cause for their origin can be discovered, they are in all likelihood, especially when occurring after the third year, epilepsy.

Convulsions in children due to the influence of mental impressions may very properly be regarded as hysterical in their nature. There are certain sources of the local origin of convulsions that are of commoner occurrence than others. The most frequent one in the experience of every physician is irritation of the gastro-intestinal canal. This is the first cause generally suspected, in the absence of other well-defined and apparent causes, and will bear close scrutiny by the medical attendant. It is commonly due either to an improper quality or too great a quantity of food. More rarely it may be owing to the existence of entozoa, also a loaded condition of the rectum from constipation. Occasionally an intestinal catarrh, arising from sudden changes of temperature, may be the starting-point of the convulsion. Whatever combination of circumstances will lead to indigestion will, in all probability, excite a convulsive attack, the probability increasing with the acuteness of the stomachal disorder. This is, on account of the manner in which the contents of the stomach in children is hastened on into the intestines, where the undigested matter undergoes fermentation, producing gases and distention which excite pain. Occasionally matter which has been wholly unacted upon by the gastric secretions enters the intestines, where it causes mechanical irritation. I have met with a case of convulsions where large pieces of orange-

peel were detected in the passages from the bowels. Frequently the irritation proceeds from the stomach, before its contents have passed into the intestines. This occurred in the case of a boy, eleven years of age, whom I attended, where a quantity of sausage had been eaten, and was removed by an emetic. Trousseau mentions a case where the altered condition of the mother's milk, after she had passed through a state of mental excitement, was sufficient to cause convulsions in her infant, shortly after nursing.

It should not be forgotten that the process of dentition and the rachitic diathesis aid to a great extent as complicating factors in disturbing the function of digestion. This is beyond the part that they assume as independent elements in the causation of convulsions in children.

Dentition may be regarded as next in order of frequency as a source of local irritation causing convulsions in children. By dentition is meant the active process of the eruption of the teeth with the attending pain and general nervous erethism, consequent upon the swollen and congested state of the gum, when this exists. The condition of the nervous system that exists during the entire period of teething, which is dependent upon the alteration taking place in the various organs for a new departure of nutrition, can only be considered as a predisposing cause. There can be little doubt that dentition, as here implied, is a factor in the causation of convulsions, independently of any other element, for it has often been demonstrated on good authority that they have ceased as soon as the tension of the swollen gum was relieved by lancing. It has been disputed by some authorities on the diseases of children, notably Hensch, that dentition is as common a cause of convulsions as rickets. While I regard rickets as a prolific source of these attacks, as will be noted further on, there is little doubt in my own mind that, in the majority of cases of convulsions occurring in children suffering from rickets, it will be found that the active process of dentition is the exciting cause, the diathesis acting meanwhile as the predisposing cause. This view is rendered all the stronger from the fact that dentition, although retarded in rachitic subjects, occurs at the time when rickets is at the height of its morbid action.

There are numerous minor sources of local irritation exciting convulsions in children, amongst which can be enumerated, burns, scalds, blisters, severe itching from eczema or other cutaneous eruptions, hardened wax or other foreign bodies in the external auditory canal, foreign bodies in the nostrils, and in fact foreign bodies in any of the animal tissues. Trousseau relates one case where a long needle sticking in the brain and accidentally discovered by the thread attached, produced a series of convulsive paroxysms which ceased as soon as the needle was withdrawn; and another where convulsions had been caused by a needle found at the autopsy penetrating the liver. He also quotes Underwood, who records a case where a pin piercing the anterior fontanelle was found to be the exciting cause of convulsions, ending in death. Such substances as long hairs or pieces of thread found in the pharynx of young children, have been reported in the journals as the exciting cause of convulsive attacks. Dr. Buzzard in *The Practitioner* (vol. xx., p. 403) has ably demonstrated the mechanism of facial spasms produced by foreign bodies in the external auditory canal, and it is reasonable to infer that a similar degree of nervous disturbance from a like cause would be manifested in the young child by a convulsion.

Under the division made of convulsions due to changes in the quality and quantity of blood supplying the cerebral circulation, fevers occupy the first place in frequency and importance. All fevers are due either to a specific poison circulating in the blood, or to the process of congestion and inflammation. To the first class belong the eruptive fevers of children, such as scarlatina, measles, variola, varicella, and erysipelas, and typhoid and malarial fevers. Each of these may be ushered in by a convulsion

corresponding to the chill in the adult. In malignant cases, convulsions often occur some time after the fever has begun, probably from the action of the specific poison. Where this happens in the early stage of scarlatina and the late stage of measles, an unfavorable termination may be expected. Convulsions occurring during the latter stage of scarlatina, it need hardly be said, are of renal origin. Intermittent fever in children, especially in those having a convulsive predisposition, presents a marked illustration of the convulsion taking the place of the chill in the adult. All doubts as to the nature of the convulsion may be set at rest when it is found to occur periodically, and is followed by high fever and sweating. To the class of fevers arising from congestion and inflammation belong pneumonia, bronchitis, summer diarrhoea and its allied affection heat fever, tonsillitis, and other catarrhal affections. Pneumonia involving the apex of the lung is especially apt to be accompanied with convulsions in children. Vogel regards convulsions in children occurring where the disease is located in certain parts, as due to the reflex irritation of the diseased organ or tissue upon the nerve-centres.

It may frequently be observed that there is no direct relation between the rise of temperature and the manifestation of the convulsion, for in children of a nervous temperament, who are more susceptible to the action of the febrile process than others, a moderate rise of fever, as indicated by the thermometer, is sufficient to induce an attack. Gastro-intestinal irritation and the irritation of dentition are frequently attended with fever. But in such cases it seems reasonable to connect the rise of temperature with the same condition of the vascular mechanism as that exciting the convulsive attack.

Rickets and syphilis are included under the head of circulatory causes, producing convulsions in children, from the fact that in both of these diseases the process of nutrition is seriously at fault, owing either to an increased or imperfect metamorphosis of tissue, the blood necessarily becoming changed in character. It has been supposed by some writers that the frequent occurrence of convulsions in rickets was in consequence of the softened and elastic cranial bones not offering a proper support to the blood-vessels, so that an undue amount of blood reached the brain. Perhaps it may be well to regard this view as having a certain degree of importance in determining the rationale of convulsions in rickets, though certainly the condition of the blood supplying the brain cannot be slighted. This view becomes all the more tenable when rickets is compared with hereditary syphilis, which it closely resembles in many clinical and pathological features, and which is now well known to be frequently attended with convulsions.

Laryngismus stridulus is the common form of convulsive manifestation in rickets, and may be regarded as an integral part of the disease. It usually is the prelude to a general attack, if not speedily controlled. The interference with the normal oxygenation of the blood by the frequent spasmodic closure of the glottis, presents a marked illustration of the influence of venous stasis in the cerebral circulation producing general convulsions.

Children suffering from rickets are immensely subject to pulmonary and gastro-intestinal complaints. These, as well as dentition, frequently aid as exciting causes to produce convulsions in such children.

The influence of syphilis in producing convulsions in children may be regarded in many respects as similar to that of rickets. Disease of the cerebral blood-vessels, leading to hemorrhagic extravasations, is probably an additional factor.

In children affected with pertussis, convulsions are the result of mechanical interference with the return of venous blood from the brain, through spasm of the muscles of respiration. Here, as in laryngismus stridulus, the nervous organization is already in a highly irritable condition, and the nerve-centres are easily disturbed by the repeated venous stasis which occurs. Convulsions in

children occurring toward the end of summer diarrhoeas, are due to the anæmia caused by the excessive drain upon the blood. Those occurring in the latter stages of pneumonia and bronchitis are from an accumulation of carbonic acid in the blood.

In the early stage of tubercular and simple meningitis, cerebral hemorrhages, tumors, and other cerebro-spinal affections incident to children, convulsions are a frequent symptom. They are then probably due to changes in the cerebral circulation, depending upon irritation of local vasomotor mechanisms. Toward the end of these diseases, however, the convulsions may justly be attributed to changes in the quality of the blood flowing to the brain, the result either of imperfect aëration from irregular breathing, or venous congestion from mechanical pressures.

Every convulsion, however slight and limited, and from whatever cause, should be regarded as dangerous, owing to the tendency to paralysis of the vital centres in the medulla through exhaustive expenditure of nerve-force. Certain forms of the attack may, however, be considered more favorable in their termination than others. Such, for instance, are those occurring at the onset of febrile processes, where there is no complication with the rachitic or syphilitic diatheses nor dentition, and the paroxysms are not repeated. Where the attacks are general, soon over, and single, they have in my experience, proved less dangerous than where they are partial and long-continued. Carpo-pedal contractions should always be regarded as a danger-signal for the near approach of a general convulsive attack, and deserve prompt remedial measures. It occasionally happens that effusions into the ventricles of the brain follow a prolonged attack of convulsions, causing death from coma.

From the previously described etiology of convulsions in children, certain therapeutical indications may be deduced. These, in general terms, are to remove the exciting cause, if possible, assist in restoring the balance of circulation, and quiet the excited nerve-centres. For the proper operation of these measures the child should first of all be entirely undressed, if this has not previously been done, and held wrapped in a light blanket in the nurse's or mother's arms, in a good light. While this is being done questions concerning the kind of diet, character of the passages from the bowels, previous health, and other pertinent matters, can be rapidly asked. At the same time a careful inspection of the body and the cavities of the nose and ears for foreign bodies can be made. The gums should be examined, also the anterior fontanelle and occiput. The existence of fever and appearance of the skin, especially in the bends of the joints, should be noted for the eruption of scarlatina, and on the forehead and scalp for measles. Inquiry as to any complaint of pain, its seat and character, previous to the attack, should not be omitted. Sufficient information can thus be hastily gathered to base a reasonable method of procedure upon, examination of the lungs not being included, as nothing definite can be discovered thereby, owing to the accumulation of mucus in the bronchial tubes and irregular respiration.

In the absence of any known exciting cause—excluding epilepsy, which rarely occurs before three years of age, is without fever and followed by a more or less prolonged comatose stage—I have always considered it safe practice, especially where the convulsive movements continue, to suspect intestinal irritation; for I have found in several instances that it was possible for the child to have eaten something that the nurse or mother was unaware of or placed small importance upon.

The first thing to be done, therefore, intestinal irritation being the possible cause, is to administer an enema, which should consist of a pint or more of strong soap-suds with a teaspoonful of salt and a tablespoonful each of molasses and castor-oil. This I usually give myself, the suction end of the syringe, if a Davidson is used, being held by an assistant near the surface of the mixture, so that the

oil, as it floats on the surface, may be first thrown into the bowel. Where the enema does not appear to empty the bowels satisfactorily, it is advisable to give a brisk purgative by the mouth, such as three grains of calomel with five of bicarbonate of soda. This should not be given where an emetic has first been used, until the stomach has had time to rest. Besides unloading the intestines, the enema, by its stimulant properties, acts as a derivative in equalizing the circulation, and the calomel often has the effect of reducing temperature accompanying the intestinal disturbance, when due to other than the presence of undigested matter. If the convulsion occurs shortly after a hearty meal or the eating of any very indigestible substance, an emetic is first indicated. The syrup of ipecac or pulverized alum mixed with table syrup can be given, if at hand, or what I generally find more convenient and equally as effective and rapid in action, a draught of tepid mustard-water with salt. This can be administered by the spoonful successfully, with the exercise of a little knack and patience. If the physician carries with him a solution of apomorphia, one-fortieth to one-twentieth of a grain may be injected hypodermically into the buttocks. The emetic, besides emptying the stomach of its contents, in many instances aids, by its revulsive effect, in checking the convulsive movements.

Frequently it happens that the convulsions continue in a partial manner after the stomach and bowels have been emptied, even where their contents had provoked the attack. This may be owing to the impression that the irritation has left upon the nervous centres. In such a case the bath should be resorted to. And here there appears to be some diversity of opinion among eminent writers on the subject, as to the advisability of the warm, hot, or cold bath. As each may be used with equal propriety, where the occasion demands, it may be well to explain their action upon the cerebral circulation.

Schüller has demonstrated by physiological experiments performed upon rabbits, that the action of a full cold bath is to dilate the blood-vessels of the pia mater, contraction occurring only after a long application of the bath, and then from the blood being cooled down. The full warm bath causes powerful contraction of the vessels of the pia mater, often preceded by a transient dilatation. A very hot full bath produces dilatation, lasting longer, and only causes contraction after the bath has been cooled down to about 86° F. As is well known, the warm bath, of a temperature of 98° F. dilates the cutaneous capillaries, reddens the skin, and produces a general relaxing effect, while the cold bath contracts the cutaneous capillaries, and is attended with a certain amount of shock. A certain length of time is required for reaction to be restored after the cold bath, and even then with the aid of friction. The cold sheet or rub-down, as described by Winternitz in the *The Practitioner* (vol. xxi., p. 104), rapidly excites dilatation of the cutaneous capillaries when combined with friction or patting, and by pouring cold water over the sheet reduces temperature.

It has been stated that convulsions have been excited again by the application of the hot bath—98° F. to 112° F.—where used to check them. As will be seen by Schüller's experiments, this might readily occur where a congestion of the cerebral circulation already existed, more especially if the precaution was not taken to apply the cold douche or a compress to the head at the time of giving the bath. I have, however, never witnessed such an occurrence, but on the contrary have seen a persistent attack of convulsions from gastro-intestinal irritation cease, after complete immersion in a hot bath, even where chloroform had previously failed to control it.

The practical conclusions to be drawn from the above description of the effects upon the cerebral circulation of the warm, hot, and cold bath, are that the warm bath is indicated where there is reason to infer that a congested condition of the pia mater exists, the hot or cold

bath where there is anæmia. Neither should be used too long. In convulsions depending upon fever, where a high degree of temperature exists, also in summer-diar-rhea, the cold bath may be used with advantage, but I think the rub-down previously referred to, with the addition of cold water poured over the sheet, preferable. Hot compresses to the head are, at the same time, advisable in all cerebral affections associated with a condition of anæmia. I have found the cold douche—temperature 40° F. to 60° F.—applied to the spinal column, either while the patient was in the hot bath or immediately after, has proved of considerable service in checking some cases of convulsions.

It has become an established practice to administer an anæsthetic at some time during the convulsive paroxysm. Chloroform is the one most commonly used, as it acts quickly, and in children is harmless when carefully used. Many physicians are in the habit of using it before all other remedies; while others prefer using it after the measures previously mentioned have been tried. The proper method, in my opinion, depends upon the severity of the attack. If these are violent and prolonged, causing the face to become livid, and are frequently repeated, it is best and safest to administer chloroform in preference to using other means, providing there is no easily perceptible local cause of irritation originating the attack. Otherwise, I consider it better practice to remove the cause first, if possible, and if the attacks continue then to use chloroform.

Nitrite of amyl has been used by Dr. Williams of Boston (*Canada Med. and Surg. Jour.*, September, 1882) with much success in the treatment of laryngismus stridulus, and other writers have reported its use in the general convulsions of children. It has been generally regarded as a highly successful remedy in the treatment of the attacks in epilepsy for some years, and from its well-known physiological action I regard it as being eminently appropriate in the convulsions of children. From three to five drops should be poured upon a handkerchief and held close to the mouth until a general flush of the face and body appears. My experience with it in convulsions has been limited, but I am almost inclined to prefer it to chloroform.

Sedatives may be administered during the attack, or what is better, immediately after, in order to quiet the excitability of the nerve-centres and so prevent a recurrence. Chloral hydrate, either alone in the form of an enema of three to five grains in a half ounce of clear starch, or by the mouth, in combination with bromide of potassium in the proportion of one part of the former to two of the latter, is a favorite treatment, the dose being graduated to the age, and given every two to four hours, according to the urgency of the case. This treatment will be found of the highest service in convulsions depending upon dentition, the rachitic diathesis, or pertussis. Other sedatives, as belladonna in small and frequently repeated doses, tincture of musk, and oxide of zinc have been recommended. Sulphate of morphia, given hypodermically in carefully regulated doses, may also be used, and, especially in symptomatic convulsions, will be found advantageous. Such cases in the comatose stage may be recognized, according to Parrot (*The Practitioner*, vol. xxix., p. 451), by the fact that if the skin be pinched there will be a momentary dilatation of the pupil to two or three times its previous size. Ordinarily these convulsions are limited to one side of the body.

Where malaria is the cause of the convulsions it need hardly be said that quinia is the main remedy indicated to prevent a return of the attack. Cod-liver oil and the syrup of the lactophosphate of lime should be given where evidences of rickets exist.

Convulsions occurring in the late stage of scarlatina, in addition to the before-mentioned remedies, should be treated with the view of relieving the renal congestion. Dry cups to the kidneys, the hot-air bath, and the internal administration of spirits of juniper with bitartrate of

potash will be found useful remedies. Our knowledge concerning convulsive affections in children and their treatment may be formulated as follows :

All convulsions depend primarily either upon a peripheral or central irritation of vasomotor mechanisms, and secondarily upon a change in the quantity or quality of the blood-supply to the medulla for their causation.

Convulsions, from whatever cause and of whatever degree, involve an element of more or less danger to life, and should be treated promptly.

Where there is any doubt as to the exciting cause of the convulsions, it may be safely treated in the same manner as if from gastro-intestinal irritation.

The treatment should be directed to a removal of the exciting cause, if local, an equalizing of the general circulation and quieting of the excited nerve-centres.

75 WEST FIFTY-FIFTH STREET.

"CHLOROFORM NARCOSIS DURING SLEEP."

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IN THE RECORD of April 28th appeared an article by John H. Girdner, M.D., under the above title, wherein he takes the ground that chloroform narcosis during natural sleep is impossible; and goes on to speak in the following terms of how untrustworthy all previous experiments and testimony in this direction are: "As to the testimony of medical experts, I may say that I am not willing to accept their statements that a person may be chloroformed while asleep without being awakened, because the evidence on which they base this opinion is anything but conclusive. The few experiments which have been made by these experts were not reliable tests, because the parties on whom they experimented were aware that at a certain hour of a certain night the doctor would make the experiment, and a desire on the part of the subjects to have the experiment succeed may have been strong enough to tempt them to simulate narcosis." The doctor then, in support hereof, gives a series of five experiments, made by himself and another physician—all of which are minutely detailed, including the age, sex, etc., of the individuals experimented upon. One of these was a boy, aged eight; another, a girl, aged twelve; the others were adult males, aged thirty, thirty-two, and thirty-five, respectively. All of them were hospital inmates, and the experiments were performed "at twelve o'clock on the night of January 31, 1882, during a terrific snow-storm."

In each case, we are told, "the chloroform was poured on a folded towel and held eight inches from the sleeper's face," and that all awoke at the end of three minutes but one, and this latter at the end of two minutes; and further, that all of them, on arousing, were more or less frightened, tried to tear away the towel, coughed, gasped for breath, etc.

The doctor in effect claims for these experiments, (1) that they were undertaken "solely with a desire of arriving at scientific facts;" (2) that they were done under the most favorable circumstances to this end, the persons chosen for the purpose being of both sexes, and of a variety of ages, and withal were entirely ignorant of anything whatever being intended; (3) that he and his *confère* "had both had a large experience in the administration of anesthetics;" and (4) that they "took every possible precaution that no errors should creep into the results;"—requisites and conditions the doctor justly maintains to be necessary to the formation of correct conclusions.

He finally closes his article with these words: "These experiments must then be taken as *prima facie* evidence toward the establishment of the fact that it is impossible to transfer an individual from a natural to a chloroform sleep without an interval of perfect consciousness." Here we beg leave to take issue with the doctor, and shall give our reasons for so doing.

Out of three attempts, some years ago, at chloroformization during sleep, made by the writer, two were successful. The subjects of them were convicts in the Ohio State Penitentiary. The experiments were carried on at about half-past ten o'clock at night, in the presence of a number of medical gentlemen, and two of them in a room that lodged about one hundred and fifty sleepers. From this number these two were chosen, as it were, at random—so that even ourselves were not aware beforehand who they should be. The prisoners were here, of course, under strict surveillance, and could have had no idea whatever of our intentions, as no one had been told of them. The utmost stillness surrounded the occasion, save the heavy breathing of the sleepers, and their shifting, now and then, upon their hard and narrow couches. The gas-lights were turned down so as to shed a faint glare over the scene. It was under these circumstances that the first two tests were made, and in this wise: The chloroform was administered from a cotton cloth about the size of a common pocket-handkerchief, such as a burglar would likely carry. It was well saturated with the drug, and held, at first, as much as two feet from the sleeper's face; the object being to sparingly impregnate the atmosphere for some distance around him, so as to blunt, primarily, the air-passages, and thus avoid the liability of the reflex disturbance which must inevitably take place if the anæsthetic be given freely at the start. This done, the cloth was cautiously brought to the position ordinarily held, and kept there until the narcosis was complete. The patient was then handled and dealt with, so as to leave no doubt as to the result.

The next experiment was made in the same way, but failed. Both these were adult male subjects. The other was an adult female, who slept by herself in a cell, in a part of the prison devoted to that sex; her surroundings, too, were quiet. The anæsthetic was given as before, and with complete success.

Here, then, are two cases of chloroform narcosis effected during natural sleep, and under circumstances wherein all the conditions and requirements claimed by Dr. Girdner as necessary to insure reliable results, were fulfilled; for our sole aim, also, was to get at the facts.

The opposite results in the doctor's experiments were, doubtless, owing to his too great haste in the outset. The eight inches spoken of, as the distance the cloth was held from the face, was obviously too close for safety, the reflex action it must have occasioned would be almost sure to arouse the sleeper, unless he happened to be of exceedingly sluggish disposition, or slept uncommonly sound. Then, too, "the chloroform was poured on a folded towel," which leads us to infer that it was given in large quantity, so that the results, it is not too much to say, were just what might have been expected.

But the most singular thing in the doctor's experiments is that he did not somewhat vary them. Instead of conducting them all alike, one would suppose after failing in one way, he would be inclined to try another, and so keep on, until every mode and means were exhausted, to bring about the narcosis, before undertaking to proclaim, in such a summary manner, the impossibility of its accomplishment.

Nor are these results of ours the only ones in contradiction with the doctor's assertions. In an article on the Medico-Legal Relations of Chloroform (*Ohio Medical Recorder*, January, 1877), Dr. R. M. Denig quotes largely from a report of Professor D. Dolbeau (*Annales d'Hygiène*, 1876) made to the Medico-Legal Society of Paris, on the question: "Can chloroform be successfully administered to a person during sleep?"

In the experiments made by this gentleman, twenty-nine in number, including both sexes, and comprehending a wide range as to age and physical conditions, ten were completely successful, being more than one-third.

In deciding a question of such gravity as the one under consideration, it is hardly fair to ignore such an amount

of testimony—emanating, as it does, from such a competent source; and Dr. Dolbeau very justly concludes by saying that the expert is bound to admit, that although difficult, it is possible to induce chloroform narcosis during natural sleep.

Here are three more cases. In the *Pacific Medical and Surgical Journal* for January, 1874, may be found the two following cases: The first was that of a little girl, aged eight, under the care of Dr. Curtis for suppurative inflammation of the mastoid process. The doctor says: "Deeming it expedient to operate for the evacuation of the pus, we met at nine o'clock. On our arrival we learned that our patient had slept but little during the night, but was then sleeping sweetly. Chloroform was at once administered upon a 4 x 6 piece of surgeon's lint, held as near the child's mouth as possible without coming in actual contact. Not the slightest effort was made by the child to avoid the inhalation of the anæsthetic, and in a few minutes was well under its influence and was carried into an adjoining room, placed upon a lounge, and the operation completed.

In the second case the little girl, two and a half years of age, was brought to the hospital to have a supernumerary toe removed. While awaiting the arrival of Dr. Nelson, the child fell asleep, and was placed in the operating chair. As soon as the doctor arrived, chloroform was administered in the manner already detailed, with equal success, and the operation completed without the occurrence of an unfavorable circumstance.

This one is from Dr. Schauffler, of Kansas City (*Kansas City Medical Journal*, 1875), wherein the anæsthetic was given for the purpose of removing a foreign body from the nasal cavity, in a female child about four years of age. After relating the history of the case, the doctor thus continues: "Tired out as she was, the child soon went to sleep and was laid upon the lounge. I then began to administer to her the chloroform upon a handkerchief, and in the usual way. As I expected her to wake up, I observed no special precautions. To my great satisfaction, however, she did not awake, but passed very quietly under the influence of the anæsthetic. The pebble was now readily removed, and proved to be three-fourths of an inch long by half an inch wide, and one-fourth of an inch thick. The little patient continued to sleep for an hour or two, and then awoke feeling perfectly well."

Certainly no collusion, or "a desire to simulate narcosis," in any of these cases, can be suspected.

It is now felt to have been conclusively shown, first, that chloroform narcosis during natural sleep is not only possible but practicable; second, that the doctor's experiments were anything but satisfactory; as there was not exercised in their management that care and versatility of resource which would warrant the conclusions he promulgates, even though there were no evidence of a contrary character known, or on record; and, finally, that chloroform may be made use of for criminal purposes, but that its success in this direction must always be contingent upon the skill in its administration, and upon the disposition of the victim, as regards the nature of his sleep, whether it be sound or easily disturbed.

It is not to be presumed, of course, that all persons can ever be unconsciously chloroformed any more than that all banks can be robbed.

THE ORIGINATOR OF THE ARMY MEDICAL MUSEUM AND OF THE MEDICAL AND SURGICAL HISTORY OF THE WAR.—Dr. Wm. A. Hammond has obtained from the Adjutant-General of the Army a correction of the statement circulated in the general order announcing the death of Surgeon-General Barnes, and giving the deceased credit for originating both the museum and the library. Dr. Hammond adduces proof that he conceived and put into execution the plan of establishing a medical museum and of writing a medical and surgical history of the war.

"CHLOROFORM NARCOSIS DURING SLEEP."

By E. M. NELSON, M.D.,

ST. LOUIS, MO.

In looking over the columns of your journal for April 28th, my attention was attracted to an article with the above title by Dr. John H. Girdner, of New York. He concludes his article with these words: "While many will doubtless require a larger number of experiments before giving a decision, there are some who will see sufficient evidence in these five experiments to satisfy their minds that every experiment of this kind, made for whatever purpose, will have a like termination."

Now, while five negative cases may be a sufficient number on which to base an argument in the absence of any positive evidence, one well-authenticated case in which chloroform narcosis has been induced during sleep completely overthrows the argument.

In the evening of October 9, 1880, I accompanied Dr. A. J. Steele, of this city, to the residence of Mr. —, on Washington Avenue. A lad of about ten years of age was in bed sleeping soundly when we arrived. Chloroform was administered by pouring it upon a folded towel, and gradually bringing this nearer to the face of the boy. After about two minutes he became a little restless and turned a little in bed. The towel was removed a little farther, and then again gradually brought near to the face. Complete narcosis was obtained; the operation of circumcision was performed, a dressing applied, and the patient was sleeping quietly when we left the house.

I have no more faith than has Dr. Girdner in the authenticity of the popular reports of chloroform administration by burglars, and am in doubt whether chloroform can be as successfully administered to an adult; but that it can, in some cases at least, be successfully administered to children the case related conclusively demonstrates.

GARRISON AVENUE.

HINTS ON THE TREATMENT OF SOME PARASITIC SKIN DISEASES.¹

By GEORGE H. ROHÉ, M.D.,

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JOHN HUNTER is said to have divided skin diseases into three classes: those that sulphur will cure, those that mercury will cure, and those the devil himself can't cure. Most general practitioners seemingly indorse this dictum of the great pathologist. At all events, most practitioners readily admit the difficulty of diagnosis, and the unsatisfactory results of treatment of many cases of skin diseases seeking relief at their hands.

When we reflect that ten years ago less than half a dozen of the medical schools of the United States made any pretence of giving instruction in dermatology beyond one, two, or three lectures, in the didactic course on the practice of medicine, which lectures were chiefly remarkable for the extraordinary number of uncouth words and unintelligible definitions hurled at the students, we cannot wonder that so many physicians should be unfamiliar with the diagnosis, causes, and treatment of the diseases affecting the skin.

In this paper it is proposed to consider, briefly, what appears to the writer the best treatment of some of the cutaneous diseases caused by vegetable parasites.

It is well known that the diseases known as *tinea favosa*, or favus, *tinea trichophytina*, or ringworm, and *tinea versicolor*, or "liver spots," are due to the presence upon or in the skin of microscopic organisms of vegetable origin. It would lead too far from the practical side of the subject to discuss here the botanical relations of these

¹ Read before the Clinical Society of Maryland, March 16, 1883.

three different parasites. For the present purpose it may suffice to state that clinically the diseases are distinct and easily differentiated, or rather, not at all likely to be mistaken for each other.

Favus is comparatively rare in the United States. The disease manifests itself in yellow, cup-shaped crusts, nearly always occurring upon the scalp. The crusts are perforated in the centre by a hair. If one of the crusts is removed, a cup-shaped depression remains in the skin, which gradually fills up to the normal level unless the crust is re-formed. The crusts of favus have a peculiar odor, said to resemble that of mice.

If a small portion of one of these crusts be rubbed up with a little liquor potassa, placed on a glass slide and brought into the focus of a one-fourth inch objective under a microscope, a number of transparent branched tubes (mycelium), with small spherical or oval bodies (spores) in their interior will be seen. Spores, singly or in groups, will also be seen in various portions of the field outside of the mycelial tubes. This is the fungus upon which the disease depends—the *achorion Schenleini* of Remak. The hairs which perforate the yellow crust or scab will also be found filled with these spores. The destruction of the fungus cures the disease by removing its cause, hence a paraciticide is the proper remedy to use.

It will be found, however, that all efforts at treatment will fall short of success unless all the crusts, and the hairs perforating them, are first removed. Soaking the scalp with oil or lard for twelve hours, then washing with warm water and soap to remove the crusts, and afterward pulling out the hairs from the diseased patches, are, therefore, necessary preliminaries to a successful treatment of the affection. After the crusts and affected hairs have been removed, the application of sulphurous acid, either in full strength or diluted with an equal quantity of water, or a solution of corrosive sublimate, one to three grains to the ounce of water or alcohol, will be all that is needed. The antiparasitic remedy must be kept constantly applied and the case carefully watched. If a relapse is threatened, prompt epilation and removal of the most primitive crusts must be practised. When favus has lasted a long time, baldness is likely to follow over the affected surface.

The time necessary to effect a cure of favus varies, but complete success should not be expected in less than six weeks to two or three months. The disease can be made to disappear in a much shorter time, but will almost certainly return if the parasiticide applications are not continued for at least three or four weeks after any evidences of the disease can be seen.

Ringworm presents marked differences as it affects different regions of the body. When it occurs upon the hairy scalp it appears in scaly patches, often having a small-vesicular or pustular border. The hairs upon these patches are dry, brittle, and most of them are broken off a short distance above the skin, giving the patches the appearance of a stubble field, over which the grass or grain has been irregularly cut. The skin under the scales is usually little, if at all, reddened, except at the border, where the disease extends centrifugally. This stubbly appearance of the hairs is characteristic of ringworm of the scalp. In that form of partial baldness termed *alopecia areata*, and which is also held by many to be parasitic, the bald patches are perfectly smooth, white, and shiny—altogether different in appearance from the scaly ringworm patches.

When ringworm remains for a long time untreated, or is improperly treated, it may develop into *kerion*, a curious, obstinate, tuberculo-furuncular disease of the scalp, which has been very thoroughly observed and graphically described by Dr. I. E. Atkinson, of Baltimore.¹ In *kerion* there is a condition simulating sycosis. The hair-follicles are inflamed, variously sized tumors develop,

from which exudes a gummy, honey-like fluid. The hairs fall out and the spot is likely to remain permanently bald—a result not apt to follow simple ringworm, in which the hair is almost always reproduced.

In ringworm of the scalp, cleanliness and frictions with carbolized oil have been almost exclusively relied on in the practice of the writer. The strength of the application used is one part carbolic acid to sixteen parts of linseed or olive oil. This should be applied in the following manner: After washing the scalp with warm water and soap, and drying, a little of the oil is poured on a piece of flannel, and rubbed into the diseased patch with smart friction. The friction drags out of their follicles the loosened hairs, and has an additional advantage in opening the mouths of the hair-follicles and allowing the remedy to penetrate deeper, and come in closer contact with the parasite, which gives most trouble when it has penetrated into the hair-follicles. This procedure renders systematic epilation with the forceps unnecessary, and so increases the comfort both of physician and patient. When the diseased patch has thus been well saturated with the carbolized oil, the rest of the scalp should also be rubbed with it, to prevent extension of the infection.

Sulphurous acid has also been used with great satisfaction in the treatment of ringworm of the scalp. It is used either in full strength, or diluted with a half, or an equal part of water.

No other measures have been found necessary in the treatment of simple ringworm of the scalp. Where *kerion* was present, the boggy tumors were freely incised, and carbolic acid ointment used as a constant application with a favorable result.

Ringworm of the body—*tinea circinata*—usually appears in the form of variously sized scaly patches, with a red papular, vesicular, or pustular border. It extends peripherally until the spots reach the size of a silver dollar, rarely getting larger without a break in the regularity of the margin. As it extends peripherally, the normal condition, barring perhaps a slight scaliness, is re-established at the centre. Auto-inoculation not infrequently takes place, and spots are found on different parts of the body. The microscope will differentiate it from *seborrhœa*, or localized patches of *eczema*. The best method of treatment the writer has employed is to apply, once or twice a day, pure sulphurous acid to the spots. No other remedy has given so much satisfaction as this in simple ringworm of the body.

Ringworm of the beard, in the majority of cases, does not advance beyond the condition just described as ringworm of the body. It is usually communicated through some of the shaving utensils used by the barber—sponge, brush, or towel. When early discovered and treated, the application of sulphurous acid will give general satisfaction. A solution of corrosive sublimate, one to two grains to the ounce, also leaves nothing to be desired. When it has lasted a long time, however, and produced the disease known as parasitic sycosis—pustules, tubercles, and abscesses of the bearded part of the face, with involvement of the hair-follicles—treatment becomes more active and complicated, and must be pursued with vigor and persistence, if a cure is expected or hoped for. In cases of sycosis all pustules, tubercles, or abscesses should be freely punctured, the face being gone over every day, or every other day. The hairs of all inflamed follicles must be extracted with the epilating forceps. The patient should shave daily, or at least every other day. An ointment of white precipitate, calomel (or what is probably better than either), oleate of mercury (five per cent.), should then be applied, and kept in contact with the diseased surface constantly. In addition, the reddened patches of skin between the pustules or nodules should be painted two or three times a week with a solution of carbolic acid, one part to four parts of alcohol.

Ringworm of the genito-crural region—called *eczema*

¹ Archives of Dermatology, January, 1881.

marginatum by Hebra—presents peculiarities which demand special consideration. In this affection the diseased part presents all the characteristics of eczema—intense itching, exudation, infiltration of the skin, etc.—but unlike an ordinary case of eczema, there is present a distinctly outlined border, and on careful microscopic examination, a fungus resembling, and probably identical with, the ringworm parasite may be discovered.

Eczema marginatum demands a somewhat different treatment from ordinary eczema and ordinary ringworm. We must endeavor to combat the inflammatory condition on the one hand, and destroy the parasite on the other. Hence the parasiticide employed must be one that is effective, while it produces the minimum of irritation. In many cases the application of sulphurous acid, followed by oxide of zinc or Hebra's ointment, will produce a prompt cure. In others, no good effect at all will follow. In some cases the continued application of an ointment containing one or two drachms of ammoniochloride of mercury will produce the effect desired. In cases accompanied by intense itching, and much local inflammation, the writer has obtained the most excellent results from the frequent application of a lotion of benzoic acid, 3j. to one pint of water. After the itching is controlled by this means, the eczema will usually get well under simple dusting with starch or chalk, and cleanliness. The benzoic acid acts as a parasiticide, and destroys the fungus while promoting the cure of the eczema by relieving one of the chief factors in its continuance—the itching.

Tinea, or pityriasis versicolor, called also "liver spots" in the vernacular, has been observed by the writer nearly as frequently as ringworm. It occurs in the form of brownish-yellow, slightly scaly patches and spots, limited to the parts of the body covered by the clothing. It is most frequently localized upon the chest, which is sometimes completely covered by a continuous sheet of the eruption. The borders are irregular, and roundish or irregular patches extend beyond with intervals of sound skin between. It sometimes extends down the arm to the wrist, and up on the neck to the collar-band of the shirt—the soap-line, as it may conveniently be termed. Beyond this line the disease is rarely, if ever, seen. The mildest parasiticide suffices to destroy the fungus which causes the disease; hence it is never found on parts frequently washed with water and soap. The remedy which, in the writer's hands, has been uniformly successful in curing the disease, is a lotion of hyposulphite of sodium in the strength of half a drachm to the ounce of water. The patient is directed to take a bath once a day, using soap freely. After the bath the affected spots are to be mopped with the parasiticide lotion. In a week the discoloration has usually disappeared. The remedy should be continued a week or two longer to prevent relapse. No other than this simple treatment is necessary in the majority of cases of tinea versicolor.

It is surprising to what an extent cases of tinea versicolor are treated for syphilis, hepatic derangement, or similar supposed affections of the internal organs. Patients are sometimes compelled to take mercury or potassium iodide for months, under the supposition that they suffered from syphilis, when the only trouble was that just described, which, when properly treated, yielded to local remedies alone in the brief space of two weeks.

No mention has been made in this paper of the employment of tincture of iodine, chrysophanic acid, and similar active irritants in the treatment of the cutaneous parasitic diseases. The excuse offered for the omission, if any be necessary, is that the writer has never had occasion to use them. Patient and intelligent application of the remedies before mentioned will, in most cases, be followed by success. Nearly all patients will likewise be better pleased if a colorless, non-irritant application be used, than if an irritant remedy, staining the skin, and not infrequently causing disagreeable complications, be applied.

CONVERGENT SQUINT CURED BY ESERINE.

By C. A. BUCKLIN, M.D.,

NEW YORK.

THE common form of convergent squint may frequently be cured during the *first few days* of its appearance by dropping into each eye a solution of the sulphate of eserine, one-half grain to three drachms of water, morning and evening.

It is successful in those cases where the disturbance in the relations between convergence and fixation are of a slight degree or are only temporary. A free discussion of the disputed causes of common convergent squint will be found in THE MEDICAL RECORD, vol. xvii., No. 21; vol. xviii., Nos. 4 and 16.

In the common form of convergent squint the child, owing to a disturbance between his power to focus both eyes for an object and his ability to fix his eyes *both* at this object, is unable to see distinctly. *Far-sighted* children require a much stronger effort of accommodation to see objects distinctly than children with normal or near-sighted eyes. Consequently its use is to be followed immediately by small doses of strychnia, and lurking diphtheria or malaria appropriately treated.

Where this will not cure the squint, proper lenses should be resorted to immediately, or a carefully performed tenotomy may save the vision of the deviating eye. The daughter of Dr. Dumond, of this city, had a convergent squint of several weeks' standing cured by the use of convex twelve lenses; the acuteness of vision of the deviating eye was restored, and also binocular vision, which was lost, has since been restored. This result was obtained after one of our best-known specialists had decided that nothing could be done but a tenotomy later in life for cosmetic effects.

The acuteness of vision in the deviating eye being usually lost as a result of the squint, I urge upon all practitioners of medicine not to allow a child to look cross-eyed for two days without attempting to do something about it. The use of the sulphate of eserine in the treatment of squint is original with me. It is only applicable during the first few days of the squint.

Condition favors greatly the development of squint. Probably ninety per cent. of squinting children see distinctly through their grandmother's glasses distant objects. This always means that they have a marked degree of *hyperopia*, which leaves but little margin of accommodative power over what is absolutely required to see objects distinctly with both eyes. Should a child in this condition have slight pareses of accommodation, or his health impaired from diphtheria or other causes, he must squint or go without seeing objects distinctly. Should he, from imitating another or in any other way, learn how to squint, he would be surprised and delighted to find that he was again able to see distinctly, and would not give up the device like another child who derived no benefit from squinting.

The use of atropine improves the squint while the eye is completely under its influence, but always makes the trouble worse as the effects of the drug begin to disappear. Eserine makes an improvement which will probably be permanent.

THE CARE OF THE INSANE.—At the meeting of the Medical Association of Central New York, held at Syracuse on the 15th of May, the report of the Committee on the "Care of the Insane" was read by its Chairman, Dr. Theodore Dimon, of Auburn, and after discussion was unanimously adopted. The following resolution was unanimously adopted: *Resolved*, In the opinion of this Association, the lunacy laws of the State of New York have been carefully considered and wisely framed for the management and treatment of the insane, and it is not so much needed that these laws should be changed as that healthy public opinion should give its support to their successful administration.

Progress of Medical Science.

PAROXYSMAL HÆMOGLOBINURIA.—Dr. J. Boas regards this as a disease *sui generis*, and distinct from any other form of hæmoglobinuria. He states that individual attacks are always caused by the cooling of portions of the integument, as of the hands, feet, nose, ears, etc. The intensity of the paroxysm is in proportion to the degree and duration of the cooling of the skin. The primary condition is that of destruction of the red blood-globules, and the passage of hæmoglobin into the plasma. The general symptoms are secondary. The cause of this increased destructibility of the blood-globules is difficult to determine. In some cases it may be attributed to syphilis, in others to intermittent fever. The destructive process is at first local, occurring in the part exposed to the action of cold. Thence it spreads into the general circulation. The treatment is to be based upon the etiology, when that can be determined.—*Deutsche Medicinal-Zeitung*, March 8, 1883.

RUPTURE OF THE SCIATIC NERVE MISTAKEN FOR FRACTURE OF THE NECK OF THE FEMUR.—Dr. Küster relates the following case in the *Berliner klin. Wochenschrift* of March 26, 1883: The patient, while walking, slipped and fell backward. He experienced a severe pain in the right leg and numbness of the foot, and was unable to rise. When seen the following day he was suffering intense pain in the limb, which was rotated outward and apparently shortened. Pain on pressure was most severe in the neighborhood of the hip-joint, where there was also a slight swelling. At the first glance, the case was apparently one of fracture of the neck of the femur. This diagnosis had been made guardedly by two other physicians, who had seen the patient shortly after the accident, but had made no examination on account of the agony which he was suffering. Dr. Küster could, however, obtain no crepitation, and, moreover, passive movements of the joint occasioned little or no pain. A diagnosis was made of rupture of the sciatic nerve, and was confirmed by the subsequent conduct of the case.

TREATMENT OF CHLOROSIS BY BLOOD-LETTING.—The cause of the want of success in the ordinary treatment of chlorosis and anæmia lies, according to Dr. Dyes (*Allgem. Med. Central-Zeitung*, March 24 and 28, 1883), in a misapprehension of the nature of these affections. Instead of the blood being thin and bright red in color, it is, he asserts, thick and dark colored. This error has arisen from the appearance of capillary blood as flowing from superficial wounds of the integument or in epistaxis. But this is only a colored fluid which filters through the capillaries, the general mass of the blood being too thick and viscid to pass into the smaller vessels. This viscosity is owing to the large proportion of white corpuscles, and upon it depend the characteristic symptoms of anæmia. The integument is pale and cold, and by reason of the disturbance of the peripheral circulation, congestions of the internal organs arise. The author regards as erroneous the idea that the white corpuscles are converted into red by the agency of iron, and he condemns this remedy as not only useless but harmful in the conditions under consideration. Anæmia frequently ensues upon recovery from acute affections, and is, according to him, due to the non-elimination of morbid matter from the blood in those diseases. Dr. Dyes advocates phlebotomy in acute inflammatory troubles, especially pneumonia and rheumatism, and laments that this practice has fallen into desuetude. The mistake of the older physicians was not, he holds, in blood-letting, but in the employment, in addition, of purgatives. The two procedures are in no way allied in their effects, but rather opposed to each other. For the

benefits accruing from the abstraction of blood are owing to the removal of the excess of white corpuscles, while the production of watery stools only increases the viscosity of the blood by withdrawing its serum. He does not think that simple loss of blood can ever produce anæmia. He never found this condition to exist in invalided soldiers applying for pensions, although many of them had been severely wounded and had lost great quantities of blood. In accordance with these views, therefore, the author discards iron in the treatment of chlorosis and anæmic conditions in general, and resorts to phlebotomy. The local abstraction of blood by leeches or wet cups does not fulfil the indications, as the capillaries only are depleted, and these, as stated above, contain only a colored fluid with but few white corpuscles. Within an hour after the withdrawal of from three to five ounces of blood from the vein, Dr. Dyes asserts that the hands and feet become warm and the patient is bathed in a healthy perspiration, showing that the disturbance of the capillary circulation has been removed. The appetite soon returns and the insomnia and nervous exaltation subside. The diet should be conformed to the instincts of the patients, who usually crave spicy and well-seasoned food and have a repugnance to more solid nutriment.

LYMPHANGIECTASIS AND LYMPHORRHAGIA.—A young woman who presented herself at the clinic of Dr. Paul zur Nieden gave the following history: When she was only nine years old she observed a dropping on the floor of a milky fluid, which the doctor said was leucorrhœa. Two days later she noticed numerous little vesicles, about the size of a pin-head, upon the labia majora, and at the same time the external genitals became swollen. The discharge was very profuse, but was lessened by confinement to the bed. Soon afterward she had an attack of hæmoptysis followed by pneumonia, and there was no further trouble with the genitals for several years. When her menses first appeared, however, the discharge began again. A milky fluid was exuded from the labia in such great quantity that at one time, she said, she collected over two pints in four hours. This was again controlled by rest in bed. When first seen by Dr. Nieden there was no spontaneous discharge, but the labia were studded with little vesicles, which exuded a white fluid on pressure. A small piece was excised from one labium, and for several days there was a flow from the wounded surface in considerable amount—five ounces in one night. The fluid was of alkaline reaction and contained only a few lymphoid cells, but very numerous fat-globules. Treatment consisted in the removal of portions of the labia with the galvanocautery.—*Deutsche Medicinal-Zeitung*, No. 7, 1883.

MORPHIA IN STRANGULATED HERNIA.—The reduction of strangulated hernia by the subcutaneous injection of morphia first employed by Dr. Philippe, of St. Maudé, may render excellent services. Consequently many practitioners in the country, where either the want of proper instruments or the prejudice or unwillingness of the peasants to submit to an operation are serious obstacles to be got over, adopt this method in almost every case, and rightly so, as the effects are sometimes marvellous. A country surgeon has just published a report of eight cases treated thus by him with only two failures. The taxis and all ordinary means failed, and colotomy seemed the only resource. Twice the reduction was impossible, and the patients having refused to be operated upon would have infallibly succumbed. In one case to which he was called everything was ready for the operation, the patient consenting, when he proposed to inject a quarter of a grain of morphia over the strangulation. A quarter of an hour afterward the hernia was reduced without difficulty. Sometimes the delay is longer, but the pain and vomiting ceases; hence the operation can be postponed without fear for some hours, when a new injection is made and often succeeds.

SPONTANEOUS FORMATION OF GAS IN THE BLADDER.—Dr. F. P. Guiard reports the following case in *La France Médicale* of February 10 and 13, 1883. A physician seventy-seven years of age, had suffered for a number of years from glycosuria, and also had a calculus, for the removal of which he had undergone the operation of lithotripsy three times and cutting once. For the past three or four years he had noticed an escape of gas from the urethra at the end of micturition, sometimes accompanied by a considerable report. The phenomenon was not always present, but was never absent for more than a few days at a time. Its occurrence was preceded by no peculiar sensations, and the patient could never tell before urinating whether it would be present or not. The gas was completely free from odor, and could not be of intestinal origin. Its passage occasioned no pain. The most thorough examination could not detect the smallest vesical fistula. Three other similar cases were discovered and carefully observed by the author. In one of them the urine, when first passed, was in a state of effervescence, which the patient likened to that of champagne. All of the patients were diabetic, and all of them had had instruments passed into the bladder for one reason or another. The author attributes this formation of gas in the bladder to a process of vinous fermentation in the saccharine urine. Germs had been found in the urine in two of the cases by another observer, but the author himself had never been able to procure the urine at the moment of the emission of gas, and could not state certainly that it contained the sugar ferment. He thinks it most probable, however, that the fermentation germs were carried on the catheters or other instruments which had been introduced into the urethra. He proposed to designate this condition by the term of diabetic pneumaturia.

CURE OF ABSCESES OF THE NECK WITHOUT CICA-TRICES.—Dr. Quinlan recommends the passage through the abscess of a fine silver wire, and the ends tied outside, when it will act as a drain. This must be done before the pus reaches the surface, when it is, say half an inch from the external surface. No poulticing or stuping must be used, and when the abscess is evacuated a compress applied. The procedure has never failed in his hands.

CHRONIC TUBERCULAR BLEPHARITIS.—At a meeting of the Société Médicale des Hôpitaux, in February, 1882, Dr. Gérin-Roze presented a patient suffering from pulmonary and laryngeal tuberculosis. The patient had also a granular ulceration of the palpebral conjunctiva, which was pronounced by the speaker to be tubercular. The correctness of this opinion was, however, doubted by several of those present. At a meeting of the same society in December following, Dr. Gérin-Roze announced that the patient was dead, and that a microscopical examination of the conjunctiva had confirmed his diagnosis. The lesion was limited to the mucous membrane, which was infiltrated with young cells and amorphous granules. Several of the sections showed very distinctly the tubercular granulations. They were perfectly round, about the size of the head of a pin, yellowish in color, and composed of granular tissue without giant-cells.—*L'Union Médicale*, March 4, 1883.

VERATRUM VIRIDE IN TYPHOID FEVER.—Dr. A. W. Nelson publishes the results of his treatment of typhoid fever by small repeated doses of veratrum viride (*Archives of Medicine*, April, 1883). He has administered this drug in every case of the disease occurring in his practice during the past decade, and has not lost a case. He states that under its influence the pulse and temperature are lowered and held within the limits of safety, the danger of intestinal hemorrhage is reduced to a minimum, and convalescence is not unfrequently established at the end of the second week. The dose given was one or two drops of the official tincture every hour.

PUERPERAL DIABETES.—A paper by Dr. Mathews Duncan was read before the Obstetrical Society of London, the author pointing out the distinction between the slight glycosuria of pregnant and suckling women and real diabetes, with its polyuria and large amounts of sugar. Physicians and surgeons were well aware of the dangers introduced into their cases by complication with diabetes. But the subject of diabetes complicating pregnancy and parturition had attracted almost no attention, and this probably arose from its rarity, which might be accounted for by the disease frequently destroying in women the sexual energies, as it is said to do in man.

The author had collected twenty-two cases in fifteen women, and they demonstrated the great gravity of the complication as respects both mother and child. Of the twenty-two pregnancies (including those ending prematurely), four had a fatal result soon after delivery. In seven of nineteen pregnancies in fourteen women, the child, after reaching a viable age, died during pregnancy. In two the child was born feeble, and died in a few hours, making an unsuccessful issue in nine of nineteen pregnancies. The histories showed that diabetes may intervene on pregnancy; that it may occur only during pregnancy, being absent at other times; that it may cease with the cessation of pregnancy; that it may come on after parturition; that it may not come on in a pregnancy occurring after its cure. They showed that pregnancy may occur in a diabetic woman; that it may not be appreciably affected in its natural progress and termination by the disease; that it is very liable to be interrupted by the death of the foetus.—*London Lancet*.

TREATMENT OF ULCERS WITH BISMUTH.—Dr. Truckenbrod reports a number of cases of varicose and other ulcers of the leg, cured by the local application of subnitrate of bismuth. The cases were seen at the Würzburg Policlinic. The bismuth in fine powder was dusted over the ulcer until a thin layer was formed, and then a simple roller bandage was applied; where there were varicose veins a rubber bandage was employed. The ulcers were usually healed in a few days.—*Centralblatt für Klinische Medizin*, March 24, 1883.

DIRECT TRANSFUSION FROM AN ARTERY INTO THE PERITONEAL CAVITY.—Drs. Corona and Cocco-Pisani report the following results of transfusion experiments made upon animals: 1, Pure blood, passed directly from a carotid artery into the peritoneum of another animal is entirely absorbed; 2, in small animals three ounces of blood had been entirely absorbed in five days; 3, the blood, until its disappearance, remains fluid in the peritoneal cavity; 4, the increase of hæmoglobin begins after twenty-four hours and continues for a certain indefinite time; 5, the animal suffers no injury on the part of the peritoneum or of any other organ.—*Centralblatt für Chirurgie*, March 24, 1883.

HYSTERICAL RAPID BREATHING, SIMULATING CARDIAC OR DIABETIC DYSPNŒA.—Dr. E. Mackey, in the *London Lancet*, February, 1883, draws attention to the little stress laid upon dyspnœa as a possibly hysterical symptom, and gives the notes of a case of a girl, aged seventeen, to whom he was several times called, as her friends thought she was dying. Dr. Mackey points out the diagnostic differences between hysterical and diabetic dyspnœa. In diabetic dyspnœa the attack comes on suddenly and with violence; the inspirations are deep; the air passes well into the lungs, but apparently does not oxygenate the blood; the attacks may recur several times, but finally the patient becomes unconscious. The duration until death varies from ten hours to three days. The respirations seldom exceed forty per minute, whilst the pulse is small, weak, and very rapid. In hysterical dyspnœa the respirations are eighty or even one hundred and twenty per minute, whilst the pulse is from sixty to eighty per minute, and the previous history of the case aids greatly in forming a correct diagnosis.

GENERAL ATROPHY FOLLOWING DIPHThERIA.—Dr. A. Cahn relates the case of a boy, fourteen years of age, who suffered from post-diphtheritic paralysis of the pharynx and œsophagus. After this had passed off, in spite of a nourishing diet of milk, eggs, and beefsteak, the patient began to waste away, until finally he became so emaciated as to seem on the point of death. A strict confinement to bed and the application of ascending and descending currents of medium strength to the spine brought about a cure after a considerable length of time. —*Deutsche Medicinal-Zeitung*, March 29, 1883.

PERFORATION OF THE AORTA BY A FOREIGN BODY IN THE CÆSOPHAGUS.—Dr. Desplats relates a case in which a sharp fragment of bone was lodged in the cœsophagus, about half-way down. An abundant hemorrhage occurred at the eighth day, which was arrested spontaneously. Thirty-six hours later it again set in and led to the death of the patient. The autopsy showed an ulceration of the cœsophagus with perforation of the aorta about an inch and a half below the junction of the transverse and descending portions. —*Revue Médicale*, March 24, 1883.

HYSTERICAL ANGINA PECTORIS.—Marie (*Jour. de Méd. et de Chir. Prat.*, February, 1883) reports two cases of angina in hysterical patients. In one the pain commenced in the left little finger, radiating up the forearm and breast of the same side. During the attack, which often lasted some hours, the pulse in the left radial artery became insensible, the lower parts and the entire left side became cold. In the second case the attack was often preceded by general malaise; then suddenly a violent pain supervened in the præcordial region, accompanied by extreme anguish and invincible terror; the pain then radiated toward the neck, the left arm, the little finger, sometimes even toward the leg; the attack lasted ten to twenty minutes, and the face, which was at first tired and cold, became red and warmer. He compares them to the form of angina called vaso-motor by the Germans.

INCOMPLETE TABES.—The symptomatology of locomotor ataxy is sufficiently characteristic to preclude the possibility of mistakes in pronounced cases. Charcot has, however, diagnosed this disease in a number of instances where several prominent symptoms were absent. Such cases may be termed incomplete tabes. The following will serve as examples: 1, A patient with nystagmus, absence of patellar reflex, lightning pains, and double optic atrophy; 2, a man with anesthesia of the face, slight paresis of the orbicularis oris, transitory diplopia, and absence of patellar reflex without lightning pains or inco-ordination; there was also a patch of anesthesia in the area of the radial nerve, and difficulty in retaining his urine; and 3, a man suffering from pains in the right arm, which had lasted nine years, especially severe in the axilla and thumb, with a species of shocks or discharges; also alternations of sensation in the soles of his feet, as if he walked on balls, and when seated, he did not know on what he was sitting. Urination was difficult, and he had no knowledge of the act of defecation. Patellar reflex was present. —*Jour. de Méd. et de Chir. Prat.*, February, 1883.

RUPTURE OF THE PULMONARY ARTERY.—A man, apparently in perfect health, was suddenly attacked with severe pains in the chest, extreme anxiety, and difficulty of respiration, which, after thirty hours, terminated in death (*Medical and Surgical Reporter*). Dr. Arro, who reports the case, found at the autopsy a rent in the pulmonary artery, from which a large amount of blood had escaped into the chest.

ACUTE DIABETES.—Dr. Jones, in the London *Lancet*, February, 1883, describes the case of a police-constable who was admitted into St. Thomas's Hospital in a very

collapsed condition. A careful physical examination failed to discover any reason for the symptoms. No urine was voided for some hours, but a catheter was passed and about four ounces drawn off. The specific gravity was 1040, the reaction acid, and it contained a large quantity of sugar and some albumen. If it had not been for the obtaining of this urine the case might have remained a mystery. The progress of this case was unusually rapid, but still it went through the usual course of such cases. There is only one feature which seems strange, and that is that the disease was only supposed to have lasted five days. Cases have been recorded of death within three weeks of the first recognition of the disease, but never within a few days.

COPPERHEAD VENOM.—Dr. I. Ott (*Virginia Medical Monthly*, February, 1883) comes to the following conclusions: "1. The venom of the copperhead is weaker in toxic activity than that of the rattlesnake. 2. The heart, with both kinds of venom, becomes greatly prostrated, and in rapid deaths is their main cause. 3. The venom of either snake does not affect the sensory nerves. 4. The sensory centres are affected by both venoms. 5. The muscular excitability continues to be little affected at the time of death by the poison of the copperhead. 6. The two venoms greatly resemble each other in physiological activity. 7. The cardiac force, rhythm, and frequency are lowered by both venoms. 8. The arterial tension is greatly lowered by both venoms. 9. The blood, after copperhead-poisoning, shows no microscopic changes of its globules, and no difference in its spectrum."

THE HYPODERMIC USE OF GELSEMIUM.—Drs. Bourneville and Bricon premise some directions as to the hypodermic use of this drug by the following observations: Gelsemium paralyzes the cerebral motor centres. It first increases, then diminishes reflex spinal excitability and cardiac contraction. It also produces a sense of weight in the head, difficulty in the motion of the tongue, trembling of the hands, uncertainty of the fingers, sensations of cold, mydriasis when instilled into the eye, nausea and vomiting. The lethal dose of the alkaloid for man is from nine-twentieths to nine-tenths of a grain. The therapeutical dose of the alkaloid is one-seventh of a grain, and of the tincture seven and a half minims. Eulenburg gives the following formula for hypodermic medication: Gelsemin. chlorhydrate, grs. xv.; aquæ, ʒ vjss. M. S.—℥i. to ij. at each injection. The chlorhydrate of gelsemine is about ten times stronger than the drug itself. The hypodermic use of gelsemine has been attended by good results in neuralgias. One part of gelsemine is soluble in 116 of water. —*Progrès Médical*, March 10, 1883.

SALICYLATES IN DYSMENORRHOEA.—Dr. Chéron says that long ago Weit and Simpson recognized the influence of arthritis on dysmenorrhœa, and that this is very well shown by the results of the salicylate treatment. The salicylates most indicated in dysmenorrhœa are the quinine and the sodium salicylates. The sodium salicylate is employed with advantage in the painful crisis of the onset. At the time of appearance of the pains, two tablespoonfuls of the following mixture suffice: R. Sodium salicylate, ʒ ijss.; rum punch, ʒ j. ʒ vij.; aquæ destill. ʒ iij. ʒ j. If the pain returns some hours later, the same dose should be employed and pushed till six tablespoonfuls at the maximum, in twenty-four hours, have been taken. Quinine salicylate is more particularly indicated in arthritic dysmenorrhœa, where lumbo-abdominal neuralgia is clearly defined, and shows itself some days before menstruation. It is best given in powder. When migraine, or muscular, or articular pains appear before menstruation, sodium salicylate given in 15 to 30 grain doses per diem is indicated. If in the same cases there exists a periodical neuralgia, the administration of two-grain doses of quinine salicylate twice daily often has very astonishing effects. —*Gaillard's Weekly*.

OBSTINATE VOMITING IN PREGNANCY.—Dr. Brock, after discussing the various theories as to the causation of obstinate vomiting in pregnancy (*London Medical Record*, April 15, 1883), arrives at the following conclusions: 1. Obstinate vomiting occurs in multipare where the uterine tissues are lax, and where the os is soft, easily dilatable, and even patent enough to admit the tips of two fingers. This causes him to reject the theory held by Bretonneau and Barnes. 2. Obstinate vomiting is absent in the majority of cases where there is a rigid state of the os, and where one would almost expect it invariably to be present, if the cause were that assigned by Dr. Barnes. 3. Obstinate vomiting is often absent in flexions and distortions of the uterus, and often present where there are no flexions or distortions. This would not be likely if Dr. Graily Hewitt's theory were true. 4. Obstinate vomiting is often absent in inflammatory conditions of the uterus, and present when there are no inflammatory conditions. This ought not to be the case if Dr. Bennett's theory were correct. 5. Because he believes a parallel condition is to be seen in other affections clearly influenced by the individual's neurotic constitution; for instance, obstinate sea-sickness, the occasional vomiting that occurs in pseudocyesis, the proneness to convulsions in certain children whenever ill; or, to take a specific case, the vomiting simulating the obstinate vomiting of pregnancy in a non-pregnant woman in whom the uterus was normal. 6. Because there is no definite line to be drawn between the ordinary cases of sickness in pregnancy and the more severe cases. He has found it associated with intermittent albuminuria. He believes the obstinate vomiting in pregnancy to depend on the idiosyncrasy of the patient.

TRAUMATIC DIABETES INSIPIDUS.—Dr. Statten records (*Centrabl. für die Med. Wiss.*, February 3d) the case of a man who received a wound on the side of his neck and the back of his head. Transitory unconsciousness and double vision occurred, and subsequently deafness on the side of the injury, the left, with total paralysis of the rectus externus on the same, and partial paresis of the same muscle on the opposite side. On the left side hearing was lost in the external meatus, but the ticking of a watch applied to the side of the head was audible. The urine, which amounted to twelve litres daily, was free from albumen and sugar. The treatment, free administration of iodide of potassium, was attended by notable reduction in the quantity of urine. The author supposes the injury to have consisted in destruction of the root of the left abducens nerve, probably with hemorrhagic cyst, and refers to cases in which this pathogeny has been recorded.

THE SIGNIFICANCE OF ATELECTASIS OF THE LUNG.—Tamassia (*Riv. Sper. di Fren. e di Med. Leg.*), from an experimental inquiry, holds that Schroeder's doctrine is devoid of foundation; and if we find by the hydrostatic test and by the other tests which complete it that the lung is absolutely without air, we may with confidence assert that the infant has never breathed.

CANCER OF THE PANCREAS, ACCOMPANIED BY PHLEGMASIA DOLENS.—Dr. L. Cane, in the *British Medical Journal*, reports the case of a clergyman, aged fifty-nine, who consulted him for dyspeptic symptoms, and said his friends had noticed he had not been looking well for some months. A few days after this he complained of pain in the right calf, and there was slight swelling of the leg and tenderness along the inner side of the leg and ankle. Two or three days after the right leg became similarly affected, and it was found that the right saphenous vein was plugged. A careful examination was made to ascertain the cause of the phlegmasia dolens; cancer was suspected, but no evidence of its existence was detected. Three months afterward the patient gradually became aphasic; he could write, but not spell cor-

rectly. A few days after this it was noticed that gradual paralysis of the right arm and right side of the face was coming on. It was not until six months after the patient was first seen that any tumor was detected, but when emaciation had become marked, Dr. Cane detected on the left side a flat, irregular mass, apparently adherent to the spine. The patient rapidly grew weaker, and died unable to make any mental effort, but apparently conscious.

At the *post-mortem* examination it was found that a large irregular mass occupied the place of the pancreas, extending downward about four inches. A number of cancerous glands, joined into one mass, surrounded the aorta and vena cava. The case, says Dr. Cane, illustrates remarkably the statements of Trousseau on phlegmasia alba dolens, that frequently the presence of phlegmasia dolens serves as a valuable aid in diagnosing the existence of deep-seated visceral cancer, in which there is no appreciable tumor.

CARBUNCULUS INTERNUS.—Under this name, Dr. Stanoff describes a case of intestinal anthrax, or Buhl's "mycosis intestinalis," which occurred in a soldier, aged twenty-one, who, soon after eating some boiled pork, began to suffer from vomiting. On admission a few hours later, he presented the following symptoms: extreme prostration, hippocratic face, cyanosis, rapid and weak pulse, cold extremities, moist and coated tongue, thirst, inflation of the belly, tenderness in the epigastric, umbilical, and right iliac regions, labored slow respiration interrupted with sighs and groans, and incessant sickness. There was no diarrhoea, fever, headache, giddiness, or loss of consciousness. The nature of his disease was recognized only after his death, which occurred twenty hours after the first symptoms. About three feet from the cæcum the hyperæmic mucous membrane of the small intestine presented a dark red, roundish, flat, oedematous swelling, two and one-half centimetres in diameter; at its margin was seen a black dense tubercle, about one and one-half centimetre broad. Numerous dark red elevated small spots were scattered along the small intestine. Peyer's patches and the solitary follicles were slightly swollen. The abdominal cavity contained a considerable quantity of a sanguinolent fluid. The spleen and liver were hyperæmic, but not enlarged. The blood was almost black, with easily friable clots. Neither microscopic examination nor inoculation experiments were made. Similar cases of internal anthrax were published by Dr. Rosenberg in the *Moscow Med. Gazeta*, No. 4, 1876, and Dr. R. Albrecht in the *St. Petersburg Med. Wochenschr.*, Nos. 43 and 44, 1878. Of six patients of the latter, five were wool-sorters. In only one of the cases, in which the skin was simultaneously affected, the diagnosis was made during life.—*London Medical Record*, April 15, 1883.

IODIDE OF POTASSIUM IN ENTERIC FEVER.—Dr. Jélenki relates (*Berliner Klin. Wochenschr.*, March 12, 1883) a series of twenty cases in which he has administered iodide of potassium as his chief remedy in the treatment of enteric fever with satisfactory results, prefacing the record of cases with a brief historic notice. A summary of these observations affords the following conclusions: 1. Under the use of the iodide there is a regular duration of from fourteen to sixteen days, which the author observes cannot be claimed for any other means. 2. The temperature and pulse are both slowly and surely lowered, not only for a short time, as with many other antipyretics. 3. A prompt cessation of diarrhoea and abdominal pain. 4. The period of convalescence is shortened by the use of the iodide, and is not attended by the after-effects that often follow other antipyretic agents. The iodide, passing through the whole length of the intestine, affects its glandular structures; and there exerts its antiseptic and antiparasitic properties, so that the author regards it as a specific in the treatment of typhoid fever.

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PSYCHICAL EVOLUTION AND REGIONAL PHYSIOLOGY.

THE phrenological hypothesis that mind is constituted by an assemblage of distinct faculties whose seats are assigned to separate regions of the cerebral cortex, receives no support from the doctrine of evolution, which is becoming the favorite study of so many students of psychology. "Every form of intelligence," says Herbert Spencer,¹ "being in essence an adjustment of inner to outer relations, it results that as in the advance of this adjustment the outer relations increase in number, in complexity, and heterogeneity by degrees that cannot be marked, there can be no valid demarcations between the successive phases of intelligence. Fundamentally considered, intelligence has neither distinct grades, nor is constituted of faculties that are truly independent. Its highest phenomena are the effects of a complication that has arisen by insensible steps out of the simplest elements." Those to whom this view commends itself—and it is a view based on an exhaustive study of comparative psychology—cannot but regard the pretensions of phrenologists as absurd.

The only division of mind which has stood the test of the ages is the threefold division of intellect, feeling, and volition, and yet these three aspects of mind are, as Bain says, so dependent among themselves, although characteristic in their manifestations, that no one could exist alone; and feeling is the basic substance of Mind.² Intellect, though long divisible into various faculties, as reason, memory, imagination, etc., is fundamentally separable into only three factors, discrimination, or consciousness of difference; similarity, or consciousness of agreement; and retentiveness, or the power of memory, or acquisition. The view, then, expressed in a previous article, respecting the special function of the prefrontal lobes of the cerebrum, compels us to regard these lobes as magazines of cells, which are the living substrata of past experiences, registered here, and serving as the basis of comparison, judgment, and imagination, as well as of volition. The connection of these cells by means of fibres with motor regions and motor cells (the latter are believed to be the large pyramidal cells of the lower strata) is too obvious to require insisting upon here.

"Will and intelligence," says Spinoza, "are one and

the same thing." While this may not be absolutely correct—for we can conceive of intelligence without any element of desire or volition, though practically this is seldom if ever realized—certain it is that intelligence is the essence of volition.

The above being premised, it seems a necessary conclusion that identical parts of the brain are concerned in all the phenomena of mind.³ To use a simple illustration: the complex psychical changes awakened at the sight of an orange are the correlatives of excitation of certain visual centres concerned in the reception of all impressions of a like kind, there is doubtless, too, a calling into action, by diffusion of the excitation, of certain cell groupings in the frontal lobes concerned particularly in the elaboration of impressions, and of such centres (presumably in the occipital lobes) as are concerned in the revivability of gustatory and visceral sensations: the desire and the voluntary impulse which ensue are inseparable parts of the completed perception.

The division of the cerebral hemispheres into lobes is artificial. There is, everywhere, intermingling of nerve-fibres and nerve-cells, and the closest blending by intercellular processes. The arrangement for diffusion of nerve "currents" are of the most perfect kind. Multiple as are the neural manifestations, there is practically, through all, the solidarity of a single unit. The hypothesis of Brown-Séquard and Goltz (advocated also by E. Fournié) that the sensory and motor substrata of function are scattered over wide areas is by virtue of the well-known multiplicity of fibre connections plausible, although it presupposes the occupancy, to a greater or less extent, of a whole cerebral hemisphere by any psychical operation, a supposition hardly compatible with the phenomena of trance or dreaming, where there appears to be concentration of psychical and circulatory energy on a limited portion of the cerebral cortex.

These are strong considerations which favor the views of localization which we have before defended.

In this seeming chaos of cells and fibres there must be orderly arrangement. All analogy leads us to believe this. If the cerebral hemispheres be a representation of inner relations answering to the most stable external relations of the outer cosmos, the order in the inner world must correspond with the order without. The law of physiological distribution of labor must apply to the cerebrum as well as to other parts of the economy. When you move your hand in obedience to a voluntary impulse, such motor excitation comes from a definite region of the cortex. It will always, under similar circumstances, come from the same cortical region. To claim the contrary introduces the element of disorder into the scene, which all experience and all analogy forbid. The fibres of the corona radiata which carry visual impressions to the cortex must pursue a definite route. Other sense impressions must follow, as it were, a beaten track to some region of the gray matter near the surface where they are for a time concentrated, to be afterward, it may be, widely diffused and blended with fibres of different sensory nature and motor fibres. That the visual, auditory, and tactile centres occupy a wide area of the cortex

¹ Primitive Psychology, vol. i., p. 388. Cited by Bastian.

² Bain: Mind and Body, pp. 44-83. Herbert Spencer: Primitive Psychology, vol. i., part 3, chap. viii.

³ See Rebot, Diseases of Memory, for striking illustrations. The nervous process is the same in feeling, perception, and remembrance. Reawakened feelings occupy the same parts as the original feelings.

seems probable, when we consider the part which they have in building up the fabric of our mental experiences.

These opinions are in harmony with those expressed by H. Charlton Bastian ("The Brain an Organ of Mind"), Broadbeut ("Cerebral Mechanism of Speech and Thought"), Croom Robertson (review of Ferrier in *Mind*, 1877). Bastian, who charily and reservedly admits the doctrine of localizations as applied to topographically distinct foci of sensation, while admitting the essential facts of motor localizations, was the first formally to propound the theory of "Perceptive Centres" in the cortex (*vide Journal of Mental Science*, 1869), also to state the view, supported of late by Exner, "that there may be much and compound overlapping of areas, and though the area pertaining to the impressions of any particular sense in the cerebral hemispheres may be a very extended one (not to speak of the still further complication brought about by the communication established between the nerve-cells of the sense area with those of others in the same hemisphere and the opposite hemisphere), still it may well be that certain portions of the surface of the cerebral hemispheres might correspond more especially to the *maximum* amount of nerve-cells and fibres pertaining to some one or other of the various senses."

With regard to Exner's investigations, we called attention to them about a year ago (*vide MEDICAL RECORD*, April 15, 1882), and need not repeat what we said then. Exner's observations strikingly confirm the somewhat hypothetical conclusions of Bastian and Croom Robertson, to which allusion has just been made. According to Exner, the cortical centres are rather areas of functional concentration than sharply demarcated sensory and motor foci, and the diffusion and interblending of fibres which there occur, and the overlapping of one district by another, afford a plausible explanation of the different results which have been noted in lesions of these districts, also of the recovery from functional paralysis, which in animals so often follows such lesions. In other words, they are "vicariating areas."

The cortical field of vision, according to Exner, corresponds more exactly with the region assigned to this sense by Muhr and Munk than to that assigned to it by Ferrier, viz.: the angular gyrus. This "perceptive centre" has a relatively wide area in the upper and middle occipital lobes, extending thence into the cuneus. Here again Bastian's prevision is justified. According to Exner's observations, the tactile fields correspond very closely with the motor fields for the same body regions, and this is in striking confirmation of the studies of Betz and Luys on the functional significance of the cells in the stratified zones. "As regards the physiological significance of certain zones," says Luys,¹ "and the relation of each to the phenomena of sensation and motion, we may by the laws of analogy believe that the submeningeal region, principally occupied by the small cells, may be specially connected with the phenomena of sensation, while the deeper regions occupied by groups of large cells may be considered as the most important regions that give rise to motor phenomena."

In studying this question, Luys bases his conclusions principally on data acquired from a study of the spinal cord, which show that those regions (the posterior horns) where small cells occur, have sensory functions, while the regions of large cells, the anterior cornua, are motor. Betz's special contribution to this micrographical study is that the large, so called motor-cells (triangular cells of Luys, pyramidal or giant-cells of Meynert), predominate in the neighborhood of the fissure of Rolando,¹ where Ferrier's motor-centres abound. (And just here there is a striking correspondence between Ferrier's and Exner's localizations as applied to both hemispheres.)

Exner's "absolute" and "relative" areas correspond to regions of greater or less concentration and diffusion of fibres. There is, for instance, an absolute cortical field for the right upper extremity in the upper parietal lobule, the upper two-thirds of each of the central gyri, and the paracentral lobule of the left side. The absolute motor field for the left upper extremity occupies corresponding regions in the right hemisphere, but of considerably more limited extent. The relative fields for these extremities "shade off on both sides with diminished intensity from the absolute areas."

Exner's absolute field for the lower limbs is nearly the same as for the upper, and he explains the phenomena of separate paralyses of the arm and leg by stating "that the areas for the arm are more sensitive than for the leg."

Exner's views, as to localization, will, if proved to be sound (and future investigations are needed to confirm or disprove them), cause physiologists somewhat to modify the current theories of localization, based largely on the carefully conducted experiments of Ferrier. Thus, while teaching that there is no absolute speech centre he locates his relative speech centre just where Broca in 1861 located it, and where Ferrier locates it, *i.e.*, in the posterior part of the third frontal convolution. This being only a "relative" centre, it will not be surprising if cases should now and then happen where injury should occur to this area without aphasia.

Exner's conclusions are based on one hundred and sixty-nine positive observations, but as we said in a former article, in which the work of this physiologist is reviewed, "it must be remembered that there are a good many possibilities of error in Exner's methods, since he used cases of cerebral tumor to work up. Some of his conclusions must, therefore, be accepted with considerable caution."

THE HYPODERMIC USE OF THE CYANIDES.

THE number of substances with which cyanogen is compounded has now become very considerable, largely through the fondness of the French for this particular poison. The United States Dispensatory gives a list which includes the cyanides of ethyl, of gold, mercury, silver, zinc, and potassium. These have all been more or less used. Somewhat over a year ago Dr. Galezowski, of Paris, made a communication to the Société de Biologie upon the subject of the hypodermic use of cyanide of mercury in the treatment of syphilitic affections of the eye, especially in choroiditis, iritis, optic neuritis, and atrophy of the optic nerve. He then claimed that cases

¹The Brain and Its Functions, page 24. D. Appleton & Co. These views were first propounded by Luys in his *Recherches sur le Syst. Nerveux Cerebro-Spinal*, p. 163. 1865.

¹P. Betz in *Centralblatt.*, 37 and 38. 1874.

which had not been relieved by mercury given in the ordinary way, were sensibly improved by the cyanide.

Dr. Galezowski has recently made a further communication upon the subject. The cyanide of mercury, he states, could only be employed in very small doses (five to ten milligrammes). Wishing to give the cyanogen in larger amounts, he prepared, with the advice of M. Frémy, solutions of cyanide of gold and potassium, of silver and potassium, and of platinum and sodium. These he found he could give in doses of twenty to thirty milligrammes without trouble. Three cases are reported in which the optic atrophy of *tabes dorsalis* was checked in its progress under the use of these preparations. Dr. Galezowski is inclined to believe that in these cyanides we have a remedy which is specially helpful in checking the progress of atrophy of the optic nerve in syphilitic and tabetic affections. Sometimes the cyanide of mercury and sometimes that of other metals acts best.

A TWO-YEAR COURSE PREPARATORY TO THE STUDY OF MEDICINE.

OUR attention has been called to the preparatory course for medical students offered by Cornell University. Students are urged to take a full four years' course in arts or in science. Should this not be possible, however, the two years' course, which embraces branches calculated to help in the future study of medicine, is recommended. This course includes French and German, chemistry, zoology, physics, anatomy, physiology, and hygiene. A considerable amount of laboratory work is also required.

We are told that a certificate of attendance is given, which usually exempts the student from one of the three years of study commonly required for graduation in medicine. If this is so, we have certainly failed to observe any acknowledgment of the fact in the printed announcements of our medical colleges. Those desiring a genuinely higher education will be inclined to doubt whether a couple of courses of medical lectures are enough to make a good doctor, even of one who has been through a preparatory course. However, as medical education stands now, a two years' preparatory course, with two years of actual medical study, are much better than the nominal three years of study which the majority of American medical students pass through. We can commend preparatory courses, therefore, provisionally, as helpful. But while they assist in giving a technical education, it should be borne in mind that they do not educate the student in the broadest and best sense of the term. The more ambitious, therefore, will not be content with merely preparatory courses.

We should not omit to state that Yale, and, we believe, other colleges have organized these preparatory courses, some of which extend over a longer time than two years.

ALCOHOLIC INEBRIETY.

THAT industrious and esteemed writer, Dr. T. D. Crothers, who may truly be said to be inebriated with inebriety, has made the various aspects of his chosen specialty familiar to the readers of medical periodicals. We have learned that inebriety is a disease, and that he is a bad, bold man who will uphold the contrary: we have been

told that inebriety has a hundred thousand victims in this country, that it is daily increasing, that its pathology, though mysterious, is distinct; that its various phenomena are woven into the social fabric, and affect all classes, all interests, and all phases of life; in fact, that inebriety is a pathological entity of the profoundest significance, scientifically, medically, and socially.

It may well be thought that this is taking a rather large view of the matter; and yet it is quite possible that the medical profession may in time be brought over to it. A particularly strong reason for this is the constant increase in medical literature of scientific, in distinction from sentimental, contributions to inebriety. There has recently appeared a work by Dr. Joseph Parrish, a pioneer in this field, upon the subject of alcoholic inebriety.¹ It is not an elaborate treatise, but it discusses the question in a scientific manner, yet with candor and caution. The point which it suggests most strongly, is that the subject of temperance and intemperance is at present looked at almost entirely from the sentimental side, and that those who are most enthusiastically interested in lessening drunkenness and inebriety, study the moral side only, or chiefly. There can be no doubt that this is a serious mistake, and that much help could be gotten if only sociologists and medical men would unite to study the problems of intemperance and inebriety philosophically. The question whether inebriety is a disease or a vice, need cause no trouble practically, since it is only a matter of words. A vicious habit (like any habit), by repetition establishes in time a definite change in nutrition, and, perhaps, structure. We may call this change disease, or a vicious habit with an unknown somatic basis, as we choose. It is a definite thing at all events, and one to be treated by other than mental therapeutics alone. This is, we believe, the gospel which our modern apostles of the inebriate pathology are proclaiming.

THE INCREASE OF PHYSICIANS IN NEW YORK CITY.

IN the list of registered physicians in the County of New York, published by Caswell & Hazard, January 1, 1881, the total number given was about twenty-four hundred. In a recently published revised list, the record is brought down to January 1, 1883. The number now is over 2,800, showing an increase of about four hundred doctors in two years. During this time the estimated increase of population has been from 1,230,000, on January 1, 1881, to 1,295,000 on January 1, 1883, or about 65,000. In other words there has been a new doctor for every 162 new inhabitants. This does not take into account all the deaths and removals, which in the two years amount probably to over eighty. Still, even allowing for this, it shows how densely New York City is becoming crowded with physicians, and that medical men are coming in much faster proportionately than the rest of the population.

In 1881 the ratio of doctors to the population was one to 514; now it is one to 463. The above figures relate to registered or legal practitioners. Of the 2,800 now in the city, about 1,800 are entitled to be termed regular by virtue of their names appearing in the Medical Regis-

¹ Alcoholic Inebriety, from a Medical Standpoint, with Cases from Clinical Records. By Joseph Parrish, M.D. Philadelphia: J.P. Blakiston & Co. 1883.

ter. There are, therefore, a thousand irregulars among us. Here truly are conditions which require a struggle for existence, and the young man intending to practise medicine may well hesitate before starting out in New York.

THE PREVALENCE OF SMALL-POX.

VARIOUS telegraphic reports seem to indicate a somewhat extensive prevalence of small-pox at present in the United States. During the month of April there was a mortality from this disease of over one hundred and sixty cases, more than half of which occurred in New Orleans. During the last week of April the mortality was sixty-four cases, showing that the disease was increasing. In the month of May a number of new foci appeared. It is reported that West Virginia has been particularly afflicted with the scourge. On May 26th it was also announced that twenty-six cases of small-pox had occurred in St. Michaels, Minn. Small-pox broke out last month in the County Prison at Lancaster, Pa. Much consternation has been excited in Cincinnati, O., by the sudden appearance of small-pox in an institution for teaching music in that city. In this latter case the disease is said to have been spread through the failure of the attending physicians to diagnose the disease. A number of cases has been reported in St. Louis, Philadelphia, and Nashville. A few cases developed in this city during the month of May.

On the whole, it seems that health authorities ought to be specially vigilant in watching for and guarding against this much dreaded disease.

THE ORIGIN OF THE AMERICAN MEDICAL ASSOCIATION.

IN the light of the great amount of silly talk regarding the "rebellion," "secession," etc., of the New York State Medical Society, it is interesting to read the account of the origin of the national organization as given by Dr. Toner, of Washington.

"The first meeting (of the American Medical Association) was held in the city of New York, May 5, 1846, on a call of the *Medical Society of the State of New York* for a National Medical Convention." This action was brought about chiefly through the activity of a (at that time) New York physician, Dr. N. S. Davis.

It is a historical fact, therefore, that the New York State Medical Society called the American Medical Association into existence.

The child repudiates the parent before the latter has reached the maturity of a chartered existence.

THE MEDICAL ASSOCIATION OF GEORGIA

Held its third annual session at Athens, April 18 and 19, 1883. The annual address was delivered by the President, Dr. K. P. Moore. The following officers were elected: *President*—Dr. A. W. Calhoun, of Atlanta; *Vice-Presidents*—Drs. R. J. Nunn, of Savannah, and M. P. Deadwiler, of Elberton; *Secretary*—Dr. Jas. A. Gray, of Atlanta; *Treasurer*—Dr. E. C. Goodrich. The Society adjourned to meet at Macon, the third Wednesday of April, 1884.

News of the Week.

THE EVOLUTION OF THE NEW CODE.—The fourth article by Dr. Piffard on "The Status of the Medical Profession in the State of New York," published in the *New York Medical Journal* of May 26th, gives an interesting history of the present State Code, and explains the reasons which led the committee to adopt the present non-restrictive clause. The subject is admirably presented, and the article reflects much credit on its author. It should be read by all who candidly desire to know the whole truth regarding New York State's ethical position.

The Independent Practitioner is to become a purely dental journal, and will be edited by Dr. W. C. Barrett, of Buffalo, N. Y. We trust it will continue successful.

THE MASSACHUSETTS STATE MEDICAL SOCIETY holds its one hundred and second annual meeting at Boston, June 12th and 13th.

PRESIDENT GILMAN, of the Johns Hopkins University, will, says the *Maryland Medical Journal*, sail for Europe shortly in order to study the methods of medical education in vogue there, with a view to utilizing the experience thus gained in the organization and conduct of the medical school to be established in connection with his own university.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At the stated meeting, held May 28th, notice was given of the following proposed amendment to the by-laws:

"No member of this Society shall assume any sectarian designation indicating that his practice is based on any special doctrine, or dogma, or specified method of treatment."

The following amendments were unanimously adopted: 1. "The members of this Society shall be governed by the Code of Ethics, adopted by the Medical Society of the State of New York, February 6, 1882." 2. "No person shall be eligible for membership in this Society who is a member of a county society not entitled to representation in the Medical Society of the State of New York."

THE EPIDEMIC FUND of one hundred thousand dollars, to be used in the discretion of the President of the United States, will be employed only in case of actual or threatened epidemic, in which event the Secretary of the Treasury is empowered by the President to disburse the fund in aid of State and local boards of health to prevent the introduction or spread of the disease.

FEMALE PHYSICIANS FOR THE NATIVES OF INDIA.—Much success has attended the subscription now being raised in Bombay to secure the services of female physicians for the native women. Miss H. Johnson, the Directress of the Medical Mission at Agra, one of the largest cities of Northern India, gives a deplorable picture of the ravages of sickness and debility among the native women, whom no male physician is allowed to approach, and who, living in ill-kept rooms, and often sitting, or even sleeping, on the bare floor, are at the mercy of every epidemic. Even when European medicines and prescriptions are within reach, they are often rendered useless by the opposition of jealous and super-

stitutional relatives. There can be no doubt that the establishment in every great Hindoo city of a native hospital, officered by competent female doctors, would save many lives every year.

DR. HOLMES NOT GOING TO ENGLAND.—Dr. Holmes has been invited to Birmingham, and the promise has been made him that if he will go a reception by the members of the medical profession will await him there. He was thus invited on the supposition that he was about to visit England, but this rumor proves to have been an error. His letter declining the Birmingham honor is made public in a London newspaper, and is as follows, the date of it being April 21, 1883: "I am very sorry to say that the story of my intended visit to England is a pure invention. I should find a great deal to enjoy, I am sure, in 'our old home,' but I hardly expect to see it again, being myself a poor traveller, and having learned by troublesome experience that I am safest when I let my children do the travelling for me. I thank you most cordially for your very kind invitation to visit Birmingham. It is a source of great pleasure to me to feel that I have many good friends in England—friends on whose faces I have never looked, and probably never shall, but whose warm heart-beats reach me through the oldest of telephones—the one that 'wafts a sigh from Indus to the pole.'"

THOSE TOLEDO SCHOOLS is the title of an editorial in the *Columbus Medical Journal*, in which the inner history of the development of medical education at Toledo is given. We are told that there are now two medical colleges in that city. It seems that there was a school started in 1878, that soon after the "outs" got a charter and started a regular college. Now the original "school" has a charter also. The *Columbus Medical Journal* says: "Six months ago, the stand taken by the Illinois Board of Health would probably have prevented the birth of either school; but its recent pusillanimity has made it the laughing stock of the country, and utterly destroyed its usefulness." It seems a little unfair to lay it all on the Health Board of another State.

A BUST OF DR. J. M. TONER, of Washington, is to be made by Mr. J. Q. A. Ward for the Congressional Library, in honor of the gift from him of a large and valuable collection of medical books.

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.—The sixteenth annual meeting of the Medical Association of Central New York was recently held at Syracuse, N. Y. The meeting was quite well attended and was an unusually interesting one. Dr. C. Mercer showed specimens of bacillus tuberculosis.

AN ANATOMY ACT designed to prevent body-snatching by providing for a suitable supply of "material" for the colleges, has been passed by the Quebec Parliament.

A WOMAN ON THE HOSPITAL STAFF OF A GENERAL HOSPITAL.—At the recent examination for the house staff at Mount Sinai Hospital, Dr. Josephine Walter was a successful candidate, and has received the appointment. Miss Walter is a graduate of the Woman's Medical College of the New York Infirmary, and after receiving her diploma spent six months in further studies before venturing her examination.

WOMAN'S MEDICAL COLLEGE OF PHILADELPHIA.—Dr. W. W. Keen has been elected to the chair of surgery in the Woman's Medical College of Pennsylvania.

PROFESSOR RICHET was elected a member of the Academy of Sciences, at its last meeting, in the section of Surgery and in the room of Dr. Sédillot, deceased. The struggle was hard between the newly elected Academician and the venerable Jules Guérin, but notwithstanding the greater claims of the latter, the result that took place was anticipated.

A SANITARY ARMOR.—The National Health Society, London, has introduced a form of garment, made of mackintosh, to be worn by those people who are compelled to enter the apartments of persons suffering from contagious diseases. Used in conjunction with a medicated cotton respirator, it is said to be a protection against contagion.

HAVANA AS A SOURCE OF YELLOW FEVER INFECTION.—Twenty-two deaths from yellow fever occurred in Havana during the week ending May 26th. The act of Congress for the prevention of contagious diseases, which requires the sanitary inspection of vessels at Havana bound for the United States, expires on June 2d, and Congress has made no provision for a renewal of the act. The want of sanitary inspection and information in bills of health will prove, it is feared, injurious to vessels and a danger to ports in the United States. It is stated that the President has authority to act in the matter. The usefulness of a competent, responsible inspector, serving as heretofore in the American consulate, is apparent. Havana, with its yellow fever, is constantly endangering the ports of the United States.

A SUCCESSFUL SURGEON PAINTER.—Sir Henry Thomson's picture at the exhibition of the Royal Academy is hung on the line.

THERE IS AN EPIDEMIC OF SCARLET FEVER at present in the town of Flatbush, L. I. There are now forty cases being treated. Two cases have terminated fatally.

THE EPIDEMIC FUND OF THE TREASURY DEPARTMENT.—The Secretary of the Treasury has written a letter to the Surgeon-General of the Marine Hospital Service, of which the following is a copy: "The President has directed the Secretary of the Treasury to take charge of the expenditure of the appropriation in the Sundry Civil Service Appropriation act of March 3, 1883, for the prevention of the spread of epidemic diseases. This department has determined to commit to the Surgeon-General of the Marine Hospital Service the inquiry into the need of the use of the money and the duty of applying it in cases that arise thereupon, and you are hereby authorized to make requisition from time to time for such sums as may be deemed necessary to carry into effect the purpose of said appropriation, to be expended in accordance with the existing regulations of the Marine Hospital Service."

HUDSON COUNTY (N. J.) MEDICAL SOCIETY.—At the annual meeting the following officers were elected: Gordon R. Dickson, M.D., President; W. P. Watson, M.D., Vice-President; J. A. Exton, M.D., Secretary; C. F. Kyte, M.D., Treasurer.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 9, 1883.

R. E. VAN GIESON, M.D., VICE-PRESIDENT, IN THE CHAIR.

DR. WACKERHAGEN presented specimens in behalf of a candidate.

DR. FERGUSON presented a specimen, illustrating
PERICARDITIS,

occurring in a female patient, aged fifty-four, a native of Ireland, and a dressmaker by occupation. She was admitted into the New York Hospital on September 11, 1882, with the following history: Three years previous to date she was in a hospital for kidney disease, where she improved under treatment. Up to three weeks previous to her admission she was fairly well and attending to business. At that time her feet began to swell, and her dyspnoea, which has been moderate since her first illness, became worse, and on admission she was suffering from cardiac palpitation. There were no visual or cerebral symptoms.

While in the hospital her temperature was subnormal (97.7° F.), her respiration ranged from 18 to 34 per minute, and her pulse from 98 to 158. She was stimulated by whiskey and digitalis, and was cupped over the region of the kidneys.

Physical examination revealed double hydrothorax, and a loud blowing bruit over the base of the heart, on both sides of the sternum. During the last three days of her illness she passed only a few ounces of urine, which contained a large percentage of albumen. All her symptoms became aggravated, and she died (comatose for several hours previously) on September 15th, three days after admission.

Autopsy, twenty-two hours after death.—There were 500 c.c. [17 ounces] of serum in the right pleural cavity. The lungs were congested and oedematous. The heart was very large, and both layers of the pericardium were covered by recent lymph. The ventricular walls, especially the left, were hypertrophied; the left ventricle was dilated, the valves were competent, and the endocardium was slightly thickened.

The kidneys were far advanced in chronic diffuse nephritis. They were much smaller than normal, and there was a great deal of fat in the convoluted tubes and many casts in the straight tubules.

The liver was pigmented, the central vessels were dilated, and there was atrophy of the liver-cells in their neighborhood. There was excess of fat in the liver, also in the muscular fibres of the heart.

Dr. Ferguson also presented a specimen illustrating

PERICARDITIS—THROMBUS OF THE ARCH OF THE AORTA,

from a male, aged seventy. He was found on the street in an unconscious condition, and pulseless at the wrist. He was aroused, and, by the assistance of two men, walked into the ambulance. He was unconscious all the time he was in the hospital, and pulseless at the wrists. He died thirty-six hours after admission.

Autopsy, twenty-four hours after death.—The upper lobe of the right lung was in the condition of gray hepatization. The lower and middle lobes were intensely congested and oedematous. The left lung was congested and oedematous throughout. The bronchial tubes, on both sides, contained mucus and pus. The pericardium contained two ounces of purulent fluid. Both layers of the pericardium were covered by recent lymph. The left ventricular wall was much hypertrophied, and the cavity of the left ventricle was small. The valves were competent. There were several small patches of atheroma in the segments of the aortic and mitral valves. The thoracic aorta was moderately dilated.

There was a clot arising from the arch of the aorta, between the origin of the subclavian artery on the left side, and the common origin of the innominate and left common carotid, one inch in length, and one-half inch in breadth, and the same in thickness, with its centre broken down. It was not organized; a part of it passed up into the left common carotid. Brain. The left middle cerebral artery was occluded by an embolus, which filled the artery and some of its branches, and the regions of the brain supplied by these branches were softened. The kidneys were atrophied, and in the condition of chronic diffuse nephritis. The urethra. There were two strictures of the urethra, each of which admitted a sound one-eighth of an inch in diameter. One was situated in the pendulous portion, two inches from the meatus, the other at the bulbo-membranous junction.

These cases resembled each other in that both patients were advanced in years; both had chronic diffuse nephritis, hypertrophy of the heart, thickening of the endocardium, and pericarditis.

The Society then went into executive session.

THE SECOND GERMAN CONGRESS OF INTERNAL MEDICINE.

Held at Wiesbaden, April 18, 19, 20, and 21, 1883.

PROFESSOR FRERICHS, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

(Concluded from p. 551.)

DISCUSSION ON DIPHTHERIA.

PROFESSOR KLEBS followed with a paper in which he agreed in the main with the preceding speaker, and thought there were undoubtedly different forms of diphtheria depending upon different micro-organisms. In Prague he had seen a form of malignant diphtheria in which there were hemorrhagic exudations in the central nervous organs, with severe general symptoms, while the local throat affection was confined to a spot the size of a penny. The superficial layer of this membrane was composed of masses of straight or bent threads mixed with epithelial debris. Beneath this was the ordinary fibrinous exudation, in which were numerous round masses of very small micrococci closely packed together. In Zurich he had found another form prevailing, in which the affection was more local. There was no enlargement of the spleen, and slight or no changes were to be found in the kidney. Death occurred through invasion of the respiratory tract by the false membrane, or from pulmonary inflammation. Paralysis seemed to follow this variety less frequently than it did that which he had met with in Prague. In this form the micro-organisms were bacilli, while in the less localized variety first mentioned they were micrococci. He considered it important to thus distinguish between these two varieties of diphtheria, as in this way we might be able to remove many of the difficulties of prognosis, and, furthermore, obtain data upon which to formulate the therapeutical indications. He had had but little experience with scarlatinal diphtheria, but believed it to be a distinct variety of the disease. He had always found a swelling of the submaxillary glands in such cases, and had discovered that they were infiltrated with micrococci.

DR. HEUBNER, of Leipzig, questioned whether the local inflammatory process might not depend upon a temporary interruption of the blood-supply to the part. He had experimented upon rabbits by closing temporarily the vessels supplying the base of the bladder, the circulation being restored again after the lapse of a short time. At the end of twenty-four hours there was a hemorrhagic oedema of the mucous membrane; an exudation appeared on the second day; and on the third day a perfect picture of commencing diphtheria was presented. A further

experiment seemed to him to explain the onset of infectious symptoms. After the mucous membrane had become diphtheritic, he injected anthrax poison into the substance of the dorsal muscles. When this was done early, the poison was found chiefly in the locally diseased parts. The speaker concluded, therefore, that the contagium of diphtheria was not the cause of the exudation, but was deposited in it through the simultaneous occurrence of a local inflammation with a general infection.

In accordance with these views, he placed little reliance upon local treatment, but endeavored to overcome the diphtheritic poison by remedies internally administered.

DR. JÜRGENSEN, of Tübingen, was inclined to regard croup as a disease distinct from diphtheria, and related a case in support of his view. As to treatment, he thought it best to remove the membrane, as far as possible, for the sake of cleanliness, but opposed the employment of harsh or irritating substances to effect this object. He considered a general disinfection of the entire body as impossible.

DR. ROSSEACH, of Jena, looked upon the tonsils as the portals through which the diphtheritic poison found entrance to the system, and on this account advocated their removal as a prophylactic measure. When they were large he cut them away; in other cases he destroyed them with the galvano-cautery.

The discussion was prolonged to the close of the session, a number of gentlemen taking part therein. In general, it was agreed that the affection designated diphtheria was not a single disease, but that there were two or more conditions at present confounded under this one name.

At the opening of the third session DR. BINZ, of Bonn, presented a paper upon

THE ABORTIVE TREATMENT OF INFECTIOUS DISEASES.

Two causes were at work which tended to make infectious diseases less dreaded now than they were in former ages. These were an improved hygiene and an improved therapeutics. Hygiene alone will not suffice to prevent entirely the occurrence of epidemics, for the simple reason that it can never become perfect; and as long as a single focus exists favorable to the growth and development of the matter of contagion, there is danger of its spread to other localities. Hygiene and therapeutics must go hand in hand. But though we can never hope to prevent absolutely the occurrence of any infectious disease, the author believed that the time would come when we could strangle the disease at its inception and thus rob it of most of its terrors. We have already five remedies which we can send after certain exciters of disease to paralyze them and abort the diseases to which they give rise. These remedies are quinine, mercury, iodine, arsenic, and salicylic acid. The antagonism of quinine to the malarial poison was dwelt upon; the explanation of its action being that it was a poison to the micro-organism found in this disease. This was not mere conjecture, but had been proven by direct experiment. Although at present there were no remedies to be regarded as specific antidotes to the microscopical organisms found in tuberculosis and diphtheria, Dr. Binz believed that they would some time surely be found. These diseases were now in the same condition as were rheumatism and malarial fevers before the discovery of the antidotal effects of salicylic acid and quinine. In concluding, the speaker predicted a glorious future for therapeutics.

DR. ROSSEACH, of Jena, followed with a thoughtful article upon the same subject, agreeing with Dr. Binz in his hopes of vanquishing these enemies of mankind. He advocated the establishment of a special commission to study the action of the various drugs now in our possession, and of others yet to be discovered, to determine their proper dose and to ascertain their poisonous effects upon the lower as well as the higher organisms. In case of an epidemic occurring in any locality this commission

should recommend some particular remedy, whose action was supposed to be inimical to the disease in question. This remedy was then to be used by all physicians in their treatment of the disease, and a report could be made to the central body, upon the subsidence of the epidemic, of the results obtained by the various observers. In this way we might hope to make rapid advances in our search for specific therapeutical agents.

The discussion which followed was without special interest. The speakers agreed upon the desirability of the establishment of some such commission, which could formulate some general plan of investigation, and collate the results obtained by individual workers.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

The Fifth Annual Congress, held in New York, May 21, 22, and 23, 1883.

(Continued from p. 580.)

SECOND DAY—AFTERNOON SESSION.

DR. LOUIS ELSBERG, of New York, read a paper entitled,

REFLEX PHENOMENA DUE TO NASAL DISEASE.

More than twenty years ago he introduced the subject that naso-pharyngeal disease, especially with considerable thickening and congestion of the mucous membrane, was liable to be attended with loss of memory and mental depression and other nervous phenomena. In 1863 a remarkable case of chorea came under his observation, so severe that the movements continued even during sleep. The nervous affection seemed to depend upon nasal disease, so much so that he directed his attention exclusively to this difficulty, and *pari passu* with the cure of the disease of the nose the chorea was completely and permanently relieved. The affections to which his attention had been especially directed were melancholia, chorea, reflex epilepsy, neuralgia, especially of the supra-orbital nerve, gastric disturbances, especially diseased conditions of the upper part of the digestive tract, uterine disorders, affections of the genito-urinary membrane, disorders of smell and taste, also of hearing and sight, and numerous affections of the naso-respiratory tract, especially various alterations in the speaking and singing voice, laryngeal cough, bronchial asthma, etc. In explanation of the intimate connection which seemed to exist between nasal disease and affections of the nervous system, the author of the paper referred to a communication made by Dr. A. Jacobi to the New York Obstetrical Society, in which three points were made: First, the trigeminus, with all its branches, is subject to direct or reflex irritation from the inflamed nasal mucous membrane; second, that thickening of the mucous membrane, or narrowing of the nasal passages in the child, especially such as attend the presence of a polypus, seriously interferes with respiration, and the result is an accumulation of carbonic acid gas in the brain, which affects the respiratory centre of the medulla oblongata; third, the nasal mucous membrane and the dura mater have an intimate relation with each other, so much so that each can be injected from the other side.

DR. J. N. MACKENZIE, of Baltimore, drew especial attention to the great frequency of cough as a symptom of nasal disease. He had reached this conclusion with reference to this symptom by experiment, as well as from clinical observation. From an extended study of the subject, both clinically and experimentally, he had reached the following conclusions, already presented in a paper which he had read before one of the medical societies in Baltimore: First, clinical experience and experimental observation had shown that in the nose, as well as in the pharynx, there exists a definite and well-defined circumscribed area, the irritation of which, caused by either pathological process or artificial means, is capable of

producing a series of reflected phenomena, but especially cough; second, this reflex area corresponds, in all probability, to that portion of the mucous membrane which covers the posterior part of the corpus cavernosa; third, this reflex is only produced when *this* area is stimulated; fourth, all parts of this sensitive area are not equally sensitive to irritation, the most sensitive being the posterior end of the inferior turbinated bone and the erectile body on the septum immediately opposite; fifth, the susceptibility to reflex cough varies greatly in different patients. The reasons which he gave for thus localizing the sensitive area, were: First, the reflex cough may be produced at will by artificial stimulation of this area; second, the reflex cough may be dissipated by topical applications to this sensitive surface; third, in all cases of nasal polypi in which asthmatic attacks are present they are only produced when the polypi are situated in the posterior part where they impinge upon the sensitive area; fifth, foreign bodies lodged in this area will give rise to reflex cough, but when lodged in the non-sensitive portion of the nose they do not produce such reflex phenomena.

DR. J. O. ROE, of Rochester, made special reference to asthma, especially that which occurs in acute attacks, such as is seen with hay fever, as being produced by disease of the nose, particularly posterior hypertrophy of the mucous membrane. He thought that in nearly all cases of hay fever it would be found that disease of the nose was an essential cause. He related the history of one case in which remarkably favorable results followed removal of hypertrophied turbinated tissue.

DR. C. SEILER, of Philadelphia, referred to cases in which choric symptoms were present, due to nasal irritation, and in which the nervous manifestations disappeared with the cure of the nasal disease. He also referred to cases of extremely violent coryza, lasting but for a short time, developing very suddenly, and attended by a profuse watery discharge, which he thought might perhaps be included under the class of cases referred to by Dr. Elsberg. He recited the history of one remarkable case; but there was no evidence of hypertrophy of the nasal mucous membrane.

DR. F. H. BOSWORTH, of New York, thought it not well to call the cases to which Dr. Seiler had referred cases of coryza, for he had examined the fluid discharged both microscopically and chemically, and found it composed almost entirely of pure water. They were first described by Sir Benjamin Brodie, subsequently by Sir James Paget, and afterward by writers in the *London Lancet*, making in all six cases, which covered the literature of the subject. He believed that they depended entirely upon some neurotic condition of the general system, but were not reflex in character. Dr. Bosworth also directed attention to the occurrence of spasm of the glottis dependent upon atrophic rhinitis, which he thought was, quite probably, reflex in character. The youngest patient in whom he had seen this symptom was six years of age, and the oldest, a man fifty-five years of age. Simple applications, such as a weak solution of salt, keeping the nasal mucous membrane moist, relieved completely the tendency to the attacks of spasm. One point with regard to Dr. Jacobi's explanation, mentioned by Dr. Elsberg, and that was, Dr. Bosworth did not believe that chronic thickening of the nasal mucous membrane or nasal polypi occurred in children. The condition which was seen was glandular tissue, and not mucous membrane which has become thickened.

DR. W. C. JARVIS, of New York, referred to a case in which relief from asthmatic attacks followed removal of a posterior gelatinous polypus and opening up of one nostril in a case in which both nostrils had been obstructed by reason of a polypus and also a deviated septum.

DR. ELSBERG, in closing the discussion, said that he was not aware of Dr. Mackenzie's interesting contributions to our knowledge of the sensitive points about the

nose, and had been much interested in the conclusions reached. He did not regard the case of excessive watery discharge, referred to by Dr. Seiler, as one which belonged to the category included in his paper. The cases of spasms of the glottis he had alluded to, and was pleased to learn that Dr. Bosworth had observed so many similar cases.

DR. CLINTON WAGNER, of New York, then read a paper entitled

SMELL HYGIENICALLY AND MEDICO-LEGALLY CONSIDERED.

The author of the paper defined odors as impalpable bodies in the form of vapor, and that the function of the special sense of smell was to be able to recognize and distinguish the impression of odors, one from the other, on the terminal filaments of the olfactory nerve. Dr. Wagner then directed attention to the great variety of smells with which the human nose became cognizant, and spoke of the exposure of workmen to certain noxious vapors and apparently without deleterious results. He explained this fact on the ground that all these workmen were engaged in active occupations, and therefore that the influence of the poison was not felt; whereas when the same noxious odors, disagreeable smells, were experienced by the feeble or delicate, who led a less active life, the influence produced was physically detrimental. The medico-legal aspect of the question was presented in the detriment to health and to comfort embraced under the legal definition of a nuisance, which might be experienced by those who lived in the immediate locality of bone-boiling establishments, petroleum yards, abattoirs, etc.

DR. BEVERLEY ROBINSON, of New York, in discussing the paper, directed attention to the distinction which should be made between deodorizers and disinfectants, and while he did not wish to say that it was not valuable to be able to detect odors, yet he believed that the use of *so-called* disinfectants frequently did more harm than good. For example, when subjected to close analysis, it had not yet been determined whether or not the *real* germ of disease was destroyed by the use of the popular agent, carbolic acid, which perhaps might be regarded as substituting one bad smell for another, and not disinfection. It should not be taken for granted that merely destroying a disagreeable odor was destroying a noxious agent. Again, he believed that more stress had been laid on the presence of sewer-gas than was always sustained by the real facts in the case.

DR. C. W. CHAMBERLAIN, of Hartford, stated that it was somewhat difficult to judge just how far, in overcrowded tenement houses, in school-houses, etc., offensive gases influenced health, but, so far as the Connecticut State Board of Health had been able to determine, they had avoided any disinfecting agent which substituted one odor for another, and had eliminated carbolic acid from the list entirely.

DR. S. H. CHAPMAN, of New Haven, thought an odor simply led us to seek the cause of some putrefaction; that the odor did no harm unless it was accompanied by a germ of disease; that with mere smells the sanitarian had nothing special to do, but that stinks might be detrimental.

DR. WAGNER said that he wished to speak of odors simply as a means for detecting sources of disease, and believed that much could be learned by following them to their origin. He did not wish to suggest that the cause of noxious vapors should be treated by disinfectants.

DR. HARRISON ALLEN, of Philadelphia, then read a paper entitled

ASYMMETRY OF THE NASAL CHAMBERS WITHOUT SEPTUM DEVIATION.

The author of the paper wished simply to direct attention to this particular fact: he believed that a dif-

ference in the diameter of the posterior nares would be found to exist quite generally. He had found corresponding to it an asymmetry of the parietal protuberances, and this might perhaps be one means by which an external examination of the head might lead to the inference that the nasal passages were deformed.

DR. DELAVAN, of New York, believed that Dr. Allen, in his line of study, was doing much to reach the root of the whole discussion of all nasal difficulties; for he believed it to be the general experience that in a large number of cases attempt to relieve patients of certain nasal affections was useless simply by treating the nasal mucous membrane.

DR. RUFUS P. LINCOLN, of New York, then read a paper

ON THE RESULTS OF THE TREATMENT OF NASO-PHARYNGEAL FIBROMA, WITH DEMONSTRATION OF SUCCESSFUL CASES, TOGETHER WITH A TABLE OF SEVENTY-FOUR OPERATIONS BY DIFFERENT SURGEONS.

The object of treatment in these cases is, first, thorough removal of the growth and destruction of diseased tissue; second, avoidance, as far as possible, of accidents incident to operations in this region; third, to secure the result with the least external disfigurement. Dr. Lincoln disclaimed the idea of recommending the employment of any single method of treatment, but he believed that there was a simpler method than that so frequently employed by the most distinguished of surgeons.

The tabulated operations included those performed upon 58 patients, including three of his own cases. There were 74 operations in all, and were tabulated as follows: Of the patients, 46 were males; 8 were females, and in 4 the sex was not stated. Age: under eight years of age, 2; between fourteen and twenty-three, 31; between twenty-three and thirty, 4; between thirty-three and forty-two, 6; between forty-three and fifty-two, 5; 1 patient was fifty-four years of age, another fifty-five, and the age was not stated in 8 cases.

Of the operations involving section of the bones of the face, there were 39 performed upon 28 patients. The number of recurrences which took place within a year was 14; the number of cases reported under observation without recurrence, 4; the number of cases in which there was no record subsequent to the operation, 13; the number of deaths as a result or attributable to the operation itself, 8; in 3 other cases the operation nearly proved fatal.

Removal by knife, scissors, forceps, etc., 7 operations performed upon 7 patients. Number of recurrences, none; number of cases reported under observation one year or more subsequent to the operation without recurrence, 1; number of cases in which there was no record subsequent to the operation, 5.

Removal by the *écraseur*, or ligature, 12 operations performed upon 11 patients. Recurrence within one year, 6; under observation for one year or more without recurrence, 4; no record subsequent to the operation, 2.

Treatment by injections, cauterization, etc. Number of cases treated, 2. Recurrences within one year, 1; without records subsequent to the operation, 1.

Removal by electrolysis in 3 cases. Recurrences within one year, 1; no record after operation, 2.

Removal by the galvano-cautery *écraseur*, 11 operations performed upon 10 patients. Number of recurrences within one year, 3; under observation for one year or more without recurrence, 6; no record subsequent to the operation, 2; fatal cases, none.

Dr. Lincoln then read the report of a case in which, in January last, he removed one of these growths with the galvano-cautery *écraseur*, and subsequently destroyed the stump by the galvano-cautery. The operation performed was the same which he described to the Association four years ago. It consists in the introduction of a loop of platinum wire through the nostril, passing it behind the tumor, after which the patient is etherized, the

battery attached, the pedicle severed, and the tumor removed through the mouth.

This patient was presented, as was also the patient whom he operated upon in 1879, and another whom he operated upon in 1875, in neither of whom was there any trace of the growth remaining.

DR. W. C. JARVIS, of New York, referred to a case of myxofibroma of the naso-pharynx in which the tumor was attached to the post-nasal arch, projected forward into the anterior nares, extended some distance into the right nares, and almost entirely occluded the vault of the pharynx. He removed the growth with his *écraseur*, using a No. 5 piano-wire, and, although the strain upon the instrument was sufficient to bow the *écraseur*, the patient only complained of severe toothache and the tedium of the operation. Although the instrument in position pulsed like an artery, there was no hemorrhage following the removal of the growth. Four months afterward there was none of the neoplasm remaining.

Dr. Jarvis also exhibited a new nasal speculum, which he devised to facilitate exploration of the nasal passages, not only in these but in all other cases.

DR. ANDREW H. SMITH gave the history of a case in which he succeeded in removing the growth by means of Jarvis' snare. The pedicle, after removal of the neoplasm, grew rapidly downward but not laterally. He again applied the wire, and resorted to the application subsequently of the perchloride of iron. All that remains now is a small conical projection, which simply indicates the location of the pedicle.

DR. SEILER also referred to cases in which he had found it most satisfactory to use the cold-wire *écraseur*. In one case he had removed the growth piecemeal, the whole when it was entirely removed weighing nearly four ounces.

DR. INGALS, of Chicago, referred to three cases which he had successfully removed by means of the galvano-cautery.

DR. BOSWORTH, of New York, thought the Society was very much indebted to Dr. Lincoln for the most complete tabulation of cases which had ever been prepared, and he was very much pleased to know that the view that these tumors can be dealt with successfully without resorting to the frightful operation of Langenbeck was fully sustained by the statistics.

DR. LINCOLN thought that any one who had seen the operation of excision of the superior maxilla could not but regard it as one of the most horrible in surgery, and one of immediate hazard to the patient, and therefore any method of avoiding such a formidable operation was worthy of careful consideration and trial.

DR. E. HOLDEN, of Newark, then exhibited

A CARBON ILLUMINATOR FOR EXAMINATION OF THE THROAT AND LARYNX.

It consisted of a spring loop of wire in which a mirror could be easily slipped, was adapted to all purposes of pharyngeal and laryngeal illumination, and when attached to two ordinary Smede's cells, the illumination given was exceedingly satisfactory.

The Association then adjourned to meet at 10 A.M., May 23d.

THIRD DAY—WEDNESDAY, MAY 23D—MORNING SESSION.

The Association was called to order at ten o'clock by the President.

The first paper was read by DR. J. SOLIS COHEN, of Philadelphia, and entitled

A CASE OF THYROTOMY FOR MORBID GROWTH; WITH SUBSEQUENT DEVELOPMENT OF EPITHELIOMA IN THE CUTANEOUS CICATRIX, BUT WITHOUT INVOLVEMENT OF THE INTERIOR OF THE LARYNX.

The patient was a man, sixty-three years of age, who had persistent hoarseness of two years' duration. The

voice was a husky whisper. His general health was considerably impaired. After some general treatment Dr. Cohen removed the laryngeal growth by thyrotomy; submitted the specimen to Dr. Seiler for microscopical examination, who reported it to be papillomatous. Two years after the operation the patient presented himself with a small, soft nodule in the skin, over the right wing of the thyroid cartilage, but not attached to the cartilage. This was removed by Dr. Agnew, of Philadelphia, and submitted to microscopical examination by Dr. Formad, of Philadelphia, who declared it to be a specimen of tubular epithelioma. Ten weeks later another nodule appeared over the left wing of the thyroid cartilage, and was attached to the muscle below; this was also removed and found by Dr. Formad to be epitheliomatous in character. Finally Dr. Cohen removed all of the skin in the neighborhood which was infiltrated with epithelioma, and filled the space by making a transplantation of flaps from the upper part of the chest. The case subsequently did very well for some time, but eventually proved fatal, the patient dying in January, 1883.

Dr. Cohen regarded it as a case of epithelioma induced in the cicatrix by irritation of the neck-band, and that after the first operation the case became an example of malignant growth due to direct local irritation.

Dr. F. H. HOOPER, of Boston, then read a paper entitled

EXPERIMENTAL RESEARCHES ON THE TENSION OF THE VOCAL BANDS,

made in conjunction with Professor H. P. Bowditch, of the Harvard Medical School. Two series of experiments were performed: First, with reference to the action of the thyro-cricoid muscle, and it was proved conclusively that the action of this muscle was to draw the cricoid cartilage upward upon the thyroid cartilage. The second series was to determine the effect of the air-blast, and it was proved that in addition to the entire rise of the larynx in singing high notes there is an excessive rise of the cricoid cartilage upon the thyroid, a phenomenon to which attention has not heretofore been called.

The paper was elaborate, technical, illustrated by diagrams and apparatus, and exhibited a remarkable amount of careful research and experimental application.

Dr. Hooper believed that the following facts had been established: First, that with high pressures the cricoid cartilage invariably moves more than the thyroid, and he believed it to be a correct inference that with all pressures such was the result. Second, that with high pressures, after section of the muscles, both cartilages moved upward more freely, but the stretching of the vocal bands is less.

The conclusion reached concerning the effect produced by the air-blast was, that air escaping from the lungs produced decided upward movement of the cricoid cartilage, in addition to the general rise of the larynx, the upward movement increasing in proportion to the force with which the air is expelled from the chest.

Dr. Hooper thought his researches might possibly offer a suggestive clue in elucidating certain pathological conditions. For instance, cases where the singing voice can be relied upon while in the same individual conversation is impossible, might perchance, in a measure, be explained by this action of the air-blast as a tensor at high pressures.

The general conclusions reached by the author of the paper were: 1, That the cricoid cartilage is the most movable part of the laryngo-tracheal tract; 2, that the thyro-cricoid muscle should be described as *arising* from the thyroid cartilage, and *inserted* into, and giving motion to, the cricoid; 3, the air-blast is a direct and important longitudinal tensor of the vocal bands.

Dr. BEVERLEY ROBINSON, of New York, then read a paper on

AURAL COMPLICATIONS OF INFLAMMATORY CONDITIONS OF THE NOSE AND THROAT.

The author of the paper believed it was very impor-

tant for laryngologists to be familiar with the aural complications incident to the diseases of the naso-pharyngeal space, and first directed attention to aural complications accompanying *acute* nasal and throat disease of inflammatory character; and, second, to the aural complications accompanying *chronic* inflammatory conditions of the nose and throat. The aural complications, such as occurred in connection with scarlet fever, diphtheria, measles, typhoid fever, and other acute general diseases and febrile affections, were discussed at considerable length. The author believed that the complications were due not, as a rule, to direct extension from the nose and throat through the Eustachian tube to the ear, but to the same cause which produced the general disease. He believed that disease of the middle ear was much more likely to occur as a complication in case of chronic inflammatory affection of the throat and nose than in those cases in which these diseases were not present. In conclusion he urged upon laryngologists the importance of guiding their patients, especially with reference to the hygiene of the ear.

Dr. MACKENZIE, of Baltimore, directed attention to one agency which had not been mentioned by the author of the paper—namely, the reflex production of disturbance in the ear, originating in irritation in the nasal passages. He had been able to produce artificial redness of the drumhead by irritation of the turbinated structures of the nose. Many of these cases belonged to the class which went first to the aurists, and were told that there was nothing the matter with the ear, and then to the laryngologists, who told them there was nothing the matter with the throat or nose, and he believed that they were largely reflex in character.

Dr. JARVIS, of New York, referred to cases in which hypertrophy of the posterior nasal mucous membrane is accompanied by deafness, and also to the influence of deviated septum in the production of aural disturbance, believing that the aural complication was due not so much to the deviation of the septum and disturbance of pneumatic conditions of the nasal and aural chambers as to the fact that a certain amount of inflammatory disease was usually present in connection with this change in the organic structure of the nose.

Dr. ROBINSON believed that certain cases could be best explained in the manner referred to by Dr. Mackenzie. Within the past six months he had seen several cases which sustained the conclusion which he had previously reached that obstruction of the nasal passages and deviation of the nasal septum has not so much to do with the aural difficulty as we had, perhaps, heretofore been led to believe.

Dr. D. BRYSON DELAVAN then read a paper entitled
TWO POINTS IN THE ANATOMY OF THE LACUNÆ TONSILLARUM.

The special points to which the author of the paper directed attention were, first, the existence of large single cavities in the interior of each one of the tonsils, which includes several follicular folds and procures their common discharge at the periphery. By this arrangement the actual superficial extent of the tonsil is increased. The second point was the unusual destructibility of the attenuated mucous membrane in the depth of these large lacunæ, a point worthy of attention because it constitutes a factor in the pathology and treatment of the diseased condition of the gland.

The Association then adjourned to meet at 3 P.M.

THIRD DAY—AFTERNOON SESSION.

The Association was called to order at 3 P.M. by the President.

Dr. G. W. MAJOR, of Montreal, read a paper on
THE VALUE OF POST-LARYNGEAL PAPILLOMATA AS A MEANS OF DIAGNOSIS IN TUBERCULAR DISEASE.

Of these papillomata he recognized two varieties: 1, the velvety; 2, the filamentous, or feathery; probably

two degrees of the same disease. The histories of several cases were given, in which by the existence of these growths he had diagnosticated tubercular disease.

DR. M. J. ASCH, of New York, said he had frequently observed this peculiar appearance in the larynx in cases of tuberculosis, but it did not seem to him that they should be regarded as absolutely diagnostic of that disease, because he had seen the same velvety appearance in other cases as well. For example, they were frequently associated with asthma.

DR. MAJOR said he quite agreed with Dr. Asch, that where the velvety appearance existed there was not necessarily actual pulmonary complication, but he had always found tubercular tendency and tuberculosis in the family. This was the more important condition to recognize because; so far as he had observed, after the filamentous growths had appeared recovery had not taken place.

DR. E. C. MORGAN, of Washington, then read a paper on

PHARYNGEAL TUMORS.

with the report of a case of enormous tumor removed from the glosso-epiglottic sinus, with remarks. The tumor was two and one-fourth inches in its lesser, two and three-fourths inches in its great circumference, and had a pedicle one-fourth of an inch long, which could be readily grasped between the tips of the middle and index fingers, and *with the fingers* he twisted the tumor from its attachment. The common opinion that purely pharyngeal tumors are rare, he thought was erroneous, because he had found sixty-one reported cases, extending over a period of seventy-one years. He included in this class only those tumors which originated within the pharynx or extended into the inferior pharynx. Of the sixty-one cases fourteen were sarcomata and ten fibromata. The interest in his case centred in the rarity of pedunculated sarcomata in this region, the size of the tumor and the method of removal.

The paper was discussed by Drs. De Blois, of Boston; Ingals, of Chicago; Delavan, Lincoln, Asch, and Bosworth, of New York.

DR. M. J. ASCH, of New York, then reported

A CASE OF SUDDEN DEATH OCCURRING AFTER TRACHEOTOMY.

There was nothing peculiar in the operation, and two days subsequently the patient was progressing favorably. Soon after visiting the patient with his assistants, and finding him doing well, he was summoned to hasten back, and on his return found that the man had fainted. From this he rallied, but soon after went into collapse and died within a few minutes.

At the autopsy nothing was found to account for the sudden death.

Dr. Asch believed that in the majority of cases in which there is obstruction in the larynx, tracheotomy is an exceedingly difficult operation; and that when it is performed for obstruction, whether acute or chronic, however easy its performance might be, tracheotomy should not be viewed in any light except that of a serious surgical procedure.

DR. ANDREW H. SMITH, of New York, read the next paper, on

ADHESION OF THE VELUM TO THE WALLS OF THE PHARYNX.

This condition is one of the results of ulceration, almost invariably of syphilitic origin, and belonging to the tertiary stage. Inflammation of the middle ear almost always occurs as a complication. In cases of complete adhesion the sense of smell is always absent and the sense of taste is lost or greatly impaired. The treatment is by dilatation with bougies, and this method failing, by cutting operations. In connection with the latter, Dr. Smith spoke of the use of monochloro-acetic acid to prevent adhesion of the cut surfaces, the peculiar action

being that healing goes on perfectly under the eschar formed by this agent.

The paper was discussed by Drs. DeBlois, of Boston, and Ingals, of Chicago.

The Association then elected as officers for the ensuing year: *President*—Dr. Frank H. Bosworth, of New York; *First Vice-President*—Dr. S. W. Langmaid, of Boston; *Second Vice-President*—Dr. S. Johnston, of Baltimore; *Member of the Council*—Dr. Beverley Robinson, of New York; *Librarian*, Dr. T. R. French, of Brooklyn.

The two retiring Vice-Presidents, Dr. C. Seiler, of Philadelphia, and Dr. E. F. Ingals, of Chicago, as a committee, conducted the President-elect to the platform, and Dr. Lefferts in a few well-chosen words retired from the office, the duties of which he has so satisfactorily discharged. The President made a few appropriate remarks, and then declared the Association adjourned, to meet in New York on the third Monday in May, 1884.

CONNECTICUT MEDICAL SOCIETY.

Ninety-second Annual Convention, held at Hartford, Conn., May 23 and 24, 1883.

(Continued from p. 575.)

SECOND DAY—THURSDAY, MAY 24TH.

The Society was called to order at nine o'clock by the President.

REPORT OF SECRETARY.

DR. CHAMBERLAIN, the Secretary, presented the report of the year, stating that the prosperity of the Society had been uninterrupted; never had it included so nearly all of the regular practitioners of the State, nor had its financial condition been better. The death-rate had been unusually large, the Society losing fourteen members and one honorary member, Dr. Wm. Pierson, of Orange, N. J. Of these, many were from the oldest and most active members. Almost all left an unspotted name, and some a reputation extending beyond their own State and land. Dr. Geo. B. Hawley, in the Hartford Hospital, left an enduring monument of faithful endeavor, and has been an unwearied worker in humanitarian labors. Dr. E. P. Bennett's fame as a surgeon was not limited by the borders of his own State.

In retiring from the office held by their favor for the past eight years, the Secretary desired to express his thanks for the cordial support received from the Society, which made it possible for him to retire from service while the Society was in such a flourishing condition. During eight years, in spite of a loss by death of eighty-six members, the net gain in numbers had been a little over a hundred. The Society now numbered four hundred and sixty, while the amount in the treasury was more than a working balance, and would enable the Society to allow some compensation to the Secretary and soon to reprint the earlier Transactions.

DR. WHITE moved that the sincere thanks of the Society are hereby tendered to Dr. Chamberlain for his long, faithful, and arduous services as Secretary for the past eight years.

DR. WILE referred to the appreciation of the work of the Secretary, the prompt appearance of the Transactions, and moved that a committee be appointed to have an appropriate series of resolutions engrossed and presented to the Secretary, as an expression of our appreciation for his services. The resolution was passed unanimously, and the President appointed Drs. W. C. Wile, M. C. Hazen, and Geo. S. Porter on this committee.

The PRESIDENT then presented his

ANNUAL ADDRESS

on the country doctor, which was in practical form, and was a witty résumé of the trials, labors, and rewards of the country doctor, and elicited repeated applause by the faithful pictures presented.

On motion of DR. PORTER, the thanks of the Society were voted the President for his address. Delegates were presented from Rhode Island and Massachusetts, and Drs. M. Henry and G. Sawyer, of New York, were invited to be present as guests of the Society.

DR. WAINWRIGHT presented his report on matters of general interest, and deferred the presentation of the cases until after the reading of essays.

PROFESSOR M. WHITE, of New Haven, then exhibited and described

AN IMPROVEMENT IN MICROSCOPIC MEASUREMENT

of his invention, with a brief essay on the subject, in which the merits and defects of different instruments were described. His invention was a method of delicate measurement, by the introduction of a micrometer in the microspectroscope. He placed above the instrument a telescope of low magnifying power, the eye-piece having a Jackson micrometer and the field-piece of equal power.

DR. WILLIAM C. WILE related

A CASE OF EXTIRPATION OF THE UTERUS,

unsuccessful, but performed under unfavorable circumstances, but demanded by the condition of the patient, who lived five days. The specimen was exhibited and the operation described and discussed.

He also related a case treated by the most eminent specialists of New York for

MYELITIS OF THE CORD.

The man, aged forty-five, had had morbus coxarius, with recovery. He presented all the symptoms of myelitis paraplegia and the like after he returned from New York. Dr. Wile discovered an

ABSCESS IN THE ILIAC REGION,

which, the patient insisted, should open itself. After discharging an enormous quantity of pus he suffered great pain. The doctor opened the hip and found that the head of the femur was absorbed two inches, diseased, and that there was a burrowing abscess reaching to the scapula. Exsection resulted in complete cure.

He also related a recent case of

EXCISION OF THE TIBIA;

disease of bone resulted from an injury three years previous, resulting in osteitis.

DR. BURKE related a

COMPLETELY SUCCESSFUL CASE OF EXTIRPATION OF THE UTERUS,

up to the present time.

DR. GEORGE S. PORTER presented a specimen of

EXTRA-UTERINE PREGNANCY.

The head of the child extended out of fimbriated extremity, which increased the length of the neck to a very considerable degree. The woman died of asthenia.

DR. WHITE related a case where twenty-two calculi were found in the bladder, in a cul-de-sac, behind a greatly enlarged prostate. Outside the bladder, in the cellular tissue, were fifteen concretions the size of a pea. One examined was found to be composed of phosphate and carbonate of lime.

DR. BROWNSON then moved that

DR. M. HENRY, of New York, by invitation, present his views on the operation for varicocele.

DR. CHAMBERLAIN related two cases where Henry's method had been used successfully and very satisfactorily by Dr. Jarvis, of Hartford.

DR. GEORGE L. PARMELE presented an essay on

POINTS IN ORAL SURGERY,

of interest to physicians. He referred particularly to

THE RELATIONS OF DISEASED AND OF IMPERFECT TEETH TO DIGESTIVE TROUBLES,

constipation, diarrhoea, and dyspepsia, and of the nervous connections and reflex influences which induce disease, directly and indirectly. Such patients were often treated years for troubles that a dentist relieved at once. Diseased teeth induce many other troubles than neuralgia, although the latter is the only one generally recognized.

The thanks of the convention were voted to Dr. Parmele for his essay.

DR. G. W. RUSSELL spoke of the unsatisfactory condition of the essay records of the Society, and moved that the Secretary be authorized to condense and print the

TRANSACTIONS OF THE FIRST TWENTY-FIVE YEARS OF THE SOCIETY,

and offered to be responsible for one hundred dollars for that purpose. The resolution was passed.

DR. W. H. HOLMES read an essay on

ASPIRATION OF THE CHEST IN PLEURISY.

The pathology of the various forms of the disease was described, and the danger of allowing effusions to remain for a long time was referred to. Under such circumstances absorption takes place, and the advantages and results of aspiration are prevented.

DR. F. N. BRAMAN presented an essay on

COMPLICATIONS OF LABOR,

illustrating many unusual difficulties and the methods used to counteract them. Hour-glass contractions, and the fillet and pressure inversion were discussed.

The paper was discussed by PROFESSOR F. E. BECKWITH. He did not think the length of the symptoms was the cause of death, but that peritonitis ensued only when the maternal tissues were injured. Winding the fillet around the body he regarded as a new suggestion by Dr. Braman, but thought the fillet around the shoulders would accomplish the same purpose.

DR. BRAMAN said that the use of the fillet around the body was to obtain complete control of the child in rotation.

DR. AMBROSE BEARDSLEY then read a paper on

THE TREATMENT OF MALARIA.

The method advocated was a brisk purgative—aloes, blue mass, and capsicum—an alterative and an aromatic tonic, with some alkali. This treatment had been very satisfactory in his hands, even when quinine in large doses had failed.

The following resolution, offered by DR. G. R. PORTER, was passed: That the Secretary be requested to communicate with the County Societies with reference to the publication of the Transactions of the Society to 1830, to see if they would bear their share of the expense for the same.

On motion of DR. BACON, the remaining papers were referred to the Publication Committee and read by title.

The report of the committee to examine students at Yale Medical School was read and ordered published.

The Society then adjourned for the annual dinner at the United States Hotel. The next session will be held at New Haven. The attendance was large, all parts of the State being represented.

THE MEDICAL DEPARTMENT OF THE SYRIAN PROTESTANT COLLEGE in Beirut, Syria, says the *Evangelist*, is in need of a Professor of Anatomy, Physiology, and Histology. Instruction is to be given in the English language. The applicant should be a graduate of a medical college, of high standing, and a man of earnest missionary spirit, who would enter upon the work for the sake of promoting the spiritual welfare of his pupils, and aiding in the advancement of the Church of Christ in Syria. The Rev. Dr. H. H. Jessup, now of 23 Centre Street, New York, may be addressed for particulars.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DEBATE ON DIABETES AT THE PATHOLOGICAL SOCIETY—THE PROBABLE REPEAL OF THE CONTAGIOUS DISEASES ACTS—SCHOLARSHIPS IN MEDICINE AND THE SOCIETY OF THE APOTHECARIES.

LONDON, May 5, 1883.

THE debate on diabetes at the Pathological Society was concluded on Monday last. It seems to have led to no definite conclusion as to the pathology of the disease, but some interesting facts and opinions were brought forward.

Dr. Seymour Taylor described some changes he had found in cases of diabetes. They presented the usual vascular engorgement, but in addition, the epithelium presented a remarkable appearance. The cells were large, brownish, their nuclei did not take the logwood stain, and the cells had a tendency to come away *en masse*, so in many parts the kidney presented a mere skeleton of its former condition.

Dr. F. Taylor considered that we had no evidence of any definite lesions. He referred to the large number of deaths from "diabetic coma." He also mentioned the frequency of severe abdominal pain as an early symptom—an important fact to bear in mind, as it might lead to error in the diagnosis.

Dr. Dickenson defended the doctrine of the association of diabetes with cerebral lesions, and described lesions he had observed. He had found extravasations of blood in seven out of fifteen brains from patients dying with diabetes.

Dr. Pavy maintained that the blood was at fault. The glucose in diabetic urine was, he considered, produced by a glucose-forming ferment found in the liver. Venous blood was antagonistic to this ferment, but arterial blood in the liver produced it. Diabetes depended on a dilatation of the arteries of the chylipoietic viscera (by vasomotor paralysis) which allowed the blood to pass to the liver too little deoxygenated. Dr. Pavy described several experiments he had made.

Since the vote on Mr. Stansfeld's motion in the House of Commons, orders have been issued to the police in the districts where the Acts are in force that they are to cease performing their duties in relation to the Acts. A discussion on the subject in the House of Commons is expected in a few days, and a Bill to repeal the Acts will probably be brought in.

The Society of Apothecaries has instituted two scholarships in medicine, of the annual value of £100, and each tenable for two years. They are open to all students of between four and five years' standing, who have obtained a qualification. They are also about to add a practical examination in chemistry to the first examination for the L.S.A. These changes are no doubt in view of coming legislation. The Apothecaries Society no doubt wish to make out a case for their survival, and intend to protest against their representative being dropped from the new medical council. The general opinion seems to be that, although the Society has done good work in the past, it is not needed now. In the case of the Irish Apothecaries Society, whose representative has also been dropped, it was only by an error that a clause empowering it to grant medical diplomas was ever inserted in the Medical Act of 1858.

CONCERNING THE DEGREE OF M.B.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the number for May 5th, which reached me today, I notice some extracts from a letter by Dr. Parke commenting upon a letter from my pen. Dr. Parke is incorrect in stating that gentlemen who are only M.B.

are addressed as Mr. Although not in strict law entitled to term themselves Dr., as a matter of courtesy the title is always given them, and it may almost be said to have grown into a right. Many London physicians attached to important hospitals are only M.B., and every one calls them Dr. As an example, I may mention Dr. Lionel Beale (M.B., London), a name doubtless well-known to your readers. Many of our universities do not require any examination to pass from M.B. to M.D., but merely the writing of a thesis, a short term of residence, or in some cases merely the payment of a fee. The London University holds a special examination for its M.D. in two subjects: 1, Medicine; 2, Logic and Psychology, and is the only university which denies to its Bachelors of Medicine the title of Doctor. Nevertheless they assume it and are addressed as such by others. I am aware that some M.B.'s call themselves Mr., but then they are surgeons. Some surgeons are M.D. and yet call themselves Mr., e.g. the late Mr. Soelberg Wells.

In speaking of physicians, Dr. Parke seems to forget that the word physician is used in a different sense in England to what it is in America. My remarks applied to *pure physicians*, i.e., practitioners who prescribe and only practise pure medicine. I beg to repeat that in London, at any rate, nearly all physicians are graduates of some university. The L.R.C.P. is a physician's diploma, but merely a license to practise, which was instituted for general practitioners. Its possession does not make its holder a physician and the majority of those who hold it are in general practice and supply drugs. It is an entirely different thing to the M.R.C.P. which can only be held by those who practise as pure physicians.

I am sir, yours faithfully,

YOUR SPECIAL CORRESPONDENT.

LONDON, May 15, 1883.

PELVIC HÆMATOCELE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the excellent *résumé* you have given in the last number of THE RECORD of the recent transactions of the West Virginia Medical Society occurs a report by Dr. R. W. Hall of a surgical interference in a case of pelvic hæmatocele, with consequent general peritonitis, and final recovery of the patient. In this case the temperature and pulse had been normal up to the moment of the advent of the consulting physician, who found a round, hard tumor in the hypogastric region, exceedingly tender to the touch, the contents of which were aspirated two days afterward. It would seem there was no immediate necessity for such an operation, if at all, as the tenderness was due to local peritoneal inflammation usual in such cases, and since the aspirator could not remove the coagulum, the chief source of septic absorption, nothing was gained by it.

The surgery of twenty-five years ago conscientiously advocated the speedy evacuation of such tumors, but experience has limited its interference to an exceedingly small number of cases, and only where long chronic disorder has not resulted in absorption, and where septic influences begin to appear.

Even Nélaton, who once popularized surgical interference, by experience was taught "to proscribe it in an almost absolute manner." Priestley shows that the mortality in surgical operations for the relief of hæmatocele is one in four, while by the expectant method it is but one in nine. Nonant lost but one case in fifteen, and Hewett none out of eleven treated by the expectant plan.

Fritsch writes: "Hæmatoceles treated by operative opening have run a particularly dangerous and malignant course. Rapid sloughing, sepsis, and death, or long-continued, debilitating suppuration and pyæmia have ensued."

In a very severe case of hæmatocele reported by me, and published in the "Transactions of the Medical Society of New Jersey," 1875, the tumor was of extraordinary size,

extending nearly to the umbilicus. Septicæmia was feared, peritonitis existed, and yet after all the alarm, the contents were suddenly evacuated per rectum in copious discharges, while all the symptoms disappeared like magic.

One other case occurred in my practice last year which further illustrates the wisdom of the expectant plan. Mrs. A. T. A—, of Holmdel, on June 9th, had the hardihood to submit to uterine examination at the hands of a homeopathic non-expert in Brooklyn, who finding no special lesion proceeded to make one by injecting some corroding fluid into the uterus. Immediately Mrs. A— was seized with sharp pains about the organ, and crying out, was hastily assisted from the table, when she experienced a sensation as though the uterus was about to escape bodily from the pelvis. She was carried in a fainting condition to the house of a friend, where she remained in great suffering for two days. On the 13th I was called to see her, at her house in the country, where she had been removed the day before, on a mattress, by train and private carriage. Her countenance indicated extreme prostration. There was pelvic pain with tympanites, coldness of the extremities, nausea, and suppression of the urine. The vagina was cool, but the speculum showed recent erosion of the os, as did the upper part of the vagina, and the vulva was inflamed from an acrid discharge, the result of the maltreatment of the 9th. Her underclothing on the evening of that day bore unmistakable stains of the caustic fluid. In the hypogastric region I discovered a tumor of considerable size, which I was assured had never been noticed until the Friday night previous.

Not to impose upon you the long description of subsequent symptoms and treatment, I hasten to say that, absorption not having occurred by August 20th, I felt called upon to evacuate the contents of the tumor, for fear of abscess and septic poisoning, the patient continuing in a low condition. Great difficulty occurred in selecting a proper point for incision, much cellular tissue remaining between the vagina and tumor. The operation was deferred for a few days.

August 20th a discharge of about sixteen ounces of fetid matter escaped from the vagina. The tumor became greatly reduced and gradually disappeared. The patient shortly afterward was able to drive out, and in a few weeks regained her usual health.

Very truly yours,

GEO. T. WELCH, M.D.

KEYPORT, N. J., May 21, 1883.

BARTHOLOW VERSUS WALLIAN, AND ATROPIA VERSUS MORPHIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: You have had in your valuable journal some very excellent pieces on "Medical Latin." Now it does seem to be time for some one to say a word on Medical Arithmetic. All your readers are, I suppose—I know they all ought to be—interested in the antagonism of atropia *vs.* morphia. This is a very important subject as well as a very interesting one. Opium-poisoning is a very common cause of death, and in our civilization seems to be getting more so. We are all deeply interested in the antidotal powers of atropia, and in trying to fix some approximate ratio of the two poisons. With these feelings I turned with avidity to Dr. Wallian's article in THE RECORD of May 5th, but was greatly disappointed that so excellent an article was so marred by mistakes in calculation. What dose did he give? He says he made a solution of gr. j. to 3 ij., and gave ℥xij., or $\frac{1}{20}$ gr. Now it is plain that ℥xij. is $\frac{1}{10}$, not $\frac{1}{20}$ gr. So, again, when he finds it necessary to "double his dose," he seems to quadruple a dose already twice as large as he thought it was. He doubled the strength of his solution, and then doubled the quantity administered, making $\frac{4}{10}$ instead of $\frac{1}{10}$. (See MEDICAL RECORD, May 5, 1883, p. 487.) This seems to be rather "mixed mathematics." His

worst cases seem to have gotten $\frac{6}{10}$ gr. atropia to antidote a dose of morphia estimated at not more, certainly, than $4\frac{1}{2}$ gr., or about 1 of atropia to $8\frac{1}{2}$ morphia. This, so far from being less than Bartholow recommends, is two and a half times as much, and is the largest relative dose I have seen suggested. Bartholow says 1 to 20. (See his admirable Cartwright Lecture, in THE MEDICAL RECORD of November 27, 1880, p. 593.) Surely this subject is of enough importance to make a gentleman who writes a piece otherwise so valuable a little more careful with his fractions. Very respectfully,

HORACE P. LACY, M.D.

SMITHVILLE, CHARLOTTE COUNTY, VA., May 22, 1883.

SUTURE CLAMP COAPTATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The note by Dr. Cipperly on "Suture Clamp Coaptation" in to-day's RECORD suggests the following: A case of instruments, made by Tiemann & Co., selected by Dr. Keyes, and given to me Christmas, 1879, contained a number of spring-clamps similar to those described by Dr. Cipperly, and a detached handle by which they could be easily and quickly applied.

Further, I have read, but do not remember when and where, that in Central or South America the natives use the nippers of large beetles for the same purpose. The sides of the wound are held together, the beetle is made to seize it transversely, and then the head of the insect is cut off. The nippers retain their hold until removed.

While Dr. Cipperly must, I think, abandon the claim to priority, he may well find satisfaction in the thought that he has recognized a positive surgical need, and has independently devised an efficient method of meeting it.

Very truly,

L. A. S.

May 26, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 19, 1883, to May 26, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon. Medical Director, Department of the South; granted leave of absence for one month, on surgeon's certificate of disability. S. O. 50, par. 3, Department of the South, May 21, 1883.

BURTON, HENRY G., Captain and Assistant Surgeon. Now awaiting orders at St. Paul, Minn., assigned to temporary duty at Fort A. Lincoln, D. T. S. O. 83, par. 1, Department of Dakota, May 15, 1883.

PORTER, J. Y., Captain and Assistant Surgeon. Assigned to duty at Fort Davis, Texas. S. O. 49, Department of Texas, May 14, 1883.

SPENCER, WM. G., Captain and Assistant Surgeon. Assigned to duty at Fort Hamilton, N. Y. H. S. O. 83, par. 2, Department of the East, May 14, 1883.

GORGAS, W. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 51, par. 5, Department of Texas, May 17, 1883.

HOPKINS, WM. E., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Whipple Barracks, Arizona Territory. S. O. 44, par. 2, Department of Arizona, May 14, 1883.

MACAULEY, CARTER N. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Bennett, Dakota Territory. S. O. 83, par. 2, Department of Dakota, May 15, 1883.

MCCREERY, GEORGE, First Lieutenant and Assistant Surgeon. To report for duty to the commanding officer of troops in the field near San Bernardino Springs, Arizona Territory. S. O. 44, par. 1, Department of Arizona, May 14, 1883.

RAYMOND, H. I., First Lieutenant and Assistant Surgeon. Relieved from duty with troops in the field near San Bernardino Springs, Arizona Territory, and ordered to return to his proper station, Fort Apache, Arizona Territory. S. O. 44, par. 1, Department of Arizona, May 14, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Upon being relieved as Post Surgeon at Fort Townsend, Washington Territory, assigned to duty at Headquarters, Department of the Columbia. S. O. 64, par. 2, Department of the Columbia, May 10, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. To report to First Lieutenant Frederick Schwatka, Third Cavalry, for duty in connection with explorations in the Department of the Columbia. S. O. 64, par. 3, Department of the Columbia, May 10, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending May 29, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 22, 1883.....	4	4	128	8	170	41	0	0
May 29, 1883....	0	5	132	4	163	39	0	0
Deaths.								
May 22, 1883.....	0	1	32	7	27	14	0	0
May 29, 1883.....	2	4	30	6	25	19	0	0

The total mortality for the week ending May 19, 1883, was 728, of which 70 were from pneumonia.

DR. CAROLINE S. PEASE, a member of the Rensselaer County Medical Society, has been appointed a member of the staff of the Troy Hospital, Troy, N. Y., taking the department of obstetrics and diseases of women and children.

FOLLOWING GREAT NAMES INTO DOUBTFUL THINGS.—The *Christian Advocate* of the 17th instant, in an editorial under the above caption, after inveighing against the misuse of great names in boosting up doubtful enterprises in stocks, manufactured goods, and speculations in general, puts the case thus : "Take no medicine on the testimony of the Rev. Father Open Mouth," who took two bottles and found himself a new man, "or the member of Congress who was extricated from the very jaws of death." He that is looking for a leader will surely find him. He who is willing to be deceived will not wait long. To follow saints when you doubt whether it be right, is little better than to follow sinners when you do not know that they are wrong. The wrecks of those who have blindly followed great names into enterprises doubtful as to their honesty, doubtful as to their financial results, doubtful as to their effect in reputation, are probably as numerous as of those who have been swindled by scoundrels, and fleeced by professional confidence men.

THE NATURE OF THE BITE OF THE LEECH has been examined by M. Carlet. He detached the animal from the shaved shin of a rabbit at different stages. Suppose a scarifier, with three toothed and equidistant blades withdrawing from one another while they press into the skin, and operating several times successively in the same place ; this gives a pretty exact idea of the mechanism.

HYGIENIC VALUE OF MIRTH.—But, aside from all this, mirth has an hygienic value that can hardly over-rated while our social life remains what the slavery of vices and dogmas has made it. Joy has been called the sunshine of the heart, yet the same sun that calls forth the flowers of a plant is also needed to expand its leaves and ripen its fruits ; and without the stimulus of exhilarating pastimes perfect bodily health is as impossible as moral and mental vigor. And, as sure as a succession of uniform crops will exhaust the best soil, the daily repetition of a monotonous occupation will wear out the best man. Body and mind require an occasional change of employment, or else a liberal supply of fertilizing recreations, and this requirement is a factor whose omission often foils the arithmetic of our political economists. To the creatures of the wilderness affliction comes generally in the form of impending danger—famine or persistent persecution ; and under such circumstances the modifications of the vital process seem to operate against its long continuance ; well-wishing nature sees her purpose defeated, and the vital energy flags, the sap of life runs to seed. On the same principle an existence of joyless drudgery seems to drain the springs of health, even at an age when they can draw upon the largest inner resources ; hope, too, often baffled, at last withdraws her aid ; the tongue may be attuned to canting hymns of consolation, but the heart cannot be deceived, and with its sinking pulse the strength of life ebbs away. Nine-tenths of our city children are literally starving for lack of recreation ; not the means of life, but its object, civilization has defrauded them of ; they feel a want which bread can only aggravate, for only hunger helps them to forget the misery of ennui. Their pallor is the sallow hue of a cellar-plant ; they would be healthier if they were happier. I would undertake to cure a sickly child with fun and rye-bread sooner than with tidbits and tedium.—*Popular Science Monthly*.

THE FREE CLINIC MANIA.—A writer in the *New York Medical Journal* says that in Buffalo, N. Y., there are nine free dispensaries either under way or starting. Further, he says : "Under the pretence of charity the physicians thus seek to advertise their names to the public, and jealousy has caused the dispensary mania to become epidemic, no one wishing to be outdone by another in the scramble for a vast acquaintance."

AN OLD PRACTICE ADHERED TO.—At the recent meeting of the Louisiana State Medical Society the following resolution, which needs no comment at our hands, was adopted. There seems to be a new and original school of virus attenuators in that State :

"Whereas, This society is informed that it is the practice of one or more practitioners of medicine within the limits of this State to inoculate human subjects with lymph or pus taken from small-pox patients, previously mixing it with milk or cream ; therefore be it

"Resolved, That the practice of inoculating small-pox by mixing any product whatever from the body of a small-pox patient with milk, cream, butter, or any fluid obtained from the cow, is productive of no modification beyond that of direct inoculation from one person to another. It does not deprive the person thus inoculated of that power to communicate the disease through the atmosphere, which naturally small-pox possesses, and is therefore dangerous to public health."

LEFT-SIDE PAIN.—At a recent meeting of the Academy of Medicine, in Ireland, Dr. Wallace Beatty read a paper on this subject (*Medical Press and Circular*). He considers the pain, in many instances, due to fecal accumulation, and it can be removed by getting rid of the accumulation. The pain is felt over the lower few ribs on the left side, associated with great pain on upward pressure of these ribs, but no pain on downward pressure. He ascribes the pain to the dragging of a loaded colon on the pleuro-colic ligament, setting up extreme irritability of the nerves.

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Original Articles.

FILTH DISEASES IN RURAL DISTRICTS.

By ALFRED L. CARROLL, M.D.,

NEW BRIGHTON, N. Y.

AN editorial comment in THE MEDICAL RECORD of April 14th, upon a paper by Dr. Hamilton, of Philadelphia, may serve as an apology for some remarks on a subject which ordinarily seems to possess scarcely more interest for practising physicians than for "practical" laymen; both being wont to lay the finger of incredulity against the nose of scorn when they turn their deafest ears to the voice of the sanitarian. In the present very unsettled condition of professional opinion as to the diagnosis of typhoid fever—passably good authorities in India, on Western mountain peaks, and even nearer home, differing widely thereanent—I shall not attempt here to discuss its etiology, or to single out for reprobation any particular one of the several kinds of bacteria which have been respectively described as its exclusive cause. Suffice it merely to hint that there may be a possible source of error in statistical arguments touching its relative frequency in town or country. But, waiving this, I am not aware that "professed sanitarians" have ascribed to "sewer-gas" alone such pre-eminence over other vehicles of filth or fungi as the article in question imputes. On the contrary, I believe that the majority of cases of enteric fever which have been traced accurately to their origin have been traced to other and more tangible contaminations of food or water. Nevertheless there is strong evidence, which has stood the test of much cross examination, that the so-called "filth diseases" deserve their name in this respect: that, whatever be the specific *tertium quid* which determines their occurrence in the individual, filth-poisoning (*i.e.*, the imbibition, through some channel, of the products of organic decomposition) is an essential factor in their genesis.

The first source of fallacy in the arguments referred to lies in the misinterpretation of the term "sewer-gas," connecting it with sewers in particular instead of with sewage in general. Thus, I find it stated that typhoid is "more prevalent in the suburbs and surrounding country than in the cities subjected to the contamination of sewer-gas"; that diphtheria and scarlatina occur most fatally "in the country, where sewer-gas is wanting"; and that in Philadelphia the extension of the sewerage system into the rural sections has diminished the sickness from fever. Now, the facts on which most sanitarians lay great stress are, that unsewered rural districts are more exposed to danger from fermenting filth than cities; that the ineffable atrocities of leaching cesspools and privy-vaults (those perversions of barbarism to which the American rustic clings as to his most precious birthright) do infinitely more to poison air, and soil, and water than all the blunders of city engineers and plumbers combined; and that, granting the worst that can be said of some city sewers which shall be nameless, even a bad sewer is better than none at all—which is merely equivalent to saying that it is better to carry away as much of one's sewage as possible than to keep the whole of it on the premises to decompose under one's nose. And the peril from this fount and origin of evil is augmented a hundred-fold where the mania for "modern improvements" has invaded rural households. Long before sewers are

thought of—even before the importation of the agonizing pianoforte—the suburban housewife insists on having a bath-room, including that sum and substance of vileness, a pan water-closet, on the bedchamber floor, and a kitchen sink and "stationary tubs" down-stairs; and these fixtures, commonly constructed in the cheapest and nastiest manner, are connected with an unventilated cesspool, serving as so many inlets to insure the constant pollution of the house atmosphere with the gases of decomposition. Then, in an uncemented basement a "portable furnace" is arranged to transport to the upper rooms, not only the cellar-air, but the freely indrawn "ground atmosphere," laden with noxious vapors from the soil-soakage of cesspools or privies. It is not saying too much to affirm that for every one channel of filth-poisoning in a paved and sewered city there are at least three in the average village settlement, and if the evidence of insanitary conditions be found in "not more than one house out of five," it is because, unfortunately, very few physicians in this country have cared to learn how to look for it—familiarity with the doses of drugs and the results of disease being regarded in most of our medical schools as vastly more important than *rerum cognoscere causas*.

I am not sufficiently informed of the morbidity statistics of African cities to appreciate the full weight of reasonings based upon their alleged comparative salubrity; the occasional scattered returns which I have seen from a few of them show death-rates ranging from 30 to over 40 per 1,000. But I am free to admit, on general principles, that it is less dangerous to let organic matter decompose fully exposed to atmospheric oxygen than to store it in unventilated receptacles to form sulphuretted and carburetted compounds, or to saturate an undrained soil with it. It is to be remembered that few, if any, sewage substances are suspected of pathogenic power while in their fresh solid or liquid state; the products of their subsequent chemical changes are what we have to fear; and if these products be liberated *al fresco* as fast as they are formed, they are diluted to homœopathic insignificance by the surrounding air. Of the two evils, therefore, the Africo-Hibernian practice of throwing house-refuse promiscuously upon the surface is preferable to the American village method of fostering and festering it in cumulative concentration.

As regards the allegation that "the young men at work in the fields were more frequently attacked (by typhoid fever) than the females, who were generally engaged in domestic duties in or about the house," it may be observed: First, that agricultural laborers do not spend all their time in the fields, but sleep in rooms from which, as a class, they carefully exclude all ventilation; second, that, for some unexplained reason, enteric fever seems to have a selective affinity for robust young males. It is an affair of common observation that, under apparently precisely similar conditions, fragile women may resist the infection to which strong men succumb.

Facts, however, are more forcible than words, and I therefore subjoin a few examples of coincidences which have very much the air of causes and consequences. I have excluded instances where water-pollution could be supposed to bear a part, and also those where careful inquiry did not seem to eliminate the possibility of immediate or mediate importation of contagium from a pre-existing case. And let me, at the outset, deprecate the Liebermeisterian criticism that if an adynamic fever

with peculiar temperature-curve, abdominal symptoms, etc., be not directly traceable to a preceding patient, it is not true typhoid, but only something otherwise indistinguishable from it; or that, without evidence of contagion, a pseudo-membranous angina with grave constitutional depression is not genuine diphtheria, though a remarkably good imitation of the real article. Grant only that there are diseases—call them what you will—which closely resemble the regulation nosological types, that people sometimes die of them, and that they are intimately associated with the eating, drinking, or breathing of filth-products, and I shall, for the present, leave the question of diagnosis to be begged by whomsoever cares for it.

I. *Typhoid*.—Large country house with numerous "conveniences." Two "pan closets" on second floor; one in a small windowless hall-apartment, the other in a bath-room adjoining a bed-chamber; basin and bath-wastes led into trap of water-closet; leaden soil-pipe not continued above the line of fixtures, communicating directly with cesspool, and badly corroded at bends of closet-traps. Servants' pan-closet in basement with foul and leaky "retainer"; kitchen and laundry wastes on same horizontal branch, constantly liable to siphonage. Frequent illnesses of minor grade prevailed in this household until the whole plumbing system was reconstructed on a proper plan, since when the inmates have enjoyed excellent health.

II. *Typhoid*.—Small house in village street. Under the cellar runs the ill-covered channel of a former brook, which receives the sewage of several adjoining tenements. The house-refuse is discharged into this foul trench through an open untrapped conduit in the basement.

III. *Typhoid*.—Cottage of better class. No plumbing fixtures except kitchen sink, which discharges untrapped into an obstructed and very foul drain; leaching privy-pit on higher ground than the basement, which, with the foundation walls, is uncemented, affording ingress to ground-atmosphere.

IV. *Diphtheria*.—Elegant mansion, regarded by owner and "practical plumber" as a model of sanitary construction. Soil-pipe extended above roof, but without ventilation at its foot. Materials and workmanship good. On a lateral branch was a down-stairs water-closet into the trap of which the kitchen waste discharged, and into the dip of the running-trap of this horizontal soil-pipe, in the basement, and within a few feet of the furnace, was inserted a servants' hopper-closet without any flushing fixture; excremental matter being, of course, thus retained in the trap a great part of the time, and its decomposition favored by the admixture of hot water from the kitchen. When the water from the boiler was set running, the steam arose freely from this hopper.

V. *Diphtheria*.—Handsome country-seat. Plumbing work recently overhauled and declared perfect by the plumber. Three foul pan-closets, and numerous other "conveniences," all leading to unventilated cesspool. In the bedroom occupied by the patient the "safe-waste" from a stationary basin was carried into the soil-pipe, constituting a direct inlet from the cesspool.

VI. *Diphtheria*.—Presumably "first class" residence. Kitchen and laundry wastes carried from basement into privy vault, which was filled to above the level of the pipes.

VII. *Typhoid?* (two irregular cases).—Cottage in good neighborhood. Bath and basin wastes discharging into trap of foul pan-closet with "putty-joints." Two-inch tin pipe inserted, with leaky slip-joint, into bend of water-closet trap, and carried with several angles to roof; no other ventilation of soil-pipe, which connects with leaching cess-pool. Cellar riddled with rat-burrows (indicating probable connection with some old drain), and air-box of furnace made of loosely jointed boards, so as to convey the cellar-air to upper part of house.

VIII. *Typhoid?* (continued fever). Cottage on high

ground. Offensive pan-closet on bedroom floor. Soil-pipe relieved by angular galvanized vent, but carried without other ventilation or trapping to cesspool on lower ground. Kitchen and laundry wastes untrapped and led to a row of buried barrels which were filled with a most malodorous mess, the water being allowed to soak into the soil as best it might.

IX. *Diphtheria*.—House without plumbing fixtures. Cellar loosely paved with bricks, and saturated with soakage from several privy-vaults on much higher ground and close in the rear; the fecal-smelling semi-liquid filth actually oozing up between the bricks when they were stepped upon.

X. *Diphtheria*.—Cottage alleged by the owner, and innocently believed by the tenant, to be "one of the best-plumbed houses in the county." Pan-closet in a decadent and offensive condition, with untrapped bath waste and insufficiently trapped basin waste led into its seal. Short vent from bend of closet-trap to outside of wall, with orifice closed during winter "to prevent water-pipes from freezing"; soil-pipe thus without ventilation at top or bottom. Butler's pantry-sink connected by tin pipe with earthenware drain, which was badly laid and composed of different sized pipes. Some distance beyond the junction of the soil-pipe and wastes, this drain was tapped by a "ventilating" pipe carried into a chimney flue, with an occasional down-draught. Kitchen waste opening directly into an unventilated cesspool. All lead pipes of poorest quality.

XI. *Diphtheria*.—Country farm-house. No plumbing. Uncemented cellar; living-room in wing built directly upon the earth. Overflowing privy-vault within twenty feet and on higher ground, the soakage and surface-washing from which had permeated the soil around and under the building.

XII. *Diphtheria*.—Large and handsome house. Sanitary arrangements satisfactory to plumber. Pan-closet with insufficient flush. Two-inch tin vent from bend of soil-pipe carried with various angles into cold chimney-flue. Running under the whole length of the basement was an eight-inch earthenware drain, receiving the soil-pipe and the wastes from different fixtures; its large calibre and slight grade precluded proper flushing, and it was thickly coated with refuse and chilled grease. Into its upper end was inserted the overflow from a tightly covered cistern, so that the only ventilation of the entire house-drainage system was through the rain-water leader, close to a "mansard" bedroom window.

XIII. *Typhoid?*—Two small houses of the poorer class, situated on a road at the foot of a steep declivity. No plumbing. Two privy-vaults, a pig-pen, and an indescribably filthy cow-stable just behind and above them, from which the washings were traceable into their cellars.

I could extend the list by scores of illustrations of rural house-defects: soil-pipes disjointed from their outlet drains and discharging their sewage under basement floors; cesspools "backing-up" into kitchen sinks or laundry tubs, or pouring a reflux tide through "overflow" pipes into drinking-water cisterns; ingenious devices of every sort to deprive the gases from pent-up filth of any escape save into the dwelling. And these among the "wealthier residents," whose surroundings are commonly supposed to be above suspicion. As regards the unplumbed poor, their chances of inhaling filth-polluted air or imbibing filth-contaminated water are often enhanced by inadequate cubic space and faulty construction within doors, and ignorant neglect of the very rudiments of hygiene in the environment; their cellars and wells being sunk in soil saturated with putrescent refuse. In the intermediate agricultural or mechanic class similar conditions frequently exist, their potency for evil depending chiefly upon the porous or retentive character of the soil; precautions to exclude the ground atmosphere from cellars or basements are seldom found; cesspools and privy-vaults are close at hand; and it is

a common thing for a couple of adults and two or three children to sleep in a "stuffy" unventilated room with not more than 1,000 or 1,500 cubic feet among them.

From a sanitary point of view it matters little whether the gases from decomposing sewage escape from sodden soil or from a foul sewer; their nature is alike in either case, and the aggregate dose may be even larger in the former instance. But when, and why, and how, they, or any of them, exert their most deleterious influences, are questions which it is impossible to answer in the present state of our knowledge. It is an indisputable fact that people may for a long while be exposed to them without pronounced manifestations of "filth disease,"—although such people, in my experience, are seldom thoroughly well, even if not specifically ill. But sooner or later an apparent qualitative change may take place and an acute zymosis declare itself. I have elsewhere suggested the part that may be borne in this complicated problem by a "personal factor," or temporarily altered individual susceptibility;¹ but it seems necessary also to assume an alteration in the external conditions; and such alteration is explained by many etiologists on the hypothesis of the importation or evolution of specific pathogenic micro-organisms. That certain varieties of schizomyces are associated with some of the acute infections is beyond doubt; that in a few, such "microdemes" are the conveyors,² if not the causes, of the infection seems proven; but it must be remembered that in the diseases chiefly under consideration no characteristic bacteroidal forms have been defined. In typhoid fever, Klebs describes a bacillus where Letzerich finds only micrococci; according to Wood and Formad, the micrococcus of diphtheria is just like that of the ordinary buccal mucus; indeed, nearly all of the acutest infectious diseases are attributed to these ubiquitous micrococci, indistinguishable from each other in most instances, and divided into species solely on the score of their assumed physiological effects. Admitting all that the most ardent advocates of the germ theory can claim for it, there are at least three possible ways in which filth and fungi may be connected:

1. Taking the view of Naegeli and others as regards the mutability of the bacteria, it is conceivable that the common "scavenger" microphytes may acquire pathogenic properties by successive generations of development amid the products of certain decomposing substances. In favor of this conception may be cited the seemingly gradual intensification of "filth-poisoning" in numerous instances; sore throats of a less septic type forerunning outbreaks of diphtheria; diarrhoeal derangements preceding enteric fever; and, farthermore, Koch has found both bacillus-spores and micrococci in surface-soils, the latter organisms preponderating where the earth is subjected to excremental soakage.

2. Or, accepting the specific classification of the schizomycetes, it may be supposed that some pathogenic germs obtain favorable intermediate conditions for their development and multiplication in these products of decomposition; a supposition almost necessary if the specific-germ theory be applied to enteric or choleraic discharges.

3. Finally, if it be conceded that desiccated spores may retain their specific vitality indefinitely, and be air-wafted almost unboundedly, the predisposing action of our filth emanations may be imagined to be cumulative, slowly undermining the individual powers of resistance, or rendering certain cell-groups an easier prey to the intruding organisms in the struggle for existence.

Which of these hypotheses, if either of them, will ultimately prevail, is a question only to be decided by experimental investigations which are beset by a multitude of difficulties and sources of error.

"A NOVEL MODE OF CLEANSING THE VAULT OF THE PHARYNX."

By JOHN O. ROE, M.D.,

ROCHESTER, N. Y.

IN the issue of THE MEDICAL RECORD for April 28, 1883, Dr. G. Fairfax Whitney reported a case which came under his observation in his clinic at the New York Post-Graduate Medical School, in which the patient employed the tip of his tongue for removing lumps of hardened mucus from the upper part and vault of the pharynx.

These cases must be quite rare, or this physiological peculiarity would have been mentioned in medical literature long before this.

Dr. Whiting remarks that his case is, he believes, the only one of the kind reported. As this peculiarity is a rather interesting one, I will add the report of a similar case, which came under my observation about thirteen months ago.

H. W.—, a bookkeeper, aged twenty-five, consulted me April 15, 1882, in regard to a nasal and throat trouble which had annoyed him very much during the previous year. He had had some nasal catarrh for about twelve years, but it was only during the last year of this time that it had become aggravated. It was attended by considerable mucus discharge from the anterior nares, and in the posterior nares and vault of pharynx the mucus became dried down in the form of crusts, which he was in the habit of removing with the tip of his tongue. He also had considerable irritation about the larynx, attended with cough, and a constant tendency to clear the throat by hawking. Expectoration was slight, consisting mainly of tenacious mucus.

He was seldom hoarse, and only when his nasal trouble was aggravated by any cause. His general health was poor, and he had become weak and debilitated.

Examination revealed a chronic rhinitis with some thickening of the inferior turbinated tissue. There was also some adenoid hypertrophy in vault. This he could plainly detect with his tongue, and also several holes or depressions in it which were plainly visible in the rhinoscopic mirror.

As his nostrils were narrowed by thickened turbinated tissue, I could not plainly observe through the nostrils the tip of the tongue when in the vault of the pharynx, as Dr. Whiting could in his case; but my patient would move with his tongue a probe, if inserted through the nostrils to their posterior opening, and if it were pushed back further, he could throw it forward nearly out of the nostrils. By looking into his mouth when he performed this feat, his tongue could be seen to pass up behind the palate, and to bury itself almost out of sight behind the vail.

In this case there was nothing abnormal to be seen about the tongue or fauces. The space between the velum palati and the vertebral column was not unusually large, and the frænum linguæ was well marked, though a little longer and more lax than is usual. His tongue was quite long and rather slender; the only peculiarity to be especially observed was the great voluntary muscular control which he had over its movements, being able to place it in any conceivable position in the mouth, fauces, and naso-pharynx.

ABORTING HORDEOLUM.—Dr. J. P. McGee (*Medical and Surgical Reporter*) claims good results from the following in hordeolum when used within the first six to twelve hours: ℞. Ex. fl. belladonna, gtt. iij.; aquæ pluv. ʒ ij. M. Sig.—A teaspoonful every hour. At the same time calcium sulphide should be given one-eighth or one-tenth grain every hour, for five or six doses, then every three. The belladonna is often sufficient alone.

¹ Trans. Am. Med. Ass'n., 1880.

² In fetal syphilis it is assumed that the spermatozoa may be the carriers of the disease; but no microscopist has yet described a separate species of spermatozoan for such cases.

THE ARSENITE OF BROMINE AND ITS USE IN THE TREATMENT OF DIABETES MELLITUS.¹

By R. H. GILLIFORD, M.D.,

ALLEGHENY, PA.

In the early part of December, 1882, I began some experiments with bromine and arsenious acid, the results of which have, in part, been corroborated by experiments performed at my request by a practical chemist. As I can find no account, in any works on chemistry, of a compound or salt formed by the union of bromine and arsenious acid, I submit my results or views with diffidence, and will welcome either correction or confirmation.

I find that bromine and arsenious acid will unite under certain favoring conditions, in the proportions of two hundred and forty parts by weight of bromine to ninety-nine parts by weight of arsenious acid. When they are perfectly united, or arsenious acid completely dissolved by the bromine, they form an oily liquid, soluble in water and alcohol without any apparent reaction. They unite very slowly, and sometimes seem for many days as if no union was taking place when merely agitated in contact with each other. When united without the addition of water they form a salt which consists of three equivalents of bromine and one equivalent of arsenious acid, and would be represented by AsO_3Br_3 .

When water is added before the bromine is united completely with the arsenious acid, or when bromine and arsenious acid are brought together in the presence of water, there takes place an immediate and rapid reaction with the evolution of considerable heat. Evidently the water is decomposed, and hydrobromic and arsenic acids are formed, and the result is a solution of the two acids with a little free bromine in the excess of water.

The solution used in the appended cases was made by the complete union of the arsenious acid and bromine before the addition of water, and from observation I believe it to be much less irritating to the stomach than a solution of the hydrobromic and arsenic acids.

As I have seen no account of any compound of bromine and arsenious acid in any medical works or journals, I have concluded that I have been the first, in this country at least, to make and prescribe arsenite of bromine.

Dr. Theodore Clemens, of Frankfort, Germany, has been using some compound of bromine and arsenic in the treatment of diabetes, and has reported great benefit from its use.

The medical journals have called his remedy bromide of arsenic, but from the known properties of bromide of arsenic it seems much more probable that the article he uses is either arsenite of bromine, or a solution of the hydrobromic and arsenic acids.

I have made a solution of arsenite of bromine, and used it in a number of cases, and furnished it to several physicians, who have prescribed it and reported to me its effects in the treatment of diabetes mellitus.

While the notes of some cases are incomplete in many important points, yet its use has been followed by the most marked benefit in every case in which it has been prescribed so far.

Some of the cases seem to have made a complete recovery, others seem to be progressing steadily toward a complete recovery. Dr. C. Emmerling, of Penn Avenue, Pittsburg, has treated two cases of diabetes mellitus with my solution.

The first case, a male, aged thirty years, was benefited so much that in two weeks' treatment he had got rid of all the distressing symptoms of the disease: the specific gravity of the urine falling from 1036 to 1029, and the quantity of urine being decreased to less than one-half that

passed at the beginning of the use of the remedy. The patient being of dissipated habits, disappeared from the doctor's observation.

Dr. Emmerling's other patient met with the same marked and immediate improvement following the use of the remedy. He was forty-seven years of age, a saloon-keeper by occupation, a very large man, and a very heavy eater and drinker. The quantity of urine passed was enormous. Dr. Emmerling reports that he seems to be getting well. The specific gravity of the urine has been reduced from 1036 to 1028, and the quantity of urine passed has been reduced to from four to four and one-half pints in twenty-four hours, after one month's treatment.

Dr. A. D. Johnston, of Sedgwick Street, Allegheny, furnishes the following notes of a case treated by him: "Weston Hall, aged nineteen years, laborer in steel works, called March 19, 1883, for treatment, and stated as follows: About January 1, 1883, he was carrying one end of a steel axle, and the man at the other end allowed his end to fall; the jar or shock was so severe as to unfit him for work for several days. Shortly after the accident he noticed an increase in the flow of his urine. The flow increased until, March 20th, he was passing three gallons of urine in twenty-four hours, of acid reaction and specific gravity of 1035. His thirst was constant. He could not eat enough to satisfy the cravings of hunger, and is very much emaciated and very weak. Tests for grape sugar in the urine show not less than twenty-five grains of sugar to the fluid ounce, estimated by the fermentation test.

"March 22d.—A solution of arsenite of bromine was procured from Dr. Gilliford, and two drops ordered to be taken four times daily.

"March 25th.—Improvement marked as regards the quantity of urine passed; thirst not nearly so excessive; feels better after eating; feels stronger; spasms of the calves of the legs disappearing; specific gravity of the urine 1030; can lie until nearly morning, whereas formerly he was compelled to rise at least three times during the night to void urine. Dose increased to four drops four times a day.

"March 29th.—The patient is able to lie all night without rising to urinate. The improvement in strength and general health very marked.

"April 17th.—The patient thinks himself well. His gain in flesh is very noticeable. Urine passed in twenty-four hours, eighty fluid ounces, specific gravity 1020, acid reaction. Fehling's test shows no sugar in the urine. The patient leaves for Clarion County in a few days, to go to work, promising to write weekly and keep a record of the amount of urine passed."

Dr. J. B. Johnston, of 25 Pennsylvania Avenue, Allegheny, Pa., furnishes the following notes: "On April 16, 1883, I was called to see a boy, aged sixteen years and five months. I found him very much emaciated, but complaining of nothing in particular, only that his thirst was insatiable and he was *ravenously* hungry, as he said. He said his fauces and throat were very dry and parched. I examined his tongue and found it red and fissured. From the symptoms I concluded he had diabetes; he was passing from a gallon to a gallon and one-half in twenty-four hours of limpid urine. I immediately made the tests for saccharine urine, and found it to contain sugar in very decided quantity. Moore's, Tromer's, and the yeast test, all verifying each other, I put him on the usual treatment of cutting off the non-nitrogenous supplies, and fed him mostly upon meats, animal broths, vegetable soups, fresh fish, etc., including cabbage and turnips. The specific gravity, when I first saw him, was 1038. I found it to vary in density from 1035 to 1040. I tried the different modes of treatment usually resorted to, but must say I found little or no improvement in the case. I found the best results in the first part of the treatment from tinct. ferri mur., given in fifteen-drop doses half an hour after meals, in a wineglassful of water.

¹ Read before a meeting of the Allegheny County Medical Society, at Pittsburg, Pa., May 15, 1883.

During the times he was taking the *iron* the thirst was not so distressing nor was the appetite so voracious, but the urine was *nearly* if not *quite* as copious, and the specific gravity remained *high*.

During the time the *iron* was being given there was passed on April 27th, 132 ounces of urine; April 28th, 130 ounces; April 29th, 129 ounces; April 30th, 127 ounces; May 1st, 131 ounces; May 2d, 129 ounces; May 3d, 126 ounces. During this time the specific gravity varied a little, from 1036 to 1038. On May 4th I began giving four drops of arsenite of bromine (my attention having been called to it by Dr. R. H. Gilliford) largely diluted with water, half an hour after each meal. On the 5th the quantity of urine, to my surprise, had fallen to 110½ fluid ounces. On the 6th to 100 ounces, with specific gravity of 1034. On the 7th I again examined the density of the urine and found it 1032, with a still decreased quantity, 98 ounces. May 8th, I did not take the specific gravity, but found 94 ounces of urine. Patient is sleeping well at night and says he does not need to get up so often to urinate. May 9th, specific gravity 1032, and 94 ounces of urine, same as on the 8th, but he confessed to indiscretions in his diet. May 10th, specific gravity 1031, with 92 ounces of urine. Thinking the dose of the arsenite might be safely increased, I began on the 9th to give five drops instead of four. May 11th, specific gravity 1030, with 89 ounces. May 12th, specific gravity 1030, with 87 ounces. May 13th, I did not take the specific gravity nor quantity. May 14th, examined both quantity and quality of urine. Specific gravity has fallen to 1029, and the quantity is 85 ounces. The symptoms of the patient are not by any means so urgent as in the beginning of the treatment. *Thirst diminished, appetite less craving*, diminished quantity of urine from 132 ounces to 85 ounces, specific gravity diminished from 1038 to 1029. There is one thing to be observed, that there has been a *constant decrease* in the quantity and specific gravity of the urine, though it has not been regular; but when we see that the *remedy* has been in use only since May 4th (ten days), we cannot but look upon the case with *much* hope. What the subsequent condition of the patient may be cannot yet be known.

A CASE OF CENTRAL SCOTOMA WITH DERANGEMENT OF COLOR PERCEPTION

CURED BY THE HYPODERMIC USE OF NITRATE OF STRYCHNIA.

By DAVID WEBSTER, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC.

THE patient, a married lady, twenty-seven years of age, consulted Dr. C. R. Agnew and myself on March 21, 1876. She said she had had no trouble with her eyes since childhood until suddenly, one morning about a week previously, she discovered that she was nearly blind in her right eye. There was no pain in or about the eye, and she was led to test the vision of each eye separately only by noticing some peculiarity in her vision. She immediately consulted her family physician, Dr. Ely, of Newburg, who, being at a loss to account for the defect in sight, referred her to us for examination and advice.

Upon applying the usual tests we found that the left eye had vision $\frac{3}{20}$, and seemed to be normal. In the right visual field was a large central scotoma, which gradually shaded off into the periphery of the field without any distinct or well-marked boundary. The patient managed to read $\frac{3}{20}$ with the right eye by dodging her head about and catching the letters eccentrically. Tested with the colored worsteds, she called blue a "dark gray," or "black." Green she called "black," or a "dark shade of brown." She recognized red. She called yellow "brown," but saw that it was yellow when placed in the extreme nasal portion of the field.

She was confined in June, 1875, and it was remarked

that her eyes were unusually strong. She would not have the room darkened, but abstained from reading for a long time, at least six weeks.

On the Sunday preceding the Wednesday in the morning of which she discovered impaired vision, she was "overcome by heat" in church, went out, and was seized with a spasm of the throat. For years her friends have remarked that she was in the habit of keeping her right eye closed when out riding or walking.

Ophthalmoscopic examination showed no gross lesion, but there was a faint opacity of the posterior capsule of the right crystalline lens. The optic disk seemed a little too pale, and the retinal arteries were apparently slightly reduced in size.

She returned to Dr. Ely with a letter recommending the daily hypodermic use of nitrate of strychnia, beginning with a small dose, and cautiously increasing the quantity day by day until the physiological effects of the drug should be reached.

She made two subsequent visits to the office. On April 5th her sight had risen to $\frac{3}{20}$ (+), having increased more than seven hundred per centum in fifteen days. On April 22d it was noted that the dose of nitrate of strychnia injected had reached one-seventh of a grain without producing any of the unpleasant constitutional effects of the remedy.

On April 30, 1883, her husband called upon us and concluded the history. He said that the hypodermic injections of strychnia were continued for a short time after her last visit, and resulted in perfect recovery of vision, which remained good until her death, which occurred in 1880, and which was caused by an attack of cerebro-spinal meningitis.

OPIUM ADDICTION AMONG MEDICAL MEN.

By J. B. MATTISON, M.D.,

BROOKLYN, N. Y.

It was the writer's pleasure, some time ago, to dismiss from his professional care, within about a week of each other, six medical gentlemen, all recovered after addiction to morphia, hypodermically, varying from eight months to ten years.

This somewhat unusual occurrence, with the fact that the majority of his patients have been, are, and probably will be, members of the profession, and the statement elsewhere made that physicians form a large proportion of opium habitués in general, and the great majority of any professional class, make pertinent the title of this paper and warrant his inviting your attention for a brief time to a topic in which perchance some of you may have a personal and painful interest.

A recent Austrian author writes: "Quite an incredible number of our colleagues have fallen victims to it, and many have only just escaped. If medical men are charged, and it is to be feared, justly, with the propagation of this disease, owing to their carelessly, or for mere convenience sake, leaving morphia and a subcutaneous syringe with the patient, it may be regarded as their punishment that the demon morphinism finds among them his favorite victims."

A Prussian writer who, in 1877, gave the profession a valuable monograph on morphia addiction, cited sixteen cases under his care, of which medical men formed more than one-third, and a much larger proportion compared with any professional class.

The records of the Inebriates' Home, at Fort Hamilton, although that institution is mainly devoted to the treatment of alcoholic habitués, show a majority of the profession among those who have sought relief from the ravages of opium.

We have been informed, on the asserted authority of a resident physician, that, in a certain New England city, containing upward of one hundred medical men, between thirty and forty are addicted to some form of opium.

Much surprise has often been expressed, and the reason asked why so many physicians apply for, or are in need of, relief. So far as concerns the first query, and as having a personal reference, we have always deemed it due to the fact that our professional efforts being directed specially to this work, and a knowledge of this coming directly to the fraternity through the medium of the medical press, those who desired our aid availed themselves of the proffered service.

Another reason may be that the peculiar secretive character of this disorder, the fear of publicity, induces the most of non-professional victims to place themselves under the care of charlatans, who find in this especial quality a fertile field which they make haste to till to their profit, and, very often, their patients' loss; while medical men, on the contrary, not so likely to be duped by the specious promises of these pretenders, are less frequently beguiled by their blandishments, but extending their confidence to those whose skill and experience warrant, secure the aid which scientific treatment can now surely afford. As to why so many opium habitués are recruited from the ranks of our profession, it may be said that the physician's calling involving, as it often does, especial inroads on his mental and physical well-being, exposes him more than any other to the various influences which stand as factors in the etiology of this disease.

Then, again, addiction, hypodermically, is likely to prevail largely in medical circles, inasmuch as the very nature of this method requires a more or less intimate knowledge of morphia and the hypodermic syringe, which the average layman does not possess.

Then, too, may not this very knowledge and the frequent employment of this potent agent for evil as well as good which the modern practice of medicine involves, disarm fear of its ill-effects, and make easy the occasional taking, which so easily and so soon forges the fetters of confirmed addiction?

Obersteiner's remark as to the retributive justice of the morphia Nemesis to those who, as he asserts, directly assist in enlarging the ranks of the opium devotees, suggests a topic worthy of no little reflection.

In reviewing the causes of opium addiction among medical men, we find that in them, as in others, some form of neurotic disorder, involving, as has been truly said by your coming president, "a physical necessity," leads the list; and, so far as our experience goes, the most frequent has been that "opprobrium of medical art"—as Flint styles it—periodical headache. Any form, however, of persistently painful disturbance involves this risk, and, apropos of this point, the opinion of a medical gentleman—who, some years ago, was under our care, and who afterward gave to the profession a most graphic recital of his experience—may be of interest. "I proclaim it as my sincere belief that any physician afflicted with neurotic disease of marked severity, and who has in his possession a hypodermic syringe and Magendie's solution, is bound to become, sooner or later, if he tampers at all with the potent and fascinating alleviative, an opium habitué.

"The first dose is taken, and mark the transformation! This overmastering palliative creates such a confident, serene, and devil-may-care assurance that one does not for once think of the final result. The sweetness of such harmony can never give way to monotony. Volition is suspended. You may not think of it when the pain for which it was taken subsides. But when distress supervenes, you go at once for the only balm that abounds in Gilead, and every additional dose is but another thread, however invisible, of which the web is made that binds us fast as fate."

Another special factor is the peculiar power that opium possesses to give strength, bring sleep, and relieve portendings incident to the anxious hours, the weary days, and wakeful nights, such as the experience of every busy practitioner so often involves. Again and again has this

been told us, and, pre-eminently true is it when—once under the opiate spell—a self-effort is made to escape. Scarcely a physician presents himself for our care who does not assert that, time after time, he has made an attempt in this direction, only to find that the demands of his calling proved fatal to his success.

Still another cause is the spirit of inquisitive research which occasionally permits a professional man to allow his zeal in the pursuit of knowledge to outrun his discretion.

Incidentally we may note the assertion—doubtless true—that the glamour of De Quincey's writings has proved fatally attractive to more than one, and Obersteiner relates this instance: "A young medical man gave the following account of his own case. While he was attending the hospital a patient was dismissed, suffering from carcinoma of the stomach, and who had been for a long time treated with subcutaneous injections of morphia. Next day the patient returned in a state of great excitement, and piteously begged for an injection, as otherwise he must die. This occurred in 1869, at a time when chronic morphinism and its phenomena were less known than now. As the physician was inclined to believe that the patient was romancing, he tried the experiment on himself to ascertain what the effects were. The result was that he formed the habit of morphinism, and never could overcome it."

He also cites another, of a medical man, aged thirty-two, who gave as one reason for his addiction that, "being assistant at the Physiological laboratory, he saw in himself an interesting subject of experiment."

A somewhat similar case has fallen under our own observation. Dr. A—, aged twenty-seven, was attacked with facial neuralgia so severe as to compel his taking one-fourth of a grain of morphia hypodermically, at bedtime, to secure ease and sleep. This amount was increased to one-half a grain per diem during the following month, when, the neurotic disorder having subsided, the opiate was abandoned, with little or no inconvenience. Some time after this, a gentleman addicted to the use of morphia placed himself under his care. Then Dr. A—, as he asserts, without the least desire for opium, but solely from a wish to discover, if possible, some antidotal drug to aid him in the cure of his patient, began experimenting on himself with hypodermic morphia, with the result of falling a victim to its seductive influence; and yet, though he failed to make the wished-for discovery, managed the case of his friend so well that success crowned his effort, while he, despite every endeavor, was unable to extricate himself from the pit into which he had unwittingly fallen, and was compelled to seek aid for his relief. Unlike Obersteiner's patient, he made a very gratifying recovery, and is to-day well.

The subtly ensnaring power of opium is simply incredible to one who has not had personal observation or experience. One of the finest specimens of physical manhood we ever saw, a physician, who survived the horrors of Salisbury prison, when the death-rate averaged eighty per cent., fell a victim to morphia after only one month's hypodermic using. Happily, he recovered, took the lecture platform, and told of the bondage from which he escaped.

It may seem to some of you like an alarmist's opinion, yet we have no hesitation in expressing our belief that any physician using morphia, daily or oftener—especially hypodermically—for four weeks, incurs great risk of becoming an habitué; indeed, we think a still shorter usage might, with some, prove a snare.

Having thus spoken of this peculiar peril, it might seem fitting to suggest that which would tend to lessen or avert it; but a proper limit to this paper precludes.

Of the gentlemen who honored us with their confidence, some details may be of interest.

Dr. B—, aged thirty-seven, six years' addiction. Cause, asthma; on admission was taking eight grains per diem, and for several months he had also taken daily

ninety grains of chloral. The latter was at once withdrawn, and to make amends for this sudden removal, his daily taking of morphia was increased to twelve grains, so that the chloral withdrawal caused no discomfort whatever, except slight mental depression the following day. Sedative treatment was begun and the morphia withdrawn in six days, with so little disturbance that the patient was up and about during the entire time, and after the final habitual hypodermic of one-third of a grain, attended a theatrical performance. Moderate restlessness followed, but the reflex irritation in general was slight, the most prominent being insomnia, which was unusually marked and persistent, requiring soporifics for several weeks. Improvement, meantime, in other directions was decided, and his case was dismissed, recovered, on the forty-seventh day of his treatment, sleep having been free from hypnotic the previous week.

A special point in the prognosis of this case, referred to the return of his asthmatic trouble when the habitual narcotic was abandoned. As a fact, much to our pleasure and surprise, not a single paroxysm—save one of less than half-hour duration, and so mild as to cause but little discomfort—occurred up to the time of his leaving, nor has there been any to date. This, to us, is an interesting and important therapeutic feature, as suggesting how much influence a prolonged narcotic condition may have had in obliterating a neurotic status, the outcome of which was his dyspnoic disorder.

It is known that in the treatment of obstinate sciatica, Trousseau advocated opium in full and increasing doses up to the point of entire relief from pain, and the maintaining this semi-narcotized condition for weeks or months, if required; and we have been told of a case thus treated with success in the person of a near relative of a well-known New York professor of therapeutics.

Stevenson, of London, himself a victim of asthma, and who has given us the latest work on the subject, asserts, after long and varied personal experience, morphia, hypodermically, to be the most effective agent for relief. Of course its use entails the risk of addiction, but in otherwise unyielding cases of this distressing disorder it might be wise to counsel the taking that risk.

Dr. C—, aged thirty-eight; cause, chronic diarrhoea; duration, ten years; amount, maximum, thirty grains per diem; on admission, fourteen. Special treatment and hypodermics abandoned at end of eight days. Effects were restlessness, insomnia, aching in lower limbs, and occasional abdominal pain—none of which were severe and all relieved by appropriate treatment. Natural sleep returned in less than a week, patient's improvement was prompt and steady, save one interruption from an attack of indigestion, and he was dismissed on the twenty-sixth day of his treatment.

Fuller details of this case may be found in the *New England Medical Monthly* for June, illustrative of a paper on "Neurotic Pyrexia, with Especial Reference to Opium Addiction."

Dr. D—, aged twenty-eight; three years' addiction; three to five grains daily; cause, sciatica. Special treatment secured; desired sedation and hypodermic withdrawal in five days. The sequelae were restlessness, relieved by hot baths; aching below knees, removed by strong faradic current; and debility with insomnia, requiring tonics and soporifics, the former throughout treatment, the latter less than one week. Patient recovered rapidly, and was dismissed on the twenty-second day of his treatment.

Dr. E—, aged forty-eight; eight months' addiction. Morphia had been increased rapidly to sixteen grains daily, but on admission was reduced to six. Sedative régime for five days, when syringe was discarded. Results: restlessness, debility, insomnia, and lumbar pain. For the first and last symptoms, hot baths, local and general, proved promptly effective. Reflex disturbance soon subsided, and patient left on the eighteenth day. Sleep and appetite normal, but strength be-

low par. Decided improvement followed a southern tour of a fortnight, and, on returning, his general condition was noted as fairly good.

Dr. F—, aged forty-six; addiction, with intervals, three years; extent, ten to twelve grains daily; cause, periodical headache. This patient's story, written by himself, formed a narrative of so much interest and importance as proving many of the points in this paper, that we secured his consent, and made it the subject of a paper published in the *New York Medical Journal*, 1883. His hypodermics were discontinued in five days, with results similar to case of Dr. E—, though the insomnia was more protracted, yet he put in an appearance at every meal, and did not lose a single entire night's sleep. He was dismissed on the twenty-eighth day of his treatment, and, in company with Dr. D—, sailed for Bermuda. Improvement continued. After returning he gave himself several weeks' longer vacation, then resumed his profession, and is now doing well.

Dr. G—, aged forty-seven; addiction, ten years; extent, six grains per diem; cause, toothache. An attempt was made to treat him at home, but, after abstaining forty-eight hours, he became violent, smashing furniture, and the opiate was resumed. He then came under our care, and was allowed sufficient morphia to give him comfort, and this continued five days, during which special treatment was employed. Sedative effect desired, secured, and the habitual opiate abandoned. The resultant irritation was mild, the most so of any of the six cases. Restlessness, depression, debility, and insomnia, but none of these marked, and, like Drs. D— and F—, he was able to do dietetic duty daily, and, each night, secure some hours' sleep. Improvement was progressive, and he was dismissed on the twenty-seventh day of his treatment.

To summarize: average addiction, five years; average length of treatment, twenty-eight days.

Remedial measures involved bromide of sodium, hot baths, electricity, both galvanic and faradic current, belladonna, strychnia, hyoseyama, quinia, chloral, coca, cannabis indica, Jamaica dogwood, varied tonics, full feeding, and cheerful surroundings, for details of which see paper, "Clinical Notes on Opium Addiction," *Cincinnati Lancet and Clinic*, March 3, 1883, reprints of which may be had on application.

All recovered. Repeated experience warrants the assertion that every case of opium addiction, free from organic disease, and in which there is an earnest desire to recover—be the extent and duration what it may—admits of prompt and positive relief.

THE SUPERIOR VALUE OF THE BROMIDE OF SODIUM.—Dr. Field (*Boston Medical and Surgical Journal*, May 10, 1883) believes that the superiority of the sodic bromide over its potassic congener is insufficiently recognized by the profession. From a physiological study of the subject he feels justified in stating the following propositions: 1. The bromide of sodium, because it is a sodic compound, should be more congenial, less disturbing, to the fluids and solids of the body than its potassic congener. 2. The sodium salt, in extended use, should be less depressing to the heart, all potassic salts, after a time, tending to produce cardiac depression. 3. The sodic bromide is less offensive to the taste, much less irritating to the stomach. 4. The bromide of sodium should have equal, if not superior, general therapeutic power with the bromide of potassium, since while the former has a bromine per cent. of 78, the latter has but 66. Clinical experience, moreover, has brought him to the following conclusions: 1. The bromide of sodium has equal therapeutic power, throughout the entire range of medication, with that of the bromide of potassium. 2. Not only this, but the bromide of sodium has superior therapeutic value, both from the greater mildness of its physiological impression and because of additional therapeutic applications which, were we confined to the potassic salt, would be inconvenient, if not impossible.

Progress of Medical Science.

TREATMENT OF FLOATING KIDNEY BY FIXATION.—

Dr. David Newman, of Glasgow, has recently performed the operation of nephroraphy. The operation was done in the following manner: The kidney was exposed by a vertical incision in the right loin, immediately external to the outer edge of the quadratus lumborum, and extending from the lowermost rib to the crest of the ilium; the capsule of the kidney was opened, and stitched to the edges of the wound; and two catgut sutures were passed through the cortex of the kidney, the muscles, fascia, and skin, and secured externally by buttons. The patient suffered from severe symptoms, and was treated for several years without success. Since the operation the symptoms have entirely disappeared, and she has now almost recovered from the effects of the operation, which was performed three weeks ago.—*British Medical Journal*, April 28, 1883.

DIPHTHERIA AND NEPHRITIS.—We are still in want of observations which shall throw light on the nature of the renal changes associated with diphtheria. The profession is familiar with the doctrine of the infective nature of the nephritic alteration. It is philosophical to bear in mind that albuminuria, so often attendant on cases of diphtheria, may not necessarily be due to actual disease of the kidneys. The manifold antecedents or causes of albuminuria may still come into play, even though the body be the subject of diphtheria. The presence of one cause, however probable its action may be, does not preclude the possibility of a less striking factor being the real agent in any particular instance. We are led to make the foregoing remarks, because Dr. Fürbringer has been unable to detect the micrococci which other observers have demonstrated in the urine and kidneys of cases of diphtheria. We are far from asserting a full belief in the view that diphtheritic nephritis is even generally a bacterial disease. On the contrary, the notion that the primary diphtheritic disease is due to micrococci requires more convincing evidence than has at present been adduced. Dr. Fürbringer has investigated the clinical history and morbid anatomy of diphtheritic nephritis with much industry. He comes to the conclusion that the renal changes may conveniently be arranged under three divisions, according to the degree of anatomical change. The earlier stages are characterized by comparatively slight changes in the epithelium of the cortical region, not unlike "cloudy swelling;" next the cellular degeneration becomes more decided and more widely spread; and there are some alterations in the interstitial tissues, but no vascular lesions. The final degree is comparable with that of the intensely congested kidneys sometimes seen in connection with nephritis after scarlet fever.—*London Lancet*, March 31, 1883.

MERCURIAL DECALCIFICATION.—A remarkable effect of acute poisoning by mercury, in the form of corrosive sublimate, was discovered by Salkowski, and has been confirmed by Prévost and Frutiger, of Geneva, in a very interesting investigation. The effect is the deposition of calcareous salts in the cortical substance of the kidney. The deposits of lime-salts may easily be confounded with deposits of fat. The process commences in the straight tubules, and afterward involves the tubuli Contorti, and is sometimes so great that the kidneys appear as if petrified. The effect is most marked in the rodents, but may also be observed in the cat, and likewise, although with more difficulty, in the dog, and it is apparently of the same nature in all animals. It is very remarkable that this change is not, as might be expected, most marked when the poisoning is most chronic. It is greatest when the doses of the poison are such as to cause death in three or four days, and are too small to kill within twenty-four hours. The Swiss investiga-

tors have made a very important discovery as to the process by which this remarkable effect is produced. They find that the calcification of the kidneys is accompanied by, or rather accompanies, a removal of lime-salts from the bones which, in the case of rabbits, is sufficient to render the epiphyses of the long bones movable on the shafts. In order to estimate the actual amount of decalcification, a series of comparative analyses were made, the tibia being the bone chosen. The loss of lime was found to be usually from two to four per cent., and sometimes to amount even to eight or ten per cent. The change in the bones was always inversely proportioned to the change in the kidney. To obtain even more precise results, the leg of one animal was amputated before the commencement of the experiments, so that the normal proportion of lime-salts might be accurately compared with that present after the action of the corrosive sublimate. But the result of this experiment was the demonstration of a very interesting fact in relation to the processes of calcification and decalcification in the system. It was found that when the animal had recovered perfectly from the effect of the amputation, no mercury having been given, there was an increase in the amount of lime in the opposite tibia. Even after intoxication by mercury, it was found that there was still an excess of lime present, showing that the augmentation due to the amputation of the other leg was more than enough to compensate for the loss produced by the mercury. The peculiar effect of the corrosive sublimate cannot be attributed to impairment of the general nutrition, since in starving animals, which had lost eight hundred grammes of body weight, the proportion of the mineral constituent of the bone was positively increased instead of being diminished. The rapid decalcification of the bone seems to afford an adequate explanation of the accumulation of lime-salts in the kidneys, arrested in the process of elimination by these organs.—*London Lancet*, April 14, 1883.

MODERN THEORIES AND TREATMENT OF PHTHISIS.—

Under the above heading Dr. Pollock has just completed a practical review of a subject which is at present engaging universal attention, even of a non-medical character. This series constitutes the Croonian lectures for this year. He concludes his remarks in the following words (*London Lancet*, April 28, 1883): "No parasitic theory can lessen the importance of the use of tonics and cod-liver oil. Supposing we possessed a local remedy of sufficient power to ensure the destruction of such bacilli as are met with in the secretions, their rapid reproduction would soon overtake our treatment. I fear that in this direction we may have much empiricism and many disappointments.

"Finally, to sum up the brief review which we have been able to make of these new doctrines, it would appear that while some facts, such as the presence of bacilli in all cases of phthisis and their absence in other affections of the lungs and air-passages, are fully proved, there are some assertions of those who hold that such appearances in the lungs and its secretions are the proximate and invariable cause of the disease, which we must for the present hold to be *sub judice*. Among these doubtful theories are those which concern the production of the parasites. Whether they be endogenous or introduced from without, whether they may not find their birth in certain blood-changes which are the outcome of pyrexial action in the system, or whether they are the product of a like morbid condition in other animal bodies, and from them introduced into other organisms by contact or infection, must remain for the investigation of later pathology. We may safely relegate these interesting questions to the ardent students who are now everywhere carrying on new observations. And for ourselves, knowing well that all pathology is progressive, and that we see but a portion of truth at any time, be content to await the result."

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE agitation over the subject of medical conduct has at least had this result: it has awakened a special interest in the American Medical Association. The attendance at its session just adjourned, of which we present a full telegraphic account, was larger than ever before, if we except the meeting in this city three years ago.

We are glad to be able to say that the quality of the addresses and papers was, if not very high, on the whole distinctly better than has usually been the case. To this commendation we must make some exception. Papers which had been read before other associations were allowed to be presented to the sections as original, thus openly violating a long-standing rule of the Association.

The vote to establish a weekly medical journal, under the able and experienced editorship of Dr. N. S. Davis, will be received with pleasure by the profession, and we shall welcome another competitor in the higher ranks of journalism. It appears to us, however, that in the details of management of the proposed enterprise there is a serious misconception of its real pecuniary needs.

The election of Dr. Austin Flint, Sr., to the Presidency will be understood as an endorsement of his position upon the question of medical ethics. It would have been more gratifying if the position had come, as it justly might, as the recognition of his character and attainments.

The action of the Judicial Council in compelling all delegates to sign a preliminary pledge was hardly such as became a dignified medical body. But it prevented the chance for the expression of any opinions different from those of the judicial council which so proudly assumed the responsibility of dictating a course for the members. The profession of the country will hardly be satisfied to have its opinions and conduct thus fixed by a few doctors who call themselves a "Judicial Council." This act of the Association was telegraphed throughout the country and everywhere received the condemnation of the press. We do not hesitate to say that the profession of America, by reason of the policy thus adopted, stands lower to-day in public esteem than it did before.

We have been among those who in the past have criticised the American Medical Association. We have done so because a candid judgment upon its work left no other choice. It has been a shifting, purposeless, illy-

organized monster, with a floating membership of (speaking biologically) undifferentiated medical protoplasm. The meeting just past has done much to give it more coherence and purpose.

VACCINATING IMMIGRANT BABIES.

It is not surprising that the sanitary enthusiasm of the present day should at times exhibit some imperfections in its practical outcome.

It appears from the evidence of several authorities that the compulsory vaccination of infants while on board the immigrant steamers, as at present conducted, is not unattended with danger. Upon the steamship *Leerdam*, of the Netherlands, which arrived here last month with eight hundred steerage passengers, there were, it is said, three deaths, and a number of cases of severe illness among vaccinated infants.

A medical man connected with this line remarked that "to vaccinate children, no matter how pure the virus may be, is always followed by fever and inflammation, more or less; but there is not much danger when the child is quietly at home and nursed by a mother who is able to take good care of it; but on board a steamship, packed with hundreds of human beings, the mothers often very sick themselves, food, air, and water altogether different from what these children are used to, some also teething, or being unwell from many other causes in consequence of a sea-voyage, is certainly not the right time and place for vaccination; and his opinion is that this regulation requires immediate review."

This opinion is expressed by several others. A Dutch clergyman, Mr. A. H. Bechthold, has particularly called attention to the matter in a letter to the *Evening Post*.

It is suggested that certificates of vaccination be required by the ship's officers before the passengers are received.

There is no doubt that something ought to be done. We should, however, be very much inclined to investigate the steamship companies first. It is very well known that many of them are not at all particular as to the quality of the virus bought, provided it is cheap. It is strongly hinted also that the medical attendance is often on a par with the virus; and finally, the companies ought not to carry passengers under unhygienic conditions.

With pure, fresh virus, intelligent medical skill, and authority to discriminate as to vaccinating the sick, we believe that few accidents, certainly no fatal ones, can occur.

THE VALUE OF CEREBRAL THERMOMETRY IN DISEASES OF THE BRAIN.

DR. J. T. ESKRIDGE, in a very elaborate report of a case of tubercular cerebro-spinal meningitis, read before the Philadelphia College of Physicians, calls attention among other things to the possible value of cerebral thermometry in brain diseases. He states that the surface temperatures of the head and of the upper posterior cervical region were registered in the case reported on ninety-seven different occasions, during which four hundred and eleven surface temperature observations were made on these parts. The cerebral temperatures exceeded the axillary forty-six times; that of the axilla was higher than

the head temperatures forty-seven times; and the temperatures of the head and axilla were equal four times.

Once the temperatures in the axilla and over the upper cervical region were equal; four times the temperature of the latter region fell below that of the axilla, varying from $.1^{\circ}$ to 1° ; twenty-four times the heat of the upper cervical region exceeded that of the axilla, it having been on one occasion as much as 3.4° above it. The temperature in the upper cervical region was usually greater than that of the head, it having been higher nineteen times out of twenty-nine.

The lowest head temperature found was 95.8° , the axillary heat at that time being 97.8° . The highest head temperature registered was 103.5° , the axillary being 104° . The lowest axillary temperature recorded was 93.8° , the cerebral temperature, at the same time, standing at 98° . The highest temperature found in the axilla, at the time of registering the head temperatures, was 104° , the surface thermometer on the head at the same time rose to 103.5° . Once the head temperature was 4.2° greater than the axillary, but the heat of the axilla never exceeded that of the head more than 2° .

As a result of the thermometrical studies in this and other cases Dr. Eskridge concludes that: 1. The right or left side of the head may, in turn, be the warmest in health. 2. When surface thermometers are used to register the cerebral temperature in disease, the normal averages should be taken to be 1° to 1.5° higher than those ordinarily given. 3. The head temperature in disease of the brain may equal or exceed the heat of the axilla for a length of time. 4. In cerebral lesions the temperature of the head is not marked by those sudden variations manifested by the axillary temperature in these cases. 5. Variations of head temperature in diseases of the brain take place comparatively slowly. The tendency of the heat of the head to remain permanently above the normal, while that of the axilla is normal or several degrees below, is the strongest evidence of organic disease. 6. The thermometer and the microscope in the case reported agreed in locating the greatest inflammatory trouble in the upper cervical portion of the cord. 7. Brain lesions attended by congestion or inflammation have a higher local temperature than suppuration going on within the cranial cavity.

Dr. Eskridge thinks that for purposes of study and comparison we should assume that the average temperature of the anterior, middle, and posterior surfaces of the brain is 95.36° F., 94.1° F., and 93.56° F., respectively.

We have before stated in commenting upon the subject of cerebral thermometry that the relation between the temperature of the scalp and of the brain beneath was, within certain very large limits, a physiological, not a physical one. The mutual changes in temperature are generally due to the intervention of the nervous system. It is known that irritations of nerves of one part of the body will affect reflexly the temperature of other parts. Variations in cranial temperatures, therefore, may be due to changes in the brain beneath, or to irritations in other parts of the body. Hence cerebral thermometry ordinarily affords us but small help in diagnosis. When, however, the brain or its membranes are organically affected the thermometrical variations may be of value. This seems to be the teaching of Dr. Eskridge's case.

THE MEETING OF THE AMERICAN SURGICAL SOCIETY.

We publish elsewhere a report of the fourth annual meeting of the American Surgical Association. There were about forty gentlemen present and about a dozen papers were read, several of them being of the nature of case reports.

We fear that even the utmost stretch of charity will not allow that the meeting was a remarkable one or at all representative of American surgery. Surgical science has reached a high eminence in America, and an association aiming to represent it must show itself awake and progressive. It must present original work, not clinical records at its annual meeting.

We are glad to say, for all this, that several of the papers showed careful labor and were extremely creditable to the Society.

The resolution asking the individual members if they had consulted with homœopaths, and if so, demanding their resignation, concluded, we will not say fitly, the proceedings of the session.

THE PROGRESS OF SURGERY IN THE GREAT NORTH-WEST.

It is a satisfaction to feel that the art of surgery keeps pace with the star of empire on its westward way. We are particularly pleased to observe that the art and the star aforesaid hover so conspicuously around Minneapolis, Minnesota, as evidenced by the columns of the local daily newspapers. One instance of the stupendous strides in surgical science which the great West is making has been recently given to the world by the *Minneapolis Tribune* of May 10th: "Drs. C—— and K—— accomplished a nice piece of work yesterday when they straightened the club feet of an eight-months-old child of Mr. Peltier, on Eighth Avenue north. It is said to have been the only operation in this city where badly clubbed and distorted feet have been straightened." We are informed that since the 10th the child has been doing well.

The operation in question seems to be the culmination of a long series of appalling operations that have been chronicled by the daily press. Dr. X——, says the *Tribune*, has with great boldness opened an immense and painful felon on the hand of an esteemed citizen. Dr. Y—— has amputated three fingers at one sitting, this being the second time so serious and delicate a test of surgical skill has been exhibited in the Northwest, etc., etc.

We are informed that it is a matter of frequent occurrence for some physicians in the Northwest, in regular standing, subscribers to the Code of Ethics of the American Medical Association, to get a free advertisement by letting their brilliant exploits in surgery be published in the newspapers. We trust we may be permitted to inform them that such conduct is not becoming physicians or gentlemen.

A FATAL BLUNDER.—There is considerable excitement in St. Louis over the poisoning of three persons at the City Hospital, two of the cases being fatal. The physician going the rounds administered to them a dose in which the principal ingredient was supposed to be Epsom salts, but which really was hydrate of chloral.

News of the Week.

TWO EPIDEMICS OF MEASLES.—Dr. H. G. V. de Hart, Health Officer of Pleasantville, Westchester County, has declared measles to be epidemic in that town, and all schools have been closed, including private schools and Sunday-schools. Up to yesterday eighty-one cases had been reported. Two patients have died. Nearly every family has been visited. The town is so closely quarantined that children are not allowed to leave it.

The town of Burgholtz, near Lockport, N. Y., is much excited by an epidemic of malignant German measles and scarlet fever. Over sixty cases have developed among the children of the inhabitants, who are mostly Germans. Four schools have already been closed. The disease was brought here about six weeks ago by Prussian emigrants. The Board of Health find their efforts totally inadequate to stay the spread of the disease, and are in great straits.

DR. WILLIAM J. MORTON has resigned from the Chair of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School.

ST. LAWRENCE COUNTY MEDICAL SOCIETY.—The semi-annual meeting of the St. Lawrence County Medical Society will be held at De Kalb Junction, N. Y., on Tuesday, June 12, 1883, commencing at 12 M.

THE STATE MEDICAL SOCIETY OF VERMONT will hold its semi-annual meeting at Rutland, June 13 and 14, 1883.

PROFESSOR WILLIAM E. QUINE has been elected to, and has accepted the chair of Practice of Medicine in the College of Physicians and Surgeons of Chicago, Ill.

DEATH OF DR. BANKS.—Dr. James Lenox Banks died June 3d, at his residence in this city, at the age of fifty-one years. Dr. Banks matriculated in 1854 at the College of Physicians and Surgeons. He was graduated from that institution in 1857. He pursued the higher branches of his studies in foreign institutions for two years, and in 1859 began the active practice of his profession in this city. He was a member of the American Medical Association, the New York State Medical Society, the New York Pathological Society, the New York County Medical Society, the New York Academy of Medicine, and the Medico-Legal Society. He was also consulting physician of the Presbyterian Hospital and of the Presbyterian Home for Aged Women. He was a member of the Boards of Trustees of the College of Physicians and Surgeons and the Lenox Library, a member of the Board of Managers of the American Bible Society, and was a member of the American Geographical and New York Historical Societies.

THE AMERICAN NEUROLOGICAL ASSOCIATION meets in this city on June 20th, 21st, and 22d. There will be five sessions, the first beginning at 2.30 P.M. Papers are to be read by Drs. Robert T. Edes, of Boston; C. K. Mills, of Philadelphia; Burt G. Wilder, of Ithaca; McBride, Morton, Amidon, and others, of New York. Dr. E. C. Seguin has sent a communication entitled the "Insane of Spain and their Asylums." A dinner at Delmonico's to the President, Dr. Edes, and the members, will be given by Dr. Amidon on the evening of the 21st.

THE PRACTITIONERS' SOCIETY OF NEW YORK, at its annual meeting June 1st, elected Dr. Robert F. Weir, President, Dr. C. L. Dana, Secretary.

HOMŒOPATHY IN ENGLAND in the last decade has unmistakably lost ground. In 1853 there were 213 homœopaths; in 1862, there were 218; in 1871, 278; in 1880, 275.

American Medical Association.

Thirty-fourth Annual Meeting, held at Cleveland, O., June 5, 6, 7, 8, 1883.

(BY TELEGRAPH TO THE MEDICAL RECORD.)

TUESDAY, JUNE 5TH—FIRST DAY.

THE Association met at Case Hall, Cleveland, O., and was called to order at 10.30 A.M. by Dr. J. C. Scott, of Cleveland, chairman of the Committee of Arrangements.

Prayer was offered by the Right Rev. Richard Gilman, Bishop of Cleveland.

The President, **DR. JOHN L. ATLEE**, of Pennsylvania, then introduced General Edward S. Meyer, of Cleveland, who delivered the

ADDRESS OF WELCOME,

which was frequently interrupted by applause.

Ex-Presidents Gross, of Pennsylvania; Davis, of Illinois; Richardson, of Louisiana; Toner, of Washington, D. C.; and Baldwin, of Alabama, were then invited to seats upon the platform.

DR. SCOTT then announced that the Ohio State Medical Society had met and adjourned to be admitted as members of the Association during the present meeting. He also announced the general programme for receptions and other entertainments. In closing he directed attention to

THE BLANK WHICH DELEGATES AND PERMANENT MEMBERS WERE REQUESTED TO SIGN

before being permitted to register.

It was to the effect that every signer should make a binding acknowledgment

TO SUPPORT AND DEFEND THE CONSTITUTION, BY LAWS, AND CODE OF MEDICAL ETHICS OF THE ASSOCIATION.

The pledge was as follows: "I will use my best efforts to maintain the same, and in testimony whereof, I hereunto affix my name."

NO MAN WHO COULD NOT SIGN THIS APPLICATION WOULD BE PERMITTED TO REGISTER EITHER AS DELEGATE OR PERMANENT MEMBER.

Certain protests were simply announced and referred to the Judicial Committee.

THE PRESIDENT'S ADDRESS.

DR. ATLEE then delivered the annual address, in which he expressed regret that the State of New York was not represented by delegates, and hoped that their absence would be only temporary, and that at the next annual meeting every State in the Union would be represented by delegates. He then directed attention to his own specialty, namely, that of being a graduate of sixty-three years' standing, and gave a brief sketch, simple and interesting, of his own medical life. Special reference was made to the University of Pennsylvania, to Caspar Wistar, Physick, Tanner, Parrish, McClellan, Hays, and a galaxy of others who labored in our profession during those early years. Only slight reference was made to the treatment of disease in that period, but mention was made of the treatment of the insane when the patients were confined in small cells in the basement, seldom having access to fresh air, and often nothing for a bed except straw. With regard to the lancet Dr. Atlee thought the

almost total disuse of this agent had been the cause of the loss of many valuable lives. The President closed with mention of the advantages which had been obtained by the adoption of the Code of Ethics, and in conclusion thanked the Convention for the high honor it had conferred upon him, and said that "at the close of a long life, one devoted to the study and the practice of medicine, notwithstanding its uncertainty, fatigue, and anxiety, and its bitter disappointment, he was satisfied that in no other career can man more fully accomplish his whole duty to his God and to his fellow."

On motion of DR. KELLER, of Arkansas,

A VOTE OF THANKS

was extended to the President for his interesting and able address, and the same was referred to the Committee on Publication.

On motion by DR. HAYES, of Pennsylvania, the members of the Ohio State Medical Society were invited to seats as members of the Association during its present meeting.

DR. BILLINGS, of the United States Army, presented a communication from the British Medical Association, asking the American Medical Association

TO CO-OPERATE IN THE WORK OF METEOROLOGICAL OBSERVATIONS

in their relation to the chemical history of disease. It was referred to the Committee on Atmospheric Conditions, of which Dr. N. S. Davis, of Chicago, is chairman.

An appeal from Dr. Dwight W. Day was referred to the Judicial Council.

DR. DIDAMA, of Syracuse, N. Y., presented resolutions forwarded by Dr. Tyndale, of New York. They were

CONCERNING METEOROLOGICAL CONDITIONS

and the establishment of an increased number of signal stations for observation, and petitioning Congress for aid in the matter. The resolutions were laid on the table, to be called up at to-morrow's session.

The permanent Secretary, DR. ATKINSON, of Philadelphia, then read the register, and on motion by Dr. Toner, of Washington, the names of all such were confirmed, no protests being entertained.

The Association then adjourned to meet at 9.30 A.M. Wednesday, June 6th.

WEDNESDAY, JUNE 6TH—SECOND DAY.

The Association was called to order at 9.30 A.M. by the President, and prayer was offered by Rev. Chase S. Pomeroy, D.D.

The Secretary announced the following

COMMITTEE ON NOMINATIONS.

W. O. Baldwin, Ala.; D. A. Linthicum, Ark.; W. F. McNutt, Cal.; H. K. Steele, Col.; T. Morton Hill, Conn.; W. Marshall, Del.; A. B. Van Velsen, Dak.; D. C. Paterson, D. C.; E. Foster, Ga.; C. T. Parker, Ill.; H. D. Wood, Ind.; W. L. Robertson, Ia.; W. L. Schenck, Kan.; L. S. McMurtry, Ky.; J. W. Dupree, La.; A. J. Fuller, Me.; J. J. Chisholm, Md.; C. A. Savory, Mass.; F. R. Owen, Mich.; P. H. Miller, Minn.; G. H. Gregory, Mo.; V. H. Coffman, Neb.; D. A. Watson, N. J.; E. Grissom, N. C.; H. D. Didama, N. Y.; W. M. Beach, O.; S. D. Gross, Pa.; A. Ballou, R. I.; R. A. Kinloch, S. C.; D. J. Roberts, Tenn.; H. C. Ghent, Tex.; Alex. Harris, Va.; J. M. Lazzell, W. Va.; S. C. Johnson, Wis.; A. L. Gilson, U. S. N.; J. R. Smith, U. S. A.; Truman W. Miller, U. S. Marine Hospital Service; W. R. Typton, New Mex.

DR. FOSTER PRATT, of Michigan, called up the

AMENDMENT TO THE CONSTITUTION

which he offered at the last Annual Meeting, to the effect that the law requiring the nominations for officers be made from those members present at annual meeting, shall apply only to president, vice-presidents, chair-

men and secretaries of sections, the assistant secretary, the chairman of the Committee of Arrangements, and the Judicial Council.

The proposed amendment was adopted.

DR. S. D. GROSS, of Philadelphia, presented a paper received from Dr. Oliver Wendell Holmes, with reference to the

MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE,

at Washington, D. C. The communication directed the attention of the Association to the propriety of the members of the American Medical Association explaining to their senators and members of Congress the necessity for funds to build a fire-proof building for the preservation of the library and the museum; stating that an annual appropriation of ten thousand dollars for the library, five thousand dollars for the museum, and an additional sum for the index catalogue, should be promptly provided, and that a fire-proof building should be built.

The communication was signed by Drs. S. D. Gross, A. Flint, and O. W. Holmes.

DR. H. A. JOHNSON offered a preamble and resolutions concerning this subject; first, that the American Medical Association endorse the movement of urging upon Congress the importance of at once providing a fire-proof building for the preservation of the library and army medical museum; second, that the annual appropriation for the library should be sufficient to enable it to obtain all medical publications, and that it regards \$10,000 as a reasonable sum for that purpose. The third clause referred to the importance of continuing the publication of the index catalogue, and the fourth provided for the appointment of a special committee of five, of which the President should be *ex officio* member, to present the whole matter in suitable form to Congress, and also to call the attention of State and local societies to the action taken by this Association.

DR. N. S. DAVIS, chairman, then read a report from the Board of Trustees

ON THE SUBJECT OF JOURNALIZING THE TRANSACTIONS.

The report contained, first, the resolutions adopted at the last annual meeting to the effect that the interests of the Association would be promoted by the publication of its transactions in a weekly medical journal under its own control, instead of the annual volume, as heretofore, provided it could be done without involving pecuniary embarrassment, etc.; second, a resolution that a Board of Trustees be appointed by request to proceed as early as possible to arrange a plan of the medical journal, to be called

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,

and that they send circulars explaining such plan and asking pledges of support by actual subscription to the members of the medical profession throughout the whole country, etc.; third, that the said Board of Trustees be and are hereby instructed to retain under all circumstances, in whatever plans of contracts it proposes to adopt, control over the use of the advertising as well as over all other pages of the journal that is proposed to be established, and that said board report in full at the next meeting of this Association the plans upon which it has been able to agree, together with the reply of the profession to its circular asking subscriptions to the proposed journal.

In accordance with the foregoing resolutions, adopted by the Association at the annual meeting in June, 1882, nine members were appointed to constitute the Board of Trustees. Immediately after the adjournment of the Association, a meeting of the board was held, at which the majority of the members were present, and Dr. N. S. Davis was elected president, and Dr. J. H. Packard secretary. The plan then originated was that the journal should contain thirty-two double columns of reading matter, each number to contain a department of original

articles, a department containing an editorial summary of the progress in various departments of medical science and practice, an editorial department proper, essentially devoted to discussing such topics as would be likely to promote the interests and the efficiency of medical organizations, both national and State, also a department of correspondence, and lastly, a department for miscellaneous items and intelligence.

Having agreed as to the general plan of the journal it was determined that forty thousand circular letters should be issued, accompanied by the same number of blanks for answer, with reference to operating the project.

The result of sending these circulars was, that about three-fourths of the entire number were absorbed in supplying fourteen States, leaving only a limited number to supply the remaining portion of the country, and it was estimated that had all been supplied the favorable responses would have been increased by at least twenty-five per cent. To the circulars which were distributed 2,150 answers were returned, of these, 12 were direct expression of opposition to the proposed change, 30 were equivocal, leaving 2,100 unqualified pledges to sustain the proposed journal in addition to these, over five hundred subscriptions were obtained from those who are not members of the Association. It was also fair, to assume that a certain proportion neglected to respond, who would probably become subscribers to the journal, and it was therefore safe to conclude that the aggregate subscription to begin with, would be 2,500, making an income of \$12,500 yearly. The proposed journal, without advertising sheets, can issue 3,500 copies weekly at an expense of \$8,000 annually, which would leave \$4,500 for editorial work and current expenses. But such a journal under reasonably fair business management would receive from advertisements, not less than \$5,000 annually. All of the editorial work is to be paid from \$6,000, which would leave a balance of \$3,500 to be expended for scientific investigation in such a manner as might be deemed proper by the Association.

At the last meeting of the Board of Trustees, after a careful analysis of all the returns and the estimates with reference to the expense of printing and publication, all the members unanimously voted to recommend to the association that a journal be published, being satisfied that it could be done without pecuniary embarrassment to the Association, and also recommended the following propositions:

First.—That the editor-in-chief take direct supervision of the entire work, and for business purposes he might employ a clerk competent to assist in all business matters.

Second.—That for assistants in editorial work the editor should engage one or more, specially qualified, to select and write up progress made in all departments in medical science and art, and give to each assistant of the editorial chair a fair compensation for the work performed. He should also secure reliable correspondents from all parts of the country and from abroad. It was also recommended that all advertisements of proprietary, trade-mark, or patent medicines, should be excluded from the sheets. It was also recommended that no advertisement be accepted bearing names of endorsers having title appended, believing it to be contrary to the letter and to the spirit of the Code of Ethics.

The board also recommended that the printing be done by the firm known as Tucker, Newall & Co., of Chicago, and that the place of publication be Chicago, Ill.

In conclusion, the Board of Trustees submitted the following resolutions:

First.—That the report of the board, just read, be accepted, and the recommendation therein contained be adopted with reference to establishing the *Journal of the American Medical Association*.

Second.—That the Board of Trustees be instructed to proceed with the publication of the *Journal* at as early a day as practicable, to take the place of the annual volume

of "Transactions." The other resolutions referred to the detailed arrangement with the treasurer, and closed with the statement that all orders upon the treasury for the disbursement of money must be endorsed by the president of the Board of Trustees.

DR. BRODIE moved the adoption of the resolutions.

DR. WILE, of Connecticut, moved as an amendment that the secretary be instructed to have the report printed, and that discussion be postponed until to-morrow, at ten o'clock.

DR. ATKINSON, permanent secretary, said that he was pleased with the report of the Board of Trustees, and tendered his full services to the Association for the furtherance of the new plan of publishing the Transactions.

The amendment was lost; the original motion by Dr. Brodie was nearly unanimously carried.

DR. MCMURTRY, of Kentucky, secretary of the Board of Trustees, stated that he had been instructed by the board to report to the Association that it had now selected Dr. N. S. Davis, of Chicago, as editor-in-chief of the *Journal*.

DR. DAVIS then took the floor, and spoke at some length with reference to the prospects of the *Journal*, the anxiety which it had given him, and asked the forbearance of the Association with reference to any shortcomings which might appear, and also that the members should not expect too much, and should not be too strict in their comparison of the *Journal* with the *British Medical Journal*, which had so often been held up for a pattern, for it must remember that the *British Medical Journal* had been the work of years.

He further announced that he expected to be able to issue the first number of the *Journal* early in July next.

He also resigned his position as member of the Board of Trustees, to take charge of the department on the progress of medicine, with the understanding that he was to have full access to the Medical Library.

DR. PALMER, of Ann Arbor, spoke in complimentary terms of the project of publishing the Transactions in journal form, and also of the editor-in-chief.

DR. COHEN, of Philadelphia, moved that the Board of Trustees be instructed, in addition to the *Journal*, to print annually a thin octavo volume containing the minutes of the Association.

This motion gave rise to discussion, participated in by Drs. Hibbard, of Indiana, Quimby, of New Jersey, and Byrd, of Illinois, and, on motion of Dr. Richardson, of Louisiana, the whole subject was referred to the Board of Trustees.

DR. BUSCH, of Delaware, moved that the Association, in consideration of the long services already rendered, and also the kindness, self-denial, and willingness to assume the duties of editor-in-chief of the new journal, tender a vote of thanks to Dr. N. S. Davis. Unanimously carried.

DR. DAVIS said he had been directed by the Judicial Council to state that that body assumed all responsibility in putting the pledge to support the Code of Ethics upon the blanks to be signed by delegates or prominent members before registering.

DR. PALMER, of Ann Arbor, asked if it was meant that, by signing this blank, the signer was to sustain the present provisions of the Code, or was to sustain the Code, whatever it might be.

DR. DAVIS answered that the Code as it now stands was meant, and that if the Association made alterations, that then the changes would be considered as binding.

DR. SCOTT announced certain ethical communications, which were referred to the Judicial Council.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN PRACTICAL MEDICINE, ETC., BY DR. J. H. HOLLISTER, OF ILLINOIS.

In the development of medical science men have been compelled to grapple with some of the most intricate and difficult problems which can challenge investigation. In studying those higher relations which lie in part beyond

the limits of finite conception, reason may properly defer to faith, and seeking the guiding hand of revelation walk with a wisdom other than its own. But in medicine it is not so. Forces, mental and material, interchangeable, interdependent, and inseparable, manifest themselves in ways so manifold and with so many essential facts undiscovered, that reason is compelled to thread her way with steps slow and uncertain, sometimes in truth, oftentimes in error, ever painfully conscious of her weakness and of the mysteries which confront her on every side. Thus only may we account for the seemingly meagre fruitage which represent the labors for more than two thousand years of some of the ablest minds the world has ever seen.

Those great problems of health and disease, of life and of death which affect the well-being of the race have been matters of patient investigation by many of the foremost men in every generation, and many of them have wrought out work which will endure as long as literature shall survive. But the essential causes of disease have been in the main so obscure and their expressions so varied and complex that the best of men have been compelled to conclusions largely inferential.

In the absence of positive knowledge no man can lay the restraining hand upon the fancies and credulities of man, and medicine has ever been the fruitful field above all others for their exuberant development. Speculations have been piled mountain high by one generation of workers to disappear before another as chaff before the driving wind. But despite the winnowings there still remained some golden grains of truth, and the treasure-house has been slowly but surely enriched by these garnerings of the ages.

The speaker then passed to some topics which pertain to medicine in general. First we can congratulate ourselves that the year has been so prolific of trustworthy, accurate, and able workers; probably no year in the world's history has witnessed an equal amount of legitimate original investigation. The united labor of such men is destined to achieve results which could never be accomplished otherwise, and there is born of such work a sympathy and an enthusiasm which is becoming world-wide.

Second, the medical journalism of the year claims favorable comparison with any that has gone before;

AN ABLE LITERATURE IS GOING TO THE PRESS,

a wiser supervision is manifest, new and able contributors are coming to the front, and all departments of medical investigation are having an abler expression of their work.

More than in any year before, the centres of intensest study have been within the range of microscopic vision. The microscope commands the advance to-day, and assertions based upon its revelations can only be tested, accepted, or rejected upon authority equally skilled in the use of this instrument. In microscopy two subjects, more than any others, command attention at this hour. One is the composition of the blood, the other is the agency of microcytes in the production of disease.

The speaker then directed attention to the difference of opinion concerning

THE STRUCTURE OF THE RED BLOOD-CORPUSCLE,

also the discovery of the third corpuscle, and concluded with the statement that as the case now stands England, and not Italy, Norris, not Bozzozero, maintains priority in the discovery of this element of the blood.

Turning to the subject of

MICROSCOPIC ORGANISMS

the most prominent man that confronts us is Dr. Robert Koch, and this prominence is based upon his discovery of what is known as the bacillus tuberculosis. One very important point arises in connection with this question

—in fact a pivotal one, upon which all others must turn, namely, the presence of specific organisms in many forms of disease. But the main question is, Are these causative or only concomitants.

Somewhat extended reference was then made to the labors of Koch and others, to the micro-organism of leprosy, of gonorrhœa, of the vaccine pustule, and other affections. The question that concerns us most is not as to whether we can destroy bacteria but whether they have not a greater vitality than the tissues of the human body, and whether in the germicidal warfare the human organism will not first succumb.

In materia medica numerous new remedies have been brought forward, but none seemed sufficiently prominent to command special attention in the year's reports.

The speaker then directed attention to the fact that recently in Italy a law had been passed which prohibited the

SALE OF PATENT MEDICINES

throughout the kingdom unless the precise composition of the medicine is stated, and asked how long shall enlightened America fall so far behind Italy in the enactment and enforcement of similar laws.

In conclusion, Dr. Hollister directed attention to the following questions and suggestions: Is the time not nearly at hand when the medical men of the United States shall be prepared to institute something like the following action? Let the medical profession in each State, in such a manner as seems best, satisfactorily designate one of their number to constitute with a like appointed member from each of the other States a nominating board. Let it be the duty of this board to nominate a list of men suitable for appointment by the President as members of the Medical Bureau, to be constituted with specific powers and duties in this bureau, composed, perhaps, of ten members. Let the army and the navy and the marine service have proper representation. Let the members of this bureau be subject to removal only for cause, receive a salary of not less than ten thousand dollars annually, to be paid by those who are applicants for the degree of Doctor of Medicine. Let the laws of the various States be so modified that

THE POWER OF CONFERRING THE MEDICAL DEGREE

shall rest solely with this body. Let students graduated by the National Medical Bureau receive an honorary distinctive title, say, that of National Fellow of Medicine. To such a movement the colleges could offer none other than a selfish objection. He thought he could see in such a plan, wisely and impartially executed, the possibilities of a medical culture of the profession such as the world has not yet seen.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN OBSTETRICS AND DISEASES OF WOMEN, BY DR. J. K. BARTLETT OF WISCONSIN.

Dr. Bartlett first directed attention to some of the topics in gynecological surgery. Two years ago his predecessor, Dr. J. R. Chadwick, referring to Emmet's operation, stated "That it could hardly be said to have passed through the stage of novelty to that of criticism; that it was destined to be a fertile topic for several years to come; when it could be assigned to its proper sphere and cease to excite discussion."

Prolonged observation has shown that undue influence was attributed to the lesion, and experience has proven that the relief claimed to follow the operation is not uniformly attained. A more definite understanding of the conditions requiring its performance, and the limits to which it should be restricted, as well as a more just appreciation of its real merits, have been thus attained.

BATTEY'S OPERATION.

Another operation which has been tested for some years is that of Dr. Battey. Most of the indications

which have been claimed to warrant it are now generally admitted. Some doubts still exist with reference to its ultimate results when performed to check uterine hemorrhage produced by myomata. There is some diversity of opinion concerning its efficacy for the relief of epilepsy, or hystero-epilepsy, and mania seemingly dependent upon or associated with ovarian troubles.

Dr. Bartlett then presented at some length the views entertained concerning

TAIT'S OPERATION,

and made somewhat extended reference to the writings of Thomas and Elliot, of New York, and Savage, of Birmingham.

Concerning this operation, some important advances had recently been made in

THE TREATMENT OF EXTRA-UTERINE PREGNANCY,

which appeared to offer a safer and a surer path out of this difficulty than any previously discovered.

The method of treatment by electricity was then referred to as illustrated by cases reported by Lusk, Emmet, Thomas, Garrigues, Rockwell, and others.

WITH REFERENCE TO TRANSFUSION IN POST-PARTUM HEMORRHAGE,

confidence in its practical efficacy in cases where death appears imminent has very much lessened in France, Germany, and England, and thus Dr. Lusk, one of our latest authorities, says that although theoretically it is the most rational method of treatment, practically it is unsatisfactory.

A somewhat extended reference was then made to the literature of the subject as presented by Garrigues, Barnes, Schwartz, Woodman, Hickford, Coates, and others. The next topic of the address was the

OBSTETRIC FORCEPS.

Special attention was directed to one of the latest additions to the instrument presented by Dr. Alexander Duke, of Dublin. It consists of tractors which are applied with the blades before they are locked. These can be attached to a belt about the waist of the operator, and with toe-caps upon his shoes to prevent slipping. The inventor claims an immense gain of power for shortening labor. He considers that there is more chance for the child, and less risk to the soft parts of the mother by pulling the head forcibly through the pelvis, than if allowed to remain and mold itself to the outlet. Dr. Bartlett thought that we should probably hear of a small electro-motor of one-horse power, so arranged as to do the pulling, and save the operator as well as the mother any exertion.

In referring to the views of various authors the statement of Dr. Goodell was quoted, viz., "to tell you the truth, such grave lessons to the mother, and for that matter to the child also, are so constantly brought to my attention that I am disposed to accept Baudelocque's dictum that, take it all for all, the forceps have been more injurious than usual to society."

Dr. Bartlett also commented severely and justly upon the motive for using the forceps which had been frequently given, namely, to secure time for other engagements, and in view of his own experience and the observations of others, he could not avoid protesting against this fashion of the time, in the name and for the sake of the mothers, as well for the ultimate repute of a useful but now much-misused instrument.

The next topic referred to was

THE USE OF ERGOT IN LABOR.

The object in introducing this subject was to suggest a reason for the wide difference in opinion which exists with reference to its usefulness in obstetrics. The writer had administered this drug for many years in cases not

very frequently seen—where the second stage of labor was retarded by insufficient contraction and no pelvic obstacles existed. He regards it as a valuable resource in such cases, and has never witnessed, in his own practice, the tetanic contractions attributed to it since he learned how to employ it. For this purpose he uses an infusion of the freshly and coarsely powdered kernels, about thirty grains to three drachms of water, giving a tablespoonful every thirty minutes until some effect is apparent.

In some cases the effect is obvious after one dose, in others two or three doses are required. In cases of nervous exhaustion on the part of the patient a full dose of quinine is also given. It was also added that the writer had made no use of an anæsthetic in labor save in some exceptional case of feeble uterine contraction, but where ergot was administered and pains became efficient, the anæsthetic was also used. How much modification of the effects of the former were produced by the latter agent he could not positively determine, but was sure they acted well together as an anæsthetic. The contrariety of views with regard to

THE USEFULNESS OF AN ANÆSTHETIC FOR THE RELIEF OF PAIN IN LABOR

also appeared to the writer to be explainable only upon the supposition that it had been improperly and injudiciously used by those who opposed it. He believed a diversity of opinion might be, and probably was, the result of faulty administration. There are three stages of anæsthetic effects which may be produced: 1st, a lessening or annulling of sensibility to pain; 2d, by increased dose, the abolition of intelligence; 3d, the abolition of mobility.

The method and object of anæsthesia in surgery and labor differed widely. For the latter it was rarely necessary to produce much more than its first effect, and this is produced *pari passu* with the pain. A little experience will soon teach the physician how to arrest its effect at this stage, or at least before the second stage is fully attained, and to vary the amount as may be required by different degrees of pain. There is no proof which the writer has ever seen that, used in such a manner, anæsthesia produces or tends to produce post-partum hemorrhage.

In conclusion, if an anæsthetic ever produced post-partum hemorrhage, injury to the child, or other than beneficial results, experience tells us it must be due to the impurity of the anæsthetic employed, or to want of that experience, discretion, and use which is necessary not only here, but in the use of all therapeutic measures employed for the relief of human suffering.

With reference to the use of antiseptics in private obstetric practice, the writer thought that none of the prophylactic measures which had been recommended so strongly were necessary in cases of complicated labor, and that some of them were absolutely dangerous.

He then spoke of

DANGERS ATTENDING INTRA-UTERINE INJECTIONS.

The conclusions which the writer thought could be legitimately drawn were that danger of poisoning after ordinary labor in practice is not such as to demand the precautionary measures which Dr. Barnes has suggested; that in many cases in which the lochia are offensive no general disturbance follows, and that cleanliness as thorough as can be attained and care as to general conditions are only usually necessary; that even in cases where rises of pulse and temperature occur vaginal irritation is frequently sufficient; that in cases where relief has followed the use of carbolic injections, vaginal or intra-uterine, the advantageous results do not so much depend upon antiseptics as upon the cleansing effects by even a simple fluid used in such a manner and quantity as to secure entire removal of any decomposing matters retained in the uterine or vaginal canal.

In conclusion, Dr. Bartlett referred to the necessity for careful constitutional treatment in pelvic disease, stating that it had often been observed, but that it had not received the attention which its importance demands. Specialism, when exclusively practised, is apt to produce narrowness of view. No one who has not received thorough training in general medicine, and has not tested, confirmed, and enlarged their natural thought attained by many years of general practice, is fitted for a specialist. When medical gynecology is thus studied and practised, aided by larger general, local, therapeutic, and hygienic resources, which such research in time will develop, the clearer and surer will be the diagnosis which the future will bring, and the time will come when the present brilliant triumphs of the surgical gynecologist will grow pale before the achievements of his medical co-workers.

DR. TONER, of Washington, presented his

REPORT ON NECROLOGY,

which was referred to the Publication Committee.

The Association then adjourned, to meet on Thursday, June 7th, at 9.30 A.M.

THURSDAY, JUNE 7TH—THIRD DAY.

The Association was called to order at 9.30 A.M. by THE PRESIDENT.

Prayer was offered by the REV. N. S. RULISON, D.D.

DR. KELLER, of Arkansas, called up his proposed amendment to the By-laws, permitting the Committee on Nominations to fix

THE TIME AND PLACE OF HOLDING THE ANNUAL MEETINGS.

The amendment was adopted.

DR. BACHELDER, of Providence, R. I., introduced the following:

Resolved, That a committee be appointed by the President, to consist of one or more persons from each of the States, who shall be members of this Association, to urge upon each legislature

THE ENACTMENT OF MORE STRINGENT LAWS IN RELATION TO ALL TOXICAL AGENTS.

The resolution was adopted.

DR. PRATT, of Michigan, referred to the death of William Farr, of England, and introduced a resolution expressive of high appreciation of the labors of this gentleman in collating vital statistics, and stating that his works are recognized by the medical profession of the United States as an enduring monument to his ability and learning as a physician and a worker in that department. The resolution was adopted.

DR. S. D. GROSS offered the following preamble and resolution:

Whereas, Good nursing is of paramount importance, and whereas the subject is one which strongly addresses itself to the common sense of every intelligent member of society; therefore be it

Resolved, That this Association, fully recognizing the importance of the subject, respectfully recommends the establishment in every county or town of schools or societies for

THE EFFICIENT TRAINING OF NURSES,

male and female, by lectures and practical instruction to be given by competent medical men, members of county societies if possible, either gratuitously or at such reasonable rates as not to debar the poor from availing themselves of this benefit. The resolutions were adopted.

DR. WALTER HAY, of Illinois, offered resolutions providing for the organization of a special section to be devoted to the subject of psychological medicine. Laid over for one year.

DR. N. S. DAVIS, of Chicago, reported from the Standing Committee upon

ATMOSPHERIC CONDITIONS AND THEIR RELATION TO THE PREVALENCE OF DISEASE.

The report was an abstract of what had been prepared, and was in accordance with the general plan established under resolutions of the Association, providing for three parallel sources of coincident observations in twelve different localities, Boston, New York, Philadelphia, Baltimore, etc.

The report was accompanied by extensive tables illustrating the work done by Professor Long and others, and it was stated, that as a result of the works of Professor Long, the quantity of organic matter daily in the atmosphere during the entire year had been estimated for the first time in this country, or in any other. Special attention was directed to one fact, namely, that not a physician in New York City could be secured to co-operate in making clinical observations.

The abstract of the report closed with the following proposition: That the committee be authorized to furnish their report for publication as a part of the transactions of the Association, and to continue the investigations now in progress, with the privilege of drawing upon the treasury for so much of the unexpended balance of the former appropriation as might be necessary. Second, that the thanks of the Association are hereby tendered to the Superintendent of the Signal Service, General Hazen, for his uniform courtesy and favors extended, and that he be requested to continue the same as the committee may require. The report was unanimously adopted.

The resolutions offered by Dr. Didama in behalf of Dr. Tyndale, of New York, at the session on Tuesday, were then taken from the table and referred to the Committee on Atmospheric Conditions.

DR. DAVIS then requested that Dr. Didama, of New York, be added to the Committee on Atmospheric and Ozonic Conditions. His request was granted.

DR. HEAD, of Indiana, introduced a resolution of sympathy with the wife and family of

DR. J. C. HUBBARD, OF ASHTABULA, WHO DIED SUDDENLY ON TUESDAY, WHILE IN ATTENDANCE AT THE ASSOCIATION.

THE PRESIDENT appointed the following

DELEGATES ABROAD:

G. J. Engelman, St. Louis; Wm. M. Finley, Altoona, Pa.; Walter L. Ziegler, Pennsylvania; M. H. Alter, Pennsylvania; R. B. Cole, San Francisco; J. H. Warren, Boston; C. H. Vonkleim, Hamilton, O.; Wm. M. Lawlor, San Francisco; Henry Martin, Boston; J. C. Hutchison, Brooklyn; A. M. Howes, Detroit; E. Borck, St. Louis; T. F. Prewitt, St. Louis; E. P. Allen, Pennsylvania; H. McCall, Michigan; I. N. Quimby, New Jersey; S. La Gordon, Maine.

DR. POLLAK, of St. Louis, introduced resolutions purporting to come from the St. Louis Medical Society, asking that the American Medical Association appoint a committee to take into consideration the

ADVISABILITY OF REVISING THE CODE OF ETHICS,

and to report at the annual meeting in 1884. The communication and the resolutions were laid upon the table.

DR. BRODIE moved that all papers before being read should secure the approval of the chairman of the section to which it was referred. The motion was laid upon the table.

On motion by DR. DAVIS, Dr. M. L. Nardyz, was received as a member by invitation.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN SURGERY AND ANATOMY, BY DR. W. F. PECK, OF IOWA.

In reporting upon the progress made in surgical science

during the last year, it is recognized that many theories are announced as facts, which, when experience and demonstration shall have thoroughly tested them, may be eliminated, perhaps to reappear when the circle of professional experience again completes its revolution. The greatest progress has been made in operative surgery, although other departments have been constantly endeavoring to add new light and additional results to our already extensive accumulations. It is not claimed that large numbers of new operations have been originated and performed, but it is evident that a better understanding of pathological conditions has stimulated surgeons to establish a standard for operations hitherto ventured upon in rare and extreme instances. In pathology, the microscopist has been active in trying to define and locate the germ cause of disease. Certain it is that during the year there has been developed a strong feeling in favor of Koch's views concerning bacilli and their alleged tubercular relations, that these peculiar microgerms exist there can be no longer any doubt, but whether they are the cause of the tubercle or whether the tubercle develops them the profession has not yet made sufficient progress to justify an unequivocal statement.

Dr. Peck then referred to the views entertained by Dr. Koch, and Spina, his opponent. The surgeon is interested in these investigations because it is thought by many excellent men that germs play a very important part in causing infection, inflammation, pyæmia, septicæmia, abscess, gangrene, etc., and if this view is sustained it will be conceded that it will tend to give new and more efficient reasons for

THE USE OF ANTISEPTICS IN PRACTICE.

The condition and the problem of the management of wounds and other pathological processes, by means of the so-called antiseptic methods, suggests the production of greater confidence in the details of operative procedure, and scrutinizing attention to extreme cleanliness in the minutiae of practice. The speaker then referred to the use of carbolic acid and other antiseptics, and to the experience of Thornton, Spencer Wells, Lawson Tait, Billroth, Esmarch, and others, and said that it could not be successfully argued that a lessened mortality was alone due to the use of antisepticism as practised by Lister. It would be immediately asked, "How else can these alleged great changes in practice be explained?" If everything that is used to keep a wound clean, and to insure thorough drainage is called antiseptic practice, then no adequate explanation can be offered. Is not the experience of Mr. Keith as wonderful as the tabulations of the Vienna or Kiel surgeons? Yet it is admitted that most of the leading surgeons of England are thoroughly wedded to the antiseptic treatment of wounds, still there are to be found a few excellent teachers and operators who most reverently believe that nature, with assistance from the surgeon, will do more to save limb and life than the surgeon can do who depends upon restricted antisepticism.

Dr. Peck had opened the abdomen, in all, forty-eight times; in forty-six instances for the removal of ovarian growths; once for an adherent ovary, and once for intestinal obstruction.

In the first thirteen cases there were six deaths. The operations were made under the spray, and the wounds were treated with carbolic-acid solution. In the remaining thirty-one ovarian operations, also in oöphorectomy and in cases of laparotomy, the spray was not employed. The two last-mentioned cases recovered, and out of the ovariectomies there were four deaths. He was of the opinion that many of the wonderful results accomplished by numerous surgeons throughout the country were secured not so much by means of the spray and carbolic acid, as by the extraordinary care and attention which they gave their cases.

Among the new and important instruments which have been presented, mention was made of the

UNIVERSAL OR COMPOUND RATCHET JOINT,

which has been offered by Dr. Stillman, of New York, which can be adjusted at pleasure and permits of universal motion. Perhaps one of the most important steps that have been taken is the utilization of the electric light, both as a means of diagnosis and as an aid in making operations in cavities, and in places where the natural light can be used only with uncertain effect. For this purpose Swain's lamp has been frequently used, which in size is not larger than an ordinary bean, and with it the interior of the bladder, the pharynx, the larynx, the cesophagus, stomach, and ear have been illuminated.

Decided progress has been made in

LOCATING METALLIC SUBSTANCES IN THE TISSUES OF THE BODY

by means of the induction balance by Prof. Graham Bell. Sir Henry Thompson has offered some very valuable information concerning

THE DIRECT EXPLORATION OF THE BLADDER.

He makes a limited incision in the membranous portion of the urethra and then passes the index-finger along the back and through the neck of the bladder, where, by the aid of supra-pubic pressure, a free and satisfactory exploration of the cavity and walls is permitted. The year has greatly added to our previously meagre knowledge of surgical procedure in intra-abdominal pathology. Statistics show that less hazard is encountered in attempting to extirpate tumors, malignant growths, and removing the causes of intestinal obstruction than was formerly supposed.

THE FEASIBILITY OF GASTROTOMY

has been established by experience collected during the past year. Up to January, 1883, there had been performed thirty-six operations for the removal of some portion of the stomach or duodenum for cancer, gastric ulcer, inflammation and destruction of the colon. Unless the greatest discretion is shown, however, in the selection of cases for operation, the mortality cannot be otherwise than very high. In connection with this operation there were two very important questions to be answered. First, If the cancer, for which nearly all the operations are performed, is due to a general cause, can the surgeon expect the patient to receive more than temporary relief from the operation? Second, Will the aggregate life in those cases in which the operation is successful, be greater than it would be in those cases in which death occurs as the direct result of the disease?

LAPAROTOMY

is an operation which is progressing with much favor in America and France. Opening the abdomen to relieve intestinal obstruction is not only inviting, but operators who have had experience in making ventral section proceed with less hesitation to search within the abdomen for arrested alimentary action than they have heretofore done. Dr. Peck then gave the history of some cases which illustrated the liability to the formation of adhesions between the cæcum and the surrounding parts, and also illustrated the relief which might possibly be obtained by operative interference. Prof. Loretta, of Bologna, had performed the operation of

STRETCHING THE CONSTRICTED PORTION FOR STENOSIS OF THE PYLORIC ORIFICE

of the stomach. The number of operations thus far performed were four, with two recoveries. It will at once be conceded that a careful study of the history in any given case must result in unequivocal diagnosis.

Dr. Peck then directed attention to one of the causes of death in this department of operative surgery, illustrated by a case. Post-mortem examination was made nine hours after death. No foreign material of any kind was found inside of the abdominal cavity. All of the organs were apparently healthy, except that in the right

ventricle of the heart there was a large, white fibrinous ante-mortem clot. What caused the blood-clot? It is not enough to say that in any given case death came as a result of fibrin collection on or around one or more of the heart-valves. There must be a further cause which influences the vital fluid.

Dr. David Newman, of Glasgow, has performed

THE OPERATION OF NEPHRORRAPHY

upon a woman, it being the first operation made in England for floating kidney. The capsule of the kidney was stitched to the margin of the incision, and deep button-hole sutures were passed through the kidney, thus fixing the organ in its natural position. The patient recovered, and is now well. Dr. Wm. Thomson, of Dublin, has added another case of

LIGATURE OF THE INNOMINATE ARTERY,

the patient living forty-two days. Dr. Arthur E. Baker, of London, has practised a novel and apparently

SUCCESSFUL OPERATION FOR VARICOCELE.

After washing the scrotum thoroughly, he separates the veins of the cord from the vas deferens, then passes a needle threaded with twisted silk behind the veins, after which the veins are permitted to drop back, when the needle is returned in front of the veins, which are thus secured in the loop of the ligature through the original opening. The thread is then made tense, and the veins are brought close to the walls of the scrotum, and the ligature is well tied, cut close to the knot, and then allowed to return with the veins to the scrotal cavity. The results reported are such as to commend a further trial of the operation. Reference was made to two interesting and remarkable operations performed upon the sternum and its contiguous relations by Dr. Keuster, of Berlin, and Prof. Koenig, of Göttingen. They were performed for malignant growths, illustrated bold and scientific manipulation, and at the same time indicated how nearly, dexterously handled, a knife and finger may reach the vital organs of circulation and respiration without compromising life. Whether or not the operations were necessary, Dr. Peck did not propose to discuss. Important additions had been made to our surgical literature, and special reference was made to two volumes, one on surgery and one on anatomy. That in surgery by D. L. Huntingdon, who succeeds the late lamented surgeon Geo. A. Otis, has been performed, and the world is now in possession of the most complete record of wounds and injuries resulting from war that has ever been produced. Dr. Harrison Allen, of Philadelphia, has produced a part of what promises to be an excellent treatise on human anatomy, including medical and surgical relations.

A real and most substantial advance is being made in surgery in connection with railway corporations. Many of the leading lines have introduced into their system of management surgical departments, the objects of which are: first, to enable the company to more economically manage its affairs, and secondly, to insure to those who are unfortunate enough to receive injuries the certainty of receiving the most complete surgical skill. The ultimate benefit which is certain to accrue to the profession is the accumulation of a vast amount of statistical information which will be of great service in neural pathology, because it is a well-known fact that in many cases the results of alleged railway accidents are not sustained by the systematic expressions of injured tissues and organs. The instances are exceedingly rare where pathology which is the result of injury does not fail to receive corresponding endorsement by the surgeon.

On the other hand, the surgeon often finds himself unable to satisfactorily interpret the inharmonious description of symptoms furnished by the person who sees a moneyed equivalent at the end of a well-established concussion of the brain or spinal cord.

The surgical bureaus of these corporations will, by their collected experience and tabulations, be qualified so as to be able to furnish much valuable information to both the judicial and popular tribunals. Then justice to pathology and rewards to individuals will receive fairer and more honorable administration.

ADDRESS OF THE CHAIRMAN OF THE SECTION IN STATE MEDICINE,

by FOSTER PRATT, M.D., of Michigan.

After making a few introductory remarks, the speaker said that no noteworthy advance had, during the past year, been made in either department belonging to this Section. The Section was established in 1873, and has now completed its first decennial period.

Not quite fifteen years have passed since systematic work in sanitary science began in the United States. As we compare the sanitary work of the year 1883 with its beginnings in 1873, there is room for congratulation throughout the country that during these ten years so much has been accomplished. What has been accomplished? Sanitary organizations and machinery have been developed and to a good degree perfected; men have been educated to some degree for their special work; books, magazines, and special articles have been indefinitely multiplied, and in all these directions it is clearly indicated that the popular interest and approval of sanitary knowledge and work is well established, and that the people are desirous of continued work and observation.

The work of sanitary reform has manifested itself in the system of

LIGHTING AND VENTILATING OUR HOMES,

our school-houses, and other public buildings; and the earth, and the air, and the water are being investigated with wholesome suspicion, to clear out their unwholesome condition. Municipalities without number are now supplying themselves with water from purer sources than formerly, and their accumulated filth is being destroyed or removed or disinfected, and their new filth is being carried away by properly constructed sewers.

The superstitions of earlier days have been steadily giving way under improved sanitary condition, and in towns both large and small there is unmistakable evidence of

THE GROWTH OF SANITARY KNOWLEDGE,

and the people are emancipating themselves from the thralldom of old views which were but the harbingers of epidemics and contagious diseases. They have come to learn that by proper observation of sanitary law they may escape, to a very great extent at least, the results which follow these epidemics and contagious affections.

TO AVOID OR PREVENT DISEASE

has come to be recognized as the principal method of counteracting the influence of these agencies. Prior to 1873 but two States in the Union had established State boards of health, Massachusetts and California. Since that date others have been added, so that at the present time thirty-eight States practically proclaim that the safety of the people is the supreme law; that public health is public wealth, and that to promote the health of the people is the first duty of the statesman.

There are yet other States which have either neglected or refused to enter upon this warfare against disease. It might be true that superstition, or even the running fire of derision from physicians, or evolution, or all combined, might delay the end desired in sanitary reform, but its consummation could not be postponed for any considerable length of time. Doubtless many years would pass before every State in our Union would be engaged in battling against the ills of humanity. When we have a health board in every State, and National board of health with proper powers and money, then we

may ask what will the Congress of the United States do when we ask for bread—will they give us a stone? Missouri is the latest recruit to the number of States in which health boards have been established, and Ohio and Pennsylvania have made strenuous efforts to join the majority.

The aid and agency of the American Public Health Association in producing this result must be recognized, but above all, and the most important of all agencies to mould public opinion, is the individual doctor who has his own personal sphere of action and influence.

He has led the way, and may still continue to demonstrate the success of the movement, because facts and reasons have been his principal weapons of warfare. Facts have demonstrated that small-pox can be prevented, also that isolation with reference to other communicable diseases has been a means of counteracting contagious influences, and facts and reasons on a grand scale are equally useful. Dr. Pratt then referred to the work which the late William Farr, in England, began in 1837, and in which he continued to labor, in compiling vital statistics, and during thirty years accumulated pile upon pile, and added demonstration to demonstration, which finally led to the passage of the British medical act, the crowning labor of his life. It was to Farr's tables and deductions and demonstrations that could be traced the basis upon which all of our sanitary structures in the United States were founded.

After reviewing the influence which statistics on such a large scale can exert, the speaker said, should be assured that the average mind is responsive to the laconic deductive philosophy. But we shall be asked, What is it that may be done by State boards of health which justify their organization and power? To answer this question Dr. Pratt referred to the sanitary work which had been performed in his own State of Michigan, and detailed at some length the work as it appears in the volumes of annual reports, where appear papers which were written upon special subjects by men especially qualified to write upon these subjects—by doctors, clergymen, chemists, and editors, who had seen how to utilize the press for sanitary purposes.

The volume contained vital statistics from one thousand four hundred local boards in the State, and all of this work and much more had been performed at an expense of less than six thousand dollars.

Does it pay? He was sure of the answer that would be given by his audience. But what would be the response from the people? Dr. Pratt then dwelt at some length upon the influences which should be brought to bear upon the people to convince them of the utility of this work in sanitary reform, such as would convince men and women of its practical value. He said "himself" or "herself" because it was a fact that in Massachusetts, which was the first State to organize a State board of health, the initial step in sanitary reform was taken by a lady.

Continuing, the speaker presented the effect which sanitary reforms produced on the duration of life. And it appeared from English statistics that there had been an increase during the last seven years in the length of human life, among males of two years and among females of three years and a half; in other words, that male life had been increased five per cent. in duration, female life more than eight per cent., and the average increase in the duration of human life was six and one-half per cent. throughout England.

He asked the significant question, Is not this proof that sanitary organization is of sufficient advantage to be accepted and adopted by the masses? and he hoped that the time would soon come when it would be so generally recognized that in newly organized States the people would be able to prevent the evils which have existed in the older States.

Are we doctors responsible for any of the tardy movements in this direction?

He was not about to preach a sermon or read a lecture, but have we not crippled sanitary work by claiming for it results that are not yet warranted? Have we not urged as facts in sanitary science what in truth is nothing more than a theory, sometimes a mere theory too?

Our advanced ideas regarding germs, etc., what are these but stumbling-blocks in the way of laymen and intelligent legislation? When we can prove to laymen that a certain stream is polluted near its source, causes sickness and death to many families, they will believe your established facts. But how much will they know about your theory concerning the precise nature and function of the morbid agency that is being carried by the stream, especially if it lead you to a somewhat too scientific method of meeting the question which is of practical moment, how to purify the stream.

In this country all sects in medicine, like all systems and sects in religion are equal before the law.

Have some of us been somewhat too arrogant or exclusive in the organization or proposed organization and management of this public affair? In private relations, in private practice we hold to the rules of the code that ignores as unscientific all medical systems based upon exclusive dogmas, but in public when we meet all sorts of doctors, and their patrons as well as our own, as taxpayers and citizens to discuss and devise measures of common interest, is not one man's medical theory as good as another's? Dr. Pratt called especial attention to the remarkable unanimity with which the State Medical Societies, the American Public Health Association, and the American Medical Association, expressed their approval of the organization of a National Board of Health. He then made brief reference to the bacillus and other micro-organisms, and stated that before sanitation can avail itself of these discoveries much must be learned in regard to the life and propagation of disease-germs; atmospheric, external, and other conditions must be thoroughly studied. As medico-legal sanitarians, waiting for firmly established truth, we must, metaphorically speaking, hold our breath.

THE TREASURER'S REPORT

showed a balance in the treasury of \$903.93. The librarian reported that the number of distinct titles in the library is 1,817, in 5,713 volumes, inclusive of pamphlets. He recommended that the home and foreign journals be continued, and that two hundred dollars be placed at the disposal of the librarian for purposes of securing and binding pamphlets and journals, also that the subscription of fifty dollars be continued for the Index Medicus. The report was accepted and the recommendations adopted. The Committee on Publication, Dr. Fricke, chairman, made its report, which was received and ordered entered upon the minutes.

DR. EUGENE GRISSOM, of Raleigh, N. C., then read the

REPORT OF THE COMMITTEE ON NOMINATIONS.

President—Austin Flint, New York. *Vice-Presidents*—R. A. Kinloch, South Carolina; T. B. Lester, Kansas City; A. L. Gihon, U. S. Navy; S. C. Gordon, Maine. *Treasurer*—R. J. Dunglison, Pennsylvania. *Librarian*—C. H. Kleinschmidt, District of Columbia. *Chairman Committee of Arrangements*—A. Y. T. Garnett, Washington, D. C. *Assistant Secretary*—D. W. Prentiss, Washington, D. C. *Members Judicial Council*—F. D. Cunningham, Virginia; H. O. Marcy, Massachusetts; W. O. Baldwin, Alabama; J. S. Billings, U. S. Army; N. W. Miller, U. S. Marine Hospital Service; E. Grissom, North Carolina; R. N. Todd, Indiana, to fill vacancy; E. W. Clark, Iowa.

Committee on Necrology—J. M. Toner, Washington, D. C., Chairman; R. F. Michel, Alabama; Wm. Turner, Arkansas; H. M. Gibbons, Jr., California; C. Dennison, Colorado; C. H. Pinney, Connecticut; J. B. Van Velsor, Dakota; H. F. Campbell, Georgia; J. H.

Chew, Illinois; W. Lomax, Indiana; S. B. Chase, Iowa; C. V. Moltram, Kansas; W. B. Reynolds, Kentucky; E. Lewis, Louisiana; A. J. Fuller, Maine; C. Johnson, Maryland; J. H. Gilman, Massachusetts; W. F. Breakey, Michigan; F. A. Dinsmore, Minnesota; W. Johnson, Mississippi; W. H. Mudd, Missouri; R. C. Moore, Nebraska; H. D. Didama, New York; G. F. Welch, New Jersey; H. Haywood, North Carolina; S. Loving, Ohio; F. Woodbury, Pennsylvania; W. E. Anthony, Rhode Island; J. B. Lindsley, Tennessee; M. D. Knox, Texas; O. F. Fassett, Vermont; L. B. Edwards, Virginia; S. L. Jepson, West Virginia; E. L. Boothby, Wisconsin; W. S. Forwood, U. S. Army; A. L. Gihon, U. S. Navy; W. Wyman, U. S. Marine Hospital Service; F. P. Porcher, South Carolina; W. H. Page, New Mexico; Wm. Lee, District of Columbia; W. Marshall, Delaware; W. H. Carpenter, Oregon.

OFFICERS OF SECTIONS.

Practice of Medicine—J. V. Shoemaker, Pennsylvania, Chairman; W. C. Wilecomm, Secretary. *Surgery and Anatomy*—C. T. Parks, Illinois, Chairman; H. O. Walker, Michigan, Secretary. *Obstetrics and Diseases of Women*—T. A. Reany, Chairman, Cincinnati, O.; J. T. Jelks, Arkansas, Secretary. *State Medicine*—D. J. Roberts, Tennessee, Chairman; Franzoni, Washington, Secretary; J. Cochran, Alabama; J. J. McAlmat, Arkansas; W. D. McNutt, California; Chas. Dennison, Colorado; C. W. Chamberlain, Connecticut; J. B. Vanvelser, Dakota; J. P. Logan, Georgia; O. C. Dewolf, Illinois; G. Sutton, Indiana; W. S. Robertson, Iowa; D. W. Stormont; Kansas; J. P. Thompson, Kentucky; S. C. Chaille, Louisiana; S. H. Weeks, Maine; John Norris, Maryland; H. J. Bowditch, Massachusetts; F. K. Owen, Michigan; C. N. Hewitt, Michigan; N. M. Milligan, New Mexico; S. Townsend, D. C.; M. Simmons, South Carolina; S. P. Bush, Delaware; H. Carpenter, Oregon; H. A. Gault, Mississippi; L. Hall, Missouri; L. Larsh, Nebraska; E. M. Moore, New York; E. M. Hunt, New Jersey; J. McKee, North Carolina; T. L. Neal, Ohio; R. J. Dungleison, Pennsylvania; C. H. Fisher, Rhode Island; C. C. Fite, Tennessee; T. D. Wooten, Texas; S. W. Thayer, Vermont; J. L. Cabell, Virginia; Moffit, West Virginia; J. T. Reeve, Wisconsin; J. R. Smith, United States Army; J. M. Brown, United States Navy; T. H. Bailhoche, United States Marine Hospital Service. *Ophthalmology, Otolaryngology, and Laryngology*—J. J. Chisholm, Baltimore, Chairman; Thompson, Indianapolis, Secretary. *Diseases of Children*—Wm. Lee, Maryland, Chairman; W. R. Tipton, New Mexico, Secretary. *Oral and Dental Surgery*—T. W. Brophay, Illinois, Chairman; J. S. Marshall, Illinois, Secretary.

Place of Meeting, 1884—Washington, D. C., first Tuesday in May.

The report was also accompanied by the statement and a letter from Dr. A. L. Gihon, that the rumor that he was unfavorable to the Code of Ethics was without foundation, and that he was unqualifiedly an adherent of the present Code and should be governed by its requirements.

On motion by Dr. W. S. DAVIS, the report was received and adopted.

DR. DIDAMA, of Syracuse, then read the following letter from Dr. Austin Flint, addressed to him as a member of the Committee on Nominations:

"Circumstances render it necessary for me to return early to-day, June 7th, to New York. Will you kindly express to our brethren, the Members of the American Medical Association, with my sincere thanks, an assurance that I thoroughly appreciate the great honor which has been conferred on me. I accept the honor, feeling assured that I may confidently expect co-operation and indulgence in my efforts to fulfil the duties which it involves."

The Association then adjourned, to meet at 9 A.M. Friday.

FRIDAY, JUNE 8TH—FOURTH DAY.

Association called to order at 9.30 A.M. by the President. Prayer by REV. C. T. COLLINS.

Amendment providing for representation from Medical Bureau United States Indian Service was laid upon the table.

DR. TONER withdrew his proposed amendment that the office of Permanent Secretary be vacated.

The proposed amendment to allow the Chairmen and Secretaries of Sections to add earnest workers, and that the Librarian be made a permanent officer, was laid upon the table.

The proposed amendment to allow permanent members to vote gave rise to discussion, and finally the whole subject was indefinitely postponed.

DR. DAVIS, from the Judicial Council, reported that the petition of D. W. Day be returned, with leave to supplement the paper with a written statement of the character of the new evidence he proposed to introduce. Further, that in the case of D. H. Goodwillie, of New York, the Council decided, that his registration be cancelled, and the annual dues be returned.

DR. TURNBULL offered a resolution that the Legislature of each State be petitioned to pass

LAWS REQUIRING RAILROAD EMPLOYEES TO BE EXAMINED

regarding their hearing before taking charge of any railroad train. Referred to Section on Otolaryngology.

DR. PRATT offered a resolution, that being impressed with the importance of the Parliamentary Bills Committee of the British Medical Association, the American Medical Association urge upon Congress the subject of

COMPETENT MEDICAL SANITARY SERVICE ON BOARD ALL TRANSATLANTIC OCEAN VESSELS;

that a committee of five be appointed to report on the subject at the next Session. Adopted.

DR. BELL, of New York, offered a resolution that all papers hereafter offered, except the address of the President and the Chairmen of Sections, shall be first referred to the Trustees of the *Journal* for classification and appropriate reference. This gave rise to discussion, and finally was tabled.

THE PRESIDENT announced as the committee to further Dr. Pratt's resolution, Drs. Bell, Gibson, Marcy, Quimby, and H. H. Smith.

DR. BRODIE moved resolutions of respect to the memory and labor of the late General J. K. Barnes. Adopted.

DR. KELLER offered a resolution that in the near future, cremation will become a necessity in large cities, and populous districts in the country, and asked that it be referred to the Section on Hygiene. Carried.

THE PRESIDENT appointed the following delegates to the Canadian Medical Association: Drs. W. Brodie and H. L. Walker.

DR. TONER moved the thanks of the Association to the Secretary and Treasurer for the efficient and satisfactory manner in which they have discharged their duties. Adopted.

DR. BLOUNT, Chairman of the Section on Diseases of Children, was granted the privilege of submitting his address without reading.

DR. QUIMBY offered the usual resolution of thanks to the Committee of Arrangements and citizens of Cleveland for their entertainments, which was unanimously adopted.

THE PRESIDENT invited the Vice-Presidents elect to the platform, made a few remarks complimentary to the President elect, bade the Association an affectionate farewell, after which DR. LESTER, of Kansas City, Second Vice-President, took the Chair, and declared the Association adjourned, to meet on the first Tuesday in May, 1884, at Washington, D. C.

AMERICAN SURGICAL ASSOCIATION.

Fourth Annual Session, held at Cincinnati, Ohio, May 31, June 1 and 2, 1883.

(Special Report for THE MEDICAL RECORD.)

THE fourth annual meeting of the American Surgical Society was convened at 10 A.M., July 31st, at College Hall, Cincinnati.

PROF. S. D. GROSS, M.D., of Jefferson College, Philadelphia, presided, and DR. J. R. WEIST, of Richmond, Ind., performed the duties of Secretary.

THE PRESIDENT read a brief

ANNUAL ADDRESS,

congratulating the Association upon its rapid growth and present prosperity, upon the fact that there had been no losses by death during the year, and recommending the adoption of an amendment to the by-laws increasing the limit of membership from one hundred to one hundred and fifty, and also enlarging the Council from four members to seven.

DR. P. S. CONNER, Chairman of the Committee on Reception, delivered a brief

ADDRESS OF WELCOME,

and invited the Fellows to attend the annual banquet at the Gibson House at 8.30 P.M., June 1st, at the close of the second day's session.

THE PRESIDENT asked that the Council act at once upon nominations for fellowship, in order that the new members might take part in the meetings.

It was announced that only eleven vacancies existed.

In the absence of Dr. Cole, one of the members of the Council, Dr. Moore, of Rochester, was appointed temporarily to act in his place.

A letter was read from the venerable Prof. Willard Parker, acknowledging the honor conferred upon him by the Association in electing him to fellowship, which he accepted with pleasure. From the

TREASURER'S REPORT

it was shown that the Association has at present on hand a balance of \$2,270.31. Drs. Mears and Benham were appointed auditors of this report.

HAVE WE ANY THERAPEUTIC MEANS, AS PROVEN BY EXPERIMENT, WHICH DIRECTLY AFFECT THE LOCAL PROCESSES OF INFLAMMATION?

C. B. NANCREDE, M.D., of Philadelphia, Pa., read a paper on the above, of which the following is an extract: Careful study of the essential processes of various morbid conditions, has often led to the theoretical employment of therapeutic measures, which by their apparent practical use have confidently encouraged their future employment.

If we find by experiment that our *à priori* therapeutics, when experimentally applied in the case of animals, actually produce the precise effects which we have predetermined will probably prove efficacious, then we can hardly go astray in confidently applying similar treatment to the human subject. If we find clinical discrepancies, it must be our aim to ascertain the exact limitation of the remedy for good or evil, and the precise indications for its employment, instead of thrusting it contemptuously aside when we fail of the expected result, the failure being probably our faulty method of applying the treatment, and not self-inherent. Upon the other hand, we must always hold before our eyes the experimental mirror of what has been and can be effected, and not expect to do what we have demonstrated is an impossibility.

The paper was avowedly written in advocacy of blood-letting in general, but chiefly of the local abstraction of blood. It referred only to the early stages of inflammation. No direct effect can be exerted upon the tissue-

changes of that process when the inflamed part has returned to its foetal state, was merely embryonal tissue, only a step farther from which was pus.

The writer enumerated the vascular changes, as described by Burdon-Sanderson, but said that, contrary to expectation, the circulation at the outset is accelerated in the dilated vessels, but the rate soon became normal and was succeeded by a slowing, then an oscillatory movement, temporary stagnation, again a resumption of the flow, and finally permanent stasis with the crowding of the vessels, especially in the veins, with cell elements, so that the previous clear space existing along the walls of the arteries can no longer be detected. The obstructions seemed to consist solely of red cells, which were so closely packed as to render "their individual forms . . . scarcely distinguishable." Free diapedesis of the white blood-cells now took place, with exudation of liquor sanguinis, both processes having commenced when incipient stagnation set in. In this connection he related the experimental conclusions of Ryneck and H. Weber.

On account of the stimulating effects of the exudation the cells of the part returned to the foetal state and pus resulted. The whole process of inflammation was summarized in the words of Burdon-Sanderson. The white blood cells in the early stages of inflammation are sluggish and then cease to move in the absence of oxygen, and were active in proportion to the amount of that substance present. It was also indisputable that the red cells were the main carriers of oxygen, and that if their numbers were relatively increased to the fluid in a given bulk of blood, especially if, as in inflammation, both the necessity and capability of the cells of the tissue making use of the oxygen were removed, at once an excess of oxygen, *i.e.*, an increased amœboid action of the white cells, not only was possible but *became a necessity*.

The theoretically perfect remedy for incipient inflammation must comprehend the following effects: it must either lessen the vis-a-tergo of the heart's action so as to prevent injury to the vascular wall by over-distention and the consequent outpouring of liquor sanguinis; it must prevent such an ingress of blood into the affected area as would produce the excess of oxygen, the migration of cells, the blocking up of the lymph-spaces, etc., or, what would practically amount to the same thing, lessen the difficulty of escape on the venous side.

The Doctor then made his conclusions as referable to treatment of traumatic inflammations.

The discussion was opened by DR. CAMPBELL, of Augusta, Ga., who strongly favored blood-letting. He taught his students the value of blood-letting, which he placed next to morphia in the list of therapeutic agents. He advocated its value in puerperal convulsions, and thought that instead of there being a state of anæmia of the brain, the woman in child-bed was full of blood, that by blood-letting we relieved congestion of the kidney on which the convulsion depended. He always had and always would carry his lancet.

DR. E. M. MOORE, of Rochester, N. Y., contended that we most needed a means of finer diagnosis, and related his experience of epidemics of pneumonia and cerebro-spinal meningitis which occurred in his neighborhood in 1848, when he advocated sustaining treatment instead of blood-letting, in opposition to the general opinions of those days.

DR. POST, of New York City, was in favor of blood-letting in a certain proportion of such cases.

DR. GUNN, of Chicago, also supported such a view, as did also DR. BRIGGS, of Nashville, Tenn., and DR. GREGORY, of St. Louis, Mo.

DR. KINLOCH, of Charleston, S. C., believed that fewer errors were committed on the side of supporting treatment than on that of the depleting method.

DR. DAWSON, of Cincinnati, O., asked why, if blood-letting was such a remedy, have we abandoned it; why, if we advocate a remedy so strongly, do we not use it?

He asked some of the advocates how many times in a year they bled a patient.

DR. NANCREDE made a few corrections of misconceptions entertained by some of the members. He repeated the essential phenomena of inflammations; said he referred only to traumatic inflammation. He did not claim that after tissue changes had occurred the process could be aborted, but, on the contrary, blood-letting after such time had an injurious effect; but that when stasis had occurred, or was beginning, it could be made to disappear, as he had observed. If the heart was weak, he would stimulate it to drive the blood through the part. The good effects were confined wholly to inflamed area.

Paper ordered referred to Committee on Publication.

At Thursday's afternoon session Dr. John H. Packard, of Philadelphia, read a paper containing a report of a reamputation at the hip-joint, secondary hemorrhage with ligation of the primitive iliac artery.

ESMARCH'S BANDAGE AS APPLIED TO TRAUMATIC ANEURISMS.

PROF. T. G. RICHARDSON, of New Orleans, related the following history of a case:

The patient received a pistol-shot in left thigh, October, 1876, in front and to the inner side, four inches above patella, ranging downward, immediately across the track of the femoral artery, emerged at the upper angle of popliteal space, with no serious hemorrhage. The wound healed in a few weeks—no lameness or other discomfort resulted. In April, 1878, the patient discovered a soft deep-seated tumor, which grew for fourteen months, when it had attained the size of a goose's egg. There was no discomfort. But after some time, the limb below the tumor became suddenly one day numb, swollen, and congested, and continued until elevation, frictions, and heat had been resorted to for twenty-four hours.

He consulted his physician in May, 1879, who discovered a fusiform, pulsating soft fluid tumor, a traumatic aneurism, and then placed the patient under Prof. Richardson's care. The patient was admitted to the hospital in New Orleans. The doctor then applied pressure by Esmarch's bandage, fingers, and tourniquet. After seventeen hours, there being no signs of coagulation taking place, and the patient being much exhausted, the treatment by compression was omitted.

A month after, the patient's general condition being favorable, ligation was determined upon. Months after ligation the tumor was still fluid. Dr. Richardson then proposed to aspirate the tumor and close the sac by some stimulating fluid, but the patient, suffering no inconvenience from the tumor, refused instrumental interference, and returned to his usual business. The patient continued well for some time, until December, 1881, when suddenly a most alarming condition arose; the veins of the patient's foot and leg were in a condition of thrombosis, and the skin gangrenous. Amputation was then made, and during the operation the sac of the tumor was accidentally cut, when a profuse discharge of dark bloody-looking fluid occurred. The patient did badly, the flaps after twenty-four hours became gangrenous, and the patient died. An autopsy was made. The tumor measured seven to eight inches in length and four inches in breadth; the artery for two inches immediately above was not obliterated. Above that point the artery was merely a fibrous cord.

The sac did not communicate with the artery below. There projected into the tumor another smaller tumor which communicated with the femoral vein. The doctor then made a summary of the interesting points in the case.

I. *History.*—*a.* Shot-wound, October, 1876. No serious hemorrhage. *b.* Tumor discovered, April, 1878, an interval of eighteen months. *c.* Attention of phy-

sician first called, May, 1879, two and one-half years. *d.* Esmarch's bandage unsuccessful, June, 1879. *e.* Artery ligatured, July, 1879. *f.* Thrombosis and gangrene, necessitating amputation, December, 1881, nearly eighteen months after ligation.

II. *Pathological Anatomy.*—*a.* Expansion of the artery to form the tumor. *b.* Failure of ligation to affect coagulation. *c.* No communication of sac with the artery below. *d.* Nature of the blood in the sac. *e.* Intracystic protuberance and its communication with the femoral vein.

He then exhibited a diagram of the popliteal artery and vein, also the pathological specimen, and asked the assistance of the Association in determining the exact nature of the lesions, expressing himself as in favor of an arterio-venous aneurism.

THE PRESIDENT asked if all the coats of the artery had been traced into the tumor.

DR. RICHARDSON said he had not determined that point.

The papers were referred to Committee on Publication, and a special committee of three were appointed to examine the specimen and report at the next meeting. It was ordered that all discussion of the paper be postponed until after the special committee reported on the return of the specimen.

THE USE OF TRIPHINE IN TRAUMATIC EMPYEMA ASSOCIATED WITH THORACIC FISTULA.

Dr. Richardson also presented the following: Chronic suppurating pleuritis with an imperfect fistulous outlet, external or bronchial, is not an uncommon result of gunshot or other penetrating wounds of the thoracic cavity; and it is no secret that the resources of surgery have not heretofore offered much encouragement to the patients. In the majority of cases there is a contraction or sinking in of the injured side from inflammatory changes, a constant discharge of fetid pus, persistent cough, fevers, and more or less rapid exhaustion of strength, usually terminating fatally. Two main difficulties were encountered in the treatment: first, insufficient drainage; and second, permanent separation of the lung from the chest wall. To those two points he desired to call attention.

First.—The serious obstacle to drainage in these cases was not the stenosis, but the approximation of the ribs consequent upon the sinking in of the chest wall. Owing to the shortness and greater degree of fixedness of the first four or six ribs, very close approach of their adjacent borders was seldom seen except in quite young subjects.

But in other situations where greater latitude of motion existed, more especially along the lateral planes of the thorax below the fifth or sixth ribs, it was not rare, in the cases under consideration, to find the adjacent edges closely applied, and sometimes even slightly imbricated. It was impossible, under such circumstances, by any ordinary means to preserve satisfactory drainage, however extensive it must be made in an intercostal space. The effect of the entrance of air into undrained pyogenic sacs was familiar to every one, and in no other part of the body, not excepting pelvic and psoas abscesses, was the decomposition of the contained fluid more complete or more certain to result in the death of the patient by the production of pyæmia, or more slowly by consuming irritative fever.

Second.—The obstacle to the closure of the pus cavity arising from compression of the lung by inflammatory membrane, and the consequent inability of this organ to expand to its original dimension, was not of itself detrimental to the life of the patient. Pyogenic surfaces when freely exposed to air, and at the same time sufficiently protected to prevent desiccation, more especially if kept moist by an antiseptic fluid, seldom gave rise to pyæmia or irritative fever.

As the great danger in these cases depended mainly

upon the want of suitable drainage, it was to the best method of effecting this purpose that he desired to draw attention. The surgeon's only resort was the removal of a portion of one or more ribs. This might be accomplished by one or other of the ordinary methods of bone-resection, but it may be best accomplished by the use of a large trephine. The idea of trephining the thorax was not new. It was said to have been proposed by Hippocrates, and in more modern times had been modified by Reybard, and adopted by Recamier, Trousseau, and others.

As well as Dr. R. could ascertain, this operation originated in New Orleans, and was almost peculiar to that city, where it had been frequently performed during the past twenty years with increasing favor.

To the late Professor Warren Stone, Sr., M.D., was undoubtedly due the credit of having first performed this or any other method of resection of the rib for empyema.

The Association then adjourned to the amphitheatre of the Ohio Medical College, to witness a demonstration on the cadaver of ligating the primitive iliac artery and the operation of lumbo-colotomy, by John H. Packard, M.D., of Philadelphia, Pa.

DR. B. A. WATSON, of Jersey City, read a paper on

LISTER'S SYSTEM OF ANTISEPTIC WOUND TREATMENT VERSUS ITS MODIFICATIONS,

in which a historic sketch of the developments of the modern method of treating wounds, and a consideration of the effects of the antiseptic treatment was entered into, with a full indorsement of the Listerian method, especially as modified by Dr. Markoe, of New York. The details of several cases were given, showing the advantages of free drainage from wounds, accurate coaptation of surfaces, and the use of carbolic acid solution in suppurating cavities, and their distention.

The discussions were opened by DR. PACKARD, who, on behalf of himself and other surgeons of Philadelphia, repudiated Listerism, had contrived to get along without it, and would continue to do so.

DR. POST, of New York, said the details of Listerism were not followed by himself nor by other surgeons of New York.

DR. A. VANDERVEER, of Albany, N. Y., repudiated Listerism on behalf of himself and other surgeons of Albany, N. Y., but believed that the most important point was thorough drainage.

DR. RICHARDSON, of New Orleans, also repudiated Listerism on behalf of himself and other surgeons of New Orleans.

DR. MCGRAW, of Detroit, Mich., referred to

THE DANGERS OF CARBOLIC ACID,

and related the history of a fatal case, the patient, a boy, dying comatose.

DR. POST asked as to the condition of the pupils.

DR. MCGRAW replied that the pupils were strongly contracted. He was unable to obtain any urine, as the boy passed his urine in bed.

DR. MASTIN, of Mobile, Ala., and DR. CAMPBELL, also spoke against Listerism.

DR. DAWSON thought cleanliness and drainage were the only things to be regarded. Listerism in all of its details had been tried in Cincinnati, but he thought with no better results than without.

DR. NANCREDE still favored Listerism.

DR. PRINCE, of Springfield, Ill., thought Listerism in its details unimportant, but that the principles of Listerism were impregnable.

DR. KINLOCH, of Charleston, S. C., spoke strongly against carbolic acid.

DR. WATSON said that he had not implied that Listerism in its details was accepted by the surgeons of America. He was, in fact, aware that Listerism had made but little progress in the United States, but that it had, nevertheless, a great modifying influence on the treat-

ment of wounds, and that the opposition to Listerism came principally from those who had never tried it or had never seen it.

The Association was again called to order by the President at 10 A.M. on Friday, and went immediately into executive session. The following new members were elected:

Dr. McCann, of Pittsburg, Pa.; Dr. Fenger, of Chicago; Dr. Taylor, of California; Dr. Peck, of Iowa; Dr. Dandridge, of Cincinnati.

THE VALUE OF EARLY OPERATIONS IN MORBID GROWTHS was the title of a paper by S. D. Gross, M.D., I.L.D.

The value of early surgical interference in morbid growths, especially malignant, has long been recognized by writers and teachers, but not with such a degree of force and emphasis to which it is entitled.

The great reasons for the removal of tumors in the early stages of their development may be thus stated: 1, the less risk of shock and of hemorrhage; 2, the more effectual riddance of the diseased structures; 3, the diminished probability of septicæmia, or blood-poisoning; 4, the avoidance of unsightly scars; and 5, the less risk of a recurrence of the morbid action, either at the seat of the operation or in other parts of the body. These propositions are so self-evident that any formal discussion of them seems to be out of place.

The fact is now generally, if not universally, admitted that all morbid growths, whether benign or malignant, are of local origin. There is unquestionably occasionally a hereditary tendency to the development of morbid growths. We see this in a remarkable degree displayed in warts and sebaceous cysts. I state, as another incontrovertible proposition, that all morbid growths, tumors, or neoplasms are the product of perverted nutrition, in which the comparatively few cells native to the part are replaced by colonies of young cells, of the latter of which the new product is essentially composed.

All morbid growths are developed, directly or indirectly, under the influence of inflammatory action, the result of external injury, or, as is more frequently the case, of some mechanical obstruction, causing in the first instance congestion of the part, and this in turn inciting action and inflammation, one of the most simple of all tumors, the sebaceous, is formed under the irritating influence of its own natural secretion, retained by the closure of its natural outlet. Obstruction of a lacteal duct is, there is no doubt, a frequent starting-point of scirrhus of the mammary gland. There are some tumors whose distinguishing features are so well marked, even in their earlier stages, that he who runs may read. On the other hand, great difficulty often presents itself sufficient to perplex and puzzle the wisest head.

Unfortunately few of the cases of malignant disease, either in our rural districts or even in our larger towns, come under our observation in time for early surgical interference. The mischief is effected before the time of observation.

There are comparatively few reliable ready or trustworthy diagnosticians. Diagnosis is a high art, and the profession as a body are not sufficiently familiar with it to render it at all times, or even in a minority of cases, properly available at the bedside. It is, of all the arts in our profession, the one which demands the greatest amount of refined culture, experience and tact of an ordinary type, but of the highest possible type. The one thing most culpable in the organization of some medical colleges is exclusion from its studies of pathological anatomy. Just in proportion as our knowledge of morbid structure is positive, accurate, and comprehensive, will be the probability that we will become skilled diagnosticians, and conversely. Knavery, dishonesty, and self-conceit are found in all ranks of life, and among all classes of men. There are "quacks" in every profession. A patient laboring under a serious morbid growth

may consider himself as peculiarly fortunate if, in the early stage of his troubles, he fall into the hands of an intelligent, upright, and conscientious surgeon. Such a man will not hesitate to express his honest convictions. If the case be beyond his experience, he will not be ashamed to recommend his patient to some other more experienced surgeon, and to lose no time. The knave will do all he can to mislead his patient and lull his fears by telling him his disease is of no importance. He is afraid to tell the truth, lest he lose prestige and thus damage his practice. It is men of this stamp (and their name is legion) that do the damage; ignorant, they allow the case to proceed from bad to worse.

In carcinoma of the breast, the enlightened surgeon does not wait for involvement of the axillary glands, or serious structural disease. He urges the importance of prompt interference. Every surgeon knows what the result of excision of the mammary gland in ordinary cases of cancer is; how rarely the disease is completely removed, and how few women live beyond eight, ten, or twelve months after such interference. In all such cases, cancer cells have invaded the neighboring structures beyond the knife and serve as foci of new neoplasms.

There is a class of patients, the subjects of neoplasms, who, influenced by timidity or mock modesty, wilfully deceive themselves. They are fully aware that there is some disease going on somewhere, but they are afraid to have the matter properly investigated—when they do apply for aid, all that can be done is of the most transient kind. What has been said is true alike of carcinoma, of sarcoma, or even of benign growths. The golden rule in these operations is to perform the work as thoroughly as possible. If this cannot be done it is better in many cases, if not in all, not to meddle with the growth at all. All secondary developments, as enlarged and indurated glands, should be removed in immediate succession. All sarcomatous neoplasms are, as a rule, dangerous formations, however early subjected to the knife, not so much on account of any inherent tendency to recurrence after extirpation, as from their liability to attack other parts of the body from causes similar to those which gave rise to the primary disease. The worst of all sarcomas is the round-cell.

What should be the rule of action of the surgeon in cases in which perhaps several operations have already been performed, there is a large ulcerated surface, attended with excessive pain and a large quantity of the foulest discharge? The only rational thing to be done is surely to sweep away the whole mass of the disease so far as possible, and then treat the wound and the system upon general principles. Such a procedure is the only feasible one of relieving pain, moderating suppuration, and of making the patient comparatively comfortable. Death under such circumstances is generally hailed as a welcome visitor. In malignant disease of an extremity attended by such a state of things, the proper remedy would, of course, be amputation without any ulterior hope of a cure. What has been said respecting early surgical interference in malignant and other morbid growths applies with equal force to many other surgical affections, as well as to diseases in general.

DR. POST referred to the value of early removal of tumors in preventing their degeneration into malignancy.

DR. MOORE said that the principles in the paper admitted of no discussion.

DR. GREGORY remarked that developing cells were more liable to be transferred than the fully developed, large irregular cells, with dry matrix. He said that inflammations were reparative processes; there had always been some antecedent injury; that tumors were the only things to which the word idiopathic could be properly applied. He doubted the propriety of early operations in all cases, and said the success of abdominal surgery in this country was not such as called for early operations. When his patients were useful and not uncomfortable, he put off operating as long as he could. He related a case where

he had delayed the operation for a long time; when he operated, removed both diseased ovaries, and the patient recovered.

DR. NORRIS, of Washington, D. C., then read a paper on

DISLOCATION OF ASTRAGALUS,

and exhibited casts and specimens illustrating the same.

DR. GREGORY had a case of complete dislocation of the astragalus, which was very easily reduced.

DR. WEIST had seen a case of incomplete dislocation of astragalus, of twenty years' standing.

DR. MOORE had seen a case of dislocation, which after persistent efforts was reduced. He had seen two cases with fracture which could not be kept reduced.

DR. DAWSON had a case of simple dislocation, when a young surgeon, which he failed to reduce. He had proposed to divide the tendo-Achillis, which was refused. He thought Dr. Gregory would not meet with another case so easy to reduce when the ligaments were torn; the case was similar to a fracture, but when they were not torn the bone was held firmly fixed in its new position, and reduction is very difficult if not impossible without a cutting operation.

DR. GUNN had not seen a case of simple dislocation, but had had a case of fracture with dislocation forward. No necrosis of the fragment; had made excision with fair result.

DR. P. S. CONNER, of Cincinnati, next read a paper on

EXCISION OF THE TARSUS.

He remarked that the foot, in its proximal half at least, was peculiarly liable to disease. By its situation it was subject to violent jars and severe twists; traumatic synovitis was of frequent occurrence. Its skeleton being principally cancellous tissue and its periosteum blended so intimately with the ligaments of its numerous articulations, and was crossed by numerous tendons, and overlain by a definite though not very thick sheet of connective tissue, inflammations were readily extended by contiguity. In strumous subjects, slight traumas might be followed by simple inflammation, or by deposit of tubercle. Specific periostitis and gumma might produce the same effects here as elsewhere. External violence, compound fractures, might be the cause of caries or necrosis. The disease might affect the whole tarsus; when extensive, rest, compression, stimulant, or sedative applications were very likely to fail. When abscesses had formed and numerous sinuses existed, surgical interference was limited to, 1, opening the abscess cavity and the informal removal of carious or necrosed tissue with or without deep cauterizations or other local stimulant applications; 2, amputation, usually at or above the ankle-joint; and 3, the methodical excision of such and so many of the tarsal bones as were unhealthy. The first method in the less severe cases might be expected to often result favorably. Amputation through the leg or at the ankle joint had been and still was preferred by surgeons generally to any more conservative method, was less likely to be fatal from septic infection or exhaustion, and the patient was better able, with an artificial limb, to earn a livelihood. It was claimed that it might cause death at first, or later that the disease would very likely recur in the parts unremoved, and even if successful as respects life would leave an useless foot, if not one that was an incumbrance.

The three questions to be considered were:

First.—Is excision a safe operation or at least attended with no greater mortality than the alternative amputation.

Second.—Is it likely to put an end to the disease or is recurrence of the disease in the unremoved bones of the foot to be expected?

Third.—Will the patient after recovery from the operation be left with a serviceable foot?

Of the 106 cases collected 11 died (10.38 per cent.),

but two if not three of these died from causes unconnected with the operation within less than a month. Out of 61 cases in which the alternative was an ankle-joint amputation, 4 died (6.55 per cent.), and out of 45 cases in which a middle tarsal removal might have been made 5 died (11.11 per cent.). The Syme and the Pirogoff amputation mortalities for caries were about six to eight per cent., and the Chopart, perhaps, four per cent. While the mortality of the operation in young subjects was very much less, it need not be confined to them alone. Of 77 cases in which the ages were given, 27 were under fifteen years, 1 died (3.7 per cent.); 17 between fifteen and twenty-five years, 1 died (5.88 per cent.); 33 were over twenty-five years, 6 died (18.18 per cent.). The disease recurred in only two cases. The most important question of the three is that in reference to the functional value of the saved foot. Of the 106 operations 10.38 per cent. resulted fatally. Of the 93 cases, the end results of which are known, 10.75 per cent. were failures, 6.45 per cent. left the subjects able to walk with a cane or crutch. In 22.65 per cent., after complete cicatrization, there was no pain or tenderness, little or no limp, and the individuals were able to earn a living; and in 47.31 per cent. the result was so good that the gait was not a bad one, the support of the body was firm, and locomotion was so easy and perfect that the individuals could, without special fatigue, walk long distances. All had a better weight-supporting and useful foot than an artificial foot after a leg amputation could be.

At the Friday afternoon session Dr. E. M. MOORE, of Rochester, N. Y., read a paper entitled

SOME QUESTIONS WITH REFERENCE TO INTRA-CAPSULAR FRACTURE OF THE FEMUR.

The points in the paper were put in the form of questions:

First.—Is not the cause of fracture of the neck of the thigh-bone, whether intra- or extra-capsular, almost uniformly that of a blow upon the trochanter?

Second.—Is not the preservation of the periosteum of the neck called in connection with the reflected capsule, the cervical ligament, although only partial, the common rule and not the exception?

Third.—Does not this condition, if preserved, supply abundant nutrition to the upper fragment sufficient to entire repair?

Fourth.—Is not the outer layer of what is called the periosteum of the neck a rudimentary organ?

Fifth.—In *reputed cases* of absorption of the neck after blows upon the trochanter, said to be without fracture, is it a reasonable, much less a perfect induction to infer a similar result, when the changes of condition are similar in one point, and dissimilar in every other to those of inflammation without a blow?

Sixth.—Should not the induction read thus: The head of the femur and the acetabulum, not being altered, the shortening of the neck could not be from the inflammation resulting from the blow.

Seventh.—Finally, does not the practice of modern surgeons produce a vastly improved result in the cases treated by them as compared with the methods of the last generation?

The doctor then passed some specimens which were taken from patients within a few days after death.

It was ordered, that, as Dr. Senn, of Milwaukee, Wis., had a paper on the same subject, the discussion of Dr. Moore's paper be postponed until after Dr. Senn reads his paper.

DR. SENN then presented his paper, illustrated by specimens. At the conclusion of Dr. Senn's paper, the President complimented both papers very highly, then called for discussion.

DR. POST said the most important principle in these cases was to make no effort by forcible movements to clear up the diagnosis, related a case in his experience

where desire to clear the diagnosis broke up the impaction. Said where at first the shortening was less than an inch, and in the lapse of time becoming greater, until it may be two or two and one-half inches, thought this indicated interstitial absorption.

DR. GUNN then related a case that came under his observation in consultation, where there was the usual symptoms of fracture of the femur within the capsule. The patient recovered with bony union, with some shortening, but was able to walk well with a cane. The limb was measured some four or five years later, with about two inches shortening.

DR. VANDERVEER asked Dr. Senn if he had used the splint which he had exhibited. He also related the history of case, where, the specimen after boiling, there had been as complete separation of the epiphysis of the head of femur as would occur in a subject fifteen years of age, the patient in this case being sixty-five years of age. Thought that better results would follow from the simple treatment of Dr. Moore, than from that of Dr. Senn.

DR. FIFIELD, of Boston, Mass., among other things, said the time for splints was passed. The best results were obtained from position, even in the cases of Colle's fracture this had been demonstrated. He paid a high compliment to Dr. Moore. Related a case where after fracture, the head and neck of the femur had entirely disappeared.

DR. NANCREDE said he had often seen cases where the attachment of the ligament was considerably in advance of its usual attachment.

DR. GUNN said he had seen in a cadaver, a vascular, thick frenum extending from the posterior side of the joint to close up to the head, so that had a fracture occurred, even quite near the head, the upper fragment would have been richly supplied with blood.

DR. KINLOCH, while complimenting Dr. Senn, said that practical surgeons demanded that the advance of pathology must show practical results. He asked if Dr. Senn had demonstrated the practicability of his new methods of treatment upon the cadaver. He doubted if surgeons could make a diagnosis so exact as to cut down upon the neck of the femur and pin the fragments together. He said if Dr. Senn could do this he would admit his pathology, and adopt his methods of treatment.

DR. CAMPBELL thought that practical surgeons ought not to give up their old methods of treatment which they had seen produce good results, for any new methods; not to make a compound out of a simple fracture.

DR. SENN in reply, said he had not tried his modified splint, as he had not yet had a case since making the splint, also in reply to charge of cruelty of his splint, said it was more cruel to treat old patients with this fracture by the old method of confining them to bed, on account of which so many developed disease of lung. Said with his new splint the patients could turn in bed or even get out of bed.

THE PRESIDENT said that eversion of the foot and slight shortening were not reliable symptoms of intra-capsular fracture of the hip. That the eversion may take place from simple contusion, and the slight shortening due to unevenness of the pelvis. He said he could not see in the specimen which Dr. Senn presented as a specimen of impacted fracture within the capsular any evidence of fracture, but that the specimen exhibited only senile changes.

The Association was called to order on Saturday morning by the PRESIDENT. The special

COMMITTEE ON PATHOLOGICAL SPECIMENS

then submitted the following report:

First.—That the original injury consisted of a contusion of the walls of both the artery and vein, with consequent adhesion at the site of injury.

Second.—That the inflammatory processes culminating in the adhesion of the two vessels resulted in such a

weakening of the walls, probably coupled with a limited destruction of the external coats of the vessel by the vulnerating body, as to render an aneurismal dilatation a necessary consequence.

Third.—That the similar probable partial destruction of, and certainly the inflammatory softening of, the venous walls at the joint of adhesion, resulted in a slight pouching toward the lumen of the artery.

Fourth.—That the projection thus commenced, however minute, was acted upon to the utmost advantage by the arterial current, which tended to enlarge the growth by an actual traction and force, as it were, in the direction of the blood-flow; this is proven by the fact that the small sac is elongated on the distal side of the venous opening.

Fifth.—That the projecting venous sac must have served to obstruct the lumen of the artery from the moment of its formation, and have acted somewhat in the way an embolus has been known to do, as the exciting cause of aneurism, by producing undue intra-vascular pressure in an artery with softened walls.

Sixth.—That the obliteration of the lower extremity of the artery which occurred subsequent to the ligation, while an anastomotic branch communicated through the patulous lumen of the artery with the sac, is the cause of the non-coagulation of the sac contents. The apparent paradox that blood can enter into and emerge from a tensely filled sac, is rendered clear when the physical surroundings of the sac are considered. The muscles of the region must have alternately emptied the sac by their compression, and allowed it to refill, when they relaxed. A familiar demonstration of this is the action of the ordinary rubber bulb pipette, although the elasticity of an aneurismal sac is not nearly so great. This deficiency is, however, made up for by the constant pressure of the blood in the patulous upper portion of the vessel, which tended to rush into the aneurism whenever the relaxation of muscle-pressure upon the sac permitted.

Your committee submit the above with some diffidence, in view of the obscurities surrounding any investigation as to the etiology of this case. They feel, however, that while they have not perhaps explained all the facts of the case, their hypotheses more nearly approach a satisfactory solution of the questions involved than any others which have suggested themselves.

CHARLES B. NANCREDE, *Chairman*.
R. A. KINLOCH.

ELECTION OF OFFICERS.

The Nominating Committee reported the following officers: *President*—E. M. Moore; *First Vice-President*—W. W. Dawson, Cincinnati; *Second Vice-President*—C. H. Mastin, Mobile; *Secretary*—J. R. Weist, Richmond, Ind.; *Treasurer*—J. H. Packard; *Recorder*—J. E. Mears.

THE PLACE OF NEXT ANNUAL MEETING

will be Washington, D. C., the Wednesday next preceding the meeting of the American Medical Association.

CLOSURE OF THE JAWS AND ITS TREATMENT,

with the report of a case in which complete occlusion followed a gunshot wound of the left superior maxilla, received at two and one-half years of age, and which was relieved eighteen years subsequently by operation according to a new method, was the title of a paper by J. Ewing Mears, M.D., of Philadelphia, Pa.

Closure of the jaws was well known under two forms—the spasmodic or temporary, and the chronic or permanent. The former occurs with spasmodic contraction of the masseter and internal pterygoid muscles, delayed eruption of wisdom teeth, abscesses, operations on the jaws, etc. The treatment consisted in the removal of the causes. When possible, removal of the teeth. Where tumors, necrosis, and alveolar abscesses exist as causes, the treatment was obvious. In permanent closure of the jaws, we had quite different conditions to deal with. It was due to formation of adventitious tissue,

which firmly and permanently locked the jaws, and in some forms defied successful removal.

The effect of the closure was stated to be a serious interference with mastication and articulation, and if it occur early in life it is often followed by a stunted development of the jaw. With regard to treatment, Prof. Gross stated that ankylosis of the temporo-maxillary articulation might be relieved by forcibly depressing the lower jaw with wedges or levers. In order to prevent reformation of the adhesions, the lever was to be used daily for many months or years.

A résumé of the methods of operation which had been suggested for the relief and cure of permanent closure of the jaws, showed that they had been as follows:

First.—Excision, more or less complete, of the cicatricial bands or osseous formations, and the subsequent employment, for a long period of time, of wedges and levers to retain the separation of the jaws.

Second.—Division of the cicatricial tissues and the adaptation of metal shields, not only to prevent recontraction, but to re-establish the sulcus of mucous membrane at the seat of the alveolus.

Third.—Dieffenbach's method of simple division of the ramus of the jaw, and the formation of a false joint behind the point of contraction.

Fourth.—The formation of a false joint as originally suggested by Carnochan. Esmarch's suggestion that it be formed in front of the contraction; that a segment of bone be removed for this purpose by external incision.

Fifth.—The formation of a false joint in front of the contraction, by simple division of the bone made by forceps applied within the mouth.

Closure due to ankylosis of the temporo-maxillary articulation, the methods practised are:

First.—Division of the ramus of the jaw from within the mouth, either by saw, forceps, or chisel, and the formation of a false joint.

Second.—Excision of the condyle with a portion of the neck, the incision being external.

The reader then related the history of several cases.

DR. MAGUIRE related a case cured by long-continued daily dilatation with instruments.

A PAPER ON REMOVAL OF MECKEL'S GANGLION FOR THE RELIEF OF TRIFACIAL NEURALGIA, WITH REPORT OF CASES,

was presented by DR. VANDERVEER, of Albany, N. Y. While not claiming to present anything new or original, yet the cases seemed worthy to go on record as illustrating the good resulting from operative surgery when medicine has failed to afford the relief sought by suffering humanity. He then related the history of a case which he first saw in May, 1870, where the patient had suffered for over ten years with severe neuralgic pains about the right side of face, along the alveolar processes, and right side of tongue, also in the track of inferior dental nerve. During the preceding five years had been operated upon twice by loosening the attachment of the cheek from the alveolar processes, affording each time a few months' relief to the patient, but the pain returned with as much severity as ever. The patient was very thoroughly treated with iron, arsenic, Brown-Séquard neuralgic pills, injections of chloroform, and every treatment known, but with no especial benefit.

In March, 1871, made a section of the infra-orbital nerve, which resulted in affording great comfort to the patient, who for two years remained quite free from pain. It then returned, more especially along the course of the inferior dental, and suggested the removal of Meckel's ganglion, but his health was such that neither he nor his friends thought it safe. The patient is still alive, and at times suffers great pain for months.

Another patient (female) with about the same history of pain in right side of face, consulted first July, 1875; had suffered more pain since the menopause, two years before. Had but little relief since that time, unless fully

under the influence of medicine. All her teeth of upper right side had been removed, one or two at a time. For last six months but little, if any, relief from pain, even from large doses of the neurotic medicines. Was under the same treatment as the other case.

She consented to an operation to remove the infra-orbital nerve and Meckel's ganglion, which was made September 5, 1875. The patient was immediately relieved from pain, and since that time she has been in perfect health and very grateful.

Another case (female), aged thirty-seven, had suffered with a blind eye on right side. At first had but four or five spasms daily, confined at first mostly to the eye, but there was really no rest for any length of time. She was advised to have eye removed, but refused. After several years she was treated with the usual remedies, but no permanent relief resulted. The spasms became very severe, and returned every few minutes, getting no rest with large doses of morphia, by mouth, hypodermically, etc.

August 2, 1881, after she had had no rest for nearly the whole of the month of July, the doctor consented to remove Meckel's ganglion, but thinking the proper thing to do was the removal of the eye.

For a few days after she suffered occasional spasms of pain, but on the sixth day she was entirely free from them, and slept for the first a quiet sleep. The pain returned in the last week of November, 1881, along the inferior dental nerve, the spasms being very intense, and coming on so rapidly as to prevent any rest. The doctor then tried aconitia (Merk's), but with little, if any, good. She could not bear more than one-eightieth grain doses three to four times daily.

On January 2, 1882, trephined the lower jaw and removed, as I thought thoroughly, a section of the inferior dental nerve, giving almost immediate relief. The pain returned in December, 1882, when a spasm occurred along the lower jaw and outer portion of temporal region. After a time the pain came on as of old, when the patient consented to have the eye removed, which was done April 3, 1883, when the patient, after suffering some pain for ten days, recovered, and still continues fairly well.

TREPHINING THE STERNUM FOR REMOVING FOREIGN BODIES FROM THE ANTERIOR MEDIASTINUM

was the title of a paper read by S. MARKS, M.D., of Milwaukee.

The history was given of a soldier, who was struck on the sternum by a spent bullet (Minié?) during one of the battles of the Wilderness. He was knocked down by the blow. When he recovered sufficiently, he went to the rear, when he was examined by the field surgeon, who assured him that there had been penetration. He was sent from one hospital to another and examined by various surgeons. At last he was sent to one of the hospitals at Washington, which he did not recollect, where he was repeatedly examined by the hospital surgeons, but by others without any suspicion of a foreign body behind the sternum. His condition at this time was such that, fearing he would die in the hospital, he returned to his home in Ohio, where he was mustered out. In the course of time he came under Dr. Marks's and partner's care, with the determination to submit to any treatment that they might advise. The Nélaton probe not answering their purpose, they improvised a probe of the stem of a clay pipe, which was introduced into the wound, passing quite a distance. On removing the probe it showed unmistakable signs of lead. The operation of trephining the sternum was determined upon. When the piece of bone was removed by the trephine, the bullet was found to be a little below the point of operation. Trephine again applied and the bullet, together with the sac which surrounded it, was removed. There was a considerable discharge of pus. The patient, after recovery from the operation, still had some cough, pain, and

shortness. The patient went to work, when one day, after jumping from some elevation, was seized with violent hemorrhage from the lungs. After recovering from the effects of this hemorrhage the patient found himself entirely free from the symptoms before the accident.

On motion it was resolved that the Secretary ascertain which members were opposed to the Code of Ethics of the American Medical Association, and request their resignation.

The Association then adjourned.

Correspondence.

THE TREATMENT OF OPIUM-POISONING WITH ATROPIA—A CRITICISM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE RECORD of May 5th appeared an article entitled "Four Cases of Opium Poisoning—Treatment by Atropia and the Faradic Current," by Dr. Wallian, of Bloomingdale, N. Y., which contains a number of serious blunders, either the fault of the writer or printer, but probably the writer. He says, "*four men jointly drank from a bottle four ounces of tincture opii, Phar., 1870.*"

"Asking the druggist from whom the drug had been—with-out fault of his—procured to give me, as nearly as possible, the equivalent in morphia received by each patient, which he stated to be $4\frac{1}{8}$ grs." Now, if the four men drank four ounces of tincture of opium, they took what was together equivalent to more than twenty-four grains of morphia; and if each drank one-fourth of it, they received more than six grains each, according to the Pharmacopœia of 1870. How the druggist was enabled to state that each man took the equivalent of $4\frac{1}{8}$ grains of morphia, while the attending physicians did not know, he does not state. It is not probable that each took exactly the same amount out of the bottle, for, had they been like Western toppers, the last wouldn't have enjoyed any.

Again, he says, "I prepared a solution of atropia, 1 grain to 3 ij., of which I injected subcutaneously ℥xij. (= gr. $\frac{1}{10}$) to each patient." Now it is self-evident that if he gave ℥xij. of this solution of atropia, he did not give $\frac{1}{10}$ of a grain, but twice that amount, or $\frac{1}{5}$ of a grain. Then he says he repeated the dose of $\frac{1}{10}$ of a grain of the same solution; when, again, the patient got $\frac{1}{5}$ of a grain instead of $\frac{1}{10}$, making $\frac{1}{5}$ of a grain.

Next, he says, "recalling the antagonistic ratio existing between atropia and morphia—according to Bartholow to be atropia gr. ss. to morphia gr. j." Now this must be an egregious blunder. Who ever heard of giving a half grain of atropia subcutaneously to antagonize one grain of morphia given by the same method. It is evident that Prof. Bartholow has never written or said any such thing. If so, I have never seen it. But Bartholow, in his work on "Hypodermic Medication," second edition, page 109, says: "I ascertained, in the case which occurred to myself, that one twenty-fourth ($\frac{1}{24}$) of a grain of atropia was equal in toxic power to one (1) grain of morphine," which is a marked difference, and might prove, under certain circumstances, a dangerous one.

Now the writer, not seeming to be satisfied with the two grave blunders he had already made in his two first injections with his unfortunate patient, makes another. He says, "I prepared a solution double the strength of the former one, or grs. ij. to 3 ij. Of this I exhibited ℥xxiv. hypodermically, = $\frac{1}{10}$ grain, to each of the three most under the influence of the narcotic." Here, again, if he gave 24 minims of this solution, he did not give $\frac{1}{10}$ of a grain, but $\frac{4}{10}$ of a grain. Now this could not be an accidental blunder, for in the second solution, which is double the strength of the first, he not only doubles the strength, but doubles the number of minims, first giving xij. ℥; second, giving ℥xxij. He does not seem to be aware that doubling twice is equal to multiplying by four.

Further on in the article he again asserts that Bartholow and other good authorities say that it requires one half-grain of atropia to antagonize one grain of morphia. Now, the doctor not seeming to be satisfied with making a blunder in his arithmetic on each of his solutions, has the audacity to criticise "Bartholow and other good authorities," for he says: "The inference is, that not more than $\frac{1}{10}$ grain, and perhaps $\frac{1}{20}$ of a grain, is sufficient to antagonize one grain of morphia." Who the other good authorities are, he does not state.

Now having scientifically treated his patients by atropia, he "sends for his battery," and applied one pole on the diaphragm, and one on the nape of the neck. He also makes the announcement that "he carefully interrupted the faradic current." He does not state in what manner he interrupted the current, but judging from the rudimentary manner in which the atropia was given, that he probably interrupted it by leaving the sponges on a while and taking them off a while.

The doctor should be congratulated for his heroic courage in a time of difficulty and danger; for few medical men there are who would give atropia solutions hypodermically in cases of narcotic poisoning, when not knowing their strength.

It is fortunate the cases recovered; indeed, the doctor himself seems to be surprised they did so, for in announcing the subject of his article, he says: "Treatment by atropia and the faradic current—Recovery."

The doctor states: "The effects of the antagonist atropia were visible for forty-eight hours or more, as shown by disturbance of vision, unsteady gait, hallucinations, harmless delirium, etc., which would seem to indicate that it was exhibited somewhat in excess of the requirements in the several cases."

This is quite likely, for he gave to each of the worst cases $\frac{6}{10}$ of a grain of atropia, while he intended to give only $\frac{2}{10}$, and $\frac{2}{10}$ and $\frac{1}{10} = \frac{3}{10}$, or, in other words, he gave three times as much as he *thinks* he gave, and then criticizes the authorities for being mistaken on the antagonistic power of atropia.

This is very funny.

C. H. PHELPS, M.D.

EFFECT OF NOISE ON DISEASED AND HEALTHY EARS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The paper by Dr. D. B. St. John Roosa on the effects of noise upon diseased and healthy ears, as reported in THE MEDICAL RECORD of April 28, 1883, is of special interest to those who have it in their own power, from personal experience and observation, to confirm the views therein so ably laid down and defended. The eight aphorisms (l. c., p. 467) are in my opinion invulnerable. There can be no question that, as Dr. Roosa says, there is a large class of people who, though deaf to a considerable degree, hear better and to a remarkable degree of acuteness amidst noises which to those with good hearing are deafening. It appears, however, that all of the observers who deny this fact, as well as Dr. Roosa himself and all of the participants in the debate which followed the reading of the paper, have overlooked an essential fact: the variety of deafness. Simply to say that any one is deaf, is, in our days, to be far from scientific accuracy. *We should define the deafness; state whether the deafness is for high or low tones* as registered by König's rods, or even by the pianoforte or by tuning forks. So far as we yet know, there may be as much difference in the inner ear, under these various degrees of deafness, as there is in eyes affected with hypermetropia or myopia.

The whole question as to hearing, or not hearing, better in a noise, is at present of no really practical value; still, during our investigations we may stumble upon valuable truths. With due deference to those who claim that the deaf do not hear better in a noise, I would

suggest, from my experiments and investigations, a ninth aphorism, to follow the eight as published by Dr. Roosa: Those who are deaf to low tones invariably hear much better in a noise.

J. A. SPALDING, M.D.

595 CONGRESS STREET, PORTLAND, ME.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 26, 1883, to June 2, 1883.

BROWN, PAUL R., Captain and Assistant Surgeon. The extension of leave of absence on Surgeon's certificate of disability, granted November 23, 1882, further extended six months on account of sickness. S. O. 123, A. G. O., par. 6, May 29, 1883.

HEGAR, A., Major and Surgeon. Assigned to temporary duty in charge of the office of Medical Director Department of the South, during absence on sick leave of Medical Director. S. O. 55, par. 9, Department of Texas, May 24, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 5, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
May 29, 1883.....	1	9	136	6	152	58	0	0
June 5, 1883.....	2	7	120	2	120	43	1	0
<i>Deaths.</i>								
May 29, 1883.....	1	4	31	4	19	27	0	0
June 5, 1883.....	0	4	24	2	22	20	0	0

SCARLATINAL RASH FROM THE USE OF COPAIBA.—Dr. C. F. Barber, of Fort Hamilton, L. I., sends us an account of the following instructive case: "Not long since a patient came to me suffering from a scarlet rash which completely covered the body, leaving a space hardly the size of a pin's point free. He complained of intense itching and burning sensation about the skin; the right hand was puffed up, the left normal in size. His mouth and throat were tender, compelling him to eat only fluid food. Nausea, but no vomiting, headache and a languid feeling were present. The eruption would disappear on pressure, but instantly return as soon as the pressure was removed. On close questioning the patient admitted that about one week previous he had contracted gonorrhoea, and had obtained a prescription, as is so often done by the young men of the present day, from a druggist, the active principle of which was balsam copaibae. This he had used faithfully until he came to me; time being just seven days. Being a strong and healthy young man, never having had any disease, save the present attack of gonorrhoea, I could see no other cause for his rash and at once stopped his recipe, and placed him upon another course of treatment. As soon as the copaiba was discontinued he began to improve and the rash soon disappeared."

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Original Articles.

ON THE OCCURRENCE OF TUBERCLES IN WHICH THE BACILLUS TUBERCULOSIS IS NOT DEMONSTRABLE BY THE ORDINARY METHOD OF STAINING.

By T. MITCHELL PRUDDEN, M.D.,

DIRECTOR OF THE PHYSIOLOGICAL AND PATHOLOGICAL LABORATORY OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK; LECTURER ON NORMAL HISTOLOGY IN YALE MEDICAL COLLEGE.

ALTHOUGH more than a year has passed since the announcement by Dr. Koch of his hypothesis of the bacterial origin of tuberculosis, and the long and logical series of experiments on which it is based, it is still in the main in nearly the same condition as that in which he made it known. Numerous of his confirmatory data have indeed been found to stand the test of careful scrutiny by skilled observers, and have been greatly strengthened, while in some respects modified, by the record of the examination of an almost incredible amount of material. The additions and confirmations, however, belong almost entirely to that side of the problem which is least essential for the establishment of the new pathological doctrine, although of the utmost importance from the standpoint of diagnosis, and possibly of prophylaxis and treatment. The more extended researches of the past year have shown that the examination of sputum is of much more practical importance than the original announcements gave reason to expect; that the technique of sputum examination for the bacillus tuberculosis must become a part of the professional furnishing of every expert diagnostician, whether the bacilli stand in a causative relation to tuberculosis or not, and that to be reliable considerable skill and much patience must be exercised; that the color-test must be subjected to some limitations not anticipated in the original announcements, because some other bacilli and many other objects are found to present the coloration originally supposed to belong to the tubercle bacilli alone; and finally, that the decoloration by nitric acid in Ehrlich's method of staining may result in the complete removal of color from some of the structures which it is desired to demonstrate, unless the greatest care be exercised, and possibly even then, since the conditions which modify their power of resisting the action of the acid are not yet definitely known.

Dr. Koch, in his recent reply to his critics,¹ deplors the fact that in the eager search for data of an immediately practical nature the more essential character of the cultivation and inoculation experiments should have been apparently lost sight of. While the whole world stands agog to know whether the tubercle bacilli are to be found in each particular specimen of sputum, feces, and urine, or on all tubercular ulcers, or in every phthisical cavity, or miliary tubercle, or cheesy nodule, his fundamental hypothesis remains unconfirmed; and he complains, if a little querulously, still it must be confessed justly, that the criticisms of his hypothesis and his statements, which have thus far been made, are not based upon experiments executed with sufficient care and data, gathered with sufficient clearness of perception as to their applicability to the question, to afford him much satisfac-

tion in framing a reply. This condition of affairs is, however, not at all surprising, for, apart from the circumstance that the immediately practical bearing of the subject appeals to by far the greater proportion of men in the profession, the careful working over of the ground so elaborately covered by Dr. Koch's experiments, by professional pathologists, would require not only abundant and exceptional facilities, but a devotion to pure science which must far exceed that of Dr. Koch himself, since the stimulus of the pioneer would be largely wanting. Still, the immense amount of exhausting labor bearing on the simpler morphological side of the problem, which in this short time has been done by men for the most part busy in the practical exercise of their profession, leads to the hope that ere long some man may appear happily enough circumstanced, and richly enough endowed with patience and acumen, who will either furnish the needed confirmatory evidence, or show himself—to fall into language by which alone the present belligerent attitude of some of the workers and more of the writers in this field can be indicated—a foeman worthy of Dr. Koch's steel.

In the meantime the simple examination of tubercular lesions and various excreta are leading to fairly definite conclusions in some of the accessory fields. It is already practically established that in the larger proportion, if not in all cases of phthisis in which there is evidence of the breaking down of tuberculous tissue, and in many cases in which physical signs are entirely negative, the tubercle bacilli may be found in the sputum, if sufficient care and patience and skill be exercised, and that they do not occur in non-tuberculous sputum. It is further demonstrated that the bacilli may be found in the feces in many cases suffering from tubercular ulcers of the intestine, and in the urine in some cases of tuberculosis of the genito-urinary tract. It is furthermore proven that the examination of material from the surface of tubercular ulcers of accessible respiratory passages may often determine their specific character. While at present of much practical importance, rapidly accumulating data lead to the belief that increased definiteness in the estimate of the value of such examinations may be confidently expected.

It is furthermore established, that in the great majority of phthisical cavities in the lungs, the contents and walls contain the bacilli in greater or less numbers; that the tuberculous areas and miliary tubercles in acute and chronic phthisis, many of them, contain bacilli; that in most cases of acute miliary tuberculosis the bacilli are present in many or most of the nodules. But it is equally true that in many of the miliary tubercles and cheesy areas, and in diffuse tubercle tissue in acute and chronic phthisis, and in some of the tubercles in acute miliary tuberculosis, the bacilli cannot be demonstrated by the technical procedures at present at our command. It was shown in a previous paper by the writer,² and confirmed by two new examples about to be recorded, that there are cases in which over large tracts crowded with miliary tubercles, both cheesy and in the earlier stages of growth, no bacilli could be detected by the most exhaustive search. Since the publication of the paper just alluded to, the lungs of a considerable number of new cases of acute and chronic phthisis have been examined, with essentially the same result, namely, that in and about all

¹ Deutsche Med. Wochenschr., No. 10. March 7, 1883.

THE MEDICAL RECORD, April 14, 1883.

cavities, in many of the larger areas of coagulative necrosis, and in a considerable proportion of the miliary tubercles, the bacilli are to be found in varying numbers. But in nearly all cases some of the larger cheesy areas and the tubercles, particularly those which were not cheesy and were in an apparently early stage of development, presented no bacilli by the same methods of staining and care in examination which revealed them in other parts. This result is in harmony with the observations of nearly all those who have made and studied extensive series of sections from tuberculous organs.

Two cases, however, formed such marked exceptions to the rule that they seem worthy of a special record. J. R.—, aged forty-seven, Irish, states that his health was good up to four weeks before admission; he then first noticed swelling of the legs and face. He soon began to suffer from cough and dyspnoea, with vomiting, occasional headache, and constipation. On admission patient had general anasarca to a moderate degree, dyspnoea was intense, cough slight, temperature $100\frac{3}{4}^{\circ}$, pulse 86, urine specific gravity 1.010, varying in quantity from thirty to ninety ounces, and containing albumen and casts. Fluid was found in left pleural cavity below angle of scapula. Aspiration resulted in the removal of a few ounces of bloody fluid. Immediately after the operation patient had a severe chill, and developed lobar pneumonia in right side. The dyspnoea continuing severe, aspiration was repeated, forty-eight ounces of bloody serum being drawn off. He grew steadily weaker, and died about four weeks after admission.

Autopsy.—The right lung was partly bound to the chest wall by old adhesions, and the entire lung was in a condition of gray hepatization. The left pleural cavity contained about one hundred cubic centimetres clear yellow fluid, and the lung was partially and loosely bound to the costal pleura by thin, partly organized adhesions. The lateral surfaces of both lobes were covered by a thin, delicate pellicle of organized membrane, thickly studded with small miliary tubercles. Neither tubercles nor cheesy degeneration were found in any other part of the body. The kidneys presented the lesions of chronic diffuse nephritis. The mucous membrane of the stomach was thickened, and the liver slightly infiltrated with fat. The other organs were normal. Many of the tubercles, as seen in sections, stained double with hematoxylin and eosin, consisted of sharply circumscribed collections of small spheroidal cells; most of them, however, were of the usual giant-celled and epithelioid-celled type, with a more or less well marked reticulum. In none of those examined was there well-marked cheesy degeneration. Six hundred and ninety-five sections, about .01 millimetre in thickness, were made from ninety-nine different tubercles from various parts of the tuberculous membrane, and stained in the usual manner by Ehrlich's method in several different lots. In not one of these six hundred and ninety-five sections could a single tubercle bacillus be detected, although all were examined with the most scrupulous care, and in many specimens the examination was several times repeated.

This case, together with one of acute general miliary tuberculosis in a child, and one of primary tubercular inflammation of the bladder, ureter, and kidney, already recorded, makes a series of three exceptional cases, observed by the writer, in which, although judged by anatomical criteria there could be no doubt of the character of the lesion, the structure being in each case perfectly well defined, no bacilli could be detected in the tubercles in any part of the body.

The following case presents a condition of affairs still more noteworthy. The man was an Italian, aged fifty-two, a ragpicker. He stated that he was perfectly well up to two weeks before admission, when he first noticed a swelling of the abdomen, and he soon began to experience nausea and vomiting. He suffered from considerable abdominal pain and dyspnoea, was unable to retain food in the stomach, and rapidly lost flesh and strength.

On admission the patient was much emaciated, cachectic, pulse feeble, dyspnoea marked, abdominal pain severe. There were a few subcrepitant râles over both apices in front and behind, considerable ascites preventing satisfactory examination of abdominal organs. He refused to take food, was sleepless; the dyspnoea and abdominal pain continued; he became weaker and delirious, refused all attempts to relieve his ascites, and died, apparently from exhaustion, twelve days after admission. The temperature was at no time above the normal.

Autopsy.—Abdominal cavity contained a large quantity of clear yellow fluid with fibrinous flocculi. Bands and membranes of fibrin bound the abdominal wall loosely to the intestines, and bound the intestinal coils firmly together. Nearly the entire surfaces of the intestines, liver, under surface of the diaphragm, and a large part of the parietal peritoneum were thickened and very thickly studded with white, slightly elevated nodules, varying from one to three millimetres in diameter.

The omentum, converted into a dense nodule or cylindrical mass, lay along the transverse colon, and extended down in a solid cord to the right inguinal region where it was attached to the abdominal wall. Heart normal, left pleural cavity contained about one litre of clear yellow serum, which crowded the otherwise normal lung inward and backward. The right lung was firmly bound to the chest wall by old thick adhesions, and the costal pleura was considerably thickened and sparsely studded with dense white and gray nodules about two millimetres in diameter. In the thickened pulmonary pleura, and in the lung tissue immediately beneath it, were a few scattered, dense, somewhat stellate nodules, similar in appearance to those in the corresponding thickened costal pleura. At the apex of the right lung, and confined to an area of about six centimetres in diameter, in either direction, were several dense grayish pigmented bands of connective tissue and larger and smaller hard branching nodules. One of these nodules, about one centimetre in diameter, was cheesy at the centre, and another, somewhat larger, contained a small cavity filled with disintegrated cheesy material. This cavity did not communicate with a bronchus. The bronchial glands were enlarged, deeply pigmented, and studded with small white nodules. The other internal organs were normal. The mesenteric glands were not enlarged. The anatomical diagnosis was accordingly old chronic phthisis at apex of right lung, with pleurisy and chronic miliary tuberculosis; left hydrothorax; tubercular peritonitis.

Microscopical examination by the ordinary hematoxylin and eosin staining showed the small scattered nodules in the surface of right lung, in the thickened costal and pulmonary pleura, and about the consolidated areas in the apex to have the ordinary structure of fibrous tubercles, many of them much pigmented at the centre. The larger nodules at the apex were composed in part of dense pigmented connective tissue, in part of areas of coagulation necrosis, with a peripheral zone of tubercle tissue. The wall of the small cavity was formed of shreds of necrotic tissue, of dense cheesy material, and in the outermost layers of tubercle tissue and ordinary dense connective tissue. The examination of a large number of thin sections from these various forms of nodules, stained by Ehrlich's method, showed that the tubercle bacilli were abundant in the walls and edges of the cavity, and in a few of the dense areas of coagulation necrosis in its immediate vicinity. But in the diffuse tubercle tissue, in the zones of simple pneumonia around the nodules, in the scattered fibrous tubercles in the lung and pleura, and in the well-formed tubercles in the bronchial glands no bacilli could be found.

Microscopical examination of the nodules in the serosa of the intestines, diaphragm, liver, and abdominal wall, as well as those in the thickened omentum, showed them to be miliary tubercles presenting the usual variations in structure; most of them were more or less cheesy at the centre and of the giant- and epithelioid-celled type,

but many were of less complex structure, consisting simply of circumscribed collections of small spheroidal and epithelioid cells lying in and upon the thickened serosa. Nine hundred and nine sections from a large number of these peritoneal tubercles, from different parts of the affected surfaces, stained by Ehrlich's method revealed, under the most searching scrutiny, no tubercle bacilli. Among the numerous tubercles chosen for examination, four, each of about one millimetre in diameter, were completely cut into sections of about one-eightieth millimetre in thickness. This exhaustive examination of single tubercles was made to reduce the possibility of error which the examination of a few sections only from various tubercles necessarily involves. Not a single bacillus, however, was anywhere detected.

Here, then, is a case of chronic phthisis in which, judging from the clinical history and the anatomical appearances, the morbid process was apparently for the most part at a standstill, but in which the tubercle bacilli still remained in a small cavity and in a few cheesy areas in its immediate vicinity at the apex. Upon this condition of affairs in the lung the more acute tubercular peritonitis presumably supervened. Judging from the considerable thickening of the peritoneal serosa in and upon which the tubercles lay, the process here was of longer duration than the somewhat meagre clinical history would seem to indicate; but the structural characters of many of the tubercles, on the other hand, would favor the belief that their development was actively occurring.

The general features of this case would lead to the expectation that it would furnish a most exquisite example of auto-inoculation, and the popular conception of Dr. Koch's hypothesis would demand that the bacilli should be found in the peritoneal tubercles, particularly in those of presumably recent development. They could not, however, be found in any of the forms. But the writer is inclined to believe that the popular conception of Dr. Koch's hypothesis is not altogether correct. That the presence of the bacilli in each and every miliary tubercle, especially of younger form, must be demonstrable or the hypothesis is greatly weakened, is a notion founded in a misconception of the broad nature of his fundamental propositions. That tuberculosis is an infectious disease; that it can be communicated by the inoculation of the so-called bacillus tuberculosis, presumably freed by cultivations from all contaminating substances, and that this bacillus is the sole cause of the disease—these are the main features of his proposition. For Dr. Koch the criterion of a genuine tubercle lies in its infectious nature, and not in its anatomical character. Whether this criterion be accepted or not is at present a matter for individual decision, at any rate, it is a logical assumption as based on the data adduced by Dr. Koch. That the very frequent occurrence of the bacilli in the lesions of tuberculosis, in the human subject and in the victims of experimental inoculation, is a valuable confirmatory fact, there is no doubt, but so far as the writer is aware Dr. Koch nowhere states, nor does the establishment of his hypothesis require that the bacilli should be, or should have been bodily present in every tubercle.

The fact that in cases of phthisis and acute miliary tuberculosis some of the tubercles do not, as judged by our present technical procedures, seem to contain bacilli, and that some apparently exceptional cases of tuberculosis do not reveal their presence anywhere in the body may be explained, it should be remembered, either, first, by the possibility that the parasites after inaugurating the morbid process may disappear from the seat of lesion or from the body; or, second, by the faulty nature of our demonstrating them; or, third, by the possibility that the bacilli may induce the growth of tubercle tissue in distant parts of the body by some product of their physiological activity at present entirely unknown to us; or finally, by the not improbable hypothesis that the morbid process which we call tuberculosis, may be induced by more than one agent.

It may be that it is just such a criterion as that which Dr. Koch asserts which we need to supplement the anatomical classification of tubercle-like growths with which, with no end of bother, we have perforce made shift to be content so long.

These apparently exceptional cases, while enigmatical, are interesting and may be of much importance at a later stage in the elucidation of the problem, but the writer does not at all believe nor would he willingly convey the impression that they are necessarily of much significance as bearing upon the parasitic character of the disease. Whether such tubercles as do not seem to contain bacilli would produce the disease if inoculated is a question which, however difficult, it may be necessary to answer when the limitations of their occurrence have been more definitely established. In the meantime it is important to avoid the error of adopting a more precise conception of the exact way in which the bacilli exert their influence, if they do so at all, upon cell-proliferation and the formation of tubercle tissue than our actual knowledge of the conditions and phenomena of cell life and the natural history and physiology of the bacillus tuberculosis will fully justify. Into this error it seems to the writer that Dr. Cheyne, the author of the "Report to the Association for the Advancement of Medicine by Research on the Relation of Micro-organisms to Tuberculosis,"¹ falls, when, after stating the indisputable fact that the tubercle bacilli are very often found associated with the epithelial cells formed in tuberculosis of the lung, he assumes that the new epithelioid cells are largely, if not entirely, due to the proliferation of alveolar epithelium, and further, that this proliferation is due to the direct stimulus of the presence of the bacillus tuberculosis. "The bacilli," he says, "escape from the blood-vessels or lymphatics and get into the alveolar epithelium, where they grow and cause multiplication of the epithelial cells till the alveolus becomes completely filled with these cells and infiltrated leucocytes." Furthermore, the whole process is detailed with the most pleasing clearness as follows: "The tubercle bacilli, which reach the lung by inhalation, develop in the epithelial cells lining an alveolus, this alveolus becomes filled with cells, neighboring alveoli become infected, and the same process goes on in them. The further result will depend on the number and rapidity of growth of the bacilli and on whether the patient is a good soil for their development. If they develop well we have curious pneumonia, if they grow slowly and with difficulty we have fibroid phthisis."

Now this may all be true, but the expression of a personal conviction, however strong, does not do away with the necessity for proof, and the fact that large quantities of the same epithelioid tissue may be found in every case of cheesy pneumonia and in many cases of chronic phthisis unassociated with the bacillus, and that the same increase in epithelioid cells is common in various forms of pneumonia not tuberculous, suggests at least the desirability of caution in explaining the cause of such results.

It is by no means easy, in the present state of our knowledge concerning the life history of nearly all forms of cells, to be certain as to the exact origin of new cells produced in the body in disease; witness the long series of patient researches which have not yet led to such positive results as could be wished regarding the respective rôles of connective tissue and white blood-cells in ordinary inflammation. And when to the inherent difficulties of the problem of the origin of new cells in general in disease we add the complexities which the introduction of a vegetable parasite whose natural history and physiological phenomena are almost entirely unknown, it is not by any precise conjectural rationale, however plausible it may be, that this obscure and difficult field of pathology is to be illuminated.

¹ Practitioner, vol. xxx., No. 4, April, 1883.

The much talked of refutation of Dr. Koch's hypothesis by Spina¹ is couched in so unscientific a spirit and rests upon so flimsy a basis of actual experiment, that it seems scarcely possible that it should for more than a moment be permitted to have any influence whatever upon the question. The admirable study by Dr. Cheyne, above alluded to, is very valuable, so far as the experimental data go, in confirming many of Dr. Koch's statements, but it seems to the writer to lack independent and objective character and not to embody researches extensive enough to give it the weight which must belong to that series of investigations which alone can give to the new hypothesis the position in science which it claims. So our attitude in regard to the primary hypothesis must, it would seem, still be one of expectation.

As the appearances and importance, from the diagnostic standpoint, of the tubercle bacillus become more and more familiar to the practising physician, as they are unquestionably destined to do, it is very essential that it be clearly understood that its occurrence in sputa and other excreta in tuberculosis, however constant or practically valuable as a means of diagnosis, is not in itself a proof of the parasitic origin of the disease, nor does the search for it commit the observer in the least to the germ theory. For as far as all this goes it may be merely a harmless concomitant of tuberculosis and nothing more. When once it is proven beyond reasonable doubt to be one of the causes or the sole cause of tuberculosis in man then will arise questions in prophylaxis and therapeutics second in importance to none which can engage the attention of medical men.

From the immediate practical standpoint, knowledge is most urgently needed on the subject of the occurrence of the bacilli in the sputa and other excreta in acute miliary tuberculosis, both in adults and children, and on their occurrence in cases of primary hæmoptysis and in the incipient stages of various forms of phthisis, as well as in cases in which complete recovery has occurred or in which the disease has become latent.

Finally, a searching examination of the reliability of the technique of the bacillus-staining is urgently needed. Ziehl² has shown that the nitric acid employed for decolorizing may, if permitted to act too long, entirely remove the characteristic color from the tubercle bacilli and so permit them to escape detection, and, furthermore, that marked differences exist among the individual bacilli in the same specimen as to their power to resist the decolorizing action of the acid. He has shown, moreover, and this has been abundantly confirmed by the researches of others, that it is not at all necessary to employ nitric acid for differentiating the usual. If after staining the specimen with fuchsin in the usual way it be placed in some other anilin dye, *i.e.*, methylin blue, the latter stain will displace the red color from the animal cells and other bacilli before it will from the bacillus tuberculosis, and if the operation be stopped at the right time a differentiation in color may be obtained not less marked and less liable to errors than that obtained by Ehrlich's method. The writer made use of this method for controlling the examination of the exceptional cases above described, but with the same result.

Dr. Cheyne³ avoids the use of nitric acid, apparently because of the unavoidable shrinkage which it occasions in the tissues, by the employment of the following method. Stain first with fuchsin; wash in distilled water; put for a moment in alcohol and then place the specimen for from one to two hours in the following solution: Distilled water, 100 c.cm.; saturated alcoholic sol. methylin blue, 20 c.cm.; formic acid, 10 M. It is then washed with water and treated with alcohol and oil of cloves in the usual way. Acetic acid may be used instead of the formic, but is required in somewhat larger quantity.

SPINA BIFIDA.

A SUCCESSFUL OPERATION AFTER THE METHOD OF MR. ROBSON, OF LEEDS, ENGLAND.

By ROBERT T. HAYES, M.D.,

ROCHESTER, N. Y.

THE MEDICAL RECORD for February 10, 1883, quoting the *British Medical Journal* for December 30, 1882, reported a case of spina bifida operated upon successfully after a new method, by Mr. Robson, of Leeds, England. Following the points laid down in that report, a similar case was treated here by the new operation on February 21st.

The patient was a female, aged nine and a half weeks; general condition good. The tumor, situated in the lower dorsal region, was the size of one-third of a hen's egg at birth, and more than twice that size at time of operating. Pressure during the first two weeks after birth seemed to stimulate the growth of the tumor, and was abandoned on account of the irritative symptoms induced. Fluctuation could be very distinctly and readily produced with one hand over the anterior fontanelle and the other over the tumor.

The child, anaesthetized by chloroform, was laid over a pillow on its face; the object being to limit, by gravitation, the loss of cerebro-spinal fluid. The attempt was first made to remove a part of the fluid by means of aspiration; but after some five to six fluidrachms were removed, the fluid having all the characters of pure and normal cerebro-spinal fluid, no more could be obtained by repeated punctures. The skin was then incised and a layer of adipose tissue met with of about one and one-half inch in thickness. This being dissected back on each side, a double sac was found; an external one, collapsed, not communicating with the spinal canal, and from which the fluid was obtained; and under this a true sac, formed by protrusion of the membranes of the cord. The aspirator needle was introduced through the thinnest portion of this sac, when the patient instantly collapsed. During some fifteen minutes spent in efforts at restoration, sufficient fluid oozed through the puncture to leave the sac somewhat flaccid as the child lay. The needle was then reintroduced, some ten fluidrachms more removed, and the sac then freely opened. The spinal cord appeared perfectly normal, and on either side was seen the root-fibres of two spinal nerves, terminating abruptly at the inner surface of the base of the sac. The superfluous portion of the membranes was then removed, and union formed by six interrupted catgut sutures. While the periosteal grafts were being prepared, the patient was accidentally brought nearly into an upright position, when, with a free gush of fluid she again, and very profoundly collapsed. After partial restoration was with much difficulty brought about, some twenty small grafts of fresh periosteum from a rabbit were introduced on the surface of the membranes and the external flaps, fatty tissue and all, hastily trimmed and closed. The patient was extremely exhausted, and only rallied after some hours of active stimulation, and maintenance of a low position of the head; any approach to the horizontal, much less upright position inducing fainting.

After rallying, recovery was rapid, kind, and perfect. Simple cold water dressings were used. Surgical fever reached 102° F. within six hours, and ceased entirely within twenty hours. Union occurred throughout the wound by first intention, at all but one point. Here a sinus existed, through which clear serous fluid drained very freely, certainly to the extent of several fluidounces daily, for four or five days, and then more and more sparingly until the tenth day, when the sinus at once closed. At no time was there any appearance of pus about the wound.

The present condition of the child—more than eleven weeks after operation is this: She is stronger, larger, brighter, and more contented than any of her preceding brothers or sisters have been at her age, and suffers ab-

¹ Studien über Tuberculose. Wien, 1883.

² Zur färbung des Tuberkelbacillus. Deutsche Med. Wochenschr., viii., 451. Berlin, 1882.

³ Loc. cit., p. 258.

solutely no obvious inconvenience, except a mechanical one from her deformity. The tumor is about one-half the size it was before operation, but the most careful examination fails to reveal anything more than fatty tissue in it. Under this can be distinctly felt a covering over the opening in the spinal canal, which is, to use Mr. Robson's words in describing his result, "of much greater than mere skin hardness." The tumor is no more sensitive than other portions of the skin, and reasonable pressure fails to affect in any degree the tension of the fontanelle.

I would add to Mr. Robson's points in operating: First, care in removing a portion of the fluid in the tumor before free incision, as a guide to the degree of tolerance present in each case for such a procedure; second, the careful maintenance throughout the operation and for some time after, of such a position of the patient as will most favor the retention by gravitation of the largest amount possible of cerebro-spinal fluid.

Finally, I would remark the apparent confirmation of the successful and useful application of periosteal grafting in this operation.

ENDEMIC DISEASES IN FLORIDA.

By C. DREW, JR., M.D.,
JACKSONVILLE, FLA.

In February, 1881, I began a systematic study of the endemic diseases peculiar to East Florida, having had compact blank forms printed to fit into my note-book, so that at the bedside of each patient could be obtained and recorded the date of attendance, sex, age, color, disease, residence, time of residence in the State, result, etc. My object was to ascertain for each month the per cent. of disease due to malaria, the per cent. of cases of fever in non-residents, per cent. of cases of phthisis occurring in residents, or any other facts which might be brought to light; also the mean barometer, thermometer, humidity, and direction of winds for each month. The question is often asked, "What are your most sickly months?" and although we well know that September and October are most insalubrious, it occurred to me that it might lead to some useful results to study the subject more accurately, and obtain in figures the exact percentage due to malarial influence, and at the same time to ascertain the meteorological statistics in order to consider their bearing upon such facts. Meteorological and topographical conditions undoubtedly often act in concert to induce disease, and although we can do nothing with the former, we may so change the latter as to produce, under similar circumstances of wind and weather, very much better conditions. The figures, it must be admitted, are few in number, and a larger record might perhaps lead to somewhat different results, but it is perhaps a fair average of results to be obtained under our usual climatic influences. Very accurate results could be obtained, in studying disease in its relations to meteorological changes, by making daily observations of both, ascertaining the prevalence of a certain type of disease and its relations to such changes upon each particular day, and if any value could accrue from such study, it would be much enhanced if such observations could be made by a number of observers, daily results being handed to a compiler for summarizing—in other words, "the collective investigation of disease," as recently suggested by the British Medical Association. Their method is to "draw up cards and explanatory memoranda regarding certain diseases, such as chorea, rheumatism, etc. These are sent to each member of the association, with the request that he answer the inquiries and return the cards to the secretary." A majority of cases recorded were within the limits of the city of Jacksonville, the semi-insular situation of which (being partly surrounded by creeks with marshy borders) makes it a good index of the influence of winds in wafting the germs of malarial disease from certain quarters into the habitations of

man. During the last two years the marshy margins of the creeks surrounding the city have been partially reclaimed, which, I believe, has made a considerable reduction in the amount of malarial disease prevalent in the suburbs.

February, 1881..	14	3	21.42	1	7.14	13	92.85	..	..	3	100.00	N.E.	58.0	62.7	30.162
March, " " "	44	7	15.93	4	15.90	37	84.10	2	28.57	5	71.43	S.W.	60.0	54.7	29.965
April, " " "	50	15	20.78	7	16.66	32	82.86	4	26.66	10	73.34	N.W.	67.4	59.0	30.047
May, " " "	42	14	33.33	7	16.66	35	83.34	4	28.57	11	71.43	N.E.	75.8	68.5	30.014
June, " " "	42	16	38.09	6	11.90	37	88.10	2	12.50	14	87.50	S.W.	83.2	64.2	29.968
July, " " "	38	23	60.52	5	15.78	32	84.22	2	8.69	21	91.31	S.W.	83.8	72.2	30.010
August, " " "	26	16	61.53	3	11.53	23	88.47	1	6.25	15	93.75	N.E.	81.6	73.7	29.992
September, " " "	38	25	65.78	..	..	38	100.00	..	..	25	100.00	N.E.	79.9	70.4	30.044
October, " " "	70	57	81.42	8	11.42	62	88.58	4	7.01	53	92.99	N.E.	74.6	70.6	30.115
November, " " "	31	19	61.29	6	19.35	25	80.65	3	15.78	16	84.22	N.E.	65.6	75.1	30.160
December, " " "	36	20	55.55	3	8.33	33	91.67	1	5.00	19	95.00	N.E.	61.3	75.1	30.170
January, 1882..	56	13	23.21	12	21.42	44	79.58	3	23.08	10	76.92	S.W.	65.6	78.8	30.210
Total number of cases reported for the year.....	493														
Total number of deaths for the year.....	38														
Per cent. of mortality.....	7.73														
Total cases of phthisis developed in residents for the year.....	15														
Per cent. of mortality.....	3.4														
Total number of cases due to malaria for the year.....	228														
Total number of deaths due to malarial fever, including one case typhoid.....	6														
Per cent. of mortality from fevers.....	2.64														
Total number of cases recorded for month.															
Total due to malaria for each month.															
Per cent. due to malaria for month.															
Total number non-residents attended for the month.															
Per cent. of total morbidity in strangers for the month.															
Total number residents attended for the month.															
Per cent. total morbidity in residents for the month.															
Total cases due to malaria in non-residents.															
Per cent. due to malaria in non-residents.															
Total number cases due to malaria in residents.															
Per cent. due to malaria in residents.															
Direction of wind.															
Mean temperature for the month.															
Mean humidity for the month.															
Mean barometer for the month.															

The accompanying table exhibits the fact that the greatest percentage of such disease existed when the winds blew from the northeast or southwest, and as the greatest areas of marshland lay in these directions, it is more than probable that the germs of disease were wafted from them into the residences of those living in the vicinity. Only for the month of March is the wind reported as having blown from the west, and during that month the number of cases of disease due to malaria is very small—15.42 per cent. In February but few cases are on record, as I had just returned from the North and my practice was small. In this month, although the temperature was 58°, the percentage of fever cases was 25 while the wind blew from the northeast, while in March, when the wind came from the west, the percentage was only 15.42, with a temperature of 60°. All things being equal, the nearer we approach the freezing-point the less liable we are to malaria. At this point it is not likely that winds exert any modifying influence, but up to that point I would infer that they did.

Dr. Austin Flint, in his work on "Practice," speaking of malaria, proposition third, states: "Its evolution or active agency is checked by a temperature of 32°;" which proposition is fully endorsed, I think, by the experience of the profession. In proposition fourth, written in 1867, he states: "It is most abundant and virulent as we approach the equator and sea-coast." It now becomes a

question as to whether or not conditions have changed, as severe cases of malarial disease have recently been reported from New York (even in that famous health-resort, the Catskills), from Connecticut, and my conversations with intelligent observers from Western States lead me to think that their malarial fevers are more intense than those observed in East Florida. My experience would lead me to infer that malaria in this section is much less intense than it was a few years ago. I am almost certain that within the last decade cases of pernicious fever are much less common than formerly. One case of chronic malarial cachexia is recorded in January, 1882. As an evidence of the scarcity of such cases in East Florida may be mentioned the infrequency of enlarged spleen. I have heard this fact commented upon by gentlemen of experience who have moved to this section from other portions of the State.

From the table it would appear that the percentage of disease due to malaria is large, but to offset this the sequelæ very seldom imperil life or future health, being easily remedied by a temporary change of climate, or in nearly all cases by time and proper remedies at home. The mortality is small, presenting a marked contrast to diphtheria and scarlet fever of the North and West, both of which are very fatal, followed by troublesome sequelæ, and are said to be upon the increase. The table exhibits a total of two hundred and twenty-eight cases of malarial fever for the year, including one recorded as typho-malarial, out of which there were six deaths, or 2.64 per cent. In estimating the per cent. of cases due to malaria all those residing in the State under one year are regarded as strangers.

The smallness of the percentage for December, January, and February, months when the city is replete with strangers, is remarkable. In March also it is small.

The total number of cases of phthisis recorded for the year as having developed among residents is fifteen, giving a percentage of morbidity of 3.4; it is impossible to offer any statistics as to the mortality from this disease in so brief a period of time. There does not appear to have been any remarkable relation between barometrical pressure and the existence of disease. From February to September, with the gradual rise of temperature incident to the summer months, the percentage of malarial disease increases. Through September, October, and November, although the temperature declines, the rate increases, and keeps up until January, when it becomes quite low. Mean humidity does not appear as a prominent factor in the development of this class of diseases. The lowest mean humidity is reported for March, when the percentage of malarial fever is low, 15.93, but in January, 1882, when the mean humidity was 78.8°, a high degree, the percentage of fever was low, 21.42. The meteorological observations were copied from those issued by the signal service at this station.

CHLOROSIS AND FEVER.—The temperature of ordinary cases of chlorosis met with in young women is usually believed to be normal. This belief has been contested by Dr. Mollière, in a paper contributed to the *Lyon Médical*. His observations were made on eight young women, who presented no other signs of disease beyond the anemia for which they were under treatment. The temperature was taken every morning and evening in the rectum, over a period varying from two to fifty days, and was found to oscillate between 101.8° and 102.8° F. The amount of urea eliminated per diem was estimated and found to be normal. Mollière suggests that the increased heat may be explained by the hypothesis of a combustion, the products of which are not so easily recognized as urea. Sulphate of quinine was given as an antipyretic, with the effect of reducing the temperature temporarily. This effect, if constant, would, according to Mollière, definitely establish the existence of abnormal body heat in chlorosis.

Progress of Medical Science.

THE BIOLOGICAL ACTION OF PICTROTOXIN.—Professor Chirone, of the University of Padua, published last year his experimental researches on the biological action of cinchonidin. He found this alkaloid was capable of producing a true artificial epilepsy. By means of many vivisections he was able to demonstrate that cinchonidin exercises its action on the cortical motor centres of the brain; since, when the cerebral hemispheres in pigeons were removed, the epileptogenic action was wanting; when one cerebral lobe only was removed, cinchonidin caused an epileptic convulsion only on the half of the body in relation with the psycho-motor centres not removed.

Picrotoxin also is able to produce epileptic convulsions. Professor Chirone now publishes the results of his experiments with picrotoxin, undertaken with the aid of Dr. Testa, and compares the action of picrotoxin with that of cinchonidin. He says:

1. Cinchonidin produces a less complete convulsion, since the motor muscles of the eye, the tongue, and the bladder are rarely affected, while these are always involved with picrotoxin.
2. The convulsion caused by cinchonidin is at first clonic, afterward tonic; while with picrotoxin it is at first tonic, afterward tonic and clonic.
3. By cinchonidin those muscles which are most used in the normal life of the animal are most affected; while by picrotoxin the muscles of the back and neck suffer most.
4. Cinchonidin does not cause convulsions in rabbits, even in a poisonous dose, while these animals are very susceptible to the action of picrotoxin.
5. Cinchonidin has no convulsive action in hibernating animals (frogs, lizards, and toads), while picrotoxin causes violent convulsions.

From these and many other facts the authors came to the conclusion that picrotoxin has not the same seat of action as cinchonidin, and that it provokes convulsions by other mechanism. Picrotoxin acts on the medulla oblongata, since it determines epileptic attacks in decapitated frogs and pigeons whose brains have been removed, and these attacks are even more intense. These are the conclusions at which they have arrived:

1. Picrotoxin may determine true epileptic attacks. These attacks may be very complete, preceded by cry. They commence ordinarily with tremors of the head or contractions of the muscles of the face, and are progressively diffused through the whole organism. There is loss of consciousness; the animal falls; there are abundant salivation, tonic and clonic convulsions, loss of urine, convulsive rolling of the eyeballs, convulsion of the tongue, which is often bitten, arrest of the respiration and heart.
2. Convulsions from picrotoxin are independent of the psycho-motor centres, since they are more intense when these are removed.
3. Picrotoxin displays its action first on the bulb and on the parts connecting the cerebral and spinal centres, then on the spinal centres, by the last action resembling quinine and differing from cinchonidin.
4. Picrotoxin brings into relief a functional antagonism between the psycho motor centres and the motor centres of the medulla oblongata and spinal cord.
5. Picrotoxin can also give rise to convulsions after the medulla oblongata is removed. This conclusion is deduced from the experiments on frogs, and in this case the convulsion is later and is tonic.
6. The convulsions of the limbs due to picrotoxin depend on the action which is displayed on the medulla oblongata, and is propagated by the spinal cord, and, secondly, by the direct action of the spinal centres.
7. In frogs the spinal functions are more developed than the cerebral, and, *vice versa*, in dogs and other higher mammals the cortical motor centres of the brain are more developed than the spinal centres.
8. The convulsions due to cinchonidin are of cerebral origin, and are not obtained when the psycho-motor

centres are removed. The convulsions due to picrotoxin are of spinal or bulbar origin, and are more intense after the removal of the higher centres.—*London Medical Record*, May 15, 1883.

HOT WATER AS A GARGLE.—Dr. Ritzy has found hot water systematically employed as a gargle of great benefit in overcoming the sensation of rawness incident to acute pharyngitis. He found that the use of hot water paled the red and inflamed mucous membrane more or less permanently. And so far as unpleasant personal sensations went, it cured the pharyngitis. He also believes that this simple plan of treatment would prove beneficial in diphtheria, in patients old enough to gargle intelligently. In ordinary tonsillitis hot water, he thinks, would hardly fail to act well. The water should be used as hot as can be well borne, and gargling should be practiced for several minutes at a time.—*The Medical Age*, May 25, 1883.

THE USE OF ANÆSTHETICS DURING LABOR.—Dr. Savill, in the *British Medical Journal*, May 12, 1883, indicates what he believes to be the main precautions, the observation of which would render the use of chloroform perfectly justifiable: 1. There are certain women who have a tendency to flood at every confinement, and others in whom there seems an already too great relaxation of fibre—weak anæmic females in their eighth or tenth confinement; and to these it would be inadvisable to give chloroform, except for necessity. Happily, it is not these women who suffer the most pain, but rather those strong healthy primiparæ whose pelves and general build approximate to the masculine type. 2. We should not give it when labor is complicated with severe vomiting, or with acute heart or lung disease, unless there be imperative call for it. 3. It should not be given to the full extent, except for operation, convulsions, or spasm of the cervix; and then it is most necessary that one person should devote his entire attention to it. 4. The inhalation should be stopped directly we find the pulse becoming very weak, or the respiration irregular. 5. Anything which makes us suspect a fatty or enfeebled cardiac wall should make us cautious in the use of chloroform. Here, as in cases other than those of labor, it is not the most extensive valvular disease (so long as it be attended by compensating hypertrophy), but the atrophied or degenerate wall that constitutes the source of danger. Unfortunately, the signs of these conditions are subtle and uncertain. Fatty heart may be suspected by an exceedingly feeble cardiac impulse, combined with an almost inaudible first sound; or attacks of dyspnea, vertigo, and syncope, in the absence of anemia, or valvular lesion; or the copious deposit of fat in other parts of the body, and the occurrence of dropsy without adequate cause. A dilated heart may be suspected by increased area of præcordial dulness, combined with epigastric and venous pulsation, and a want of correspondence between the violence of the cardiac impulse and the strength of the pulse. Pericardial adhesions also form a great source of danger. They may be suspected when the heart's apex is fixed above its normal position, and does not shift with respiration; or when there is depression instead of protrusion of intercostal spaces over the position of the apex, giving a wavy character to the cardiac impulse. 6. In all cases, we should take extra care to prevent the occurrence of hemorrhage after birth; by giving a full dose of ergot when the head reaches the perineum; by ceasing the chloroform immediately it is born; and by rousing the patient from her lethargy as soon as possible.

PRIMARY ACUTE MILIARY CARCINOSIS.—A sufficiently searching scepticism is always necessary in medical science, and it is at no time more needed than when an attempt is made to add a new name to medical nomenclature. There are no *à priori* reasons why carcinomatous nodules should not crop up in various parts of the body

under the influence of mere general conditions. It is conceivable that certain of the tissues in certain individuals may as naturally become carcinomatous as those of others fibroid, external agencies apparently having but little influence in the matter. Modern pathology, however, gives an important place to the doctrine of infection, and in the presence of the actual the mind instinctively turns from the merely conceivable. There can be no doubt that the majority of physicians would be extremely careful to exhaust every source of infection before coming to the conclusion, in any particular case of cancerous affection of the serous cavities, that they had to deal with a primary carcinosis of those structures. MM. Raymond and Brodeur diligently but unsuccessfully searched for the primary disease in the case which they have reported. The observation was made on a man aged seventy-six, who showed during life symptoms similar to those induced by pulmonary tuberculosis; palpation of the swollen abdomen, moreover, is said to have revealed the existence of disseminated hard nodules, varying in size from a pea to a bean, apparently separated from the observer's hands only by the thickness of the abdominal wall; there were, in addition, periodic febrile attacks simulating ague. To inspection with the naked eye, tubercles and nodules of carcinoma are sometimes wonderfully similar. The microscopical characters described in the above case were those of genuine carcinoma, growths from the pericardium, pleura, and peritoneum having essentially the same structure. There was a tumor in the liver which the authors assured themselves was nothing more than a cavernous angioma. Charcot has recorded two similar cases also occurring in old age, and, like the present one, having no hereditary taint. If the observations be true, we must recognize the existence of the disease which is called "primary acute miliary carcinosis."—*London Lancet*, March 31, 1883.

FREE INCISION IN PURULENT PERICARDITIS.—At the last meeting of the Royal Medical and Chirurgical Society (*Lancet*, April 28, 1883), Dr. West read a report of the above case, which terminated in the recovery of the patient. A boy, aged sixteen, came under treatment with a large pericardial effusion. The symptoms became so urgent that paracentesis was performed. Pus was obtained. Three days later paracentesis was again performed, and subsequently the pericardium was laid freely open, evacuated, washed out, and a drainage-tube inserted. The temperature never rose, and the boy recovered completely in five weeks, the only feature of interest being an attack of general urticaria, which came on about a week after the operation and lasted three or four days. In support of the diagnosis, a case was referred to in which what was supposed to be a mediastinal cyst was frequently punctured, but it proved to be, on post-mortem examination, a case of chronic pericardial effusion. The points of clinical interest discussed were: 1, the absence of any special signs to indicate the nature of the effusion; 2, the operation and the place selected for puncture; 3, the amount of the fluid evacuated; 4, a peculiar epigastric prominence, noticed before paracentesis, which disappeared after operation; 5, the attack of urticaria; 6, the pulsus paradoxus. A short account was then given of the only other recorded case of incision of the pericardium for purulent pericarditis, by Prof. Rosenstein, of Leyden, which also recovered. Dr. West also read a paper on the statistics of paracentesis pericardii. A complete list of the recorded cases up to date was given in a tabular form, with the addition of several cases hitherto unpublished. The history of the operation was briefly referred to. The cases were discussed under the headings of sex, age, causes (rheumatic fever, scorbutus, phthisis and pleurisy, miscellaneous, purulent pericarditis), length of illness before operation, the effect of the operation, the nature of the fluid; the quantity of the fluid, the number of punctures, the modes of operation, the place of puncture. The following con-

clusions were drawn: 1. Paracentesis pericardii is not only justifiable, but an operation which may be safely undertaken with ordinary precautions, for only one case is recorded in which the operation was in itself fatal, and with this exception all the patients were greatly relieved by the removal even of small amounts of fluid, and many recovered completely who would probably have died had the operation not been performed. 2. The most suitable place for puncture is, in ordinary cases, in the fifth left intercostal space, one inch from the edge of the sternum; but if the pleura be adherent, the puncture may be made safely much further out, and even in the sixth space. 3. The instrument employed should be a trocar and canula, with or without aspiration. 4. The operation may be performed with advantage, not only in the pericardial effusions of rheumatic or primary origin, but also in those which occur in the later stages of general dropsy, if it should appear that the fluid in the pericardium is adding to the difficulties under which the heart is placed. 5. Purulent pericarditis is best treated on general principles, like empyema. 6. The pericardial sac may be safely opened and drained. 7. This treatment, moreover, appears to be the only one which offers the slightest hope of recovery. 8. The results do not seem to be as unfavorable as those of empyema, for the walls of the cavity are better able to contract rapidly, and thus permit of the obliteration of the cavity.

SALICYLATE OF ZINC.—This salt is very soluble in water, and dissolves also in alcohol and ether. The medical properties attributed to salicylate of zinc are that it forms a valuable antiseptic and astringent agent. In certain kinds of cancerous ulcers it has, we are told, given some excellent results, and has been used successfully in gonorrhœa, as an injection, in solution containing one-half to one per cent. of the salt. Messrs. Poignet and Demarres, two French pharmacists, assert that it is preferable to sulphate of zinc as an astringent in ophthalmic affections, and in other cases, since it combines with its astringent action the antiseptic properties of salicylic acid.—*The Monthly Magazine of Pharmacy.*

COMBINED EXTERNAL AND INTERNAL ŒSOPHAGOTOMY.—Among the conditions recently advanced as indications for gastrotomy are the so-called impermeable cicatricial strictures of the lower portion of the œsophagus. They have been placed in this category because of the generally entertained belief that their removal by operative measures was either impossible or attended with the greatest danger to life. While unwilling to deny that gastrotomy may be called for in certain cases, Professor Gussenbauer believes that many, if not all, œsophageal strictures of cicatricial origin, even in the thoracic portion of the tube, or at the cardia itself, may be relieved by an operation of much less gravity. He relates two cases in the *Zeitschrift für Heilkunde* of March 20, 1883, in which he performed the double operation of external and internal œsophagotomy with success. The first case was that of a young woman who had taken about an ounce of sulphuric acid with suicidal intent. The attempt against her life was unsuccessful, but it resulted in the production of a double stricture of the œsophagus, one in the cervical and the other in the thoracic portion. It was determined to perform external œsophagotomy, and accordingly an incision was made in the neck below the level of the cricoid cartilage, when the upper stricture was readily cut by a probe-pointed bistoury passed on a director. The lower stricture was very tight, but after several attempts a filiform bougie was passed. Using this as a guide, the operator introduced a fine director and then incised the stricture in several directions with a hemiotome. The patient made a rapid recovery and was able to take solid food with ease. Owing, however, to neglect on her part in passing the bougies, a recontraction took place. The same operation was

performed a second time with equally successful result. The second case was that of a child, to whom a teaspoonful of a fifty per cent. solution of carbolic acid had been given by mistake. The stricture was situated at the cardia, or immediately above it, and was so close as to prevent the passage of the smallest sized bougie introduced through the mouth. The child could take no nourishment, even water being regurgitated. The œsophagus was opened as low down as possible, and the attempt was then made to pass a sound. But it was only after repeated trials that the operator succeeded in introducing the finest filiform. The subsequent steps were the same as in the preceding case, and the results of the operation were equally favorable. Reasoning from his success in these cases, Dr. Gussenbauer thinks that the attempt to relieve cicatricial strictures of the lower portion of the œsophagus by the combined method should always be made before resorting to the much more serious operation of gastrotomy.

INOSCUATION BETWEEN THE LYMPHATICS AND THE CAPILLARY BLOOD-VESSELS.—The question of the lymphatic circulation is one which is as yet by no means settled. Mascagni and Sappey hold the opinion that there is an anastomosis between the ultimate arterial ramifications and those of the lymphatic system, but most microscopists deny that such a connection exists. In a recent communication, addressed to the Académie des Sciences of Paris, Dr. Alphonse Guérin has embodied the results of some experiments undertaken by him to determine this point. He selected as the field of his study the pulmonary pleura, a membrane admirably adapted for such purpose, by reason of the number and superficial location of its lymphatics. He found that if an injection of water were thrown into the pulmonary artery, in a few seconds the fluid would enter the lymphatic vessels, distending them so that they were readily visible beneath the pleura. Were it not conceded that there is no venous plexus upon the surface of the lung, one would be tempted to regard the injected vessels as venous radicles. But aside from that, Dr. Guérin determined the nature of the vessels by tracing the injection into the lymphatic glands lying near the bronchi. Before drawing any practical conclusions from these experiments, the speaker endeavored to answer any objections that might be raised against his interpretation of the facts observed. To the first objection, that it was not possible to conceive of a direct communication between the two systems which would not permit the passage of red blood-globules from one to the other, he stated that he had never observed this to occur; further, it had been shown by Sappey that the red corpuscles could not pass through a vessel less than 2 mm. ($\frac{1}{25}$ inch) in diameter. The fluid passing first after the injection of the pulmonary artery was of a red tinge; but this only proved that a fluid analogous to the blood-serum, containing hemoglobin in solution, could pass through the anastomosing vessels. It might also be urged that post-mortem epithelial changes may permit of a communication between the two sets of vessels, which did not exist during life. But this objection was disposed of by some injections practised upon rabbits at a time when no post-mortem destruction could possibly have commenced. Dr. Guérin thought he had found in this anastomosis an explanation of some of the phenomena of inflammation. If the serum of the blood can pass from the arterial capillaries to the lymphatics, the white corpuscles can do the same. In accordance with these views, he regarded suppuration as arising from the passage of the white corpuscles of the blood into the lymphatic vessels rather than from their extrusion through the capillary walls. The first phenomenon, therefore, of suppuration was the invasion of the lymphatic territory by the white blood-globules, this invasion taking place through the anastomotic connections of the two systems.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CONVALLARIA MAIALIS—ITS ACTIONS AND USES.

It is a matter of gratification that this beautiful little flower, whose clusters of white hanging bells greet us at this season of the year in many a garden, on the heath, and even by the solitary wayside, is of real therapeutic value, worthy of a rank beside the purple foxglove.

The convallaria is one of our newest remedies, scarcely known to the profession three years (in fact, Dr. Ralph D. Ary's first report bears date October, 1881), yet it has already won for itself an established place in the treatment of adynamic heart affections.

Dr. D. Ary learned the use of this plant while on a tour through his native country, Russia, where it is used as a favorite diuretic and tonic of the heart in chronic dropsical effusions.

Drs. Bogoyavlenski and Troitsky, of St. Petersburg, had previously experimented with the convallaria and called the attention of the profession of Russia to its merits. Their articles were, by Dr. Ary on his return to this country, translated and published, chiefly in the *Therapeutic Gazette*.

Early in the year that has passed, Professor Germain Sée, of the Hôtel Dieu, Paris, learning through Professor Botkin, of St. Petersburg, of the usage of the lily-of-the-valley, in Russian practice, introduced it into his hospital service, besides submitting it to physiological experimentation in his laboratory. The results of these experiments with the convallaria were published in the *Bulletin Gen. de Therapeutique*, July 30th, and were communicated to the medical profession of the United States, through the columns of THE MEDICAL RECORD, in an article by Dr. Hurd, of Newburyport, bearing date September 9, 1882.

Since THE RECORD of the above date called attention to this new remedy, it has been very extensively prescribed throughout this Union, and it is safe to say that there is not a city or hamlet in the land where it has not been tried in cases of cardiac dropsy. In fact, it is now one of the remedies that are first thought of in such cases.

Physiological actions.—Experiments on animals show that convallaria has a marked tonic action on cardiac innervation; small doses strengthening, while slowing the heart's pulsations, large doses speedily tetanizing that

organ. In fact, death occurs, in poisoning by this drug, from tetanus of the heart, and the heart's cavities are found empty. Experiments on the human subject show that there is a marked effect on the heart and circulation, but as yet no cases of poisoning have been observed. It is probable that the toxic dose in the human subject would be large.

In pathological conditions of cardiac adynamia, characterized even by extreme asystolism, the effects of the convallaria are often most beneficial, but it must be taken for granted that the heart muscle is in a state to respond to excitation; if fatty degeneration be much advanced, it is useless to expect any considerable effect from any remedy. The convallaria will generally do what any medicament can do—cases that have failed to derive benefit from digitalis are often helped by it. In functional palpitations, from whatever cause, we have known speedy relief to be derived from ten-drop doses of the fluid extract of convallaria flowers. In the asystolism of Corrigan's disease the heart's action has been strengthened, dropsical effusions in the thorax and subcutaneous cellular tissue have been removed, and the patient made every way more comfortable. But it is especially in the dropsy from mitral insufficiency, where the heart's pulsations are weak, rapid, and irregular, that the most marked benefit has been derived. We have reports of several cases awaiting publication—where the parietic heart has been aroused to new life and activity, where the sluggish kidneys have gone to work in earnest to remove dropsical accumulations (it is not known whether convallaria produces its diuretic effect in part by a special action on the secretory function of the kidneys) and where in a few weeks the patient has been restored to a fair state of general health, with entire freedom from dropsical effusions, and all under the influence of drachm doses every four hours of the fluid extract of the lily-of-the-valley.

Preparations and doses.—Now is the time, while the plant is in bloom, to save a quantity for use during the coming year. The infusion of the entire plant is a good form in which to give the remedy. Two drachms of the leaves may be steeped in a pint of water and the whole taken during the twenty-four hours. The alkaloid of convallaria has been little given, and we have no certain data with regard to its administration. The alcoholic tincture, made by macerating four ounces of the flowers in a pint of alcohol, is a very reliable preparation, and may be given in doses of from ten to forty drops every four hours. The liquid extract of the root is a good preparation, but must be given in larger doses than any alcoholic preparations of the leaves and flowers. Whatever form of the medicament may be chosen the dose may be gradually increased without fear of evil results; unlike digitalis it has no cumulative action to be dreaded. Sometimes it is well to interrupt the action of the medicine, and give digitalis for a time. It is almost always indicated when digitalis fails to act.

We have endeavored not to be unduly eulogistic of this new cardiac tonic. Perhaps the sober second judgment of the profession will give it a lower place in therapeutics than has been here assigned. It must, however, always from henceforth rank as a heart corroborant of great utility.

MEDICAL INCOMES IN NEW YORK.

A DAILY paper of this city has recently published the results of a reporter's investigations regarding the income of some of New York's prominent physicians and surgeons. The publication is an impertinent one, yet we cannot but notice the very moderate amounts at which the incomes of even the best-known practitioners are fixed. The largest do not exceed \$25,000, and the average in a list of about thirty names is about \$15,000. We are inclined to think that the estimates are somewhat under the real amount in many cases. Yet there is no doubt that the enormous sums of \$60,000, \$80,000, and \$100,000 per year, which it is rumored some New York medical men receive, are great exaggerations. We doubt if the average income of the New York City physician exceeds \$5,000, and there is a very large number, if not a majority, who do not get even this sum. A doctor has to work hard to make \$400 a month, unless he has the better class of patients.

With the increase in scientific knowledge and practical skill, there has been an increase, in late years, in the average incomes of professional men, but the maximum of individual incomes has not been raised. No physician or surgeon of the present day has probably ever reached the £21,000 a year which Sir Astley Cooper and Sir Everard Home are reputed to have earned, nor the £1,000 single fee which the former once received. Forty years later, according to Timbs, there were not six medical men in London who received over £5,000 a year, and recently a London writer estimates that the number is not above thirty.

Neither in New York nor in any other American city is it possible for a physician, without some special genius, to make a fortune. The more he earns the more he is obliged to spend, so it happens that a leading specialist, who had an income of \$10,000 to \$15,000 yearly, died recently insolvent, and the widow of a prominent and widely known surgeon has now to depend upon charity.

This is the darker side. Many members of the profession, perhaps the majority, earn enough to live comfortably, educate their families, and supply themselves with some luxuries; and their practice, though hard enough, does not involve so much physical wear and tear as that of their provincial and country brethren.

THE NEW YORK ACADEMY OF MEDICINE AND THE STATE SOCIETY.

*"The kettle to the pot denies
Its sordid superficies."*

SOME attempts have been made to excuse the action of the Academy of Medicine at its last meeting, by comparing it with the action of the State Society in adopting the State Code. "It [the Academy's action] was done," says Dr. Squibb, "exactly as the New Code was adopted in the New York State Medical Society," in 1882. Such a statement illustrates, in an interesting manner, how partisan zeal will warp the most truth-loving mind.

The differences between the action of the Academy and of the State Society are several. For a year every county society knew, or should and could have known, that the Code of Ethics was to be changed; notice of the exact change could not be given, because it would

have been forestalling a committee's report; there was no previous pledge that the matter of ethics should not be introduced; there was no secret and organized attempt to surprise the Society; and there were no threats of "throttling it" at the time.

We have never heard that the pot was thought the more of because it called the kettle black, and the managers of the Academy fiasco will not regain respect by crying that others are just as bad as they.

AUTOPSIES IN THE ARMY.

NOT long ago we mentioned the fact that the Surgeon-General of the Army had issued a circular directing members of the medical corps to make autopsies whenever practicable. It appears now that the carrying out of this order will meet with some opposition.

A few weeks ago a soldier was accidentally killed on the target range. The bullet struck him in the upper lip and passed directly through his brain. He died in less than two minutes. A post-mortem was held the next day, all the viscera being carefully examined. A correspondent of the *Times*, using this incident as a text, protests against the right and legality of the Surgeon-General to order or permit such examinations. He says:

"This enlisted man did not sell nor convey his body to the medical corps; there is nothing either expressed or implied in the contract entered into between the United States and this enlisted man which gives his body to the post surgeon for dissection after death. When dead, killed in the line of duty, his body is entitled to and merits decent treatment and honorable burial. His body does not receive decent treatment if it be subjected to the surgeon's knife without his consent previously obtained."

We understand that the body of a dead soldier should receive the same respect and consideration as that of any other citizen—and no more. No one in private life makes a bargain with his doctor not to hold an autopsy. It would be foolish and impracticable to attempt getting an expression of opinion from each recruited soldier as to his exact post-mortem disposition, since in many cases autopsies are absolutely demanded; nor is autopsical examination "indecent treatment."

The rule which holds in civil life has been found satisfactory, and it can be applied in a measure to the soldier. Autopsies should be allowed, provided responsible friends or relatives do not object. The Surgeon-General has no moral right to order an autopsy in opposition to the wishes of these. Yet it must be admitted that the complications and unusual conditions of military life make any special regulation impossible.

THE IRON CURTAIN AT WALLACK'S AS A SAFEGUARD FROM FIRE.

WALLACK'S Theatre is one of the two or three theatres in the city which have been pronounced perfectly safe as regards fire. This security is attributed to the large number of exits and to the fact that there is an iron curtain separating the auditorium from the stage, which can be let down in case of fire. This curtain was put in at a time when iron curtains were thought to be the great and indispensable feature of a fire-proof theatre.

Further experience seems to throw some doubt over the value of this opinion. At the International Hygienic Exhibition, now open at Berlin, the display of iron curtains among the life-saving apparatus is small, and there is a well-developed opposition to their use. A very powerful argument has recently been furnished to this side. The National Theatre of Berlin burned down not long ago. There was no one in it at the time, and no lives were lost. The iron curtain was down, however, and we are informed that before the house could possibly have been emptied this curtain came crashing over into the parquet.

It would be well if the public could be assured that such an accident can not happen at Wallack's or other theatres where this partition has been, or is likely to be, introduced.

News of the Week.

DEATH OF DR. NOAH C. LEVINGS.—Dr. Noah C. Levings died at his residence in this city June 11th, at the age of fifty-nine years.

THE OREGON STATE MEDICAL SOCIETY met during the past week at Portland.

THE PENNSYLVANIA ANATOMY BILL.—The Legislature of Pennsylvania has passed the new bill providing for a supply of anatomical material substantially as it was drafted.

ANOTHER OFFICE THIEF.—An office thief, who is known under the name of "Dutch Lena," is around again. She is about thirty-five years of age, of sickly aspect, and claims to be sent by some neighboring druggist to consult the doctor on account of uterine ailment. She says that several operations have been performed on her by prominent specialists. She finds out when the doctor is absent from home, when she calls, and, under pretence of writing a note, steals whatever she can.

THE DEATH OF DR. WILLIAM E. KENNEDY, an old and widely-known physician of New Orleans, is announced.

WHAT OTHER PEOPLE THINK OF THE AMERICAN MEDICAL ASSOCIATION.—Seldom have so many bitter and contemptuous comments upon the medical profession been called out as by the recent action of the American Medical Association. We print the following specimen from the *New York Times*:

"The labors of the American Medical Association were crowned at its final session by the expulsion of Dr. Goodwillie, of this city, upon the express ground that he adhered to the Code of Ethics of the New York State Society. In other words, a physician whose standing is not challenged in any other respect is declared unworthy of professional association because he reserves the right to attend a patient in consultation with an 'irregular' physician of the patient's own choosing, whenever, in his judgment, any emergency requires him to do so. And this reservation is regarded as the violation of a code of 'ethics.' The doctors who take this view would appear to be cruel bigots if they did not present so much more prominently the aspect of simple geese. This is not the

spirit of a learned profession; it is the spirit of an ignorant trades-union, bent upon punishing 'rats.' The men who made it and who adhere to it must believe not so much that it is the business of physicians to heal the sick as that it is the business of the sick to furnish constant and remunerative employment to a carefully limited number of 'regular' physicians."

The above is somewhat strong. No one, of course, questions the legality or logical necessity of the Association's action—which was hardly a formal expulsion. But to refuse to consider that there is anything wrong in a set of by-laws which excludes several thousands of reputable and hundreds of eminent physicians, this naturally excites criticism.

Reports of Societies.

MEDICAL SOCIETY OF NEW JERSEY.

One Hundred and Seventeenth Annual Convention, held at Atlantic City, June 12 and 13, 1883.

(Special Report for THE MEDICAL RECORD.)

TUESDAY, JUNE 12TH—FIRST DAY.

THE Convention was called to order by DR. JOHN W. SNOWDEN, of Waterford, President, after prayer by the REV. JOSEPH GARRISON, D.D., of Camden.

An "Address of Welcome" was tendered by DR. BOARDMAN REED on behalf of the Atlantic District Medical Society. He was followed by the HON. CHARLES MAXWELL, Mayor of Atlantic City, who in a very happy manner greeted and made welcome the medical fraternity of New Jersey.

After the reading and adoption of the minutes of the last annual meeting, the recent action of the American Medical Association

IN REGARD TO THE CODE OF ETHICS,

as supported by that body, was brought to the attention of the meeting. A lively discussion ensued, in which much was said both in favor of and against the position maintained by them. As there was some misunderstanding with reference to the precise nature of the Code of Ethics in question, Dr. Atkinson, Secretary of the American Medical Association, was asked to explain. He stated that the Code of this year, which all delegates were required to sign, did not differ in any particular from the original Code as formed by the American Medical Society. It was then urged by Dr. Price that a Society which frames a law or laws had the right to enforce compliance with such law or laws, so far as delegates were concerned who wished to be connected in any manner to it. Dr. H. H. Tichenor stated that the State Society should assert its loyalty to the "old Code" without modification.

DR. EZRA M. HUNT then presented the following resolution:

Whereas, The American Medical Association has at its late meeting made new requisition of delegates before their names were allowed to be enrolled;

Resolved, That in nominating delegates to that body the Nominating Committee be requested to confer with our Committee on Ethics, and if they think necessary, with the Society, as to the propriety of this course, and what action needs to be taken in reference thereto.

During the discussion that followed, a motion was made to "lay the resolution on the table," and after a very close contest the motion was carried.

Dr. Hunt stated that a code of ethics should not be presented for unconditional acceptance, which, because of some questionable modifications, rendered them liable

to debate, if inspection by a special committee were allowed. Also that a body maintaining such a standard of ethics should in all fairness listen to suggestions when so much of importance is involved.

After the announcement of committees by the President the meeting adjourned to 7.30 P.M.

FIRST DAY—EVENING SESSION.

The meeting was called to order by DR. STEPHEN WICKES, of Orange, First Vice-President, after which the President delivered his address.

PRESIDENT'S ADDRESS.

"The Advances Made in Medicine by Physical Diagnosis." He stated that in the early history of medicine physical diagnosis was unknown. The first means of this sort was introduced by Hippocrates, and styled succussion. The means of diagnosis of diseases of the chest were then considered, the various appliances which are used as aids being well enumerated and described. Among the more recent additions since the time of Laennec are the sound of pleuritic friction by Raynaud in 1829, pericardial friction by Collin in 1831, and the proper interpretation of sounds heard over the vessels. Phonometry, as described by Prass, is a new method of investigating the condition of the thoracic and abdominal organs. It consists in placing a vibrating tuning-fork on the surface of the chest or abdomen and determining by the intensity or feebleness of the tone it gives whether the subjacent organs do or do not vibrate simultaneously, that is whether they are permeable or not to air. The paper was an exhaustive treatise on the subject of physical diagnosis and contained much valuable information. At its conclusion the address was appropriately accepted and referred for publication in the "Transactions" of the State Society.

DR. H. H. JAMES, Chairman of Committee on

WHERE AND OF WHOM RELIABLE VACCINE VIRUS MAY BE OBTAINED,

then made a report, in which he stated that each physician for himself ought to investigate whether the virus he uses is pure and reliable. Owing to the prevalence of small-pox for the last few years, the demand for vaccine lymph has been great; so that in order to meet this need a quantity of unreliable virus has been thrust on to the professional community by the "vaccine farms," "vaccine companies," etc. Dr. Wm. M. Nelsh, Surgeon of Municipal Hospital, Philadelphia, says that one propagator is able to charge from eight thousand to fifteen thousand points from one heifer. This is four or five times the number collected by more reliable producers. There is a so-called patent lymph advertised and sold throughout the country. One of these specimens was examined by Dr. J. Mitchell Prudden, of New York, and he found it to contain epithelial cell, hairs, some broken off, others having their roots attached. Beside these things there were fragments of vegetable substances of various kinds. It is thus shown how impure and unreliable much of the lymph is. The author of the paper said that perfectly reliable virus might be obtained from Dr. Henry A. Martin & Son, Boston, or from Dr. Frank P. Foster, of New York. He closed his report by saying that the propagation of animal virus is a service requiring very exact management, and should be committed to no hands but intelligent and conscientious physicians.

After the reading of the paper it was discussed by DR. J. D. OSBORNE, of Newark, who said that physicians are much to blame for the unpleasant results which so often follow vaccination with animal virus. He considered the humanized lymph much more reliable.

DR. PRICE, of Camden, agreed with Dr. Osborne, and further stated that after vaccinating a child with human-

ized virus he had placed it in the bed with its father, who had small-pox, without any fear of the disease being transmitted from the sick to the healthy. No unfavorable result followed.

DR. WRIGHTSON, of Newark, then stated that in Maryland there was a State law regulating the use of vaccine lymph, physicians being provided with reliable virus *gratis*. He made a motion to the effect that such a law be made in New Jersey, but it was not carried.

WEDNESDAY, JUNE 13TH—SECOND DAY.

The meeting was called to order by the President after which the Nominating Committee reported as follows:

President—Stephen Wickes, of Orange; *First Vice-President*—P. C. Barker; *Second Vice-President*—Joseph Parrish; *Third Vice-President*—Charles J. Kipp; *Recording Secretary*—William Pierson; *Corresponding Secretary*—Wm. Elmer, Jr.; *Treasurer*—W. W. S. Phillips.

Standing Committee—T. J. Smith, Chairman; E. J. Marsh; S. S. Clark.

Delegates to American Medical Association—George Bayles, H. G. Cook, J. Condict, W. R. Little, E. J. Marsh, D. A. Currie, E. L. B. Godfrey, A. Coles, B. A. Watson, George F. Welch, L. A. D. Allen, D. B. Ingersoll, H. W. Elmer, Frank Ashhurst, J. D. Heritage.

Delegates to State Medical Societies.—Pennsylvania—Theo. A. Varick, T. L. Laws, D. Berryman; *Connecticut*—D. C. English, —Sonnors, St. John; *Rhode Island*—Rich Page, Boardman Reed, L. J. Gordon; *Massachusetts*—E. North, E. M. Hunt, J. L. Bodine; *Vermont*—George H. Larison; *Maine*—Joseph North, Jr., W. K. Newton, A. C. Hunt.

Drs. T. A. Emmett and Isaac E. Taylor were elected honorary members.

The subject of the "Fellow's Prize Essay" for 1884, will be "The Etiology and Pathology of Septicæmia and Pyæmia."

DR. JOSEPH PARRISH, of Burlington, read a very interesting paper on

SOME PROBLEMS IN INSANITY,

in which he stated that places of retreat should be provided where the patients should in every instance have the most careful attention, and where there should not be unnecessary restrictions enforced. He likewise asserted that many of the so-called lunatics in the New Jersey State Asylums are not insane, and that if only the *insane* were confined in the asylum, there would be much more vacant room than can at present be found.

The doctor, after the paper was duly accepted and discussed at some length, offered the following:

Resolved, That it is the

OPINION OF THIS SOCIETY THAT A LUNACY COMMISSION SHOULD BE APPOINTED

by the State authorities and as a means of protecting the pauper insane especially, and of improving the general condition of the almshouses of the State.

This resolution was not adopted as first presented, but was remarked upon and finally adopted as amended by Dr. E. M. Hunt, in the following form:

Whereas, The condition of the insane poor in the several county houses of the State is such as to warrant investigation by this Society, it is therefore

Resolved, That the Chair appoint a committee whose duty it shall be to inquire into the management of the asylums and poor-houses in the several counties, as often as may be suitable, and in a friendly and unofficial manner acquaint themselves with the condition of the insane, and report to this Society at its next annual meeting.

DR. GEO. BAYLES, of Orange, then read a very instructive paper on

CAUSES OF MELANCHOLIA.

In this paper he showed, by deductive reasoning, what may be regarded as the initial agencies at work in the world to provoke a tendency to mental incompetency through cerebral innutrition. Melancholia is considered as a term of very general significance, applied very generically to many, if not all, conditions of mental alienation preliminary and leading to insanity. The etiology of melancholia includes two sets of causes, "the remote predisposing" and the "immediate exciting." It was the former that the essayist paid special attention to. The great cosmic causes, and those of heredity, have heretofore been considered as mainly those upon which the melancholic dyscrasia depends. Dr. Bayles claims that in many periods of the world's history, and in many communities, these special causes are not directly operative. There is another cause, found within the system of the mother, derived from the impressions made upon the generative zone through the emotions. The influence of the emotions upon the nutrition of the ova, upon the nutrition of the fetus in utero, and the post-natal life, is fully set forth. The writer claims that a sufficient first cause of depreciated mental and nerve force is all that is necessary for the successful operation of the later or secondary causes. The doctor claims the unqualified importance of the pre-natal excellence of the germ of future life. After pointing out what should be the true physico-mental states accompanying conception, it is shown how this bears upon nutrition or innutrition in relation to the etiology of melancholia. A brain inheriting normal and healthy conditions is never susceptible to motives of melancholia, excepting under the direct influences of acute organic disease. This paper seems to be an extension of the writer's views as presented in a paper read before the New York Medical Journal Association, about four years ago, entitled "The Malady of Innutrition."

The committee appointed at the last annual meeting of the New Jersey State Medical Society to present a plan for putting into effect the suggestions made by the President

IN REGARD TO THE CURRICULUM OF MEDICAL STUDY, reported as follows: They suggest that when possible a regular college education be had, and that when such a course is impossible an equivalent or near approximation to it be exacted, and that the applicant should produce a certificate of a completed course in a reputable academy or high school, in which are taught in addition to the English classical and mathematical branches required for admission to our more advanced colleges, intellectual and moral philosophy, rhetoric, logic, and the elements of physics, chemistry, and natural history, including botany and zoölogy.

In default of either a college diploma or academic certificate as above defined, the applicant, before being taken under the care of a physician for medical instruction, should be subjected to examination and approved by a competent censorship appointed under the authority of the State Medical Society. In order that the desired result might be attained it was recommended that the action of this Society be communicated to the medical societies of the several United States, to the National Medical Association, as well as to the local medical organizations, with the request that they co-operate with the New Jersey Medical Society.

DR. C. J. KIPP, of Newark, then read a very practical and interesting paper on

THE MANAGEMENT OF CASES OF IRITIS.

He stated that in the treatment of all cases of iritis, no matter what the origin, the first indication is to secure dilatation of the pupil, and for this purpose the most reliable mydriatic is the sulphate of atropine. In recent

cases five or six instillations of a few drops of a one per cent. solution of atropine, made at intervals of five minutes, will usually break up any adhesions which may already have formed, and cause complete dilatation in the course of a few hours. When, as is sometimes the case, the atropine does not have such an effect, six or eight leeches should be applied to the temple. When leeches cannot be used with benefit, a brisk cathartic will sometimes have a very desirable effect. In all severe cases the patient should be put to bed, or at least kept in a dark room till the severity of the disease is broken. Dilatation of the pupil should be maintained until *all irritation* has subsided. If such remedies as have been recommended do not produce a larger pupil, mercurials should be given by inunction or by the mouth. In some cases muriate of pilocarpine will answer very well. In his recent practice the doctor has been able to dispense with mercurials in cases where there were not marked symptoms of secondary syphilis. To relieve the pain morphia is to be given in large enough quantities to produce sleep at night. Paracentesis of the anterior chamber will give relief if the pain is due to increased tension of the globe, a symptom not at all uncommon in the so-called serous iritis. If after the iritis the pupil is excluded, an iridectomy should be made as soon as practicable. It would be profitable to report in full this paper which deals with such an important lesion, but space and time forbid.

DRS. MARSH and BAIKWIN were appointed a committee to arrange for the entertainment of the Society at the next annual meeting at Cape May, N. J.

MASSACHUSETTS MEDICAL SOCIETY.

One Hundred and Second Annual Meeting, held in Boston, Mass., June 12 and 13, 1883.

(By Telegram to THE MEDICAL RECORD.)

TUESDAY, JUNE 12TH—FIRST DAY.

THE one hundred and second annual meeting of the Massachusetts Medical Society was held at Huntington Hall, Massachusetts Institute of Technology, Boston, Mass., commencing June 12, 1883, Vice-President DR. JOHN H. MACKIE, of New Bedford, presiding.

CONCERNING THE TUBERCLE BACILLUS.

DR. H. C. ERNEST, of Jamaica Plain, read a paper on the "Tubercle Bacillus," giving a *résumé* of the views of Koch, Pasteur, and others, concerning the same, and presenting a large number of original experiments of inoculation with tuberculous matter. In guinea-pigs, operated upon there was always found a causal relation of the inoculation with the death of the animals from phthisis. Several cases of phthisis were also reported, in all of which the bacilli were found in large quantities in the sputa. The same result was obtained in the examinations of cheesy glands, lung cavities, in specimens of milary tuberculosis, and in one case of tubercular iritis. No culture experiments were attempted. The writer coincided with Koch's view to the effect that there was a bacillus which by inoculation was capable of producing tubercular processes, and also that the examination of the sputum of cases of suspected phthisis was of great diagnostic value.

In the discussion which followed, confirmatory statements were made by Drs. R. H. Fitz and W. T. Whitney.

DR. H. R. BOWDITCH believed that the bacillus doctrine gave great weight to the possibility of the contagiousness of tubercular disease, and alluded in passing to the possible benefits of antiseptic respirators. He also referred to the necessity of examining the sputum in doubtful cases of pulmonary phthisis.

DR. ERNEST remarked that no suitable antiseptic had been found for the bacilli. Carbolic acid and other antiseptics acted only very slightly on bacilli. Perhaps re-

peated cultivations, like those of Pasteur in connection with hen-cholera, might prove of service in establishing a means for prophylactic inoculation.

DRS. L. S. WOOD, of Springfield, and W. A. DUNN, of Boston, read papers on "The Uses and Abuses of Ergot," after which the morning session concluded.

FIRST DAY—AFTERNOON SESSION.

The meeting was called to order by President ALFRED HOSMER.

The following papers were then presented: Dr. J. W. Warren, of Boston, on "Glycogen;" Dr. O. F. Wadsworth, of Boston, on "Phlyctenular Diseases of the Eye;" Dr. B. H. Hartwell, on "Minor Injuries of Spinal Cord"—reporting nine cases; and Professor T. M. Clark, of the Massachusetts Institute of Technology, on "Plumbing Appliances," illustrated by working models of water-closets, ventilating systems, and samples of faulty and good plumbing. He spoke of the system adopted in the new bill regulating plumbing in Boston.

At the annual meeting of Councillors in the evening there was the usual discussion and vote

ON ADMISSION OF WOMEN TO THE SOCIETY.

Although the majority of the Fellows seemed in favor of the measure in answer to private circulars, the motion to amend the by-laws so as to admit women was lost.

ELECTION OF OFFICERS.

The following named officers were chosen: *President*—Alfred Hosmer; *Vice-President*—Ira Russell; *Treasurer*—Frank W. Draper; *Recording Secretary*—F. W. Goss; *Corresponding Secretary*—C. W. Swan; *Librarian*—D. H. Hayden.

WEDNESDAY, JUNE 13TH—SECOND DAY.

The meeting was called to order by President ALFRED HOSMER, in the Chair.

The Secretary, DR. FRANK W. GOSS, read the record of last year's meeting, and presented his annual report, announcing the addition of twenty-six Fellows and the death of twenty-seven.

The report of the Treasurer, which was accepted by the Councillors at their meeting the previous evening, was read. The total income of the Society was, \$8,595.79; expenditures, \$7,056.37; balance on hand, \$1,539.42.

On motion of DR. H. H. BOWDITCH, a committee of three was appointed to memorialize Congress in regard to the

DISPOSITION AND CARE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE

and to urge upon representatives the importance of providing fire-proof buildings for its preservation, in connection with the Museum, and distinct from the General Congressional library, also of securing a liberal appropriation for completion of the "Index Catalogue," and for the general purposes of the library. The Chair appointed as members of the committee: Drs. H. P. Bowditch, H. P. Wolcott, and O. F. Wadsworth.

The request of the President of the College of Physicians and Surgeons, that diplomas granted by said college should be recognized by the Society, was, after some discussion, laid on the table.

DR. E. N. WHITTIER read a paper on

RECENT CHANGES IN THE METHOD OF MEDICAL INSTRUCTION.

He briefly reviewed the old system of acquiring knowledge of the science of medicine by studying with some physician, remarking that the method was unsatisfactory and that the practice of medical apprenticeship was, properly enough, practically abolished. It was superseded by the co-operative system of instruction, the stu-

dents having advantages by class instruction of different lecturers and professors, which they could not enjoy while studying with one physician. The rapid growth of hospitals required a larger number of undergraduate appointments. The difficulty was not to get enough, but to properly select from those fitted for such positions.

DR. J. S. GREENE, of Dorchester, read a paper on

NEURASTHENIA,

its courses and its home treatment. The disease was not due to work, but to the competition, anxiety, hurry, and excitement of business and society. Education was one thing, but cramming was another. The latter always caused nervous exhaustion. He then spoke in detail of the influences, more or less, resulting in nervous exhaustion, and considered the different methods of treatment, paying high tribute to those who have endowed hospitals for the reception and treatment of those suffering from neurasthenia.

DR. J. W. SPOONER, of Hingham, read a paper on "Artificial Feeding of Infants."

DR. W. B. GOLDSMITH, one of the examiners at the Danvers Insane Asylum, read a paper on "Early Symptoms of General Paralysis of the Insane."

The following named delegates were then introduced to the meeting: T. J. W. Pray and L. J. Young, of New Hampshire; C. E. Webster, of Maine; E. R. Campbell and George Dunsmore, of Vermont; G. T. Swartz and H. J. Miller, of Rhode Island; G. G. Hopkins, P. V. S. Pruin, and E. N. Brush, of New York, and Alice Bennett, of Pennsylvania.

After an intermission of fifteen minutes

THE ANNUAL DISCOURSE

was delivered by DR. AMOS H. JOHNSON, of Salem. He took for his text the motto of the Society "Natura Duce," and suggested that it should be changed to read "Ratione et Natura Ducibus." He referred to the wonderful progress made in the study of astronomy and electricity during the last few years, and then turned to the consideration of the progress in the science of medicine, saying that it was chiefly the result of judgment and critical observation. He also alluded to the danger of allowing patients to follow Nature as a guide, declaring that in many instances her advice proved fatal. The indifference with which the presence of some contagious diseases was regarded was one of the bad moral influences in the community which had to be met. The science of preventive medicine was of recent growth, but it had made tremendous strides. He expressed the hope that the time would come when State boards of health would be relieved from the fear of political influence, and thus attain their greatest usefulness.

At the conclusion of the address a vote of thanks was tendered to Dr. Johnson. The Society then adjourned.

The annual dinner of the Society took place in the Skating Rink on Clarendon Street at one o'clock, Francis H. Brown, M.D., of Boston, presiding. Among the after-dinner speakers were President Hosmer; President Elliot, of Harvard University; Dr. A. H. Johnson; B. A. Gould, Ph.D.; Rev. Edward A. Horton; Dr. W. H. Hings-ton, of Montreal; Rev. E. C. Bolles, Ph.D.; Dr. John B. Hamilton, Surgeon-General U. S. Marine Hospital Service; Professor E. S. Morse, and President Francis A. Walker, of Massachusetts Institute of Technology. Governor Butler was not present. Especially worthy of note were the remarks of President Elliot on the relation of the medical profession to the poorer classes. He scouted the idea, now maliciously advanced, that the medical profession systematically ill-treat the poorer classes, either before or after death. On the contrary, the poorest pauper to-day had better care than a king's daughter could have had two hundred years ago. This resulted largely from the advance in medical education, which should therefore receive all possible support from the people and those who make and execute the laws.

American Medical Association.

*Thirty-fourth Annual Meeting, held at Cleveland, O.,
June 5, 6, 7, and 8, 1883.*

MEETINGS OF SECTIONS.

SECTION OF PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

TUESDAY, JUNE 5TH—FIRST DAY.

THE Section was called to order at three o'clock P.M. DR. J. H. HOLLISTER, of Illinois, Chairman, and DR. J. G. LEE, of Philadelphia, Secretary.

The only two papers presented were those by Dr. Robt. D. Murray, of the U. S. Marine Hospital Service, on

YELLOW FEVER,

and by Dr. W. M. Beach, of Ohio, on

MILK SICKNESS.

Dr. Murray being unavoidably absent, his paper was read by DR. F. W. MILLER, of Chicago, also of the Marine Hospital Service. The author advocated putting the patient at once to bed and giving a warm-water bath. Mental tranquillity must be obtained by whatever means. He laid emphatic stress on absolute quiet of both body and mind. The symptoms should be treated with the usual remedies, but very cautiously. Diet must be light, and after a few days tonic; to stop vomiting he employed charcoal early and placed a little ice in the patient's mouth.

DR. CAMPBELL, of Augusta, Ga., advised blood-letting in yellow fever patients. The patient should also be thoroughly vomited with hot water.

The discussion which ensued was participated in by Dr. Elliott, of Pennsylvania, who put his patients to bed immediately, but did not approve of bleeding them; Dr. Bell, of New York, who coincided with Dr. Murray's treatment; Dr. Franklin, of Ohio who depleted such patients with calomel instead of the lancet; Dr. J. B. Hamilton, of the Marine Hospital Service, who advised strict quarantine.

Dr. Beach's paper on "Milk Sickness" was discussed by DR. A. B. PALMER, of Ann Arbor, Mich., who thought that the germ of the disease was multiplied after its entrance into the body.

The Section then adjourned, to meet on Wednesday at 2.30 P.M.

WEDNESDAY, JUNE 6TH—SECOND DAY.

THE Section was called to order by the Chairman, DR. HOLLISTER, at 3 P.M.

DR. THOMAS N. REYNOLDS, of Detroit, Mich., read a paper on

THE ALIMENTARY CANAL IN BRONCHITIS AND PHTHISIS.

He argued that the abnormal condition of the alimentary canal and portal and lacteal systems was often the predisposing cause of both acute and chronic affections in all parts of the respiratory apparatus. Acute tracheo-bronchitis was often caused by excess in the dietary, with proportionately incomplete waste elimination. In view of this fact in such cases the treatment should be prompt evacuation of the bowels and restriction of the diet to a light liquid form. Necessary quiet and warmth of the surface should be maintained, but the atmosphere of the room should not be too warm. The cathartic, hot drinks and warm surface produced a revulsion of nervous energy from the inflamed part to the bowels, kidneys, and skin. He deprecated the use of ordinary cough mixtures to the exclusion of this more rational treatment. Morphine, quinine, aconite, and veratrum viride were the more usually appropriate remedies in the first stage, but did not equal the treatment without drugs to which he referred. Derangement of the primæ and secundæ was still more causative

of chronic bronchitis, and treatment should have reference to this fact.

When purulent, quinine was the best remedy in connection with the management pertaining to ingestion and elimination. It was not wise to press stimulants and strong nourishment when not readily digested. Clothing should be sufficient but not excessive. A common mistake was wearing too much on the chest. He had a few times seen striking improvements in expectoration in those going about from removing two or three extra undershirts and a chamois leather lung protector. Physical exercise, involving free use of the lungs, restored wonderfully their normal elasticity after an attack. It dissipated thickening and adhesions just as continued free motion dissipated the thickening and adhesions from around a recently inflamed joint. Catarrhal fibroid phthyses most frequently were the result of neglected chronic bronchitis and should be treated in much the same way, not by cod-liver oil or any other supposed specific alone, especially if they interfered with digestion, but quinine was useful in lowering the temperature and lessening the secretion of pus. The patient should cultivate an out-door life with plenty of physical exercise and wholesome mental occupation.

Under this régime digestion and tissue-building soon went on properly, cavities often healed, and recovery became complete. Any region free from malaria or unwholesome emanations, with a temperature permitting constant out-door life, would answer for a resort. Tubercular phthisis had sometimes seemed to be excited in those of tubercular family history by neglected bronchitis; in those of constipated habit, and with general defective elimination, and who lived an inactive in-door life. In dyspepsia with constipation, and septic fermentation of the ingesta, it seemed probable that the septic product might be carried by the portal and lacteal vessels directly to the capillaries of the lungs, and be there sometimes auxiliary in causing bronchitis and phthisis in any or all of their forms.

DR. W. F. BELFIELD, of Illinois, followed with a paper on

THE GERM THEORY OF DISEASE, WITH MICRO-PHOTOGRAPHIC ILLUSTRATIONS.

The paper was briefly discussed by Drs. Austin Flint, Jr., of New York City, and A. B. Palmer, of Ann Arbor, Michigan.

DR. JOHN V. SHOEMAKER, of Philadelphia, read a very interesting paper on

MECHANICAL REMEDIES IN THE TREATMENT OF SKIN DISEASES.

These remedies were massage, compression, blood-letting, incision, excision, enucleation, scooping, scraping, setons, and cauterization.

The use of massage in certain morbid conditions of the integument, when properly applied, is often followed with marked beneficial changes, and, at times, with complete restoration of the part to its natural state. Massage not only acts in this way locally, but by its indirect effect, when used generally, will add tone and vigor to the entire system. Direct as well as indirect action of this powerfully mechanical remedy can thus be put into execution, both for its local and constitutional effect in many skin affections. Massage, if employed in its original sense, would simply imply kneading. It has now a wider and more general use, and includes as well a group of procedures known as friction, pinching manipulations, rolling, and percussion of the different external parts of the body. It can be done with the hand or with the additional aid of some fatty substance, a coarse towel, a hair mitten, or brush. It may be performed also by means of ingenious machines that are now perfected and arranged for doing what the most skilful manipulator can do with his hands. The first, and perhaps the most common form of massage used in the treatment of skin

diseases is friction. Friction can be employed upon the integument either by patients themselves or by a manipulator.

In the dry form of seborrhœa, particularly of the scaly, and in thinning and loss of hair, frictional massage used with moderation stimulates and augments the sluggish circulation, furthers absorption, and imparts tone and vigor to the scalp and hair. In indurated acne and in glandular swellings it arouses the activity of the sluggish and choked-up absorbent vessels, and thus relieves the glandular congestion and the skin again becomes normal, in being soft, supple, and elastic, and free from these lesions. It not only has a local beneficial influence upon the class of affections just named, but likewise often removes or assists in removing, when used over the trunk, many gastric and intestinal disorders which very often keep up the cutaneous irritation. This general effect of frictional massage he had witnessed again and again, in relieving and curing constipation and other functional derangements, which were very often active factors in keeping up acne, rosacea, hyperidrosis, seborrhœa, urticaria, and eczema. It was often efficacious in removing scars, and in cases in which the pigment of the skin was either in excess or deficient in quantity stimulating to renewed activity the absorbents, and assisting again in restoring the parts to their natural state. Massage was an invaluable agent in certain neuroses, and especially in neuralgia and perverted sensibility.

Compression is a most important adjunct in the treatment of herpes, herpes zoster, urticaria, furuncular, and glandular affections, erythema, and eczema. In acute eczema it soothed muscular irritation, toned up the dilated capillaries, and prevented the escape of serosity into the tissues. Again in subacute and chronic eczema it enabled the vessels to remove poured-out products, protected the denuded surface, and excluded the air, which was very stimulating to inflamed and irritable parts, and so moderated diseased action. The doctor here showed a new woven gum-bandage which he has been using in place of ordinary gum bandages, and spoke of its great advantage over the latter for making systematic compression in eczema and other skin affections. In chronic eczema of either the superior or inferior extremity, the use of water or oil dressings and local medication, combined with systematic pressure with the bandage, would generally afford a most excellent result.

Referring to blood-letting, he remarked that the abstraction of blood either as a local or general measure was one of the most powerful anti-phlogistic remedies that could be resorted to in the treatment of skin diseases. It was both a speedy and efficient means of combating and arresting morbid changes of the integuments. It was especially applicable in chronic conditions after medicinal agents had been exhausted in vain attempts to cure many eruptive diseases. Blood might be abstracted either locally from the capillaries or generally from a vein or an artery. In the treatment of cutaneous affections by means of blood-letting, local depletion should be used in the great majority of cases, general blood-letting only being resorted to in very rare instances. Topical blood-letting might be performed by puncturing, scarification, and leeching. The doctor then dwelt upon the abstraction of blood in various diseases, and exhibited his new dermatome and other appliances. Concluding, he spoke also of the great value of the other mechanical means mentioned.

The meeting closed with the delivery of a paper upon
A NEW METHOD OF PROCURING PURE PANCREATIC JUICE.

The speaker illustrated his remarks on a dog, in whose stomach he had created an artificial fistula.

THURSDAY, JUNE 7TH—THIRD DAY.

The first paper was by Dr. J. SOLIS COHEN, of Philadelphia, on

THE ELEMENTS OF PROGNOSIS AND THERAPEUTICS OF LARYNGEAL TUBERCULOSIS.

While acknowledging the truth that the prognosis is always unfavorable in tuberculosis of the larynx, it may be maintained that it is less so in some cases than in others. After citing several cases, he discussed a number of acute varieties occurring in his own practice. "I have reason to believe," said the speaker, "that the course of certain forms of tuberculosis of the larynx may be retarded to such an extent in occasional instances as to start the patient on the road to recovery."

Dr. H. A. MARTIN, of Massachusetts, spoke on

VACCINATION AND PROPAGATION OF VACCINE VIRUS.

He recommended physicians to procure virus from young heifers, not because they are cheaper, but on account of their perfect health. The quantity of virus that can be taken from an animal varies very much. It can be used only once. He had introduced animal vaccination in this country, and would like to see it succeed. He did not speak against the use of vaccine from the arm of a patient, but thought it utterly impossible to secure the desired quantity of it.

Dr. A. T. KYTE, of Ohio, read the closing paper, on the
DIMINUTION OF THE RETARDATION OF THE PULSE IN AORTIC INSUFFICIENCY.

The Section then adjourned.

SECTION ON SURGERY AND ANATOMY.

TUESDAY, JUNE 5TH—FIRST DAY.

This Section met at half-past two o'clock. Chairman, Dr. W. F. PECK, of Davenport, Ia.; Secretary, Dr. PAUL F. EVE, of Nashville, Tenn.

The first paper read was on

THE RADICAL CURE OF HERNIA BY A NEW METHOD,
by Dr. R. A. VANCE, of Cleveland, O.

Referring to oblique inguinal hernia, he spoke of the peculiarity of his method as consisting in bringing together the two lips of the hernial opening by means of a deep-seated suture passed subcutaneously with a semi-circular needle.

In this way he converts the previously wide-open hernial canal into a closed valve, that resists all tendency to allow of a second protrusion.

Dr. D. P. ALLEN, of Cleveland, followed with a paper on

THE COMPARISON OF ANTISEPTIC AND NON-ANTISEPTIC METHODS OF TREATMENT.

His conclusions were as follows:

First.—The fact that the operations in the abdominal cavity succeeded without the spray does not influence the employment of antiseptics with regard to other operations where there is a continued opportunity for infection.

Second.—It would appear that the spray is the least important of all the details in antiseptics, and that if the other details are attended to, proper drainage, dressing, and pressure may, by securing absolute quiet for a wound, avert danger.

Third.—That different methods are of different applications, and that whereas the spray may be most important when opening joints, and in the atmosphere of hospitals with bad hygienic surroundings, flooding might be equally efficient in certain other wounds.

Fourth.—That some prominent antiseptics, such as iodoform, would be most serviceable when other antiseptics are inapplicable, as in the removal of a tongue.

Fifth.—That although there are certain dangers in the use of antiseptics, these are more than equalled by the dangers attendant upon their omission, especially in large hospitals; and that dangers by poisoning are cer-

tainly decreasing as the application of antiseptics is becoming better understood.

Sixth.—That investigation may develop a method of securing antiseptic results less onerous, and devoid of the disadvantages that now surround them.

The various antiseptic methods produce better results than any other method.

DR. MARTIN, of Massachusetts, in opening the discussion, remarked that in fifty years, he believed, Listerism would only be regarded as one of the curiosities of medical literature. By Listerism he must be understood to refer to the "destruction of bacilli," regardless of any other co-existent uncleanness. He believed in

GENERAL CLEANLINESS IN THE TREATMENT OF WOUNDS.

He further referred to Ambrose Pares' experience in French campaigns, where the wounds of the higher officers, who had all possible care and surgical oversight, proved far more fatal on the average than those of the common soldiers, whose injuries remained uncared for for days at a time, lying as they did utterly apart from all assistance at the spot where they happened to fall on the field of battle.

DR. C. B. NANCREDE spoke strongly in favor of Listerism and against Dr. Martin's criticisms.

The next paper, on the "Value of Early and Late Operations in Morbid Growths, especially Malignant," was by DR. S. D. GROSS, of Philadelphia. (This paper having been read before the American Surgical Association, appears in our report of that body. See page 639.)

The Section, after listening to a paper by DR. H. A. MARTIN, of Massachusetts, on the

TREATMENT OF SYNOVIAL DISEASES BY A NEW METHOD, advocating the withdrawal of the synovial fluid by aspiration and the application of the rubber bandage, adjourned.

WEDNESDAY, JUNE 6TH—SECOND DAY.

The Section was called to order at 2.30 P.M. by DR. W. F. PECK, of Iowa, Chairman.

DR. ROBT. NEWMAN, of New York City, read a paper on

THE SURGICAL USE OF ELECTROLYSIS.

The results which he had obtained from its use in stricture of the urethra had been excellent.

DR. JAMES R. TAYLOR, of New York, read portions of an elaborate paper on

FRACTURES OF THE LONG BONES,

which was profusely illustrated by well-executed drawings. The doctor first spoke of fracture of the thigh-bone, which he treats with a saddle made to fit into the perineum, whereby he secures the most perfect comfort possible by any apparatus used for the purpose of counter-extension. This neatly devised little saddle is held in position by a strap running to the head-board on each side, thus securing the limb in an immovable position. By fastening strips of adhesive plaster, previously secured to the leg, to a peculiar spring arrangement attached to the foot of the bed, he can produce any desired degree of extension. The chief advantage of the whole apparatus over all other instruments is the little saddle on which the patient sits, as it were, with comfort, rather than misery, as in most other methods, and the arrangement of springs. The doctor announced himself as positively opposed to the old method of using stones and other suspensory weights to produce extension of the limbs, and then turned his attention to

THE TREATMENT OF FRACTURED RIBS.

He brings the broken ends into place by raising the arms over the head, an original method, by which he claims there is no trouble in adjustment. They are then held in place by a band of adhesive plaster around the

body. He gave original methods of treating broken wrists and collar-bones, illustrating the treatment of the latter with a living example in the person of an Irish laborer of this city, who was suffering from an injury of the kind named.

A paper on the

COMPARATIVE VALUE OF ANTISEPTICS

was read by DR. HENRY O. MARCY, of Boston, Mass., detailing the results of a series of experiments.

DR. L. H. SAYRE, of New York, followed with a paper on "Amputation below the Knee-joint, in Preference to either *Brisement Forcé* or Resection, in Certain Cases of Deformity with Ankylosis," illustrated by two cases. The substance of this has already appeared in THE MEDICAL RECORD, page 527.

DR. E. M. MOORE, of Rochester, N. Y., read a very interesting paper on

THE TREATMENT OF OLD CASES OF COMPOUND DISLOCATION OF THE ULNA

in connection with Colles' fracture. He thinks that in those cases of fracture of the radius known as the Colles fracture there is also dislocation of the styloid extremity of the ulna, which dislocation in many cases is not reduced, and great deformity is the result. At any time within six months from the date of the original injury, he rebreaks the united fracture and attempts a reduction of the dislocation, but when cases are of so long standing as not to permit of breaking the bones, he excises the extremity of the ulna, thus making a useful and movable joint. The discussion which followed was participated in by Dr. Wile, of Connecticut; Dr. S. M. Ross, of Altoona, Pa.; Dr. Quimby, of Jersey City, N. J.; Dr. Kinloch, of South Carolina; Dr. Mudd, of Arkansas, and Dr. C. Redin, of Illinois.

DR. V. H. COFFMAN, of Omaha, Neb., read the last paper of the day on

THE TREATMENT OF TENDER SPINES BY SUBCUTANEOUS INCISIONS.

He took issue with the usual method of treatment in such cases and said the simplest but most effective method, rest always understood, is subcutaneous incision over the seat of that portion of the spine which is implicated. His procedure is to introduce a tenotome at a point below the tender spot, thence passing it to a point above, and then by pressure, as he withdraws it, he cuts down upon the bone, and where tendinous structure is involved he divides the sheath of the tendon or performs longitudinal section of the tendon itself. He also incises the aponeurosis when it is the seat of disease.

The paper gave rise to numerous inquiries and a good deal of discussion, as the practice is a very novel one.

Dr. Coffman was recalled to re-explain his method of making the incision, after which he was kept standing upon the stage for some time answering questions from various physicians relative to his paper.

The Section then adjourned, to meet on Thursday, at 2.30 P.M.

THURSDAY, JUNE 7—THIRD DAY.

The first paper was on

EXCISION OF BOTH HIP-JOINTS,

by W. A. BYRD, of Illinois.

The speaker said that ever since the first suggestion of the removal of the head of the femur, by Charles White, in 1769, for morbus coxarius, and the first execution of it, by Schmalz, in 1816, as stated by Dr. Sayre, or by Anthony White, in 1822, as claimed by Barwell, there had been great diversity of opinion among surgeons in regard to its propriety, a few favoring it, but many condemning it as utterly useless. For, while it might save the life of the patient, it frequently left a miserably deformed being, incapable of locomotion without the aid

of crutches or cane. The chances of cure were no better than if the patient were left to depend upon the slow process of spontaneous exfoliation of the diseased bone, a process generally anticipated by death. Opinions, however, had greatly changed since the number of excisions had become sufficient to compare with the older methods. The Doctor then reported the case of a girl, ten years of age, who, after enduring the operation for the removal of the head and upper portion of the femur, was in due time able to walk without crutches, passing up and down stairs with ease. The operation consisted in an incision two inches above the great trochanter, continued downward, curving behind the great trochanter, and ending five inches below its origin. The soft parts were pulled aside and detached carefully, with the periosteum, from the bone, by means of a dentist's scraper. The head of the bone was brought out through the opening, and, on account of its softened condition, was divided just below the trochanter, there appearing to be no other portion of the bone affected. The dressing was oakum and balsam of Peru. A photograph illustration of this case was shown. He called attention to the time intervening between the attack and the excision of the joint, showing the period to be four months.

Dr. Byrd called attention to the splint used by him, which was first brought to his notice by Dr. Charles T. Parks, of Chicago; but stated that the inventor himself, Dr. W. T. Verity, of Chicago, was present, and called upon him to exhibit and explain his apparatus. Dr. Verity placed upon the platform an upright post, to which he attached a triangular frame made of strips of wood, fastened together by strong strap-iron hinges, and attached to the upright by means of a clamp. From the extremity of this triangle hung, suspended by a strong cord, the wire framework in which the patient lies, capable of adjustment to fit any desired position of the limbs. The triangular frame can also be adjusted at any angle, and can be attached to a door-post, or any such convenient upright. The entire apparatus is very portable, and can be packed up for transportation in a few seconds. While in this condition it requires no wider space than an ordinary violin-box. As the inventor explained point after point, proving the superiority of the apparatus, he was enthusiastically applauded.

Dr. L. HALL SAYRE, of New York, complimented Dr. Verity very highly upon having the correct idea of suspension, but claimed for his father and himself the origination of the principle involved in the construction of every apparatus for suspension.

Dr. MOSES GUNN, of Chicago, emphasized the utility of Dr. Verity's apparatus.

The next paper was by Dr. H. O. MARCY, of Boston, on

THE SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.

He stated that great triumphs had been achieved during the last decade in abdominal operations, and divided intestinal obstructions into three classes—chronic, late acute, and early acute—either or each of which might be caused by fecal impaction, fibrous or cancerous stricture, intussusception, injuries, etc. The first and most important thing was a prompt and correct diagnosis. He asserted that the aspirator could be used to relieve gaseous distention with almost absolute safety, and that its use is followed by relief, though only palliative and not curative. He mentioned the reduction of gaseous distention of the rectum, recommending, however, that no time be lost in resorting to an operation, as the location of the trouble cannot be accurately known. Dr. Marcy recommended opening the abdominal cavity in the median line, taking care to preserve the utmost cleanliness during the operation. After the obstruction had been removed, the edges of the wound should be brought accurately together, especially the opposed edges of the peritoneum, as the hemorrhage is generally grave.

In opening the discussion Dr. B. A. WATSON, of New Jersey, spoke in very commendatory terms of the method.

Dr. GORDON, of Maine, believed the time would come when physicians would be held criminally responsible for the use of the carbolic acid spray in abdominal surgery. He accepted antiseptic precautions, but not the carbolic acid spray.

Drs. Byrd, of Illinois; Brophy, of Pittsburg; Keller, of Arkansas, and Moore, of New York, also took part in the discussion.

Dr. PREWETT, of Missouri, read a paper on "A New Operation for Ranula."

Dr. RANSOHOFF, of Cincinnati, then spoke on "The Early Use of the Trephine." Drs. Gunn, of Chicago, and Hyde, of New York, expressed their corroboration of the writer's sentiments.

Dr. HENRY J. REYNOLDS, of Orion, Mich., then read a paper on

THE TREATMENT OF STRICTURE OF THE URETHRA.

He said no importance whatever should be attached to the statement by the patient that his stream is full size. The size of the stream may be evidence of the *presence* of stricture, but not of its *non-existence*.

For either large or small calibred stricture he prefers internal cutting and stretching with Otis' instrument to all other methods. He always, however, provides the patient with a full-sized sound, with instruction to pass it every few days for an indefinite length of time.

If the stricture be too small for this instrument, he enlarges sufficiently to admit it, first with Thompson's or Maisonneuve's instrument, and then uses the Otis instrument, carrying the enlargement even beyond the normal calibre to insure the absolute and complete removal of all obstruction, without which the cure is liable not to be permanent; the smallest amount of obstruction or contraction remaining, he claims, will furnish a groundwork for future gleet or contraction, or both.

He then gave a report of several cases treated by different methods, showing the comparative merits of each; among which was a case of extreme stricture involving external perineal urethrotomy without a guide, in which even the prostatic portion was contracted in its anterior part. In this case a pocket an inch deep, and large enough to admit the finger, extended upward and backward in front of the prostate, the septum between which and the urethra he cut across.

Dr. R. B. BONTECUE, of New York, made a few remarks on his method of treatment of cystitis by external urethral section.

Dr. J. H. WARREN, of Boston, followed with his paper on "Tissue Repair, or the Pathology of Subcutaneous Injections in Cases of Hernia." He exhibited an improved syringe that discharges its contents automatically upon the slight pressure of a knob attached to the instrument.

A telegram was read from Dr. Dawson, of Cincinnati, expressing regret at his inability to appear at the sessions of the Surgical Section.

The following papers were read by title and referred to the Committee on Publication: "Syphilitic Mammary Tumors," by Dr. C. C. F. Gay, of New York; "A Form of Inguinal Hernia Liable to be Overlooked," by Dr. A. H. Wilson, of Massachusetts; "On Derrick and Improved Suspensory Apparatus for Suspension in the Application of Plaster Casts, etc.," by Dr. W. T. Verity, of Chicago. The Section then adjourned.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY, JUNE 5TH—FIRST DAY.

This Section met at half-past two o'clock.

Dr. J. K. BARTLETT, of Wisconsin, Chairman, and Dr. G. A. MOSES, of Missouri, Secretary.

The first paper presented was that by DR. W. H. BYFORD, of Chicago, on

CHRONIC INTERO-PELVIC INFLAMMATION.

The terms parametritis and perimetritis are supposed by many to include the whole subject of intero-pelvic inflammation.

These terms are misleading, because, as now often used, they present to the mind the idea that all cases of inflammation not confined to the uterus must belong to one or the other of them. Acute observation teaches the important fact that perimetritis and parametritis usually exist together and are usually complicated with inflammation of the uterus, and not infrequently the ovaries and Fallopian tubes are involved. Chronic pelvic abscess is generally the sequel of acute inflammation, and attains chronicity from the imperfect evacuation of the pus after acute inflammation has terminated in suppuration.

The remedy in such cases is found in surgery, and consists in making a more direct outlet through the vagina, large enough to at once completely evacuate the pus and enable the surgeon to cleanse and disinfect the cavity.

He gave the following summary: First, the sometimes terrible effects of examinations or operations in the pelvis do not often, if ever, take place when there is not a perceptible predisposing inflammation. Second, the inflammation may be so slight as to be easily overlooked. Third, it may be an original condition, the sequence of an acute attack long gone by, or it may be the product of some immediately previous examination or operation, the effects of which have not subsided. Fourth, to avoid the dangers of acute inflammation we should, in making the first examination for pelvic disease, conduct it in such a way as not to give the patient much pain, and when she complains of pain and suffering, desist at the sacrifice of complete diagnosis. Fifth, complaints of much tenderness to the touch or the use of instruments, especially in parous women, is sufficiently diagnostic of inflammation upon which to base treatment for that condition. Sixth, if with such tenderness a thorough examination or an operation is imperative, it should be done under profound anæsthesia. There was no question in his mind that much less danger of ill effects is incurred in making examinations or operations on susceptible subjects under the free use of anæsthetics. Seventh, examinations or operations should not be repeated until the effects of the first have entirely passed off. Eighth, as chronic parametritis is a frequent complication of most of the morbid conditions of the uterus, it should be always inspected and its diagnosis be carefully considered in all cases of metritis. Ninth, when chronic parametritis is present it should be the chief, if not exclusive, object of treatment until removed. Tenth, it is not safe to use the sound, sponge-tent, or intra-uterine stem when there is parametritic inflammation. Eleventh, it is especially dangerous to replace a displaced uterus when it is bound down by inflammatory adhesion, by any means which will overcome its fixedness by force. Twelfth, all local treatment of the uterus must be conducted with the greatest care in all cases where the complication is present.

The next paper was on the subject of

POST-PARTUM POLYPOID TUMORS,

by DR. HENRY G. LANDIS, of Columbus, O. He described four forms: 1, blood polypus; 2, fibrinous coagula, with fragments of placenta and membrane; 3, prematurely detached strips of decidua, with or without clots; 4, hypertrophied patches of decidua.

The writer detailed two cases of the latter kind, very few being on record.

A short discussion ensued on a paper on
THE RESTORATION OF THE PERINEUM BY A NEW METHOD,
by DR. H. O. MARCY, of Massachusetts. He advised the

repair of the perineum by the use of lateral support. This he accomplished by the use of German-silver wire, which possesses elasticity enough to make lateral tension, while the ends are so bent as to each form with the other a sort of safety-pin support, which thus holds the refreshed parts in position.

The last paper read was by DR. R. S. SUTTON, of Pittsburgh, on

ENTEROTOMY AS A COMPLICATION IN OVARIOTOMY OR OÖPHORECTOMY.

He related a case in which he had successfully removed four inches of the small intestine, and spoke of this case as the first successful operation of the kind ever performed in this country. Billroth of Vienna has performed the same operation abroad.

WEDNESDAY, JUNE 6TH—SECOND DAY.

The Section was called to order at half-past two by the Chairman, DR. J. K. BARTLETT, of Wisconsin.

Drs. R. Beverley Cole, of California, and J. Tabor Johnson, of the District of Columbia, who were announced for papers, being absent, the first paper read was by DR. JOHN MORRIS, of Maryland, on the subject:

WHAT MEANS CAN BE JUDICIOUSLY USED TO SHORTEN THE TERM AND LESSEN THE PAINS OF LABOR?

He described lingering labor, dividing it into three stages: First, when the head remains high up; second, when it has descended into the pelvic cavity, but the parts are tense and undilatable; third, when the head of the child impinges on the perineum. He explained the procedures to be used in all these conditions and at what time to employ them. These procedures were, detaching the membrane around the cervix with the finger in the first stages, dilating the os with the pulpy part of the finger and stretching it continuously during each pain; rupturing the membranes, forcible external compression pushing the cervix over the occiput, administration of opium, ergot, but never in first cases, and finally, chloroform. These means all failing, the only alternative was the forceps. The Doctor said that if the means he suggested were employed, laceration of the os and perineum, those *bêtes noir* of modern medical literature, would be obviated and post-partum hemorrhage, that greatest of all complications in labor, would be prevented.

The discussion which followed was participated in by Drs. McClurg, of Pennsylvania; Ghent, of Texas; T. Reamy, of Ohio; Smart, of Michigan; Morton, of Maine; Martin, of Massachusetts; Montgomery, of Pennsylvania; Landis, of Ohio; Humiston, of Ohio; Robinson, of Pennsylvania; and Watkin, of Kentucky.

DR. E. C. DUDLEY, of Chicago, followed with remarks on

THE IMMEDIATE APPLICATION OF SUTURES IN PUERPERAL LACERATION OF THE CERVIX AND PERINEUM.

The paper was ably discussed by Drs. Walker, of Kentucky; E. W. Jenks, of Chicago; John Morris, of Baltimore; G. M. Maughs, of St. Louis, and Wm. Ulrich, of Chester, Pa.

Before the Section adjourned, DR. W. A. TAYLOR, of Cincinnati, offered a voluntary and very interesting report of

A CASE OF LAPARO-ELYTROTOMY.

DR. T. REAMY, of Cincinnati, said the one lesson to be drawn was to make the operation earlier.

DR. MATHER, of Louisville, thought laparo-elytrotomy was better than craniotomy, which had been attempted and could not be completed in the present case. In country districts the operation which should have been done was Cæsarean section, Porro's modification of Cæsarean section, or Mueller's modification of Porro's. The latter showed great success in European hospitals.

DR. REED, of Ohio, referred to a case of labor in a

dwarf, with foot presentation. By the second day the body had been extracted as far as the head by traction. Finding it impossible to remove the head, they separated the body and pulled it away with Hodge's long forceps. He succeeded in getting blades round the head. The woman got well without a bad symptom.

DR. WILLIAMS, of Boston, claims that the high forceps operation was more fatal than abdominal section. He did not agree with Dr. Mathers that Cesarean section was an easier or simpler operation. There was less danger of bleeding in Thomas' operation. Dr. Taylor's case was the ninth reported.

DR. JENKS, of Arkansas, was surprised that some one had not referred to symphysiotomy. Recovery of mothers, sixty per cent.; children, thirty-seven per cent. Not above $2\frac{1}{2}$ of antero-posterior contraction of the pelvis was possible in cases amenable to this operation. Drs. Morisani and Novi, of Italy, have reported many such operations performed successfully.

DR. DUNLAP, of Springfield, O., said that the mortality in such cases was very great. Death, however, teaches us lessons which cannot be learned in any other way. The cause of death was doubtless, in the case reported, delay in performing the operation. He would not condemn the operation, but it should have been performed much earlier than it was. Great care should be taken that suppression, if present, is promptly treated. He performed the operation upon the left side.

DR. DANDRIDGE, of Cincinnati, wished to emphasize the ease with which the operation was performed although all the facilities were poor—great want of light, etc. The left side possesses very decided advantages; the finger of the left hand can be introduced into the vagina and so map out the ground. He did not attach much danger to hemorrhage from wounding the epigastric artery. Another lesson to be drawn is that this operation does not require any special preparation. In this case the operation was put off too long.

Dr. Robert Battey, of Rome, Ga., was announced for a paper on "Battey's Operation—Death from Ether," but was not present.

DR. P. ZENNER, of Ohio, then read a paper on
VALUE OF GYNECOLOGICAL TREATMENT IN HYSTERIA
AND ALLIED AFFECTIONS.

While he acknowledged that the cure of uterine diseases was sometimes followed by relief of the nervous disease, he called attention to the injury occasionally caused by local examination or treatment. Cases were reported, some of which came under his own observation, some reported by others, in which gynecological measures had done direct injury. The manner in which harm can be done, principally of mental origin, was detailed. The author thought, for various reasons mentioned, that the etiological relation between hysterics and uterine disease was not as close as believed by many—a predisposition, often hereditary, was usually at its base. In conclusion, after

WARNING AGAINST THE PROMISCUOUS GYNECOLOGICAL INTERFERENCE

in all hysterical patients, he spoke of general measures to prevent the development of nervous diseases. If hysteria depended on defective nervous organization, Dr. Zenner thought no one had a right to demand of the gynecologist who removes a tumor that he must thereby give his patient that which she never possessed—a healthy nervous system.

ULCERATION OF THE OS UTERI WAS A VERY RARE DISEASE IN THE UNMARRIED,

unless given rise to by the murderous practice of introducing the speculum into the virgin vagina two or three times a week, and injecting caustic solutions. He wished to state that the introduction of the speculum in the virgin vagina by a woman doctor was just as unfortunate in its result as the same examination by a man.

DR. GORDON, of Maine, in the main endorsed Dr. Reamy's views, which were that if the symptoms of unmarried women pointed to uterine disease they should receive precisely the same treatment as in the case of a multipara. There was a morbid sentiment in the other direction. Were girls to endure uterine disease untreated by men physicians because they are unmarried? You will not have done your duty if you do not apply local treatment to girls with nervous symptoms pointing conclusively to the womb.

DR. CATLETT, of Missouri, thought that hysterical symptoms in insane patients (female) did not direct their thoughts to the generative organs.

DR. MAUGHS, of St. Louis, said the great danger of the age was the over-zealousness of gynecologists. He condemned the universal practice of making digital examination for all hysterical symptoms; still very many married women suffer after marriage because they have not been examined before they were married, and treated for the uterine disease which really existed.

DR. CRAWFORD, of Illinois, believed that in nervous disorders due to uterine disease the removal of the local disease was only the first step in the treatment. The cure of the local uterine disorder did not by any means imply the cure of the nervous symptoms.

DR. JENKS thought the chief value of Dr. Zenner's paper consisted in its enforcement upon the specialist of the necessity of general constitutional treatment.

DR. G. M. MAUGHS, of St. Louis, read a paper on "The Midwifery and Gynecology of the Ancients," after which the Section adjourned.

SECTION IN DISEASES OF CHILDREN.

TUESDAY, JUNE 5TH—FIRST DAY.

In the absence of the Chairman, Dr. Blount, of Indiana, DR. EARLE, of Chicago, was elected Chairman *pro tem.*; and in the absence of the Secretary, Dr. Sears, of Texas, DR. BOOTHBY, of Wisconsin, was elected Secretary *pro tem.*

The Chairman *pro tem.* then read a paper on

CEPHALÆMATOMA IN THE NEW-BORN.

The tumor spoken of is a soft, elastic, fluctuating tumor, situated on one of the cranial bones, due to rupture of a blood-vessel between the periosteum and the bone. It is usually noticed upon one of the parietal bones, and it can be detected by the fluctuation present. In the caput succedaneum there is no fluctuation; there is simply a boggy feel, an œdematous and bruised condition of the tissues. There were four difficulties with which it is liable to be confounded: first, the caput succedaneum; second, congenital encephalocele, or hernia cerebri; third, erectile tumors; fourth, craniotabes.

The treatment advocated was letting the tumor alone; nature in a great majority of cases cures this difficulty without any aid from our art. There is a tendency on the part of parents and friends to interfere. Formerly it was regarded as good practice to open these tumors, but the fact that a certain number thus opened were followed by long-continued suppuration and exhaustion, and in some cases death, should deter us from operative interference. The special object of the paper was to call attention to the greater frequency of the difficulty than had heretofore been supposed; also to the four affections with which it is liable to be confounded, and to the fact that in a few cases, where pain, swelling, and tension become very great, it is admissible, indeed the best practice, to open these tumors and treat them antiseptically.

DR. WM. LEE, of Baltimore, said he did not know how craniotabes could be confounded with the above, as it was peculiar to rickets, and had accompanying it the many other symptoms of that trouble, which made it impossible for it to be classed with any other disease.

In regard to treatment of cephalæmatoma, while

many cases get well without any interference, there were cases which unquestionably require surgical procedure.

DR. HARRIS, of Virginia, had probably seen cases of the kind mentioned, but his mind had not before been so strongly impressed with the means of distinguishing between them and cases of caput succedaneum. He thought the points made in the paper deserved careful consideration.

DR. READ, of Cincinnati, referred to a case of cephalæmatoma in which, while the diagnosis was not perfectly clear, the let-alone plan of treatment was recommended; but the parents being anxious, sent for another physician, who lanced the tumor. Hemorrhage followed, and the child died.

DR. BOOTHBY, of Wisconsin, had seen three cases falling under the title of the paper, the first one quite early in his practice, which perhaps was a partial excuse for opening the tumor. No bad consequences, however, followed the operation, and the child lived. In the other two cases he made no interference. He thought it a good general rule to let the misshapen head of the new-born alone, and nature would restore the normal form which existed before parturition.

The paper was referred to the Committee on Publication.

WEDNESDAY, JUNE 6TH—SECOND DAY.

The Section was called to order by the Chairman, DR. R. F. BLOUNT, of Indiana.

DR. ALEXANDER Y. P. GARNET read a paper on

EPIDEMIC JAUNDICE IN CHILDREN.

During the summer of 1881, remarkable for its unprecedented heat for a long period, he had under observation several cases of jaundice, the epidemic confining itself to young children. The author of the paper then reviewed the literature of the subject of jaundice, and followed it with a detailed history of one of the typical cases which came under his observation. The epidemic occurred in midsummer, after an unusually protracted period of high temperature, and in all the instances the jaundice appeared before gastro-intestinal disturbance became a marked feature. Dr. Garnet then referred to the usual causes of jaundice, directing special attention to gastro-intestinal catarrh, and expressed the opinion that in the cases in the epidemic referred to, this catarrh was not the real factor in the etiology, because the jaundice antedated the gastric disturbance. He believed that the essential element in the production of the jaundice was an affection of the nervous system, and quoted various authorities at some length to sustain that position. He then asked the question, In what manner does the deleterious agent of heat operate upon the nerves distributed to the liver to effect such a derangement of its normal function? The answer was that scientific research and experimentation had not yet supplied us with positive data upon which we can base a conclusive reply to this question.

UNITY OF DIPHTHERIA AND MEMBRANOUS CROUP.

DR. A. HARRIS, of Virginia, read a paper on the above subject, in which he expressed the opinion that the diseases which have received the name of diphtheria and membranous croup are one and essentially the same. The paper contained extensive references to the opinions of various medical authorities upon this question.

DR. SNOW, of Michigan, believed that the two affections were essentially distinct. Diphtheria begins within a small space, and extends from that location over the mucous membrane. Croup never does this. It commences in the air-passages, almost always over the mucous membrane of the larynx, appearing as a very thin layer of false membrane, which gradually thickens until the child

dies of suffocation. Diphtheria extends as erysipelas does in a measure; it begins and travels on, commencing in the pharynx and going down into the larynx. Diphtheria is a decidedly contagious disease, while croup is not regarded as a contagious disease.

DR. WM. LEE, of Baltimore, said that he was a firm believer that there were two diseases. He differed from Dr. Snow with regard to the direction in which diphtheria had a tendency to spread, and said that according to his observation diphtheria has a tendency to pass up into the nose, and he regarded this as an important diagnostic symptom. In most cases which he had seen the patients had died from blood-poisoning, and in many instances had died from neglect in early treatment, sufficient care not being taken to cleanse the throat, especially behind the uvula. A child with diphtheria might die of croup. He believed, however, that diphtheria was essentially a local disease at first, and constitutional secondarily. Dr. Lee directed especial attention to the fact that albumen is present in the urine in diphtheria and absent in croup. The plan of treatment, according to his experience, which had been most successful was the free use of alcoholic stimulants and quinine. The following remedy he had been using with marked success, and he gave the recipe, for some of the most important items of which he was indebted to Dr. Read, of Savannah, Ga., in order that the members of the Section might have an opportunity to try it during the coming year.

R. Resorcin	.....	gr. x.
Acid. tannic	.....	3 j.
Acid. salicylic	.....	3 iv.
Acid. boracic	.....	3 ij.
Sulph. pulv	.....	3 ss.

Mix thoroughly, and put a small pinch of this powder on the tongue every two or three hours.

The subject was discussed by Drs. Boothby, of Wisconsin; Franklin, of Ohio; Freeman, of Indiana; Sheehan, of New York; Earle, of Chicago; Green, of Ohio, and Ulrich, of Pennsylvania. There was about an equal division of opinion with reference to the unity or the duality of the diseases. Dr. Ulrich and Dr. Snow spoke very highly of the beneficial effects produced by the administration of calomel in large doses; ten-grain doses every two hours. The discussion was closed by Dr. Harris, who reviewed his paper and argued further in support of the opinion that the false membrane is a local expression of the blood-poisoning.

DR. W. H. MYER, of Indiana, then read a paper on

THE SURGICAL TREATMENT OF PURULENT PLEURITIS.

He recommended making a free incision in purulent pleuritis, resorting to puncture only when the effusion was serous. A single puncture was allowable, chiefly for purposes of diagnosis. The reasons for using the knife after the first aspiration were the following: First, the cavity refills after aspiration; second, repetition of aspiration is painful, and causes more or less shock; third, much valuable time is lost by allowing the fluid to remain, and favoring the formation of firm adhesions which will be followed by contraction of the chest; fourth, speedy relief of the lung promotes complete expansion. The admission of air into the pleural cavity has ceased to be an important factor in the operation.

DR. E. SINNOTT, of Ohio, and DR. CHRISTIE, of Iowa, referred to cases which they had treated successfully by the free incision.

DR. C. W. EARLE, of Chicago, then read a paper entitled

A PLEA FOR PLEASANT MEDICATION FOR CHILDREN, AND FOR A MORE THOROUGH STUDY OF INFANTILE THERAPEUTICS.

The Section then adjourned, to meet at 2 P.M. on Thursday.

THURSDAY, JUNE 7TH—THIRD DAY.

The Section convened at 2 P.M., and the first paper was read by DR. A. H. GOOD, of Indiana, on

DENTITION.

In addition to the teeth acting as a foreign body, a reflex nervous irritability is produced. When the gums are swollen they should be divided to relieve pressure, pain, and inflammatory action. Aphthous ulcers should be treated with a solution of persulphate of iron, or some other astringent lotion. For the functional and concomitant derangement of the stomach and bowels, the result of enervation, he uses cold compresses to the abdomen and ice-water injections, and for the secondary symptoms pepsin, bismuth, and carbolic acid.

PÆDIATRIC MEDICATION.

DR. B. CASSEBEER, of Auburn, Ind., read a paper on the above subject, in which he spoke of the judgment necessary in administering medicine to children, and of the necessity of giving as little as possible. He described his experience in making the medicaments palatable. He pointed out that the relation existing between diseases of children and that of adults was as that of the sprout to the full-grown tree. He conjured the profession to wake up to the realization of the fact that there is real science in the proper practice of medicine among the children, where the nature, expression, and influence of disease is read by the physical signs and rational symptoms, unaided by the verbal language of the patients, and that any indifference or inclination to shift responsibility of their treatment is only an evidence of weakness in the physician. The author directed especial attention to the lack of knowledge or misconception of the true principles of the practice of medicine as applied to children. He maintained that diseases of children and adults are essentially alike; that they have been presented in a way in text-books and by teachers as though they were different conditions; that the indications are the same for treatment in children as in adults. Special attention was directed to the treatment of pneumonia and pleurisy.

The general principles of the paper were discussed by Drs. Ulrich, of Pennsylvania; Boothby, of Wisconsin; Van Klein, of Ohio, and others.

DR. TEAL, of Indiana, then read a paper on

INFANTILE OR ESSENTIAL PARALYSIS.

He detailed the history of a case; a female child, seventeen months old. The patient was attacked suddenly. With the best possible treatment this paralysis lasts for a long time, if it is not permanent.

The paper was discussed by Drs. Myers, of Indiana; Sinnott, of Ohio; Snow, of Michigan, and Hyatt, of Ohio.

DR. WILLIAM LEE, of Baltimore, said, as Dr. Teal's paper was confined to a description of what he called paralysis coming on suddenly without any warning whatever, that he believed that these cases, almost as a rule, had as an exciting cause, rheumatism or neuralgia, and this from the fact that the patients get well in a short time under treatment appropriate for these difficulties. Dr. Lee said further, that sometimes the disease seemed to be, as it were, the beginning of hip joint disease, but increase of heat of the parts and other symptoms recognized as due to hip disease easily excluded the disease under discussion. As for the curative treatment of infantile paralysis, he believed that at best it was often unsuccessful, and even when successful was very tedious.

A somewhat protracted discussion on the identity or non-identity of

CROUP AND DIPHTHERIA

was then introduced, and was participated in by nearly all the members of the Section. The symptomatology was reviewed and various plans of treatment of diphtheria

were discussed without developing anything with which the profession in general is not already familiar.

The Section then adjourned.

SECTION IN OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY.

TUESDAY, JUNE 5TH—FIRST DAY.

In the absence of the Chairman, Dr. A. W. Calhoun, of Georgia, Dr. J. Chisholm, of Baltimore, was elected Chairman *pro tem*. Dr. Carl Seiler, of Philadelphia, was Secretary.

PARALYSIS OF THE FACIAL NERVE IN CONNECTION WITH DISEASES OF THE EAR.

DR. LAURENCE TURNBULL, of Philadelphia, read a paper on the above subject, in which he directed attention to the fact that acute and chronic disease of the middle ear will give rise to temporary or permanent paralysis, alteration in taste, touch, smell, gait, and vision. Falls, epileptiform convulsions, hemiplegia, and insanity are also due to reflex phenomena from irritation and compression of the sensory and motor nerves of the ear, the result of necrosis of the temporal or mastoid bones. Paralysis of the parts supplied by the facial nerves occur, and are the result of acute inflammation of the ear followed by accumulated secretions in the Fallopian canal, or necrosis of the mastoid cells. Dr. Turnbull then recited the history of several cases which had occurred in the aural department of the Jefferson Medical College Hospital. The first was a case in which a woman, fifty years of age, had a malignant tumor situated in the ear, originally caused by a polypus which gradually extended from the interior of the ear, involving the meatus, auditory canal, temporal bone, and passing out through the auricle until it formed a large double tumor. The lesion was situated between the petrosal branches of the fifth nerve, involving the chorda tympani. It produced perioritis which gave rise to irritation and pressure that ultimately involved the brain and caused death. The second was a case of entire paralysis of the mouth and face, due to exposure and occurring in a patient twenty-four years of age. The patient died within a short time. The histories of other cases were mentioned. This form of paralysis is generally attended by pain, and as the pain is relieved the paralysis shows itself. The pain, however, is not in the facial nerve, but is of a rheumatic character generally, and from some irritation of the fifth nerve. The anatomy of the fifth nerve and its distribution were then given. Dr. Turnbull also referred to cases in which temporary facial paralysis occurred, due to simple swelling of the nerve. Permanent paralysis also of the same nerve might occur in connection with suppuration in the middle ear.

The paper gave rise to discussion, which was participated in by several members of the Section.

DR. J. E. HARPER, of Illinois, then read a paper on

HYSTERIC AMBLYOPIA.

This was followed by a paper on

TONSILLOTOMY WITHOUT HEMORRHAGE,

by DR. WILLIAM C. JARVIS, of New York.

Reference was made to the wide difference in opinion entertained by surgeons of acknowledged authority on the question of hemorrhage following the removal of enlarged tonsils. He named those who discouraged the use of all sharp instruments as dangerous to life, and their opponents in opinion who insisted upon the indiscriminate removal of enlarged tonsils by means of the knife. Safety lay between the two extremes. The histories of two cases selected from a number were given as furnishing the basis for his views. In the first case reported, a profuse and persistent hemorrhage followed the removal of a hypertrophied tonsil excised with the knife. The tonsil presented an unusual appearance. Its

surface was rough, marked with numerous fine indentations, and darker in hue than the surrounding mucous membrane. It had the consistency of cartilage, giving a harsh, gritty sensation when pressed upon.

Afterward another case came under observation where the tonsils were identical in appearance and consistency as the one in which the copious hemorrhage occurred. The scissors and tonsillitome had been used by different surgeons. Alarming and profuse hemorrhage followed each operation. Convinced by the patient's unfortunate history and also by his own experience in operating upon a case of the kind that the knife was contra-indicated, he used the *écraseur*. Both tonsils were removed, each operation occupying three hours. The operations proved bloodless, causing but slight discomfort. When the first was performed the patient said there was no pain, and only complained of the procedure being tedious. Both of the tonsils, though very large, were removed and normal deglutition and respiration re-established. The hemorrhagic and non-hemorrhagic tonsil could, in many cases, be easily differentiated. The hard or scirrhus tonsil differs in many respects from the familiar soft, or malacholic, hypertrophied gland. It lacked the smooth surface, was not easily lobulated, and had not the softness of the familiar glandular hypertrophies. The occasional occurrence of a serious hemorrhage after tonsillotomy not resulting from laceration of contiguous tissues, showed the infrequency with which the harder scirrhus tonsils were met. The two forms of hypertrophy could be easily recognized and distinguished by sight and touch. Preference should be given to the tonsillitome in removing soft malacholic hypertrophies, since like the glandular tissues of the vault of the pharynx the hemorrhage was usually trifling and the pain only momentary. The *écraseur* afforded a safe, simple, and reliable means for the removal of the scirrhus form of enlarged tonsil, which, when excised with the knife, bled invariably like its analogue, the nasal fibroid tumor.

DR. WILLIAMS, of Cincinnati, preferred the bistoury to the guillotine for excising tonsils.

DR. J. P. THOMPSON, of Indianapolis, thought that cutting off tonsils when they were inflamed was not good practice. But in chronic enlargement he had uniformly removed them, and no accidents or unfavorable results had followed the operation. He did not intend to overestimate in the least, but believed that without exaggeration he had excised *two bushels* of tonsils, and thought no special advantage existed in the use of the instrument described.

DR. ROE, of Rochester, had never met with a case of serious hemorrhage after tonsillotomy, although persistent oozing had occurred in several cases. He agreed with Dr. Jarvis that cases should be selected when operative interference was contemplated. Where there is simple hypertrophy, no adhesion to the palatine folds, we are quite safe in not expecting any hemorrhage. But where there are adhesions a small portion of the pillar of the fauces was very apt to be removed, and the liability to serious hemorrhage followed. He uses a peculiar blunt-pointed bistoury and small, long tenaculum forceps. The blade of the knife is about one-fourth of an inch wide and curved. He had also used the tonsillitome. In two or three cases the hemorrhage gave him considerable annoyance. In one of these the hemorrhage was controlled by pressure, and although at times it apparently ceased, removal of pressure was followed by persistent bleeding. Much blood was swallowed and vomiting occurred. The bleeding, he believed, was stopped by the effort at vomiting, from pressure upon the tonsillar artery. This was also recommended by an English surgeon. He has found port wine an excellent styptic for oozing.

THE CHAIRMAN believed that repressed cardiac action resulting from vomiting might explain the cessation of tonsillar hemorrhage.

DR. CARL SEILER, of Philadelphia, had never met

with persistent oozing of blood after tonsillotomy. His patients were given a powder of twenty grains of gallic acid, with thirty grains of tannic acid (a mixture suggested by Mackenzie of London), this to be used should secondary hemorrhage occur. The patients invariably return with the unused powder.

DR. WILLIAM PORTER, of St. Louis, thought the determination of the effect of removal or non-removal of enlarged tonsils was called for as having an important influence upon the patient's career. In his experience local applications had not given good results. The Vienna paste or chromic acid when used mildly was inefficient; if applied as a caustic they proved painful; when applied in stimulating quantity they were apt to increase rather than diminish the hypertrophy. He had used Jarvis' *écraseur* in six cases. Pain was, however, caused by its manipulation in his hands. He had met with profuse hemorrhage in a single case where he had excised the tonsils with a knife. The patient was a physician's child, and the hemorrhage finally ceased without the employment of styptics. Hemorrhage, therefore, may be looked for in certain cases. It was inadvisable to remove the entire tonsil, excision in a line with the pillars of the fauces being sufficient. Hemorrhage most frequently occurs as a result of incision of the faucial pillars. The lessons taught in the paper were valuable and endorsed by him. In view of the opinion gaining ground in favor of Jarvis' *écraseur*, he would use it to remove enlarged tonsils. He also thought that if a small portion of the enlarged tonsil was removed it would be sufficient in most cases, and did not believe there was any special tendency to hemorrhage when the operation was performed in that way.

DR. JARVIS commented upon the good fortune of some of the speakers who had so far met with no serious hemorrhage in removing enlarged tonsils, although it would seem that one of the gentlemen had had a very large experience. He was convinced that they had not met with a scirrhus or hemorrhagic growth. His opportunities for observation had been afforded by one of the largest throat clinics in the country. Out of a large number operated upon, the case described in the paper was the only one in which dangerous hemorrhage occurred. The history of hemorrhage in the other case was obtained from the surgeon who operated. The fact that the tonsillitome was used and only a small portion of the growth excised, showed that the hemorrhage was not caused by laceration of the fauces. Five cases of fatal hemorrhage following incision of the tonsil from puncture of the internal carotid were cited as a warning against the free use of sharp-pointed bistouries. The palatine folds could be incised by even a blunt-pointed bistoury, but not by the tonsillitome. A case of death from exhaustion following the incision of a tonsil by a surgeon using the knife was mentioned, in which death from exhaustion occurred after three days' bleeding.

Cases of nearly fatal hemorrhage, reported by Drs. Geo. M. Lefferts, D. B. Delavan, and Andrew H. Smith, of New York, were referred to. A remarkable tonsillar hemorrhage, published by a physician as occurring in himself, afforded recent and reliable evidence on the subject. Though flushed with success it was well to take timely warning, as a fortunate record was liable to be blighted by the excision of an unnoticed scirrhus hypertrophy. As regards the question of pain asked by Dr. Porter, he called attention to the fact that the patient was permitted to remove the tonsil. Patients by this means can stop, when they feel a twinge, and permit the pain wave to fade away. When the physician removed the tonsil his activity was apt to cause pain.

ACTION OF NITRATE OF SILVER ON THE MUCOUS MEMBRANE OF THE THROAT.

DR. CARL SEILER, of Philadelphia, read a paper on the above subject, in which he stated that nitrate of silver, solid or in solution, is not a caustic; that is, it does

not destroy the epithelial covering, and that its action varies according to the strength of the solution employed. When applied to the surface from which the epithelium has been removed it destroys the upper layer of cells. From clinical observation, the solid stick, or supersaturated, solution does not produce much pain on the healthy mucous membrane, but acts as a local stimulant. Solutions of from two hundred and fifty to one hundred and fifty grains to the ounce act similarly to the solid stick; little or no pain is felt, and the localized inflammation is of but short duration. Solutions of from one hundred and twenty to one hundred and sixty grains to the ounce produce no pain whatever, but, on the contrary, act as a local anæsthetic when applied to the inflamed surface; they produce no perceptible local inflammation, although they stimulate the glandular secretions. These solutions will also frequently cut short acute inflammations. Solutions of less than sixty grains to the ounce produce more pain the weaker they are, and the anæsthetic and astringent action diminish in equal ratio with the strength of the solution, while the stimulant and irritant action increases as the solution becomes weaker. The glandular secretions are materially increased by weak solutions of the salt. When the stimulant and irritant action is desired, the nitrate of silver in fine powder, highly diluted with starch, is preferable to the solution, since the fine granules of the silver salt set up points of inflammation and increased blood-supply.

DR. WM. C. JARVIS, of New York, considered nitrate of silver one of the most valuable of all local applications used in the special treatment of diseases of the throat. The different effects produced by the salt in various forms and parts should be constantly borne in mind. It was unequalled by any other agent in controlling the extension of superficial ulcers of the mouth or pharynx, when used fused or in full strength. Its healing quality in this respect was partly antiseptic in nature, primarily a stimulant, subsequently anæsthetic, and largely protective. When shellac varnish was carefully applied to a superficial sore in the mouth, associated with perversion of the buccal secretions, it would rapidly heal. The silver salt produced the same beneficial result, since the chemical coating or eschar formed protected the ulcer from the action of acrid secretions. This metal, albuminate of silver nitrate, had been shown by experiment to be a most powerful antiseptic. Nitrate of silver did not exercise the same controlling influence over deep ulcers, and was often contra-indicated in the treatment of these lesions. Solutions of the salt were not well borne by the nasal mucous membrane. Catarrhal troubles in the throat and mouth were benefited by sprays containing the salt in solution. It was a valuable application in chronic, congestive, or inflammatory disease of the larynx in the strength of from five to fifty grains to the ounce, the best results being obtained by atomization.

DR. ROE, of Rochester, spoke of the influence of nitrate of silver solution in arresting inflammation in its earliest stages. For example, in acute tonsillitis, a solution of sixty grains to the ounce applied over the surface of the tonsil, and then followed by inhalations of steam, was one of the most valuable methods of treatment for arresting the inflammatory process.

DR. TURNBULL, of Philadelphia, spoke of the local application of the solid stick of nitrate of silver, and also of strong solutions, and had supposed that they produced an eschar; that is, actually destroyed tissue.

DR. CONNOR, of Detroit, thought that the effect produced by nitrate of silver depended very much upon the length of time that the caustic was kept in contact with the surface to which it was applied.

DR. THOMPSON, of Indianapolis, spoke of the beneficial effects which followed the use of nitrate of silver in purulent conjunctivitis.

THE CHAIRMAN thought that he had more than once caused ulceration by applying nitrate of silver about an erysipelatous patch to prevent its spread.

DR. LUNDY, of Detroit, asked Dr. Seiler if he had any method to suggest for removing the stains produced by the use of nitrate of silver.

DR. SEILER, in closing the discussion, said that when nitrate of silver was applied frequently, and for a considerable length of time, there would be a deposit of the substance itself beneath and within the epithelium which would stain the tissues. He knew of no method of removing these stains, because they were produced by the oxide of silver, which is practically insoluble except in cyanide of potassium, which could not be used locally.

With regard to nitrate of silver, either in stick or in solution, producing ulcers and eschars, he could only say that in those cases the local sore was not caused by destruction of the epithelium, but was due to the localized inflammation produced by the fine particles of silver acting as foreign bodies; that is, the stick or the strong solution does not produce the eschar, but the particles of silver set up a localized irritation which produces rapid cell death, the same as does many other substances.

He has never succeeded in removing nasal polypi with nitrate of silver; its application to these growths always caused pain. Has seen microscopic specimens from the eye of a rabbit, showing inflammatory action of the salt upon the intra-ocular tissues. He believed with Dr. Jarvis that location had much to do with the strength in which the silver should be applied.

Benefit could not be derived from using a ten-grain solution of the salt in acute tonsillitis, solutions of from sixty to one hundred and twenty grains to the ounce would cut short the inflammation.

A paper on "Myringitis," by Dr. Williams, of Minnesota, was read by title and referred.

WEDNESDAY, JUNE 6TH—SECOND DAY.

The Section was called to order by DR. CHISHOLM.

The Chairman appointed Drs. Connor, of Detroit; Williams, of Cincinnati; and Seiler, of Philadelphia, as a sub-committee, to which all papers submitted to the Section were to be referred.

SEGMENTAL FEATURE OF GLAUCOMA.

DR. H. CULBERTSON, of Ohio, read a paper on the above subject and reported a case. He believed that glaucoma occasionally showed itself in segmental distribution. The author discussed at some length the pathology of intra-ocular inflammation. A desultory discussion followed, in which the experience of the members of the Section present seemed to sustain the view advanced by the author of the paper.

TINNITUS AURIUM AND THE DEAFNESS WHICH ACCOMPANIES THE DIFFERENT FORMS OF BRIGHT'S DISEASE.

DR. LAURENCE TURNBULL, of Philadelphia, read a paper in which he detailed at length certain aural symptoms frequently accompanying Bright's disease. The drift of the subsequent discussion was that none of these symptoms are pathognomonic of Bright's disease.

DR. J. L. THOMPSON, of Indiana, then read a paper entitled

QUESTIONS ON THE ETIOLOGY OF SOME FORMS OF LENTICULAR OPACITY.

He presented a collection of cases of peculiar opacity of the lower periphery of the lens, appearing suddenly, and lasting for years without change. He could ascertain no cause for this appearance, but had noticed it in diabetic cases.

DR. NOYES, of New York, had seen similar cases associated with myopia. The sense of the discussion was that similar opacities had been observed, due to various causes.

DR. J. O. ROE, of Rochester, then read a paper entitled

NASAL DISEASE THE FREQUENT CAUSE OF ASTHMA.

The discussion seemed to affirm the author's views concerning the production of asthma by nasal irritation.

The Section then adjourned, to meet on Thursday, at 2.30 P.M.

THURSDAY, JUNE 7TH—THIRD DAY.

DR. J. F. RUMBOLD, of St. Louis, read a paper on

THE APPEARANCE OF THE DISEASED MUCOUS MEMBRANE OF THE NOSE AND THROAT OF ADULT PATIENTS.

He described the characteristic appearance of the inflamed throat of the young adult and directed attention to differential diagnosis, prognosis, and treatment. It is unsafe to take the patient's account of symptoms. Follicular inflammation does not require special treatment. The writer had observed cases of aphonia treated successfully by applications to the nasal mucous membrane.

DR. SEILER agreed with the author of the paper as to the possibility of laryngeal trouble being disposed of by nasal treatment. He did not agree with the author of the paper concerning the appearance of the inflamed pharynx, and believed there were more manifest variations. He thought aphonia occurred most frequently about the period of puberty, as did hysterical paralysis in girls and change of voice in boys. He did not agree with Dr. Rumbold concerning the smoker's sore throat, and had found that the throats of cigarette-smokers were more irritated than those of pipe-smokers, as the former inhale the smoke more than do the latter, and there was more surface exposed to irritation. He did not agree as to the harmlessness of inflamed follicles, as touching one of them sometimes produced marked symptoms of violent congestion.

DR. RUMBOLD remarked, in closing, that probably not ten per cent. of the vocal cords of smokers presented their normal white, pearly appearance.

IS ABSCESSION A PROPER OPERATION?

DR. J. J. CHISHOLM, of Baltimore, read a paper with reference to the above question, in which he considered the best mode of forming a stump for an artificial eye. Enucleation is one of the easiest ophthalmic operations; abscission one of the most difficult, and liable to be followed by fatal injury of the ciliary region.

DR. FROTHINGHAM, of Ann Arbor, urged the abandonment of abscission on account of the great liability to the occurrence of secondary inflammation. He considered the difficulty of retaining observation of patients was sometimes a fatal objection in abscission; patients frequently not returning till the cases were beyond hope of successful treatment. He advised enucleation to young practitioners, as the stump is a constant source of danger from the interstitial deposit or morbid growths. The preservation of the stump only for a cosmetic effect should be abandoned.

DR. LUNDY, of Detroit, agreed as to the experience of the author of the paper. Possibly a little better motion of the artificial eye would be obtained by abscission, but the risks overbalance this slight advantage. He gave an instance in which bone had taken the place of the ciliary body; also gave cases in which great sympathetic irritation had occurred. He remembered an unfortunate circumstance in which abscission had been performed and an eye worn on the stump which had eventuated in hopeless blindness.

DR. THOMPSON, of Indiana, mentioned a case of panophthalmitis resulting from abscission; he spoke of care in rounding off the stump carefully, leaving no corners protruding. He mentioned a case of enucleation in which the patient had returned to business on the second day.

DR. CULBERTSON, of Ohio, expressed approbation of

the paper because of its thoroughness, but he had not had an unfavorable result from abscission in thirty years. He never used any sutures after abscission; sometimes has taken out the choroid and retina and allowed the eyeball to take care of itself. By this process he gets not so large a ball, perhaps, but for practical purposes a more useful one. In dividing the tissues well back he cuts off the most sensitive parts of the ciliary nerves.

DR. NOYES, of New York, had performed abscission many times with no trouble, but he always informed the patient of its great danger, and recommended enucleation first.

DR. CORNWELL, of Ohio, related a case in which he had removed the globe with the lachrymal gland and had stitched together the ciliary margins of the lids, putting in drainage-thread, with a fine result.

DR. CHISHOLM, of Maryland, had also abandoned abscission, and laid down as an aphorism, a lost eye is a dangerous element and should be removed.

DR. NOYES mentioned a case of injury to ciliary body.

DR. CULBERTSON, of Ohio, described (having lost the glasses)

A FORM OF SPECTACLES TO BE USED IN LIEU OF NOSE-PIECES.

They consisted of the addition of a semicircular glass to each of the spectacle glasses, attached by a peculiar mechanism, so that the nose-piece allowed them to come below the permanent glasses, out of the way for vision and yet available for close downward vision, as in walking, descending stairs, etc. He gave cases of astigmatic asthenopia and myopic astigmatism which he had relieved by these glasses, and claimed that they were easy of prescription and adjustment.

DR. FROTHINGHAM expressed much regret that the speaker had lost the glasses, and while approving the plan, expressed much doubt as to its practicability and its meeting all the indications as claimed.

DR. CULBERTSON again explained the arrangement of the glasses.

DR. CORNWELL reported four cases: 1, hemianopia without paralytic symptoms, monocular optic neuritis and atrophy of optic nerve; 2, paralysis of the sixth cranial nerve from basilar meningitis; 3, a case of choked disk from tuberculous tumor in cerebellum.

DR. SEILER presented a convenient case of instruments for use at night in emergencies.

DR. TURNBULL read a letter from a patient as to the subject-matter of his paper on Bright's disease.

DR. SCOTT then read a letter from Dr. Calhoun, explaining his absence on account of his wife's sickness.

The Section then adjourned.

SECTION ON DENTAL AND ORAL SURGERY.

DR. D. H. GOODWILLIE, of New York, Chairman;
DR. T. W. BROPHY, of Illinois, Secretary.

DR. JOHN S. MARSHALL, of Illinois, read a paper on

DENUDATION OR EROSION OF THE TEETH.

Various terms had been applied to this disease, such as denudation, erosion, abrasion, surface wear, and atrophy. It consisted in a gradual wasting away of the enamel and dentine, generally upon the labial and buccal surfaces, most often beginning with the incisors, but it might involve all the teeth to the second molars. It usually began at the gums, forming cavities or grooves, which followed the curves of the gum lines. They were smoothly cut and quite sensitive. The disease progressed with variable rapidity; in some cases it seemed to become arrested. John Hunter was the first to notice the condition, and named it "decay by denudation." The views of Bell, Fox, Wedle, Salter, and various others, were reviewed. An interesting case was narrated, in which it was believed there was a syphilitic taint, and

the author then gave his ideas concerning the cause of the affection. The tooth is invested at the root by vital tissues which render it electro-positive; the air surrounding the crown or exposed portion, renders that electro-negative to the root, and forms a negative element, or, in other words, the tooth is polarized. The only thing needed to establish an active current is an acid fluid, and that we have almost constantly in contact with the labial, buccal, and proximal surfaces of the teeth at just the points where the disease manifests itself. It was argued, therefore, that, like the copper wire, the teeth will be acted upon the most vigorously at the junction of its two poles, provided there is an acid medium, like the buccal mucus, to establish and maintain the electro-chemical action. By this action the lime salts are removed at the line of junction and washed away.

Vital resistance, however, was strong, and must exercise a powerful influence over electro-chemical action. The teeth generally denuded belonged to the class called medium, and belonged often to patients who had inherited a peculiar cachexia, as the scrofulous or syphilitic, which had a depressing influence upon the developing processes, and in lowering the vitality. He did not state, however, that syphilis or scrofula produced the disease, but that they predisposed to it.

At the close of the reading of the paper Dr. H. D. Nicoll and Dr. J. H. Hinton, of New York, said they had been informed that the chairman, Dr. Goodwillie, of New York, had not properly registered, and they therefore protested against his acting as chairman of the Section.

DR. WILLIAMS, of Boston, was called to the chair, and Dr. Goodwillie said that he had written to the proper authorities in the Association before he left New York, stating that if there was likely to be any objection raised to his presiding over the Section, he would not go to the trouble of attending the Association. As he was not informed that any objection would be raised, he came and registered, protesting, however, against certain clauses in the qualifications.

DR. NICOLL said that a member of the Judicial Council had informed them that Dr. Goodwillie was allowed to register under protest of the committee, and it was thought that he should not preside over the Section until the Council had taken permanent action in the case. There was some warmth in the discussion following, the members of the Section generally coinciding with the secretary in the statement that parties unknown to the Section should not be allowed to interfere with the regular proceedings of the Section without showing authority for doing so. A member of the Judicial Council came later to enter the protest in a formal manner, but as Dr. Goodwillie, out of courtesy, had not resumed the chair, no further action was taken. Dr. Williams presiding, the Section proceeded to the discussion of Dr. Marshall's paper.

DR. GOODWILLIE thought that erosion of the teeth might be due either to local or constitutional causes, or to the two combined. Scarlet fever, the pustular, and other diseases might check the development of the teeth before maturity, which would be indicated by depressions upon the sides of the teeth. The more compact structure might form over these depressions if vitality was sufficiently restored afterward, or, if not, denudation was likely to result in destruction of the teeth. One of the most important and frequent constitutional affections which lowered the vitality, and led to the condition in question, was syphilis.

The paper was further discussed by Drs. Buffin, Harton, Andrews, Barnes, the Chairman, and others.

On motion of THE SECRETARY, invitation was extended to dentists in general to participate in the discussions throughout the remainder of the session.

Subsequently it was learned that a former Professor in a Homeopathic Medical College had participated in the discussion.

Correspondence.

THE INFLUENCE OF DEAD TEETH UPON THE HEALTH.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In your issue of the 12th instant you ask a pertinent question as a heading to the interesting letter of Dr. Samuel Sexton upon the subject of dead teeth, to which I beg permission to reply.

The care of such teeth has formed a very large part of my practice for twenty-five years, and I feel competent to speak as to the feasibility of their being rendered, in every instance except where exostosis or malformation is present, quite as durable and innocuous as if their vitality had never become impaired.

A complete misapprehension with respect to this exists among physicians and surgeons, due doubtless to the fact of there being so very few oral surgeons who attend to this branch of dental surgery, and also, I fear, to the peculiar character of the representations made about it by those who do not. It would be easy to have this unfortunate opinion quite changed if those who should be correctly informed would make proper investigations. Certainly the names of such men as Amos Westcott, Robert Arthur, Eleazer Parmley, E. J. Dunning, and Joseph H. Foster cannot be unknown to the medical profession, and there are probably few of the private pupils of those eminent men, or of perhaps others, who could not soon set this question at rest. Would you permit me to ask why such men are not applied to by those most interested in being accurately informed? The proprietors or managers of dental depots could doubtless, if they considered it best to do so, give the names of those who are qualified to fill a root.

Dr. E. J. Dunning is still living, and would give valuable information about it with pleasure, I am sure.

In speaking of the treatment and filling of devitalized teeth, one is necessarily placed at the outset in a very delicate position, since not more, I think, than one oral surgeon in a thousand does it with uniform success, and probably not two in a thousand at all (though I am not referring to the claims made about it), and one does not wish to be considered hypercritical by those who do not. I should be happy to speak of this and, at the same time, pay a merited tribute to the very many conscientious and useful dental surgeons who find the successful care of roots too much for them, but your space would not admit of this.

So kindly pardon me if I reply to Dr. Sexton's letter, not as its importance requires, but by a few plain statements simply.

He does not exaggerate the harmfulness of dead teeth left in the mouth with nerve-cavities unstopped, and with no vent from them for the accumulations which form in them. He is also quite correct in his conclusion, that artificial dentures are not always harmless when fastened to dead roots. The public, which from time to time has its attention directed to this practice in one way and another, would do well not to permit its confidence to be too readily captured. This, however, is not likely, since those wearing such dentures would scarcely speak of the ulceration following their insertion, or of the open pustule too liable to exist, if the roots in question had not been put in proper order by some competent person in the first place.

Nerve-cavities are nests of disease solely from the corruption of the fluids which enter them. Obviously then they are not at all so if the influx of fluids is absolutely prevented. But to stop them in such a manner as to effectually accomplish this object, and it must invariably be done with metal, requires a care in manipulation which can be given it by extremely few mortals only. I know of no manipulation in which human fingers have to engage which approaches it in delicacy. Some years ago

a famous dentist practising abroad, where this is never attempted, came to this country expressly to see a root filled. The operator to whom he applied showed him the process by filling a root for a patient in his presence. Upon its conclusion, and the departure of the patient, he sadly remarked, "I have made my trip to no purpose, for I could never, never accomplish that."

Would you permit me to say, finally and frankly, that it seems to me to be the duty of every physician, surgeon, oculist, and aurist, in every such city as New York, to seek out some oral surgeon who is competent to take proper care of dead teeth and send his patients to him, rather than to permit them to needlessly lose important organs. He should also hold the dentist to the most rigid accountability in case of one single failure, and, if exostosis or malformation does not exist, he should never recommend him for that kind of operation again.

Should Dr. Sexton feel interest enough in this matter to investigate it more fully, I should be happy to have a personal interview with him, and, should he desire it, pray be good enough to give him my name and address.

Your obedient servant,

X.

May 25, 1883.

DR. WALLIAN'S MISQUOTATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Referring to Prof. Bartholow's disclaimer in your issue of May 19th, I beg to explain that the misquotation occurred through the hasty and fairly inexcusable inadvertence of relying on the statement of one of the numerous handbooks, instead of referring directly to the works of the distinguished author, all of which were within easy reach as I wrote.

In the language of Napoleon, it was "worse than a mistake, it was a *blunder*," and when I add the still more humiliating statement that the guilty handbook referred to was compiled (but not proof-read) by myself (!) I do not know that I can make my apology any more pointed.

It is another lesson to us all, since it proves that we cannot possibly be over-careful or over-accurate in making medical statements or in quoting those of others.

That the statement referred to by Prof. Bartholow was a stupid misquotation occurred to me some days after I had sent you, but too late to recall the report. Hoping to go and sin no more,

Yours very meekly,

SAMUEL S. WALLIAN.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 2, 1883, to June 9, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. So much of S. O. 82, par. 6, A. G. O., April 10, 1883, amended to direct that he be relieved from duty at the U. S. Military Academy, West Point, N. Y., October 1, 1883. S. O. 125, par. 7, A. G. O., June 1, 1883.

McKEE, J. C., Major and Surgeon. Assigned to duty as Post Surgeon, Presidio of San Francisco, Cal. S. O. 56, par. 2, Department of California, May 25, 1883.

DE LOFFRE, A. A., Captain and Assistant Surgeon. To proceed to Madison Barracks, N. Y., and report to the Post Commander for duty. S. O. 98, par. 2, Department of the East, June 5, 1883.

AN IMPROVEMENT IN LITMUS PAPER.—Dr. Squibb has substituted for the ordinary blue and red litmus paper, a single color, viz., purple. This purple litmus paper turns red with acids, blue with alkalis. It is claimed to be much more delicate and convenient.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 12, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
June 5, 1883.....	2	7	120	2	120	43	1	0
June 12, 1883.....	0	6	104	4	107	46	0	0
<i>Deaths.</i>								
June 5, 1883.....	0	4	24	2	22	20	0	0
June 12, 1883.....	0	3	23	4	21	18	0	0

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—Our report last week stated that Dr. N. S. Davis resigned as trustee to take charge of the department of "Progress in Medicine," etc. This should have read, "Dr. N. S. Davis resigned as trustee, and also announced that *Dr. William Lee*, of Washington, had been secured to take charge of the department of 'Progress in Medicine.'"

AMERICAN MEDICAL EDITORS.—At the annual meeting of the Association, held in Cleveland, June 5th, the following were elected officers for the ensuing year: *President*—Dr. L. Connor, of Detroit; *Vice-President*—Dr. Thomas Gallagher, of Pittsburg; *Secretary*—Dr. John V. Shoemaker, of Philadelphia.

The President, Dr. N. S. Davis, delivered an address on "The Present Status and Tendencies of the Medical Profession and Medical Journalism."

Dr. H. O. Marcy, of Boston, also read an essay on "Journalism Devoted to the Protection and Concentration of Medical and Surgical Science in Special Departments."

A POPULAR THERAPEUTICAL DELUSION.—There is no more common practice than that of giving spirits of nitrous ether as a diuretic. According to Dr. Nunneley and to recent experiments made by Mr. Edmund A. Cook (*British Medical Journal*), nitrous ether is in no sense a diuretic by itself, or a diaphoretic.

A CASE OF TRANSPOSED VISCERA—AUTOPSY.—Dr. W. Fruitnight, of this city, sends us the report of a case of transposed viscera. The patient, a woman aged forty, married, and mother of thirteen children, had been a steady drinker and was discovered to have a cirrhotic liver, diffuse nephritis, and cardiac disease. Of this she died. The following is the record of the autopsy: Lungs: The left one was made up of three lobes. There were evidences of a recent pleurisy on its posterior surface, and a small amount of fluid in the pleural cavity. The right was made up of two lobes. The pleural cavity was obliterated by old general pleuritic adhesions. The structure of both was normal. Heart situated on the right side. It was slightly hypertrophied. The left ventricle was situated on the right side, and *vice versa*. The aortic valve was quite rigid, thickened, and retracted. Pericardium contained about two ounces of serous fluid. Aorta had patches of thickening. It arched toward the right and descended on the right side of the spinal column. Liver weighed 24 ounces. It was situated in the left hypochondriac, lumbar, and epigastric regions, extending three inches below the free border of the ribs in the mammary line. It touched the spleen on the right side. It was divided into two lobes by a deep notch in the anterior border. The left lobe was the largest, and contained

the gall-bladder on its under surface. The surface of the organ was nodulated, and the seat of a decidedly fatty and cirrhotic change. Spleen was located in the right hypochondriac region; its dimensions were 10 by 6 by $3\frac{1}{2}$ inches. It weighed 59 ounces. The enlargement was the result of passive congestion. Stomach was reversed. The cardiac extremity was directed to the right, and the pyloric orifice toward the left. Intestines: The caput coli was situated in the left inguinal region, and the sigmoid flexure occupied the corresponding position on the right side. Kidneys were enlarged, weighing 15 ounces each. They were affected by chronic diffuse inflammatory changes. Pyelitis existed.

THE MEDICINE LAY.—The following ingenious trick is described as having been frequently practised in London. It is known as the "bottle of medicine lay." A healthy vagrant bandages his arm carefully, carries a bottle of water under his coat, collides with a charitable-looking gentleman, drops the bottle with a crash, and attracts a crowd by bemoaning his broken-armed, medicineless, miserable condition. Despite warning, several of these enterprising persons have been carrying on a profitable business and littering the streets with broken glass for some time, until one of them recently rashly lost his medicine twice in the presence of the same gentleman, whose charitable aspect so far belied him that, on the second occasion, he called in the police.

DR. SQUIBB ON PHENIC ACID.—During the past two years (Squibb's *Ephemeris*) very much has been published by "Dr. Déclat, of Paris," on the subject of carbolic acid, or phenic acid as he calls it, for the cure of zymotic diseases, among which he classes phthisis, and most irrational statements are made by him and his advocates in regard to its character and uses. Most of his statements are at variance with well-established facts, and his deductions from these statements are as inaccurate as they are irrational. He seems to have had quite a successful professional following, notwithstanding such absurd statements as that it is impossible to transport pure carbolic acid; it immediately deteriorates and develops cresylic acid, an active poison; it must be combined in its nascent state, and so on. The effect of such undertakings as this of Dr. Déclat seems almost incredible. For all the ordinary uses of carbolic acid as a disinfectant, the next article, or the "crude carbolic acid," is as good or better than the crystals, is much less costly, and is more important because it is so much more largely used. Dr. Squibb recommends very highly a dilute solution of carbolic acid ($\frac{1}{2}$ per cent.) as an application for burns.

HIGHER MEDICAL EDUCATION.—Minnesota has shown a praiseworthy desire to elevate the standard of medical education. We gladly note, therefore, further progress: The faculty of the Medical Department of the Minnesota State University, says the *Northwestern Lancet*, met recently and organized. The President of the University is Ex-officio President of the Medical Department, and P. H. Millard was elected Secretary. This is not a teaching faculty but purely an examining, and the ambition of the gentlemen forming it is to raise the standard of the profession throughout the Northwest. They purpose conferring two degrees, that of Bachelor of Medicine and Doctor of Medicine. Parties desiring to take either of these degrees must have studied four years, attended three courses of lectures, and possess a degree of some college of letters or arts, and not possessing the latter, go before the general University faculty, and pass an examination that would admit him to the Sophomore year of said University. No party can obtain the degree of M.D. without having passed an extra good examination, and defending a thesis before the faculty.

PREMIUM FOR AN INVALID CHAIR.—An Association having the peculiar title of "The Humanitarian Invention Association," Youngstown, O., offers a cash pre-

mium of \$3,000, for the "most complete, practicable, and patentable" invalid chair, for use in homes, hospitals, and public conveyances.

A NOVEL METHOD OF MEDICAL ADVERTISING is described by the *Maryland Medical Journal*: "A few days ago a one-dollar note came to the notice of one of the editors of this journal, on which was stamped 'Doctor A. B. L., Baltimore.' This gentleman is a member of the Medical and Chirurgical Faculty of Maryland."

A KINDLY ACT.—The misfortune which befell Dr. Comegys, of Cincinnati, in not diagnosing a case of small-pox, has brought out the following kindly and interesting letter:

"CINCINNATI, OHIO, May 28, 1883.

"DEAR DR. COMEGYS: We desire to express to you our sympathy for the painful criticism to which you have been subjected in the daily press for having mistaken a case of purpura variolosa for a case of purpura hæmorrhagica, and believe that the report of an almost similar accident which occurred in the hands of three of us, Dr. James Graham and the subscribers, which you may use as you see fit, will at least divide the responsibility among a greater number.

"In this case, which happened seven years ago, the symptoms were so vague and ill-defined, that we felt constrained to regard it as an anomalous case of typhoid fever, and so reported it in the death certificate. On post-mortem examination the lesions were found more like that rare form of disease, purpura variolosa, and we determined to report it as such to the Academy of Medicine of this city. The full account of this case, with the subsequent discussion, is detailed in the *Cincinnati Clinic*, July 15, 1876. We subsequently learned that the body had been in the meantime shipped to some town in the interior of the State.

"We trust that you may take comfort in this evidence of human fallibility, which we share with you in the celebrated aphorism of Voltaire: 'Only the charlatan is always certain.'

"J. T. WHITTAKER,
"P. S. CONNOR."

A SURGEON'S MISFORTUNE.—Dr. Moses Gunn, of Chicago, while conducting a surgical clinic, not long ago, introduced to the class an infant, ten weeks old, who was suffering from a nævus, situated near angle of mouth and about the size of a fifty-cent piece. The child was imperfectly developed, and the growth of the vascular tumor was rapid. The injection of a solution of chloride of iron, a remedy used by Dr. Gunn in many other cases, was selected as a means of relief. Immediately after the injection of three drops of the solution, the child became slightly convulsed and died within thirty minutes. Prof. Gunn's explanation of this unfortunate termination was that the babe died of shock. An inquest was held upon the remains, and Professor Gunn was entirely exonerated, as he should have been. No surgeon passes through his professional life without a certain number of accidents for which he is blameless.

CURIOUS RESULT OF CANNIBALISM IN NEW CALEDONIA.—Mr. J. M. Creed, editor of the *Australasian Medical Gazette*, reports and vouches for the following: In 1848 a man named Sutton, who had been adopted into and was for some time living with the Shuarka tribe of natives in New Caledonia, offended them so seriously, by first leaving it and afterward firing on the messengers who were sent to ask him to return, that watching their opportunity they attacked his camp, situated on an island a short distance outside the territory of the Shuarka chief, killed him, carried off his body, and afterward cooked and ate it, as was the custom of the New Caledonians. To the knowledge of my informant, Sutton had been for some time suffering from venereal disease, and the natives told him that every man who ate of the flesh died shortly afterward, apparently poisoned.

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THE TREATMENT AND CURABILITY OF CHRONIC UTERINE CATARRH.

By PAUL F. MUNDÉ, M.D.,

PROFESSOR OF GYNECOLOGY AT THE NEW YORK POLYCLINIC; GYNECOLOGIST TO MOUNT SINAI HOSPITAL.

THE extreme prevalence and the vital importance of chronic catarrhal inflammation of the uterine cavity, as regards the possibility of conception, as well as the acknowledged difficulty experienced in curing the disease, leads me to offer a few remarks on this subject. I am not aware of having anything particularly new to offer; my object is chiefly to insist on perseverance and on the adoption of thorough measures as absolutely indispensable to success. The causation, pathology, and special symptoms of uterine catarrh do not come within the scope of this paper. The opinion has hitherto largely prevailed, both among specialists and general practitioners, that a really chronic endometritis or endocervicitis (I still use the latter familiar although hybrid term) is practically incurable. This opinion is based partly on the dictum of men of such eminence as Thomas and Sims, and partly on the experience of the numerous physicians who have vainly endeavored to cure this disease by the usual routine of applications, and in a measure also, I presume, on the well-known obstinacy of all forms of catarrhal affections of mucous membranes throughout the human body.

Thomas, in his last edition, says of chronic cervical endometritis, that "Even in the mildest case, which has lasted for some time, from four to six months will probably elapse before perfect cure can be accomplished, and even after this a relapse will be very likely to occur, unless preventive measures be adopted and strictly adhered to. . . . If a large amount of thick resisting mucus hangs from the cervical canal, the prognosis, according to my experience, is very doubtful, and sometimes hopeless, unless very radical measures be adopted."

Of chronic corporeal endometritis he says: "The prognosis . . . is always grave with reference to cure. . . . If it have continued for a number of years it will often prove incurable." And he quotes approvingly the following sentence from Scanzoni: "As for ourselves, we do not remember a single case where we have been able to cure an abundant uterine leucorrhœa of several years' standing."

In opening the discussion on a paper on Intra-uterine Medications, by the late Dr. James P. White, before the American Gynecological Society, in Baltimore, in 1879, Dr. J. Marion Sims remarked that he thought "only a few men can say that they have cured half a dozen of these cases (uterine catarrh with thick albuminous mucus). I am sure that during the first thirty years of my practice I was not able to boast of more than two or three."

Schroeder, of Berlin, has even gone so far, in his efforts to cure this intractable disease, as to practise the complete removal by the knife of the diseased cervical mucous lining and its replacement by vaginal mucous membrane, thereby removing entirely the mucus-secreting power of the cervical cavity.

I could multiply these experiences indefinitely by quoting from all recent authors on gynecological dis-

eases; but I presume it is unnecessary to add further evidence of the intractability of the disease under discussion.

Before proceeding to speak of the treatment and its results, I wish to say a word as to the significance of the disease and the physical conditions under which it occurs.

Significance.—Whether there be a chronic *corporeal* or a chronic *cervical* endometritis, the result as regards conception is usually the same. That desirable event rarely takes place. A thick, glairy, purulent plug of mucus filling and occluding the cervical canal usually effectually bars the cavity proper of the uterus to the spermatozoa. The ingenious hypothesis of Krichteller, of Berlin, that this tenacious cervical plug served as a ladder on which the spermatozoa could climb into the uterus is not borne out by experience.

If the cervical canal is comparatively healthy (and this is rarely the case when its mucous lining has been long exposed to the contaminating influence of the secretions from the cavity above), the presence of a purulent, acrid secretion in the uterine cavity is not favorable to the vitality of the spermatozoa, and, granting that conception actually takes place, the endometrium is scarcely in a suitable condition to receive and nourish the rapidly growing ovum; as a result early abortion frequently occurs.

This baneful influence of chronic uterine catarrh on conception is not imaginary or exaggerated; all will agree that women suffering from this disease are sterile while so affected; and if conception has occasionally taken place, it was rendered possible by the accidental discharge of the cervical plug shortly before coition (possibly by injection, for instance) or by recent treatment. Thus I have known a sterile woman to conceive within twenty-four hours after the removal of the uterine secretions with a cotton-wrapped applicator, no medicated application having been made.

Although sterility is the chief symptom of chronic endometritis, the constant discharge, the subacute vaginitis and vulvitis, frequently entailed by direct contact with the uterine secretions, the menorrhagia not uncommonly produced by the uterine hyperæmia, and the ultimate general anæmia and neurasthenia, are even more distressing and annoying. While acute pain is usually not experienced, many women complain of a sensation of weight, fulness, heat, or burning in the suprapubic and sacral regions, and of bearing-down during walking or standing. One of my patients, a well-known pianist, was unable to continue her daily practising of four to six hours on account of the uncomfortable weight in her pelvic region, after sitting some time on a piano stool, and her sole disease was a profuse chronic cervical catarrh. Another, a young unmarried lady, was nervous, "run down," unable to walk or stand about long, with constant dragging sensations in her pelvis, all produced by the same disease.

That a chronic endometritis will, in course of time, bring about and maintain a chronic hyperæmia of the ovaries, with the distressing symptoms peculiar to that affection, is well known to all gynecologists.

From what I have already said it is evident that the significance of this disease varies accordingly as it occurs in a virgin, a married nullipara, or a woman who has borne children. In a virgin the symptoms are chiefly those produced by the discharge (annoyance, soreness,

pruritus), and by the utero-pelvic hyperæmia. The question of sterility merely looms up for future consideration. Only impending marriage or great distress from the disease should in such cases, as a rule, call for very active radical treatment.

In the married nullipara, however, the sterility will probably be the leading indication for treatment, which should not only look to curing the catarrh, but also to removing any other possible obstacle to conception which may chance to exist (narrow external or internal os, displacement, flexion, ovaritis).

In the parous woman, finally, the question of sterility may or may not preponderate. Indeed, as in such women the cervical catarrh is very often (perhaps usually) due to a gaping of the external os and exposure of the cervical canal produced by laceration of that part during parturition, and the corporeal catarrh frequently accompanies subinvolution, the sterility may be only temporary and may, perhaps, be voluntary. Certain it is, that a thick sanio-purulent mucous plug occluding the cervical canal is quite as sure to entail sterility (at least so long as that plug is not removed) in a parous woman with torn and gaping cervix as in a nullipara. Of course the mucus is more easily dislodged, as by syringing, and sterility is therefore by no means absolute in such cases.

In parous women the enlarged glands and hyperplastic mucous membrane of the cervical canal are frequently exposed by the laceration of the cervix; the so-called ectropion of the endocervical mucosa is present. The diagnosis is therefore an easy one, for the cervical mucus clings to the examining finger, and the eye easily recognizes the condition. But in nulliparous married women it may, at times, be difficult to understand the reason for their sterility, since the finger merely feels a not unusually small external orifice, with rather pulpy borders, and carries none but vaginal mucus with it when it is withdrawn. Here the sound may clear up the case, for on withdrawing it and the guiding finger the familiar thick cervical mucus accompanies it, and on exposing the cervix with the speculum a plug of this same mucus is seen issuing from and clinging to the os, whence it is with difficulty wiped away. The narrow external os, usually found in such cases, entails a retention of the normal cervical discharge; this retention gradually produces a dilatation of the cervical canal, and the accompanying irritation causes hypersecretion, until the cervix assumes a bulbous shape, and its cavity is filled with thick, viscid, discolored fluid. When the external os is dilated by the passage of the sound, and the cervix is compressed by the examining finger, the mucus gushes out in a thick stream. The sound easily detects the presence of a large cavity within the narrow external os. This condition is not at all unfrequent, and is as unfailing a cause of sterility as it is curable by prompt and proper treatment.

While the diagnosis of this disease is easy, and its pernicious influence on the fertility of the female sex is obvious, the question of its successful treatment is by no means so easy of solution. It is to this subject that I particularly wish to invite attention, for cases of this kind occur to the general practitioner probably quite as often as to the gynecologist. I do not propose to discuss all the methods of treatment which have been and may be employed with more or less benefit, but to describe briefly the plan which I have employed for several years, and which I have found to answer fairly well in a majority of my cases.

I may as well begin by saying that it is utterly useless to expect to cure a chronic uterine catarrh by such mild remedies as the plain or even compound tincture of iodine, the solution of nitrate of silver, even one drachm to one ounce, or pure carbolic acid. You will certainly fail in chronic corporeal endometritis, and in the cervical variety you will surely increase the discharge. I have faithfully tried these milder remedies, and have never seen the slightest benefit in the cervical, and but temporary relief in the corporeal variety.

If the patient is a virgin or a nulliparous married woman, it will generally be found necessary, after thoroughly exposing the cervix (in the virgin usually at the expense of the hymen), to enlarge the external os. This is essential for two reasons: first, to give free vent to the accumulated endocervical mucus, and second, to allow the ready application of the remedies. This little operation is best done in the following manner:

The cervix being exposed through a Sims (or after a fashion through a large cylindrical or bivalve) speculum, a Sims uterine knife, or simple bistoury, or straight scissors, is passed about one-fourth of an inch into the cervical canal, and the anterior lip is divided by one quick stroke; the instrument is then turned against the posterior lip and this also is incised, and the same is done with each lateral lip. Four incisions have thus been made, each about one-fourth of an inch deep, completely dividing vaginal and endocervical mucous membrane, and making the external os nearly or quite as large as the calibre of the cervical cavity. In order to insure this opening against speedy closure, it is imperative that the four flaps of mucous membrane formed by this cervical incision be removed. If this is not done, even frequent sounding and forcible dilatation will not prevent the flaps from re-uniting, and in a few weeks the external os is as narrow as ever. I have invariably met with this result when I left the flaps *in situ*, and hence have adopted the plan of seizing each flap with a fine tenaculum and trimming it off with curved scissors, so as to have a funnel-shaped external os. The raw surfaces of this slight wound soon cicatrize over, and the os retains its funnel-shape.

It is not necessary to perform this operation in every nullipara; indeed, in many the discharge has rendered the os patulous, the examining finger easily enters it, and its lips are pulpy and eroded.

I have found the same condition in virgins and married nulliparæ.

After the os has been enlarged, the next step is to destroy, as thoroughly as possible, the cervical glands which furnish the annoying mucous secretion. To do this effectively, once and for all, take a sharp curette, with cutting edge (Sims's or Simon's), and scrape the whole cervical canal up to the internal os until the creaking sound tells you that the subglandular base has been reached. Do not be afraid to do this thoroughly, since no harm can be done, and unless the glands are entirely destroyed, their secreting power is liable to survive. When the whole canal feels smooth, apply, on a cotton-wrapped applicator, or, what is better, a wooden or glass rod, pure nitric acid, being careful to protect the external surface of the cervix and the vagina by packing cotton underneath. This application must be so thorough as to give the cervical canal a charred, yellowish-black appearance, with not even a drop of blood issuing from it. In order to effectually protect the cervix from the acid, I frequently use the cylindrical speculum after curetting. Any excess of acid should be mopped up with cotton, and several tampons covered with vaseline placed against the cervix.

In some instances I have merely applied the iodized phenol (equal parts), or saturated solution of chromic acid. But I prefer the nitric, as more efficient and scarcely more painful. If the patient is a multipara, it is rarely necessary to enlarge the external os; indeed, it is generally lacerated, and more or less gaping. And sprouting from the surface of the everted lips will be found more or less numerous fungoid granulations, which are partly enlarged papillæ, and partly distended follicles. These must be removed in order to cure the hypersecretion, and to put the cervix in proper condition for the plastic operation of Emmet. The sharp curette is here also an excellent instrument, although the curved scissors are often more rapid and efficient in removing large and tough vegetations.

It is these same papillomatous growths which to the

comparatively uneducated touch feel like epithelioma, and give rise to mistaken diagnoses and unfavorable prognoses. A mere clip of the scissors removes them, and leaves a clean, smooth, although raw, surface, which needs only to be attached to its opposite fellow by sutures to effect a cure.

After removing these granulations, the surface should be painted with tr. iodine, or sol. arg. nit. (3 j. to 3 j.), or iod. phenol; or, if the production of a superficial slough appears desirable, nitric acid should be applied, and an emollient tampon inserted.

A very common condition is that of cystic hyperplasia, the everted surfaces being dotted with numerous small translucent, more or less prominent, spots, which are simply occluded cervical glands (Nabothian follicles). Every one of these must be punctured with a bistoury or scarificator, and its cavity obliterated by thorough swabbing with tr. iodine, or it will be a constant source of mucous secretion, and its presence will interfere with union if trachelorrhaphy is performed.

The operation of crucial incision of the external os, followed by the sharp curette and nitric acid to the cervical cavity, had better be performed at the residence of the patient, and the latter kept quietly in bed for a day or two at least. It is not that it is attended by special danger; indeed, I have performed it many times in my office or the dispensary, and seen no bad effects from it. But within the past two years I have met with three instances of unfavorable reaction to this treatment, which has induced me to observe the precautions usually advisable in all operative procedures about the uterus. Two patients upon whom I practised this method at my office during one winter, disregarded my positive directions to go home at once and remain quiet during the remainder of that day, but went down town shopping. It was a cold, damp day, and, as a result, within a few days I was called and found severe pelvic cellulitis, which confined them to their beds for several weeks. During the past winter I scraped away some fungoid granulations from the external os of a patient at Mt. Sinai Hospital, and applied pure nitric acid; she was at once put to bed, but a furious cellulitis ensued which kept her in the hospital for several months. These are the only cases, out of several hundred treated in a similar manner, which have been followed by the slightest unpleasant consequences. I have also curetted the cavity of the uterus proper many, doubtless several hundred, times, and in perhaps twenty cases have swabbed it out with pure nitric acid; in only one instance did a cellulitis follow. I am inclined from this experience to look upon the cervical canal as rather more susceptible to inflammatory reaction from this operation than the uterine cavity, especially when a severe caustic, like nitric acid, is applied; and I believe this greater liability to be due to the intimate relation of the cervix to the lymphatics which abound in the paracervical cellular tissue. While applications above the internal os are more liable to produce shock and peritonitis, those to the cervix are more frequently followed by inflammation of the pelvic cellular tissue.

In spite of this danger, the severe measure (sharp curette and nitric acid) is by far the most advisable, because it is the most effectual. I have never as yet found it necessary to substitute the actual cautery, so warmly recommended by Sims; but I have resolved in the very next case which proves rebellious to the acid to use the Paquelin long slender tip, and thoroughly sear the cervical cavity up to the internal os. The danger of thereby contracting the latter orifice should be borne in mind.

As for catarrh of the endometrium proper, I seldom use the sharp curette above the internal os, except when it is my purpose to remove vegetations or hyperplastic mucous membrane of unusual exuberance, or where the dull curette has not prevented the return of the disease. And then, also, I am tempted to follow the curette by fuming nitric acid, and have seen none but good results

follow this apparently heroic treatment. But, as a rule, I find the dull curette and milder caustics (iodized phenol, co. tr. iodine, sol. arg. nit. 3 j. to 3 j.) sufficient to effect an improvement.

The soluble gelatine pencils containing these ingredients (except the nit. silver), and also iodoform, sulph. zinc and copper, have at times been beneficial in my practice; but the difficulty occasionally encountered in keeping them in the uterine cavity, and their tendency to produce uterine colic, owing to their frequent insolubility, has somewhat deterred me from using them as often as I should have wished to do. If they are readily soluble (and those made by Mitchell, of Philadelphia, and especially those of Fleischer, of 652 East Sixth Street, in this city, are unusually so), these pencils, by their long contact with the diseased surface, are decidedly preferable to fluid applications. They are retained in the uterus by flat tampons over the external os.

As a rule, I think that where an immediate, positive effect is desired (styptic, astringent, caustic), fluid applications on cotton-wrapped applicators are preferable; where a steady, gradual alterative influence is called for, soluble bougies are indicated.

The nitrate of silver is usually prepared in pencils by fusing with nitrate of potash, in various proportions; it is particularly liable to produce uterine colic in this form, and I have never thus employed it.

An indispensable condition to the safe and effectual application of caustics to the endometrium, is the patulousness of the uterine canal, particularly the internal os. Fortunately this is usually the case, the discharge softening the tissues and dilating the canal. But when nitric acid is to be applied, it is always well to secure a canal of sufficient width to permit the easy insertion up to the fundus of a straight rubber stick wrapped with cotton, and a previous dilatation with a tupelo tent for a couple of hours will attain this end.

Whether the application be made to the whole uterine canal, or to the cervix alone, it must be remembered that the more powerful the caustic the longer will it be before the slough separates; that of nitric acid usually takes from five to seven days; that of iodized phenol or pure carbolic acid, three to four days; that of tincture of iodine two days. Not until the slough has separated should a second application of a milder nature be made. I usually employ a solution of nitrate of silver, one drachm to one ounce; or tincture of iodine, and continue these applications every other day, or twice a week, until the raw surface is glazed over, or a return of the discharge shows that the severe treatment has not been effectual and requires to be repeated wholly or in part. It should be remembered, however, that so long as constant applications of caustic are made to a raw surface, it cannot heal. Hence it is well, after a couple of weeks of steady treatment, to allow the patient a week's rest, in order to give nature a chance to heal the wound; if she then fails we must begin again, and perhaps a third and a fourth time.

That *hot* injections should be steadily used whenever there are no tumors in the vagina need scarcely be mentioned. The vaginal leucorrhœa usually present is very effectually controlled by painting the canal through a cylindrical speculum with a mixture of fluid extract of hydrastis canadensis and glycerine, equal parts, and placing a couple of tampons, soaked in this fluid, into the vagina, to be removed in twenty-four hours. As an injection, a tablespoonful of the plain fluid extract of hydrastis in a pint of water is excellent to continue the more powerful effect of the application just mentioned. I have found this remedy superior to any other astringent in vaginal leucorrhœa, as it can be used undiluted without cauterizing or eroding the vagina or vulva.

Patients with chronic endometritis or endocervicitis should be treated at least twice a week, and usually every other day. The more chronic and aggravated the case the more frequent the treatment. As improvement manifests itself, intermissions of several days, or a week

or two, may be made, in order to test the persistence of the benefit.

I have not referred to the time-honored practice of dilating the uterus with a sponge-tent, and tearing away the hyperplastic glands and mucous membrane when the tent is removed, because the dilatation is more safely accomplished by the tupelo, and the removal of the diseased tissues more thoroughly by the sharp curette. But, when the uterus is unusually enlarged and a decided drastic and alterative effect is desired, the sponge-tent may still be employed and prove beneficial. The usual caustics should follow its application. The forcible dilatation of the whole uterine canal by steel divergent dilators or graduated sounds has proved exceedingly useful in my hands in this disease. Not only does the dilatation allow the easy application of topical agents, but the free exit of fluids and the steady pressure of the dilators in themselves act beneficially on the diseased tissues.

I have not discussed Schroeder's radical operation (above referred to) in detail, because it seems to me so complicated, and, I confess, wrong in principle, as to be applicable only to the otherwise totally incurable cases of endocervicitis. To slit such a cervix up to the vaginal junction and transplant into its cavity vaginal mucous membrane (so entirely different in character from that of the cervical canal) seems doubtful surgery, until every other means have failed. However, the operation is ingenious, and in extreme cases doubtless advisable.

The prognosis as regards permanent cure will always be a doubtful one, so long as some time has not been allowed to elapse since the discharge of the apparently cured patient. A temporary improvement, or even an entire cessation of the discharge, may, in a few weeks or months, be followed by a fresh attack of the disease. This experience is common to chronic catarrhal affections of all mucous membranes. And only by means of constant, unremitting, and long-protracted treatment can a permanent improvement or a CURE be obtained. My experience certainly has furnished me with a fair proportion of cases in which, after several months of the treatment above described, an improvement was obtained of such duration as to leave the patients entirely free from uterine discharge for three and six months. Whether the cure was really permanent afterward, I am unable to say, as such patients who came from a distance were lost sight of; of those living in the city, I infer a permanent cure, since it is fair to suppose that, having once been benefited, they would have returned to me had the disease recurred.

Those cases I have found the most amenable to treatment and the most favorable for a permanent cure, in which the uterine discharge was chiefly maintained by a narrow external or internal os, or where a laceration of the cervix and consequent hyperplasia of the follicles was present. The radical operations for these conditions, as I have described them (removal of diseased glands and papillæ by the curette and caustics, division of the external and internal orifices; and, in given cases, closure of the laceration) usually secured a permanent cure. The most obstinate were those instances of catarrhal endometritis and endocervicitis, in which the external and internal orifices were anatomically normal, and no special hyperplasia of the glands or mucous membrane could be detected. Here all efforts to rest on the normal secreting qualities of the mucous membrane usually proved unavailing and permanent relief seemed hopeless. Where there was a distinct pathological condition or lesion of the orifices or tissues of the uterine canal, the removal of that condition and the restoration of the canal and its walls to the normal state was generally possible, and a permanent cure could with fair certainty be promised. My experience, at all events, does not coincide with that expressed by the words of one of our most eminent gynecologists when giving his opinion on two cases of sterility depending on chronic uterine

catarrh (one endometritis, the other endocervicitis) which recently consulted him, viz.: "This is an instance of that interminable uterine catarrh, which is practically incurable." Both these cases came to me utterly discouraged, and after three months of the treatment here described were discharged, to all appearance cured, having been free from discharge for one month without treatment. Whether they remain so is, of course, another matter. But they were both certainly relieved long enough to give them a chance to conceive, and if this happy event should take place, nature alone could, during the puerperal state, complete the cure. And if this one attempt at relief fails, and after some months the discharge returns, as all catarrhs are liable to do, better success might attend a second course of treatment. It certainly does not seem right to discourage all such patients and deprive them of all hopes of maternity (should they chance to be nulliparæ) when experience has shown us how much good a thorough, persevering course of local treatment will do them.

In making this statement I wish to except that class of cases which have been made a special study by Dr. Noeggerath, viz., latent gonorrhœa in the female, where catarrhal infection (I would like to call it affection, for I do not believe in the frequent venereal transmission of this disease as warmly advocated by Dr. Noeggerath) of the vagina and uterine canal has spread to the tubes, and has thus planted itself beyond the reach of topical, as well as general, medication. These cases, when once chronic, are really incurable, and, if they recover, do so almost in spite of, not in consequence of, treatment. Fortunately these cases are not the majority of those which come under our observation. For them only the last resort of Tait's brilliant operation—the removal of the diseased tubes, generally with the ovaries—remains. And we look forward to the not far distant day when we in this country can point to results as favorable after this operation as those reported by its originator.

The intelligent specialist and the general practitioner need scarcely be told that accompanying anæmia must be suitably treated. The influence of iron and other tonics is as marked in improving the tone and functional power of the uterine mucous membrane as of any other organ of the body. Pelvic plethora should be relieved by saline laxatives, the general circulation stimulated and regulated by massage and active exercise, and active hyperæmia of the sexual organs prevented by abstinence from sexual intercourse, during the local treatment here described. And it certainly must be a desperate case which resists all these measures.

IOWA STATE MEDICAL SOCIETY.—The thirty-first annual meeting of the Iowa State Medical Society was held at Council Bluffs, Iowa, May 16th and 17th. The attendance was very good; fifty new members were admitted during the session. This was the first meeting of the Society held since the plan of dividing the work of the Society into sections was adopted, and consequently there was some friction and confusion, which will be overcome in the future. Creditable work was done in most of the sections.

The annual address of the President, Dr. D. Schofield, was an interesting paper advocating, among other things, further reforms in the organization of the Society; higher standard for medical education; more extended and better accommodations for our insane. Volume V. of "The Transactions" of this Society has been published during the year.

The following officers were elected: *President*—Dr. S. R. Robinson, of West Union; *First Vice-President*—Dr. H. C. Huntsman, of Oskaloosa; *Second Vice-President*—Dr. D. W. Crouse, of Waterloo; *Secretary*—Dr. A. A. Deering, of Boone; *Assistant Secretary*—Dr. A. C. Simonton, of Des Moines; *Treasurer*—Dr. G. R. Skinner, of Cedar Rapids. The Society adjourned to meet in Des Moines in May, 1884.

VACCINATION OBSERVATIONS AND SUGGESTIONS.

By E. F. BRUSH, M.D.,

ATTENDING PHYSICIAN TO THE NEW YORK INFANT ASYLUM.

LIKE many other questions in which the dispute has lain between the profession and the laity, the subject of vaccination has not been advanced by recent literature as it deserves. Those who are capable of writing in regard to the matter take upon themselves the task of defending it from the attacks of that incomprehensible class the anti-vaccinators. These latter say we propagate other diseases and do not protect from small-pox. The burden, therefore, of recent contributions to the journals has been simply to defend the procedure. Thus, while devoting attention to statistics they have lost sight of the surgical aspects.

It is supposed we all know how to vaccinate, and, somehow or other, it has come to be considered that there is no choice between the animal and the humanized virus. Presumably this has come about in a business way, by reason of the numerous vaccine farms which are now worked. Some years ago I vaccinated a child from the arm of another healthy child. The parents told a friend of theirs; this friend told his doctor, "a legalized practitioner," who said it was against the law, and that I ought to be arrested. This, of course, made the parents very uncomfortable, but they had at least one consolation, their child had not a very sore arm, while the advocate of law and animal virus produced a sloughing ulcer on the arm of the child which he denuded of cuticle, a practice, unfortunately, very common, and advocated by some of the dealers in animal vaccine, as every arm thus treated is sure to take, with the loss of a good deal of substance.

Some time ago, I examined the arms of 191 children; the result was striking. I found only 13 children with a well-defined, round scar pitted, and only 1 with two scars, well-defined, round, and pitted; 51 had no marks at all; the remainder had scars of various forms, shapes, and colors. No vaccination had been performed for three months previous, nevertheless some of the arms were still crusted. The majority of the older scars contained cicatrices, long, irregular, varying in dimensions from a quarter of an inch to one inch by two, some had purple ridges in the centre, some red; others had cavities, blue or red; some of these were pitted, in some of them on the edge of the raised cicatrix the puckerings somewhat simulated the appearance of pitting. I took the fifty-one that had no marks and selected six of the most favorable subjects; these I inoculated with animal virus, procured from what was considered a reliable source. Only one vesiculated, of the other five one had a very sore arm, indurated on the third day, which did not follow in any way the regular course. The other four did not respond at all. From the good arm I vaccinated on the eighth day thirteen children with only one failure. I continued at the end of each eighth day, to select another good subject, and from it to vaccinate another group. From the close observation of these fifty-one cases I began my studies regarding the proper mode of performing vaccination.

I prefer humanized virus, for the simple practical reason that one can select the subject, watch the vesicle, and procure the virus at the right time uncontaminated. By humanized virus I mean the bovine virus transmitted through the human subject from arm to arm. And here let me state that too much caution can not be exercised in procuring the primary virus. Last summer I sent by messenger to well-known wholesale druggists in New York City for one dozen points of bovine virus, requesting information as to its source. They informed the messenger that the supply was exhausted but that the points would be sent the following day by mail. This was done, but they neglected to state whence the virus had been derived. The weather being warm I used the points immediately

and wrote to the firm asking for information, and received the following reply: "The vaccine virus we sent you was bovine, and was obtained through Mr. —, of the — Dispensary."

I wrote to Mr. —, of the — Dispensary, asking him whence the virus came, and received from the house physician the following reply: "Your favor of the 5th instant to Mr. — has just been shown me. In reply I have to inform you that this institution has never furnished bovine virus, but has until the last four years largely supplied the humanized. Notwithstanding, the points furnished you were bovine and were obtained from the Board of Health. They were sent you contrary to rule and in violation of good faith, as they were obtained for use here. This was the result of an error." The above correspondence explains the degree of carelessness that exists among the dealers. The twelve points procured as above related contained only three that were successful, and these did not present a good appearance. In one case the vesicle, on the eighth day, presented a decided blue color, containing a dark-colored centre crust; another presented a bright opaque pearl-colored vesicle, not umbilicated; the third was a small pearl-colored vesicle with a slight depression. I did not consider it safe to use lymph from any one of these.

Next after the care in procuring the virus there ought to be a preparatory examination of the subject to be vaccinated. This preliminary examination should be directed to the physical condition, especially in its relation to the state of the skin, and more particularly in the vicinity of the place selected for the introduction of the virus; that is, the skin of itself must not furnish a poison to produce irritation. Gregory, in writing on this subject and comparing vaccination with the inoculation of the small-pox virus, says, "It requires no arguments to prove that a process that is to free the constitution from a poison so active and subtle as that of small-pox should be conducted with at least as much attention as was paid to its introduction into the system." These words, written fifty-two years ago, are still applicable and deserve attention. We send for the virus by mail, and rather than lose it, use it immediately, our only care being that there is an ordinary degree of health. I will point out that it requires more than this when I come to make suggestions as to proper careful vaccination.

There is a degree of watchfulness necessary during the progress of vaccination, which is absolutely as much a matter of security as the process itself. In the early days of vaccination, when more attention was given to the protective process and the vexing questions as to its utility were not absorbing the medical mind as in these latter days, Cross, a noted writer says that you must watch the progress "for revaccination becomes imperatively necessary when the regular vaccine pock is impaired by rubbing or accident, when the system is pre-occupied by any other disease, and where the scar is feeble and not indented."

Notwithstanding the apparently well-authenticated cases of the introduction of syphilis into the system by the process of vaccination, I doubt whether this or any other disease would be conveyed were proper caution exercised. I regard the introduction of specific virus into the system in the light of seed-planting. If I go into a field of corn and carefully remove one sprouting grain of corn, without the admixture of other seeds or matter, and place this grain in my field, nothing but corn will grow from it. If I remove with it a shovelful of dirt with other sprouting seeds, the Lord only knows what the product will be. I know corn, where it grows, and where it will grow. With the same absolute knowledge as to the vaccine vesicle, its time of growth, and its form, there is to me an absolute certainty that I can collect it for my planting and nothing else with it. In the old experiments of Drs. Woodville, Willan, and Ferguson, we learn that if small-pox virus be mixed with vaccine virus small-pox virus only will grow, because after inoculation with small-pox

virus the pustule forms in three days, whereas after the introduction of vaccine virus the vesicle forms in four days. Again, if the vaccine virus is first introduced, and when the vesicle is formed the small-pox virus is introduced, they both grow. If they are placed near enough to coalesce, the matter taken from the respective sides will produce the respective diseases. Now, in the case of syphilis, the shortest known period has been ten days between the introduction of the poison and the appearance of the papule, and in Pallazari's cases of syphilitic inoculation twenty-five days elapsed between the operation and the appearance of the papule. Thus the true and uninterrupted course of the vaccine vesicle can be completed before the syphilitic poison becomes localized.

In regard to the operation of vaccination, there are several things to be borne in mind. In the first case we must make the avenue which we open for the introduction of the virus sufficient for its purpose, then we must guard against the intrusion of any other poisons which menace it, and, in opening this avenue, we must take care to do it in such a manner that it may not of itself generate poison.

Without accurately understanding all these dangers, I, at first, thought the chief danger to be guarded against was the repeated use of the lancet. I sought to avoid this by the use of a cambric needle, in each case throwing the needle away when the operation was complete. I discovered that this did not make the right opening, that is, the incisions were not perfectly healed when the vesicles appeared, and this always interferes with their perfect growth. A dried crust or an unhealed incision occupying the place where the vesicle arises distorts its shape, thus precluding the possibility of knowing whether the vesicle is pursuing a normal course, and likewise sets up a premature inflammatory action.

On making this discovery I came back to the lancet, and find, with rare exceptions, I can always make so light and clean an incision that by the third day it is perfectly healed, and the vesicle has a clear field in which to form, and one can see by the fourth day the number of punctata forming; on the eighth day, when these have coalesced, it can be seen whether the vesicle has the normal round shape, umbilicated centre, and clear uncontaminated lymph. I consider the use of the lancet in the manner described as absolutely, unequivocally necessary for perfect vaccination. I may say that I have relieved my mind of the dangers of contaminating the incision by the lancet in common use by having at hand, when operating, a small bottle of alcohol and a lighted alcohol lamp. I first dip the lancet in the alcohol and wipe it dry with a napkin. I then again dip it in the alcohol and set fire to the adhering spirit. I regard this as better than the employment of carbolic acid as the disinfectant, which might adhere to the lancet and irritate the incision, thus preventing perfect healing by the third day, which, let me reiterate, is absolutely necessary to allow the perfect formation of a vaccine vesicle. As the latest hospital statistics teach us that four well-pitted vaccine marks form the highest point of protection, it is advisable, therefore, to give the child two and let it acquire the other two by adult revaccination.

In operating on infants or children I take a piece of note-paper about an inch wide and three or four inches long; in it I cut two holes one-fourth of an inch in diameter and three-fourths of an inch apart. This I stretch over the part selected to be vaccinated, which throws into relief two disks of skin. By this method I can hold the arm perfectly still, avoid making any accidental cuts, and I find if the incisions bleed freely that when the band is removed the bleeding ceases. Of course I take care never to use the same piece of paper twice. If I find on the eighth day that but one of my disks has taken, with lymph from it I vaccinate the other spot. In this connection it is worthy of remark that the second vesicle on the sixteenth day from the first opera-

tion, appears as old as its parent vesicle, notwithstanding that it commenced more than eight days later.

In regard to the preparatory treatment, I differ somewhat from many authors, who warn us against vaccinating infants suffering from bronchitis, sores behind the ears, eczema of the scalp or nates, etc. I have found cases suffering from eczema in locations removed from the spot where the vaccine virus was introduced to follow a normal course. Of course in these cases of eczema there is more danger of the vesicle being scratched, by reason of the itchiness existing in other locations. But if a vesicle happens to become ruptured by this or other accidents, it must be kept perfectly dry by the application of cotton. By this method every case under my observation followed a normal course. I would not have dared vaccinate such subjects if my reading on the matter had been restricted to modern writers. But I found Thomas, in his work on "Practice," recommends the inoculation of vaccine ichor as a remedy in obstinate ulcers on the arms and chest and in glandular tumors. Without placing much faith in this, I nevertheless thought that if it were safe to vaccinate where these troubles existed, it would be safe to vaccinate in the presence of milder diseases.

One other point in the successful carrying out of proper vaccination is to keep the vesicle and the crust, while it is forming, perfectly dry. Avoid, as you would the introduction of pus itself, the application of oil, water, or any substance that would tend to soften the crust. If the vesicle happens to rupture, put on it dry cotton or a dry rag, and allow it to stay there to come away with the crust. I have seen very deep ulcers formed by the casual habit of putting sweet oil or wet rags on the arm, which softens the crust around its edge, where it is liberated, and being still attached by the centre, it rotates till it is finally loosened from the centre, which is deep down near the bone, and presents deep, nasty-looking caverns.

There are some conditions of the skin not absolutely recognized as diseased which forbid the operation of vaccination. A case in point was that of a boy six years old, whose physical condition seemed perfect but whose skin on the arm was rough, dry, and scaly. The incisions I made for the introduction of the vaccine virus did not heal, but commenced festering on the second day. On the eighth day the arm presented an erysipelatous blush and was quite deeply indurated, but no vesicle had formed. This arm was three weeks in healing. I afterward had the skin rubbed twice daily with sweet oil for some time, and again vaccinated with normal results.

Undoubtedly due to the habit of denuding the arm of cuticle, there exists a lack of knowledge of the normal condition of a vesicle on the eighth day. A rather painful illustration of this fact came to my notice while exhibiting some sketches which I had made of normal and abnormal vaccination results. By way of experiment I took a boy, four years old, with a rough, dry, goose-skin epidermis, who was otherwise well nourished and healthy looking. I simply scarified the arm in the same manner as I do for vaccination, without, however, introducing vaccine virus. The illustration I had made on the tenth day, when the arm was reddened, swollen, and indurated with a flat dark crust in the centre of the reddened portion. This illustration, with some of normal vesicles, was submitted to the inspection of a physician for his opinion as to which was the best. He unhesitatingly selected the illustration presenting the most intense action, namely, the one where no vaccine virus had been introduced. This is not surprising when we read the following passage from an article on vaccination in a recent number of THE RECORD. "The fault cannot be in the method, for I scrape off the epidermis entirely from a square measuring a quarter of an inch or a little more and rub the virus on for at least a minute."

It can hardly be called too fastidious to require the arm in all cases to be washed with Castile soap and dried with a clean towel before being vaccinated.

In removing lymph from a vesicle, the nicest kind of care is required, that nothing but lymph be taken. I may say here that since I have regarded vaccination as the nicest and most delicate operation I am called on to perform, I have not had one single case of enlarged glands, erysipelas, or other bad results following the operation. I ought to add, of course, that I have not operated as extensively as many others. The number of cases on which I base this claim is a little over two hundred. I do not wonder that complications arise in the practice of those who use bovine virus. My friend, Dr. Campbell, related to me, some time ago, that he received a quill from one of the dispensaries in the city, presided over by a physician who sells animal virus, and this quill was stained with blood. It was returned, with a request that a clean one be sent in its place. He received the answer that a little blood was not harmful, as it came from an animal so different from the human. As we sow so shall we reap. I have no doubt the wart-like excrescence that occasionally grows on vaccinated surfaces where the bovine virus is used arises from this admixture of foreign material with the lymph. It occurs to me that some one in authority ought to call the attention of the animal-lymph dealers to the necessity of perfect purity.

There is one careless habit which has done much to bring the procedure of vaccination into disrepute, namely, the careless, thoughtless way by which we account for all eruptions, soreness of the eyes, and the like, which take place during the process. It is also noticeable that many physicians allow mothers to imagine that these things, even when they occur after the vaccination is complete, arise from the introduction of vaccine virus. If we take pains to explain that this is not the case, we shall be doing much to weaken the arguments against vaccination.

IMPERMEABLE STRICTURE OF THE URETHRA SUCCESSFULLY TREATED BY ELECTROLYSIS.

By W. H. DIKEMAN, M.D.,

OLEAN, N. Y.

THE following case of impermeable stricture successfully treated by myself by electrolysis, after the plan of Dr. Newman, of New York, may serve a purpose in giving evidence of the successful treatment by such method:

Mr. F. H. S—, of this city, about thirty-five years ago contracted gonorrhœa. He was treated by strong injections and the usual remedies. In three months, he states, he was cured. About ten years later he commenced to notice irritation while micturating, and at times a stoppage of the stream. Without consulting a physician he purchased a bougie, and with more or less manipulation attempted to force it into the bladder, but failed. In the attempt he caused himself severe pain, and, as he states, considerable bleeding. He undoubtedly ruptured the urethral mucous membrane. From this time his trouble grew worse, and for the last three years he has been unable to either retain or pass his water. He has worn a urinal for three years, as his water dribbled away drop by drop. The irritability of the bladder would cause straining in an attempt to micturate, associated with severe tenesmus, and he was obliged to resort to the use of the stool instead of the chamber vessel. And all these long years of suffering and with these inconveniences of life he has been unable to get relief, because in all this time he has been treated for disease of the kidneys and bladder (by constitutional remedies).

On October 10, 1882, I was called to see him in company with another physician, when I obtained the above history. I found him greatly emaciated and careworn. I advised him as to the immediate necessity of exploring the urethral canal. He did not like the idea, because twenty-five years ago he caused himself so much pain by the use of an urethral instrument. However, he soon

consented to the examination. I picked up a No. 17 French bougie and passed it about one inch into the urethra, when it was arrested. It was withdrawn and a No. 15 was introduced, which passed the first stricture but became arrested about one inch and a half further on. Smaller sizes were each used in succession until a No. 9 was reached, which passed the second stricture but was again arrested by a third at about five inches from the meatus. Having no smaller instruments at hand he was advised to call at the office. A No. 3 French filiform bougie failed to pass this third band. I then advised external urethrotomy or treatment by *electrolysis*. He preferred the latter and the operation was performed as follows: An insulated electrode bougie, with an olive silver end, No. 9 French scale, was introduced, and passed the first and second strictures as on the preceding day, but was arrested again at the third. The negative pole of the McIntosh galvanic battery was connected to the electrode bougie, and the wet sponge of the positive pole was placed on the left thigh. Six cells of the galvanic battery were in operation, and in eighteen minutes it passed through the stricture. But to my surprise it passed but a very short distance when it was arrested by a fourth obstruction. Electrolysis with the six cells was kept up fifteen minutes longer, but failed to pass through the band. As the patient felt somewhat exhausted, the electrode was withdrawn and the patient sent home with the advice to keep perfectly quiet and return again the next day at the same hour.

Next day, October 12th, patient returned in due time, said he felt no bad effects whatever from the operation, but said the electricity made him feel much better and wanted more of the same kind.

To satisfy myself as to whether the fourth stricture band was impermeable or not I again tried to pass the No. 3 French filiform bougie, but failed to pass it through the obstruction. So the treatment by electrolysis was returned to as on preceding day. The current was started with six cells and was gradually increased cell by cell, until twelve cells were in operation. The patient had such great faith in the treatment that he desired I should continue the séance longer than on the preceding day. But with the twelve cells in operation the electrode passed gradually on—it appeared that the fourth band was about one inch in length—and in nineteen minutes it passed into the bladder.

The electrode was withdrawn, and Mr. S— made a stream of water, which he had not done for ten years. He departed rejoicing, with the advice to again remain perfectly quiet on his back, and should he experience any ill effects to let me know.

Next day he returned. There were no ill effects whatever. There was no soreness, no pain, no hemorrhage, no dribbling of urine. He wore no urinal, and for the first time in all these long ten years of an uncontrollable bladder, he had now full control, and when the call of nature demanded he could pass a stream of water.

Each day he reported as feeling better, but as the opening was small, the séance was repeated on October 18th, with an insulated electrode bougie No. 13 French. The bougie was arrested at the first stricture, but with twelve cells of the galvanic battery in operation it passed all four strictures into the bladder in seventeen minutes.

On October 21st a No. 15 French conical sound (Van Buren's) passed easily into the bladder.

October 25th electrolysis was repeated with a No. 17 French insulated electrode bougie, and in thirteen minutes it passed quietly into the bladder.

November 1st he reports as gradually improving and feeling better in every way. The séance was again repeated with a No. 21 French, which passed into the bladder in seven minutes. As he is satisfied with the size of the instrument that now passes into his bladder the treatment will, for the present, be suspended. As he is sixty-five years of age he feels contented and satisfied

that his present condition will safely see him through his remaining days.

November 6th, he again reports. His stream of urine gradually gets larger. A No. 22 French sound passed by its own weight into the bladder, without giving any pain in the least, or detecting any soreness whatever. The patient declares himself perfectly well and is discharged.

In place of the experiment given by Dr. Newman for demonstrating decomposition by electrolysis I would suggest the following simple practical test, which can be performed by any one in a few minutes.

Take a small piece of fresh beefsteak and lay it on an insulated surface. Then with the positive electrode placed on the under surface of the beefsteak and the negative electrode on its upper surface where the decomposition can be watched, the conducting cords are now connected with six cells of the galvanic battery. By close observation in a few seconds the effects of the electrolysis on the tissues will be seen to take place. By continuing the experiment for a few minutes the results will be distinctly appreciable, and we have a most correct idea of what takes place in the treatment of stricture of the urethra by electrolysis.

Progress of Medical Science.

THE HEALING OF WOUNDS OF THE SPLEEN.—Dr. Dannenberg (*St. Petersburger Inaug. Dissertation*) wounded, in various ways, the spleen in fourteen dogs, killed the animals in periods varying from twenty-four hours to one hundred and eight days, and examined numerous specimens microscopically. He sums up the results of his investigations as follows: 1. Incisions into the spleen are prone to rapid union; some amount of gaping occurs only on the surface of the organ. 2. Incisions into the pulp are prone to heal without suppuration. 3. Suppuration of the splenic tissue, in the course of a wound, occurs only as a rare exception. 4. Adhesion of the splenic capsule to the omentum, which develops very rapidly, is one of the conditions leading to healing of wounds of the spleen. 5. Perforating wounds heal slowly, and always through development of granulation-tissue. 6. Punctured wounds heal by the first intention. 7. Amputation wounds of the spleen heal by its adhesion to the omentum, resulting from the formation of connective-tissue between the parts. 8. In the formation of a scar, both the proliferating elements of the splenic pulp and the epithelioid elements of the reticulum take part. 9. Hypertrophy of the subserous layer of the capsule depends on the proliferation of cells of connective-tissue. 10. There is proceeding an extremely active proliferation of capsular epithelioid tissue around the edges of a wound. 11. There is proceeding a complete regeneration of the epithelioid covering on the surface of a cicatrix left by a wound. 12. Under certain conditions common epithelioid cells may undergo transformation into cylindrical and cuboid epithelioid elements.

DIAPHRAGMATIC PLEURISY.—Pleurisy of the diaphragm, or, more strictly speaking, of the supra-diaphragmatic space, is always very difficult to diagnose, physiological symptoms being very incomplete, or altogether wanting. Gueneau de Mussy has indicated some signs which, however, are of good value in elucidating the question in favor of this variety of pleurisy. He discovered that the phrenic nerve is painful to pressure in the accessible points of its course between the two origins of the sterno-mastoid muscle. Also pressure on a circumscribed portion of the epigastric region awakens an acute pain. This spot is situated in a point corresponding to the intersection of two lines—one coming from the external border of the sternum, the other from the osse-

ous part of the tenth rib. Gueneau de Mussy named this point the button of the diaphragm. Thus, whenever a patient is found to present these symptoms, the case, *cateris paribus*, may be safely diagnosed as diaphragmatic pleurisy.—*Cor. Med. Press.*

APOMORPHIA AS A SAFE, CERTAIN, AND QUICK EMETIC.—Dr. Brown writes as follows to the *British Medical Journal*, May 12, 1883: "It has occurred to me, in several cases, to have patients who have been obnoxious to ordinary emetics. The emetic has caused nausea and depression, but no emesis. A few weeks ago, two cases of this kind occurred in my practice. One was a man who had been drinking and eating indigestible food. Domestic emetics had been given, which had produced nausea and ineffectual attempts at vomiting. It occurred to me that apomorphia, used hypodermically, might succeed. I prepared a solution containing a grain of chloride of apomorphia, twenty minims of rectified spirit, and water to two drachms, of which I administered ten minims hypodermically, which equals one-twelfth of a grain. In seven minutes it produced free and copious vomiting. There was no nausea, nor depression, nor intolerance of food. The other case was a man who was a total abstainer. Patient had loaded his stomach with a mass of indigestible food, which had caused acute pain in his stomach. He had tried domestic remedies without success. Pain was so severe, that I was called up at night. The other case having been so successful, I at once administered ten minims of the solution. In two minutes, without any previous nausea or warning, the contents of the stomach were violently ejected on the floor, the patient not having time to get a vessel to vomit into. This was repeated two or three times at short intervals, and the patient had speedy relief. In this case there was no nausea or bad after-effect. From inquiries which I have made, I am convinced that the value of apomorphia as a safe, certain, and quick emetic, is not appreciated because not known. In cases of alcoholic and narcotic poisoning, it is a most valuable remedy, and, judging from my experience in one case, the emesis is delayed a few minutes. In cases of acute gastralgia and convulsions in children due to overloaded stomach, apomorphia will prove a speedy cure. I have given one-sixth of a grain of the drug to children by the mouth without producing any effect whatever."

TREATMENT OF PREMATURE BALDNESS.—In the *Berliner Klin. Wochenschrift*, April 16, 1883, Dr. Lassar discusses the etiology and treatment of early baldness, or alopecia prematura. From observation and experiment upon animals it was found that the disease is contagious, and occurs independently of any general affection or the state of health of the patient. The method of treatment recommended is as follows: The scalp is to be washed every day with tar soap, or soft glycerine soap, or with soap containing sodium iodide; the soap is to be thoroughly applied, and rubbed into the scalp for fifteen minutes. Following this is a warm douche; then by the application of a corrosive sublimate (two parts per one thousand) the hair is dried, and a half per cent. spirit-solution of naphthalene is rubbed into the affected portions. Carbolic or salicylic acid may also be employed if desired. If this treatment be adopted in the early stage, when the hair is just beginning to fall, it has usually proved successful, but it must be kept up for eight weeks or more. The fact that this disease is due to a communicable morbid principle has been brought up in order to show its conveyance by the comb and brush of the barber.

GLYCERINE IN PHTHISIS.—Recently Drs. Jaccoud and Ferrand have been trying glycerine as a substitute for cod-liver oil in phthisis, and with so much success that the former orders it in every case where the oil is not borne, and under its use the patients increase in weight, the cough diminishes, and the dyspnoea is in many instances considerably ameliorated.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE PSYCHOLOGY OF PANICS.

ARE we to have an epidemic of panics? It would almost seem so. Three such have occurred in this city within the year. With the memory of the Brooklyn Bridge horror still fresh there came this past week news of an almost similar disaster in England. The public press has described and pictured everything, and has emphasized the details in the thrilling and affecting style of modern journalism. People are on tiptoe for another panic as soon as the occasion occurs.

A panic is an acute disease of the brain, it belongs to medicine and to morbid psychology. A genuine panic is an insanity of the mass. The activity of the higher centres is suspended, reason is gone, the whole force of volition is turned in one channel, the whole energy of the emotions is translated into fear of danger and desire for safety. The panic-struck are anæsthetic, insensible to injury, ignorant of any sight or sound, or taste or smell, except such as relate to their effort for safety. Man when in panic touches as near as ever he can to the mental condition of a beast. A runaway horse, a frightened flock of sheep, a panic-struck crowd are on the same mental level.

There is no emotion so contagious as that of fear, and no desire so strong, so intimately wrought into our nature as that of self-preservation. Hence the rapidity with which the psychological contagion of the panic spreads itself. The strongest and bravest man becomes tremulous when in a crowd struck with fear. Panics have their predisposing causes. The mind when wrought upon by harrowing recitals of previous disasters, or when made unstable from nervous weakness, or insecure by lack of confidence, is most readily affected. For this reason it seems probable that there is at present a widespread predisposition to panics.

The best prophylactic for a panic is the cultivation of a stable nervous system and of the habit of being mentally prepared for contingencies. Every one should know where the fire-escapes are in the hotel in which he sleeps, or the exits in the theatre which he attends. If each person were to take these precautions it would certainly make a difference in the number and extent of panics.

No doubt the best thing for the individual to do in case of panic is in most cases to remain still. One can not stifle emotion but one can often restrain action,

which latter is the thing that does the harm. In incipient panics, loud noises, a confident speech, music, or any distracting object may still affect the mind and check the tide of feeling before it has yet concentrated upon the single purpose of escape.

The class of men who are least affected by and least liable to panics is doctors. We speak from knowledge. We have seen, in a demonstration before a large medical audience, an explosion occur with a flash of flame, burning ether running down and over the table. There was not a cry nor a stir in the whole audience, the fire was put out by throwing cloths over it, and the demonstration went on. We have often witnessed similar accidents on a smaller scale—and the experience is not infrequent—but never have we heard of a party of physicians panic-struck. The reason is easy to see, every medical man is continually called to meet emergencies and to allay panics on a smaller or larger scale. A doctor who has been called to see infants with sudden attacks of croup, children in convulsions, women in hysterical moods, and the various other pathological factors of domestic upheaval, necessarily requires very extraordinary circumstances for the complete disturbance of his own equilibrium.

HOW TO CARE FOR THE POOR.

AMONG the many perplexing social questions of the day there is probably none that have come to assume an aspect so alarming, an interest so vital, a responsibility so pressing, as that of the relation between the upper and lower classes, the old problem of labor and capital, the Gordian knot of history, baffling the wisest minds, and yielding no solution even to the sword. We in America have of late had the various phases of this subject impressed upon our attention in ways that have served to detract considerably from the effectiveness of that style of eloquence known as "spread-eagle," and which are anything but conducive to complacency in the average patriot. It is a question which certainly affects the "life, liberty, and pursuit of happiness" of each and every one of us; and it is certainly time we should "stop and see where we stand." What are the bottom facts in the case?

Our so-called lower class in America is a motley crowd, as indeed, what class is not, in some degree? Other governments have only to provide for a body of people whose disposition and temperament are perfectly well-defined and understood, whose standing and relations have been practically the same for centuries, and are thoroughly known, who are distinctly identified with the country by all the ties of heredity, and who are impregnated with its social atmosphere. From the very nature of the case, society in America is a mixture of many diverse elements. Our land is open to all. Very naturally, but none the less unfortunately, it has come to be the Mecca of all who have become restless under restraint at home, and who seek freedom from it here. No wonder the old discontent breaks out on finding new, but no less oppressive influences against them in their struggle for subsistence. No wonder despondency succeeds to discontent, and the foreign peasant becomes an American pauper. Another potent factor in the pro-

duction of this deplorable state of affairs is found in the growing adverseness of our own common people to engage in manual labor. Unfitted for the "genteel" employments to which they aspire, they lapse into habits of shiftlessness, which soon develop into absolute apathy under the influence of the pitiable fallacy that "the world owes them a living."

We have, then, an enormous and increasing class of people who are largely dependent on charity, and especially is this true of New York. But, on the other hand, the means of relief are most abundant. The question to be decided is, therefore, plainly this: Are these means of relief insufficient or inadequate for the wants of the poor, or do they fail to accomplish their end by expending their energy in false directions? Plainly the latter. For every honest man will admit that, whatever the number of our charitable institutions, and whatever the activity of charitably disposed persons, for some reason the results are unsatisfactory, and as yet all efforts have failed in securing the greatest possible good to the greatest possible number of those in need. As a result of this widespread feeling of something lacking, there have recently been formed in this and other large cities charity organization societies, and which have already been productive of much good. It is easy to see the advantage of a regular organization in such a field. The aim and scope of these societies are admirably embodied in the "Handbook for Friendly Visitors among the Poor," issued by the Charity Organization Society of New York, and published by G. P. Putnam's Sons, New York, 1883. Every one who is brought into contact with the poor should own this book. Its influence will surely tend to materially lessen that ill-advised and misapplied charity which has proved, in so many cases, a curse rather than a blessing. The gist of the whole subject we find upon the title-page, viz.: "Charity must do five things. 1. Act only upon knowledge got by thorough investigation. 2. Relieve worthy need promptly, fittingly, and tenderly. 3. Prevent unwise alms to the unworthy. 4. Raise into independence every needy person, where this is possible. 5. Make sure that no children grow up to be paupers." Then follow in detail the different chapters, as follows: "General Suggestions to Visitors," "Directions to Visitors," "Quotations" (from eminent philanthropists), "Hints on Domestic Economy," "Sanitary Suggestions," "Legal Suggestions," each subject being tersely but clearly treated. The book gives in plain, concise form what might be termed the "first principles" of charity.

Now all this comes home with peculiar force to the medical profession, for no other class of people are brought into such constant and intimate relations with the poor, and none are more identified with efforts for their relief. Gratuitous services rendered a patient who could possibly pay has certainly a demoralizing effect on his character. The Charity Organization Society have recognized this, and act accordingly; but what is the policy of the profession? Our attention was lately called to a circular letter sent by the New York Society to the different hospitals, describing at length a man who had come to New York for surgical treatment, one who was well able to pay, but who was attempting to pass himself off as utterly destitute. Assuredly a move in the right direction; but what medical man doubts of this

man being able to obtain free treatment, especially if his case be an interesting one. The "interests of humanity," which have of late been so feelingly alluded to, would seem, in the light of such facts, to demand a radical reform in this direction.

NON-PARASITIC PHTHISIS.

DR. FRANZ RIEGEL, of Giessen, has made a contribution to the pathology of phthisis which is of especial interest in view of the present active agitation regarding the subject. Riegel has been and still is a believer in Koch's discovery and in Koch's conclusions regarding the causation of tuberculosis. He has recently reported the histories of two cases of phthisis occurring in diabetic patients. He examined the sputa of both. In the one he found the bacilli of tubercle, as has been done before by Immerman and Rüttimeyer. In the other *no bacilli could be found*, despite more than fifty careful examinations. The patient was a man fifty-two years of age, who had suffered from diabetes for a long time. At the left apex of the lung there was dulness, irregular respiratory sounds and moist râles. The sputa was muco-purulent, and at times small masses were expectorated which were found microscopically to contain fatty degenerated portions of the lung parenchyma. There could hardly be any mistake in the diagnosis. It is equally improbable that the failure to find bacilli was due to lack of skill, since Riegel had frequently made such examinations.

It was concluded, therefore, that there is a form of phthisis in diabetics not due to the bacillus. This conclusion is thought to be strengthened by the opinion which pathologists have already advanced, that there occur in diabetes two forms of phthisis, one a tubercular, the other an ulcerative or catarrhal process.

It will be readily seen that if the disciples of Koch admit the existence of a catarrhal phthisis as a complication of one disease, they must admit also the possibility of its occurring under other circumstances. In other words, we are brought back to the old view that phthisis may have two or even three forms: tubercular, catarrhal, and fibroid.

THE DISGUSTED PARTY.

WE have received from a correspondent the following letter:

"DEAR SIR—Will you not allow me a word in your valuable journal regarding the much-discussed subject of medical ethics. My sympathies have all along been rather for the old Code. I have often read and admired it, and I quite disagree with those who talk so glibly about its 'moral platitudes.' With all respect to your opinions, sir, it seemed to me that we were doing very well with it, and that it might have been let alone, when this question of consultation would probably have settled itself. I came very near joining the printed list of old Code defenders. I am very glad I did not, however, and since the disgraceful trickery at the Academy of Medicine occurred, I have heard of many who regretted signing their names to the document which the leaders in the old Code party have been circulating.

"The fact is, sir, the whole controversy has ceased to

be an ethical one, and has degenerated into a medico-political warfare in which the real issue is forgotten. I would not debase myself by acting under such a leader as the old Code puts forward, even to re-enact the fates of Mount Sinai; neither do I care to join the new Code party, which poses too much as a martyr, and is too much *en rapport* with newspaper men to accord with my old-fashioned notions of what a doctor should do.

"I belong to the disgusted party, and I think that there are many with me. We, the disgusted, do not like the flood of circulars which is being sent us by machine organizations. Their postal cards, asking our personal views, are an impertinence, and their addresses and 'comments' are platitudinous and tiresome. We are practitioners of medicine. We know that what practitioners want is more medical knowledge and skill; and that it doesn't make the difference of a pseudo-bacillus in the doctor's actual work whether there is a long code, a short code, or no code, provided we have the Scriptures.

"Will not THE RECORD use its powerful influence to help along this the

"DISGUSTED PARTY?"

We have published the foregoing, though rather long, because it doubtless does represent, as claimed, a widespread sentiment. In a large measure we agree and sympathize with our correspondent. The seeds of liberality and justice have been sown, and have taken root. They cannot now be destroyed. The issue can be safely left to time.

ALUMINIUM IN THE TREATMENT OF PHTHISIS.

DR. JULIUS PICK, of Pribyslau, announces the successful use of aluminium in the treatment of pulmonary tuberculosis. Aluminium, he states (in the *Wiener Medicinische Wochenschrift*), is one of the most active destroyers of the bacillus of tuberculosis, and assuming that this bacillus is the cause of the disease, the metal in question may be rationally given as a remedy against it. When so administered, it kills the bacillus and takes away the specific character of the disease. If, however, serious organic changes have occurred, the drug will not remedy these; hence, in the later stages of phthisis, when much tissue has been destroyed, we can expect no good from Dr. Pick's treatment.

The method employed by the investigator in question is illustrated by the history of a young man, both of whose lungs revealed the changes of the first stage of phthisis. He was ordered the following:

R. Aluminii metall. 1.00 gramme.
Aluminie hydr.,
Calc. carb. depur. 5.00 gramme.
Gum tragac. q. s

M. Div. in pil. No. 60. Sig. one t.i.d., two hours after eating.

The lime was added to assist in the calcification of the tubercle!

He was also ordered to be rubbed all over twice daily with oil. After eight days the diarrhoea and night-sweats had ceased, the fever had left him, and his appetite returned. He was treated for nine weeks, at the end of

which time he seemed to have nearly, if not entirely, recovered. The average dose of aluminium was about 0.10 gramme daily.

Dr. Pick reports the above case as a sample of what the metal will do. He does not say how many others he has treated. It is evident that he has not proved very much for his new remedy as yet.

THE THERAPEUTICS OF BLUFF.

HE stood by the bedside counting the pulse, counting the respirations. The patient was in advanced life, and was suffering from broncho-pneumonia. "One hundred and six!" was the exclamation, "respirations thirty-six. An increase over last evening of ten pulsations and six respirations. Some slight lividity of the extremities of the fingers. Heart's action a little irregular." Dr. Blank shook his head dubiously: "Mrs. Brown is not so well to-day." A cloud passed over his countenance as he spoke these words; it was noticed by Jane, Thomas, and Susan. A gloomy silence followed. The Cammann bin-aural tube was applied to different parts of the thorax. Subcrepitant ronchi everywhere; small bubbling at the bases. "There is extensive consolidation," he said; "this dull region is stuffed with the products of inflammation. It is a hard tug for breath with the old lady."

The supreme cortical cells of Dr. Blank's cerebrum were evolving this thought: "This patient will die; I shall lose prestige in consequence; I shall lose the patronage of this family."

What shall he do about treatment?

The digitalis does not seem to be working well; there is nausea. The squills, senega, and ipecac do not promote expectoration. There is pain in the head, and he fears that it is caused by the quinine and whiskey. In doubt and uncertainty he tells them to put these medicines on one side, and writes a prescription for some carbonate of ammonia. He directs full doses of this medicament, and then, after starting for home, in his hesitation comes back and advises the family to give only half the dose prescribed. With a heavy heart, which his countenance too plainly shows, he bids the Browns good-morning.

What are Thomas and the Brown girls thinking about at this time? "This man is fairly discouraged. He has done all he can. He has no confidence in his medicines. He has made a complete change, and now is doubtful about the result of the change. He evidently thinks mother is going to die. Mother, too, is discouraged. It is time to try somebody else."

Dr. Blank had hardly arrived home that morning when a messenger brought a note from the Browns, stating that they had made a change; that Dr. Blank might consider this note a note of dismissal; that Dr. Bluff would now take charge of the case.

Dr. Bluff was not in any sense a scientific man, nor had he any skill in the selection of his remedies. He stole a good many useful hints from members of the faculty and young graduates, with whom he now and then held consultations (and with whom he always agreed), but his diagnosis was hap-hazard and his treatment was hap-hazard. He drove fast horses, and would bluster like an English country squire. All this gave him great

popularity. Individuals had been heard to say that they would rather have Bluff's presence in a sick room, if he did nothing more than talk slang, and tell them that they would be able to dance a polka in a few days, than have the most scientific college professor who would give them nauseous medicines, and tell them that their sickness was of a very grave nature.

Dr. Bluff was ushered into the room of the sick Mrs. Brown. The diagnosis and the fearful prognostications of poor Dr. Blank were turned to ridicule. There was nothing the matter with Mrs. B., only "a little stuffing" in the chest. He "would clear out those pipes in less than no time." Whiskey and milk and his white emulsion of ammoniacum was all that was necessary. In less than half an hour the vocabulary of banter and current slang was exhausted. The sick woman was a "daisy," a "blooming rose of Sharon," and a "gay old gal." She had not "got through her *sparking*" yet, and "if the present Mrs. Bluff should ever be taken off, he would improve his opportunity," etc. As for dying—"fiddlesticks! she cannot die with *that* pulse." He would "have her out of that bed scrubbing the kitchen floor before a week."

It is needless to say that the Browns were all delighted with the assurance and the jocoseness of their new family physician, whose encouraging words rallied them to renewed efforts to prolong their parent's existence by often-repeated potions of whiskey and milk.

It is worthy of note, too, that the patient herself for a while felt the invigorating stimulus of a new hope. Although the final result was as Blank predicted, yet there always was a feeling on the part of the Browns that if Bluff had been called a little earlier the result would have been different.

The above is no imaginary picture. Dr. Blank and Dr. Bluff are the prototypes of many men who honor or dishonor our noble profession. The latter will generally be the most popular, if not the most successful.

We do not believe in *bluff*, but encouraging words and smiles are often of real therapeutic value.

BROOKLYN DOCTORS.—The King's County Register (says *Ephemeris*) contains the names of 974 persons who are now authorized to practise medicine here. Of these 765 registered in 1880, the year in which the law took effect. In 1881 the additions reached 104 names. In 1882, 77 registered, and thus far in 1883, 28, making an aggregate of 974, a few of whom are now doubtless dead or removed. The "Medical Register" for 1882-3, which practically embraces the same area, and which registers the names of all persons in the regular profession, contains 488 names, and the active membership list of the County Society has somewhere about 370 names. Hence the legally authorized practitioners number about 974, while the regular profession numbers about 488, or just about one-half of the 974, and a portion of the 488 are determined to destroy all impediments to their consultations with the 486, and this on the ground of liberality and humanity.

THE MEDICAL SOCIETY OF LOUISVILLE is the title of a new organization recently established in Louisville, Ky.

News of the Week.

ANNUAL COMMENCEMENT OF THE LONG ISLAND COLLEGE HOSPITAL.—The twenty-fourth annual Commencement of the Long Island College Hospital, of Brooklyn, took place last week in the Brooklyn Academy of Music. There was a large attendance of ladies and gentlemen. The presentation of candidates for graduation was made by Prof. Jarvis S. Wight, and the Hippocratic oath was administered by Prof. Samuel G. Armor, Dean of the Faculty. William H. Dudley, President of the Collegiate Department, conferred degrees upon fifty graduates. Honors were bestowed upon the ten men who passed the best examination. Mr. Andros P. Chesley, of the graduating class, delivered the valedictory, and the Rev. Dr. Charles H. Hall, of the Church of the Holy Trinity, made an address to the graduates. Among the graduates was a colored man, who is said to be a man of fine education. About twenty-five per cent. of the candidates for graduation were rejected.

FOUNDATION OF A PRIZE IN PHYSIOLOGICAL THERAPEUTICS.—The late Dr. Martin-Domourette has left to the Académie des Sciences forty thousand francs for the foundation of a prize in physiological therapeutics.

THE REPORT OF THE TYPHOID FEVER COMMISSION.—The Commission appointed by the Académie de Médecine to consider the subject of typhoid fever, particularly of the Paris epidemic, have made their report. It is couched in somewhat general terms and really presents nothing novel. It refers the epidemic in question to bad drainage and filth, and it recommends certain measures to the municipal government. Only two members of the Académie disagreed with the conclusions.

THE ILLINOIS HEALTH BOARD AND THE COLLEGES.—We learn that the Illinois State Board of Health is now revising its "Directory of the Institutions Granting Medical Diplomas or Licences in the United States and Canada." Copies of the last issue are being sent to the medical colleges asking for corrections and additions, at the same time reminding the colleges that the schedule of "minimum requirements" as to the good standing of schools in that State is now in force.

JOURNALISTIC CHANGE.—Dr. E. C. Dudley has resigned the editorship of the *Chicago Medical Review*. Dr. Roswell Park has assumed the editorial chair thus vacated.

THE LONDON UNIVERSITY has for the first time given its medical diplomas to women graduates.

AN IMPOSITION.—Doubtless our valued contemporary *The Medical and Surgical Reporter* will unite with us in holding up for reprobation one R. H. Gilliford, who has evidently sent copies of the same article both to the above journal and to *THE RECORD*. We can hardly suppose any contributor so dull and ignorant as not to know that editors accept articles only on condition that no other journal has received the same.

PLACE AUX DAMES.—The remains of two New York ladies were cremated at the Lemoyne Crematory, Washington, Pa., last week.

DONATION TO THE GERMAN DISPENSARY.—Mr. and Mrs. Oswald Ottendorfer will present a new site and a new building with a free circulating library to the German Dispensary of this city. The site is upon Second Avenue at the corner of Eighth Street, the lot being 70 feet by 150. The sum paid for the site was \$62,000, and the building to be erected will cost \$80,000 to \$90,000, making the total amount of this most generous donation about \$150,000.

OFFICERS OF MAINE MEDICAL ASSOCIATION.—The following officers were elected for the ensuing year: *President*—Dr. O. A. Horr, Lewiston; *Vice-Presidents*—Drs. L. W. Pendleton, Portland, and D. E. Marston, Monmouth; *Corresponding Secretary*—Dr. J. O. Webster, Augusta; *Board of Censors*—Drs. H. N. Small, Portland; W. K. Oakes, Auburn; J. M. Bates, Yarmouth; W. B. Cobb, Standish; and J. D. Nutting, Hallowell; *Committee on Publication*—Drs. C. D. Smith, C. O. Hunt, and G. H. Cummings, Portland; C. A. Packard, Bath; and B. F. Sturgis, Auburn; *Business Committee*—Drs. I. E. Kimball, Portland, and W. P. Watson, Gorham. Dr. A. S. Thayer, of Portland, was chosen Treasurer for five years. Dr. C. D. Smith, of Portland, was elected Recording Secretary in 1882 for a term of ten years.

PROFESSOR CHIARI has been made Ordinary Professor of Pathological Anatomy in the University of Prague.

THE GERMAN SOCIETY FOR PUBLIC MEDICINE met in Berlin May 16th to 19th. Virchow took part in some of the debates.

CONSULTATIONS IN GERMANY.—Prince Bismarck is attended in his present illness by Gen. Rath Frerichs, a well-known and reputable physician, in association more or less with a homœopath by the name of Zwingenberg.

On the occasion of a recent attempt to prosecute a quack who was selling homœopathic medicines, Bismarck is reported to have said that he considered the sale and use of homœopathic medicines quite harmless.

MORE VETERINARIANS NEEDED.—In an address before the Kentucky Medical Society, at its recent session, the practice of veterinary surgery was commended to young men. The speaker estimated that the yearly loss arising from the want of sound advice and treatment—the horses of the country being valued at nearly eight hundred million dollars—amounts to \$15,000,000.

A DOCTOR EXONERATED.—A jury of medical men was convened last week to hear the evidence against Police-Surgeon R. H. Vorhees, in a charge of malpractice. A policeman had his foot crushed and died in consequence. The jury brought in the following verdict, which shows the nature of the case:

"We find that policeman Timothy Ryan came to his death from traumatic gangrene and pyæmia, and that in view of the fact that the patient was sixty-seven years of age and had calcification of the arteries, no blame can be attached to any of the surgeons in charge of the case."

THE NEWPORT NATURAL HISTORY SOCIETY is the title of a scientific organization recently established in Newport, R. I. Dr. Samuel W. Francis was the original promoter, and a number of medical men are among the members.

THE FLOATING HOSPITAL OF ST. JOHN'S GUILD will make its first excursion this season on or about June 26th. It has been decided to begin the trips earlier this year, as it has been found that cholera infantum is largely produced during the June heated term. The Sea-side Nursery will also be opened at the same time.

OUR CULTIVATED CONTEMPORARY the *Medical Press and Circular* refers appreciatingly to the Holmes banquet, and says that American medicine may well feel proud of the author of the "Breakfast-table Essays," "Elsie Venner," and the "Bigelow Papers." Perhaps Minister Lowell will make some objection to this view.

ATTENDING THE SICK POOR.—The Sick Children's Mission of the Children's Aid Society has begun its summer work of providing medical attendance, medicine, and nourishment, free of charge, to the sick children of the poor in the tenement-houses. A corps of physicians has been engaged to visit the sick children at their homes. A number of druggists have agreed to put up all prescriptions at a small cost to the Mission.

ANOTHER OPPONENT OF KOCH.—Klebs, of Zurich, has come out against Koch. The Zurich pathologist claims that Koch has not yet proved that his bacilli are organic structures, and that the cultivation experiments are imperfect, since he has not separated the bacilli from the substratum.

THE REVIVAL OF THE PORK PROBLEM in the *North German Gazette*, by attempts to show from statistics that American pork is sixty times more liable to produce trichinosis than German, may, says *The Sun*, give Minister Sargent something more to do. A short time since it was charged in the German newspapers that thirteen deaths had occurred in the garrison at Tilsit from eating American pork, and that many more of the troops were sick. Mr. Sargent caused the nearest consular officer to make an inquiry, and it was found that fourteen trivial cases of trichinosis had occurred, and that every one of the patients had recovered. The statement that American pork is sixty times more trichinosed than German is about twenty times too strong. It is in fact unwarranted by any trustworthy statistics.

THE HONORARY DEGREE OF LL.D., of Cambridge, is to be conferred on M. Pasteur, Sir John Lubbock, and Professor Roscoe.

DR. ROBERT DRUITT, of England, died recently. He is well-known as the author of the "Surgeon's Vade Mecum."

HOMŒOPATHY AND THE MICHIGAN ASYLUM FOR INSANE.—Petitions have been circulated freely among the homœopathic physicians of Michigan, asking the State Legislature to place the medical management of the Northern Michigan Asylum for the Insane in the hands of the homœopaths.

PASSAGE OF A LAW REGULATING THE PRACTICE OF MEDICINE IN WISCONSIN.—Dr. P. H. Millard, President of the Wisconsin State Medical Society, sends us a copy of a law passed at the last session of the Wisconsin Legislature, and entitled "An Act to Regulate the Practice of Medicine in Wisconsin." Dr. Millard writes: "It is quite similar to the Illinois law in many of its features,

and upon the whole, if properly and judiciously enforced, I think a far superior law. There is a general disposition to give the law a fair trial by the profession and much satisfaction in obtaining any law upon this subject. The provisions of the act will be judiciously and rigidly enforced by the Board of Examiners, and we trust will merit the success that it deserves.

"The most objectionable feature of the bill is the five years' exemption clause, but the bill could not have been passed without this provision."

A HOMŒOPATHIC PHYSICIAN OF MINNEAPOLIS has been appointed "Professor of Obstetrics and Gynecology" in the "State University Medical College," a non-teaching faculty appointed by the regents, and constituting, by recent enactment of the Legislature, the examining board for the State.

THE COLLEGE OF THERAPEUTICS is the title of a new medical college recently incorporated in Massachusetts under the general statutes. It is said that the institution has been established in the face of the recent decision of the Assistant Attorney-General that institutions thus incorporated could not confer diplomas.

ENFORCING THE REGISTRATION LAW.—We are glad to learn from the *Buffalo Medical and Surgical Journal* that the Board of Censors of the Erie County Medical Society have undertaken, with commendable earnestness, a crusade against certain persons in that city and county who are imposing upon the credulity of the public by practising medicine without either diploma or license, in violation of the laws of the State.

TRICHINOSIS IN CHICAGO.—The Secretary of the Cattle Commission, J. H. Sanders, has learned that, since his appointment (somewhat over a year), seven cases of trichinosis are known to have occurred in Chicago, of which three were fatal.

ALLEGED PRESENCE OF PLEURO-PNEUMONIA.—The investigations of the Agricultural Department and the local Health Board in Washington appear to show that the outbreak of disease among cows in that city is not due to contagious pleuro-pneumonia, but to simple pneumonia, which is not contagious.

PRIZES OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—No award of the triennial prize of the Royal College of Surgeons having been made this year, the subject has been withdrawn, and the following substituted for the next, to be awarded in 1886, viz., "The Nature of Inhibitory Action in the Animal Body, to be elucidated by Original Research." This prize consists of the John Hunter Medal, executed in gold, to the value of fifty guineas; or, at the option of the successful author of the dissertation, of the said medal executed in bronze, with an honorarium of £50. The subject for the Jacksonian Prize for 1884 is, "The Surgical Treatment of Uterine Tumors, both Innocent and Malignant." For the present year, it is, "The Pathology, Diagnosis, and Treatment of Obstruction of the Intestines in its Various Forms in the Abdominal Cavity." The value of the Jacksonian Prize is about \$60.

OPERATING UPON A PERSON IN ORDER TO DETERMINE THE SEX.—Professor Porro recently performed an operation for no other purpose than to determine the

sex. The individual requiring such unique interference was pseudo-hermaphrodite, aged twenty-two, had been brought up as a female, although all her (his) tasks had been masculine. The face and chest were like those of a man, although the breasts were considerably developed. The pelvis and lower limbs were like those of a woman. The mons veneris was slightly developed. There was a vulva, with a well-developed clitoris labia and a short vagina; no penis, no prostate, and no uterus. At the summit of what corresponded with the labia majora, near the inguinal region, two round bodies could be felt, which on pressure gave pain. The question was, were they ovaries or testicles. Professor Porro cut down on the right side, and found that the body was a testicle with epididymis and spermatic cord attached. The wound was closed up, the patient pronounced a man, and sent forth enchanted with his new status in society.

THE ORDER OF THE ROYAL RED CROSS.—The Queen of England has created a new decoration designated "The Royal Red Cross." It is to be bestowed as a recognition of special services in nursing or attending the sick and wounded soldiers and sailors. It seems to be intended chiefly for trained nurses.

THE MORTALITY IN THE CAPITALS OF EUROPE for the first quarter of the year 1883 is as follows: London, 22.1 per 1,000; Berlin, 24.3; St. Petersburg, 40.6; Brussels, 25.7; Paris, 27.3; Stockholm, 27.8; Vienna, 31.1; Madrid, 36.4.

Some comment might be made on the fact that in Vienna, one of the greatest medical centres of Europe, the mortality should be so excessive.

THE APPEARANCE OF THE PLAGUE IN KIL-DJIVARENO.—It is reported that the plague has appeared in Kil-Djivareno, a district of Persia, about twenty-five miles from the Turko-Persian frontier. It is not far from the district of Nonkris, where the plague appeared in 1878 and 1881.

MEDICAL BOARD OF EXAMINERS FOR ILLINOIS.—The Chicago Medical Society has appointed a committee to confer with the State Board of Health, as to the feasibility of a statute which shall invest the exclusive right to grant license to practise medicine in Illinois in a Board of Examiners, independent of all medical schools. The State Board of Health has submitted to the faculties of the various medical colleges a proposition that all individuals desirous of pursuing the study of medicine in Illinois shall be submitted to uniform preliminary examination by the State Board.

BRITISH MEDICAL ASSOCIATION.—The Fifty-first annual meeting of the British Medical Association will be held at Liverpool, England, on Tuesday, Wednesday, Thursday, and Friday, July 31, August 1, 2, 3, 1883.

A NEW METHOD OF DESTROYING THE FŒTUS IN CASES OF EXTRA-UTERINE PREGNANCY.—Dr. Kochmann, of Strasburg, reports a case of extra-uterine pregnancy, six months advanced, in which the fœtus was destroyed by a single application of sparks from a static battery. The duration of the sitting was about fifteen minutes, and sparks about one and one-half centimetres long were drawn.

Reviews and Notices.

THE PATHOLOGY AND TREATMENT OF DISEASES OF THE OVARIES. By LAWSON TAIT, F.R.C.S., Surgeon to the Birmingham Hospital for Women, etc. Fourth Edition. Re-written and greatly enlarged. New York : W. Wood & Co. 1883.

LAWSON TAIT's name is familiar to the profession as that of a leader in the department of surgical gynecology. His views are not always in accordance with those of many of his co-workers. Such as they are, however, they appear to follow logically enough from his personal experience, which is a large one. The present edition of his treatise on the ovaries differs in no essential respect from former ones, although the increasing number of his operations, and a constantly growing experience have necessitated an enlargement of the book. It forms an interesting and readable volume.

DIAGNOSIS OF OVARIAN CYSTS BY MEANS OF THE EXAMINATION OF THEIR CONTENTS. By HENRY J. GARIGUES, A.M., M.D., Obstetric Surgeon to the Maternity Hospital, etc. New York : W. Wood & Co. 1883.

THE present essay first appeared as an original contribution in the *American Journal of Obstetrics*, where it doubtless became familiar to a large part of the profession. It is now issued in book-form, without further changes or additions. The author presents a quite formidable array of conclusions, fifty-five all told, from which it appears that the importance of examining the fluid from cysts has been both under and over rated. The truth would seem to be, that while the examination of fluids affords no pathognomonic evidence, it is an important aid to diagnosis, and should not, therefore, be neglected.

THE DISEASES OF WOMEN : A MANUAL FOR STUDENTS AND PHYSICIANS. By HEINRICH FRITSCH, M.D., Professor of Gynecology at the University of Halle. With 159 Wood Engravings. New York : W. Wood & Co. 1883.

THE treatise of Professor Fritsch has achieved a rapid popularity in Germany. In its English dress it forms the March volume of Wood's Library. Its great merit lies in the conciseness of all statements, in its practicalness, and in the freedom from personal dogma. It is nevertheless essentially a German book, and can hardly aim to replace American and English text-books with us. In its special province, that of elucidating the present status of German advanced gynecology, it scarcely has a rival, at least not of equally small size. The American gynecologist will be pleased to discover that his German *confrères* are not behindhand in this much evolved branch of medicine.

AN INDEX OF THE PRACTICE OF MEDICINE. By WESLEY M. CARPENTER, M.D. Pp. 304. New York : William Wood & Co. 1883.

THE author's well-known literary skill, practical knowledge, and conservatism, led us to expect much of the present work. We have not been disappointed. It is an admirable epitome of practical medicine, giving in a most condensed form, yet carefully stated, nearly every point that the general practitioner would care to know about the diseases of the body. The arrangement of subjects is alphabetical, which allows of easy reference. The headings : "Synonyms," "Definition," "Etiology," "Symptoms," "Differential Diagnosis," "Treatment," are printed in thick, black letters, making the subdivisions prominent. Prescriptions are added in some cases, a feature which we can hardly commend.

The book is interleaved, so that the physician can add

his own therapeutical or symptomatological notes. It is a small octavo size, bound in sealskin, and wallet-shaped, so that it can be easily carried in the pocket and referred to as readily as the ordinary dose-books.

We believe that Dr. Carpenter's work will prove a boon to the general practitioner.

A MANUAL OF CHEMICAL ANALYSIS, as applied to the Examination of Medicinal Chemicals. By FREDERICK HOFFMANN, A.M., Ph.D., and FREDERICK B. POWER, Ph.D. Third Edition. Philadelphia : H. C. Lea's Son & Co. 1883.

THE third edition of this treatise takes due cognizance of general chemical progress, and more particularly of the advances recognized by the recent new issues of the United States and German pharmacopœias. As a reliable work of reference to those who require to be kept posted in matters pertaining to medical and forensic chemistry, the book has no superior. The general practitioner, however, need scarcely be burdened with a knowledge of its contents.

A MANUAL OF AUSCULTATION AND PERCUSSION ; EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART, AND OF THORACIC ANEURISM. By AUSTIN FLINT, M.D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, etc. Third Edition. Revised. Philadelphia : H. C. Lea's Son & Co. 1883.

THIS well-known little treatise requires no notice, beyond mention of the fact that a third edition was called for a short time after the second had appeared. It appears, therefore, that its practical utility is duly appreciated, a circumstance which reflects credit upon the profession as well as the author.

THE MICROSCOPE AND ITS REVELATIONS. By W. B. CARPENTER, C.B., M.D., etc. Sixth Edition. With Plates and Engravings. Vols. I. and II. New York : W. Wood & Co. 1883.

THE well-known treatise of Dr. Carpenter has reached its sixth edition. The work has been issued in two volumes, forming the April and May numbers of Wood's Library of Standard Authors. It is hardly necessary to repeat what is so generally recognized to be true, viz., that this treatise constitutes the most complete and indispensable guide to the working microscopist published in the English language. The manual is not specially intended to be a medical book, but yet the physician will not fail to derive both profit and amusement from a perusal of its pages.

THE SYSTEMATIC TREATMENT OF NERVE-PROSTRATION AND HYSTERIA. By W. S. PLAYFAIR, M.D. Pp. 106.

THIS little work is a reprint of Dr. Playfair's previous communications on this subject. They show the favorable results obtained in England by the Weir-Mitchell method of treatment.

EXPERIMENTAL PHARMACOLOGY. A Hand-Book of Methods for Studying the Physiological Actions of Drugs. By L. HERMANN. Translated, with the Author's permission, with Notes and Additions, by ROBERT MEADE SMITH, M.D. 8vo, pp. 201. Philadelphia : Henry C. Lea's Son & Co. 1883.

THE increasing interest that American physicians are taking in experimental physiology and physiological therapeutics renders the present work a timely one.

The author describes the general method of pharmacological investigation, and claims for pharmacology the position of a distinct science, covering the subject of the action of drugs upon animals.

The special methods of studying the action of poisons upon the various organs and tissues of the body are then described. The book is a technical one for the assistance of those who wish to do actual work. Dr. Smith

has very numerous and valuable additions in the way of notes and comments. Many illustrations also are given. We trust that it will give a further impulse to the study of pharmacology in America.

FORMULAIRE DES MALADIES URINAIRES. Par F. MALLET. 8vo. pp. 292. Notes Therapeutiques et Cliniques recueillies à la Clinique, de la rue Christine, Paris. Adrien Delahaye et Émile Lecrosnier, Éditeurs. 1883.

THIS work covers the subject of the therapeutics of genito-urinary diseases, and it contains much that is useful. We especially commend the ingenious tables in the latter part, by which the various methods of treatment are presented in an admirably succinct manner.

STUDENT'S GUIDE TO DISEASES OF THE EYE. By EDWARD NETTLESHIP, F.R.C.S. Second American, from the Second Revised and Enlarged English Edition. With a Chapter on Examination for Color Perception, by William Thomson, M.D., Professor of Ophthalmology in the Jefferson Medical College. Philadelphia: Henry C. Lea's Son & Co. 1883.

THE verbosity of the chapter on "Examination for Color Perception," added by Dr. Thomson, is in strange contrast with the terse diction of the rest of this admirable Guide, which bids fair to become the favorite text-book on ophthalmic surgery with students and general practitioners. It bears throughout the imprint of sound judgment combined with vast experience. The illustrations are numerous and well chosen. From a reference on page 44 we infer that the English edition of the work contains test-types which have accidentally been omitted in the American edition.

On page 43 the statement is made that rays forming a visual angle of one minute "are very nearly parallel, and may be considered as coming from an object at an infinite distance." This is erroneous and apt to sadly confuse a tyro in physiological optics. On page 72 we read that by the direct method of ophthalmoscopic examination the parts are seen in their true position "unless the eye be myopic." This statement also needs correction. On pages 72 and 305 the dot is wanting in front of the figure 5.

These are the only blemishes we could detect on a cursory examination of this book, which, within the short compass of about four hundred pages, contains a lucid exposition of the modern aspect of ophthalmic science.

THE PRACTITIONER'S READY REFERENCE BOOK. By RICHARD J. DUNGLISON, A.M., M.D. Third Edition, thoroughly revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1883.

THE new edition contains numerous additions and illustrations, which the author believes will materially increase the value of the book. The volume now has five hundred and twenty-five pages, and medical topics as follows have been considered: Weights and measures occupy thirty-nine pages, which contain much useful as well as "handy" knowledge concerning weights and measures of the United States Pharmacopœia and of the metric system. Nearly twenty pages are next occupied with tables which give the solubility of medicines in water, alcohol, ether, glycerine, etc. The abbreviations in common use, the companion of thermometric scales, and the reference tables of size, weight, and specific gravity of different parts of the body are interesting and useful; perhaps not so much so to the general practitioner as to pathologists and specialists.

The Hippocratic oath that follows is good reading, especially in the light of the author's comments, who says that "*instead of displaying a narrow-minded and exclusive selfishness, it inculcates a generous line of conduct, and enjoins an observance of the rules of propriety*," etc. Simple, comprehensive, and, amid the present ethical agitation, interesting.

The pages which immediately follow possess the least

intrinsic value of any in the book. If all that appears concerning rules for the practitioner, rules of medical etiquette, and what the practitioner must learn of the patient, were totally expunged, it would greatly improve the work. So much of it is puerile and so much impracticable that what remains is like a plant that has grown in the shade; it wilts when it is brought to the sunlight.

The fifty pages which follow are devoted to doses of medicines for children and adults, administered by mouth, enemata, suppositories, etc. As a matter of course, the basis of much that these pages contain is the United States Pharmacopœia, but the simplification renders it very acceptable; so also is the material derived from other sources.

Hints as to prescribing.—How and what to prescribe is especially interesting when read in conjunction with the selected prescriptions found a few pages subsequently. Probably the eight pages of incompatibles will be as little observed in practical prescribing as anything that appears in the book, and as evidence that such may be the case, the reader has only to refer to the prescriptions selected by the author himself—and selected because they have been employed with good results by eminent authorities—where can be found incompatibles in combination *in abundance*. A fair sample is the following: Hæmatoxylon has among its incompatibles mineral acids and opium, and one prescription reads as follows: R. Acidi sulphurici aromatici, ext. hæmatoxyli, tinct. opii camphorata, and syrupi zingiberis.

The selections included under the head of "Hygienic and Therapeutic Management of Children" are very good. They are from such men as Goodell, Albert H. Smith, Meigs, and Pepper, of Philadelphia, A. A. Smith, of New York, Eustace Smith, of London, and others, whose opinions are entitled to favorable consideration.

Several pages are occupied by tables of differential diagnosis, credited to Etheridge, of Chicago, Roberts ("Theory and Practice of Medicine"), Seiler ("Diseases of the Throat"), H. Augustus Wilson, of Philadelphia ("Fractures and Dislocations of the Femur at the Hip-joint"), and Bramwell, of London ("Cardiac Valvular Murmurs"). These are only fairly good. Roberts' is the best. A few words would have made each much more complete than it is. For example, all the symptoms enumerated as *characteristic* of typhoid, with a single exception, may be present in other affections, and the real peculiarity of the single symptom is not pointed out.

The tables on "Fractures and Dislocations of the Femur at the Hip-joint" are lamentably deficient. They were evidently abstracted from one author. The amount of shortening given varies so much from that laid down by the authority generally accepted in the courts, that they are not entitled to consideration. They have been made up without reference to either the influence of impaction or the situation of the fracture in the neck. No mention has been made of Bryant's line, accepted as one of the most reliable guides in obtaining the amount of shortening. Nor has attention been directed to the fact that measurements from the anterior superior spinous process of the ilium to the malleolus at the ankle have been largely discarded because it has been definitely ascertained that there is, in most persons, a difference in the length of uninjured lower extremities. As it now stands, the author would do well to either revise this table or substitute another.

The rules for chemical examination of the urine were arranged and condensed from J. Hughes Bennett's "Text-book of Physiology," published in 1873. These also need revision, and we are surprised that the author, with his well known habits of precision, should have allowed them to remain without certain modifications. For example, it is established that certain articles of diet so affect the urine that a precipitate like that yielded by sugar will be formed on the application of Trommer's test. Fehling's

solution, when fresh and properly applied, undoubtedly gives the most certain results, although the rules leave it to be inferred that it is otherwise. In the present state of our knowledge it is very questionable whether the terms fibrinous, hyaline, waxy, should be used to define different varieties of casts. Sometimes casts can be obtained much more certainly from the urine *along the sides of the glass*, or in the cloud which forms part of the way down, than from the sediment at the "bottom of a conical glass."

Under the head of "Treatment of Poisoning" we find no reference to electricity, certainly a most valuable agent, although mention is made of various other external measures. This leads us to speak, in this place, of the chapter "On the Use of the Galvanic Battery," condensed from a discourse by H. Tibbits, M.D., of London, 1877. The writer uses the term "electrization," and says that the remarks concerning it apply *equally* to Voltaism (galvanism) and Faradism. We do not believe that this view is sustained by the best authorities of the present day. "Electrolysis has been successfully employed in several cases of *aneurism*." True; but our best surgeons would hesitate for a long time, probably reject it *in toto*, before adopting the measure in aneurism of the arch of the aorta, as suggested here.

"How to Apply Trusses," "How to Use the Clinical Thermometer," "How to Apply Bandages," "How to Apply Immediate Relief in Recent Accidents or Sudden Illness," "Suggestions for Nursing of the Sick," "Dietetic Preparations and Precepts," and "How to Conduct a Post-mortem Examination," are the titles of the more important chapters which follow. These pages contain a goodly proportion of acceptable items. The section on "Stained Sections of Animal Tissues and How to Prepare Them" might be simplified to advantage for a book of this kind, prepared, as it has been, for the general practitioner.

The reputation already acquired by the author for care and painstaking in detailed work has been maintained in this edition of his book, and with slight revisions in certain parts, some of which have been suggested, this volume will form a substantial addition to the many books of ready reference now in the hands of the profession.

A TEXT-BOOK OF THE DISEASES OF THE EAR AND ADJACENT ORGANS. By DR. ADAM POLITZER. Translated from the German by James Patterson Cassells, M.D., M.R.C.S., England. With two hundred and fifty-seven illustrations. Pp. 800. Philadelphia: Henry C. Lea's Son & Co. 1883.

DR. POLITZER has been long known as a profuse contributor to the literature of otology, and through English translations in the medical journals of the past fifteen years most of his views have been made known. The large volume before us is presumably a collection of the author's views in the various departments of the subject, and will therefore find a place in the library of every one who wishes to keep informed in the literature of otology.

The author divides the organ of hearing, for the purpose of discussion, into two principal parts, the *sound-conducting* and the *sound-perceiving* portions, which he regards as the only correct one from the pathological standpoint. In the former are included—*a*, the external ear (auricle and external meatus); and *b*, the middle-ear (the tympanic cavity with membrano-tympani and ossicula, Eustachian tube, and mastoid process). The latter, the so-called internal ear, is divided into: *a*, the origin of the auditory nerve in the brain; *b*, the trunk of the auditory nerve, and *c*, its expansion in the labyrinth. After this division of the organ of hearing the author passes on to the special description of the anatomico-physiological relations of the human ear. There are 73 pages devoted to this subject. To the diseases of the conducting apparatus, general and special, there are given 110 pages. The diseases of the middle ear, consisting of affections of the membrana tympani, of the tympanic cavity, of the

naso-pharynx, of the adhesive and purulent inflammations of the middle ear, and diseases of the mastoid process and external ear, occupy 393 pages, while 85 pages are given to ear disease and life assurance. The anatomy and physiology of the internal ear, special and general diseases of the labyrinth and auditory nerve, injuries of the internal ear, cerebral disturbances of hearing, malformations of the ear, deaf-mutism, hearing instruments for the deaf, and appendix of therapeutical formulæ, occupy 101 pages of the book.

While this work evinces a great amount of labor, including not only the author's own observations but also an extensive compilation of the researches of others in this special department of medicine, yet its chief value is, as a work of reference, for the specialist. The author could have, perhaps, given the work more value had he possessed more decided convictions concerning certain matters discussed. For example: a perusal of the whole subject of the subjective symptoms of diseases of the ear is confusing, and leaves the reader without a clear idea of the subject. Thus he says, page 192: "Subjective noises in the ear, which are always caused by some irritation of the auditory nerve, arise either from disease of the ear itself or *by reflex transmission from the cerebral and spinal nerves to the auditory nerve*." The portion of the above sentence which we have italicised is an example of dogmatism without evident meaning, which occurs rather frequently in the work before us.

When the American practitioner comes to consult this book for guidance in the treatment of aural disease he will most likely be somewhat disappointed, unless he be familiar with the German methods of medication which are considered here—we may be permitted to say, as somewhat excessive as regards local medication, notably in skin affections. Let us here examine what Dr. Politzer has to say concerning the treatment of acute inflammation of the middle ear. He says, on page 253—"The treatment of acute inflammation of the middle ear in the beginning of the disease, and as long as the congestion and the active symptoms last, is palliative. The main duty of the practitioner at this time consists in the removal or alleviation of pain, and only in the subsequent course of the disease does the indication for treatment of the pathological process and of the functional disturbance appear." In the more intense degrees of inflammation, it is true, local blood-letting is recommended, but the only internal treatment suggested is the administration at night, if the pain disturbs sleep, of small doses of acetate of morphia, or if that does not agree well with the patient, the chloral hydrate in solution. To assist perspiration in certain cases he employs a cup of tea, or a decoction of lime blossoms, the action of which is increased by adding a spoonful of spirit. mindereri.

The author's general treatment of acute purulent inflammation of the middle ear does not differ materially from the above. Now, in the acute stage of these diseases, we may in many instances do much to prevent their progress, and the literature of the day is suggestive of further advances even in this direction. The employment of calcium sulphide, and some of the mercurial preparations have been used here with marked benefit, according to reliable authorities. Then the practice here, as regards local treatment, has undergone a great change. The employment of solutions are much less resorted to than formerly, and the dry treatment has now many advocates. Politzer recommends only solutions in this affection.

Otologists are indebted to this author for a valuable and simple means of inflating the tympanic cavity, which method, as is well known, bears the author's name. That inflation of the ears is greatly abused is not the fault of the author, although one might almost wish, on witnessing the unnecessary, nay, frequently injurious employment of the air-douche, that it had never been invented. On the whole, this is a valuable contribution to otological literature, although not well adapted to the use

of the general practitioner. We cannot but express regret that the publishers had not, instead, given us a new edition of their own Treatise on the Ear, inasmuch as the author, Dr. Burnett, is well known to entertain advanced views in the treatment of aural diseases, and hence would be able to bring his work up to the demands of the present day.

The book under review is well printed, on excellent paper, and, although bearing the imprint of an American house, is evidently of English manufacture. The numerous illustrations are in the main very good, and some of them quite new. The representations of the drum-head in various pathological conditions are notably suggestive. The translator, Dr. James Patterson Cassells, of Glasgow, deserves the thanks of all who rely upon a translation from the German into English for access to Dr. Politzer's views, and he seems to have merited the approval bestowed upon this work by the author. It may be remarked in conclusion, that the work before us is not well bound, the sheets being too heavy for the muslin covers.

ON THE PATHOLOGY OF BRONCHITIS, CATARRHAL PNEUMONIA, TUBERCLE, AND ALLIED LESIONS OF THE HUMAN LUNG. By D. J. HAMILTON, M.B., F.R.C.S.E., F.R.S.E., Professor of Pathological Anatomy (Sir Erasmus Wilson Chair) University of Aberdeen. With Illustrations. London: Macmillan & Co. 1883.

THIS work will be read chiefly by pathologists. It is made up of a series of papers which were published in *The Practitioner* in 1879 and 1880. Part I. is devoted to bronchitis, and, pursuing a well-established method of teaching, the author directs attention, first, to the structure of the normal bronchi. His views concerning the morbid changes in this affection are based upon the anatomy of the parts as he has seen it under the microscope. He recognizes three varieties of cells in the epithelial layer: 1, the columnar epithelial cells (ciliated); 2, the deep germinal layer (Debove's membrane); and 3, the perfectly flat layer lying upon the homogeneous basement membrane. Besides, the author describes other cells, which are regarded as of transitional shape (beaker cells of older writers), and he traces what, to him, seems to be a direct line of ascent from the endothelial layer through the germinal layer to the fully formed columnar (ciliated) epithelial cells.

The author also directs especial attention to the basement membrane, quite hyaline, only a few granules here and there interrupting the invariably homogeneous translucency, and this basement membrane of the mucosa, as he calls it, is said to play an important part in the pathological process of acute bronchitis. There have always been (since instruments of precision were first invented) differences of opinion concerning the minute anatomy of various parts of the human body, and equally divergent opinions still exist, notwithstanding the improvement and apparent perfection in the means for observation. Probably such differences will continue to exist, and in the very nature of things must be tolerated; but they are entitled to consideration when they give evidence of careful investigation. So it is with the views promulgated by this author—they are entitled to consideration.

The first change in the process of acute bronchitis, says the author, occurs in the branches of the bronchial artery ramifying in the inner fibrous coat immediately beneath the basement membrane of the mucosa. These become engorged, and within from twenty to thirty hours desquamation of the columnar epithelium, with some of the transitional forms of epithelium, takes place at the foci of greatest congestion. The basement membrane, in the meantime, becomes swollen and redematous, and it is this condition that facilitates the shedding of the epithelium.

This theory is excellent, and the author sustains it with illustrations made from actual specimens. The faithfulness of the cuts we do not question, but it occurs to the

reviewer to suggest that the theory would be stronger had the author demonstrated that the circulation in the terminals of the bronchial arteries is the *only* vascular supply which the mucosa receives, and in the event of blood supply from another source, that the condition of the bronchial artery is the *only* one disturbed. For eminent histologists have demonstrated, as they believe beyond question, that the blood supply for the bronchial mucous membrane is not derived *solely* from the bronchial arteries. In the first part the author also studies the varieties of chronic bronchitis, chronic interstitial pneumonia, vesicular emphysema, bronchiectasis, and catarrhal pneumonia as complications of bronchitis.

Part II. contains a dissertation on catarrhal pneumonia and tubercle in the human lung. The term "catarrhal" as applied to pneumonia is retained, although the author says in one place, "catarrhal so-called," thus partially indicating that another word would be more correct, and, therefore, more acceptable. In speaking of the microscopic appearance of tubercles, he lays great stress on the presence of giant cells, and goes further in this direction than almost any other observer. For example, he says that "in tubercle of the lung and of all other organs they (giant cells) are invariably present whenever the nodule becomes defined." This may be true for the University of Aberdeen, but the statement does not hold for the United States.

The general style of the writer is pleasing, and from the manner in which the subjects in this book have been treated it is evident that the author is familiar with the practical manipulations necessary to their proper study from a pathological standpoint. A slight tendency, however, manifests itself to make statements and leave them unsupported. This, in a work of this kind, should not occur, as the evident intent of the author is to be quite exhaustive with reference to the morbid changes that take place in the diseases under consideration. The illustrations are very good; at all events they possess one characteristic which is acceptable, and that is they do not seem to be largely the work of imagination. The last article is "On the Supposed Contagiosity [a word deficient in euphony, at least] of Tuberculosis and Pulmonary Phthisis." It contains an account of Koch's discovery, a description of the methods by which the bacillus has been demonstrated, and is a brief *résumé* of what was known on the subject at the time the book was published. As a whole the book is worthy of a place upon the shelves of those who are interested in the pathology of these diseases.

DEEP BREATHING AS A MEANS OF PROMOTING THE ART OF SONG, AND OF CURING WEAKNESSES AND AFFECTIONS OF THE THROAT AND LUNGS, ESPECIALLY CONSUMPTION. By SOPHIA, MARQUISE A. CICCOLINA. Illustrated. Translated from the German by EDGAR S. WERNER. New York: M. L. Holbrook & Co. 1883.

THE authoress advocates, enthusiastically, the systematic cultivation of voluntary abdominal breathing. She considers it an indispensable help to the art of correct singing, and a hygienic measure of great value in asthma, consumption, and weak lungs. We have heard that the practice of teaching young women abdominal breathing for the production of the voice is not entirely devoid of danger.

TREATING DYSPEPSIA WITH SAND.—Dr. G. Kerlus argues from the facts of comparative physiology that fine sand is a good thing for dyspeptics to take with their food. Herbivorous animals all eat a little dirt with their regular food, and it makes it more "porous." Fowls and birds of all kinds also take sand with their meals. Why not, therefore, man, says Dr. Kerlus. Putting this brilliant piece of inductive reasoning into practice, he has administered finely ground sand with the food of his patients, and, of course, reports cures.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS.

Stated Meeting, May 24, 1883.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. PAUL F. MUNDÉ read a paper (see page 673) on

THE TREATMENT AND CURABILITY OF CHRONIC UTERINE CATARRH.

DR. W. GILL WYLIE said that he agreed with the author of the paper in many respects, while he differed with him upon several other points. In the first place, he had not met in his practice with quite so many cases such as had been described by Dr. Mundé and others as incurable. There are cases of endocervicitis which undoubtedly are incurable unless we destroy the mucous membrane, but he did not think they were so common as had been supposed, and the same could be said of endometritis.

Although the subject of etiology did not enter into the paper, there was one point to which he would direct attention, namely, he believed that many of the so-called cases of incurable uterine catarrh were due to the general condition of the system, or to a diathesis, and that although the catarrh might be improved temporarily, if the diathesis was permitted to remain uncorrected the local condition will return. Dr. Wylie also believed that uterine catarrh was more frequently due to disease of the Fallopian tubes than had heretofore been considered. He had lately had two cases of this character under observation. In one the patient had been treated for several years, but still there was a purulent discharge in the vagina, especially when the patient was upon her back. After treating her for a little time by the use of the glycerine and alum tampon, which not only by pressure but by producing an alterative change, affected the parts, he was able to readily diagnose this condition of the tubes, and after they had been removed he could press exactly the same kind of discharge from the tube which he had always found in the vagina. He had seen other cases in which the discharge was mechanical in character, and came from the tubes.

His method of treatment for uterine catarrh was not so heroic as that which had been described by Dr. Mundé. If a patient came to him with cervicitis, with the slightest tenderness, he commenced with simple applications of pure glycerine upon cotton, not oftener than once in three days. He followed this for a time with a saturated solution of alum in glycerine, to which had been added a very small quantity of carbolic acid, making the applications once in three or four days. Then for the first time he passed a sound, and, as a rule, especially if the patient has not borne children, it will be found necessary to dilate the cervical canal. For that purpose he employs Sims' instrument, dilating first the external and then the internal os to some extent, and then begins the treatment of whichever cavity is diseased. If the mucous membrane of the cervix is extensively diseased, after trying astringents, although they did not do much good, he generally uses the curette, particularly if the patient complains of menorrhagia. After using Sims' curette thoroughly he then makes an application of pure carbolic acid, and rarely uses anything more powerful than this. He does not like to use nitric acid because of the possible contraction of the eschar. He was very certain that the cervix did contract after the use of the actual cautery. One reason why a cure is not effected was that the curette and the local applications were too frequently not thoroughly done. The same remarks applied when the lesion was higher up. Applications to the uterine cavity without dilating to some extent the internal os, were of no use whatever. The application should be made through the curved silver tube, so that it can be

delicately touched to every point, and if so done, seeing that each little delicate recess was touched with the local application, many of these cases can be cured which have heretofore been regarded as incurable. He did not believe that there were many cases in which nitric acid was necessary above the os internum. As a rule, in his hands carbolic acid accomplished all that could be desired. If the uterus is soft and large he uses iodine. If the uterus is indurated and hard, being in the position of anteversion, and the patient complains of trouble about the bladder, etc., having been about town under treatment for years, he had found that these cases were about the easiest ones which he had to treat, because they had been almost universally treated without enlarging the internal os. But in these cases, even with the uterus enlarged and the cervical canal open, he always prepared the parts by removing tenderness with the applications of glycerine and alum, and if the cervix was not open, subsequently dilating it with the Sims dilator, observing throughout the strictest rules of cleanliness, wetting the instrument with some antiseptic, as carbolic acid or iodine. Frequently these cases will be relieved within a week, and can be cured within six weeks by adopting this plan of treatment. He really thought that it was the method of applying the treatment rather than any special treatment of itself, as it was in many other cases, which makes it successful. He also thought that if the general condition of the patient was neglected, probably the local condition would return, and of all the diatheses which might give rise to it he thought that the rheumatic was the most active.

DR. L. WEBER said that he was glad to hear that Dr. Mundé regarded his cases as cured, for the time being at least. The treatment which he had adopted for several years was that practised by Amann, of Munich. After dilating the internal os with the tupelo tent, with the thorough application of the curette, Sims' in preference, he had followed the plans of Professor Amann in using mitigated nitrate of silver, making a thorough application to the mucous surface. This he had usually done with the ordinary Lallemand's porte-caustique. He had not seen any disagreeable results from this method of treatment. He had known of two deaths following the use of nitric and chromic acid. Whether he had absolutely cured these cases he was unable to say positively, but he knew that they had received a great deal of benefit from the treatment which he had adopted.

Dr. Weber also believed that there was an undoubted connection between these intractable catarrhs and the general condition of the patient. He should prefer to lay stress upon the intimate connection between this local condition and the scrofulous or tuberculous diathesis rather than gout or rheumatism. Again, in at least half the cases he had seen, such as the general practitioner very often encounters, the disease had followed early abortions. He related one such case, in which acute tuberculosis developed after miscarriage, and the patient died within two years.

DR. TAUSZKY said he had found mild applications the best to be resorted to at first. He had not used nitric acid, but had for the most part followed the rule which the late Dr. Peaslee recommended, namely, commence with mild applications, and then gradually reach the strongest solutions. In most cases there was some form of displacement present which, of course, should first be corrected. For many years he had used cotton tampons after using glycerine in the preparatory treatment. If he failed with mild applications he then resorted to stronger ones.

THE CHAIRMAN said he had never used nitric acid within the uterine cavity or the cervical canal. It occurred to him that we should consider the existing cellulitis, if any were present, and adopt measures to remove it entirely before proceeding further, and then consider the condition of the uterus. If subinvolution is present he had been accustomed to resort to hot water injections, the local application of glycerine, and was fond

of applying a sponge-tent without curetting. The spongetents he had made with the utmost care, prepared antiseptically, and just before their introduction the surface was wet and covered with soap, and then rolled in finely powdered salicylic acid. After introducing the tent it was allowed to remain forty-eight hours, the patient in the meantime being confined absolutely in bed, the bowels having previously been moved freely so that it was not necessary during the forty-eight hours to rise for this purpose. In many cases, after the tent had been thus applied and removed, the catarrhal discharge had ceased entirely, and with it the condition of subinvolution had disappeared. In the event of failure he then resorted to more active measures. In those cases in which the uterus is anteverted he used tents, and after removing thoroughly with the curette the degenerated mucous membrane of the uterine cavity, thoroughly wiped away all the blood, and removed every particle of secretion, he applied the strongest solution of carbolic acid; and he had been entirely satisfied with the results.

DR. MUNDÉ, in closing the discussion, remarked that undoubtedly the scrofulous diathesis had a great deal to do with the production, or at least the continuance, of the disease under consideration. He was particularly pleased with Dr. Weber's statement concerning one point in the etiology of the affection, namely, that in the large proportion of the cases it followed early abortion, by which he supposed Dr. Weber meant subinvolution, which usually accompanies these cases. That had also been his experience, but, as had been remarked, the etiology of the disease had not entered into the scope of his paper. His principal object was to point out that many of these cases, which had been intractable to treatment, did not improve under *mild* applications, no matter how conducted, but would, in a certain proportion, get well under *heroic, active, and persevering* treatment; at least get cured sufficiently long to get rid of their sterility; and if that was the prominent feature in the case the great object of treatment was accomplished. Besides, many of them were cured of the uterine catarrh. Dr. Wylie had laid stress on the preparatory treatment. This was perfectly correct. Dr. Mundé did not speak of preparatory treatment to any very great length, because it was his special point to discuss active treatment for the cure of the disease. Preparatory treatment is quite as important, and in cases where the uterus is immovable it may be one of the essentials; but where the uterus is perfectly movable, it may be as well, perhaps, to go on with the heroic treatment at once.

For the class of cases to which Dr. Wylie had referred, Dr. Mundé would not touch one of them with the curette or with nitric acid. If there existed cellulitis of the remotest origin he would not apply either the curette or nitric acid until, at least, he had tried all other methods without success. With regard to the objection to the use of nitric acid because it was liable to be followed by contraction of the cervical canal, Dr. Mundé admitted that this contraction does take place, but he did not care for this because in these cases the canal is, as a rule, already too large, and a moderate amount of contraction is desirable. But it should be recollected that he did not recommend the application of the nitric acid sufficient to make a deep slough. With regard to carbolic acid having been sufficient, he could only say that he had occasionally succeeded in the use of this remedy, but he had more frequently failed. He had not used either the actual cautery or the galvano-cautery. He thought that Dr. Hunter's use of salicylic acid was an excellent one, but suggested that the results possibly might be due to the effect of the acid quite as much as to the effect produced by the sponge-tent.

One important point he had neglected to mention in his paper, and which it might have been well to have incorporated, namely, the contra-indications to the use of any of these strong applications to the cervical and uterine cavity.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 28, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

THE USE OF ANTISEPTICS AFTER ABORTIONS AND LABOR.

DR. W. GILL WYLIE read a paper on the above subject, in which he stated that in 1870 and 1871, while an interne in Bellevue Hospital, he saw much of septicæmia in surgical cases and something of the same in puerperal cases. Under the teachings of the late Prof. James R. Wood he became a believer in carbolic acid, and by its free use subsequently, while serving in the lying-in wards, he delivered thirty-six women without the occurrence of a case of puerperal fever, and he believed that this result was due to the free use of carbolic acid, and the burning of all sponges, rubber cloths, etc. All these women had some rise of temperature, but none over 102° F. at any time. In 1872 Dr. Wylie saw Dr. Lister at work in his wards in the infirmary at Edinburgh, and became a convert to his antiseptic methods, and had since in private practice adopted the antiseptic plan, especially following the practices and teachings of Lister in all cases of labor. Nearly without exception the temperature after confinement in his practice had not risen above 100° F. There had not been even a so-called milk fever, and the well-known odor of the lying-in woman had been absent. The method is as follows:

First.—Examine locally every case some weeks before labor; have a trained nurse several days before confinement is expected; if lochia are present, warm vaginal douches of carbolic solution, 1 to 40, are given twice a day, and in all cases, as soon as the first symptoms of labor begin the vagina and vulva are thoroughly washed with the same solution.

Second.—Remove all useless and old stuffed furniture from the room; disinfect with the spray of carbolic acid everything that remains in the room; see that a large supply of napkins and bed linen are on hand, all of which are carbolized with the spray immediately before being used; change the linen every day; also have two sets of blankets; air them and use them alternately; wash the hands and all instruments in a solution of carbolic acid, 1 to 20.

Third.—When labor begins commence the production of the carbolic spray, and after labor every napkin is carbolized, or carbolized muslin or oakum is used to catch the lochia, and changed according to the discharge every hour or two, night and day.

Fourth.—Immediately after labor wash the external parts thoroughly with the 1 to 30 solution of carbolic acid, and give vaginal douches from two to four times a day. This is kept up faithfully for six or ten days, as may be required.

Fifth.—The test for the thoroughness of this method is that at no time should one be able to recognize by the smell the odor such as usually characterizes the lying-in woman.

For cases of abortion endeavor to carry out the same line of practice. Dr. Wylie then read the history of several cases.

He had reached the conclusion that it was best to consider the uterus after an abortion precisely as surgeons of to-day regard a punctured wound, and just as likely to be poisoned and beset with dangers when neglected or badly treated. He proceeded, therefore, upon the following plan: First, that septic matter must be excluded with great care, and that antiseptics are of great service in preventing infection; second, that perfect drainage is just as essential as in a severe contused and punctured wound; that not only versions, and especially flexions, may cause retention of lochia, but contraction and swelling of the os internum very frequently is an active cause in preventing a constant and free discharge; third, that when septicæmia has begun within a reasonable time, say

within ten or twelve hours after the first chill or high temperature, in almost all cases the patient may be saved by perfecting the drainage and by washing out the cavity either of the vagina or the uterus, as the case may be, by frequent douches of a solution of carbolic acid of a strength of from 1 to 40 to 1 to 20; fourth, that medication, except so far as it keeps up the strength of the patient, has little or no direct effect, and that the washing out with the carbolic acid not only removes or renders inert the organisms on the surface of the wound or cavity, but in all probability sufficient carbolic acid is absorbed locally into the surrounding tissues to weaken if not to stop the active reproduction of the organisms or the generation of poison associated with them.

He was fully aware that many cases very soon reached a stage where neither local nor any other treatment could arrest the disease, such as those where the poison has extended rapidly into the connective tissue, or has been carried a distance from the surface by the lymphatics or the veins, and started a new centre of local poisoning. But he believed that most of these hopeless cases began as simple ones, and if treated in time would never reach such a dangerous stage.

He did not advise intra-uterine injections in all cases. If the disease is confined to the vagina, apply antiseptics to that canal, but do it often enough to keep up their influence for at least twelve consecutive hours. Usually, if puerperal fever has lasted for several days, or if the symptoms are dangerous, it would be better not to delay washing out both the uterus and vagina, and do it vigorously and faithfully, and do not be satisfied with the uterine injection twice or three times a day, or even every three hours. He favored intermittent irrigation instead of continuous irrigation, for the following reasons: First, it is more readily and with greater safety carried out; second, it gives the parts, if not the patient, a little rest; third, douching at short intervals, we can use stronger solutions with less risk of poisoning with the antiseptic than when the continuous stream is employed.

What should guide us in the use of antiseptics after abortion? The first symptom is usually a chill, or chilly sensation, arrest of the lochia, and then a rapid rise of temperature. If in such a case an extensive laceration of the perineum, or cervix, or wound of the vagina were found, he would wash out the vagina with a solution of carbolic acid, 1 to 20 at first; after this give douches regularly, every fifteen minutes or half an hour, for three or four hours, of a solution 1 to 40. If the temperature then fell gradually, he would continue the douches in the same manner every twelve hours or more; but if, notwithstanding these vaginal douches, the temperature should continue to rise, or go up rapidly after lessening for several hours, he would at once begin intra-uterine douches, giving one of 1 to 20; and after this douches every half hour of 1 to 40, until the temperature fell to normal.

When the injection returns clear and remains so for several injections, almost invariably the temperature is found normal.

It is especially important, in giving the intra-uterine douche, to be certain that the carbolic acid is pure, and he insists upon having Calvert's No. 1.

The histories of several cases were given which he had seen in consultation. Dr. Wylie also referred to the histories of nine cases which he had treated successfully in Bellevue Hospital.

His experience with the dangers of intra-uterine injections was limited. In one case shock was produced, and it was afterward found that the solution had entered the peritoneal cavity through the Fallopian tube. The patient, however, recovered. In some cases shock was produced without any apparent explanation. If a large tube, such as Chamberlain's, is used after the os internum is well contracted, the instrument may be hugged so closely that the uterine cavity will be filled with the fluid injected. Under these and similar circumstances, of

course, the solution might be forced through the Fallopian tube into the peritoneal cavity, or a clot might be forced through a vein or sinus and do harm. But if a gum-elastic catheter was used of sufficiently small size to pass very readily, with a thread tied around it two and a half inches from the fenestrated extremity, indicating the distance to which it should be introduced into the uterus, not only would the fluid escape, but very frequently large threads of debris, clots, etc., would be brought away.

In those cases where the uterus was flexed, or the os firmly contracted, and where there is imperfect drainage, the tube can be left in the uterus, cut off close to the vulva, and a piece of soft rubber tubing attached when the injection is given. When left in this way it served as a drainage-tube, and the lochia should be caught by a carbolyzed napkin or dressing at the vulva.

One special object which the author had in reading the paper was to advocate the frequent and long-continued use of antiseptic dressings, when once begun, in cases of puerperal septicæmia, and to make it plain that three or four vaginal or intra-uterine injections given in twenty-four hours is not sufficient to do much good, and was likely to result in the disuse of the best, and in many cases the only, means of preventing death from septicæmia; that vaginal and intra-uterine injections of carbolic acid of a strength of from 1 to 40 to 1 to 20, will save almost all cases when begun early, and that it will often save apparently hopeless cases.

DR. MUNDÉ said that he had attained very positive convictions upon the subject of Dr. Wylie's paper, and that he had employed, with very satisfactory results, the use of antiseptics after abortions and labor. He had thought, however, where there was no offensive discharge from the uterine cavity or vagina, that intra-uterine injections were not useful. Since the introduction of Dr. Chamberlain's tube, however, he had, in every case in which the vaginal temperature reached 102° F., used the intra-uterine injections, and had generally found it sufficient to use them three or four times a day. He was very firmly convinced where there is a rise of temperature due to septic endometritis, where there are decomposing substances within the uterus, giving rise to that condition commonly known as puerperal septicæmia, that intra-uterine injection, repeated as often as the temperature may rise, and continued until the temperature comes down and remains, is perhaps the only proper local treatment to be employed. But the time arrived when such injections could no longer be of use. He had used them in cases where the temperature went up and down, and finally discovered that the rise took place very soon after the injection had been given, and the patient also complained of some pain. He had thought that in such cases the injections did not do any more good, but, on the contrary, developed a traumatic influence which was kept up, and which had better be avoided. He believed, if the temperature was substantially unaffected after using the injections for twenty-four or forty-eight hours, that they would no longer do any good, and in those cases he had given ten grains of salicylate of soda every two hours, which had produced lasting reduction of temperature, even after quinine, administered in large doses, had failed. He thought there was a certain danger in the use of intra-uterine injections, a certain amount of risk of washing away too much of the accumulation in the uterine cavity, and there was also a possibility of laying open some sinuses. He did not favor continuous irrigation of the uterine cavity. If there is no offensive discharge he did not see the utility of washing out the uterus. However, it might do some good, but he thought salicylic acid or quinine, to prevent rise of the temperature in these cases, would be better than injections.

DR. MALCOLM McLEAN had seen two cases in which air had been introduced into the cavity of the uterus with almost fatal consequences while intra-uterine injections were given. At the same time, notwithstanding

this objection, he regarded the recommendations in the paper as most excellent, and worthy of being commended. He believed that the temperature, which in many instances was the active agent in destroying the patient, could be reduced by this plan. He objected to leaving the catheter in the uterus during the intervals while the injection is not being made. He thought it a dangerous precedent to establish, because it was almost impossible not to have some air in the tube which might subsequently be driven into the uterine cavity. In cases of abortion he thought that swabbing the uterine cavity with a strong solution of carbolic acid answered a most excellent purpose. There is sufficient room for this, but scarcely enough, in many cases, to carry out the plan of irrigating the uterus by means of a tube. There were certain old cases of septicæmia, to which Dr. Mundé had referred, which had not seemed to be benefited by the intra-uterine injection. He thought it well in all such cases to be sure, if called in consultation, to find out as to whether the uterine cavity had been injected thoroughly. It may be reported that it has been irrigated thoroughly, whereas it may not have been irrigated at all, but the injection has been simply vaginal. He believed that the soft, flexible catheter was about as good an instrument as any which can be used in giving intra-uterine injections, and he thought it a good plan to keep one finger in close contact with the cervix, to determine whether or not the return flow from the uterus was actually taking place.

DR. H. J. GARRIGUES thought that we should distinguish between prophylactic and curative measures. He had been favorably impressed with the antiseptic plan as a prophylactic measure, but less favorably impressed with it as a curative measure in private practice. In hospital practice he had not obtained the results which he had expected from it as a prophylactic measure, notwithstanding very thorough antiseptic precautions had been observed. As a curative measure, however, in hospital practice, it had seemed to him to be very valuable, especially the intra-uterine injections. These injections, according to his experience in the New York Maternity Hospital, had invariably brought the temperature down, and they had been repeated as soon as it rose again, and to the best of his recollection they had not been required oftener than once in three hours. He had also used a concentrated solution of boracic acid and a solution of iodine with excellent results in the cases in which he wished to avoid the depressing effects of carbolic acid. In gangrenous cases he had used a ten per cent. solution of camphor, and also iodoform with very satisfactory results. In diphtheritic cases he had employed an eight per cent. solution of chloride of zinc, besides the intra-uterine injections of carbolyzed water, repeated once a day for seven or eight days, with excellent results. At the same time, if the parts affected with the diphtheritic exudation could be seen, a solution of chloride of zinc, 1 to 1, might be applied locally, and repeated if necessary. He agreed entirely with the author of the paper, that intra-uterine antiseptic injections were of the greatest value after abortion and labor. He preferred to use the gum-elastic catheter in their administration. He did not think that the entrance of air did much harm, for it would be immediately carried out of the uterus by the injection.

DR. WYLIE, in closing the discussion, said that most of the points referred to by those who had participated in the discussion, and the objections mentioned, had been considered and answered in the histories of cases, which he did not read on account of lack of time. He had not seen any trouble from the entrance of air into the uterine cavity. He usually employed the gum-elastic catheter No. 12.

With regard to waiting for the offensive discharge, he thought that that was just the point where fatal mistakes were made, for the reason that the uterus might become poisoned in consequence of imperfect drainage without the appearance of any offensive vaginal discharge. He believed that the severe cases were those which had been

neglected too long, or those in which perhaps one injection had been given and not repeated until after the lapse of six or eight hours. With regard to swabbing the uterine cavity, he thought it doubtful, in very many cases at least, that every little recess among the tissues could be thoroughly reached by this method. He was unable to understand why poisoned wounds of the uterus should be considered and treated differently from any other poisoned wounds.

The Society then adjourned, to meet on the fourth Monday in September.

STATE MEDICAL SOCIETY OF ARKANSAS.

Eighth Annual Meeting, held at Little Rock, May 30 and 31, 1883.

(Special Report for THE MEDICAL RECORD.)

THE State Medical Society of Arkansas convened at 11 A.M. Wednesday, in the hall of the House of Representatives, and was called to order by DR. CLAIBOURNE WATKINS, Chairman of the Committee on Credentials.

Dr. Watkins introduced DR. J. H. SOUTHALL, President of the Society.

REV. A. R. KENNEDY, of the Second Presbyterian Church, offered a prayer.

DR. C. WATKINS, Chairman of the Committee of Arrangements, delivered the address of welcome, an excellent article and replete with good points.

DR. J. H. SOUTHALL delivered the annual address, which was listened to with the closest attention.

The Committee on Credentials, made their report, which included forty-one delegates from nineteen societies, twenty-three permanent members, and twenty-four applicants for membership.

The President's address was referred to a special committee of three members.

During the afternoon session invitations to visit different institutions and places of interest, and telegrams from absent members were read.

Papers were read and discussed as follows: "Surgery of the Popliteal Space," Dr. J. E. Bennett; "Skin Grafting," Dr. G. W. Hudson; "A Case of Strangulated Inguinal Hernia in a Crypt Orchid," Dr. J. H. Debrell, Jr.; "Ligation of the External Iliac Artery for Traumatic Aneurism of the Femoral," Dr. R. G. Jennings; "A Case of Osteo-Sarcoma," Dr. C. L. Kirksely; "Radical Cure of Hernia on the Heatonian Plan," Dr. J. E. Bennett; "Notes on Cases of Placenta Prævia," Dr. S. Kirby.

At the evening session DR. E. CROSS, as Chairman of the Committee on Gynecology, read his address. It was followed by papers on "Laceration of the Perineum," Dr. J. T. Jelks; "Puerperal Convulsions," Dr. W. H. Hawkins; "Use of Ergot in Treatment of Puerperal Convulsions," Dr. A. N. Carrigan; "An Interesting Experience in Gynecology," Dr. J. R. Dale; after which the Society adjourned for the day.

The morning of the second day was consumed in transacting the business of the Society, consisting of reports of committees, officers, etc.

At the evening session the Nominating Committee reported the following officers for the ensuing year: *President*—J. M. Keller, Garland County; *First Vice-President*—G. W. Hudson, Ouachita County; *Second Vice-President*—J. M. Carrigan, Hempstead County; *Third Vice-President*—J. F. Blackburn, Franklin County; *Fourth Vice-President*—D. S. Mills, Jefferson County; *Secretary*—L. P. Gibson, Pulaski County; *Assistant Secretary*—E. Meek, Pulaski County; *Treasurer*—A. L. Breysacher, Pulaski County; *Librarian*—John Waters, Pulaski County.

The place of meeting next year to be the city of Little Rock, and the time to be the Wednesday next preceding the meeting of the American Medical Association in 1884.

The following resolution was adopted unanimously :

Resolved, That the State Medical Society of Arkansas not only heartily condemns the effort of any local or State body of medical men to break down or destroy the Code of Ethics of the American Medical Association, but pledges itself to encourage no medical school or college whose professors, one or more, indorse or favor such effort.

DR. MCGAVOCK spoke in encouragement of the election to the legislature of such delegates as would sustain a liberal medical law. He moved the President appoint a committee of five to address the medical men of the State to urge the importance of medical legislation. Carried.

Papers were read and discussed as follows : "Diabetes Mellitus, with Case," Dr. J. E. Bennett ; "Some Observations on Hydrobromate of Hæmatropia and on Jequirity," Dr. T. E. Murrell ; "Modus Operandi of Zymotic Agents," Dr. W. W. Hipolite ; "Influences of the Mind," Dr. G. B. Malone ; "Observations on Concussion of the Spine from Blows, Falls, and Collision," Dr. E. Bentley, U. S. A. ; "Laceration of the Cervix," Dr. J. T. Jelks ; "Hydrophobia," Dr. J. G. Eberle, and "Report of a Case of Ascites," C. L. Kirksey.

On motion, Drs. Orto and DuVal were appointed a committee to conduct the President-elect to the chair.

DR. SOUTHALL, the retiring President, with a few brief remarks, thanking the members for their universal kindness and appreciation of his efforts, recommended their new officer to their kindest consideration.

DR. KELLER, in assuming the chair, said that owing to the lateness of the hour he would make them no long speech, but merely bow his thanks for this honor conferred upon him—the greatest honor of his life.

On motion, the Convention then adjourned.

THE TORONTO MEDICAL SOCIETY.

(From our Canadian Correspondent.)

Regular Meeting, May 18, 1883.

I. E. GRAHAM, M.D., PRESIDENT, IN THE CHAIR.

AFTER some routine business DR. J. FERGUSON, M.A., read a paper on

PUERPERAL PYREXIA.

After setting aside conditions of elevated temperature due to inflammatory processes, he went on to show that in a strictly normal labor, followed by a strictly physiological state of the system, there should be no elevation of bodily heat. Of the causes giving rise to pyrexial conditions he referred somewhat fully to the following : 1. Cases where there is elevation of temperature from some derangement of the system, as constipation, urinary derangements of various kinds, arrested or imperfect action of the skin, and some abnormal state of the breasts as regards the secretion of milk. 2. Cases of pyrexia of a purely neural character. The reader of the paper held that during pregnancy there is a period of high tension ; and after labor a period of low tension. To this condition of general low tension many cases of pyrexia could be traced, as the functions of secretion and excretion were liable to be interfered with by it, in people of a specially anxious, irritable disposition. 3. Cases where high temperature was due to malaria. He thought that the influence of malaria had not received the attention it merited in connection with the puerperal state. He divided the cases into two groups : the acute, where the symptoms are somewhat similar to malignant ague, and chronic cases of malarial poisoning, where the symptoms were more like those of low typhoid fever. He thought that if the woman had once been affected with ague or lived in a malarial locality, the system might be so affected as to give rise to chills and fever after confinement, although not living in a malarial lo-

cality at the time of her delivery. He recorded three striking cases of this kind. 4. Cases of pyrexia caused by a deranged relationship between the absorption of effete matter and its rejection from the system. This loading of the system with effete matter might arise in two distinct ways, or by a combination of both : first, by an imperfect digestion or destructive oxidation of this effete matter after it had been absorbed into the system ; and secondly, by a retention of this waste matter in the system. These toxic materials circulating in the blood impressed both the secretory and trophic nerves, and in this way gave rise to constitutional disturbances more or less severe. 5. The last group of cases were the really toxæmic from putrid or septic conditions. This group was divided into those of soporæmia, due to the absorption from the genital tract of some dead poison ; and those of a true septicæmia. This latter might arise from local infection from the hands of the physician or nurse ; or the contagion come in contact with the lacerated tract through the atmosphere. It might also be caused by constitutional infection through the lungs. In this way the infection of measles or scarlatina could enter the system and produce septicæmia ; or even a case of measles or scarlatina as well as septicæmia, if the woman had not had a previous protection from these diseases.

The treatment recommended for soporæmia was frequent sponging of the body and intra-uterine washings, with good nourishment. For septicæmia the same plan was adopted, but quinine in large doses, twenty to thirty grains, three to four times in the twenty-four hours, if required, to control the temperature and septic conditions.

Correspondence.

A MISNOMER EXPLAINED.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR : The meaning of hy-dro-pho-bia is a dread of water, *not a disease* susceptible of connection by any absurd construction from a diagnosis of the *so-called* disease of canine madness, which exists only in the imagination. All persons, as well as animals, dread water or any drink when under the influence of excessive fear, as a morbid inactivity of the organs of the throat prevails which tends to quackle or choke, and this tendency in the canine race, after they have taken cold in wounds that produce spasms, is proverbial. What has become of the mad dogs? In their absence let us calmly consider a few facts, and ask ourselves whether ignorance and superstition have not something to do with increasing their number and magnifying the dangers accompanying their malady. Dogs are sometimes afflicted with a distemper. When young they frequently have fits, running wild, with glaring eyes and frothing mouth ; when old they have attacks of paralysis, and are reduced to a stupid, inactive condition, both of which have been called *rabies*. It is a common superstition, that should a dog go mad *after* biting a person, the latter will also fall a victim to rabies. Dogs suffering from wounds may take cold, and inflammation setting in, the nerves become affected, spasms ensue, saliva is emitted, water is avoided, the whole appearance of the animal suggesting madness. The great disproportion of the sexes, occasioned by the destruction of the female dogs, has a capricious influence with various effects, including that of amateness and jealousy, often making them irritable to strangers and to snap and bite them seemingly without cause, or at the least trifling annoyance even from friends. Persons taking cold in wounds have suffered in a precisely similar manner, with all the attendant manifestations of so-called rabies. The effect is the same as lockjaw, only that a wound from a rusty nail may, with inflammation from a cold, produce a stronger affection in

the region of the throat. The end of many diseases which afflict humanity is attended with spasms, saliva, and other symptoms of hydrophobia. A few incidents will illustrate:

Some years ago a man in Dorchester, Mass., was bitten by a cat, another in Boston by a rat, and several by rabbits, the bites producing spasmodic symptoms in all the victims.

Mad horses and cows have been known, their disorder (frothing at the mouth, etc.) being doubtless caused by a poisonous shrub eaten with hay. A father bitten by his child, from whose throat he attempted to remove diphtheritic formation, died from the wound. A blacksmith of Roxbury, Mass., sprained his ankle while attending to a horse; he took cold, inflammation ensued, then violent spasms, and paroxysms at intervals for a week preceding death. The newspapers of 1878 reported that last March, in New York, Mr. J. Russell was bitten in the hand by Thomas Kelly, while quarrelling with him; since then his finger, then his hand, then his arm were successively amputated. He finally died from the effects of the bite.

A farmer of Ohio died from the effects of a bite on the hand from an insane son. Some members of a family were poisoned from eating roast goose, which they imagined was bitten by a mad dog, and were undoubtedly under spastic delusion. Had these animals and persons been bitten by dogs, they would undoubtedly have been reported as victims of rabies.

A man was bitten on the hand by a dog in Kingston, N. Y., and after three years was seized with symptoms which were at once regarded as those accompanying hydrophobia by all the city physicians, who watched the case with much interest. Between the interval of spasms the patient was rational and quiet, partook of water and food at times, but *usually the sight or sound of water* threw him into violent spasms. The man recovered, and the physicians regarded it as *hysteria* with hydrophobia simulation, which they thought was merely mental.

A dog-trainer, of New York, whose intelligent experience was of long standing, did not believe such a disease as canine madness existed. He was bitten, and while suffering from the wound his attendants called the malady hydrophobia; it was in reality delirium tremens. Watts, of Boston, who has probably the greatest experience with dogs in the New England States, never yet discovered evidence of this so-called disease. It is true that cases have been reported in the medical journals, but generally with a protest from eminent authorities. One instance is that of a woman, whose malady was hastily set down by the physician as hydrophobia. He was deceived by a chronic case of hysteric fits.

What gives something of a quietus to this obsolete superstition is the fact of such innumerable cases of persons having been bitten all over the world by dogs with no serious consequences, which could be cited if space would admit, wherein rabies have been pronounced as absolutely existing in the animal and patient, without any foundation or fact. A single instance, for the present, gives the fancied ideal of a volume, which is from a person holding office in the Society for the Prevention of Cruelty to Children and Animals, who witnessed an extreme case, called rabies, of a dog in paroxysms, frothing and biting fences and everything in his way, and finally biting a lady severely, aside from which she experienced no ill effects, and lived thirty years thereafter. Last autumn, a lawyer, of New York, was ferociously bitten by a large dog, while entering the premises guarded by the faithful animal at night. He took care that he took no cold in the wound, and therefore no harm came of it. A lady, of Cambridge, Mass., bitten by a black and tan pet last winter, took similar precaution with like result.

Hunters and sportsmen who have been bitten by their own and other dogs repeatedly, under various conditions and circumstances, some attacks being mild, others ferocious and of a mysterious nature, attest that no

positive evidence has yet been produced to show that virus ever emanated from a canine's mouth.

The writer during his life has been surrounded by different species of dogs; his children and friends, as well as himself have often been bitten by them, sometimes severely; but by the exercise of every precaution against taking cold, no ill results have followed. If a wound be severe, first cauterize it, if possible; however this may be, the application of a poultice of flaxseed and slippery elm, saturated with laudanum, will remove all irritation. Many practitioners of Paris have for a long time doubted the existence of hydrophobia as a disease, and those of eminence, experience, and deep research of Europe and America, regard it now as fallacious; while observation, experience, and an intelligent domiciliary view by others, who have studied the subject-matter, see no reason why this phantom should be a synonym of hydrophobia, with any more sense, than to substitute hallucination for reality.

J. G. CLAPP.

[Our correspondent's statements are interesting, but they simply show that hydrophobia is a rare disease (which is well known), and that many bites are harmless or only cause a non-specific tetanus.—ED.]

POLYCLINICS, POST-GRADUATE SCHOOLS, ETC., AND THEIR RELATION TO THE MEDICAL PROFESSION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: A fertile source for the inspiration of lugubrious groans on the part of the medical profession are the perversion of charity and the development of pauperism among patients who are amply able to pay; and as these are great, if not the greatest obstacles menacing the success of those of us who, by a discriminating Providence, are compelled to practise among the middle and poorer classes, it therefore justifies a moderate protest against any institution whereby our means of gaining a livelihood are materially, and even seriously compromised by these unnecessary "long-felt wants."

I say they are unnecessary, advisedly, for there is no city in the world with better clinical advantages than New York, for the hospitals and dispensaries are numerous where the specialties and details of treatment can be studied.

Not only are there many clinics in the city where for a small fee any specialty may be studied, but in addition to this many physicians of recognized ability would gladly extend the courtesy of their ward and amphitheatre to the student, without hope of fee or reward.

The Polyclinic and Post-Graduate School inculcate upon the mind of the rustic physician from the wilds of Bushwick the principles of the various specialties, for a decided quid pro quo, by means of patients appropriated from us.

Gelatine-coated pills and the luxuries of the Pharmacopœia are not enough, but in addition, in seeking an obstetric practice, we must contend against placards in English and German, soliciting pregnant women to be treated gratuitously—if too poor to pay. Thrift in this instance assumes poverty for an evident advantage, for, if necessary, one of the "professors" will assist the pauper (?) if occasion requires it. Why, sir, in the present style, Tom, Dick, and their unmentioned friends can hire a back-room on the top floor of a tenement-house, and proclaim themselves "professors" and "specialists" in the New York Pauper Developing School, and who can interfere?

Let us hope, for the benefit of our profession, sadly lacking in numbers, that the two institutions heading this article will have the usual disagreement in their respective faculties, and then we may have two more of them, for we certainly need more colleges. There are, at the lowest estimate, nine houses in New York City

without a tenant in the shape of a medical man, and the druggists are overrun with counter-prescribing. Now, Mr. Editor, let me declare that I have no feeling of pique. I don't want to be a "professor." I don't want to write a book. I simply want to make a living, and let me here detail my experience of the past week :

I had a patient with a stricture, who is in an established business, with an income enviable to an ordinary medical man, and who paid me a good fee on every visit, and I know too he had no cause for dissatisfaction. He went to one of these institutions, where he found a "professor" who advertises in fact, but not in words (as they all do in a way), that he was a specialist and "professor" of venereal diseases. I lose my patient, the patient receives treatment gratuitously, congratulates himself on his business sagacity, and ever after becomes a medical "deadhead" for dispensary treatment.

The second case was one of pulmonary trouble, whose circumstances were on a par with the preceding case.

The third case, a married lady, also able to pay, went to the "professor" of — well, nails, who asked her under whose treatment she had been. She mentioned my name, whereupon the "professor" said : "Oh, yes ; we know him very well. He is a very good doctor—but he don't know anything about *nails*."

I must ask you, Mr. Editor, to pardon the space I have taken ; but I am sure that you will find there are others who feel as I do in this matter. And now for a remedy. Inasmuch as the success of these institutions means our loss, it is evidently the duty of every physician whose business is injured by them to do all in his power, consistent with business courtesy and gentlemanly courtesy too, to thwart their aims, *e.g.*, by persuading any of his patients who may have gone to either of the schools, to go elsewhere, etc., and in cases of interest alone, or in which an opinion is sought, to refer the case to some one of the dispensary physicians, specialists, or visiting physicians of the hospitals of this city, who are able men and who may not be "professors."

In closing, I may say that in this enlightened age this letter savors of the bigotry and intolerance of ages ago ; but this is an era of trades-unions, etc. However, your readers will judge as to the bigotry of ITIS.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 9, 1883, to June 16, 1883.

TILTON, HENRY R., Major and Surgeon. Granted leave of absence for four months. S. O. 136, par. 7, A. G. O., June 14, 1883.

APPEL, AARON H., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of Dakota and assigned to duty in the Department of the East. S. O. 130, par. 3, A. G. O., June 7, 1883.

POWELL, JUNIUS L., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East. S. O. 130, par. 3, A. G. O., June 7, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of Dakota, and assigned to duty in the Department of the East. S. O. 130, par. 3, A. G. O., June 7, 1883.

Official List of Changes in the Medical Corps of the Navy for two weeks ending June 16, 1883.

KERSHNER, EDWARD, Surgeon. From Marine Barracks, Brooklyn, to the Navy Yard, Brooklyn.

TAYLOR, JOHN Y., Medical Director. From the Naval Hospital, Washington, to the Naval Hospital, Norfolk, Va.

SUDDARDS, JAMES, Medical Director. From the Naval Hospital, Norfolk, Va., and waiting orders.

TURNER, F. J., Medical Director. From the National Board of Health, and waiting orders.

MARTIN, CHARLES, Medical Director. From the Navy Yard, New York, and awaiting orders.

SPEAR, JOHN C., Medical Inspector. From the Naval Medical Board to the Navy Yard, New York.

DIEHL, OLIVER, Assistant Surgeon. United States Practice Ship Dale, to report to the Medical Board for examination, preliminary to promotion.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 19, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
June 12, 1883.....	0	6	104	4	107	46	0	0
June 19, 1883.....	0	7	74	6	91	20	0	0
<i>Deaths.</i>								
June 12, 1883.....	0	3	23	4	21	18	0	0
June 19, 1883.....	0	3	23	9	22	16	0	0

THE CHOICE OF CLOTHES.—Much has lately been said and written to show that the demands of fashion should yield to the laws of physiology in matters of dress. Public attention has been prominently and frequently directed to certain well-recognized reforms in garments, especially in those of women, which are of indisputable importance. The proposed improvements have mainly had reference to the shape and size of articles of apparel, and have chiefly been designed to prevent certain baneful constrictions and compressions, certain unscientific distributions of weight, and certain impediments to healthy movement and growth, which fashion has favored, but which are obviously, in the truest sense, unphysiological. But it must not be forgotten that, in human dress, intelligently adapted to its essential utilities, the materials of garments must be wisely chosen, and that the texture and color of clothes have as important bearings upon the health and happiness of their wearer as the mere "make" of his apparel. On these points, hygienic science has established certain definite and reliable conclusions. Whatever else may be said about clothes, their primary object is to protect against hurtful variations of cold and heat. All their other uses are either derived from, or are subsidiary to, their essential purpose. If utility strictly rule, it is clear that the material, texture, thickness, and color of clothes must be governed in accordance with their bearing upon the protecting function of dress, and that these must be specialized in conformity with experience to meet the necessities of different climates, and the requirements of various occupations. With regard to protection against extremes of simple cold, as distinguished from cold winds, wool is much superior, for equal thicknesses, to either cotton or linen. For protection against very extreme cold, besides wool, leather or waterproof clothing is useful. Wool is especially adapted for underclothing ; when protection against cold is particularly aimed at, all underclothing should be of this material. Against cold, cotton and linen, for equal thicknesses, are about equal in protective power. For protection against cold winds, leather and

India-rubber, according to Dr. Parkes, for equal thicknesses, take first rank; wool the second; cotton and linen taking the lowest places. For protection against extreme of heat, in the form of direct solar rays, the texture of clothes is practically immaterial; protection from this danger depends chiefly, if not entirely, upon color. White has the greatest protecting power, then gray, yellow, pink, blue, and black. For hot countries, white clothing is the best; next comes dress of a light gray or dust-colored shade, like the Indian "khakee." In the shade, Dr. Parkes found that the protecting effect of color against heat is not marked. Here the thickness and the conducting power of the material are the conditions which affect protection. With regard to the absorption of perspiration, the hygroscopic properties of woollen fabrics are well known. The water penetrates into the woollen fibres themselves, and distends them (hygroscopic water), and also insinuates itself between the fibres (water of interposition). In absorbent power for watery fluids, wool is greatly superior to either cotton or linen; it has been found that the hygroscopic absorption of woollen fabrics, as compared with those of cotton and linen, is at least double in proportion to weight, and quadruple in proportion to surface. This observation applies to cotton fabrics made of cotton fibres as ordinarily prepared. Cotton fabrics made of cotton fibres so dressed as to become "absorbent," as in those made for surgical dressings, would probably equal, if they did not surpass, woollen materials in hygroscopic affinity. Amongst the subsidiary functions of clothes are the effects of various dress materials upon the absorption of odors, and in protection against malarial emanations. These considerations respectively assume especial importance in some occupations and in some countries. Odors probably mark the diffusion of minute material particles. Their absorption by articles of apparel has been found to depend partly upon color and partly upon texture. Stark's observations show that the power of absorption of odors by dress fabrics, so far as color alone is concerned, is in the following order: black, blue, red, green, yellow, white. So far as texture is concerned, the absorption of odors has been found to be in proportion to hygroscopic absorption. Woollen materials take up odors best. With regard to the protective influence of various dress materials against the effects of malarial emanations, the late Dr. Parkes wrote: "It has been supposed that wearing flannel next the skin lessens the risk of malaria. As it is generally supposed that the poison of malaria enters either by the lungs or stomach, it is difficult to see how protection to the skin can prevent its action, except indirectly, by preventing chill in persons who have already suffered from ague; but the very great authority of Andrew Combe, drawn from experience at Rome, is in favor of its having some influence; and it has been used on the west coast of Africa for this purpose with apparently good results."—*British Medical Journal*, April 28, 1883.

GENERAL PRACTICE IN ENGLAND.—A "general practitioner" writes to the *Lancet* in the following strain, and doubtless his remarks will be re-echoed in many quarters of the globe, not excepting our own country. Dr. Hickman, in an able and thoughtful address to the Harveian Society, pointed out some of the practical grievances of the general practitioner, arising from indiscriminate gratuitous medical aid supplied by hospitals and dispensaries, from the too cheap medical attendance given by provident dispensaries, and from various modes of low practice pursued by men who live by underselling their medical brethren.

Mr. Burdett, in the *Nineteenth Century*, advocates various reforms in the working of hospitals, which at present defraud the profession and the public; for a large and increasing proportion of the patients are quite unworthy of charitable aid, and such patients defraud the hard-worked junior members of the staff of the re-

muneration which is due to skilled work. They defraud the general practitioner of his fees by leaving him and getting gratuitous medical aid. They defraud the subscribers who give their money to be expended solely for the benefit of the needy. After due consideration of the various aspects of the question, Mr. Burdett thinks that medical men should refuse to do gratuitous work. The expenses of medical education and of living have greatly increased during recent years, and yet medical fees are sinking lower and lower. The very moderate fees formerly paid cheerfully or gratefully, are now given grudgingly or objected to. The public go to the cheapest medical market. Hospitals and dispensaries give them what they want for nothing. Provident dispensaries supply them at a price less than is paid for beer, and numerous cheap dispensaries give for sixpence or a shilling what used to cost from half a crown to five shillings. The effect of all this on general practice is evident. Many medical men hardly know how to make a living. The value of medical attendance is lowered in the eyes of the public, and an honored and learned profession sinks to the level of a badly paying trade.

Mr. Burdett wisely advises medical men to cease gratuitous work. As regards the vexed question of provident dispensaries, greater discrimination should be exercised regarding the admission of members, and the remuneration to the medical officers should be increased.

PHYSICIANS' PRESCRIPTIONS.—A rather curious lawsuit lately took place before the justice of the peace at St. Germain, in which a pharmacist was prosecuted for having refused to give up a prescription that was taken to him by a patient. The patient claimed the prescription as being his property, which the chemist contested; but the tribunal decided otherwise, and the prescription was restored to the patient. The *Société de Médecine Légale*, commenting on the case, was of opinion that, although the decision of the judge was unassailable from a legal point of view, yet it was considered that the restitution of a prescription was attended with great inconvenience, as the patient may take it to other chemists successively, and have it made up oftener than is necessary or good for him, without any reference to the medical man who gave him the prescription. Thus it has lately happened that a female patient spent one thousand eight hundred francs for the purchase of morphia for hypodermic injections, which had been only a few times prescribed for her, but which she ultimately employed on her own account. The result was that she became insane, which the medical experts who were required to give their opinion attributed to the abuse of morphia. Whereupon the husband sued the chemist, but a case of the kind not having before been brought to the notice of the court, the present prosecution has been remanded for legislation.

PINUS CANADENSIS IN DIPHTHERIA.—Dr. D. M. Cool, of Wanly, Iowa, sends a suggestive letter describing the results of seven years' experience with diphtheria while practising in Chicago. During this time he saw several hundred cases of all grades of severity. Before adopting the treatment which he now recommends Dr. Cool had used sulphurous acid, chlorate of potash, iron, quinine, alcohol, etc., with fair success. He writes: "There came a time when my per cent. of deaths became much too large to be satisfactory. I was called quite early in the morning to see a child of Mrs. C—, three years of age. Two doctors had just left it saying it could not live until night. While thinking over in my mind what I should do in the case, a thought struck me to try extract *Pinus Canadensis* fluid. Acting upon this thought I wrote for Keneday's extract to be applied to the throat by means of a soft swab once an hour. Internally I gave Labarraque's solution chlorinated soda, five drops once in two hours. With this I gave milk, quinine, and brandy. I called in the afternoon and was agreeably surprised to find the patient better. From that time to this, in a large practice, I have

used the following: *R. Ex. Pinus Can. fl. 5 j.*; carbolic acid (95%), *gtts. x.* *M. Sig.* Apply (by means of a soft swab or camel's-hair brush) to the throat once an hour. Also, internally, Labarraque's sol. chl. soda, $\frac{5}{2}$ ij.; give, according to age, three to ten drops in water once in two hours. This, with the usual support, has been my treatment, with only the loss of four cases." A history of these cases is given, showing that in nearly every case the remedy could not be satisfactorily applied. Dr. Cool concludes: "I am not a believer in specifics, but this comes as near to one in my hands as well as in the hands of the physician whom I have given it to, as quinine is to a well-marked intermittent. In order to make it successful it must be applied frequently and thoroughly to the patient's throat, at least once an hour during the day, and once in two during the night. So far as I know, I am the first to use it in diphtheria. I had used it in leucorrhœa with fair success. The solution of chlorinated soda is useful through the chlorine it contains. In addition to this I apply salt to the throat externally."

[Dr. Cool's letter suggests the query (whether any good disinfectant applied with such thoroughness will not secure equally favorable results.)]

A SUCCESSFUL CLOSURE OF A RUPTURED PERINEUM, WITH COMPLETE LACERATION OF THE SPHINCTER ANI, WITHOUT CONSTIPATING THE BOWELS OR THE USE OF THE CATHETER.—Dr. W. H. Johnston, of Selma, Ala., writes: "The patient's bowels were thoroughly evacuated the day before operating, and on the morning of the operation were again emptied by an enema of warm water. The rents in the bowel and perineum were closed with three deep silver sutures, and then two superficial sutures of horse-hair were used, which closed every part perfectly; legs were tied together. Operation performed on April 25th. Patient directed to have a cupful of tepid water, with a tablespoonful of listerine in it, and to use this to wash out the vagina every time the bladder should act. On the morning of the 27th an enema of warm water was gently thrown into the bowel, followed by the first action since the operation. On the evening of the fourth day two teaspoonfuls of magnesia were given; bowels acted three times during night; patient was directed to use an enema of a small quantity of warm water whenever she felt that her bowels were going to act. On the morning of May 1st, six days after the operation, the sutures were all removed and union was perfect. This patient had been unable to exercise any control over the flatus, and whenever her bowels were loose could not retain their contents. My only reason for reporting the case, is that heretofore it has been generally believed necessary to use the catheter for three or four days to empty the bladder, and also it was a rule to constipate the bowel, neither of which procedures seem to be necessary, and the omission of which adds greatly to the comfort of the patient."

THE PRACTICE OF MEDICINE IN THE MIDDLE AGES.—In Mr. Fort's interesting work on "Medical Economy in the Middle Ages," some interesting facts are given regarding the practice of medicine in the Two Sicilies. Long before the healing art had been replaced on anything like a rational basis in the rest of Christian Europe, a great deal of the ground lost since Galen was recovered in the kingdom of the Two Sicilies. Here the presence of a large Mohammedan population offered facilities for the study of Arabian science, which had preserved and in some directions augmented the knowledge gained by the Hellenic anatomists and botanists and by Greek empiricism generally. Some of the Sicilian laws relating to the practice of medicine and to sanitary regulations attest a surprising degree of knowledge and sagacity on the part of the legislator. For instance, a decree of Frederick II. prohibits, under severe penalties, the sale of diseased pork and deleterious bread in his Sicilian and Neapolitan dominions. Another

sanitary ordinance by the same emperor orders the dead bodies of men or animals to be buried in remote localities or carried out to sea and sunk. Another rescript of this sovereign's prescribes minute rules for the guidance of physicians in their practice. They were required to give gratuitous attention to the indigent sick, and a maximum fee was fixed for their professional services to the well-to-do. The fees of apothecaries were also specified, and physicians were sternly admonished against secret association with druggists to defraud patients by illegal additions to the legal cost of compounding remedies. In other parts of Europe, however, medical honoraria seem to have been generally determined by special contracts, often contingent on the recovery of the patients. The sums thus pledged, in written instruments still extant, for restoration to health seem very large, when we remember the purchasing power of money at the time. That cures, real or supposed, were frequently accomplished, notwithstanding the ridicule heaped upon the medical fraternity by Petrarch and other writers, may be inferred from the enormous fortunes accumulated by some practitioners.

THE POWER OF DRUGS.—Many men doubt the efficacy of drugs because their efforts have not been attended by success. But this want of success is more often not the fault of the remedies themselves, but the fault of the prescriber, who fails, from the want of an almost intuitive tact, in the selection of the best drug, or drugs, and in their proper combination and dosage. How frequently one sees a patient, who, under the treatment of one man, drags on wearily from week to week, no better—often, indeed, going from bad to worse—under another man's care rapidly improve, and from the very rapidity of recovery giving proof of the efficacy of the drugs employed. Instead of lowering the estimation in which our materia medica is held, increased knowledge is likely to carry it to a still more honored position, when the powers of each drug, from accurate observation, become more thoroughly defined.—*Medical Press.*

THE NEW CODE AND THE SENTIMENT IN THE WEST.—Dr. W. B. M——, of Washington Court House, O., writes: "I am moved to pen the enclosed effusion because I am convinced that the idea (which seems to obtain in New York City) that the profession throughout the country, and especially throughout the West, is wildly opposed to the new Code, is an erroneous idea. I am certain that the opinions expressed by the medical press in the West against the new Code do not reflect the sentiments of the majority of the practitioners. Here almost all the regular physicians are in favor of the new Code. I hope and feel certain that Drs. Agnew, Roosa, and their allies, will succeed in the battle which seems to be going on. It is only a question of a little time when the whole profession will stand by them."

FATAL CASE OF CHOREA.—Dr. J. A. Fordyce, of Hot Springs, Ark., late House Physician to the Cook County Hospital, Chicago, sends us a very complete history of a case of chorea which ended fatally. The case occurred in the Cook County Hospital under the service of Dr. F. Heurotin. The patient was a Swedish girl, unmarried, twenty-two years of age, who had had good health except for a short attack of chorea a year before. Four weeks before admission to the hospital the fatal attack began. The movements were not very bad until a few days before admission. There was some swelling and pain in the knees and ankles, and a systolic murmur at the apex and base of the heart. The movements were very violent. The patient had a fever; grew weaker. Salicylates were given and enormous doses of chloral to secure rest. Their effect was only palliative. The patient died within eight days. No autopsy was allowed.

EXTIRPATION OF A LARGE GOITRE.—M. Labbé, of the Lariboisière Hospital, recently extirpated an enormous goitre from the neck of a middle-aged woman. The

operation was rendered imperative from the condition of the patient, who was being gradually asphyxiated. Knowing that the loss of blood would be fatal to a person already so much reduced, he decided on practising transfusion immediately after the operation. One of the students generously furnished the blood. The tumor was excised, transfusion practised, and the woman recovered. This noble act of the student was highly praised, and the Legion of Honor will, it is said, be given to him as a recompense.

THE HOSPITALS OF ROME.—In Rome I visited the Hospital S. Spirito in Sassia and the great lunatic asylum (Ospedale di S. Maria). It is surprising what a large number of hospitals Rome possesses. Thus it has among its large hospitals one for internal diseases only, two for surgical diseases, one for skin diseases, and one lying-in hospital. Besides these large institutions it possesses any number of smaller ones for convalescents, fever patients, scabies, chronic incurables, etc. Nine hospitals for strangers (German, Spanish, Armenian, Portuguese, Egyptian, etc.) swell this number. Ospedale di S. Spirito is the largest hospital of Rome, and at one time was the largest in the world. It was erected by Innocent III. to serve both as a hospital and a foundling institution, probably the first foundling hospital of which we have record (1200). It possesses an income of one-half million francs yearly, and receives 200,000 francs additional from the State. It serves only as a hospital for internal diseases, has sixteen hundred beds, and about twenty thousand patients yearly. Malarial fevers, phthisis pulmonalis, pneumonia, and intestinal troubles furnish the largest number of patients. Passing through the wards we are confronted by the malarial cachexia on every side, and our guide was kind enough to allow us to palpate some immensely enlarged spleens. Large doses of quinine and some preparation of iron (I think the iodide is preferred) is the treatment most generally adopted here. The Roman Campagna furnishes this large number of patients suffering from malaria. Phthisical patients are kept entirely separated here in special rooms. On the whole, I must say that I was impressed rather unfavorably with its wards, the light being very poor, and the ventilation not of the best; the age of the institution must, however, not be forgotten in passing judgment as to its merits.—E. E. SADTLER, in *Cincinnati Lancet and Clinic*.

ST. ANDREA HOSPITAL, GENOA.—The St. Andrea is our very ideal of what a hospital should be. Beautifully situated on a hilly projection of the Genoese coast, looking out upon the calm blue expanse of the Mediterranean, it will be a very paradise for the sick. The very sight of the calm repose expressed on every side, the salt breezes laden with health, will do more toward healing the sick in this place than any medicine that man has ever had at his command. Genoa seems to be a second Cincinnati as regards the lavish generosity of its citizens. Here we have a woman, the Duchess of Galliera, building three hospitals, one for scrofulous diseases, one for chronic incurables, and this one in progress—the St. Andrea—the model of all models. She contributed 5,000,000 francs for its construction, and ordered neither pains nor money to be spared to make it perfect in every respect. Six years have already been spent working at it, and two more years will be required to complete it. At present work has been stopped for a time for lack of funds, the private secretary of the duchess having decamped with \$100,000 of the money entrusted to his care.—SADTLER, in *Cincinnati Lancet and Clinic*.

INSANE FROM FRIGHT.—There has just died at the Charenton Asylum, near Paris, a man who, thirty years ago, was condemned to death at the Seine Assizes for the murder of an old gentleman. The case had excited considerable interest, and the court was crowded with spectators. Among the persons standing immediately behind the criminal, who was flanked by a pair of gendarmes, was an employé of the *Presse* newspaper, who

had somehow contrived to wriggle himself into that position without attracting notice. Scarcely had the sentence been pronounced, when this *Presse* employé, moved, as he afterward explained, by an uncontrollable impulse, passed the side of his hand over the prisoner's neck in imitation of the keen blade of the guillotine, at the same time emitting a whirring sound. The man just convicted instantly fell forward with a shriek of terror, and the by-standers, indignant at this heartless and shocking act, rushed upon the *Presse* man and roundly abused him, who also was subsequently condemned to two years' imprisonment. His victim never recovered the shock, but remained insane until his death. He was pardoned by the emperor, and confined, first at Bicêtre, and afterward at Charenton, where he has just expired. He had the delusion that he had been actually beheaded in the Palais de Justice, and when relating the story was in the habit of imitating the sound that haunted him for thirty years.—*Gaillard's Journal*.

THE NEW YORK MEDICO LEGAL SOCIETY.—At the stated meeting of this Society, on May 3d, District Attorney George B. Corkhill read a paper entitled "Insanity as a Defence for Crime." The reader referred to the great extent to which insanity has been used as an excuse for crime. Speaking of the cases in which men who avenge the ruin of their domestic bliss by killing the destroyer, and are acquitted on the ground of emotional insanity, Colonel Corkhill said: "Would it not be more creditable to our juries and more honorable to the administration of justice to let the jury say by their verdict that the justification for the crime was in the character of the act which provoked it, and not encourage and countenance this plea of insanity by a verdict as contrary to their oaths and the law as would be the former? If they must apologize, let it be the more manly apology of open refusal to find a prisoner guilty under such serious provocation, rather than to shield themselves behind a defence in which neither they nor the community which they represent believe."

Colonel Corkhill did not think that insanity should ever be allowed as a plea of defence for crime in the trial of the prisoner under the indictment. When a prisoner proposes to defend his crime on the ground of insanity, a jury should be specially chosen for their fitness to try the special plea, and if the prisoner, after trial, is found to be insane, then he should be confined in an insane prison a certain time commensurate with the character of his crime; if, however, the verdict of the jury declare the prisoner to be sane, the plea of insanity should not be allowed on the trial of the cause. It is not a question whether the plea of insanity should be allowed as a defence for crime, but whether some means cannot be devised under the law by which its existence can be rationally and honestly determined.

Mr. Corkhill's view that the question of insanity should be determined by a special and expert jury is one which has frequently been urged.

A NEW DISCOVERY IN THE PHYSIOLOGY OF THE HEART'S ACTION.—Dr. Thomas J. Mayo, of London, sends us the report of a series of experiments upon the action of the frog's heart made by him in the Berlin Physiological Laboratory. He has succeeded in unearthing a new phenomenon in the physiology of the organ in question. Heretofore it was always found that the pulse-waves of the frog's heart never varied in elevation whether excited by strong or weak electric currents, i.e., an electric current in passing through the heart either produced a maximal contraction or none at all. This was held to be a characteristic mark in the behavior of the heart, which differentiated it from a skeleton muscle. Dr. Mayo has found, however, that under certain conditions this differentiation entirely disappears, and that very striking contrasts between high and low pulse-waves can be called forth in the frog's heart by strong and weak electric currents.

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IMPREGNATION OF A COMPLETELY PROLAPSED UTERUS—ABORTION—EXTIRPATION OF UTERUS AND OVARIES, WITH A LARGE SECTION OF THE POSTERIOR WALL OF THE VAGINA—RECOVERY.¹

By J. T. STEWART, M.D.,
PEORIA, ILL.

MRS. C—, aged thirty-five, of German birth, from Peru, Ill., the mother of five children, was admitted to St. Francis' Hospital, May 23, 1882. She was suffering from extreme procidentia, the uterus and bladder protruding half-way to the knees. Her constitution was good, but she was in an irritable condition and very despondent. I put her on general treatment, to allay this irritation and build her up, until June 12th. At this time I operated on her for narrowing the vagina. The operation was a partial success. It retained the uterus *in situ* four months; the organ then burst through. In the early part of February last she returned to the hospital. The procidentia was even worse than before. The neck of the womb was enormously enlarged, measuring about three inches in diameter, and the entire surface in a state of ulceration.

As before stated, she was the mother of five children, aged respectively fifteen, twelve, ten, and six. She had a miscarriage four years ago at four months. After the birth of the second child the womb prolapsed, protruded outside the body, and was in this condition most of the time until after the birth of the last child, when it came down and remained in a state of procidentia continually. Therefore, according to her account, she had this procidentia for twelve years, and for the last six years continually. It probably resulted from a laceration of the perineum during her second confinement. After the trouble first began she bore three children. It is hardly credible that she should become pregnant while the womb was protruding continually; but that is her statement, and that she miscarried at four months.

Seeing she could be benefited by no operation, except the removal of the entire organ, I so informed her, and laid before her the full extent of the danger of the operation. She said she would rather die than live in the condition she was then in, and insisted on my doing it. I therefore prepared for it, and on February 13th performed it.

The operator was efficiently assisted by Drs. J. P. Johnson, J. Murphy, and J. Studer, members of the hospital staff.

The patient being etherized, the first step consisted in drawing the mass well downward and forward and making a transverse incision on the posterior part through the mucous membrane a little below the junction of the cervix and the body of the womb. Then a longitudinal incision to near the rectum. The uterus was then seized by the fundus and drawn downward and forward through the opening. The uterus with its appendages were thus fully exposed. On one side a ligature was placed just outside the ovary; the ligament was divided inside the ligature, and the broad ligament divided to the uterus between the ovary and the round ligament, leaving the

ovary still attached to the uterus. A ligature was next placed around the round ligament near the uterus, and another embracing the rest of the broad ligament the same distance from the uterus, perhaps half an inch. These parts were then divided. The other side was treated the same way.

The next step was to separate the bladder from the uterus. Here was the great difficulty of the operation, and it was very great. The whole posterior part of the bladder had become firmly adherent, not only so but it had lapped round and adhered to at least two-thirds of the circumference, of the womb. A sound was introduced as a guide, and the dissection began. By the exercise of extreme care and long perseverance this was accomplished without wounding the bladder. The uterus was then severed from its attachments to the vagina. The posterior wall of the vagina being thickened and prolapsed was removed by the scissors. It was then found that at the upper part, where the uterus was separated from its vaginal attachment, the peritoneum was loosened for quite a distance. This was secured by three stitches.

The bladder was then replaced, a wad of absorbent cotton placed over the vulva, and some cotton wadding placed over the abdomen, which were kept in place by a T-bandage.

This completed the operation, which occupied an hour and ten minutes. By this time the patient was in an extremely exhausted condition. She was put to bed, warm blankets applied to her, plenty of fresh air admitted, and, as soon as she could swallow, stimulants given freely. She revived in an hour or two and began to suffer pain, when an opiate was administered. The posterior wall of the vagina was removed for two reasons: one was because it was greatly thickened and prolapsed; the other was to give a fresh surface for the bladder to rest upon.

The posterior surface of the bladder in removing it from the womb was denuded; the posterior surface of the vagina was denuded. In lying on her back these two raw surfaces fell together and adhered, thus making a firm floor to support the intestines, and, of course, the whole posterior surface of the bladder being adherent to the posterior surface of the vagina prevented it from prolapsing.

There was no need to close the external parts. By leaving them open it gave better drainage, and there could be no possible object in closing them. The external parts are now natural. From the outside it is about an inch to the adhesion in the centre. On each side it is about an inch and a half. The adhesion is perfect and complete, closing the whole passage. No catheter was left in the bladder, and it was not necessary. The urine was very easily drawn off. I instructed one of the Sisters how to do it, and she drew it off four times in twenty-four hours for about two weeks, after which time the patient passed it herself without difficulty. I may say here that the secretion of urine was copious all the time. I now give, from notes taken at the time, an outline of the progress and treatment of the case. The operation was done on the afternoon of February 13, 1883.

February 14th.—Fully recovered from the shock of the operation. No fever and not much pain. Continued cotton to abdomen. Applied absorbent cotton to vulva, with two thicknesses of lint moistened with carbolized water over it. The dressing secured by a T-bandage. One-fourth grain opium every four hours.

February 15th.—Patient resting well and feeling com-

¹ A paper read before the Illinois State Medical Society, at Peoria, May 16, 1883.

fortable; respiration normal. Pulse, 110; temperature, 102½. Skin moist. Continue opium, half grain every four hours. Dressing same.

February 16th.—Pulse, 118; temperature, 102°; great thirst. Continue opium and dressing same as yesterday.

February 17th.—Pulse, 80, very weak; temperature, 98½°. Pain and tympanites; vomited occasionally through the night. One-grain opium pill every four hours; drop doses of Fowler's solution every three hours. Gave pounded ice to quench thirst, which was intense.

February 18th.—Pulse, 100, weak; temperature, 98°. Vomiting ceased; diarrhoea. Continue opium; continue ice. Gave Liebig's extract beef and brandy.

February 19th.—Pulse, 80; temperature, 98½°; thirst intense; severe pain in abdomen by spells. Tympanites continued. Ordered one grain opium every two hours; arnica flower poultices to abdomen. Beef extract continued. Champagne given in place of brandy. Ice continued *ad libitum*.

February 20th.—Pulse, 80; temperature, 98½°. Great tympanites and pain. Opium, beef extract, and champagne continued; also the following mixture:

R. Fennel seed	ij.
Manna	ss.
Magnesia carb.	ij.
Tinct. asafetida.	ss.
Barley water	℥℥.

Mix. S.—Tablespoonful every three hours.

Injection into the bowels of asafetida mixture and spirits turpentine.

February 21st.—Pulse, 90; temperature normal; little pain; tympanites increased. Gave an injection of castor-oil and turpentine in soapsuds. It passed off without effect.

February 22d.—Had a restless night; temperature, normal; pulse, 100; tympanites slightly reduced; pain increased. Gave one-fourth grain morphia hypodermically. Continue opium pills. Applied turpentine to abdomen, to be followed by mercurial ointment. A dessert-spoonful of the following mixture every three hours:

R. Spts. turpentine	2 ss.
Ol. sweet almonds.	℥ivss.
Ol. anisi	gtt. ij.
Aq. anisi	℥ij.

Pulv. acacia q.s. to make an emulsion.

Beef-tea and champagne given freely.

February 23d.—Pulse, 90; temperature, normal; tympanites still great; some pain. Repeat hypodermic injection of morphia; continue emulsion. Apply turpentine again, followed by mercurial ointment.

February 24th.—Decidedly better; temperature, normal; pulse, 90; tympanites less; pain less; suppuration healthy. I will say here that tepid carbolized water injections were used daily to cleanse the wound until it healed. Continue treatment as before.

February 25th.—Much the same as yesterday. The intense thirst which has been persistent from the beginning now abating. For this ice has been allowed freely, which is still very grateful.

February 26th.—Still improving. Stop mercurial ointment and apply cotton over abdomen. Emulsion once in four hours, opium at night.

February 27th.—Progressing favorably; bowels regular, as they have been most of the time. Stop emulsion, ten grains quinine during the day and opium at night.

Suffice it to say that from this time on, with the exception of three or four days in the latter part of the third week, during which she had a rather severe diarrhoea, with an almost total cessation of the action of the liver, she improved steadily and very satisfactorily. At the end of five weeks she could sit up a little. In seven weeks she could easily walk across the room alone, and in two months after the operation she was perfectly well.

A few days later she was allowed to go home. That is about a month ago. She says, in a letter she wrote a few days since, that she is as well as she ever was in her life. The drainage-tube was not much used, for the reason that it was not necessary.

HOW TO PROCURE THE BEST POSSIBLE PHYSICAL CONDITION AFTER PARTURITION.

By JAMES D. MACGAUGHEY, M.D.,

WALLINGFORD, CONN.

THE above title headed a paper read before the New York Academy of Medicine, Section in Obstetrics, April 26, 1883, by Dr. R. Tauszky. Then came the important questions, "Why is it that almost every woman, as soon as she becomes a mother, begins to suffer from some pelvic disease?" referring to the very large percentage of gynecological cases in which the morbid condition present could be traced directly to childbirth, and then followed logically the second question, "By what means can the occurrence of these conditions be prevented?" The author proceeds to state those things which will secure the answer to the last question, and in the main I agree, and would take no exceptions, only in regard to his remarks on closing all wounds and suppressing the lochia.

A rapid review of his paper will show where we diverge. In regard to absolute cleanliness on the part of the accoucheur, and the use of carbolic solution for disinfecting the hand before undertaking a case, its importance is thoroughly recognized, even by the skeptic, who, if conscientious, washes his hands in a carbolic or other disinfecting solution, to give the patient the benefit of the doubt. Certainly, all instruments and articles used about the woman should be cleaned and disinfected. The bowels should be properly attended to prior to confinement. Careful dilatation of cervix facilitates the relaxation of the os, and gently pushing up the anterior lip will certainly save it from undue pressure and remove a minor cause of dystocia. Of course, tough membranes should be ruptured, chloroform given if necessary, and, as for the forceps, we all know their value, and, I hope, when and how to use them. As for waiting for the umbilical vessels to stop beating before separating the child from the mother, it would seem to be a foolish delay; if the child is breathing good, and shows active signs of life, separate at once and let the attention be turned to the mother. The writer of the paper in question forgot to mention one important manœuvre which would certainly help him out in his idea of suppressing the lochia, viz., to keep the left hand pressing firmly down on the womb, following it up closely as it grows smaller in expelling the child, and directing an attendant to continue firm pressure while the cord is being separated and the child is receiving proper attention. This way of managing the second stage of labor is very essential in producing the permanent contraction of the uterus, and in causing it to cast off the placenta. Crede's method of expression of after-birth is good, if there is a little tension on the cord; at best, it is an overrated measure.

As for examining the genital passages of *all* puerpera after removal of secundines, and directing that all slight lacerations should be promptly closed, the advice is very good on paper, but very awkward and difficult and often very unnecessary at the bedside; besides, the "meddlesome midwifery" of exposing all women, and of closing slight lacerations or wounds, would involve more, much more, danger to the patient than letting them alone.

The binder should never be dispensed with, the child applied to breasts early, and in the puerperal condition careful disinfection should be strictly observed. But here Dr. Tauszky and the writer diverge, because his advice which follows I think fraught with danger, interfering with nature and the natural post-puerperium physio-

logical processes, and going entirely too far when he remarks that "a little hemorrhage after parturition is a dangerous thing and should be arrested;" and that the "accoucheur should be regarded as guilty of malpractice who would permit a slight quantity of blood to escape from the genital organs of a woman for days after parturition." He maintained that not a *single drop of blood should appear after the completion of the third stage of labor, and that napkins removed should be perfectly free from color* (italics my own); that should they be colored, the physician should at once institute an examination with reference to the source from whence the blood came, and set about arresting it. This point was made more positive in the discussion which followed this extraordinary statement by Dr. Carpenter asking Dr. Tauszky if "he wished it to be understood as saying that not a single drop of blood should be seen in the discharges after the completion of the third stage of labor?"

Dr. Tauszky replied that "no bleeding whatever should take place after labor; that not one single drop of blood should be seen." Surely the days of extremists are here, for in my obstetrical reading I fail to recollect of having seen any such statement made by any acknowledged authority, either in this country or Europe.

I have always thought that it was a well-understood fact, that no one ever questioned, that a sanguinolent flow always follows the parturient state, and that it is necessary. Upon a matter so well known and recognized, it seems hardly worth while to take up space to quote authorities, but on account of the importance of the matter, and of the necessity of fixing the attention on the subject, I will do so briefly. Ramsbotham, American edition, p. 165: "The sanguineous discharge does not cease as soon as the placenta is expelled, *nor ought it to disappear suddenly*; but a continual oozing goes on from the uterine vessels in a greater or less quantity for some time after delivery." It is unnecessary to quote Playfair, Meadows, Meigs, Smith, Barnes, and a host of authorities whose combined dicta have settled the question long ago. Here is Leishman's opinion, third American edition, p. 591: "Efficient and rhythmical contraction of the uterus prevents the flow from becoming so profuse as to be dangerous, but still a certain amount of discharge goes on from time to time; and, indeed, it is well known that the maintenance of this discharge for a certain time after delivery is, to some extent, a guarantee of the favorable progress of the case." Recollect, Dr. Tauszky puts his foot, figuratively speaking, on the womb, and says "not one drop" shall you pour forth, and, still figuratively speaking, if he keeps up the practice will undoubtedly put his foot into it many times. Well, to follow up Leishman, to see how his ideas coincide with the shut-off method. He (Leishman) advises on the second day after confinement, that the woman make water on her knees. Why? Because it (the position) "permits escape of any portion of fluid which may have accumulated in the cavity of the vagina." It seems to me to be ridiculous—a work of supererogation—to discuss this matter, so universally well known and settled. But if a subject is allowed to come before the New York Academy of Medicine and be discussed, and the proceedings be published in a journal so extensively read as THE RECORD, and, moreover, as the practice was not condemned by those present who took part in the discussion, I deem it necessary, from the intrinsic importance of the subject, to call attention to the paper of Dr. Tauszky, owing to the influence it may have upon others who in their zeal are anxious and waiting to adopt some new and novel manner of treating the parturient woman—to call attention to a treatment which is the very opposite of rational, and in the face of well-known physiological facts, that such "meddlesome midwifery" will do just what we don't want it to do.

Those who would wish to suppress immediately the lochia should read Cazeaux on this subject, and, recognizing the increased amount of liquid in the uterus, also

its enormously increased solids, as compared with the condition just before and just after confinement, can easily convince themselves that the physiological function of the lochia should remain strictly undisturbed as long as it keeps within normal limits. I believe, after all, it is impossible, even if desirable, to suppress the lochia after the delivery of the placenta, and the attempt to do so is dangerous. After the third stage, although the womb may have at the time been thoroughly contracted, yet in most cases *there will be a subsequent relaxation*—impossible to prevent owing to circumstances unavoidably appertaining to the woman's heredity, previous health, and many conditions vitiating health prior to labor; the blood will continue to collect in the uterine cavity as it has slowly transuded from the uterine surface, and Dr. Tauszky can't help it or prevent it, and after a rest will be expelled. This flow, commencing some little time after completion of the third stage, continues from twelve to fifteen hours, when it loses its consistency, "the color becomes lighter, and after a short time is changed into a bloody serosity," of course indicating the natural preliminaries of involution and the reproduction of the decidua membrane; and a man that would interfere with this natural process—a process which nature elaborated and perfected in the grand scheme of restoring the puerperal womb to its healthy size and condition—ought to be mulcted for malpractice. The close connection between the secretion of milk and the effect beginning lactation has on diminishing or suspending the lochia shows that you might as well in healthy cases try to suppress the milk for fear of mastitis, as to suppress the healthy lochia for fear of some imaginary evil. After labor the size of the womb must be reduced. Suppressing the lochia would be dangerous, for the reason that in uterine involution, much that is discharged per vaginam would have to be carried by absorption through the circulation, unduly and unnecessarily loading the blood, and throwing a heavy burden upon the eliminative organs of the economy. By its natural retractile power the liquids are thrown out as well as by direct elimination. As Cazeaux remarks, the "uterus retracts its walls gradually, disgorge fluids they had imbibed, and these naturally run toward the central cavity. So long as the large venous canals in its (the womb's) substance are not empty, the discharge continues of pure blood; later it is composed of serum, together with the detritus of the ovum and the mucosities of the organ"—beautiful things to be shut up in the womb and carried out through the general system instead of a "short cut" by the vagina!

Often unavoidable coagula will remain or form in the uterus a day or two after labor, and intravaginal injections fail to dislodge them, and if the lochial discharge is rudely shut off, these clots will decay, as well as all other suppressed discharges, the flow becomes fetid and a cause of puerperal trouble. Then there is a condition of the womb after confinement where the discharges are abundant and the womb high up, called by Leroux humoral engorgement, which he declares depends upon, in his estimation, the fact that "the blood-vessels and pores of the womb, from being distended with blood, do not become empty as soon as usual, because the contractility of tissue is not then active enough to expel it, for the walls of the uterus constitute a true sponge whose meshes are composed of muscular fibres, and which must retract forcibly, so as to express liquids contained in the vessels and vacuities which they form." And so abundant is the flow sometimes that, according to Cazeaux, "the discharge might very readily be mistaken for flooding occasioned by retention of some parts of after-birth or coagula, the more especially as it is accompanied at times by sharp after-pains. But if a finger be passed into the interior of the uterus and no foreign substance found, with assistance of conjoined manipulation he will be easily satisfied that the unusual size of the organ depends on enlargement, and the bloody discharge is beneficial. In such a case the absolute rule of shutting off

the post-parturient discharge would be folly. The prevention of such a condition is difficult if firm, inherent contractions are absent or impaired from some unknown or unavoidable cause; as some wombs, as no doubt has been the experience of every one, will contract and remain firm, while others will contract and subsequently relax. To save prolixity, I will not undertake to give an opinion in regard to the question, "Why is it that almost every woman, as soon as she becomes a mother, begins to suffer from some pelvic disease?" but recur to the question, "How to procure the best possible physical condition after parturition?" If you can, make the woman's home life, social and moral surroundings as comfortable and free from worry as possible, saving and conserving her nervous system to the best extent attainable; pleasant exercise and attention to all the *diseases of gestation*; and, if possible, empty bladder and rectum before labor. Stay by her faithfully and attend to her judiciously during labor, letting ergot alone unless most positively indicated.

When the head, shoulders, and body are being born, with the left hand steadily compress the womb, following it up closely, so that when empty of child it will be firmly contracted on placenta. In fifteen minutes remove placenta by combined expression and tension on cord. Support perineum when needed, and bandage limbs in minor laceration, and operate on larger ones at once. Of course, it is expected of every accoucheur that hands, instruments, and everything about him will be clean and disinfected, as also about the patient. Apply forceps when necessary. *Leave the woman in a dry bed* with a good, intelligent nurse, with strict injunctions about diet, changing clothes, and attending to the breasts. Use the vaginal syringe only when indicated and not as a routine practice. Have the labia, outside and in, bathed three times a day with a solution of carbolic acid and water. Have the moral and social atmosphere as pure as possible; relieve pain. If in a malarial climate give quinine during the two weeks subsequent to labor. I consider this extremely important. Procure sleep, and *recognize deeply all the physiological processes which nature will set in play*. Keep her in bed fourteen days until the relaxed uterine ligaments gain strength and the weight of the womb is reduced, and last, but by all means not least, *let the lochial discharge severely alone, and let no interference be allowed except there is evidence that the proper involution is not taking place*, and the symptoms admonish us that there has been a laceration, and even then surgical interference will not be necessary in more than one-half the cases. It has become too much the fashion to go to extremes in turning up every parturient woman to a glaring light and taking a bird's-eye view of her genital canal, feeling assured that there is a "nigger in the wood-pile" that must be castigated, and in the relaxed, contused, swollen, and bloody passage finding something nature is incapable of taking care of under sensible and hygienic conditions, and trying to prove that nature in child-bearing women is, and has been, making grand mistakes every time a child has been born into the world. Let common sense, tempered and pruned by conscientious study and experience, following the guide-boards, indications, be the dictator. Let us recollect that no man has any right to disturb any *physiological process of nature in regard to labor*, lest he cause a blight to fall upon a home which will cause it to be darkened forever by the death of one of the most sacred and important individuals of the household—the mother. Following out the plan laid down, except in those cases of unavoidably bad labors from some dystocia due to mother, child, or secundines, we believe the results following will be the answer to the question propounded at the head of this article.

THE VARIOUS NEW YORK MEDICAL SOCIETIES have ceased to hold meetings until after the vacation. The larger number will commence work during the first fortnight in September.

TRACHEOTOMY: A REPORT OF TEN CASES, WITH REMARKS UPON THE INDICATIONS FOR THE OPERATION.

By NATHAN JACOBSON, M.D.,

SYRACUSE, N. Y.

I SHALL briefly present the records of my first ten tracheotomies, and purpose dwelling in their consideration upon the train of symptoms which necessitated the operation, and the circumstances affecting the prognosis or influencing the termination of the case.

CASE I.—During the months of June, July, and August, 1880, A. K—, a lad, ten years of age, was under treatment for a suspicious form of laryngeal and bronchial trouble. When first seen he had aphonia. He breathed with difficulty, each respiration being audible, the air producing a rattling noise as it forced itself through the accumulated mucus. He was emaciated, had a cough and night-sweats. No dulness upon percussion, mucous and subcrepitant râles could be heard over either lung. The epiglottis was ulcerated and cedematous; the upper part of the larynx swollen and filled with mucus. Slight glandular swellings about the neck. No fever. No Hutchinsonian teeth. No history of syphilis could at this time be revealed.

Upon cod-liver oil, hypophosphites and strychnia, and local applications of iodoform to the larynx during the succeeding months, his weight increased, his cough left him, the breathing was more free and the night-sweats disappeared, although the pulmonary condition had not materially changed. But during the rainy weather of August he took cold.

August 28th.—The pulse was rapid and feeble; temperature, 104° F.; dyspnea very severe, suprasternal and epigastric depression with each inspiration. Extreme cedema of the epiglottis and upper portion of the larynx existed. Emetics and hot fomentations failed to relieve the distressed breathing. On the following day, the trouble seeming rather aggravated than improved, tracheotomy was performed. Drs. Didama and Totman assisting. In the after-treatment no steam was used; the temperature of the room was maintained at about 80° F. The child remained under the constant care of physicians for forty-eight hours and then was transferred to the parents. The temperature by midnight of the day of operation fell to 99.5°. The following day it was normal, and remained so. On the third day after operation auscultation failed to detect any abnormal respiratory sounds. Anti-syphilitic and tonic treatment was pursued, with the local application of iodoform and astringents to the larynx.

A steady improvement was noted in the after-history of the case.

January 16th, four and one-half months after operation, the tube was removed. The wound healed nicely. There was complete freedom from dyspnea; the lungs were normal; the epiglottis cicatrized. A thickened condition of the mucous membrane of the upper part of the larynx remained; the voice was hoarse.

CASE II.—On the evening of May 30, 1881, I saw Anna H—, aged eight years. She was suffering from the ordinary symptoms of croup. Pharynx healthy. Temperature, 99.5° F. Emetics were prescribed and afforded great relief. On the following day she continued to be hoarse, yet her breathing was free. At this time the laryngoscope detected a fine film upon either false vocal cord, and reaching upward to the aryepiglottic folds. For the succeeding days the case was closely watched. The temperature never reached above 100° F. The breathing gradually grew more distressed, the attacks of dyspnea more severe and frequent, and the hoarseness developed into aphonia. Emetics, slaking lime, steam, and other remedies failed to relieve her. Doctors Pease and Plant were called in consultation to consider the necessity of doing tracheotomy. The operation was performed. For ten days succeeding the operation the temperature continued elevated, varying

from 100° to 102° . A diphtheritic deposit appeared upon the edges of the wound on the fifth day after operation. An erythema existed over the entire body during the second week. The urine was at all times free from albumen. Lime was freely slaked for several days, but seemed to irritate the bronchial tubes. One drop of liquor potassæ in an ounce of lime-water was substituted, sprayed by the atomizer over the mouth of the canula. This would always relieve impending dyspnoea due to accumulated mucus or loose membranes. For two weeks the child could not breathe, when the orifice of the canula was closed by the finger. During the third week air gradually found its way into the lung by the side of the tube. The patient was carefully watched day and night. On the twenty-fifth of June, twenty-two days after operation, the tube was removed.

CASE III.—On January 30, 1882, at 10 A.M., I was called to a child fourteen months old. The family lived in the fourth story of a tenement block, in very destitute circumstances. The child had been sick since the 28th inst. It was very hoarse, had great difficulty in breathing, and a temperature of 100° F. The tonsils were covered with a diphtheritic deposit, the glands of the neck badly swollen. A tent was made with a sheet and lime slaked. During that day and night it constantly grew worse. On the following morning, assisted by Drs. Aberdein and Totman, I did tracheotomy. The trachea was so small that, when the forceps were stretching it, the tube had to be introduced by main force. I could fairly feel the trachea tear under the pressure exerted. Dr. Cowles (who has since met a sad fate at Rochester) and myself in turn remained constantly with the child after the operation, and persisted in freely slaking lime. At eight in the evening diarrhoea appeared, and vomiting soon set in. The breathing remained free, the distress was perfectly relieved. The diarrhoea and vomiting became uncontrollable; the temperature rose to 103° in the evening, 104° during the night, and 105° in the morning. Convulsive twitchings appeared. At three in the afternoon, twenty-eight hours after operation, the child died in a severe convulsion.

CASE IV.—On the evening of July 19, 1882, Dr. A. C. Benedict requested me to see a child affected with membranous croup. I found a girl, seventeen months old, suffering from great dyspnoea. The family was living in some miserably ventilated upper rooms in a tenement house. The child was poorly nourished; had no pharyngeal patches. In an adjoining room was the mother, bedridden with phthisis. I urged that a tent be made and lime slaked. At the morning visit the father insisted that the lime had only helped to make the child worse. Three or four times he had placed the child upon the bed thinking it was dying. The condition certainly was worse, and Drs. Benedict and Totman concurred with me in the belief that unless tracheotomy be performed at once the child would die in a very short time.

There was some little difficulty in introducing the tube, because of the small size of the trachea. For several days some of our medical students watched day and night with the child, after this she was entrusted to the care of the father or willing friends. No case could have had more to contend with in the way of poor nursing, throughout the greater part of its history, than this one. The slaking of lime was discontinued and a solution of one drop of liquor potassæ to an ounce of lime-water sprayed over the mouth of the canula. This would always relieve her dyspnoea. On March 14th an effort to remove the tube was made. Dyspnoea returned at once and the tube had to be replaced. On April 3d the mother died, and, despite the inclement weather, the child was removed in a closed carriage to St. Joseph's hospital. Each month an attempt was made to remove the tube, but as often as it was withdrawn, whether under ether or not, the impending dyspnoea forced its return. The child would talk aloud, utter loud sounds, and apparently breathe freely when the finger was held over the opening of the tube,

yet it was never possible to remove it. The child's general health seemed fairly good. She played about, went out of doors, and was finally removed to Rochester, after having been in the hospital nearly four months.

CASE V.—W. A. S.—, aged fifty-four, a farmer residing in Otiseo, consulted me May 16, 1882. He had aphonia and some difficulty of breathing, which he attributed to a cold. There was a slight scaly eruption, perhaps half an inch square, on the upper lip, but no other cutaneous disease. His pharynx was healthy, but the larynx bore the unquestionable marks of syphilis. I prescribed anti-syphilitic treatment. Returning to my office on the afternoon of June 11th, I found the same person. He was laboring fearfully for breath, was cyanotic, had cold extremities and a very weak pulse. Dr. Munson had seen him in the morning and, recognizing the danger of the case, had sent him to the city to have tracheotomy performed. He was at once removed to St. Joseph's Hospital and etherized. Assisted by Drs. Totman, A. C. Mercer, and Stanton, I operated. Immediate relief was given. Stimulants and sustaining food, large doses of the iodide, a warm room but no steam, were prescribed. After three weeks he left the hospital for home, not a single unfavorable symptom had occurred. The tube, which might have been removed, was left in the trachea to give the larynx proper rest, that it might heal. He labored upon his farm, doing more work than he had in some time. Late in the summer, I am told, he was attacked with gastro-enteritis and died.

CASE VI.—On July 8, 1882, I saw—with Dr. Skinner, of East Syracuse—a child sixteen months old, well-nourished, slightly cyanotic, with hurried respiration and no fever. The child had been seen to put a bean into its mouth two days prior. It strangled, nearly suffocated, and finally, while the parents and friends were working over it, the foreign body was pushed downward. Drs. Skinner and Chase were called. It was impossible to dislodge the bean by emetics, position, or any means resorted to. The fact that the right lung was collapsed and received no air whatever, while all the respiratory sounds were exaggerated on the left side, indicated an impacted right bronchus. Tracheotomy was done, Dr. Skinner assisting. The dissection was very carefully and slowly made. The veins were crowded aside, the trachea finally exposed and opened for about half an inch. The tracheal orifice was held open by Dr. Skinner with a two-bladed dilator. After using half a dozen different forceps in vain, one devised by Stoerk, of Vienna, finally succeeded in grasping a piece of the skin of the bean. Soon another piece of the skin, then half of the bean and finally the remaining half. The wound was closed with straps. On the day after the operation the temperature was 103.5° , respiration 60, and pulse very rapid. The child was very restless and could not sleep, the straps had given way, and the child breathed through the tracheal orifice. Purgative, quinine, and sponging were prescribed. The next day the temperature had reached 104.2° , and no improvement in the other symptoms. The child breathed equally well with both lungs. On the third day the symptoms improved, and by the fifth day all fever disappeared. Five days later the wound had healed and the child fully recovered.

CASE VII.—At noon of October 9, 1882, Dr. Didama requested me to tracheotomize a child five years old, that he had just seen in consultation with Dr. Weaver. I found the child all but dead, with all the terrible symptoms of membranous croup. The little one was chloroformed, and the operation done. It seemed as if it could hardly live through the operation. Drs. Weaver, Totman, and Heffron were present. For two days the child was most carefully watched, with either a physician or a medical student in attendance. The laryngeal distress was completely relieved, but the respiration remained hurried and superficial and at times dyspnoea appeared. The alkaline spray was used, but did not relieve the dyspnoeic attacks as it had in previous cases. The

lungs were found to be œdematous. The heart's action continued very feeble, and stimulants were freely administered. The temperature never rose above 102° , but the lungs continued to grow more and more œdematous, the heart weaker, and finally, on the morning of the 11th, forty hours after operation, the little one died, not of suffocation nor in that terrible distress in which it was before operation, but because of the condition of the lungs.

CASE VIII.—October 22, 1882, at 1 P.M., I saw the child of M. S.—, three years old. The dyspnea was frightful, supra-sternal and epigastric depression marked, cold extremities, and the child dying for want of air. The pharynx was loaded with diphtheritic deposit, the glands of the neck swollen, the pulse weak, and the temperature 103° F. A physician had seen the child at his office on the previous day, and had promised to see the patient on the next, but failed to do so. Tracheotomy was performed, Dr. Totman assisting. The dyspnea was relieved. During the afternoon the temperature gradually increased, despite everything that was done, and at 7 P.M. had reached 106° F. The pulse became so rapid that it could not be counted. The child remained stupid during the entire afternoon, as if prostrated by the general infection. It died evidently of paralysis of the heart.

CASE IX.—About three o'clock on the morning of November 14, 1882, Dr. Oberlander aroused me and requested that I call with him upon a child, seven years of age, suffering with diphtheria. The tonsils and posterior arches of the pharynx were covered with membrane. There was every symptom of extensive laryngeal disturbance, which with the laryngoscope could be seen to be of the same character. It seemed as if the child must die at every moment. The parents consenting, tracheotomy was performed, the father holding a miserable oil lamp, the only source of illumination. An effort was made to chloroform the girl, but instead of relieving the distressed breathing, as it usually does, it tended only to aggravate it. You seemed to be between Scylla and Charybdis, death from chloroform or asphyxia from laryngeal obstruction. The tube was finally entered, the child breathed freely for about a minute, when respiration suddenly ceased and the child was dead.

CASE X.—Dr. Thomas, of East Syracuse, telephoned me about noon of April 2, 1883, to come to that village to see R. A.—, a child two years of age, that had been afflicted with pharyngeal diphtheria for several days. Three days prior to my visit the larynx had become involved. The dyspnea was very great. Tracheotomy was performed at 2 P.M., Drs. Thomas, Skinner, and Chase assisting. The child at once breathed easily, and for the first twenty-eight hours everything progressed fairly well. Twenty-four hours after operation I saw the child again. There was no laryngeal distress, the temperature had risen to 104° ; pulse, 150; respiration, 50. During the afternoon of the second day a very peculiar train of symptoms appeared. The respirations were not very labored, but would at times be very irregular, now rapid, and in a moment so slow that one would think the child had stopped breathing. These attacks would last perhaps fifteen minutes, when, for a time, the respirations would be regular. The temperature was very high; at 2 P.M., 105° ; at 3 P.M., $104\frac{3}{4}^{\circ}$; at 4 P.M., $105\frac{1}{2}^{\circ}$; at 5 P.M., 104.9° ; at 6 P.M., $105\frac{1}{2}^{\circ}$; at 7 P.M., $104\frac{1}{2}^{\circ}$; at 8 P.M., 103.5° . For the reduction of the heat, quinine, sponging, and the cold pack were used. The temperature of the room was kept at 80° . Vessels with steaming water kept the atmosphere moist. The alkaline spray was used. At midnight I was sent for. Dr. Thomas had been in attendance the entire evening. The child had several of the severe attacks of breathing described. At one time it was thought to be dying of collapse, but brandy hypodermically revived it. At midnight, pulse, 160; respiration, 48; temperature, 99.5° , and the child was sleeping quietly. In this condition it remained until 1.30 A.M., when the respirations suddenly increased to

70 and became very shallow. This continued about a minute when the jaws became firmly set, the extremities cold, and the respirations reduced to ten per minute. The pulse gradually became slower and slower, until it reached ninety. Stimulants were given hypodermically as rapidly as possible. Suddenly the child ceased breathing. The heart continued to beat for about a half minute after the breathing had ceased.

Remarks.—The questions now arise: When is tracheotomy indicated? What hope does it afford? What difficulties does it present? What benefit, in reality, is derived therefrom? In the cases here reported the operation was done for immediate relief from impending suffocation, save in the instance where the foreign body was removed from the bronchus. In each case it was the unanimous opinion of the physicians in attendance that without the relief the operation would afford death must follow, and, in many of the cases, that very soon. In each case emetics, lime, steam, or some other favorite mode of treatment, had been thoroughly tried, but without any resulting benefit. In all the same tale is told of increasing distress in breathing, approaching cyanosis, more frequent attacks of dyspnea; shorter intervals of free breathing; labored respiration, with supra-sternal and epigastric depression with each respiration; cold extremities; a pale, anxious countenance; strength exhausted, and the patient dying. Allowed to progress, the patient grows more and more cyanotic, the heart weaker, the lungs œdematous, the breathing more labored, indeed, frightful to behold, and when death comes it is thankfully received, for it frees the patient from terrible agony. Tracheotomy opens the way for supplying the much-needed air to the lungs. The blood is again aerated, cyanosis disappears, the breathing is easy and tranquil, and the extremities regain their warmth. The patient is given an opportunity to outlive the disease. The operation is only done when we feel certain that no other course is left open from which we may expect favorable results. But what encouragement does the operation offer? Let us study the successful cases and see. Of the five that ended in recovery, two were done for syphilitic laryngitis, one for the removal of a foreign body in the bronchus, and two for membranous or diphtheritic croup. In the first case (the child with hereditary syphilis) we gained not only immediate relief from severe dyspnea but a restoration of the lungs to a healthy state; rest for the larynx, and finally a permanent recovery from the laryngeal disease. Fully as much was secured in the other case of syphilitic laryngitis; although when found at my office he was so nearly dead that it did not seem possible that he could survive until conveyed to the hospital. He was so thoroughly unconscious that when he grew better he was unable to recall anything that transpired for two hours prior to the operation.

The case of foreign body in the air-passages is no less instructive. It certainly establishes the fact that an operation of the severity of tracheotomy can be successfully performed, and followed by an equally severe operation of entering the bronchus and removing the foreign substance, in a child but sixteen months old. It has been said that tracheotomy is unsuccessful in children under two years of age. This case, added to the other reported in this paper, and the many others in which our literature abounds, must disprove this view.

The two successful cases of membranous or diphtheritic croup will, perhaps, interest us more. The first, a girl of eight, asphyxiated because of laryngeal obstruction, made a good recovery without any complication, except the appearance of the diphtheritic erythema. The tube was removed three weeks after operation. The wound healed nicely.

The second, as stated in the report, faced all the difficulties a case could contend with. But seventeen months old, a consumptive mother dying in the next room, a miserable home with the vilest and filthiest sur-

roundings, obliged to be cared for by the neighbors, and being transferred during cold and raw weather to the hospital, were obstacles enough. It is but fair to presume that if a child, under these circumstances, could recover when at the time of operation it hardly seemed possible that she could live through it, there must be hope for other children.

As to the unsuccessful cases. The first, a child but fourteen months old, with pharyngeal diphtheria, poorly nourished, poverty-stricken parents, and wretched hygienic surroundings, met its death through cholera infantum with high fever and convulsions.

The second was of good age and robust, but the operation had been too long delayed. (Edema of the lungs existed. The child was exhausted with vomiting and the labor of breathing with the existing dyspnoea. There is good reason to believe that had the operation been done earlier the child would have recovered. The third death was likewise after an operation performed when the child was almost breathing its last. But the terrible general infection and the high fever overpowered the child. The fourth affords an opportunity for argument. Whether chloroform occasioned the death or some hidden cause existed I cannot say.

In the last case, the child did nicely for twenty-four hours, but the peculiar respiration and the accompanying peculiarities of pulse and temperature point, in my mind, to some central disturbance as the cause of death.

In all cases the object for which tracheotomy was done was thoroughly accomplished. The patient was made to breathe freely. Now the question arises, What is the duty of the physician in this class of cases? When called to a case of diphtheritic or membranous croup, it should be his care to thoroughly enlighten the parents as to the character of the disease and what may develop. He should carefully watch its progress. If accumulating mucus in the larynx obstruct the passage of air, emetics may be administered to relieve it. But their persistent and continued use in cases where adherent membrane alone occludes the passage can only result in debilitating the child, while affording no relief to the dyspnoea. The use of the line should not be continued when it fails to afford relief or hold the disease in check. As will be observed I have had but poor results from its use. The physician is culpable if tracheotomy be long delayed, and resulting oedema of the lungs and a weak heart develop. The operation should not be done as a last resort after the ill-spent effects of turpeth mineral, sulphate of copper, alum, and the host of other emetics have exhausted the child. There is no reason why a case should be watched from day to day, continually growing worse, and then operated upon under the dim light of a miserable kerosene lamp, at an early hour in the morning, just as the child is ready to shuffle off its mortal coil.

We cannot even assure the parents that the child will live through the operation; but should it, we can safely promise that it will breathe freely. One thing is sure, they have nothing to lose, everything to gain by tracheotomy. Moreover, they should be given to understand the necessity of patient watching. The child must not be allowed to sit up, for fear of syncope, to turn its head, for fear of inducing suffocation. The tube must be cleaned at proper intervals. The temperature of the room must be cared for; a moist atmosphere produced. Weeks, perhaps months may pass before the tube can be removed and the child breathe per viam naturalem.

These are the points that we must consider in asking ourselves what can we expect from, what can we promise for tracheotomy.

THE LAW AND THE DOCTOR.—Dr. McLean, of Ann Arbor, Mich., has been successful in his action for libel against the *Detroit Evening News*. He has recovered damages to the amount of \$20,000.

Progress of Medical Science.

OXYDENDRON IN ANASARCA.—Dr. Clendenin (*Therapeutic Gazette*, April, 1883) calls attention to a drug which the eclectics have had good success with in the treatment of dropsy. The drug in question is sourwood (oxydendron), which grows abundantly throughout the Southern States. The leaves and bark of the sourwood contain the medicinal properties, being diuretic and laxative. The best way to use it is to make a semi-solid extract, which should be worked into two grain pills, to be given in doses of two or three pills, three times daily, gradually increasing the dose each day until twelve or fifteen pills are given during the day, then gradually decreased day by day until the original dose is reached. By this mode of treatment he claims dropsical effusions of the worst form may be often removed.

SUBACUTE DIFFUSE SARCOMA OF THE PERITONEUM.—The following case is reported by Dr. E. Gaucher in *La France Médicale* of March 31, 1883: A young man, twenty-seven years of age, had been suffering for two months with obstinate diarrhoea, the stools at times being mixed with blood. He emaciated rapidly and lost strength. About a week before admission to hospital his abdomen began to increase rapidly in size and his legs became cedematous. The belly was hard and tense and very painful on pressure. There was excessive tympanites with but moderate ascites. The latter, however, increased rapidly after a few days, and so interfered with respiration that it became necessary to perform paracentesis. About twenty-five ounces of sanguineous fluid was taken away. The patient appeared to be relieved by the operation, but died three hours later. At the autopsy the peritoneum was found to be thickly studded, throughout its whole extent, with very vascular cancerous vegetations resembling raspberries. The omentum presented a most peculiar appearance, entirely covered, as it was, with these raspberry vegetations, filled with blood and pressing closely one against the other. There were no cancerous lesions to be found in any of the viscera, nor was there any glandular infection. The vegetations were seen under the microscope to be composed of embryoplastic cells, closely pressed together, and sustained by a delicate network of fibrous connective tissue. There was a large number of newly formed blood-vessels.

NAPHTHALINE AS AN ANTISEPTIC.—In a monograph entitled *Die Wundbehandlung mit Naphtalin*, Dr. Carl Bonning has formulated the results of upward of fifty cases in which naphthaline dressings were employed after operations in the Strasbourg surgical clinic. From a study of these cases, as also of a number of other less serious injuries treated in the polyclinic, he feels justified in regarding this substance as a most valuable antiseptic. He sums up its advantages as follows: 1. It is very cheap—a consideration not to be despised, especially in hospital practice. 2. It is convenient to handle and easy of application: it is simply sprinkled in powder upon the wounded surfaces and the dressings, or cavities may be filled with it. 3. It is not poisonous, and thus may be used without fear in cases in which the employment of carbolic acid or iodoform might be attended with untoward consequences.

In a brochure on the same subject (*Naphtalin in der Heilkunde und in der Landwirthschaft*), Dr. Ernst Fischer speaks most highly of its destructive action upon the lower forms of animal and vegetable life. He advances the same considerations in its favor as does Dr. Bonning, viz.: its ease of application, its non-poisonous properties, and its cheapness. Among its disadvantages he recites: 1. Its insolubility in water, whereby it is unsuitable for the disinfection of wounds which are to be closed by suture. 2. Its disagreeable odor. 3. The pro-

fuse secretion which naphthaline excites where it is applied to a large extent of wounded surface. He recommends its use also in skin diseases of parasitic origin. The second part of the monograph is devoted to a consideration of the value of naphthaline in agriculture, and especially of its destructive action upon the phylloxera.

LAPPA MINOR IN PSORIASIS.—Dr. W. C. Reiter (*Squibb's Ephemeris*) claims that the use of a tincture of burdock seed has yielded excellent results in the treatment of psoriasis. The tincture is made from one part of burdock seed ground fine, and macerated with eight parts of diluted alcohol. The dose is a teaspoonful.

URIC ACID AND RENAL CONCRETIONS.—In the Lumen Lectures for 1883, Dr. Garrod (*British Medical Journal*, March and April, 1883) took for his text the physiology of uric acid and its relation to renal calculi and gravel.

Two theories, he said, as to the origin of uric acid in the animal economy are advanced. In the first, the kidney is regarded simply in the light of a strainer of the uric acid which is formed in the blood, and passes through it. In the second, the kidney is held to be the actual producer of uric acid, and the presence of this principle in the blood and tissues is explained by resorption from the renal cells, a process which becomes more marked in proportion to the difficulty which the uric acid has in finding its way to the uriniferous tubes.

The human subject excretes on an average in the twenty-four hours about one part of uric acid for each 120,000 parts of his weight, whilst in birds the amount excreted is about $\frac{1}{120}$ part of the body-weight. Again, the blood of the bird is as free as, and often freer than, that of man from uric acid, so that it is hardly possible to look at these facts and maintain the first theory that uric acid first exists in the blood.

Another point which goes to disprove the first theory is that in the kidney-cells uric acid exists combined with ammonia, but when found in the blood, or deposited in the tissues, either of man or the lower animals, it is in the form of urate of sodium. If the second view is adopted, and it is assumed that urate of ammonium is produced in the kidneys, and that it sometimes becomes resorbed into the blood after its formation, experiments show that urate of ammonium is readily converted into urate of sodium, if added to a solution containing a large excess of either phosphate or chloride of sodium. The presence of urate of sodium in the urine of man and the carnivorous mammal is explained by the fact that the urate of ammonium meets with large quantities both of phosphate and chloride of sodium, and thus becomes converted. Those who consider that uric acid is formed before it reaches the kidneys, generally fix upon the spleen as its source; and Dr. Michael Foster remarks in his work on physiology that the increase of uric acid during ague and during ordinary pyrexia seems to run parallel to the turgescence, and therefore, presumably, the activity of the spleen. As far as Dr. Garrod's experiments go he has, however, proved that the spleen of the turkey and common fowl is almost entirely free from uric acid, and that of the ox contains a good quantity, whereas the urine of the turkey or fowl contains much more uric acid than that of the ox. One fact is mentioned as regards the second theory, and that is—that the urine of the sucking calf and the young of other herbivora contains uric acid in notable quantities, while that of the adult animal is usually free from it, making it hard to reconcile the view that uric acid is formed in the kidneys.

Uric acid is the chief ingredient of human urine to which attention is directed, and it is shown: 1. That uric acid exists in the urine as urate of sodium, unless the urine is very ammoniacal; then the uric acid, meeting with a large excess of a new base, is deposited as urate of ammonium. 2. That uric acid is held in solution in an acid fluid solely on the tribasic character of

phosphoric acid, for with the urate of sodium is also formed the acid phosphate of sodium, which exhibits a full acid reaction, but does not possess the power of precipitating the uric acid. 3. That whenever any free acid exists in the urine, the uric acid is immediately precipitated. 4. That the different shapes which uric acid assumes when it is precipitated from its state of solution are, either in combination with a base, *i.e.*, in the form of a urate, or a free uric acid.

After demonstrating the action of carbonate of lithium on small calculi, and on the spherules from the urine of reptiles, Dr. Garrod draws attention to the influence of diet on the production of renal calculi, and assumes that whatever in the way of food tends to produce gout tends to develop calculus also. Special stress is laid on the effects of saccharine food and of different alcoholic beverages on the uric and excreting function, and an important point is noticed with regard to allowing patients a proper amount of animal food, as it does not tend to increase the amount of excretion of uric acid. With regard to the causes of gravel and calculi, Dr. Garrod's experience shows him that gouty subjects, or those who inherit that diathesis, are more liable than others to gravel and calculus. Portal congestion is another point to be looked at in the prophylactic treatment of gravel and calculus. Where there is a tendency to the rapid deposition of uric acid from the urine, the value of water as a therapeutic agent is shown. Speaking of the effects of alkaline treatment, the advantage of the lithia salts is discussed. Hippuric and benzoic acids in an alkaline solution possess the power of changing and removing uric acid, so that these salts should become valuable in the way of treatment, and great benefit has resulted from the use of benzoate of sodium in cases of gout and of gravel and calculus; and if you wish at the same time to increase the quantity of the urinary excretions, then give the benzoate of potassium or of lithium.

THE ORIGIN OF ARTICULAR INFLAMMATION.—Professor Schüller observes (*Deutsche Med. Wochenschrift*) that at the present day we do not think of inflammation except in connection with some special inflammatory excitant. Such exciting material may be chemical or organic, and may enter the joint in one of three ways: 1, through an external wound into the joint; 2, by the blood; 3, by spreading from the neighboring tissues. With respect to open wounds of joints, antiseptic surgery has taught us that they are not inevitably followed by purulent inflammation, as was formerly supposed, but only when some of the exciting causes of inflammation can enter the wound and develop in the joint. Inflammation in closed joints cannot be caused by contusion, unless there be an exciting cause of inflammation in the blood itself, or in some part of the body where it can pass easily into the circulation, and so reach the joint by means of the extravasation. Such a cause must be always present when inflammation of a joint results from a simple injury. Metastatic inflammation can take place in the joints without injury of any kind, as in acute rheumatism, pyæmia, etc.; and the exciting material may be micro-organisms, as in pyæmia, or a chemical substance, as in gout. The anatomical arrangement of the tissues of the joint probably predisposes to the deposition there. Lastly, inflammation may result when the excitants enter the joints from the neighboring tissues, which they may do suddenly, as in some forms of acute osteo-myelitis, gradually invade the articular tissue from point to point, as in syphilitic and tuberculous inflammations, or enter through the lymphatics, as in phlegmonous infiltration and some forms of acute infectious osteo-myelitis. Dr. Schüller finally points out how many of the old ideas on inflammation of the joints are again coming to the front, how great is the advance which we have made in the knowledge of the subject, but how much still remains to be done before we have a clear insight into the processes and causes of the inflammation.

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New York, June 30, 1883.

COLLATERAL INNERVATION.

M. RICHELLOT has recently communicated to the Société de Chirurgie the report of a case which appears to indicate the possibilities of a collateral motor innervation developing when the normal nervous supply has been cut off. The patient, a young man twenty-six years old, had at the age of seven sustained a compound fracture of the right humerus just above the elbow. The bone healed, but the median nerve had been injured, and its integrity destroyed. There was, consequently, paralysis of the flexors of the fingers, of the outer lumbricales, and anesthesia of the palm of the hand, ball of the thumb, and first and second fingers. In the course of two years sensibility was gradually restored. Movement also returned to a considerable extent, the movements of the fingers being feeble but free. The muscles of the forearm and thenar eminence were considerably atrophied. The patient applied for relief from pains in the arm, caused presumably by a neuroma of the median nerve just above the elbow. The tumor was removed, and in doing so the median nerve was entirely severed. Curiously enough, motion and sensibility continued in the fingers nearly as before. The hypothesis suggested is that a collateral innervation, probably from the ulnar, had gradually developed. The phenomena of collateral innervation of sensory nerves has been often observed, but that of motor nerves is certainly rare. M. Verneuil reported a somewhat similar case, however.

BICYCLE RIDING.

It may be laid down as a rule, to which there are few exceptions, that an out-door sport which maintains for years a wide popularity is not essentially an injurious one. The average man is a tolerably sensible creature, and learns sooner or later whether a particular practice is hurting him or not. So it is that ball-playing, tennis, cricket, boating, all have, as a general result, the promotion of health. Some individuals are injured, as some individuals always will be, no matter what they do. But the criticisms directed against these various pastimes apply only to an over-indulgence in them.

The question as to the healthfulness of bicycle-riding has been much agitated of late. Some medical journals and medical men have asserted that the practice leads to all kinds of troubles: hernia, varicocele, sexual weakness, spermatorrhœa, and so on. This is a view which is unquestionably not true, so far as facts at present show.

There are certain individuals whom it may injure, and there is a certain number of accidents which must inevitably accompany locomotion on a somewhat unsteady vehicle. But bicycle-riding is not injurious to the mass of those who practise it. We do not consider it a model form of exercise. It brings into play chiefly the extensors of the foot, the flexors of the leg, and the abdominal muscles. The chest or arm-muscles are not greatly exercised, and there is, at times, some mental tension connected with the possibility of at any time taking a "header."

For all this, bicycle-riding is an excellent form of exercise, as well as an exhilarating mode of locomotion for many people. The propagation, by certain alarmists, of the view that it is going to spread the disease of the Scythians among us should be discountenanced.

THE MEDICAL VACATION SYSTEM.

Just now the fancy of the city physician lightly turns to thoughts of summer hotels and sea-side resorts. The exodus to these places appears to be greater every year, until in this particular city, in August the inhabitants have to depend chiefly upon the natural salubrity of the climate and counter-prescribing in their physical distresses.

Going out of the city, however, does not by any means signify that the doctor is taking a vacation. The custom is rapidly growing of taking up a summer practice, and it is one which often furnishes no small addition to the doctor's income. By a practice at a summer resort he enlarges his acquaintance and greatly multiplies his fees.

There are very few medical men who do not need all the money they can earn, and to some a vacation practice is almost a necessity. It is one that is not without abuses, however. The physicians at summer resorts have in too many cases developed remarkable business talents, and have shown a capacity for capturing patients and sending in bills which would adorn the memory of Captain Kidd or the lamented Jesse James much more than the members of a learned profession. In fact, the "hotel doctor" has been rendered a suspicious character in some quarters, and we fear justly so. It is certainly very much to be regretted that medical men should risk the dignity and honor of their profession for the sake of earning a few more dollars.

A new phase of the summer vacation system is gradually developing, and not in this city alone. It is the custom of letting other physicians know by card where one is to stay during the summer. The practice is, within proper limits, a good and useful one. It is the custom in Germany every spring, when the bath season sets in, for medical men to announce in the medical journals where they will practise during the summer. A summer medical directory might be a desirable thing for the city physicians of this country.

OUR DISPENSARIES.

ONE of the younger men attached to a large dispensary in this city, writes us as follows:

"DEAR SIR: A patient, a German liquor dealer, came to my class in the dispensary, a short time ago. After being treated a few times, he took out his pocket-book to

put in it some directions I had written. It was bulging out with bills so that he could hardly shut it. I wanted very much to exchange it with my own.

"An old lady comes to me wearing gold jewelry and a silk dress, and looking very much as though she had a large income. She wore such a benignly respectable air, however, that I didn't like to ask her whether she was a fraud or not.

"Two or three nicely dressed school-girls come to my class. Their parents can evidently afford to dress them nicely but wish to shirk their doctor's bills. It is, I believe, a very prevalent practice, and one that is extending, for the head of a family to send his wife and children to the dispensary. For a long time I treated the wife and child of a German engraver who earned (as I learned later) about \$80 amonth. But he would not give his family any money with which to pay for medical services.

"I wish that something could be done for these cases. It makes a good deal of dispensary charity seem like a humbug, and it seems rather hard on the doctors.

"Very truly yours, M. S."

Our correspondent has touched upon an old theme and an old abuse. The suggestion that the paterfamilias who holds the purse-strings is getting into the habit of sending his family to the dispensaries deserves consideration. We would call the attention of our correspondent, as well as of all connected with dispensaries, to the fact that a partial remedy at least for the abuse described is at hand. The Charity Organization Society has undertaken to investigate all suspicious cases that are reported to them. If a little pains were taken to send to the Secretary of this society every week or oftener, a list of patients suspected of being able to pay, a great deal could be done.

It would not take a long time to create the impression that dispensaries were only for those who can not pay. In fact, with the opportunities which we understand are now offered, it is largely the doctor's fault if he continues to treat gratis those who can afford to pay him.

NEUROLOGY AND THE AMERICAN NEUROLOGICAL ASSOCIATION.

THE meeting of the American Neurological Association, which took place in this city last week, is said to have been one of unusual interest, scientifically and socially. Representatives from Chicago, Philadelphia, Baltimore, Boston, and other cities, were present. The President, Dr. Hammond, in his retiring address, referred to the continually increasing prosperity of the society, but expressed some surprise that a specialty so broad and comprehensive as neurology should not excite a still greater interest than it had done. The explanation suggested was that nearly every practising physician felt himself to be more or less of a neurologist. However this may be, it is no doubt a fact that less special attention is paid to nervous diseases by medical students and by practitioners than to many other much narrower branches of medicine. Clinics for nervous diseases are but poorly attended unless the lecturer has some special popularity. And even in some large colleges a general practitioner is thought quite capable of lecturing on neurology. This indifference is to be deprecated, since a sound knowledge

of the nervous system in health and disease is indispensable to a correct and rational method of practice.

The American Neurological Association is doing something toward exciting a wider interest in its important department.

News of the Week.

THE DEATH OF DR. MORITZ MICHAELIS, of this city, occurred on June 23d. Dr. Michaelis was born at Detmold, Germany, in 1811, and came to New York in 1840. He was well known for his obstetrical skill, kindly disposition, and unostentatious charities.

UNITED STATES SANITARY INSPECTOR AT HAVANA.—Dr. Daniel M. Burgess has been reappointed Sanitary Inspector for the United States at Havana. Dr. Burgess will act under the direction of the United States Marine Hospital Service and the immediate direction of the American Consul-General for the sanitary inspection of vessels bound for the United States.

A REJECTED CANDIDATE.—A woman physician recently made application for admission to the Onondaga County Medical Society, at Syracuse. She was rejected by a vote of thirteen to six. It was stated that she had advertised in the daily papers.

CONCERNING MEDICAL DEGREES IN GREAT BRITAIN.—Our London correspondent calls our attention to the fact that *not* is omitted in the last sentence but two, second column, page 614. It should read: "The L.R.C.P. is *not* a physician's diploma."

THE TYPHUS CASES FROM ST. STEPHEN'S HOME.—The children attacked with typhus fever at St. Stephen's Home and removed to Riverside Hospital, have nearly all recovered, a few only of the recent cases being still under treatment. The fever appeared in only one of the houses belonging to the Home, and the number of cases thus far occurring is twenty-four. With a view to thoroughly eradicate the infection it has been determined by the Health Department that the children exposed to the fever be removed to North Brothers Island for quarantine and observation, and the house in the meantime be renovated. For this purpose the old hospital building on the island has been put in order, and early last week the children were transferred to their new temporary quarters, where they will enjoy a few weeks of fresh air. One of the trained nurses at Riverside Hospital has been very sick with typhus contracted from the children under her care, but is now convalescent. This is the third one of the regular nurses that has taken the fever since its recent advent among us.

THE PROGRESS OF THE TUBERCLE WAR.—The acerbity of Koch's criticisms of his Vienna critics has stimulated them to a remarkable activity in the study of tubercle bacilli. At a meeting of the Vienna Society of Physicians, May 11th, Professor Stricker and Dr. Spina reported further results. They reaffirmed the opinion that the tubercle bacilli, so-called, were not characterized by a peculiar staining which other bacilli did not take. They asserted that this bacillus could not be considered a special form, morphologically or chemically, of micro-

organism, and further, they asserted that they had produced tuberculosis in perfectly healthy guinea-pigs by injecting particles of glass and cinnabar. It is expected that a commission will be appointed by the Society to settle the whole question.

UNINTERRUPTED SERVICE.—In the surgical division of the Roosevelt Hospital, the plan of having an uninterrupted service, which has been on trial during the past year, has received the approval of the Board of Trustees, who, at a recent meeting, reappointed Dr. Henry B. Sands as the sole attending surgeon, to serve during the pleasure of the Board. Dr. Wm. S. Halsted was reappointed in a similar manner, as Dr. Sands' assistant, and was also placed in charge of the out-door surgical department, which, with an out-door medical department, under the direction of Dr. J. West Roosevelt, has just been established. The hospital contains seventy-five surgical beds.

AN INTERNATIONAL CONGRESS FOR THE PROTECTION OF INFANTS was opened in Paris on June 15th. It is held under the auspices of the Society for the Protection of Abandoned Infants.

IODOFORM AS A VERMIFUGE.—Dr. Schildowsky finds that iodoform is an excellent remedy for nematoid worms. He gives it in doses of one grain to adults.

DEATH OF PROFESSOR VALENTIN.—One of the Nestors of Physiology, Professor Valentin, of Berne, Switzerland, died on May 25th, in the seventy-third year of his age.

DR. JOHN SWINBURNE has been elected mayor of Albany.

THE LATE DR. WILBUR'S SUCCESSOR.—Dr. G. A. Doren, of Columbus, O., has been elected Superintendent of the New York State Asylum for Idiots.

BANQUET IN HONOR OF M. VILLEMIN.—A banquet was tendered on May 26th, by a number of eminent Parisian medical men, to Professor Villemin, of Val-de-Grâce. It was rightly considered very appropriate that now, when the infectiousness of tuberculosis is so universally conceded, that M. Villemin, who first experimentally demonstrated the fact, should be remembered. It was on March 6, 1865, Villemin inoculated a rabbit with particles from a phthisical lung. The animal subsequently died of phthisis.

KRAO, THE MISSING LINK.—There is now on exhibition at the Westminster Aquarium, London, a girl seven years old, who presents many striking simian characters. Her body is covered with hair, her face is very prognathous. Her feet are prehensile, and she can pick up even small objects from the floor. She comes from Laos, in the interior of Indo-China, and her parents are both covered with hair. She can speak some words of English. A full account of her is given in the *Revue d'Anthropologie*.

DR. W. H. DUKEMAN, of Olean, N. Y., is the author of the article on "Impermeable Stricture of the Urethra," in our last issue, instead of Dr. W. H. Dikeman, as printed.

THE COLLEGE OF MIDWIFERY OF NEW YORK.—At the completion of the first annual course in this institution nine candidates presented themselves for examination. Of these, seven passed very creditably and two were rejected. The following are the names of the grad-

uates in the order of their merit: Katie E. Vanderbilt, Marie Mount, Annetta Meyer, Kathrine Mergel, Bridget A. Mullady, Rosina Stuhlfauth, Theresa Hall. The standard of requirements for midwives is high, the examinations are impartially made by a board of censors, and the school is destined to be a success.

THE ELECTION OF THEOPHILUS PARVIN AS PROFESSOR OF OBSTETRICS IN JEFFERSON MEDICAL COLLEGE.—The Trustees of Jefferson Medical College, Philadelphia, elected, at their meeting held June 25th, Professor Theophilus Parvin, of Indianapolis, successor to Professor Ellerslie Wallace in the chair of Obstetrics. This is one of the best appointments that could have been made. We congratulate the college on securing the valuable services of this distinguished and successful teacher, and predict for him a brilliant future in his new career of usefulness.

A POLYCLINICAL DINNER.—The Faculty of the New York Polyclinic gave a dinner at Delmonico's to the assistant clinical staff, on June 23d.

FLOATING HOSPITALS.—The German admiralty, says *Gaillard's Medical Journal*, are going to try a novel experiment, as they intend to send a complete hospital ship to accompany the Baltic squadron on its evolutionary cruise. A corvette has been fitted with cots, requisites for the sick and wounded, instruments, and operating tables. It is intended that in any future war the vessel shall accompany the fleet into action, carrying the Geneva flag; and, in order further to distinguish her, she has been painted white with a red streak.

A DRUGGIST SENTENCED FOR SELLING TOO MUCH MORPHINE.—A Parisian druggist has been sentenced to eight days' imprisonment and a fine of twenty-one hundred francs for selling four hundred dollars' worth of morphine in the space of ten months to one of his customers.

A GERMAN-AMERICAN MEDICAL MONTHLY.—The *Medicinish-Chirurgisches Correspondenz-Blatt* is the title of a new monthly intended for German-American physicians. There are over two thousand of these in the country, and it is thought that they need an organ. The journal is published in Buffalo, N. Y., and edited by Dr. M. Hartwig, of Buffalo, in conjunction with Dr. Meisburger, of the same city; Dr. Jacobson, of Syracuse; Dr. Proegler, of Fort Wayne, Ind.; Dr. Schwartz, of Vienna; and Dr. Reuter, of Berlin. In an editorial note, commenting on the Code controversy, the editor says: "The physicians in Germany have never felt the need of a Code, and have never had one. The general rules for guiding the conduct of gentlemen have been found sufficient." It naturally appears strange to foreign eyes that American physicians alone are the only ones throughout the world who seem to think that they need a written Code.

ECLECTICISM IN MICHIGAN.—We are informed by the *Eclectic Medical Journal*, that a bill to establish a department of eclectic medicine in the University of Michigan has been introduced in the Legislature of that State. Should it pass, the unique spectacle would be presented of the three systems of medicine—regular, homeopathic, and eclectic—being taught in one and the same institution.

Reports of Societies.

THE AMERICAN NEUROLOGICAL ASSOCIATION.

Ninth Annual Meeting, held in New York, June 20, 21, 22, 1883.

WEDNESDAY, JUNE 20TH—FIRST DAY—AFTERNOON SESSION.

THE American Neurological Association convened in the hall of the New York Academy of Medicine, and was called to order at 2.30 P.M., by DR. WILLIAM A. HAMMOND, of New York, the retiring President, who made a few appropriate remarks, and then introduced the President-elect, Dr. R. T. Edes, of Boston.

Dr. R. W. Amidon, of New York, was elected Secretary, *pro tem*.

THE PRESIDENT'S ADDRESS.

DR. EDES said that if he were called upon to select a single word that would best express the progress made in neurology during the last few years, that word would be "localization." Although we see where the blow has struck, it is worth while to consider how important is the knowledge which is so greatly lacking, or so merely speculative as to its nature and origin, and how essential it is that correct views should prevail as to early symptoms. Two opposite views prevail, in two classes of minds, as to the significance of symptoms which have not become thoroughly declared. One set of men, who may be found especially among the therapeutists, are prone to consider every recovery after symptoms which are more or less allied to those that point to the serious organic diseases as cures, and such they may be in some cases. The error consists, not in recognizing the beneficial effects of treatment, but in not considering that disorders which are at the beginning functional, or hardly more than such, may turn toward recovery or toward organic lesions. The other error is that of the anatomist, who looks at all diseases in the light thrown backward from the autopsy, and who is apt to think of lesions as existing from the beginning, and regard failure in therapeutics as a mistake in diagnosis. But both classes of minds are necessary to the progress of neurology, as for other branches of medicine, and both require for their correction that most important piece of apparatus, without which no physiological laboratory is complete, no matter how elaborate its other furnishing is, that vulgarly known as the "level head." One of the first thoughts in all our minds must be the losses which the meeting of the Association had sustained in the absence of the Secretary, who had done so much of the scientific work, and in the death of one with whom many often differed, but whose laborious investigations and suggestive writings had added so much to our interest and instruction.

In conclusion, Dr. Edes read a letter from Dr. Seguin, dated Zurich, Switzerland, May 30, 1883, in which he expressed the unabated interest he retained in the welfare of the Association, and sent a friendly greeting to the members, from whom, without exception, he recalled only courteous and friendly acts.

The Council reported that they had examined the papers presented by the following candidates, and recommended that they should be elected to membership in the Association: Drs. Leonard Weber, of New York; G. L. Walton of Boston; and J. T. Eskridge, of Philadelphia. These gentlemen were unanimously elected.

NOMINATION OF CANDIDATES.

Dr. Ralph L. Parsons, of Sing Sing, N. Y., and Dr. Charles F. Folsom, of Boston, were nominated for active membership.

NOMINATION OF OFFICERS.

Dr. Isaac Ott, of Easton, Pa., and Dr. Landon C. Gray, of Brooklyn, were nominated for *President*. Dr. Ott was elected.

Dr. W. R. Birdsall, of New York, and Dr. J. J. Putnam, of Boston, were nominated for *Vice-President*, and Dr. Birdsall was elected.

Dr. R. W. Amidon, of New York, and Dr. E. C. Seguin, were nominated for *Secretary* and *Treasurer*. Dr. Amidon was elected.

Drs. J. J. Putnam, of Boston, V. P. Gibney, F. P. Kinnicutt, and W. J. Morton, of New York, were nominated for *Councillors*. Drs. Gibney and Morton were elected.

DR. CHARLES L. DANA, of New York, moved that the President appoint a committee of two to prepare suitable resolutions with regard to the death of Dr. George M. Beard. The President appointed Dr. C. L. Dana and Dr. C. K. Mills, and suggested that the committee prepare a letter to be entered upon the minutes, instead of the usual resolutions.

Dr. W. J. MORTON, of New York then read a paper on

NEURITIS FOLLOWING DISLOCATION.

The paper constituted a contribution to traumatic neuritis, and was illustrated by a case following dislocation of the humerus. The essential features were the following: Injury to the brachial plexus, motor paralysis, sensory disturbance (exaggeration of tactile sense, hyperalgesia, diminished temperature sense), reaction of degeneration, cedema, glossy skin, painful joints, causalgia, fibrous hyperplasia, neuro-muscular hyper-excitability, extension of disturbance to opposite member; that is, ascending neuritis.

The patient, Alexander M—, sixty-five years of age, about ten months ago slipped on the sidewalk and fell, striking on his right shoulder. His arm was rendered nearly motionless, the shoulder painful, and soon the hand and forearm swelled. He went to Bellevue Hospital, had his shoulder set, and remained there two days. From the hospital records the following note was taken: "Admitted September 27, 1882; diagnosis, alcoholism and dislocation of the humerus; discharged September 29th." The record was important only as establishing the fact that dislocation existed.

An interesting feature in the case was the fact that the left, or opposite arm, at the end of ten months, showed evidence of being affected by the injury originally inflicted upon the right axillary plexus. Electrical changes were present, which approach to the reaction of degeneration so prominent in the right arm; but more curiously, neuro-muscular hyper-excitability was also present, although in a modified form.

Two noteworthy symptoms were noticed. First, fibrous hyperplasia. The usual nutritive disturbance following neuritis is atrophy of various tissues. Dr. Morton had found only one such case, that reported by Weir-Mitchell, and his case formed a fitting companion for it. As regards the hyperplasia, it ranks with Mitchell's as a unique observation.

Second, neuro-muscular hyper-excitability. If we would find an exact parallel we must turn to Charcot's description of the condition discovered by him during the lethargic stage of hypnotism, and designated by him neuro-muscular hyper-excitability. After reviewing Charcot's views and conclusions at some length, concerning this phenomenon, Dr. Morton concluded that neuro-muscular hyper-excitability is not alone found in the hypnotism of the hysterical, but that it may exist in ascending neuritis which has reached the spinal centres.

DR. C. K. MILLS, of Philadelphia, said that Dr. Morton's case called to mind several cases of brachial neuritis which had fallen under his observation, and in one of them the phenomena spoken of under the term neuro-muscular hyper-excitability was present in one arm at least.

In one patient, also, symptoms had developed in the other arm, as in Dr. Morton's case.

As to the question of neuro-muscular hyper-excitability, it presented one of the best fields for discussion, from a scientific standpoint.

DR. GIBNEY, of New York, had found that it was in cases of Pott's disease where the excitability of the muscles was most marked the most perfect cure could be promised; and he queried whether the hyper-excitability in the class of cases under discussion might not have a bearing on prognosis.

DR. S. G. WEBBER, of Boston, had tried various measures in the treatment of neuritis, and had found that blisters yielded the most satisfactory results.

DR. W. A. HAMMOND, of New York, advocated that rest of the nerve, as far as possible, should be insured, believing it to be one of the most essential elements in effecting a cure. He believed that the only way in which stretching an inflamed compound nerve could act was by securing for it rest.

DR. WEBBER sustained Dr. Hammond's view concerning the efficacy of rest.

DR. PUTNAM, of Boston, referred to the special efficacy of ice. If ice is used day and night, or a great many hours in succession, precautions being taken not to have the cold too great (protect the skin with flannel), it is of the greatest possible value.

DR. C. L. DANA, of New York, then read a paper entitled

NOTE ON HYDROBROMIC ACID AS A SUBSTITUTE FOR THE BROMIDES.

After making brief reference to the literature of the subject, Dr. Dana stated that this acid had been used by the profession chiefly with quinine, under the belief that it prevents or lessens cinchonism.

The only extended record of clinical observations regarding this acid that he had been able to find was one by Massini, published two years ago, who used it in thirty-one cases of various kinds without special benefit. Dr. Dana was led to experiment with the drug, with the hope that it would produce the beneficial effects of the alkaline bromides in epilepsy without causing depression and scurvy. He had now used hydrobromic acid in the treatment of various nervous affections for nearly two years at the Northeastern Dispensary, and had the clinical notes of over fifty cases of various kinds.

The officinal dilute acid is a ten per cent. solution, of which the dose would be from one drachm to two drachms and a half, well diluted. In *epilepsy* some patients received marked benefit from the use of the acid in doses of four to five drachms a day. Dr. Dana believed, however, that in epilepsy hydrobromic acid could not be used as a substitute for the bromides, except in the non-controllable cases, and yet it undoubtedly has a controlling influence over the disease.

In *chorea* he thought the acid could be used advantageously as a medium for arsenic or strychnine when it is desired to give a sedative. In *alcoholism* it failed in two cases, the patients being on the verge of delirium, and the bromides with chloral were subsequently given with relief.

Hydrobromic acid is a good solvent of quinine, but it does not prevent cinchonism, as has been asserted, certainly not in the small doses usually prescribed. In most cases of *insomnia* it also acts well. He could say positively that he could give the acid with just as much confidence that it would produce nervous sedation as when the alkaline bromides are prescribed. He had never seen any sign of bromism or any disagreeable constitutional effect other than some drowsiness. He believed that the ordinary custom of prescribing from twenty minims to one drachm of the three per cent. solution, the strength ordinarily employed, or of a ten per cent. solution, was generally much too small a quantity. Theoretically, in order to get the sedative action, from a

drachm and a half to two drachms and a half of the ten per cent. solution must be prescribed. Practically he had found that very satisfactory sedative effects could be produced with drachm doses of the officinal dilute solution. In conclusion, the acid could be substituted for the bromides in all the milder affections for which the latter are used. It had appeared to him to be especially efficient in producing vascular and nervous sedation in the post- and pre-hemiplegic conditions. Unless given in very large doses, it takes several days to get its best sedative effects.

DR. W. A. HAMMOND used hydrobromic acid for seven or eight years, and then abandoned it because he did not see that it did any good. He had found, however, that it does prevent the unpleasant effects of sulphate of quinine; but in this respect it is not so efficacious as a corresponding dose of the alkaline bromides.

Dr. Hammond's experience concerning the power of this acid to prevent cinchonism was corroborated by DR. ESKRIDGE, of Philadelphia, who also spoke of the good effects of the drug in typhoid fever.

The discussion was closed by Dr. Dana.

DR. J. J. PUTNAM, of Boston, then read a paper entitled

LEAD-POISONING SIMULATING OTHER DISEASES—A SOURCE OF ERROR IN THE ANALYSIS OF THE URINE FOR LEAD.

Within the last few years a number of cases had come to his notice in which examination of the urine had shown the presence of lead, while the symptoms and clinical history were not such as are usually considered characteristic of lead-poisoning; in fact, simulated other types of disease. So far as he knew the first case in which lead was supposed to have given rise to symptoms simulating any other form of spinal disease than poliomyelitis anterior, was one reported by Dr. F. Minot, of Boston, and published in the *Boston Medical and Surgical Journal* in 1881. In that case the symptoms of so-called lateral sclerosis were present to some degree, lead was twice found in the urine, and the patient improved materially under the use of iodide of potassium.

In none of the eight cases reported by Dr. Putnam were the blue line upon the gums, colic, emaciation, or discoloration of the skin, the characteristic localized atrophic paralysis, or typical cerebral symptoms present, and the diagnosis was established solely through the examination of the urine after the administration, for a few days, of iodide of potassium. All the chemical work of the investigation was done by Prof. E. S. Wood, in the laboratory of the Harvard Medical School.

Under the vague term lead encephalopathy a variety of nervous symptoms have been described, of which delirium, mania, dementia, epilepsy, and coma are at once the severest and the better recognized; but the disease is, no doubt, capable of giving rise to a variety of less slowly marked but not less important signs.

CONTAMINATION OF WATER BY LEAD.

Apropos to the contamination of water from leaden pipes, Dr. Putnam mentioned that while it was well known that hot water is more apt to dissolve lead than is cold, it is not, probably, so generally realized that this fact makes it objectionable to run hot and cold water pipes side by side through houses, especially when the latter carry water for drinking purposes. He had been assured by a reliable plumber that under such circumstances the cold water pipes were apt to be considerably corroded.

The quantity of urine examined should be at least one quart, and it should be collected during the administration of iodide of potassium, given either for the first time or after an interval of repose.

One source of error has recently suggested itself to Prof. Wood, and that is that the tests hitherto used for lead apply equally well to bismuth, a drug very fre-

quently prescribed. To avoid error, therefore, it was necessary to make sure that the patient has taken no bismuth within a considerable period before the examination for lead is made.

The paper was discussed by Dr. Webber, of Boston, who had noticed disturbances of sensation in every case of lead-poisoning, affecting the spinal cord, which he had examined. He also directed attention to an additional source of error in examination of the urine, namely, that when decomposition occurs, a chemical reaction takes place between the urine and glass by which lead is set free, and responds to test for that metal. Add a small quantity of acetic acid to the specimen to be examined, in order to eliminate this source of error; by Dr. Mills, of Philadelphia, who spoke of the protoplasmic effects produced by lead, as suggested by Ringer. The discussion was closed by Dr. Putnam.

DR. PUTNAM exhibited a urinal for use by female patients while sitting in a chair. It was a small copper basin, a miniature bath-tub, with a metallic conducting tube from the bottom of the outer, or broad end, to which could be attached a piece of rubber tubing.

The Association then adjourned to meet at 8.30 P.M.

FIRST DAY—EVENING SESSION.

The Association was called to order by the President.

DR. J. T. ESKRIDGE, of Philadelphia, read a paper, which contained the report of a case of

GENERAL NEURALGIA.

G. B.—, a German: aged twenty-nine; married; a laborer in a foundry; denied ever having had venereal disease. There was no external evidence of specific disease, and his children, three in number, were well developed and healthy. He enjoyed good health until the year 1873, when he suffered from an attack of pneumonia affecting the left side, and was confined to his bed four weeks. Two years ago, after sleeping one night in a damp bed, he noticed a dull heavy pain in the dorsal and lumbar regions of the spine. This pain continued about one month, and was then accompanied by severe pain in the course of the left sciatic nerve. During these two months he managed to hobble to and from his work, a distance of several squares, and was compelled to stand on his feet about two hours daily. The following summer he was able to walk quite well, although a little pain was experienced when the left sciatic nerve was firmly pressed upon. In October, 1881, melted iron fell into his left shoe and burned his ankle severely. The burn was mostly superficial, but its area was greatest around the internal malleolus; on the outer aspect of the ankle the area was small, but the wound extended to the bone. For this burn he remained in the hospital of the University of Pennsylvania ten weeks, and left comparatively free from pain, and returned to his work. One week later he began to experience great pain in the left leg and ankle. This attack lasted about one month, and the pain was greatly relieved by pressure over the sciatic nerve as it emerged from the pelvis. During the next ten weeks he suffered more or less pain, but was able to work. In October, 1882, he remained five weeks in the hospital suffering from severe pain, which extended from the lumbar region down the posterior portion of the thigh and leg to the left foot, most intense in the ankle. He improved somewhat in the hospital, but after returning to his work the pain became worse than it had been at any previous time. In January, 1883, he was scarcely able to walk, complained of great pain in the leg and back, sleep was broken, appetite capricious, bowels constipated; temperature, 100; pulse, 92; respiration, 24. His spine was tender on pressure in the dorsal and lumbar regions. All the superficial nerves of the left leg and gluteal region were the seat of neuralgic pain, and light pressure over any portion of the affected nerve greatly increased his suffering. Nothing, except hypodermic in-

jections of morphia and atropia, afforded any relief, and the effect of these medicines soon diminished. Chloroform injections increased rather than diminished his pain. In February the internal saphenous and genito-crural nerves became neuralgic, the left side of the scrotum was red and burned like fire, and was exceedingly sensitive to the touch. The right side was normal. Double intercostal neuralgia soon became well established and nearly constant. The only relief afforded the patient came from the alternate use of hot and cold applications to the spine and painful sciatic nerve; bladders filled with ice, and rubber bags with hot water were alternately applied every five minutes for an hour each day. When this was faithfully carried out the pains were greatly lessened, no morphia was required, and the patient's appetite and general condition improved, and finally the man could walk slowly about the wards. Most of the large superficial sensitive nerves were painful to pressure; the left fifth cranial nerve alone having escaped.

The question of diagnosis was one surrounded with some difficulties. Has not the case been one of general neuritis following inflammatory spinal trouble and improved? In favor of general neuralgia were the following reasons:

First.—It is a disease which has extended over a period of more than two years, made up of pain lasting from two to six months in a man whose condition and general appearance to-day seemed to be as good as they were after the first attack in the year 1881.

Second.—That several times by firm pressure over the great sciatic nerve, as it emerges from the pelvis, he had succeeded in relieving pain in the foot and leg.

Third.—That in inflammatory condition of the cord of so long duration reaction of degeneration and other trophic disorders would probably be found, and improvement would be slower if it occurred at all.

Fourth.—That the left leg and right fifth cranial nerve were severely affected, while the left side of the face entirely, and the right leg almost entirely escaped.

Fifth.—That pain was often shooting or steady in character, differing from the dull pain of neuritis.

Syphilis was eliminated not only by the history of the case, but by treatment.

The paper was discussed by DR. WEBBER, of Boston, who thought the fact that electrical reactions of the muscles were not disturbed militated against general neuritis or polio-myelitis.

DR. LEONARD WEBER, of New York, regarded the case as one of spinal lepto-meningitis, of which he had seen two similar ones within the last two months.

DR. ESKRIDGE could not accept Dr. Weber's view of the case until autopsies have been obtained which will throw light upon the cases in which apparent recovery takes place.

DR. C. K. MILLS, of Philadelphia, then read a paper on

LOCOMOTOR ATAXIA TERMINATING AS GENERAL PARALYSIS OF THE INSANE.

The author said that the relation between locomotor ataxia and general paralysis of the insane had been a problem of interest to neurologists and alienists since the investigations of Westphal in 1863. He then related the history of a case occurring in a man, forty-seven years of age, of good constitution, who had been treated most of the time for three years for "rheumatism," when he came under Dr. Mills' observation. The patient was addicted to venereal excesses and occasionally abused the use of alcohol. There was no evidence of secondary or tertiary symptoms of syphilis, although, many years before, he had had what was called a chancre. There were absence of paralysis, preservation of galvanic and faradic reactions, inability to walk well in the dark, swaying when standing with his eyes shut or heels together, numbness and tingling in the feet, sharp, sudden pains in the limbs, awkwardness with his hands in dressing, sense of con-

striction in the lower part of the abdomen, diminished sexual desire, marked loss of flesh, insomnia, mental anxiety, but not aberration of mind, absence of delusions. Improvement temporarily under treatment. Decided mental symptoms first developed two years after coming under treatment, when he spent his money very freely; had queer and lofty ideas, but the delirium of grandeur did not manifest itself until about one year later. Nearly three years after the notes first made by Dr. Mills concerning the spinal symptoms, and nearly six years after the development of ataxic pains, the patient was sent to the Insane Department of the Pennsylvania Hospital. His symptoms increased in severity and he finally died in the State Hospital for the Insane at Danville, Pa., five years and four months after first coming under Dr. Mills' care, and about eight years after he was first affected with ataxic pains. The autopsy revealed opacity of the cerebral pia, particularly in the postero-frontal and parieto-temporal regions, with congestion and adhesion at points, marked decortication and atrophy of the convolutions. The pia of the cerebellum, especially over the superior vermiciform process, was deeply congested and adherent. The pia of the cord was thickened, and the substance of the cord presented a shrunken and irregular appearance.

Microscopical examination showed marked sclerosis of the posterior columns throughout the whole extent, with general inflammation and thickening of the pia mater. Sclerosis was also present in the pons, crura, optic thalami, and convolutions examined, and in the cerebellum.

In this case the spinal symptoms were the first to appear. Dr. Mills referred to the views of various authorities concerning the relation of locomotor ataxia and general paralysis of the insane. According to Westphal and Hammond no direct relation exists between the morbid process in the cord and that in the brain; neither disease is secondary to the other; they simply co-exist as the expression of an excessive proclivity to diseases of the nervous system.

Dr. Mills also referred to cases reported by Obersteine, Hamilton, Plaxson, Mickle, and others.

The paper was discussed by Drs. J. C. Shaw, of Brooklyn; W. R. Birdsall, of New York, who directed attention to the possible relation which might exist between meningitis and sclerosis of the substance of the cord; Weber, of New York, who had had cases similar to that reported by Dr. Mills; Morton, of New York, and Webber and Putnam, of Boston.

Dr. E. C. SPITZKA, of New York, then read a paper entitled

REMARKS ON THE ALLEGED RELATION OF SPEECH DISTURBANCE AND THE PATELLAR TENDON REFLEX IN PARETIC DEMENTIA.

At the annual meeting in 1881, Dr. J. C. Shaw read a paper on the tendon reflex in general paresis, which contained the following conclusion: "The exaggerated reflex is closely associated with two prominent symptoms in this disease. Those cases in which there are marked difficulties of speech, hesitancy, stuttering, up to complete inability to speak, not aphasia proper, are the cases in which is always found, sooner or later, exaggerated tendon reflex," etc.

Certainly the suggestions which seemed to open up a prospect of establishing a physiological relation between the speech centres and the lumbar enlargement of the spinal cord would merit our serious attention if the proposition that such a relation exists were made but tentatively. Unfortunately, however, Dr. Shaw had adopted premises in drawing his pathological conclusions which cannot but have contained a source of error, as he had excluded from consideration the pathological condition of the brain. It occurs that in paretic dementia there is, as a rule, a diffuse affection of the entire central nervous axis. In some cases the lesions seem to be concentrated and intensified in the cord, in others in the cortex, and,

as Dr. Spitzka had had occasion to observe in a series of fifteen autopsies, in not a small proportion in the brain isthmus. A speech disturbance may be due to a high cerebral lesion, and may then be permanent; it may, on the other hand, be evanescent, and due to temporary vaso-motor causes. It may not differ in its mechanism particularly when associated with hemi-paretic attacks from speech disturbance following cerebral or meningeal hemorrhage. Speech disturbance may also frequently depend upon lesions in the medulla oblongata. Here, then, are a number of conditions which may in themselves be associated with changes in the tendon reflex.

The presumption of science is that there are few things in neurology as remote from each other as the tendon reflex and the speech function. Dr. Spitzka reported briefly eighteen cases from his private practice, most of which conflicted with the view advanced by Dr. Shaw.

Dr. SHAW said that his paper was on tendon reflex exaggerated, normal, and absent in paretic dementia; that he had observed seventy cases, and in twenty-two of these it was exaggerated; and that he merely put it forward as a clinical observation at that time. Of course he had been unable to prove it pathologically, and he never pretended to make any such connection between the spinal cord and the speech centres as would seem from Dr. Spitzka's paper.

The paper was further discussed by Dr. Putnam, of Boston, and the discussion was closed by Dr. Spitzka.

The Association then adjourned, to meet at 2.30 P.M., on Thursday.

THURSDAY, JUNE 21ST—SECOND DAY—AFTERNOON SESSION.

The Association was called to order by Dr. W. J. MORTON, of New York, Vice-President.

Dr. Ralph L. Parsons, of Sing Sing, N. Y., was elected a member.

The President, Dr. R. T. EDES, of Boston, then read a paper on

THE EXCRETION OF THE PHOSPHITES AND PHOSPHORIC ACID AS CONNECTED WITH MENTAL LABOR.

It seemed to the writer that there is a strong popular and scientific opinion that excretion of phosphoric acid is perceptibly or decidedly increased by mental labor; the most common form in which the statement is made being with regard to the increased elimination of phosphorus by clergymen on Mondays. He had not, however, been able to find the statement distinctly made by the original authority, Dr. Holmes. Whether or not it was based upon the statement of Golding Bird he did not know; but if so it does that eminent physiologist much injustice, as he does not speak at all of the elimination of phosphoric acid, but of the deposit of earthy phosphates, and refers to Sunday service not as intellectual labor, but as bodily exertion and anxiety. The technical difficulties in the way of such an inquiry—if the condition be at all a marked one—are almost none at all, since the determination of the presence of the phosphates with reasonable accuracy was a very simple process. But it is not so easy to make a distinction between mental labor and mental rest a very marked one. We have no accurate scale for mental labor corresponding to the foot or pound of mechanical work done, and it is very obvious that degrees of mental exertion are utterly without correspondence to the value of results obtained. The feeling of fatigue or consciousness of mental effort, is, perhaps, the only means that we possess of estimating the intellectual labor. This, it is evident, may as well result from the adding up of a most meaningless column of figures as from the composition of a sonnet. A certain admixture of bodily and mental labor is also unavoidable if anything like speaking or writing is attempted.

Dr. Edes gave the results of observations made upon

himself. The earlier ones embraced only the times of a lecture and a few hours afterward. But as it might be objected that phosphoric acid formed during the greatest period of mental activity, and only slowly finds its way into the blood and out of the excretory organs, he made a few others in which the examination was made not only for the evening but for the succeeding night. In some of these the earthy phosphates were separately estimated, with the result of giving about the ordinary proportion, showing nothing of special interest. From his experiments it was seen that phosphates were diminished rather than increased during the process of mental action, as, for instance, during a lecture. Would it be fair from these figures to infer that no phosphorus is used up in the process of cerebration? Certainly not; but they are sufficient to show that the amount of phosphates derived from the metamorphosis of brain-tissue in a condition of physiological activity is so small in comparison with that from the system generally, that it has no perceptible effect upon the total of phosphates found in the urine.

DR. JEWELL, of Chicago, being called upon, said that while he had not made investigations such as those made by Prof. Edes, he had studied the subject somewhat in the light of common sense, as the question had been very frequently asked him, and he had been unable to see why the brain, in even a tolerably protracted mental effort, should so extraordinarily increase the compounds into which phosphorus enters as to make any great change in the quantity found in the urine. It had seemed to him to be almost absurd, and he was glad to have the support of Dr. Edes' investigations.

DR. F. T. MILES, of Baltimore, suggested that phosphorus existing in nerve structures had been detected only in the white substance of Schwann, and not in the protoplasm of the ganglionic cells.

The paper was further discussed by Dr. Ott, of Easton, Pa., and the discussion was closed by Dr. Edes.

DR. S. G. WEBBER, of Boston, then read a paper in which he reported

CASES OF LOCOMOTOR ATAXIA, INTERESTING ON ACCOUNT OF UNUSUAL SYMPTOMS AND ON ACCOUNT OF MARKED REMISSION IN THEIR COURSE.

Case first was one of severe *gastric crises*, without other prominent symptoms. The patient was a man fifty years of age, and the case was interesting from the extreme violence of the gastric symptoms, to which no words could do justice. There was, however, very little vomiting. The disturbance showed itself in severe attacks of flatulence attended with pain.

Case two was of interest from the *restriction of respiration*. Dr. Webber had seen this in one other patient. The attacks recalled laryngeal spasm, but there was no cough. The sensation was probably an unusual form of the girdle sensation.

The third case was characterized by *diabetes*, and occurred in a male patient fifty years of age. The diabetic condition was associated with occipital pain, and was the combination of symptoms which attracted especial attention.

The fourth case occurred in a male fifty-three years of age. *Deafness* has been seen only a few times in locomotor ataxia. Erb reports a case, and other cases have been reported. Sometimes the deafness is unilateral, sometimes it is only partial. The following case was one in which the deafness was such that the voice could not be heard. Probably the lesion is similar to that which is found in atrophy of the optic nerve. The patient was examined by Dr. C. J. Blake, of Boston, who gave it as his opinion that the condition of the ears would not account for the patient's deafness. In the remaining cases, either the patellar reflex was not lost, or it returned. At least, temporary reappearance was obtained in some. The first five cases reported were chiefly of interest on account of the unusual individual symptoms. The last three cases, making in all eight,

were of interest as regards the prospect of improvement, whether great benefit or cure may ever be expected in locomotor ataxia.

Case six might be regarded as virtually cured, as the patient had remained free from symptoms for three or four years. It is reasonable to think that when the symptoms develop rapidly, the prognosis is more favorable than in other cases.

The paper was discussed by Dr. G. L. Walton, of Boston, who had examined over forty patients suffering from locomotor ataxia, with special reference to deafness, and in not a single instance could the deafness which was present be attributed to degeneration of the auditory nerve. In none was hearing for high tones lost, and hearing was best through bone on the side where the deafness was most marked. The cases of deafness as a symptom of locomotor ataxia, as Dr. Edes had said, were extremely rare, hence the special interest of the case reported.

DR. JEWELL, of Chicago, directed special attention to the great efficacy of *absolute rest* in bed for months, with passive exercise to keep nutrition in as good condition as possible, as being the *most important of all* measures in the treatment of locomotor ataxia. The rest must be rigidly maintained to be of value.

The paper was further discussed by Drs. Morton and W. A. Hammond, of New York, and the discussion was closed by Dr. Webber.

DR. R. W. AMIDON presented a case of

TETANOID PARAPLEGIA

occurring in a child, the tetanoid symptoms being preceded by a train of symptoms indicating subacute hydrocephalus.

He made the query whether the central trouble could not, by causing descending changes in the cord, account for the tetanoid symptoms, the etiology in most cases being obscure.

Dr. Amidon also presented two anomalous cases of

PARKINSON'S DISEASE,

the peculiarity consisting in entire absence of tremor, every other symptom of paralysis agitans being present.

DR. GIBNEY presented a patient illustrating

PROGRESSIVE MUSCULAR ATROPHY WITH MARKED FIBRILLARY TWITCHINGS.

He also presented a patient with fibrillary twitchings following a gunshot wound.

DR. MORTON then read a paper and exhibited an apparatus for the treatment of

WRITER'S CRAMP.

Among the non-fatal diseases of the nervous system there are none probably less curable or more disastrous to the patient's occupation than is writer's cramp. He had obtained better and more lasting results by the method of stretching the muscles affected by the cramps than by any form of electricity. After referring to Wolff's method of treatment, reference was made to the method of treatment devised by Nussbaum, of Munich, who utilizes the idea of bringing the extensors into play in the act of writing, and thus resting the flexors and abductors of the thumb. Dr. Morton thought that the principle could be applied in a much more simple way than by means of Nussbaum's apparatus, and had therefore devised what was practically a thimble-pen; that is to say, it is a long thimble worn on the entire index finger. To the end of this thimble is attached a stub-pointed pen. The thimble should be of very light elastic metal, split from end to end, should be made for the finger and clasp it entirely. A very slight rubber elastic band, such as is commonly used on writing-desks, slipped over the thumb and fingers, serves to steady and offer a moderate amount of resistance to extension or abduction. The patient now writes by the usual shoulder movement of free writing, holding the hand flat upon the paper and sliding it

along. The natural tendency of the finger and thumb is to extend rather than contract, as in holding the ordinary pen, and the result is that the patient, with very little experience, learns to write a good hand and without the slightest experience of cramp or spasmodic movement.

The paper was discussed by DR. PUTNAM, of Boston, who thought one objection to the theory of the apparatus existed in the fact that we cannot say that simply diverting the muscles is the essential thing. He also thought it to be questionable whether the extensors could be called upon to take this forced position without also suffering; by DR. DANA, of New York, who thought the device an ingenious one, and suggested that it could be resorted to as a prophylactic measure; by DR. WEBBER, of Boston, who thought that learning to write with the opposite hand was as practical and satisfactory as any means that had been suggested; by DR. WALTON, of Boston, and DR. MORTON.

A paper by DR. E. C. SEGUIN, of New York, entitled "The Insane of Spain and their Asylums," was read by title, after which the Association adjourned to meet Friday at 2.30 P. M.

On Thursday evening Dr. R. W. Amidon gave an elegant but informal dinner at Delmonico's to the President, Dr. R. T. Edes, the members of the Association, and numerous invited guests. Toasts were responded to by Rev. Dr. Collyer, Drs. Edes, Otis, Miles, J. C. Peters, Putnam, R. W. Taylor, Mundé, Ridlon, and others.

Dr. W. J. Morton also gave a brilliant reception at a later hour, at which there was a large attendance not only of the members of the Association, but of the medical profession of New York.

FRIDAY, JUNE 22D—THIRD DAY—AFTERNOON SESSION.

The Association was called to order by the President.

Dr. J. Leonard Corning, of New York, was nominated for membership.

The Secretary presented a large volume received from Dr. J. J. Mason, entitled "The Central Nervous System of Reptiles." It was accepted with thanks.

DR. GREME M. HAMMOND, of New York, presented a patient who had suffered from

LOCOMOTOR ATAXIA.

The patient was a man thirty-two years of age, who had been referred to him by Dr. James H. Anderson. Early in the history he suffered from the characteristic pains of locomotor ataxia, there was absolute loss of tendon reflex, and the ataxic gait was well marked. A long while ago the patient had a sore upon his penis, but no evidence of either secondary or tertiary symptoms of syphilis could be obtained. The treatment had consisted in the use of electricity, iodide of potassium, and general measures, and every symptom of the disease had disappeared, and the tendon reflex had returned very considerably.

DR. W. A. HAMMOND corroborated the diagnosis, and the case was discussed by Drs. PUTNAM, of Boston, and MILES, of Baltimore.

DR. F. T. MILES, of Baltimore, then reported a case which illustrated

NUTRITIVE ALTERATION IN THE HAND FROM PRESSURE OF THE HEAD OF A DISLOCATED HUMERUS IN THE AXILLA.

The interesting points were the great amount of deformity, with glossy skin, insensibility not only to touch but to heat and cold, the loss of power in the muscles, with great deformity of the little and ring fingers, and all developed slowly by pressure of the head of the humerus in the axillary space, with pain located entirely about the shoulder.

Dr. Miles thought, if the question was thoroughly

studied it would be found that these various forms of neuritis were capable of altering function without developing many subjective phenomena; that neuritis may progress without absolute pain, and produce alterations in tissue without giving rise to many of those symptoms which it was generally thought should be present when a nerve is inflamed.

DR. BURT G. WILDER, of Ithaca, then read a brief paper

ON THE BRAIN OF THE CAT LACKING THE CALLOSUM.

Although there have been recorded several cases of more or less nearly complete absence of the great cerebral commissure with human beings, the specimen exhibited (with photographs) seemed to be the only case of the kind among the lower mammalia, being the only case occurring in the anatomical laboratory of Cornell University among the several hundreds of cats' brains there examined. There was no trace of the callosum, nor of the fornix beyond the dorsal limits of the portæ (foramina Monroi); the præ commissure and medi commissure are larger than usual. Unfortunately nothing whatever was known of the history or habits of the cat. Now that the unique specimen had been submitted to the Association, Prof. Wilder will be more free to dissect it.

Dr. Wilder read another brief paper

ON THE ALLEGED HOMOLOGY OF THE CARNIVORAL FISURA CRUCIATA WITH THE PRIMATIAL FISSURA CENTRALIS.

Referring to the assumption of T. Lauder Brunton (*Brain*, January, 1882), "that these fissures correspond," Prof. Wilder made the following suggestions:

First.—Writers should specify whether by correspondence they mean *analogy* or *homology*, as a relation based upon the position of a fissure based its location among experimentally determined "motor areas," or a relation implying identity as determined by embryology and comparative anatomy.

Second.—The present disagreement of competent authorities respecting the homology of these two fissures should restrain both physiologists and zoölogists from assuming the correctness of any particular view; for example, the human centralis has been homologized with not only the cruciate, but the superorbitalis, the coronalis, and the ansata together with the coronalis (in connection with the last idea was shown a fetal human brain, exhibiting the somewhat rare condition of an interruption of the centralis); the cruciate has been homologized with not only the centralis, but with the first frontal, the calloso-marginalis, and the occipito-parietal; *i.e.*, the surest method of determining the true homology seems to be the one which is outlined in Wilder and Gage's "Anatomical Technology," to make careful and extended comparison between the brains, especially fetal specimens of man, monkeys, and the *lemurs* on the one hand, with those of cats, dogs, and seals on the other.

The lemurs are primates with some characters of the carnivora, while the seals, though carnivora, have the occipital lobe and the post cornu of the procellia (cornu posterius of the ventriculus lateralis).

These papers were discussed briefly by Drs. Morton, Miles, Mills, Birdsall, and Hammond.

DR. W. J. MORTON, of New York, then read a paper "On the Treatment of Migraine." [It will appear in full in a subsequent number of *THE RECORD*.] It was discussed by Drs. W. A. Hammond, J. L. Corning, J. J. Putnam, Burt G. Wilder, F. T. Miles, C. L. Dana, C. K. Mills, and the discussion was closed by Dr. Morton.

DR. W. R. BIRDSALL, of New York, presented statistics with reference to

THE RELATION BETWEEN SYPHILIS AND LOCOMOTOR ATAXIA.

He had collected 525 cases of locomotor ataxia, of which 225 patients had syphilis, or 43 per cent. The cases

were from Rosenthal, Bernhardt, Remak, Westphal, Pusinelli, Gowers, Fournier, Erb, together with 42 which had come under his own observation. It was noticed that there was a marked difference in the percentage of syphilis in the cases reported by different observers. For instance, Erb, in 100 cases, reports syphilis present in 88 per cent., while in his own cases (42) only 4 per cent. of the patients had syphilis. Probably the differences were due to accidental relations.

Dr. Birdsall also exhibited

AN ELECTRODE FOR MAKING CAREFUL ELECTRICAL TESTS, and also for therapeutical purposes. It was a hand electrode, so arranged that the current could be interrupted and reversed at the same time. The communication on syphilis was discussed by Dr. Mills, of Philadelphia.

The Convention then adjourned to meet at 8.30 P.M.

THIRD DAY—EVENING SESSION.

*A communication from Dr. H. D. Schmidt, of New Orleans, "On the Pathological Anatomy of the Cerebro-Spinal Axis in a Case of Chronic Myelitis of nineteen years' standing," accompanied by photographic illustrations, was read by title.

GALVANIZATION OF THE BRAIN AND ITS VALUE IN THE TREATMENT OF CHOREA.

DR. C. L. DANA, of New York, read a paper on the above subject, in which he said that, as regards the phenomena which result from passing a galvanic current through the healthy human brain, the effects may be classified under those of subjective or those of which the patient is conscious, and those which are objective or apparent and can be noted. Then followed a classification of the phenomena, succeeded by a classification of therapeutical results which can be obtained in the diseased brain with more or less certainty.

As a result of direct electrical irritation of the exposed brain of animals, certain phenomena are obtained not observable when the cranial bones are interposed. Then followed tables containing the results of experiments.

A question of great interest is: In what way does the galvanic current produce the phenomena which result when precutaneously applied to the brain? Dr. Dana's conclusions concerning precutaneous galvanization of the brain were:

First.—That it is one of the most easily reached and easily affected of central organs.

Second.—That in ordinary galvanization, the polar method and the polar nomenclature should be used, as it is the pole and not the direction of the current which produces specific effects.

Third.—That the anodal galvanization of the brain probably lowers cerebral irritability, contracts the pial vessels, slows the circulation and produces effects on the nutrition of the brain.

Fourth.—That its action is chiefly a direct one, but is supplemented by reflex processes.

Fifth.—That possibly more powerful or special polar effects may be produced by using widely separated electrodes.

CHOREA.

Dr. Dana, having thus given the theoretical basis for the practical use of electricity in chorea, said he believed that ordinary chorea minor is an irritative disease of some part of the voluntary motor tract. The irritation may be chiefly in the spinal cord, or chiefly in the brain, as with the ordinary chorea of children.

Chorea is not a disease which should be left to Nature. It often, indeed generally, runs a typical course, but in the beginning the physician can never say whether or not it will cling to the child for months or years; hence the best therapeutical means should be promptly applied. Dr. Dana then reviewed the reports as to the value of electri-

city in chorea, and found that they had been most conflicting. It had seemed to him, however, that the agent, so far, had been applied irrationally. By acting upon the hypothesis that anodal galvanization of the brain *ought* to prove sedative in functional spasmodic troubles of cerebral origin, he began some time ago to use this method in the treatment of chorea. It was not until recently that he learned, in Erb's work, that Berger also had been using anodal galvanization of the brain in chorea; neither of the authors, however, had given detailed reports of their cases. Dr. Dana reported eight cases. The patients all recovered. The average duration was thirty-four days; the average duration of treatment, twenty-five days. It was not upon the statistics of duration, however, that he was led to believe in the efficacy of anodal electricity. What he claimed for anodal galvanization is that it is a most valuable adjunct in the treatment of chorea; that given daily for a week or ten days with arsenic, and probably without, it will materially shorten the duration of the disease.

The method of application is as follows: A large sponge-electrode of flexible brass, 4 x 2 inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted and the electrode applied over the side of the head above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a current, three to six Stohrer's, four to eight Daniell's cells, is passed for from three to five minutes. The electricity should be applied daily for at least ten days. If after that time there is no improvement it may be discontinued.

DR. CORNING, of New York, was convinced of the efficacy of central galvanization in the treatment of chorea, with or without arsenic.

DR. MILLS, of Philadelphia, agreed largely with Dr. Dana concerning the efficacy of galvanization of the brain in chorea, but took some exceptions to the theory advanced concerning the mode of action. There were very many things which led him to believe that the effect, so far as the brain was concerned, was *indirect* or of a reflex character.

DR. WEBBER, of New York, thought the reflex action was probably the most important to consider. He had no doubt of the refreshing effects of electricity passed through the head, but had found that only a few cells of a good battery were necessary to give the desired results; three elements for children, four to six, utmost eight, for adults.

The paper was further discussed by Drs. Birdsall, Corning, and Morton, and the discussion was closed by Dr. Dana.

DR. BURT G. WILDER, of Ithaca, then read a brief paper

ON THE REMOVAL AND PRESERVATION OF THE HUMAN BRAIN.

It referred to the removal of the calvaria, which should never be done with a jerk, but by sawing through a little to one side of the great longitudinal sinus, and then removing the sides carefully after releasing the dura by means of a thin-bladed flexible knife with curved point. The brain should never be allowed to support its own weight, but should be suspended in strong brine. Several points concerning the handling of the brain were mentioned. The preservation was by means of alcohol, beginning with fifty or sixty per cent. and gradually increasing the strength until the ordinary ninety-five per cent. is reached. He also passes alcohol through the vessels of the brain in a continuous stream for some time, and, besides, irrigates the central cavities of the brain. Whether brains hardened in this manner were well preserved for microscopical examination he was unable to say.

DR. SPITZKA said that the process recommended by Dr. Wilder was absolutely worthless for the histologist

and pathologist, but was doubtless an excellent method for the comparative anatomist.

The communication was discussed somewhat by Drs. Mills, Miles, Spitzka, and Wilder.

DR. WILDER then began a paper

ON SOME POINTS IN THE ANATOMY OF THE HUMAN BRAIN, but owing to the lateness of the hour did not complete it. So far as he presented it the object was to show that we need greater accuracy in our methods of dissection than have been followed in general.

A paper by DR. E. C. SPITZKA, entitled "Lesion of the Stratum Intermedium," with remarks on the anatomy and physiology of that tract, illustrated by specimens, was read by title.

A paper was presented by DR. G. L. WALTON, of Boston, in which were reported

TWO CASES OF HYSTERIA: 1, HYSTERICAL HEMI-ANÆSTHESIA IN A MAN FOLLOWING INJURY; 2, HYSTERICAL ANÆSTHESIA OF SPECIAL SENSE ACCOMPANYING CUTANEOUS HYPERÆSTHESIA.

The first was interesting with regard to its etiology. A strong, robust man, without a trace of nervous history, who, following a fall upon his head and shoulder, had, besides other symptoms, typical hysterical hemianæsthesia.

The second case was interesting in that there was anæsthesia of the special senses, hearing, smell, taste, whereas the skin over these organs was hyperæsthetic, entirely contrary to the rule.

Both cases yielded under the use of the magnet.

The Association then adjourned to meet at the call of the Council.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 16, 1883, to June 23, 1883.

GORGAS, W. C., First Lieutenant and Assistant Surgeon. The leave of absence granted in S. O. 51, par. 5, C. S., Department of Texas, extended one month. S. O. 63, Military Division of the Missouri, June 19, 1883.

WYETH, M. C., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Maginnis, M. T. S. O. 103, par. 2, Department of Dakota, June 14, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending June 23, 1883.

DAVID KINDLEBERGER, Medical Director, and F. M. GUNNELL, Medical Director. To the Naval Retiring Board.

M. H. CRAWFORD, Past Assistant Surgeon. From Navy Yard, League Island, Pa., to the U. S. S. Pinta.

JEROME H. KIDDER, Surgeon. Resigned, to take effect June 18, 1884, and granted leave till that time.

THOMAS J. TURNER, Medical Director. Orders of June 7th modified to continue on duty as member of the National Board of Health, till June 30, 1883.

ADULTERATIONS AND CHARITY.—A Spanish magistrate, shocked and exasperated by repeated proof of the adulteration of food in his district, has issued a proclamation aflame with righteous wrath, that "all articles in the shape of wines, groceries, and provisions, which upon examination and analysis are proved to be injurious to health, will be confiscated forthwith and distributed to the different charitable institutions."

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 26, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
June 19, 1883....	0	7	74	6	91	20	0	0
June 26, 1883.....	0	11	61	4	87	39	0	0
<i>Deaths.</i>								
June 19, 1883.....	0	3	23	9	22	16	0	0
June 26, 1883.....	0	9	16	4	18	11	0	0

HEITZMANN IN BERLIN.—Dr. Heitzmann, of this city, described his peculiar histological views before the Berlin Medical Society, at its meeting on May 2d. These views, it will be remembered, are that the body tissues are not made up of cells, but rather of a reticulated network enclosing living protoplasm. In the discussion which followed Virchow responded to the attack made upon the cellular histology. His view, in brief, was that the fact of a cellular network, even if proved, was of secondary importance, and did not affect the theory that the cell is the physiological and anatomical unit of the tissue. That cells are the individual units and not part of a great ramification, he still believed, and instanced a number of facts in support of the opinion.

Dr. Fränkel, who was the only other speaker, contended, against the opinion of Heitzmann, that even healthy rabbits may be made tuberculous by the inoculation of non-tuberculous matter.

POISONING FROM CASTOR BEANS.—Dr. M. E. Alderson, of Russellville, Ky., writes: "It is the general impression among the laity, and also with many of the medical profession, simply because they have not had occasion to carefully examine into the history of the plant, that the *Ricinus communis*, or common castor-oil plant, is non-poisonous and harmless. Very few of the writers on *Materia Medica* ascribe to it any dangerous qualities. Pareira, of the older authors, speaks of serious effects from ingestion of the bean; and Stillé, of the modern, gives a number of fatal cases of poisoning from the same. As a consequence of this careless notice, the plant has gained a prominent place among the flowers in our gardens, and as the fruit has thus become easily accessible to children, I thought that the following cases might be of interest, put some on their guard, and perhaps save little *innocent tasters* from its terrible effects. On Sunday morning, April 8th, I was called to see Mattie and Mabel W—, aged respectively seven and three years. I was told by the messenger that they had, on the previous day, in the afternoon, eaten some castor beans, and had been vomiting and purging incessantly all night. Upon my arrival, about eight o'clock, I found both the little girls completely prostrated, with cold extremities and scarcely any radial pulse, in fact, almost in fatal collapse. The symptoms were very similar to those of cholera infantum. I immediately ordered mustard to stomach and bowels, and administered, as best I could—as the efforts to vomit came on every ten or fifteen minutes—a mixture of sulphuric ether, aque camph., and mucil. acaciæ. Under this treatment they seemed to revive a little. By keeping up the stimulant treatment and combating the intense nausea and thirst with cracked ice and small doses of bismuthi subnitrat and sulph. morphicæ, I succeeded in lengthening the intervals between

the attacks of vomiting, the purging having stopped early in the morning. After the thorough evacuation of the poison, we had for five days to contend with most acute attacks of gastro-enteritis, during which the little sufferers again came near losing their lives. They, however, withstood the shock, and are now convalescent."

HOSPITAL STRETCHERS.—Dr. Morison, writing from Berlin, of the Hygienic Exhibition, says (*Maryland Medical Journal*): "The best arrangement for carrying the ill to a hospital, or anywhere, is suggested by the exhibit of covered stretchers. This exhibition is made by Vienna, where an ill person is always carried in this way. No carriage or wagon can possibly be made as comfortable, or managed with so little danger to the patient. There is no exposure, for the covering is complete, and they are made so light that two men can easily carry any patient upon them. Ambulances may carry the stretchers, but the stretchers should carry the patients. Many an agonizing pain, and perhaps many a life, would thus be saved."

TO STOP HICCOUGH.—Dr. Martin Burke, of this city, sends us the following item: "Perhaps the narrative of these two cases may prove of interest. John C—— was suddenly seized about a year ago with an attack of hiccough. The cause was unknown. All the usual remedies were tried in vain. Dr. John Burke, my father, was then called upon. Noticing the convulsive heaving of the patient's ribs, more particularly upon the left side, he firmly compressed the side between his two hands, and in a short time the hiccough ceased for the first time in days. The second case was that of Mr. C——, a young man of thirty. He also was attacked, first with vomiting and then with hiccough, most violent and convulsive. Morphine suppositories would produce sleep, but even in sleep the hiccough was distressingly severe. As his vomiting had now ceased, almost every remedy known was called to our aid, but it was not until we had again, by my father's advice, compressed his heaving ribs, that the hiccough almost instantly ceased. It returned indeed within twenty-four hours, but compression again arrested it. The patient is now convalescing, and as hiccough very often proves fatal, perhaps the record of these two cases may prove of service."

TO DISGUISE THE ODOR OF IODOFORM.—Dr. J. A. Andrews, of Staten Island, N. Y., writes: "It may interest your readers to know that cumurin will disguise the unpleasant odor of iodoform. The Tonka bean has been employed for this purpose. The bean being placed in the bottle containing iodoform. This, however, is not effectual. Cumurin, itself a derivative of the Tonka bean, is an anhydrate of cumuric acid. It disguises the odor of iodoform more effectually and permanently than do other drugs with which we are familiar, nor does it form, when incorporated with iodoform, lumps of powder which are slow to dissolve, which is a real advantage where this drug is employed in the therapeutics of purulent inflammation of the middle ear. However, it is not the object of my communication to urge the claims of iodoform in the treatment of suppurative inflammation of the external or middle ear, because I believe it is of use only in certain selected cases of this affection, often actually aggravating the condition in others. The minimum amount of cumurin which I have found sufficient to disguise the odor of iodoform, is three grains of the former to one drachm of the latter."

MERCURY AND MALARIA.—HEMORRHAGIC MALARIA.—We have received a letter from Dr. Harris Fisher, of Eastman, Ga., containing an interesting discussion of the subject of hemorrhagic malaria, and criticizing some of Dr. W. O'Daniel's views on the subject of malaria as the cause of hæmaturia. The remarks upon the popular practice of giving mercury in malaria will excite some dispute. "We have," he writes, "just passed through a most notable epidemic of benign biliary jaundice. Every practitioner in this country has seen scores of cases. Catar-

hai duodenitis, with occlusion of the bile-duct, white feces, a stupid and depressed mental state, with an abnormally slow pulse in some instances as the extreme toxic effect of the bile. With a reappearance of bile in the feces a rapid clearing up of the skin. An inevitable deepening of the jaundice by any untimely exhibition of mercury. The pathological states giving rise to this icteric hue are entirely dissimilar: but as relates to the use of mercury, very similar, i.e., it can hardly fail to do harm in any case. Our own observation and experience go far to sustain the broad assertion that the occasion for the exhibition of mercurials in malarial fevers in general is seldom present. From what we have seen and read and heard related of the behavior of hemorrhagic malarial fever, we think it should here be used with the greatest circumspection. First, at some period or other of a malarial paroxysm the liver, as a rule, acts with unwonted energy. The hasty administration of a dose of calomel only adds profusion and acidity to the secretion. Depletion and an enhanced tendency to congestion follows as a sequence. The patient who has a chill to-day and takes blue mass, and has another on the third day, will vomit and pass more bile per anum than ever before. In hemorrhagic malarial fever it is the observation of most writers that the liver seems to act profusely: and certainly the catalysis of mercury is to be avoided where the death-rate of the oxygen carriers is simply fearful to contemplate. Dr. O'Daniel says 'malarial hæmaturia is malignant bilious fever, and nothing more.' This is a very debatable point. A monument should be erected to Thomas Watson for impressing so profoundly upon the practitioner the importance of studying the mode of death and tendency to death in every disease. The application of this hint to the point in question militates strongly against Dr. O'Daniel's position. In ordinary bilious or remittent fever, when it assumes a type worthy of the term malignant, the cause of death is generally breaking down under the prolonged and unrelieved congestion of the mucous coat of the stomach and similar changes in the liver and spleen. Prolonged high temperature is an important factor in producing the same results. Day after day, running into weeks, the patient may exhibit the dry, parched, almost black tongue, and vomiting continue until the secreting structures of the stomach begin to pass away in "coffee-ground" vomit, and death supervenes; and not a drop of blood be effused into the tissues, or stomach, or bladder; on the other hand, the patient yet on foot suffers in many instances from all these things, effusions, before taking his bed. The tendency to death is, in the latter case, eminently by anemia. It is true there is, perhaps, in all cases of hemorrhagic malarial fever more or less splenic and hepatic congestion, but the cause that carries off a man or woman in two or three days after going to bed is effusion of broken down blood; and the syncopal and asphyxial symptoms that immediately precede dissolution are in striking contrast to those that close the scene in a death from remittent fever. Patients suffering from severe remittent fever are apt to have it from the first. Hemorrhagic malarial fever is almost always concurrent with chronic intermittent. Dr. O'Daniel very correctly insists that there is more in the prophylaxis than the cure. His success is above the average. Whoever has chronic chills and determines to live in daily or nightly renewal of the contamination is liable at any moment to exhibit the signs of the dreadful disease. The recently malaria-bitten need not be uneasy. The causes that bring about this sudden death of the blood operate slowly. The following observations are, we think, justified by theory and experience: A complete differentiation from any other form of malarial fever: the jaundice accompanying is hæmaturic; the tendency to death is mainly by anemia; the use of quinine now and then precipitates an attack; mercurials are but little indicated; when periodic, the rhythm must be broken; the prophylaxis or hygiene of this disease is retreat.

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THE FIXATIVE POWER OF TRACTION IN THE TREATMENT OF HIP DISEASE.

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THAT traction possesses to a certain degree the power of fixing the joints of the extremities is not a new idea in surgery. It was entertained in the last century by Desault, whose apparatus for fracture of the femur is described as follows: "This consists, to speak in general terms, in taking the points of extension above, on the tuberosity of the os ischium of the diseased side, and below, on the malleoli; in securing the straps or rollers, destined for making extension, on the two ends of a strong splint, placed along the outside of the limb; and in converting, so to speak, the pelvis, the thigh, the leg, and the foot, into one entire and solid piece."¹ In 1835 Lesauvage wrote that one of the objects of continued extension in the treatment of hip disease is to prevent motion.² Mr. Liston, seeking to disparage the use of the weight and pulley in the treatment of hip disease, said: "All this may amuse the patient's mind, perhaps, but I do not think any good can come of it further than preventing motion."³ M. Philipeaux writes, "that in the absence of retentive splints, traction may be employed to secure immobility of the limb."⁴ Dr. C. Fayette Taylor refers to "the quiet fixation of the joint, which the splint has been a convenient means of accomplishing."⁵ Dr. Louis Bauer says: "Whatever benefit I have derived from it (extension) is unquestionably due to its collateral effect upon fixing the affected articulation."⁶ Mr. Thomas, referring to extension, writes: "In its application it involves, unavoidably, a fractional degree of fixation."⁷ Dr. L. M. Yale writes: "When the muscular spasm is urgent, fixation cannot be secured, save by the use of a force as constantly acting as that which is to be overcome, and the agent best adapted to this purpose is traction."⁸ Dr. J. A. Wyeth writes: "Extension is made by means of the screw-key, until there is freedom from pain and a comfortable fixation of the limb."⁹ Dr. N. M. Shaffer writes: "When traction exists the patient has the advantage of that peculiar and perfect immobility which the extension of the long hip splint affords."¹⁰

The fixation of the hip-joint is one of the most difficult problems in mechanical surgery.¹¹ In the first place, this articulation is a ball and socket. Aside from this

the difficulty is due, in a great measure, to the fact that the hip-joint is situated near the centre of the body. In order to understand the subject clearly, it may be well to take an elementary view of the relation of the muscles to the joints, as follows: The muscular apparatus of a joint has a twofold function. It can at will either move or fix the joint. If the joint be remote from the centre, the muscles will be more effective in their control either for motion or fixation, because of the disproportion in size and weight between the part above and that below the point of motion. There is philosophy as well as humor in Dundreary's witticism: "Why does a dog waggle his tail?" Answer. "Because the tail can't waggle the dog."¹² As the wagging of a dog's tail is not only motion alternately right and left, but also arrest of motion right and left, it is clear that motion and fixation, as effects of muscular action, are correlative, and if the part below the point of motion is more easily moved on account of its comparative lightness, it will also be more easily fixed, and if more easily fixed, disease attacking the joint will be less serious and more easily curable. In this lies a partial explanation of the fact that joint diseases of the lower extremity become less serious as we pass from the hip toward the phalanges. Aside from the fact that the hip-joint has a peculiarly wide range of movement, if the entire limb were no larger and heavier than the foot, hip disease would not be more serious than ankle disease. A striking illustration of this point is the case related by Mr. Hilton,¹³ in which the patient had disease of the left knee and the left hip. Amputation, which was performed above the knee, promoted recovery at the hip by facilitating the control of the latter joint by muscular action. To quote Mr. Hilton's words: "In fact, I may say the hip-joint was cured by cutting off the leg."

Furthermore, a joint which is situated near the centre of the body is peculiarly liable to be disturbed by the movements of other members. The distal phalangeal joint is not appreciably affected by movements made elsewhere, but the hip-joint is inevitably disturbed by the movements of other parts of the body. In the words of Sir Charles Bell: "There is no rest to it; every motion of the body may be said to be accompanied with a movement of the head of the femur within its socket; even if the arm be raised, there is a change in the centre of gravity of the body, and the trunk must be poised anew upon the hip, as the centre of all our motions. It is remarkable how the slightest degree of movement in another part of the body is, as it were, necessarily accompanied with a motion of the surfaces of those bones which compose the hip-joint. If ever you should see a patient suffering with acute inflammation of the hip, you will see the proof of this; for every motion of the body gives extreme pain, and proves an additional source of excitement and inflammation. It is this consideration which leads us to understand the difficulty of curing the disease."¹⁴

Another most serious obstacle to the successful fixation of the hip-joint is found in the fact that a retentive splint acts here at a great mechanical disadvantage. If the distance from the acetabulum to the crest of the ilium were equal to that from the head of

¹ Treatise on Fractures, p. 243. Translated by Charles Caldwell, M.D. Philadelphia, 1817.

² Arch. gén., p. 280. November, 1835.

³ Lancet, pp. 237, 238. November 25, 1843.

⁴ Traité de Thérapeutique de la Coxalgie, p. 285. Paris, 1867.

⁵ THE MEDICAL RECORD, p. 290. September 1, 1867.

⁶ Lectures on Orthopedic Surgery, p. 282. Second Edition. New York, 1868.

⁷ Hip, Knee, and Ankle, p. 10. Third Edition. Liverpool, 1878.

⁸ THE MEDICAL RECORD, p. 27. January 12, 1878.

⁹ New York Medical Gazette, p. 243. April 17, 1880.

¹⁰ Archives of Medicine, p. 108. October, 1880. The opinion has been expressed by the present writer that "traction, however applied, is unavoidably accompanied by fixation," that "the advantages derived from the traction exerted by the hip splint are due solely to the fact that it secures fixation," and that "fixation is undoubtedly one of the principal functions of the long hip splint." New York Medical Journal, p. 17. July, 1882. St. Louis Courier of Medicine, p. 370. May, 1881.

¹¹ THE MEDICAL RECORD, p. 738. June 26, 1880.

¹² In 1828 Sir Charles Bell said: "No instrument has ever been effectual in keeping the thigh and trunk fixed." London Medical Gazette, p. 139. January 12, 1828.

¹³ Our American Cousin, by Tom Taylor, Act I., scene 1.

¹⁴ John Hilton: Rest and Pain, pp. 298, 300. London, 1863. American Edition, pp. 178, 179. 1879.

¹⁵ Loc. cit., p. 138.

the femur to the condyles, or if, in imagination, we were to convert the pelvis and the vertebrae into a single bone, a retentive splint would doubtless be as effective in securing fixation as it is when used at the knee, or when applied to a fracture in the middle of the shaft of a long bone.¹

In view of these difficulties, can we reasonably hope to secure fixation of this joint by so simple a method as traction? That this expectation is not entirely unreasonable, is indicated by the fact that the most remarkable result of the application of purely fixative apparatus, viz., the relief of pain, is also the result of the application of apparatus that is purely tractive. The following observations prove the anodyne quality of the simple retentive apparatus. Dr. Coates, referring to the use of Dr. Physick's hollow carved wooden splint, which extended from the external malleolus to the middle of the thorax and embraced nearly one-half of the trunk, wrote: "The patient frequently stated that he had obtained, in the night following its application, sounder sleep than for many weeks or even months previously."² M. Bonnet, referring to *le grand appareil*, which embraced two-thirds of the circumference of the lower limbs and the lower part of the trunk, wrote: "I have seen the pain and inflammation disappear as soon as the limb was brought into position and held immovable." Relating a case, he wrote: "From the moment of application the pains diminished."³ M. Philipeaux, referring to a case in which Bonnet's apparatus was applied, wrote: "The next morning I learned that the patient, who had moaned incessantly the night preceding the application, had slept calmly for four hours."⁴ Mr. E. J. Chance's splint embraces the thigh and a large part of the trunk, and Mr. E. Noble Smith speaks of "the almost immediate relief from pain which the patient experiences when the splint is applied."⁵

On the other hand, the anodyne effect of simple traction is equally remarkable. It was observed by M. Blandin that on the application of extension and traction the acute pains of hip disease "disappear as if by enchantment."⁶ Gustav Ross said that when the weight and pulley were used in the hip disease of children, "the pain lessens astonishingly."⁷ Dr. John Watson, describing his treatment of a patient in the acute stage of hip disease, said: "I had hardly put on the counter-extension before the girl was entirely free from pain. It operated beautifully and instantly."⁸ Dr. E. S. Cooper, referring to his ingenious device for traction and counter-traction, writes: "Often have patients slept better the first night after its application than they had for many months previously."⁹

When we find, as above, that pain is controlled equally by direct fixation and by traction, can we escape the suggestion that perhaps traction is in itself an effective method of securing fixation? It has been stated as an objection to this view, that the relief which follows traction is too instantaneous to be considered as the result of fixation. It is thought to occur before immobilization could have produced any effect. In reply it may be said that the pain of hip disease is composed, to a certain degree, of extreme apprehension and mental and muscular fatigue, produced by prolonged efforts to prevent motion, with sudden sharp accessions when motion is inadvertently made, or when the patient starts in the act of falling to sleep. Such pain as this is capable of

instant relief or abatement by fixation. In certain cases there is a severe pain not controlled by mechanical treatment, the occurrence of which, sometimes at least, accompanies the development of an abscess.

We have seen above that fixation has, by a number of writers, been recognized as an accompaniment of traction applied to the hip-joint. We have also seen that clinical observation renders it not improbable that traction acts as a fixative power, because its first effect is identical with that of apparatus which is purely fixative. The important question arises whether it is demonstrable that traction secures fixation. This question may be answered affirmatively. Take two rods of iron or soft steel, of sufficient length, and form an eye in the end of each by bending its extremity into a small circle. When the rods are joined by these eyes they will together resemble two links detached from a surveyor's chain, and there will be wide and free mobility at the joint. Then tie the free end of one link to a staple and apply moderate traction, by means of a weight and pulley, to the free end of the other. It is seen at once that the mobility which existed at the joint between the links is absent so long as the traction continues.¹⁰ Although the immobility thus produced is liable to be overcome by a competent disturbing force, it is nevertheless quite sufficient to relieve the pain of hip disease and to promote union in fracture of the long bones. But in the treatment of hip disease fixation by the weight and pulley is open to the objection that it necessitates prolonged recumbency, and is liable to wilful disturbance. Discarding for these reasons the weight and pulley, let us subject the two links of surveyor's chain to traction in a hip splint, tying the free end of one to the perineal straps and that of the other to the leather strap which leads to the foot-piece. The result of applying moderate traction by the rack and pinion when the parts are thus arranged is fixation of a remarkably stable and indestructible kind.

It is worthy of note, furthermore, that when the hip splint is applied to a patient traction is made in such a manner that fixation is rendered more complete by a part of the apparatus which acts as a brake. The hip splint is so well known that it does not require a description here. It is sufficient to say that the apparatus here referred to has a less flexible upright and pelvic band than have been found in some forms of the apparatus, and also a bolt and nut connecting the two parts, by the use of which they can be firmly fixed at any angle desired by the surgeon. It is provided with suspending straps passing over the shoulders, by which the adhesive plasters and the affected limb are relieved from the weight of the splint when raised in walking. It also has a U-shaped attachment¹¹ at the level of the lower part of the thigh, by which motion is more fully arrested than by a flexible strap.¹² The parts which act as a brake are the perineal straps. A brake is described as follows: "An apparatus used for retarding the motion of a wheel by friction on its periphery." As applied to a patient, the hip splint, when traction is exerted, makes friction on the tuberosities of the ischia and the rami of the ischia and pubes, these parts representing the periphery of a wheel revolving at the upper end of the femur

¹ One of the difficulties in the treatment of Colles's fracture of the radius arises from the shortness of the lower fragment. If this fragment, the caput, the metacarpus, and the phalanges, were one piece the management of the accident would be greatly simplified.

² *Amér. Jour. of Med. Sciences*, p. 307, foot note, February, 1871.

³ *Traité des maladies des articulations*, vol. ii., pp. 387, 390. Lyon, 1845.

⁴ *Traité de thérapeutique de la coxalgie*, p. 253. Paris, 1857.

⁵ E. Noble Smith: *The Surgery of Deformities*, pp. 15-17. London, 1882.

⁶ *Mémoires: De la coxalgie*, Thèse de Paris, p. 227. 1844. *Ann. de la*

Chir. Fr., et étrangère, vol. xii., p. 192. 1845.

⁷ *Deutsche Klinik*, p. 98. March 4, 1854.

⁸ *Am. Med. Times*, p. 318. May 11, 1861.

⁹ *San Francisco Medical Press*, p. 145. July 15, 1861. Dr. James A. Post has

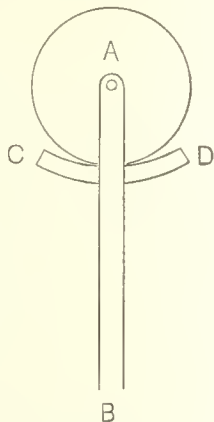
noted the remarkable relief afforded by the weight and pulley in cases of hip disease in an adult (*Philadelphia Medical News*, p. 527, November 11, 1882).

¹⁰ In this way we arrive at a competent explanation of the efficacy of traction by the weight and pulley in the treatment of fractures, a method the antiquity of which has been traced by Mr. J. H. James (*Address in Surgery*, Transactions of the Provincial Medical and Surgical Association, vol. viii., pp. 213-216, 1846) and A. S. Golner (*Nouvel appareil pour le traitement des fractures du col du fémur*, p. 30. Paris, 1835). The explanation which depends on the supposition that traction places the muscles on the stretch and thus makes them retentive splints is open to the objection that traction is powerless to stretch the muscles to a degree even approaching the normal lengthening to which they are accustomed in the ordinary movements of the limb. If a muscle is in extreme normal contraction, its opponents are of course relaxed and lengthened, and when the parts are at rest this potential elongation is so great that traction would be incompetent to stretch the muscles enclosing a long bone in any degree, still less to give them enough tension to qualify them for the functions of a retentive apparatus. For the same reason the efficacy of traction (continuous extension) in the treatment of fractures can hardly be said to depend on its ability to tire out the muscles whose contraction produces displacement of the fragments.

¹¹ Described in *The Medical Record*, p. 738, June 26, 1880.

¹² Some practical points in the management of this apparatus have been considered in the *Medical Gazette*, pp. 413-415, December 10, 1881.

through a considerable arc in the plane of flexion and extension. If friction can be made on the periphery of this wheel by a process or offshoot of the femur, motion of the pelvis on the femur (or of the femur on the pelvis) will be retarded or prevented. The perineal straps are a process of the femur inasmuch as they are carried by the pelvic band, which is immovably attached to the upright, and this latter is practically of one piece with the femur, especially if the femur is held parallel with the upright by the U-shaped piece attached at the level of the lower part of the thigh. In the accompanying figure let the circle represent the pelvis, A the acetabulum, A B the femur and the upright, and C D the perineal straps, practically of one piece with A B and applied to the ischiatic tuberosities. When traction is made by the rack and pinion, it is clear that motion at A will be retarded or prevented. In practice it is found that when traction is made, in the case of a patient to whom the hip splint is applied, motion in flexion and extension is prevented, although it may not as yet have been arrested by the disease.



Motion in adduction and abduction is also arrested to a certain degree by this apparatus—adduction by the circumstance that, as the perineal straps are both situated on the inner side of the joint, traction is abductive or in a direction away from the median line; while motion in abduction is opposed by the action of the apparatus as a retentive splint (although its action as such is feeble), applied to the outer side of the limb and pelvis, the retentive force being directed from within outward at the upper part of the thigh, and from without inward at the pelvis and the lower part of the limb.

The question here arises, whether an apparatus so well contrived for the arrest of motion in the hip-joint could not be used with advantage in appropriate cases in the treatment of fracture of the femur, a question worthy of attention because the hip splint not only secures fixation but also permits the patient to walk, a point of importance in the management of ununited fracture. It may also prove to be useful after osteotomy for deformity of the hip.

The idea that hip disease requires the same treatment as fracture of the femur is not new in medical literature.¹ M. Bonnet presented *le grand appareil* for the treatment of hip disease in 1845, although he had described it in all its details in 1839, as an apparatus for the treatment of fractured femur.²

In the same manner, but with a longer intervening lapse of time, the complicated apparatus of M. Martin was prescribed by him in 1850 for fracture of the femur, and in 1865 for hip disease.³ Mr. Ford compared hip disease without an external opening to a simple fracture of the bone,⁴ and Sir Benjamin Brodie carried the comparison further, saying: "If it (the cartilage) be extensively destroyed without suppuration, the case may be compared to one of simple fracture; and if there be suppuration, it may be compared to one of compound fracture;" a statement which drew from Dr. Alden March this apt inquiry: "If there be some analogy between the condition of the hip-joint in morbus coxarius, and fracture

of the neck of the bone, why should there not be some similarity in the mode of treatment?"⁵

If we recall the morbid anatomy of this disease, in which the integrity of the central portion of the bone is invariably assailed, we can better understand the comparison of hip disease to a fracture of the bone, and the more readily recognize the propriety of treating it by fixation. If hip disease were synovitis, invading, under the pressure of reflex muscular contraction, first the cartilage and then the bony tissue, it would be right to try to diminish this pressure by traction, or any other method believed to be practicable.⁷ We might even attempt the difficult combination of traction with mobility, in the hope that motion without friction would perhaps assist the process of repair and secure a recovery without impairment of mobility. But the disease is not synovitis. It is osteitis, beginning in the cancellous tissue, or at the epiphysal junction, excavating the bone, undermining its strength, progressing from within outward, and involving in time all the structures of the joint. In this view it is clear that the proper local treatment is protection from the pressure and concussion incident to walking, and the prevention of motion in the joint. As in a fracture, so in hip disease, the part should be placed in a favorable position for the action of the natural reparative processes which, aided by appropriate general treatment, are, as a rule, able to limit this morbid process when it occurs in parts which, like the ankle, are more easily protected from disturbance and violence by the voluntary efforts of the patient.⁸

It may be said, in criticism of this precept, that the intention in treating a fracture is to abolish mobility, which, in a case of hip disease, it is our desire to retain or recall. In reply, it may be well to state that the cases of real hip disease which recover with perfect motion in the joint itself are rare, no matter what form of treatment or expectancy be pursued. There are, indeed, many cases in which the friends of the patient erroneously believe that motion of the joint has been preserved, basing their opinion on the evident facility with which the patient walks. It is a common idea among non-medical observers that the limb cannot assist in locomotion if there is absence of motion at the hip-joint, while the truth is, that with a perfectly motionless hip-joint walking may be very well performed, and even with considerable grace, by reason of the acquired mobility of the lumbar region of the spinal column, and by the patient's unconsciously taking advantage of the motion of the unaffected hip.⁹

It is not unreasonable, however, to suppose that central osteitis occurring so near the joint as to produce all the symptoms of incipient hip disease, may, in favorable conditions and with treatment commenced sufficiently early, be resolved with perfect motion in the joint. Such cases have been observed. Patients have even been observed to recover from the third stage, with considerable useful motion in the joint. In every case, therefore, whether the disease be recent or in the third stage, the surgeon should try to secure recovery with motion, and it is important to observe that the treatment herein described not only prevents ankylosis, if it can be pre-

⁶ Transactions of the American Medical Association, p. 503, 1853.

⁷ The pathological objections to this view have been presented in the New York Medical Journal, pp. 1-17, July, 1882; the mechanical objections in THE MEDICAL RECORD, pp. 509-512, May 12, 1883.

⁸ Remarkable results from expectant treatment in disease of the ankle have been obtained by Dr. James Knight, at the Hospital for the Ruptured and Crippled. Thirty cases have been reported by Dr. T. E. Satterthwaite (Report of the Surgical Committee of the Therapeutical Society, MEDICAL RECORD, pp. 197-202, August 21, 1880) and Dr. V. P. Gibney (Cases of the Ankle in Children, American Journal of Obstetrics, pp. 434-457, April, 1880). These results have not met the appreciation which they deserve. Dr. Gibney writes (op. cit., p. 451) that in ankle disease excision "is rarely ever justifiable." He adds: "The expectant plan of treatment, fully carried out, assures us of more results that are perfect, and more limbs that are useful without the aid of support, than does any other plan known to the profession." These words give appropriate expression to a conservatism closely allied to that which crowns with honor the memory of Fergusson.

⁹ Mr. Hilton describes one of his patients, who recovered with a firmly ankylosed hip-joint, as follows: "She is an excellent dancer, frequently dancing for a whole evening, and but few persons know, when she sits down, that the right knee-joint is bent at right angles with the thigh and body, and tucked under the chair to meet the inconvenience of her fixed hip-joint." John Hilton: Rest and Pain, p. 373. London, 1863. American Edition, p. 221, 1879.

¹ In 1779 David de Rouen, referring to diseases of the joints, wrote that notable cures are to be effected "by allowing the parts to remain undisturbed in splints, as in the treatment of fractures." R. Philipeaux: De la Coxalgie, p. 381. Paris, 1867.

² Mémoire sur les fractures du fémur, Gazette Méd. de Paris, pp. 570, 580, September 14, 1839. Traité des maladies des articulations, vol. I., pp. 322-324. Lyon, 1845.

³ L'Union Médicale, Décembre, 1850. De la coxalgie, par Ferdinand Martin, pp. 488-496. Paris, 1865.

⁴ Edward Ford: Diseases of the Hip-joint, pp. 132, 133. Second Edition. London, 1850.

⁵ Clinical Lectures, p. 287. Boston Edition, 1846.

vented, by subduing inflammation, but also, if ankylosis be inevitable, provides for the best position of the limb.

The fixation which this apparatus secures is of a peculiar quality. It may be compared to the condition found in some forms of paralysis, when a joint is said to resemble a leaden pipe, which may be bent with suitable force, but retains with sufficient firmness whatever position it may be placed in. This "fractional degree of fixation" is attended with sufficient arrest of motion to allay inflammation, encourage the reparative process, and afford relief from pain; and yet it is not so inflexible as to prevent the gradual correction of the deformity in obedience to the unconscious efforts of the patient to place the limb in its most useful position, which is that of slight flexion with neither adduction nor abduction. This position permits both walking and sitting with considerable facility, although the joint be motionless.

The deportment of the limb under this treatment is observed to advantage in a case that has progressed so far that the patient is confined to his bed while the thigh is in excessive flexion and adduction, and yet not so far that the structurally shortened muscles are an impediment to the reduction of deformity. Almost immediately the adduction is visibly lessened, and is succeeded in a few days by abduction, which in its turn becomes excessive, because the direction of the traction is abductive or away from the median line. But when the patient has gathered strength from the relief of pain and the ability to sleep, which are secured by fixation, and begins to walk with the assistance of the ischiatic crutch¹ furnished by the perineal straps, and with the aid of a high sole on the shoe of the unaffected side, it is seen that the abduction is, in its turn, gradually diminishing; and as the patient resumes active locomotion, still wearing the splint, the limb assumes a position neither adducted nor abducted, in which it is most favorably situated for walking.² And while the limb has been making these changes laterally, it will at the same time be reduced from a position of extreme to one of moderate flexion, in which it is most favorably situated for both walking and sitting. The favorable position thus acquired is retained without difficulty until recovery is assured.

TWO CASES OF INCOMPLETE FRACTURE OF THE FOREARM.

By GUY HINSDALE, M.D.,

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DURING a service of four months in the surgical dispensary of the Episcopal Hospital, nearly fifteen hundred new cases presented themselves. Among these were five incomplete or "green-stick" fractures of both bones of the forearm, one of the radius alone, and one of the clavicle. The patients were all children from one to six years old, excepting two, whose history I will give.

CASE I.—Frank B. T., aged thirteen, came to the dispensary July 8, 1882. While standing upon a wooden



stool about eighteen inches high, the legs of which were loose, he fell upon a hard cellar floor. He had been reaching high up, holding his left arm in full extension. In his fall his forearm fell across one of the legs of the overturned stool, striking upon its posterior surface and producing the deformity as figured. Although partly

stunned by the fall, he noticed his arm resting on the leg of the stool.

Upon presenting himself at the dispensary within half an hour after the accident he did not exhibit great suffering. The bones were bent backward at their lower fifth; the hand and wrist were not greatly swollen, and motion at the wrist-joint was good. The deformity was so marked that before reduction was attempted I obtained the contour of the limb by means of lead ribbon and took the following measurements, the forearm being flexed at a right angle with the arm and pronated: External condyle of humerus to styloid process of ulna, $8\frac{1}{2}$ inches; external condyle of humerus to styloid process of radius, $8\frac{3}{4}$ inches.

Mobility and crepitus could not be obtained and the diagnosis of incomplete fracture was made. By means of extension and counter-extension and manipulation the bones were at once restored to their original form. As they became straight snapping of fibres of bone was distinctly heard and felt, but complete fracture did not take place. The forearm was then enveloped in lint soaked in lead-water and laudanum, and straight splints were applied to its anterior and posterior surfaces. The wet dressing was continued a few days until the pain and swelling, which was slight, had subsided.

At the end of the third week the splints were removed and a piece of binders' board was moulded to the anterior surface of the arm. There was still some tenderness at the ulnar side of the seat of injury. The measurements made in the same manner as before were now 9 inches and $9\frac{1}{4}$ inches. The patient was discharged at the end of the fifth week. Two months later a similar accident befel him, occasioning almost precisely the same condition as described above, and requiring the same treatment.

CASE II.—Esther S., aged sixteen, a weaver, applied on June 9, 1882. While standing in the mill near her loom, for an instant she rested the elbow of her right arm against the wall, her hand being fully extended. She was instantly struck a sharp, hard blow upon the ball of the hand by the flying shuttle-box, which forced the hand and arm backward toward the wall. The patient was seen about an hour after the accident and found to be suffering greatly. Both bones at the lower fifth were bent backward; the hand was flexed and both it and the wrist were somewhat swollen and of rather a dusky hue. The gentlest touch gave rise to such pain that at the patient's request I asked an assistant to administer ether.

The forearm being flexed at 90° and pronated, the distance from the external condyle of the humerus to the styloid process of the ulna was found to be $8\frac{1}{2}$ inches. Grasping the forearm near the elbow I then made traction from the wrist. Both bones were firm, neither crepitus nor mobility could be obtained. The deformity was then reduced by grasping the forearm with the left hand, the wrist with the right, and making pressure with the thumbs upon the posterior surface of the arm over the seat of injury. As the bones assumed their proper shape the snapping of their fibres could be distinctly felt and heard. With a great deal of force and firm and gradual pressure, and by placing the arm upon a plane surface and pressing forcibly over the seat of injury, the bones were restored to a straight line. It was quite easy to feel the bony fibres give way, although complete fracture did not take place. The arm was then dressed with lead-water and laudanum and placed on a straight, broad palmar splint, reaching from the olecranon to the finger-tips; after applying compresses at the seat of injury, upon the ulnar and dorsal surfaces, a bandage was applied. Wet dressings were discontinued after a few days and a shorter splint substituted. This was laid aside in about four weeks from the time of accident, and the patient ordered to rub the arm well with soap liniment.

Five weeks after the accident the arm looked and felt almost precisely like its fellow, but by passing the hand along the ulna at about the lower fifth a small ridge of callus could be felt. Measurement was again made in

¹ The question of axillary or ischiatic support has been considered in THE MEDICAL RECORD, pp. 1-3, July 2, 1881.

² Cases treated in this manner, in the third stage, have been reported in the Illustrated Quarterly of Medicine and Surgery, pp. 47-52, April, 1882.

the same manner as before and found to be $9\frac{1}{4}$ inches. No tenderness over the seat of injury. The accompanying cut illustrates the deformity:



In most of the works on surgery very little is said upon the subject of bent and incomplete fractures. The works of Gross¹ and Hamilton,² and an article by John Rhea Barton,³ contain the most satisfactory references.

In young children it is possible for bending of bones to take place without perceptible rupture of the bony fibres; the outline is curved, while incomplete fracture in older children usually presents an angular deformity. These curving bones yield more easily to pressure and even of themselves show a tendency to resume their proper shape; incomplete fractures, however, are usually restored with difficulty. As for impacted fractures in the forearm, they usually occur in adults, and by an examination of the bones the rough line of the fragments can almost always be recognized. Efforts to elicit crepitus are, in all these cases, unsuccessful.

As for the treatment in very young children spontaneous recovery may occur. It is, however, better to secure the proper outline by firm, gradual pressure, and the application of splints. Complete fracture may occur in the effort to reduce the deformity and need not excite alarm. The case is then transformed to one of simple fracture. But as this accident destroys the continuity of the bone, and is apt to be followed by a certain deformity, it should, if possible, be avoided.

In regard to the cause of incomplete fracture the prevailing impression has been that it is due to differences in the proportion of the organic to inorganic elements of bone at the different periods of life. Gray¹ quotes Schreger and Rees, who state that the proportion of the earthy element increases with age, and Stark¹ and Von Bibra, who state that the proportion is constant. The later analyses of Mr. R. Tuson,² Demonstrator of Chemistry at St. Bartholomew's Hospital, confirm this statement. The analysis was made of equal weights of long bones of different ages, viz.:

	At birth.	10 years.	36 years.	71 years.
Organic matter.....	35.37	32.62	32.04	32.94
Inorganic matter.....	64.63	67.38	67.96	67.06
	100.00	100.00	100.00	100.00

The predisposition of young bones to incomplete fracture must therefore be sought for in physical rather than in chemical differences. Young bones have a more spongy texture. The proportion of the compact to the cancellous element is smaller in the young than in the old. The specific gravity is also less. To determine this I took two radii. One was from a child about ten years of age, and was itself a fine illustration of incomplete fracture. Its specific gravity was 1.358; the second was from a man forty-five years of age, and its specific gravity was 1.429; while a section taken from the middle of an adult femur gave 1.600.

There is also a difference in the size and structure of the Haversian canals. As the bone grows, the lamellæ increase in number from the periphery inward until as many as fifteen rings may be counted. The calibre of

the canals is therefore larger in young subjects than it is in the aged. It is proper also to state that in growing bones the Haversian interspaces are more abundant.

It is, I believe, owing to these facts, taken collectively, that young bones are permitted to bend when an older and a denser bone would snap.

THE RELATIONSHIP BETWEEN DIPHTHERIA AND SCARLATINA.

By GEORGE T. WELCH, M.D.,

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MOST medical authors are at particular pains to controvert the opinion that scarlatina may be complicated with diphtheria, and strenuously oppose the clinical experience of independent observers with an array of arguments, which might become invincible if nature could be held in bonds by any charm of words. But not even the anatomist can map so accurately that some anomaly may not arise; while the pathologist constantly discovers the confusions attending upon the invasion of one disease into the territory of another. Medicine would become an easy art indeed, and every man would be his own doctor, if but one morbid ill could dispute with life at a time; but as Mary Magdalen was possessed of seven devils, so a crew of noisy complications in some diseases puts the wits to wrangle, and disturbs the judgment. It is certainly the duty of the teachers to simplify the study of morbid processes, to lop away the traditions, thin the redundancies, and let in all the daylight possible upon our science. But to contend that one disease alone hunts in an epidemic is manifestly absurd. And the gentlemen who deny the existence of diphtheria as a complication or sequela of scarlatina, or *vice versa*, readily admit that the former complicates measles, or that it deepens the malignancy of typhoid. Where is the consistency? What is more reasonable than that diphtheria should be awakened when the system is profoundly poisoned with scarlatina, especially since the latter insidiously ravages the same membranes? How seldom does a complication arise in any malignant disease until the invasion of certain vital structures invites the disease that usually preys upon that organ?

All the older writers acknowledged a relationship between the two diseases. In fact, while diphtheria has had an authentic history of two thousand years, scarlatina was never separated from it until within these last three centuries, nor given a name until Sydenham stood sponsor in 1676. We refine upon the ancients, but disease is a gross Caliban that constantly escapes his boundaries.

Let us see how some of the best authorities differ. Says Da Costa, "Diphtheria and scarlatina are certainly allied but not identical; for the poison of one leads to a cutaneous rash, and leaves a protective influence against a second attack; but often also deafness, suppuration of the glands of the neck, and dropsy—phenomena which are not encountered in the other. Moreover the exudation is not exactly similar in the two diseases. In scarlatina it is pultaceous and not coherent, and has no tendency to spread to the respiratory passages."

It is the observation of Squire, in "Reynolds's System of Medicine," that in diphtheria, while there is no diffused redness of the skin, sometimes little isolated red spots are discovered in different parts of the surface, and that the recurrence of the disease in the same individual, if it has been once fully formed, is by no means settled conclusively in the affirmative. Further he states that the albuminuria of diphtheria occasionally results in anasarca.

Mercatus mentions a rash in some of the Spanish epidemics of diphtheria, with redness of the whole face and neck. Fothergill describes a rash in the first edition of his treatise on the disease. Aitken, treating of anginose scarlet fever, declares the sore throat may be of a diphtheritic character.

¹ System of Surgery, Fifth Edition. Philadelphia, 1879.

² Report on Deformities after Fractures, Trans. Amer. Med. Assn., 1855-57.

³ Medical Recorder, 1821.

⁴ "Without any actual disruption except what may be interstitial and too trivial to be reckoned" (Hamilton: Deformities after Fractures, Trans. Amer. Med. Assn., vol. viii., p. 421).

⁵ Gray's Anatomy, p. 51. Philadelphia, 1878.

⁶ Dr. Stark: Edin. Med. & Surg. Journal, 1845.

⁷ Human Osteology, p. 3. London: Luther Holden, 1878.

Hartshorne tells us that occasionally paralysis is a sequela of scarlatina, and that the paraplegia may exist for several weeks or months. It is the opinion of Flint that in some severe cases of scarlatina anginosa the pharynx offers all the characters of diphtheritic inflammation. He observed, in consultation with Dr. Biady, of Brooklyn, a boy who had recently had diphtheria, now suffering with complete hemiplegia and general dropsy. After his convalescence his sister was attacked with scarlatina.

Professor Clark, in his lectures on Diphtheria, has given the details of a case in which that disease was held in abeyance during scarlatina and measles, these diseases following each other rapidly, when the diphtheria again appeared, and proved fatal.

Henoch, in his "Diseases of Children," vehemently denies the complication of diphtheria with scarlatina, but like an honorable observer, a page further on, records the autopsies of seven cases of scarlatina in which fibrinous infiltration of the pharynx descended to the larynx; and of two cases which showed upon post-mortem examination diphtheria of the pharynx, and in one, of the oesophagus also.

Dr. L. A. Smith presented to the Pathological Society of New York the pharynx of a child covered with true diphtheritic membrane, the little patient in life presenting characteristic symptoms of scarlatina.

To these latter I desire to add my own observations. April 30, 1882, I was called to see Frank T—, a lad of ten years of age, who had had scarlet fever in a light form two years before. He had soreness and stiffness of the throat, enlarged cervical glands, inflamed tonsils which filled the throat almost to suffocation, and with the pharynx and half-arches presented a glistening appearance as though coated with varnish. May 1st, the right tonsil had at the centre a yellowish white spot which increased gradually in size, the next day appearing on the left tonsil, and subsequently upon the uvula, velum, base of the tongue and roof of the mouth, and into the nasal passages, accompanied by symptoms of suffocation and impending dissolution dreadful to behold. May 6th, the exudation began to be detached, and by the 8th the whole of the affected portions of the throat were cleared of the diphtheritic membrane, and, despite relapses, the patient finally made a good recovery. So tenacious was this membrane that sometimes, being dislodged from the throat, it would adhere to the roof of the mouth with such persistency that the boy would find difficulty in scraping it off with his fingers. Albuminuria occurred during the progress of the disease. There were no sequelæ.

May 2d.—Joseph L—, an infant of sixteen months, in this family, was attacked with scarlet fever, the efflorescence being diffused generally over the whole surface. May 3th, the eruption subsided, when diphtheria supervened, the tonsils being rapidly covered with the tenacious exudation, which extended both upward and downward, the larynx becoming involved, and the patient dying on the 8th.

On May 6th and 7th, two other children in this family were attacked with severe scarlet fever, without special throat symptoms.

For some months subsequently isolated cases of scarlet fever would appear in families a distance from each other, and in December two cases of diphtheria occurred in a family three miles from Keyport. A child of this family, convalescing from a light attack, conveyed the disease to a little girl of three years in a neighboring family. Five persons were attacked in this family, an infant of twelve months dying from the disease. Paralysis was a sequela in two of the cases. Other attacks of diphtheria appeared in this neighborhood, and scarlatina occurred at the same time in town.

On January 22, 1883, I was called to see a son of Z— C—, aged twelve, who passed through all the stages of a mild attack of scarlet fever. On the 28th,

his two little sisters, Sarah and Grace, two and four years of age, were attacked with the fever. February 5th, Grace was prostrated with virulent symptoms of diphtheria, which extended into the nasal passages, the thin, acrid discharge from which excoriated the upper lip, and acting as a centre of infection, the whole face became involved in a revolting eczematous eruption, which was with great difficulty subdued. Complete paraplegia resulted during convalescence, the child toppling over whenever raised upon her feet, and finally dragging herself by her hands and arms in a sitting posture about the floor. She recovered completely by the end of April.

On February 5th, another sister, Annie, aged ten, was prostrated with severe scarlatina, which began to subside on the fifth day. February 12th she was attacked with diphtheria. On the 16th, false membrane of considerable density was expectorated. Regurgitation of liquids and nasal tone of voice were persistent for some time afterward. In the third week rheumatism of all the large joints occurred, and desquamation, which had been deferred, now began.

On February 11th, I visited Geo. A. F—, ten and one half years of age, who had been ill since the day before. I was struck with the intolerable fetor of his breath as soon as I entered the room. His skin was glowing with the characteristic eruption of scarlet fever. On the succeeding day the brain expended itself in a fury of active delirium. The body roasted at a dull heat. The stiffened jaws would scarcely permit an examination within, but an ash-colored, parchment-like exudation was plainly discovered. February 13th, nasal passages occluded, voice hoarse and inarticulate. February 15th, membrane began to loosen, the edges looking like the frayed finger of a leathern glove. Large pieces, still tough, having the mould of the glottis, were drawn from the throat on a sponge probang. These adhered to the skin like collodion. Upper lip excoriated. Virulent sores were grouped about the alæ of the nose. The conjunctivæ became granulated and covered with an ash-colored deposit. In the meantime the rash had not faded from the body. Death occurred on the seventh day of the disease.

February 15th.—Frank F—, aged nine, was attacked with scarlet fever, and made a good recovery, without any notable departure in the type. C—, an infant of seven months, in this family, was attacked on February 27th with diphtheria of the most malignant form, speedily investing the larynx and causing death on the fifth day. A small ulcer on the face was covered with diphtheritic deposit. The mother had a mild attack of this disease about the same time.

February 15th.—I was called to see Mrs. S. D. C—, a stout, florid lady of forty, who was almost in a state of suffocation. Voice indistinct; liquids regurgitated through the nose. An ash-colored diphtheritic membrane invaded all parts of the throat that could be seen, even extending to the base of the tongue, and upward into the nares, the neck brawny, the pulse swift, the temperature exalted. There was no hopeful presage among all the symptoms. Ice was used in abundance within and without the throat; large doses of perchloride of iron frequently exhibited in milk, though swallowed with increasing difficulty; rectal alimentation, wine, lime-water sprayed in the throat; the room filled with an atmosphere of steam. On the third day there was an evident tendency to softening of the membrane, its edges loosening and having the appearance of old wash-leather, but the patient was alarmingly near death, too. A solution of perchloride of iron was used with an atomizer in the throat, and then twisting about in the latter a sponge probang dipped in the perchloride in glycerine. To my great relief a large piece of membrane was detached. It now broke down rapidly under the use of the atomizer, and enough more was withdrawn to afford sensible relief from impending death. The patient was making a fitful and tardy recovery, when, on the tenth day my attention was called by the nurse to a

scarlet efflorescence which, by the afternoon, covered the face, neck, shoulders, arms and chest, and to a milder degree, other portions of the trunk and limbs. Desquamation occurred a few days later. There was incomplete paraplegia in the third week, which caused great stiffness in locomotion for some time after. Extensive sloughing of the uvula, with severe ulceration of the pharynx followed the loosening and disappearance of the diphtheritic membrane.

At the same time that I visited Mrs. C—, I found her eldest daughter, Lida, aged fourteen, prostrated in another room with severe scarlatina, and one week later, Annie, aged three, was attacked with the same disease.

March 14th, Nellie V—, an infant aged eighteen months, was prostrated with severe scarlatina. On the 20th the efflorescence had disappeared at my morning call, but being hastily summoned in the evening, I found alarming symptoms of diphtheria had suddenly developed. On the 21st the inflamed tonsils had nearly closed all aperture between, and a glistening membrane invaded all the parts to be seen. Successive layers of this appeared in the throat. March 25th, after a series of dark days that lengthened despair to the family, the membrane began to decay. The upper portion broke short off under the use of the probang, like a fracture of macaroni, showing three successive layers of membrane. A most fetid air arose from the mouth. Membrane was expelled from the nostrils; the excoriation of the lip was very severe. A piece of membrane, moulded to the circumference of the throat, was loosened by coughing and removed with the probang. Dr. Arrowsmith, who kindly visited the patient in the afternoon and the succeeding three days, during a short illness I had, reported that at his first visit he distinctly observed the succession of layers of membrane in the throat, and brought away moderately large pieces on the probang, the child being too exhausted to assist in relieving itself. April 4th the skin began to exfoliate. An abscess of large size developed over the larynx. Paraplegia occurred later, with seeming anaesthesia of the skin, and inability to pass urine at will. The anaesthesia was inferred from the great coolness of the skin, and the child's evident desire to be warmly wrapped and held near the fire. Though previously active in walking and running, it was not able to stand alone until May 4th. During the progress of the diseases named, I met in other families scarlatina, and in others diphtheria, which did not present any of the remarkable symptoms detailed.

These cases go far to prove a relationship between diphtheria and scarlatina, even if they do not show that there is but one disease here, preying upon life under dual names, like a villain of many aliases.

Might it not be the same disease we call scarlatina when the symptoms are mild and the efflorescence well developed? scarlatina anginosa when the eruption is obscure and the throat direfully inflamed, with pultaceous deposits on tonsils and pharynx? diphtheria when the deposit is organized and extending above and below with frightful impetuosity?

There is a tribe of Kurds in Caucasus who dare not call the devil by his right name, and so the diagnosticians labor to prove a distinction whenever a difficulty arises. But your writer of pure diagnosis, I take it, is like the lexicographer who compiles from all known sources and makes an average of opinions and judgment, and like him, is forever changing his standard where the ground is disputed, for opinions vary with their sources and judgment is not infallible.

Truly the lists are not closed here, and no man should trust to the books when nature opens to him a dreadful page which he may read as well as another.

It is to this end I have offered the foregoing clinical notes as a contribution to the further study of the identity of diphtheria and scarlatina, for I am impressed with the futility of setting up fast boundaries to these morbid processes. The action of the morbid principle

in the two diseases (if they be two diseases) is so very variable in different epidemics, and in different individuals in the same epidemic, that no reliable average can be gathered from the experience of one generation, but, like the philosophy of many other scientific problems, it must be left to some wiser future.

THE TREATMENT OF SPORADIC CHOLERA.

By J. M. FRENCH, M.D.,

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My note-book contains the analysis of twenty-five cases of cholera morbus, occurring during the past three years, in which three different modes of treatment were employed. The cases were of various degrees of severity, some mild and some extremely severe, but all characterized by vomiting and purging, with more or less prostration.

The first plan of treatment consisted in the administration of pepsine, bismuth, alkalies, opiates, and stimulants, by the mouth, with which was frequently combined the application of sinapisms and hot fomentations externally.

The second plan was by means of the rectal injection of starch and laudanum, thirty drops of laudanum being a medium dose; and with this were combined any measures of the first class which might seem desirable.

The third plan consisted in the hypodermic injection of the sulphate of morphia, one-fourth of a grain being the ordinary dose. It was usually unaccompanied by any other treatment.

The results can best be seen by a brief review of the cases:

CASE I.—Mrs. H. S—; September, 1880; very severe; oral and external measures entirely without avail; great prostration; fatal result feared; the rectal injection of starch and laudanum proved promptly successful, and needed but one repetition.

CASE II.—Mr. W. K—; July, 1881; moderately severe; oral remedies successful.

CASE III.—Mrs. H—; August, 1881; moderately severe; oral remedies successful.

CASE IV.—Miss A. M—; August, 1881; mild; oral remedies successful.

CASE V.—Mrs. L. R—; September, 1881; quite severe; rectal injections promptly successful.

CASE VI.—Mrs. C—; September, 1881; very severe; oral remedies ineffectual; rectal injections speedily successful.

CASE VII.—Mr. M. K—; September, 1881; moderately severe; rectal injections successful.

CASE VIII.—Mr. McC—; October, 1881; moderately severe; rectal injection retained but a short time, and required supplementing by oral and external measures, administered by the nurse, owing to my absence.

CASE IX.—Mr. A. W—; August, 1882; moderately severe; oral measures slowly successful.

CASE X.—Mrs. A. W—; August, 1882; moderately severe; oral remedies slowly successful.

CASE XI.—Mrs. O. W—; August, 1882; moderately severe; oral remedies slowly successful.

CASE XII.—Miss E. G—; August, 1882; mild; oral and external remedies successful.

CASE XIII.—Miss M. P—; August, 1882; mild; oral measures successful.

CASE XIV.—Mr. T. F—; August, 1882; very severe; rectal injection promptly successful, and no repetition needed.

CASE XV.—Mr. C. M—; August, 1882; very severe; a strong man; not seen until he was greatly prostrated—the disease not checked; hypodermic injection of one-fourth grain morphia promptly successful, and no repetition needed.

CASE XVI.—Mr. J. S—; August, 1882; moderately severe; rectal injection administered, and repeated; slowly successful; combined with oral measures.

CASE XVII.—Mr. C. C.—; August, 1882; very severe and greatly prostrated; hypodermic injection promptly successful.

CASE XVIII.—Mrs. K.—; August, 1882; severe; rectal injection rejected, repeated, and fully successful.

CASE XIX.—Mr. C. B. S.—; August, 1882; moderately severe; hypodermic injection successful.

CASE XX.—Mr. P. C.—; August, 1882; mild, because seen early; hypodermic injection promptly successful.

CASE XXI.—Mrs. C.—; August, 1882; moderate; oral measures slowly successful.

CASE XXII.—Mr. P. O'N.—; August, 1882; sudden and severe attack, with great prostration: being close at hand, I gave a hypodermic injection, and prescribed strict quiet, as in other cases; promptly successful, no other treatment needed.

CASE XXIII.—Mrs. G. F.—; September, 1882; moderate oral measures failed; hypodermic injections promptly successful.

CASE XXIV.—Mr. G. V.—; September, 1882; quite severe; hypodermic injection promptly successful.

CASE XXV.—Mrs. F.—; October, 1882; severe and exhausting, requiring constant care; hypodermic measures and all opiates refrained from, on account of previous ill effects of morphia; oral and external measures slowly successful.

Summary.—Mild cases, 4; moderately severe, 12; very severe, 9. Cases treated by oral and external measures only, 10; by rectal injections, 8; by hypodermic injections, 7.

Conclusions.—The first plan of treatment is only adapted to mild and moderate cases, or those which have safely passed the acute stage, as in severe cases no medicine can be retained on the stomach. At best, this plan requires constant watching, and failures are frequent.

The second plan is much more effective, but is liable to need several repetitions on account of inability to retain the injection until absorbed. If not promptly successful patients are apt to lose faith in it, and often object to its repetition. Hence, it is not fully satisfactory.

The third plan is speedy, certain, satisfactory. Except in those cases where all opiates are dangerous, it is also perfectly safe if properly administered. Very seldom does it need repetition. If taken early, it is the only treatment needed. On the whole, I consider the hypodermic injection of morphia as nearly a specific for cholera morbus as anything in medicine.

PUERPERAL ECLAMPSIA.—Dr. Burton, in the *Medical Press and Circular*, May 30, 1883, says: 1. That puerperal eclampsia is a motor neurosis associated with loss of consciousness. 2. That it stands in intimate relationship to the convulsions of childhood and to epilepsy. 3. That only one factor in its production is constant, viz., a peculiar condition of the nervous system that may be designated as one of "unstable equilibrium," and that this factor is common also to the convulsions of childhood and to epilepsy. 4. That retention of urinary constituents when present vastly increases the tendency to convulsions in pregnancy, but that outside the conditions of pregnancy and childhood such retention is but rarely the cause of convulsions. 5. That nerve-irritation—shock, emotion, violent pain, uræmic or other morbid condition of blood, etc.—is capable of setting up sudden vasomotor spasm of cerebral blood-vessels. 6. That this spasm of blood-vessels, causing sudden anemia of the brain, is the cause of the convulsions and of the consequent coma. This view of the etiology of puerperal convulsions leads naturally to the treatment, and in fact furnishes an explanation of the success that has attended the employment of chloroform, ether, chloral, bromide of potassium, subcutaneous injection of morphia, and blood-letting.

Reports of Hospitals.

ST. LUKE'S HOSPITAL, NEW YORK.

(Reported by HENRY MOFFAT, M.D., House Physician.)

A CASE OF DIABETIC COMA WITH ACETONÆMIA.

So much has been written of late in the various medical periodicals upon the pathology and clinical history of this somewhat unusual condition, and so little can be found in explanation of it in the standard works on practice that I have been led to think that a case as typical as the following will not be without interest to the profession at large.

As condensed from my notes the case is as follows: George A. C.—, aged nine years, admitted September 9, 1882. Family history negative. Patient was perfectly well till January, 1882, when it was first noticed that he had nocturnal incontinence of urine. At the same time the daily quantity of urine passed began to increase. This increase became gradually more and more marked, his appetite became ravenous, thirst unquenchable, and he soon developed all the well-marked constitutional symptoms of diabetes mellitus.

On admission he was anæmic and emaciated. Upon his forehead was the cicatrix of a wound received when about two years of age. (No history of any cerebral symptoms following this wound.) He was passing one hundred and eighty ounces of urine daily. Examination showed specific gravity 1.044, acid. No albumen and no casts. Sugar, thirty-two grains to the ounce.

Patient was put upon diabetic diet, and treated with strychnia sulph. gr. $\frac{1}{100}$, and later with the bromides. Under the latter treatment he seemed to be gradually improving, and by January 28, 1883, was passing only sixty ounces of urine, with seventeen grains of sugar to the ounce.

February 11th.—Without any known cause patient began to complain of pain in abdomen, and soon became drowsy and sleepy, and when seen at 6.30 A.M. his respiration was rapid but deep; pulse rapid and somewhat feeble. He could be roused, and spoke continually of his abdominal pain. 9.30 A.M.: Pulse, 146; respiration, 36; temperature, 99°. Surface warm and dry; pupils normal and react to light; no cyanosis; patient completely comatose; the respiration was very deep and full, the whole chest expanding well.

Examination of urine passed at this time—specific gravity 1.034; acid; trace of albumen; sugar, 3.45 grains to the ounce. With ferric chloride it gave the dark wine-colored reaction supposed to be due to the presence of "acetone." At 11 A.M. patient was seen by the attending physician, Dr. G. G. Wheelock, and the diagnosis of acetonæmia confirmed.

Patient remained in this condition for twenty-six hours, when he died. There were no distinct convulsions, but just before death a slight twitching of the hands and face.

At the autopsy, performed by Dr. F. Ferguson, nothing abnormal could be detected by the naked eye either in the brain, spinal cord, or any of the viscera.

Since then, however, the doctor has very kindly furnished me with the following microscopical report:

"The kidneys are slightly anæmic—the epithelium lining the tubules in the cortex is cloudy, fatty in places. There are a large number of fatty emboli in the vessels of the kidney extending into the capillaries of some of the Malpighian tufts. There are numerous fatty emboli in the vessels of the lungs. The lungs in other respects are normal. There is a very small amount of fat in the liver, evenly diffused throughout the organ and pigment of the hepatic cells around the central vessels. The heart-fibre contains considerable pigment—the organ in other respects normal."

Upon reviewing the case there are a few points I would wish to emphasize.

1. The coma occurred in a case which was *not* acute, but seemingly improving in every way. In this it differs from the case observed by Drs. Foster and Sandby,¹ who conclude that this condition is more apt to occur in acute cases.

2. There was a marked diminution in the amount of sugar in the urine during the coma.

3. The discovery by Dr. Furguson of fat emboli in the vessels of the kidney and lungs is of interest as bearing upon the mooted question of the lipæmic origin of the coma. There was, however, no evidence of marked pulmonary obstruction, nor any congestion of the meninges or substance of the brain. (See *Edinburgh Medical Journal*, September, 1882.)

4. We cannot close without referring to the peculiarity of the respiration. When once seen it can never be mistaken. It was rapid but very deep; the whole chest being fully expanded, but seemingly no relief to the dyspnoea.

Progress of Medical Science.

A CASE OF MOVABLE KIDNEY FIXED BY OPERATION.—The patient, a married woman, aged twenty-seven, had for three years suffered much from pain and sensation of weight and dragging in the right hypochondriac and iliac regions, increased by walking and exertion, gastric catarrh, and habitual constipation. A movable tumor was found, and clearly made out to be the kidney. As no kind of treatment or support afforded any relief, an operation was determined on. Anæsthesia was produced by bichloride of methylene, and all antiseptic precautions were followed. The patient placed on the left side, an incision, about sixteen or eighteen centimetres long, was made in the right lumbar region along the external border of the sacro-lumbar muscular mass, extending from the last intercostal space to the crest of the ilium. On cutting carefully through the parietes, the circumrenal fatty connective tissue was reached. The kidney was not *in situ*, but could be felt through the abdominal wall in the iliac fossa. An assistant pushed it up with his hand and kept it in position, while the operator, breaking through the fatty connective tissue, easily discovered the convex border and the greater part of the posterior surface. The first suture was put in the convex border: the needle traversed the fibrous capsule of the kidney. The circumrenal fatty connective tissue was raised and drawn into the wound, through the tissues of the wound directly under the lower edge of the last rib, and again through the circumrenal connective tissue. A second suture was applied on the posterior surface of the kidney, and in the deep tissues of the posterior lip of the wound. A third suture was placed in the same way in the anterior surface of the kidney, at the convex border and the deep structures of the anterior margin of the wound. With these three sutures the kidney was held in position. For greater security, the circumrenal fatty connective tissue of the lower half of the kidney was united by four sutures to the tissues of the wound. Catgut sutures were used. A large drainage-tube was applied deeply, and a small one superficially, and the wound was sewed up with seven points of deep sutures and twelve superficial. The patient bore the operation well, and her subsequent course was satisfactory. There was no fever, and the urine remained normal. The wound was dressed on the fourth day, and the drainage-tubes were removed. On the ninth day it was dressed for the second time. Cicatrization was complete; the superficial sutures were removed. On the twentieth day the patient was discharged cured. She has lost all her former pains, is perfectly well, and the kidney can be felt in its normal situation.—*London Medical Record*, May 15, 1883.

DERANGEMENT OF THE MUSCULAR SENSE IN CEREBRAL DISEASE.—In a recent lecture (*Wiener Medizin. Blätter*, March 1, 1883) Professor Nothnagel made some general remarks on the derangement of the muscular sense in cerebral disease. The muscular sense is disordered in the following circumstances: 1. When patients cannot distinguish between weights. 2. When they have no idea of the position of their limbs, and are unable to imitate with one limb a movement which has been made passively with the other. 3. When ataxic symptoms are present, *i.e.*, when the gait is staggering, or when the patient cannot use the upper extremities for such movements as putting in a button. The symptoms point to morbid processes in the cerebellum, corpora quadrigemina, pons varolii, thalamus opticus, centrum ovale, or cortical substance. In the cerebellum the affection is not of the hemispheres, but of the vermis, and Nothnagel is inclined to think only the deeper part of the vermis; but more exact knowledge on this point is wanted. Sideward inclination comes on when the crus cerebelli is injured. In the corpora quadrigemina, the seat of lesion seems to be the posterior pair; in the pons, we know that the injury must be near the centre, but the exact spot has not been discovered. Our experience as regards the optic thalamus is very slight; one case has been observed by Hughlings Jackson where weights could not be distinguished, and Flourens believes from his experiments that the position of the limbs is not known. There is not much to say of the centrum ovale, and in the cortical substance the central evolution is now supposed to be the seat of injury, instead of the parietal, as formerly; and the more superficial the injury is, the more will the muscular sense, and not the motility, be disturbed. Clinically, both extremities are affected when the lesion is in the pons varolii or cerebellum, whilst in affections of the cortical substance the muscular sense is disturbed only on one side. Staggering gait seems to occur in connection with dizziness. In cortical lesions weights cannot be distinguished, but the ataxic gait is seldom seen. In some cases of injury to the pons co-ordination only was disturbed; in others the muscular sense also.

ENCHONDROMA OF BOTH LUNGS WITH SECONDARY GROWTH IN BRAIN.—Dr. Churton, in the *Lancet*, March, 1883, gives notes of the case of a girl, aged eighteen, who came under his observation for shortness of breath and severe cough. The left leg had been amputated four years previously, but the exact nature of the disease was not ascertained. There had been wasting for sixteen months before she came under Dr. Churton. On examination, there were the usual signs of effusion on the right side of the chest, and subsequently several ounces of blood-stained fluid were removed by the aspirator. After two or three weeks of frequent headache and vomiting, twitchings of the left arm and hand were noticed; and after this patient had fits at intervals, remaining unconscious for an hour or more. The patient gradually became worse, and died about two months after her admission. The post-mortem examination showed a hard, bony growth of the lower part of the right lung, with scattered nodules through the anterior part, and also in the left lung. In the substance of the right cerebrum was a growth weighing nine drachms, which on examination proved to be ordinary osteo-enchondroma.

THE PICRIC ACID TEST FOR ALBUMEN.—Dr. Johnson, *British Medical Journal*, May 7, 1883, gives the following additional details concerning this test:

It should always be borne in mind that, in testing for albumen, the picric acid must be in excess. A few drops of a saturated solution of picric acid in a highly albuminous specimen will form a coagulum, which is quickly redissolved. When urine contains much albumen it should be mixed with its own volume of the picric acid solution; and in testing a fresh specimen, it is better to begin by adding an equal volume of the test liquid.

¹ Birmingham Medical Review, January, 1883.

One difference between picric acid and nitric acid as tests for albumen is, that whereas an excess of nitric acid, especially when the urine is heated, will entirely redissolve the previously precipitated albumen, no excess of picric acid will redissolve the precipitate which it has once found in an albuminous solution. Picric acid solution on the surface of the urine is applicable only for the detection of a minute trace of albumen. For this purpose he advises that a column of urine four inches in height should be poured into a six-inch test-tube, and upon this one inch of the picric acid solution. The result is that the upper layer of the urine is mixed with about its own volume of the test liquid; and if albumen is present, the stained portion of the urine is instantly rendered more or less opalescent, and thus contrasts with the unstained and transparent urine below. If the picric acid solution were allowed to flow so gently on to the surface of the urine as merely to come in contact and not to become mixed with its upper portion, the albumen, if present, would not be detected, or it would be indicated only after an interval of some minutes, when the two liquids had become mixed by slow diffusion. There must be an actual mixture in about equal proportions, and not merely contact of the two liquids, to ensure the action of the test.

The slight opalescence caused by the picric acid solution in a sample of urine which contains a mere trace of albumen is always increased by the application of heat. So that if the flame of a spirit-lamp be applied to the upper part of the opalescent column, this will become more opaque than the lower part, which had not been exposed to heat. He now invariably applies heat to a specimen of urine, which has been rendered opaque, or more or less coagulated, by picric acid. His chief reason for this practice is to ascertain if peptones ever appear in the urine. In a paper published in the *Journal*, March 31st, he has shown that, whereas the albuminous precipitate with picric acid is rendered more opaque and coherent by heat, the precipitate which picric acid gives with peptones is entirely redissolved by heat considerably below the boiling-point.

The microscope alone would serve to distinguish the precipitate caused by picric acid with peptones, with urates, and with albumen respectively. The precipitate recently thrown down with artificially prepared peptones appears under the microscope quite homogeneous, and free from solid particles; but when the precipitate having been dissolved by heat, reforms on cooling, it seems to consist of numerous very minute, apparently globular particles, in which the so-called "Brunonian movement" is very active. The microscopic appearances of uric acid and urates are so well known as to need no description.

The precipitate produced by picric acid with albumen presents irregular clusters of granular material, which appear much larger and more opaque after the application of heat. According to his experience, a deposit of uric acid and urates is about as rare a result of adding picric acid to urine as a similar deposit caused by nitric acid; and hitherto he has met with no specimen of urine in which the presence of peptones has been indicated. A deposit thrown down by picric acid and redissolved by heat, may pretty safely be assumed to consist of urates, but in any case of doubt the addition of Fehling's solution and the microscopic appearances will at once serve to distinguish between precipitated peptones and urates.

DYSENTERY AND LIVER ABSCESS.—In a paper on the relation of hepatic abscess to dysentery, Sir J. Fayer (*Lancet*, May 19, 1883) summarizes his opinions as follows: 1. The so-called abscesses which originate in local deaths of parenchyma (pyæmia, embolic deposits, or infarcts) are cavities varying in size from a mere speck to an orange, containing debris, sanies, puriform matter, leucocytes, and, finally, pus. They are seen in various stages of development, and are not necessarily confined to the liver, but occur in other viscera or regions of the

body. These are truly pyæmic. 2. There is a form of liver abscess co-existent with, and perhaps due to, dysentery, which is the result of direct absorption and transference of pus or septic matter from the bowel to the liver through the mesenteric veins. Such may be solitary, double, or triple. This is also a very dangerous form of the disease, though not necessarily fatal, as it is feared must always be the case in the former variety.

3. Dysentery, malarial fever, and hepatitis may co-exist, or supervene on each other as effects of common climatic cause; it seems natural to ascribe the liver abscess in such cases to the dysentery, but it is probable that they are rather coincidences than consequences of each other, and that the cause which affects the glandular structures of the large intestine may determine the mischief in the liver in certain climates and localities; such are obviously very different from those previously mentioned. 4. The ordinary large and most frequently single tropical abscess is quite independent of dysentery, though it may co-exist with or follow it. Each or all of these forms may, in England, be the result of disease originally contracted in certain climates.

THE NITROUS COMPOUNDS IN ANGINA PECTORIS.—Dr. Hay has instituted a series of experimental observations touching the value of nitric, nitrous, and nitro-compounds in angina pectoris (*The Practitioner*, May, 1883). He concludes therefrom that nitrous acid in any combination, whether as an ether or a metallic salt, is useful in the treatment of angina pectoris; and that, in the case of the nitrite of amyl, the action of the acid is aided by that of the base. On the other hand, all compounds of nitric acid, whether ethereal or metallic, are without effect, unless it so happen that the constitution of the nitrate is such that it decomposes in the body with the liberation of nitrous acid. Further, nitro-substitution compounds have likewise no remedial effect. So far as at present known, the nitrogen-containing remedies for angina pectoris may be divided into two classes, the one consisting of combinations of nitrous acid with metallic oxides or alcoholic radicals, the other comprising a peculiar class of nitric ethers, obtained from the higher alcohols, whose decomposition within the body results in the production of nitrous acid. In both classes the action of the compound is ultimately dependent on the nitrous acid present. Typical examples of the first class are nitrite of sodium and nitrite of ethyl, and, of the second class, nitro-glycerine. To these classes might be added another containing such substances as compounds of amyl, whose action is similar to that of nitrites. But, limited as this group at present is to compounds of amyl, it is not one to be chosen in the treatment of angina pectoris. The dose required is large, and the action is not rapidly produced, and disagreeable after-effects are apt to occur; and altogether I am very doubtful of its always acting so well as it did in the case of my patient.

CHANGES IN THE CARDIAC NERVES IN HEART DISEASE.—From a number of examinations of hypertrophied hearts with valvular lesions, Dr. Putjatn (*Virchow's Archiv.*) concludes that: 1. In chronic affections the nerve-ganglia are affected by an encroachment of the inflammatory process. 2. In cases of early and relatively slight disease the changes are restricted to hyperæmia and granular degeneration. In chronic and extensive affection of the heart there are evidences of interstitial inflammation with the production of fine connective tissue, while the ganglion cells themselves present appearances of fatty and pigmentary degeneration. In one case there was entire destruction of the ganglion cells, with calcification of the tissue between them. 3. Aside from local trouble in the heart and aorta, changes in the ganglia may be called forth by chronic constitutional disease. 4. The above described lesions cannot be without influence on the physiological activity of the heart. In this way many of the functional disturbances

and even paralysis of the heart, when fatty degeneration is not present, can be explained. Possibly, also, some forms of angina are referable to the same cause.

Uskow has also studied the nerves of the heart, in cases of hypertrophy combined with chronic interstitial nephritis (*Virchow's Archiv*). He has found that with the growth of muscular tissue the medullary sheath of the nerves is lost, and a process of nuclear proliferation commences. Should an acute disease supervene, then the changes in the affected nerves assume the character of an acute parenchymatous inflammation. In the nerve-cells lying in the course of the fibres, as well as those in the ganglia of the septum atriorum, the changes were confined to thickening of the capsule and increase of nuclei. The protoplasm itself was unaffected.

THE RAPIDITY OF CEREBRAL ACTS.—Dr. René has made a series of experiments on the rapidity of transmission of impulses through nerves, and the rapidity with which cerebral acts are performed. He finds (*Gaillard's Journal*) that the intensity of the stimulus has a direct influence on the rapidity of nervous transmission. The stronger the stimulus the more rapid the transmission. The rate of transmission cannot, therefore, be stated in exact terms, since it is relative, as has been not unfrequently noted for other kinds of cellular activity. He has also confirmed the fact, now very generally admitted, that it is impossible to measure the rapidity of transmission in sensory nerves by stimulating different points of their length, for the rapidity of the response is not proportionate to the length of the nerve traversed. Thus the response to a stimulus applied to the finger is often made with a shorter interval of time than a stimulus applied to the elbow or to the shoulder, though the length of nerve called into play is much greater in one case than in the other. In a word, it is impossible to compare the results obtained from different regions. The most exact method of measuring nervous transmission appears to be that of response to an auditory stimulus. The rapidity with which nervous impulses are here conducted he estimates at twenty-eight metres per second, which is a little lower than the number obtained by other physiologists. For the rapidity of transmission of motor impulses René gives twenty metres per second, which is below that of other experimenters. The duration of a cerebral act he estimates at $\frac{3}{100}$ second. In young infants the duration is more considerable, amounting to 0.090 second. The duration of a reflex act—that is to say, the time occupied by the entire reflex arc, sensation, transmission to the cord, including motor impulse and muscular movement—is 0.15 second.

CEREBRAL VACUOLATION.—At a recent meeting of the London Pathological Society (*British Medical Journal*, May 17, 1883) Dr. White read a paper, written conjointly by Dr. Savage and himself, on vacuolation of the cerebral substance. It was shown that there were nine causes for holes in the brain: 1. Small processes of sclerosed meninges, in cases of general paralysis, dipped into and excavated minute portions of cerebral tissue. 2. In the same disease the sclerosed neuroglia, by its contraction, might give rise to small cavities. 3. There might be multiple hydatids in the brain. These three conditions were very rare, the authors having no knowledge of the second, while the third was almost confined to animals suffering from staggers. Several references to continental authors were given, while the relation of the muslin appearance to the second of the above was pointed out. 4. The fourth cause was the dilatation of cerebral vessels giving rise to the "*état criblé*." It was particularly emphasized that this was, in the majority of cases, of no pathological significance. 5. Shrinking of the cerebral convolutions in some cases gave rise to holes in the subjacent cerebral substance; a very good example of this condition was exhibited. 6. Miliary aneurisms, as Charcot had pointed out, might give rise to holes in the brain-substance; some very

marked specimens showing this were exhibited. 7. In the condition known in Germany as *die Porencephalie*, a large gap existed in the brain-substance; this might communicate either with the exterior or the interior of the brain, or both. 8. The Gruyère cheese condition. This, it was pointed out, was quite different from the "*état criblé*," for it was due to a dilatation of the perivascular lymphatic space of His. Of the causes of this dilatation nothing was known; probably they were local, and the dilatation was saccular. The authors showed an example of this condition in which the whole of the brain, except the lower part of the medulla, was riddled with cavities exactly like those found in cheese, and microscopic specimens exhibited showed that these holes were produced by this perivascular dilatation. The shape and direction of the cavities also corresponded with that of the vessels. Very few examples of this condition had been carefully described; in England only one, by Lockhart Clarke, who referred it to the same cause. 9. The authors showed specimens from two remarkable cases, in which the kidneys, lungs, liver, heart, and brain all contained holes; in the kidney, these cysts were due to the dilatation of either the tubules or Malpighian capsules; in the liver they were due to the vacuolation of the hepatic cells; in the lungs and brain it was impossible to come to any definite conclusion as to their origin, but in both these viscera the cavities contained a peculiar material, staining deeply with logwood; both the subjects were lunatics. Cases in which there were found only a few holes, such as patches of softening hemorrhage, were not considered to come within the scope of the paper. Dr. Savage said that, in the cases of the two lunatics last referred to, the changes were certainly not due to changes produced by preservative fluids after death, as the vacuolation was noticed at the necropsy. Both the patients were general paralytics, but in one the disease was chronic (three or four years), in the other acute (three or four months). He was convinced that the vacuolation occurred under various conditions.

THE LOCAL ORIGIN OF MALIGNANT GROWTHS.—Mr. Jonathan Hutchinson, in the *British Medical Journal*, March, 1883, contributes a paper on the nature and scope of the local influences which induce malignant action. "The more we investigate, the more clearly will we see that all inflammations are really infective, and that inflammatory processes may pass by almost insensible gradations into those of malignancy." It is not so much senility of the entire organism as local senility (an old age of the tissues concerned, which is premature, and does not correspond with that of the body as a whole) that is almost always necessary to the production of cancer, exceptions occurring, however, in cases due to the influence of inheritance. Tissues and organs which are just passing out of use are those most prone to develop cancer. As to the inheritance of cancer, it has been urged that a disease which is capable of inheritance must be a constitutional one. This is true to some extent; but Mr. Hutchinson says that a peculiarity of cell-structure generally is inherited, not germs, not a blood-malady, but a special type of cell-organization, permitting with greater ease than in other persons the injurious influences of local causes. The rodent ulcer of the face is looked upon by the author as a form of morbid action which stands half way between common inflammation and cancer. There is also a distinct proneness possessed by parts formerly affected by syphilitic inflammation to become affected by some malignant growth. In conclusion, Mr. Hutchinson urges the adoption of his doctrine of a pre-cancerous stage, where surgical interference is necessary and ought to be insisted on, before the growth takes on any definite form except that resembling ordinary inflammation, and before the neighboring lymphatics are affected. Without this, he sees no hope of any improvement in the reduction of the mortality of cancer.

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THE INSANITY OF EPILEPSY.

IN the study of epileptic insanity we find much to justify the view of the pathogeny of the falling sickness propounded by Hughlings Jackson, namely, that the epilepsies are dependent on excessive paroxysmal discharge of some part of the cerebral cortex.¹ Not to dwell on the fact that the initial symptom of the "grand mal" may properly be designated as a paroxysmal affection of consciousness, and that light seizures of the "petit mal" are constituted by abrupt temporary suspension of the conscious mental life; that epileptic attacks often begin with some strong mental emotion as fear, or anger, exhibitions of irascibility or peevishness of hours' or days' duration, forcing upon us the irresistible inference that, if the fit begins in the intellectual sphere, and consequently in the gray matter of the hemispheres, the succeeding physical processes must begin in the supreme cortical motor centres, between which and the psychical centres there is both contiguity and histological solidarity. The truth has often been pointed out that the sensory, intellectual, and motor phenomena of epilepsy are interchangeable, and that an attack of mania may take the place of the ordinary convulsive paroxysm, the derangements displaying themselves in convulsions, not of the muscles but of mind, to use Maudsley's expression.

"The physical process, in a fit beginning by loss of consciousness, is a discharge beginning in some of the nervous arrangements in the highest centres of the brain" (Hughlings Jackson). This view, which is generally accepted by those who believe in the modern doctrine of localizations, explains all the phenomena of the fit and their order of occurrence much better than the older theory, which finds the point of departure of the paroxysm in excitation of the medulla oblongata.

A remarkable example of the *furor epilepticus* taking the place of the customary convulsive seizure, constituting what is known as *masked epilepsy*, is given by Jules Falret in the *Archives Gén. de Médecine*. "François L—, shoemaker, was for many years subject to epileptic fits. The attacks, which at first were followed by but slight alteration of the reason, became more serious and were accompanied by furious mania. Sometimes the fit was replaced by homicidal delirium, as in the following instance: When he was through with his military service (he had been a soldier) he returned home and decided to marry.

The ceremony was fixed for October 26, 1841. The 24th an intense headache came on and seemed to him to betoken an impending attack. He called a physician who had formerly treated him for the disease, and demanded to be bled, an operation which had always given him relief. The physician refused to gratify his request. The 26th, some hours before the wedding, he was bled by another physician, but without any diminution of the pain. During the marriage ceremony François was dejected and taciturn; he said nothing but the one word *yes*. On quitting the church he was seized with a most atrocious pain in the head, and when he arrived at the house of his father-in-law he was obliged to take his bed. The bed-chamber was adjoining the dining-room where the wedding feast was being prepared. Then he was seized with an attack of epileptic madness, and while the persons who were with him were hunting for cords to tie him, he precipitated himself naked into the dining-room, with a shovel, of which he had obtained possession, pursued a woman who fled before him, threw her down and inflicted heavy blows on her head. His father-in-law interposed, when he flew at him and drove him from the house. He cast himself on the ground before the door, biting the threshold with his teeth; then he rose with a shoe-knife in his hand, opened the door with force, crying out that he would kill them. The first person he met was his father-in-law, whom he instantly killed. This attack lasted three days. On the 28th instant his reason returned, but he remembered only the event of his marriage, and nothing of that which came after. He supposed that he had slept all that time. He was at once removed to the asylum of Clermont, where he still remains.

Lesegue relates similar instances where the fits were preceded or replaced by the "delirium of impulse." In one remarkable case, that of the assassin Thouviot, light was shed on the extraordinary motiveless murder of a young girl, by the subsequent occurrence, while the homicide was in jail, of two epileptic fits.¹

The epileptic paroxysm is often preceded by grave intellectual troubles. Bellod relates an observation in which the convulsive crisis was always ushered in by a state of melancholia, and succeeded by a state of mania. A remarkable case is recorded by Ball² of an ecclesiastic who had been epileptic for twenty years. Every month occurred a period marked by two or three complete convulsive attacks. Each of these periods was preceded, for eight or ten days, by a melancholic delirium, characterized by ideas of persecution and by hallucinations of hearing, in which he would hear the most shocking blasphemies. After the convulsive paroxysms, and several days of hebetude which followed, he entered on a phase of *bien-être* and satisfaction inexpressible, in which he spoke incessantly of his restoration; his hallucinations of hearing had left him, and he was enabled to devote himself to his usual religious exercises. This period of *bien-être* would last a fortnight, to be succeeded by a state of melancholia and another convulsion.

In the event of a crime being committed by an epileptic, the criminal should always have the benefit of the doubt as to whether he were sane at the time. The deed

¹ Lectures on Epilepsy, by Jackson, in London Lancet, 1879. Maudsley on Responsibility in Mental Diseases, page 41 et seq.]

¹ Maudsley in his works gives many similar instances.

² Leçons sur les Maladies Mentales. Article, "Folie Epileptique."

of violence may, as Ball remarks, be but the first symptom of developing lunacy, or the result of that impulsive, brutal, badly equilibrated character which in an epileptic unquestionably diminishes the moral freedom.¹

It is true that some epileptics have been characterized by extraordinary mental activity and brilliancy of genius, and Mahomet, Swedenborg, Napoleon, have been cited as examples of epileptics, whose malady did not impair, possibly may have increased their intellectual power. It is, moreover, very probable that much which has passed current among mankind as *revelation* and as *divine*, like Mahomet's visions, was the fruit of genius under the direction of the *furor epilepticus*. Maudsley sarcastically intimates that the invention of the modern sensational novel, with its murders, bigamies, and other crimes, was an achievement of the epileptic imagination. If epilepsy be the result of morbid excitation of the supreme cortical cells, it is easy enough to trace a kinship, and often a causal connection, between this disease and any perversion whatever of imagination and genius.

That the general tendency of the epileptic neurosis is toward mental degradation, amnesia, and dementia, is proved by multitudes of facts in the experience of alienists everywhere.

It is an interesting circumstance in connection with this study, that epilepsy in the parent may engender the insane neurosis in the child, and insanity in the parent may be transmitted as epilepsy to the child. The fact that insanity is essentially a disease of the ganglia of the hemispheres, gives great probability to the theory that epilepsy, which bears such an intimate correlation to it, is itself due to abnormal modifications ("discharging lesions") of the supreme cortical cells. Moreover, the epileptic aura is a sensory disturbance, evidently emanating from some perceptive centre in close relation to the motor area of a member, and epileptic vertigo—attacks of which often precede for months the convulsive motor manifestations of the disease—is a phenomenon affecting the domain of consciousness. It is easier to understand these phenomena on the supposition that they are primarily cerebral than that they are primarily spinal.

In conclusion it should be stated that, in not a few instances, autopsies of epileptics have revealed grave, sometimes gross, lesions of the cerebral hemispheres.²

THE END OF THE STATE MEDICAL SOCIETIES.

SINCE February last we have furnished to our readers records of the meetings of twenty-six State Medical Societies, of three national organizations of specialists, and of the American Medical Association. This certainly shows that there is much activity among American physicians. Whether this activity has correspondingly enriched the science of medicine we will not undertake to say. It is to be borne in mind that although each of the States in the Union has its own Medical Society, many of these organizations have hardly more than a nominal existence, so far as real medical work is concerned. We have received several complaints to the effect that the reports

of these societies are not interesting nor instructive reading. The charge is in a measure true, yet it will be found that few State Societies meet without doing something worthy of note. We trust that we shall not be accused of sectarian jealousy if we intimate that decidedly the best work has been done in the New England and Middle States.

Having watched for some twenty years the growth of State Societies, we are glad to be able to say that in the last few years they have been steadily improving. The meetings are better attended, more papers are read, and more interest is shown. It must be admitted also that more dinners are eaten and more excursions are made.

State Medical Societies are very useful agents in the promotion of mutual acquaintance and good feeling, as well as in maintaining that *esprit de corps* which is so valuable to the profession. A cordial shake of the hand, a dinner at the same table, will do more than any by-laws to secure the proper relations between physicians. We urge upon physicians, therefore, an increased interest in their State Societies. The majority of them have still their potency for good in a very crude and undeveloped condition.

A HOUSE DIVIDED.

IT seems that all the defenders of the American Code of Medical Ethics are not satisfied with the election of Dr. Austin Flint to the Presidency of the American Medical Association. The objection (which is made by a correspondent of the *New York Medical Journal*) is not that Dr. Flint did not deserve it on personal grounds, but that he does not stand by the old Code in its entirety. The writer referred to says:

"It is scarcely more than a month since Dr. Flint, through the columns of your own journal, labored to break down the force of the restrictive clause in the Code, and concluded by saying: It is to be hoped that the American Medical Association will adopt such modifications in the phraseology of this section as will place restrictions in consultation, not on the ground of doctrines or forms of belief, but on separation from and avowed antagonism to the medical profession. Now, when it is remembered that, on the ground of doctrines and forms of belief, we thrust the homeopaths neck and heels out of the profession, and ourselves created the 'separation' and 'antagonism,' I submit that Dr. Flint does not leave us a visible leg to stand upon. Heaven save us from our friends!

"But I am glad to see that Dr. Flint has so far reconsidered his views as to be able to sign the required pledge to sustain the Code as it is. I hope there is in this case none of that mental reservation referred to by Dr. Flint, Jr., at the Academy, and so ably exposed by Dr. Squibb in the article to which I called attention last week, and that we shall not be mortified next year by any movement toward a change. I am the more solicitous about this as I am informed that a great many joined the movement for re-enacting the old Code in this State in the belief that our leaders would initiate some action in the association this year looking to revision."

There exists much confusion in the minds of many as to the real significance of the "restrictive clause" in the old Code. Some think that it is right as it is, others,

¹ "It were as unreasonable to hang a man for not stopping by an act of will a convulsion of which he was conscious."—Maudsley: *Body and Mind*, p. 66.

² Vide recent papers by Seguin and Jackson.

like Dr. Flint, think that it ought to be changed; and still others think that as it stands, the clause does not really forbid consultations with educated and liberal homœopaths. There has been a great deal of mutual congratulation over the fact that no discussion or dissension regarding the Code took place at Cleveland. But after all would it not have been better and manlier to have faced the matter courageously, and shown some consideration toward the strong feeling, shared, if not initiated by Dr. Flint, that some change is needed.

So far as the position of the profession before the world is concerned, we can only repeat that every week brings new expressions of condemnation and contempt for the unwise and timorous policy of the Association.

LOCATING YOUNG PHYSICIANS.

THE General Association of French Physicians, which met in Paris not long ago, has undertaken a project which is certainly unique and which promises to be very useful. It proposes to organize a bureau for the purpose of securing information regarding the most desirable places in which recently graduated physicians may locate. At present, we are told, many young men leave college with no definite idea as to where they had best go. In consequence they often choose a location without fully understanding what the prospects will be for them, and have to wait a long time before a respectable practice is secured, or perhaps have to abandon the field finally and go elsewhere.

It is proposed to obtain, by correspondence and otherwise, a kind of topographical chart showing where physicians are most needed and where the best prospects for new comers are to be found. The association will also act as agents for those physicians who wish to retire or sell out, or leave their practice for a time.

The plan is highly commended by the French medical journals, and we presume that it can be made to work successfully in France. In this country the difficulty would be in finding any place where a new doctor is wanted. With the young American graduate the question generally is, not where is there an opening, but where is the field least occupied. The advice very frequently given, therefore, is to go to the place which one likes best, and there stick till practice comes. Old Dr. Crosby, of Hanover, used to say for the comfort of his young pupils: "Whereas once I was young, and now I am old; yet have I never seen the intelligent physician forsaken or his seed begging bread."

THE APPEARANCE OF ASIATIC CHOLERA.

Two months ago some cases of Asiatic cholera appeared in Bombay. But little attention was paid to them, and the English Government, whose general policy is not unfavorable to quarantine, is charged with neglecting to take proper precautions against the disease which thus developed. About a fortnight ago a few cases appeared in Damietta, a town of about thirty thousand inhabitants, lying on the east branch of the Nile, between Port Said and Alexandria. In a few days the disease had spread with an appalling rapidity, and in the seven days ending July 4th, over seven hundred deaths were reported.

Cases have also appeared in Port Said, at Rosetta, and as we write, a telegram reports a first case at Alexandria.

This rapid development of cholera in a very malignant form, has materially excited some alarm. The disease having developed on the direct route of Indo-European travel, the likelihood of its transportation is, of course, considerable. At the same time, there is less to fear than was the case seventeen years ago, when cholera last invaded European and American ports. Since that time sanitary organization has become perfected, and the profession has learnt that by quarantine, isolation, disinfection, and cleanliness, the disease can be either kept away or greatly limited in its activity.

News of the Week.

THE RHODE ISLAND MEDICAL SOCIETY held its seventy-second annual meeting at Providence, on June 21, 1883. Dr. Job Kenyon, President, in the Chair. About one hundred members were present. The Trustees of the Fisk Fund stated that no prize had been awarded for 1883. Essays were invited on the following subjects for the year 1884: 1. "The Origin and Progress of the Malarial Fever now prevalent in New England." 2. "Original Investigations in Household Hygiene." For the best dissertation on either of these subjects worthy of a premium, they offer a prize of \$300 on the usual conditions. The Library Committee reported that four hundred and nine volumes had been added during the past year. The following officers were elected for the ensuing year: *President*—Dr. Job Kenyon; *Vice-Presidents*—Drs. O. C. Wiggin and H. G. Miller; *Secretary*—Dr. Geo. D. Hersey; *Treasurer*—Dr. Chas. H. Leonard. A Board of Censors was also elected, and a Publishing Committee. The president presented a communication from the Newport Medical Society, accompanied by the draft of a law pertaining to the abolition of the coroner system in this State, and the substitution therefor of a system of medical examiners, similar to the system which has worked so well during the past six or seven years in Massachusetts. This draft of an act was presented to the General Assembly at the May Session, referred to the Judiciary Committee, and lies over until the next meeting of the Legislature. The profession in Newport, who initiated the movement, ask the State Society to co-operate in securing the enactment of this much-needed law. The Society adjourned to meet in three months at Newport.

THE NEW YORK POLYCLINIC has organized a medical society of its own, composed of members of the faculty and graduates of the institution.

THE PRICE OF HIS BLOOD.—Edward Banks, a colored man, has begun suit in the Sixth District Court, before Justice Kelly, against Dr. Henry J. Garrigues and Charles J. V. Okerberg, for \$250, as the value of eight ounces of blood taken from Banks and injected into the veins of Mr. Okerberg. It appears that on February 7th last this gentleman went to bed in a small, close room, blowing out the gas. In the morning he was found insensible. Dr. Garrigues and Dr. Frederick E. Valentine treated him, and at the suggestion of the former the operation

of transfusion was performed. The patient recovered, and now Banks, who furnished the material for the operation, claims what he considers a fair compensation.

MEDICAL DEPARTMENT OF YALE COLLEGE.—At the meeting of the President and Fellows of Yale College, held June 27th, Dr. Thomas H. Russell, of New Haven, was appointed a professor in the Medical Department of Yale College. He will occupy, by vote of his colleagues, the chair of *Materia Medica* and Therapeutics, which is made vacant by the transfer of Professor C. A. Lindsley to the Chair of Theory and Practice. The latter chair was made vacant by the death of Professor Wilcox.

BUST OF DR. BIGELOW.—The sculptor, Launt Thompson, is at work upon a bust of Dr. Bigelow, which is to be placed in the new building of the Harvard Medical School.

PANIC IN THE AIR.—We recently suggested that there was just now an "epidemic constitution," favorable to the development of panics. This was illustrated last week by a panic which occurred upon a Fulton Ferry boat, and which was caused simply by a sudden shower of rain. Fortunately no harm was done.

CONTAGIOUS PLEURO-PNEUMONIA ON STATEN ISLAND.—The ravages of pleuro-pneumonia among the cattle on Staten Island have been increasing, and the Boards of Health in Middletown, Westfield, Castleton, Smithfield, and Northfield, are busy with the subject. In two cases the carcasses of the diseased animals, which had been hastily sold to the butcher by the owners as soon as the sickness was noticed, without inquiring into the cause, were found in the meat markets about to be offered for sale. Upward of forty head have died already in one town. Stringent efforts will be made to quarantine the animals.

HATS AND SUNSTROKE.—Scientific hatters, says a contemporary, are beginning to discover that the liability to sunstroke when the head is covered with a low-crowned straw hat is as 100 to 1 compared with a high-top beaver. The true summer hat has not yet been invented. When it does appear it will be a cone-shaped affair, light, and lined with sponge, and surrounded by a broad brim.

We very much doubt the important relation above described, between hats and sunstroke. High temperature, exposure, over-exertion, indiscretions in food and drink, bring on sunstroke without much reference to high or low crowns, or the popular cabbage-leaf.

SMALL-POX AMONG THE INDIANS.—A despatch from Dr. Warren Day, of the Mohave Indian Agency, Arizona, states that there is a general outbreak of small-pox among the Arizona Indians. Supplies of fresh vaccine virus are urgently requested.

THE FIRST VESSELS OF THE SEASON WITH YELLOW FEVER on board arrived at Ship Island June 28th and 29th. They were at once quarantined and disinfected.

THE STATE BOARD OF HEALTH held a special meeting at the Capitol on June 29th. The sanitary committee submitted detailed statements of its work under the laws to prevent the adulteration of food and drugs and to prevent the sale and use of dangerous illuminating

fluids, especial reference being made to an injunction placed upon the sale of what is called "lie tea."

Mr. Erastus Brooks presented the subject of the alarming increase of pleuro-pneumonia in milch cows on Staten Island, and asked what aid the Board could give in helping to suppress the plague and to punish those responsible for it. The Board passed a resolution calling the attention of the National Commission on Cattle Plagues to the cases. The Board will meet at Ogdensburg on August 9th.

RESTRAINED FROM ISSUING DIPLOMAS.—The College of Physicians and Surgeons, of Buffalo, known also as the Mohawk College and the College of Rational Medicine, which tried to get a charter from the Legislature last winter and failed, its true character being shown up, has recently become involved in a legal complication. It has prepared about twenty young men for graduation, but at last an injunction was secured from Judge Haight forbidding the college to issue certificates or diplomas as a legally incorporated college of medicine and surgery. The college claims legal incorporation under the laws of 1882, and the question whether this claim is well-founded will be argued in court, probably in September. Until that time no further action will be taken.

It will be remembered that this college stands on about the same footing as the U. S. Medical College of this city.

UNFORTUNATE COUNTER-PRESCRIBING.—A Second Avenue druggist in this city who attempted counter-prescribing has, along with his patient, come to grief. It appears that he advised a woman who inquired of him for a physician to take his own counsel for her sick husband, and prescribed for the patient, whom he had not seen, a medicine which the patient took and shortly after died, in spite of the efforts of some physicians, who declared that he died of poisoning by opium. Everybody will wish, if this story turns out to be true, that Leman may receive the extreme penalty of the law for his quackery.

THE TAX UPON PATENT MEDICINE ceased on July 1st. Most of what did go into the hands of the Government, will now enrich the owners of patent cure-alls. We trust that they will be able to pay their religious weekly supporters with increased liberality.

THE NUMBER OF PHYSICIANS IN NEW YORK CITY.—Some special inquiries having been made of us regarding this, we would say that the total number of physicians and surgeons in New York State in 1880, according to the United States Census, was 9,272. This number has now undoubtedly swollen to 10,000.

In what, for distinction's sake, may be called the Physician's Medical Register for 1883-84, a list of only 2,684 names is given, which number represents the regularly educated physicians in affiliation with regular medical societies. The remainder are composed of homeopaths, of whom there are probably 500 or 600 in the State, eclectics, and nondescripts.

SYPHILIS IN THE NINTH CENTURY.—The Chinese are first in everything; the Japanese press them hard, and in the matter of syphilis, seem to have precedence. Between the years A.D. 806 and 810, says the *British*

Medical Journal, an emperor of Japan commanded his court physicians, Abemans and Idzumo Kirotsada, to collect in one volume all extant records of native medicine and surgery. A manuscript copy of this work, for centuries forgotten, although the facts of its origin were recorded in Japanese history, was found in 1827 by a priest, in a provincial Buddhist temple. Dr. Scheube, of Leipzig, has recently examined this work, and, in an article published in a recent number of *Virchow's Archiv*, has shown its undoubted authenticity and its high value from a purely scientific point of view. It was written long before Chinese ideas had penetrated into Japan and influenced native practitioners. The most interesting passages are descriptions of local and general affections, which clearly prove that syphilis, and several allied disorders, were well known to the ancient Japanese. Chancroid and phagedenic chancre are clearly described, as well as a "swelling on the penis, of the size of a millet-seed," followed by eruptions, feverishness, pains in the bones and head, blindness, swelling of the testicles, and other very familiar symptoms. These were observed to continue for many years. The passages of this work, called the "Daidorui Thiu-ho," which relate to the treatment of these symptoms, have not yet been translated into English. Herbs alone appear to have been used, and without much success; mercurial treatment was introduced at a comparatively recent date, from Europe. The ancient Japanese surgeons do not appear to have recognized the venereal origin of the disease which they describe, although the "Daidorui" distinctly traces all the secondary symptoms to "the poison from the affected organ."

DAMAGES FOR THE DESTRUCTION OF EXAMINATION PAPERS.—A recent decision in a Cincinnati Justice Court will perhaps alarm some of our medical teachers who think too lightly of the intellectual efforts of medical students. A young lady medical student, the plaintiff, was a graduate of Pulte Medical College for the year 1883. The examinations at the close of the term were conducted in writing, and under test conditions. Dr. Hartshorn, the Professor of Surgery, conducted the examination on that subject by writing a list of twenty-three questions on the black-board, and requiring the students, in his presence, to write the answers. The plaintiff wrote about seventeen pages of manuscript in answering the questions, and handed the same to her Professor. Afterward, having determined to have the several results of her examinations published in pamphlet form, as an aid to her in starting in her profession, she called upon the members of the College Faculty and requested a return of the papers, or copies thereof. All of the professors so requested returned the papers, except Dr. Hartshorn, who, instead of giving her the papers, or a copy, threw them in the fire and burnt them up. The strange conduct of the Professor could not be explained satisfactorily, and upon the facts and testimony relative to the value of the papers, the court assessed the damages for the destruction of the same at \$300.

A RARE CASE INDEED.—The *Australasian Medical Gazette* publishes the following account taken from a New Zealand paper of February 23d: "A most extraordinary and painful phenomenon has lately occurred in Warsaw. A lady died under somewhat peculiar circum-

stances, which gave rise to a report that her death had been caused by her husband's ill-treatment. Hence, several weeks after the interment, her body was exhumed for post-mortem examination, when it was found that in the grave a perfectly healthy child had been born. This gives a startling new meaning to the word 'posthumous.'"

Upon the above the editor of the *Gazette* comments as follows: "This case, though extraordinary, is possibly true, two similar cases being recorded, one in the *Medical Gazette*, vol. xlv., p. 713, the other in *Casper's Vierteljahrsschrift*, 1861, p. 186. It is more probable, however, that the woman was buried in a state of suspended animation, and that the birth took place during her life. If it took place after life had departed, it is certain it occurred almost immediately after death, and before the muscular contractility of the uterus had ceased, the body having been confined very quickly, and the child remaining unnoticed prior to burial."

LISTER ON LISTERISM.—Professor Lister has written the following letter to Mr. Henry Gray Croly, in response to an inquiry whether he had given up the spray in operations:

DEAR MR. CROLY: I have not given up the use of the spray, although I certainly regard it as the least important part of our antiseptic arrangements. Whatever other good it may do, it is a very mild form of antiseptic irrigation, and tends to keep the *entourage* of the wound, including the surgeon's hands and instruments, pure. But if I had not a spray-producer at hand, I should not on that account omit other elements of antiseptic treatment. I still use the spray in changing dressings, so long as the wound is not merely superficial. But far more important than using the spray is it to make a point of covering the wound with some pure antiseptic material before beginning to wash the parts which were covered with the edge of the dressing only, and were therefore impure. In other words, I believe one of the commonest causes of failure is dabbing alternately the impure surrounding parts and the pure wound with the same piece of rag, which, though moistened with carbolic lotion, cannot work miracles.

Believe me, yours very truly,

JOSEPH LISTER.

Obituary.

BEVERLY LIVINGSTON, M.D.,

NEW YORK.

It is most sad to have to record the death of one who, after years of hard work and careful preparation, had just begun to enter a brilliant professional career. Dr. Beverly Livingston, who died most suddenly and unexpectedly of diphtheria, on June 30th, was born in 1852. He graduated at the Sheffield Scientific School, at Yale, and took his medical degree at the College of Physicians and Surgeons of this city in 1877. He entered Bellevue Hospital as an *interne*, and was there for two years. He then went to Europe, and studied several years in Paris and in Germany. Returning to this city, he began his practice here under the most promising circumstances. He was attending physician to the Nursery and Child's Hospital, member of the Academy of Medicine and of the Pathological Society. He had already shown unusual attainments as a pathologist, as well as practical skill as a physician. Personally Dr. Livingston was a general favorite, and few young men had a wider circle of friends. In his death the profession has sustained a loss which all who knew him will keenly appreciate. For ourselves with our sorrow we can but feel a bitterness at the fate which so ruthlessly cut down in an hour the labor and promise of years.

Reports of Societies.

MAINE MEDICAL ASSOCIATION.

*Thirty-first Annual Meeting, held in Portland, Me.,
June 12, 13, and 14, 1883.*

GEORGE E. BRICKETT, M.D., OF AUGUSTA, PRESIDENT,
IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

FIRST DAY—JUNE 12TH.

A BIOGRAPHICAL sketch of Dr. Alexander Ramsay—who was a very prominent medical teacher in this State seventy years ago—written by Dr. Geo. P. Bradley, U. S. N., was presented, and referred to the Publication Committee.

DR. S. P. WARREN, of Portland, reported a case of absence of uterus in a married woman, and a case of cyst in the vesico-vaginal wall.

A committee was appointed to consider the question of providing a banquet, and, on its recommendation, a committee, with Dr. J. M. Bates, of Yarmouth, as chairman, was chosen to report on the subject next year.

THE PRESIDENT, in his inaugural address, paid a fitting tribute to his predecessors, sixteen of whom are still alive. He recommended efforts to secure

THE ESTABLISHMENT OF A STATE BOARD OF HEALTH, AND
A BOARD OF REGISTRATION.

Stress was laid upon the value of investigations into the properties of new remedies. The medical schools at Portland and Brunswick, and the Maine General Hospital were commended, and loyalty to the Code of Ethics of the American Association enjoined.

Certain proposed amendments to the constitution, introduced by Dr. E. F. Sanger, of Bangor, were acted upon. Those relating to discipline, and which, if adopted, would bring into the meetings differences between members which are now disposed of by the censors, were rejected by a unanimous vote; and a similar fate attended those which related to officers and membership. As their author was not present, there was no voice to support them.

DR. O. ST. C. O'BRIEN, of Bristol, visitor to the Portland School for Medical Instruction, reported that the institution was in excellent condition, and that it presented unusual facilities for obtaining an education.

DR. J. G. PIERCE, of Freeport, read a paper on

SYNOVITIS,

emphasizing the advantages of treatment with the aspirator and elastic bandages.

DR. A. K. P. MESERVE, of Portland, presented an essay

ON ACUTE INFLAMMATION OF THE MIDDLE EAR.

A very large proportion of these cases comes to the general practitioner for treatment, and it is, therefore, important that the profession generally should be familiar with their management. The paper was eminently practical.

DR. H. N. SMALL, of Portland, read an elaborate paper on

EXTRA-UTERINE FETATION,

illustrating the subject by a description of a fatal case in his practice. In the discussion which followed, a number of members reported cases which they had seen. One was mentioned in which the fetus became calcified, and remained in the abdomen many years—the woman, meantime, bearing a number of children.

DR. S. H. WEEKS, of Portland, made some extended remarks on fractures of the elbow-joint. An animated discussion ensued, some members advocating the rectangular position of the joint in the treatment of most cases, while others favored the straight position, in ac-

cordance with the theory of Dr. Allis. A marked difference of opinion obtained also with reference to the time of beginning passive motion.

SECOND DAY—JUNE 13TH.

DR. O. A. HORR, of Lewiston, visitor to the Medical School of Maine, reported that the institution maintains its high standard in all respects. The examinations are strict and searching, and a diploma is granted to no one who does not reach seven on a scale of ten. The new anatomy law has operated to the advantage of the school.

DR. E. E. HOLT, of Portland, read a paper on diseases of the mastoid.

The Committee on Revision of the By-Laws, appointed last year, was discharged from further service, and its work was assigned to the Publication Committee.

DR. A. H. BUREBANK, of Yarmouth, read a paper on

THE INDUCTION OF PREMATURE LABOR,

in cases where contraction of the pelvis forbids the birth of a living child at term. He believed this procedure should be instituted much more frequently than it is, and recommended gradual dilatation of the os with the digit.

DR. J. T. DANA, of Portland, introduced

THE SUBJECT OF BRIGHT'S DISEASE,

detailing the symptoms of various forms, and illustrating his points with accounts of several typical cases. We are justified in a more hopeful prognosis in many cases than formerly, when the pathology of the disease was less perfectly understood.

DR. J. A. SPALDING, of Portland, read a paper giving an account of the testimony in a trial for alleged malpractice, where he was called as an expert.

The necessity of the early removal of an eye which is the subject of traumatic inflammation was carefully discussed and illustrated.

The officers for the ensuing year were then elected.

The annual oration was pronounced by DR. M. C. WEDGWOOD, of Lewiston, whose subject was

RATIONAL MEDICINE AND QUACKERY.

He spoke of various forms of charlatanry which have adopted particular names, but dwelt particularly upon quackery as it is often met with in the regular profession, displayed by men who prate about their allegiance to codes, and yet undermine and traduce their fellows. Rational medicine will achieve its greatest triumphs only when education of mind and heart and hand are insisted upon in all its disciples. All exclusive dogmas—allopathy as well as homeopathy—are based upon error, while rational medicine embraces every truth from whatever source.

DR. B. F. STURGIS, of Auburn, reported a case of chronic abscess of the tibia.

DR. S. C. GORDON, of Portland, the Committee on Necrology, presented biographical sketches of the following deceased members: A. Crosby, Waterville; W. H. Brown, Bangor; R. Curtis, Richmond; J. P. Grant, Saco; W. W. Greene, Portland; W. Sweat, Hollis; R. E. Paine, Camden; D. M. Telford, Portland; and D. F. Ellis, Brunswick.

DR. F. H. GERRISH, of Portland, reported

A CASE IN WHICH THE BLADDER WAS DIVIDED BY A SEPTUM,

so that a lithotrite could not be so introduced as to reach a free calculus, which was easily touched with a catheter. Lateral lithotomy was performed, and the patient, though seventy-five years old, did not have an unfavorable symptom afterward.

DR. GORDON read a paper on the treatment of some accidents occurring during parturition, devoting especial attention to lacerations of the cervix, ruptures of the perineum, and cystocele. The essay displayed great familiarity with the subject, and abounded in illustrations drawn from practice.

THIRD DAY—JUNE 14TH.

The Board of Censors made their report in substance as follows :

It was recommended that the next annual meeting be held in Portland, on the second Tuesday in June, 1884.

Orator—Dr. A. L. Hersey, Oxford. *Delegates to other medical societies*: New Hampshire—Drs. T. A. Foster, Portland, and D. L. Lamson, Fryeburg; Vermont—Drs. W. C. Mason, and R. K. Jones, Bangor; Massachusetts—E. H. Hill, Lewiston, and A. M. Peables, Auburn; Rhode Island—C. T. Moulton, Cumberland, and J. L. Horr, Cumberland Mills; Connecticut—O. St. C. O'Brien, Bristol, and A. J. Billings, Freedom.

Visitors to Portland School for Medical Instruction—C. A. Packard, Bath, and J. A. Richards, Farmington. *Visitor to Medical School of Maine*—S. Laughton, Bangor.

It was recommended that Dr. W. H. Simmons' request, to be allowed to withdraw from the Association, be granted. It was reported that Dr. C. Seavey, of Bangor, had been tried on charges preferred by Drs. Sanger and Mayo, and that the charges were not proven.

A large number of applicants for membership were recommended, and were at once admitted by vote of the Association.

DR. WEEKS reported a case of immense sarcoma of the head, which illustrated the importance of early removal of morbid growths. He mentioned some of the principal features of a case of oöphorectomy which he had recently treated, and promised a full report of results at the next meeting.

The following committees to secure legislation were appointed in accordance with the recommendations of the President in his address: On State Board of Health—Drs. Dana of Portland; Bates, of Yarmouth, and Weeks, of Portland. On registration of practitioners—Drs. O. A. Horr, of Lewistown; Webster, of Augusta; O'Brien, of Bristol; Walker, of Thomastown, and Smith of Whitefield.

The customary votes of thanks were passed to the city for the use of the rooms, and to various officers; and the Association adjourned at noon on Thursday, after a very pleasant, harmonious, and profitable meeting.

NEW HAMPSHIRE MEDICAL SOCIETY.

Ninety-third Annual Meeting, held in Concord, June 19 and 20, 1883.

(Special Report to THE MEDICAL RECORD.)

THE Society was called to order at 11 o'clock A.M. The President, DR. A. H. CROSBY, of Concord, in the Chair.

Prayer was offered by the REV. F. D. AYER, and the usual committees were appointed for the session by the Chair.

Delegates being present from Vermont, Rhode Island, and Massachusetts, they were introduced to the Society and made welcome guests of the association.

After some routine business had been transacted the proceedings of the Council were read by the Secretary, from which it appeared they had recommended twenty-five physicians for new members; that only four deaths had occurred during the past year; one new district society had been chartered; matters of ethics had been duly disposed of, and all matters of new business had been attended to with due regard to the interests of the Society.

It appeared that they had taken into consideration the condition of the collections in the Surgeon-General's office at Washington, D. C., and offered pertinent resolutions looking toward the perpetuation of these valuable collections, in urging upon their Congressmen the necessity of the Government making an appropriation sufficient to construct a suitable building, with all the appointments necessary to preserve and protect these contributions to medical science from a hard-worked and self-sacrificing profession.

The proceedings of the Council were duly accepted. At twelve o'clock THE PRESIDENT read his annual address, taking for a subject

THE COUNTRY DOCTOR.

He alluded to the toil and hardships to which their professional life led in fitting terms, and comparing their resources in medicine and surgery with those of their more favored brethren, who, living near or in the great centres of population, where every known drug or surgical appliance could be found, and professional assistance could be had at a moment's notice, he said that their judicious selection of a few standard drugs, and the mechanical ingenuity they displayed in improvising surgical appliances to meet the wants of an individual case was a surprise to many a city surgeon, while the results obtained would fairly rival that attained in the large hospitals.

His address was listened to with attention, and was referred to a committee for publication.

Orations by Dr. G. C. Blaisdell, of Contoocook, and Dr. George W. Hatch, of Wilton, treated upon professional labor in general terms, while

AN ESSAY ON COLDS,

by DR. W. T. SMITH, of Hanover, was an interesting paper upon a familiar subject, but entitled to consideration, as being one to which our attention is so often called.

The speaker gave a *résumé* of the effects of cold upon the surface of the body, the shock to the system, and how its injurious influence was transmitted to the nerve-centres, and reacted upon organs and tissues at a distance from the part exposed.

He alluded to the epidemics of influenza that have passed into history, and while freely admitting that the unsanitary surroundings of the people must have had its influence in preparing the system for the easy introduction of disease, yet the atmospheric influence upon the skin and air-passages, must have been the exciting cause of their development.

DR. PRAY, of Dover, presented a long paper upon variola, of which no brief abstract would do justice, and DR. J. A. WATSON, of Concord, gave a paper

ON WATER POLLUTION.

He gave some interesting facts that had been developed in the State by the Board of Health, and the statistics of several wells that had been examined and condemned. He also appealed to all present to investigate into the condition of the water supply in all cases of a doubtful character or what appeared to be of mysterious origin, assuring the members that the Board would be glad to respond to the assistance of any one who had cases of this character to investigate.

Several other papers were read, and discussions followed until late in the evening, the anniversary dinner having been served at 2 P.M., at the Eagle Hotel.

The Society met at 8 A.M. Wednesday morning, and was called to order by the President, when the Secretaries of the District Societies made their annual reports, from which it appeared that they were in a flourishing condition.

The Treasurer made his report, showing the Society to be in sound financial condition, having about sixteen hundred dollars in the bank and current funds.

The election of officers followed, and Dr. John W. Parsons, of Portsmouth, was elected President; Dr. John Wheeler, Pittsfield, Vice-President; Dr. D. S. Adams, Manchester, Treasurer; Dr. G. P. Conn, Concord, Secretary; Dr. A. P. Richardson, Walpole, Anniversary Chairman; Drs. A. H. Crosby, C. R. Walker, Concord, and Dr. G. D. Towne, of Manchester, Executive Committee.

A board of ten Censors and twenty Councillors was elected, and a programme for reports and papers was an-

nounced for the session of 1884. Dr. J. S. Billings, U. S. A., Washington, D. C., and Dr. J. H. Mackie, of New Bedford, Mass., were elected honorary members of the Society.

This was followed with discussions and the report of cases until afternoon, when the Society adjourned to meet again in this city on the third Tuesday of June, 1884.

OREGON STATE MEDICAL SOCIETY.

Tenth Annual Meeting, held at Portland, Oregon, June 13, 14, and 15, 1883.

(Special Report to THE MEDICAL RECORD.)

ADDRESS OF WELCOME—PREVALENCE OF CRIMINAL ABORTION IN OREGON—THE QUESTION OF OPERATION IN MORBUS COXARIUS—OCULAR AFFECTIONS IN CONSTITUTIONAL DISEASES—ELECTION OF OFFICERS—SUBNITRATE OF BISMUTH AS AN ANTISEPTIC—DENTITION AND AFFECTIONS RESULTING THEREFROM—GUNSHOT WOUND OF STOMACH—SPONGE-GRAFTING.

THE Society was called to order at two o'clock, President DR. C. C. STRONG, in the chair.

THE REV. DR. F. R. MARVIN being present was invited to the platform and opened the meeting with prayer.

DR. C. H. WHEELER then welcomed the Society to Portland in a very appropriate address.

DR. S. E. JOSEPHI, of the Oregon Hospital for the Insane, extended to the Society a cordial invitation to visit that institution during the session.

The Executive Board having reported favorably, Drs. Jas. F. McCormac, Marshfield; Hannibal Blair, Albina; J. C. Whiteaker, Portland; John S. Stott, Hillsboro; Otto S. Binswanger, Portland; J. A. Fulton, Astoria; Chas. E. Bebee, Goldendale; G. Cooke Lane, Portland; D. Raffety, East Portland; A. G. Avery, Portland, were elected active members of the Society. Rev. F. R. Marvin, M.D., was elected an honorary member.

DR. G. M. WELLS then called the attention of the Society to a case of parametric abscess from which he had taken that morning a large amount of pus. The doctor stated that his principal object in speaking of the case was the fact that it was one of many similar cases which came under his observation as the result of criminal abortion, which was practised in this city to an alarming extent, and hoped the Society might take some steps in the direction of suppressing the practice.

DR. B. A. OWENS then presented a case of hip-joint disease for examination, and asked the Society to recommend a course of treatment. The disease was in the beginning of the second stage, and from the examination of pus aspirated from an accumulation just below the great trochanter, it was evident that the bone was diseased and that the process of exfoliation was established. The question of treatment elicited an interesting discussion, Drs. Wells, Saylor, Blaney, Tyler-Smith, and Owens recommended excision of the bone, while Drs. Givens, McKenzie, Dodson, Lane, McKenzie, and Fraser advised rest with extension and counter-extension of the limb, etc.

Meeting called to order at 10 A.M. June 14th by C. C. STRONG, M.D., in the chair.

DR. F. B. EATON read a paper entitled "Diagnostic Importance of Ocular Affections in Constitutional Diseases." The paper was discussed by Drs. McKenzie, Givens, and Lane.

The time fixed for the election of officers having arrived, the Society took up that order of business, the election resulting as follows: *President*—Dr. W. H. Saylor; *Vice-President*—Dr. J. W. Norris; *Secretary*—E. P. Fraser; *Member of the Executive Board*—Dr. C. M. Wells.

DR. SAYLOR then presented a case showing the favorable result of an operation of excision in hip-joint disease.

DR. HOLT C. WILSON read a paper on "Antiseptic

and Aseptic Surgery," in which he called special attention to the use of subnitrate of bismuth as an antiseptic. The paper was discussed by Drs. Watkins, Givens, Eaton, Fulton, and J. R. Smith.

DR. JOSEPHI presented a paper entitled "The Present Condition of Insanity throughout the World," giving very valuable statistics on the subject.

DR. B. A. OWENS read a paper entitled "Dentition and Affections Resulting therefrom."

The Society then selected the following subjects for special consideration at its next annual meeting: Diseases of Joints; Headaches; Tuberculosis; Pathology of Pregnancy; Uses of Bismuth; Typho-Malarial Fever.

Meeting called to order at 10 A.M. June 15th, President C. C. STRONG, M.D., in the chair.

A paper was then read to the Society by DR. J. F. McCORMAC, describing a case of "Gun-shot Wound of the Stomach with Recovery."

DR. SAYLOR then read the report of some cases of sponge-grafting in chronic ulcers with marked success.

DR. C. C. STRONG, President, then read his address on retiring from the chair.

DR. W. H. SAYLOR, President-elect, was conducted to the chair and read a short inaugural address.

On motion, a committee was appointed to draft resolutions in regard to deceased members.

Portland was selected as the place of the next annual meeting.

There being no further business the Society adjourned *sine die*.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE NEW OUT-PATIENT DEPARTMENT AT ST. MARY'S HOSPITAL—THE NEW LAW COURTS—DR. OLIVER'S TEST-PAPERS AT THE CLINICAL SOCIETY—THE ARMY MEDICAL INQUIRY.

LONDON, June 13, 1883.

THE new out-patient department of St. Mary's Hospital has been opened. It is a decided improvement on the old rooms, which occupied the basement and were mainly lighted by skylights. The new rooms are lofty, well lighted, and fairly well ventilated. For the latter purpose Tobin's tubes are placed in every room, and a large extraction shaft surmounts the central hall. The outer walls have, here and there, bricks perforated with conical holes—the large end innermost—the object being to bring air in without draft. All the passages have their walls covered with glazed bricks, which will conduce greatly to cleanliness. Close stoves are at present employed for warming the rooms. It seems a pity hot water or warm air was not employed. Greater uniformity in the temperature would have been thereby attained. The department is connected with the main building by a short flight of steps, which is roofed in, but not closed in at the sides. This seems a pity, and cannot but prove unpleasant in winter. It is also a pity that the new building has not been so arranged as to enter on the level from the main corridor of the hospital. As it is, on entering the hospital you *ascend* a short flight of steps to the main corridor, pass along it, then *descend* half-a-dozen steps to the new out-patient department, and then *ascend* a flight of steps to the consulting-rooms. The patients go *down* steps from the street, then *up* a flight to see the doctors, then *down* again to the dispensary, and finally *up* a few steps into the street.

Architects never seem to consider stairs a disadvantage. At the new Law Courts, the judges—most of whom are old men—have to ascend about forty steps to their rooms. No lifts have been provided. The Courts are also said to be damp, and cases of illness are stated to have occurred among the officials.

At the last meeting of the Clinical Society Dr. George Oliver, of Harrogate, demonstrated his method of detecting sugar in the urine by means of test-papers charged with carmine of indigo and carbonate of soda. One of these papers placed in a test tube with a little water and heated gives a blue solution. If a drop of saccharine urine be added first a play of colors ensues on heating—purple, red and straw, successively. On shaking, the colors reappeared in the reverse order. Heating again brought them out again. A confirmatory test was applied by dropping in a paper charged with corrosive sublimate while the indigo solution was still hot, which immediately gave rise to a blackish green precipitate. Non-saccharine urine merely gave a transparent green solution with the mercuric paper. Dr. Oliver claims that his method will detect sugar in any proportion in the presence of albumen, peptone, pus, blood or bile; that it gives no play of colors with uric acid; and that it is cleanly and portable. Dr. Oliver has not obtained the characteristic play of colors with the indigo test-paper with any other substance but glucose.

The army medical inquiry has excited considerable interest. The report is not yet published, but proof-sheets have been communicated to *The Times* and an article on the subject has already appeared in that paper. A memorandum on the subject by Sir W. MacCormac, which is to be published as an appendix to the report, also appears in the current number of the *British Medical Journal*. Some of the charges against the medical department will probably fail to be sustained, whilst others refer more properly to the commissariat and military departments. The medical department will, though, doubtless be made the scape-goat.

As an illustration of the repute in which the profession is held by the Government, it may be remembered that, when votes of thanks were passed by both Houses of Parliament to the officers engaged in the Egyptian campaign, the name of the chief medical officer was not included. The medical profession has always been treated badly in the public services. The army, naval, Indian, and convict medical services have each in turn been the scenes of shabby treatment to medical men, so history is but repeating itself now. Lord Wolseley's evidence seems particularly unsatisfactory and at variance with his statements in public despatches at the time of the alleged shortcomings. Lord Wolseley stated that he actually went into the hospital at Ismailia and grumbled at the medical officer because the patients were not supplied with better bread. This gentleman replied that he had complained to the commissariat, but his lordship seemed to think that it was the duty of the medical officers to go out into the bazars and buy bread themselves.

The Parkes Museum of Hygiene was reopened on Saturday morning, May 26th, at its new premises in Margaret Street. Speeches were delivered by Sir Charles Dilke, the Duke of Albany, and others. In the new museum many of the exhibits have the great advantage of being shown in action; for instance, the different varieties of water-closets have had a water supply laid on, and have been connected with the drains, so the way in which the flushing action takes place can be observed.

THE LILY OF THE VALLEY IN HOMŒOPATHY.—Some Western homœopaths have got hold of convallaria, and having read all that scientific medicine has to say about it, are quietly appropriating the drug themselves. Dr. Hall recently read a paper on the subject before the Western Academy of Homœopathy (the feebleness the association the more high-sounding the name), at Madison, Wis. Without giving credit to any one but Dr. d'Ary, he tells all about the drug, recommending it in small and large doses. In palpitations and irritable heart he gives one-thousandth to one-tenth of a drop with great success.

OUR PARIS LETTER.

THE ALLEGED WONDERFUL PROPERTIES OF COPPER.—
SO-CALLED SYPHILITIC TEETH NOT PECULIAR TO
SYPHILIS.

PARIS, June 12, 1883.

THERE are two men in Paris who have the same hobby, though they do not ride it in the same direction. That hobby is copper, and they are both known to your readers. Dr. Burq has for many years maintained that copper was a specific for cholera, for which it should be prescribed, not only for the cure of the affection, but it should be used continually as a prophylactic. Dr. Burq founded his theory on the fact that those employed in the manufacture of copper articles enjoyed a remarkable immunity from the disease. Arguing from this standpoint, Dr. Burq was inspired with the idea that copper would have a similar beneficial effect on typhoid fever. He made particular inquiries, and ascertained that during the recent epidemic of typhoid fever in Paris there were only two deaths among the manufacturers of copper articles. Moreover, he learned that in a copper manufactory in which there were from three hundred to four hundred workmen, only one death occurred during the last sixty years from infectious disease, and that death was from small-pox. From this Dr. Burq formulated the following conclusions, which he submitted recently at a meeting of the Biological Society: First, there exists an incompatibility between the salts of copper and the microbes of infectious diseases; second, in anticipation of the preventive inoculations of infectious diseases as proposed by M. Pasteur, one could be protected by the administration of large doses of the salts of copper, the innocuousness of which has been shown by M. M. Ducor and Galippe. Dr. Galippe, it will be remembered, has for some time endeavored to prove the innocuousness of copper, but people both in and out of the profession are rather sceptical about this, and remain under the old impression that copper is a powerful poison. Dr. Galippe lately submitted a paper at the Academy of Sciences in which he asserted that copper was found in large proportion in the nuts of the cocoa tree, from which chocolate is manufactured. It is therefore erroneous to suppose that the copper found in the latter substance is added to it for fraudulent purposes.

Another hobby is that of Professor Parrot, who sees syphilis everywhere, particularly in children in whom, according to him, rickets is one of the manifestations of hereditary syphilis, and he has even discovered syphilis in prehistoric skulls. Professor Parrot is the great champion of France of Hutchinson's interpretation of the lesions of the teeth, which the latter author described as being characteristic of syphilis, but at a recent meeting of the "Société de Chirurgie," where the subject was fully discussed, Hutchinson's theory about syphilitic teeth and Parrot's notions respecting the relation that exists between syphilis and rickets did not meet with much favor. Dr. Magitot, a well-known dentist, as principal speaker on the occasion, declared that from his experience the lesions known as Hutchinson's were not at all peculiar to syphilis, as they are found in children who are not syphilitic, but who are the subjects of other pathological conditions.

The same lesions may also be seen even in animals. He also referred to several cases in which adults bearing these lesions have contracted syphilis, which would have been impossible if they had been already syphilitic. According to Dr. Magitot the following are the real characters of syphilitic teeth: They are small, deformed, irregular, and slow in making their appearance, but he rather startled his hearers when he declared that the dental lesions known as Hutchinson's were due to infantile convulsions. Among other speakers, all of whom rebutted the idea, Dr. Desprès asserted that he had seen several children bearing the dental lesions referred to, but who have never had neither syphilis nor convulsions. Dr. Desprès added

that he had met with one case in a child, whose mother had just recovered from typhoid fever when she became pregnant, and another who was fed artificially bore these lesions. These two cases would seem to suggest that the malady or state of health of the parents would have a certain influence on the regularity of the evolution of the teeth in their offspring.

"MEDICAL EDUCATION IN CANADA AND CHURCH INFLUENCES".

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Having read an editorial, published in your journal of April 28th, on "Medical Education in Canada and Church Influences," permit me to say that the writer is under a complete misconception as to facts. With the sole object of placing you right on the question at issue, I take the liberty of addressing you.

To begin, you say that the number of students attending Laval University, of Quebec, "became fewer and fewer each year." Now, a reference to the annual announcements issued by the University prove the exact opposite; consequently, the reason advanced by you for the establishment of the Laval Branch in Montreal is not the right one.

Laval University was founded in the city of Quebec at the request of all the bishops of this province, and with the understanding that *there should be no other Catholic University established in opposition to her*. Later on Monseigneur Bourget, then Bishop of Montreal, supported by the professors of the Montreal School of Medicine, in affiliation with Victoria University, of Coburg, applied to Rome asking for a Catholic University in Montreal, giving as a reason that the absence of a university forced the school into an affiliation with Victoria, and that this affiliation with a Protestant university was scarcely in accordance with Catholic precedent, and was absolutely dangerous from a Catholic standpoint. Rome having long ago decided that one Catholic university in the Province of Quebec was sufficient, and knowing that Laval had been founded on this understanding, in response to this application of the bishop and professors, issued the now famous decree of February, 1876, and it was in obedience to this decree that the authorities of Laval established their branch in the city of Montreal. In the year following faculties of theology, law, and medicine were formally organized, and all the professors of the School of Medicine, affiliated with Victoria University, received appointments in the new medical faculty of the Montreal Branch of Laval University.

Shortly afterward, owing to a dispute as to details, a majority of these same professors separated from Laval to continue their school of medicine under its old auspices. So much for the origin of Laval University in Quebec and its branch in Montreal.

I now come to your remarks on the legal aspect of the question.

No action was ever taken by the Montreal School of Medicine to the Privy Council in England. An action taken before the Superior Court in Montreal against the University of Laval, some three years ago, may be considered as discontinued, and as a matter of fact was never brought up in open court at all. The School of Medicine did, however, take the legal opinion of Sir Farrar Herschel in London, and that is all.

The University of Laval, on the contrary, in order to set aside all doubts as to the legality of her position in Montreal, appealed to the Parliament, and in spite of every opposition on the part of the School, a bill was passed by the Legislature of the Province of Quebec to set aside all doubts on the subject. This bill received the sanction of the Lieutenant-Governor, and notwithstanding a further factious opposition by the School, the bill was maintained in Ottawa by the Governor-General.

Therefore, the Montreal branch of Laval University is not, as you erroneously infer, an illegal body. On the

contrary, its diplomas are strictly legal. The "College of Physicians and Surgeons" of this Province has consequently never had the slightest reason for withholding his license from bearers of the Laval diploma.

Furthermore, Rome, seeing that they who had made representation in the first place that the affiliation with a Protestant university was dangerous to the faith of their Catholic students still continued the said affiliation, and in addition did all in their power to injure the branch of Laval opened in Montreal, issued another decree, that of February, 1883, requiring the immediate and complete fulfilment of the previous decree of 1876, and in addition, ordering that all efforts to injure the University of Laval and its Branch, should forthwith cease, and that all good Catholics should aid in every way possible.

In order to conform to this decree, acknowledged by all Catholics as obligatory, the Bishop of Montreal has issued his mandate to the Sisters of the Hôtel-Dieu, to receive the Laval professors and students into their hospital, in place of those of the School of Medicine in affiliation with Victoria.

The Sisters do not refuse to obey their Bishop, as you assert, on the contrary they have transmitted his order to the professors of the School, declaring at the same time their intention of abiding by his mandate.

The School again in its turn appealed to all the Bishops of the Province in Council assembled. The Archbishop of Quebec, the Bishop of St. Hyacinthe, and the Bishop of Pembroke were charged by the Council with the execution of the Papal decree, and are at the present moment in Montreal, in furtherance of this object.

Hoping you will, by the publication of this letter, correct the many errors into which you have doubtless quite unintentionally fallen, I beg to subscribe myself, Mr. Editor,

Your obedient servant,

E. P. LACHAPPELLE, M.D.,

Secretary Med. Fac. Univ. Laval, Montreal, and Treasurer of Coll. Phys. and Surg., Prov. of Quebec.

MONTREAL, May 29, 1883.

[We have considered all the points in the above letter of Dr. Lachapelle, and must say that he has not convinced us of any material incorrectness in our editorial of April 28th on the above question. It is useless for Laval to assume any other reason for coming to Montreal than that of extreme poverty in Quebec. It is an accepted truth that for good prospects in teaching facilities we require an increasing commerce and population, which bring with them hospital material and wealth to maintain it: and Quebec, unfortunately, has been losing ground in both of these respects instead of increasing. This is an acknowledged fact throughout the whole province. It is quite true Laval obtained the passage of a bill through the Quebec Legislature to give the established branch of its university in Montreal the semblance of legality, but it must not be forgotten that the local government of Quebec has not the power to set aside the enactments of the imperial government, and upon this point rests the illegality of Laval's position. We also understand that the passage of such a bill in Quebec could not have been a very difficult matter, as the will of the Archbishop of Quebec is law in such matters, and the government is simply his mouthpiece. The acceptance of Laval's degree by the College of Physicians and Surgeons as a legal document may be accounted for by the majority of its members being also under the influence of His Grace.—Ed.]

SIR HENRY THOMPSON ON CIGARETTE SMOKING.—In a letter to *The Lancet*, Sir Henry Thompson states that if cigarettes are smoked in a holder with a bit of cotton-wool interposed they are less injurious than cigars or pipes. Smoked in the ordinary way, held between the teeth and smoked nearly to the end, they may be most hurtful.

MIDDLE GROUND ON THE CODE QUESTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I think that the following editorial from the *New York Herald* of June 25th, one very similar, which recently appeared in the *New York Times*, and others, which have appeared in various papers of influence in different parts of the country, cannot be seen by too many of those of our profession who are keeping up this, to most people, senseless quarrel about a "code":

"A report comes from a town in Wisconsin that a little girl was thrown from a carriage and had her skull fractured. An allopathic doctor was called in and treated the case until the arrival of the family physician, who was a homœopath. Soon afterward the young patient grew worse and serious symptoms were developed, which required special surgical treatment. As the homœopath made no profession of surgical skill the allopath was recalled; but, on finding the former in attendance, obstinately refused to have anything further to do with the case, on the ground that he could not 'consult with a homœopath.' Notwithstanding the earnest entreaties of the anxious parents and the proffered withdrawal of the family physician, the allopath deliberately abandoned the child in its critical condition and, so far as he was concerned, left it to die. He was 'a regular,' he said, and 'must observe our Code.' Nothing was then left to be done but to telegraph to Chicago for a surgeon, who fortunately arrived in time to save the young life.

"For the sake of common decency it is to be hoped that this barbarous illustration of the operation of 'the Code' is an exceedingly rare one. Yet it is but a logical effect of the practical working of a theory which subordinates the instincts of humanity to inhuman notions of medical ethics, and holds the saving of human life of less consequence than the heartless subserviency to a petty system of professional red tape. If the medical profession itself does not soon reform its ridiculous and unmanly 'Code,' then it may be well to inquire whether the law cannot prescribe a proper penalty for such offenders as the Wisconsin 'regular.' In case of the death of a patient under such circumstances trial of the offending doctor for manslaughter might have a salutary effect."

This discussion is rapidly losing us the respect and friendship of the press and of thinking people outside the profession, and transferring it, to a certain extent, to the homœopaths, who have not rendered themselves liable to the same obloquy. Our enemies could not have devised anything more injurious than this. It is useless for us to attempt to explain to what will soon, I fear, be considered an outraged public, the *status* of the question from our standpoint. They cannot and will not understand our position or our explanations. There are fools in all professions, and the "Code" is more apt to develop such instances as the above, among *them*, to the damage of the profession, than to prevent harm by its stringent regulations.

The "Code" refers to a good many points, but the discussion, with unanimous consent, seems to have narrowed itself down to one point—consultation with homœopaths. Well, consultation with homœopaths thirty years ago, was an absurdity, and no respectable physician thought of it. But the homœopathy of the present day is quite a different affair, and consultation with a well-educated homœopath may be as pleasant to the physician and as profitable to the patient as with one of the regular school. Dr. Flint, the honored exponent of the old Code, would have us believe that one who consults with a homœopath connives at fraud. He says, in substance, let him drop his special designation and call himself simply physician, and one may consult with him. Well, how many signs do we now see in New York with the designation homœopathic on them? Very few; they are rapidly disappearing. The better class of homœopathic physicians are repudiating the designation, so far as it indi-

cates exclusive belief, in a particular dogma, or reliance on any exclusive system of practice, either *similia similibus curantur*, or the employment of infinitesimal doses. They seem to be ambitious to be called simply physicians, while we, on the other hand, for some time past, at least, have been gradually admitting that the practice of homœopathy is not *all* fraud or humbug; and that in some cases medicines do act on the homœopathic principle, and also that very minute (if not infinitesimal) doses of many of our drugs when thoroughly triturated in the machinery of the homœopathic pharmacists, act in many cases far more pleasantly and satisfactorily than in their crude form. Witness Kinger's works, now so popular, and the frequent articles in our journals on minute doses, from the pens of some of our ablest practitioners. The absurdities, and worse, the falsehoods of many of the earlier homœopaths, claiming impossible successes, so disgusted us that we naturally scouted the whole matter as fraud and trickery, and did not until of late years give, if we have yet given, the system a fair clinical test. Our codes, in all the societies with which I have had any acquaintance, have been a failure. Let us sweep away all codes as the easiest solution of this very serious disagreement in the profession. If a physician should so far forget his self-respect and the dignity of his profession as to consort and consult with irregulars and disreputable individuals, made M.D.s perhaps by the legislature, he would soon find that he had seriously compromised his standing with his colleagues, and could be summoned before the bar of his medical society on the charge of conduct unbecoming a physician and gentleman, and punished just as effectually as if the Code were in existence—indeed, I think more so.

Our younger and rising men, if they would not lose the esteem and confidence of their friends outside of the profession, must stir themselves, and with the aid of their elders who are not too old to learn new things, abolish codes as so much rubbish of a by-gone age. Let the New Code men abandon their position, and the Old Code men theirs, and meet on a common platform on which all gentlemen belonging to the great profession of *medicine*, not homœopathy or allopathy, ought to be able to stand together.

HARMONY.

THE NEW YORK POST-GRADUATE SCHOOL AND THE ABUSE OF MEDICAL CHARITY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a letter signed "Itis," and published in a recent number of your journal, under the heading "Polyclinics, Post-Graduate Schools, etc., and their Relation to the Medical Profession," the writer descants upon "the perversion of charity and the development of pauperism among patients who are amply able to pay," and protests "against any institutions whereby *his* (our) means of gaining a livelihood are materially and even seriously compromised."

As the well-defined charges and statements of the letter may create some misapprehension in medical circles, it may be proper to state that the New York Post-Graduate Medical School has from the beginning of its career, persistently advocated, and rigidly adhered to a high standard in the dispensation of its charities, to which, doubtless, is largely due the material support it has secured from the physicians of this city and its environs. But the relations of the patients to the school can best be shown by its printed rules, which are to be found on the cover of each prescription-book of the Institution.

Rule No. XI. says: "Any person applying for medical or surgical relief, who, in the opinion of the Secretary, is able to pay a reasonable sum for advice and medicines, shall be so informed, and (unless it be a case of emergency) referred to private sources for them. No person who is able to pay a reasonable amount for both

advice and medicines shall be entitled to the benefits of this institution. The physicians generally shall have power to reject unworthy applicants." Nor is this all. Each patient is expected to pay for such medicine as is ordered by the physician, and the average price that has been paid for each prescription dispensed at the pharmacy of the School (based on the first one thousand prescriptions, and including those dispensed *gratis* to the absolutely impecunious) has been more than sixteen cents, an average price that would prove remunerative to many of our ordinary city druggists.

Individual opinions may differ as to whether the New York Polyclinic or the New York Post-Graduate School are necessary or "unnecessary," but it is a matter of fact, that medical men from far and from near in our country have seen fit to patronize them, and in sufficient numbers to place their finances on a satisfactory basis.

I am, respectfully yours,

THOMAS E. SATTERTHWAITE, M.D.,
Secretary of the Faculty.

213-215 EAST TWENTY-THIRD STREET.

"CHLOROFORM NARCOSIS DURING SLEEP."

THE article with the above title recently contributed to our columns by Dr. J. H. Girdner has called forth considerable comment. As a continuance of a discussion of the subject we group the following communications:

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Having read with interest the paper by Dr. Girdner on the above subject, I beg leave to take issue with the gentleman, having myself, in a number of instances, produced chloroform narcosis in children, administering the same while they were asleep and making my examination or operating without the child ever having been aware of the handling it had received. In one case I particularly call to mind, a child, six years of age, having hæmaturia in which a polypus was suspected, the child was anæsthetized upon six or seven distinct occasions for examination and operation, and after each sitting was left sound asleep, not knowing what had taken place when she again recovered consciousness. I have also had occasion to employ the anæsthetic during sleep in a number of cases while house-physician in the Mount Sinai Hospital in New York.

I am, yours, etc.,

L. E. BORCHEIM, M.D.

ATLANTA, GA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Before the evidence is all in, and the case submitted to the jury, I would offer the following as a fragment of "evidence" in favor of the possibility of bringing a sleeping person profoundly under the effects of chloroform without his first being aroused to consciousness. In 1856 I was requested by my then partner, Dr. I. S. Dolson, of Bath, N. Y., to see with him a case in which a bright boy, of about four years of age, in his play had fallen and received quite a severe wound of the face. To avoid an unsightly scar it seemed very desirable to carefully stitch the wound. Voluntary submission on the part of the child was found impracticable, and the mother was equally averse to the child's opposition being overcome by force.

At my suggestion it was decided to try the use of chloroform while the child would be asleep, to aid us in our work. Accordingly, late the same evening, we again visited the patient, and found him in the condition desired.

Without delay I stole quietly into his room, the lights being well turned down, and by gradual approaches I brought a napkin saturated with the anæsthetic to the child's face without exciting cough or the contraction of a muscle. In a few moments the patient was fully under its influence, and the little operation satisfactorily performed by Dr. D. The child slept quietly through the

night, and wondered the next morning how he came by the big plaster on his face.

This was the first and last attempt of the kind I ever made; and had no other thought than that it would be practicable in all cases, until the late prominent discussion of the subject in THE RECORD. Success in this direction is only attained by the most careful and deliberate manipulation on the part of experienced physicians, and even then it seems that some fail, and I have little confidence in the sensational newspaper reports of burglaries committed after the inmates of dwellings had first been "chloroformed" by the robbers.

Can any one give us a well-authenticated case of this kind?

H. C. MAY, M.D.

CORNING, N. Y.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Observing in your issue of May 26th, Dr. S. Murill's report of a case of "Chloroform Narcosis During Sleep," stimulates me to write of a similar case which occurred in my own practice.

April 30, 1871, I was attending Walter McF—, aged four years, for morbus coxæ. An abscess having formed, and the little fellow having been under treatment for some time, very naturally had become exceedingly sensitive and irritable. In order to open the abscess, I finally concluded to try to transfer him quietly from a natural sleep to a chloroform sleep, and requested the assistance of Dr. M. A. Halsted. We were quite successful in the first attempt, but, another abscess having formed, we were not so successful in a subsequent attempt.

We hear much more about "chloroform narcosis during sleep" through the lay press than we do through the medical journals; but it is evident that Dr. Murill's case and mine, and probably many others not reported, prove that such a thing is not impossible.

W. F. MORGAN, M.D.

LEAVENWORTH, KANSAS.

CONCERNING MEDICAL DEGREES IN GREAT BRITAIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: If your London correspondent will refer to *The Lancet*, May 19, 1883, page 870 (and throughout that journal, *passim*), he will see a critique on a translation of a German work on practical anatomy, by Donald Macallister, M.B., who, in this article, is always spoken of as *Mr. Macallister*. What then becomes of his statement that I am incorrect in saying that an M.B. is not *entitled* to be called Doctor? I maintain that he is not. He is sometimes called Doctor in *pure courtesy*, and nothing more, as licentiates of colleges of physicians are likewise.

I do not *at all* forget that the word physician is used in a different sense in England from what it is in America. Your correspondent seems to think that no one is a physician but a consultant. But any one licensed to practise medicine is a physician, according to common sense and the ordinary meaning of the word. He says the possession of L.R.C.P. does not make the holder of it a physician. Then there is no meaning in language. You will see from the following extracts from the register of the King's and Queen's College of Physicians in Ireland how far his remarks apply to the licentiates of that body:

"Every candidate before admission as a licentiate solemnly declares . . . that he will not engage in any trade . . . nor compound nor dispense medicine for sale. If he be an apothecary he must, previous to examination, *surrender the apothecary's certificate*. . . By ancient usage in this country, analogous to 'Rev.' in the case of a clergyman and 'Esq.' in the case of a barrister, the title of 'Dr.' has been applied to a *physician* as distinguished from that of 'Mr.' to a surgeon."

In the above extract the term physician is obviously used to denote one who holds the license of the college.

and when he receives it the college causes to be put in the newspapers an advertisement to the effect that ———, having been duly examined, has been admitted a licentiate and received authority to practise as a *physician*.

I did not say that "gentlemen who are only M.B. are addressed as Mr." What I said was "the M.B. *can* only call himself Mr."—a very different thing. Your correspondent should quote more carefully. If those M.B.s who, according to him, modestly *assume* the title of doctor continue to do so after the new bill becomes law, they will render themselves liable to a penalty of £20 (*vide Lancet*, May 12, 1883, p. 849).

Apologizing for trespassing so much on your space, especially as the whole subject is *vox et præterea nihil*,

I am, sir, yours faithfully.

N. V. D. PARKS, B.A. Dub., L.K.Q.C.P.I., etc.

ASHTON, R. I.

THE LEGAL STATUS OF THE PROSPECTIVE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There is a vital point, it seems to me, on which the Board of Trustees of the American Medical Association, to which is entrusted the publication of its journal, failed to give information. If the journal is to assume the place claimed for it, its publication, with all that appertains, involves a very large financial enterprise, such as can only rest securely upon a solid legal basis. So far, if that body is an incorporated one, I have not been able to learn when or where it became such. If it is not, it seems to me the so-called Board of Trustees, consisting of a member from each State, and appointed to start and conduct the journal, has no legal existence whatever; that they utterly lack the power to make the association or its members financially and legally responsible for its acts; and that as such trustees they can neither sue nor be sued.

I write for the purpose of calling attention to this matter, fearing we may get into a muddle. Very likely, before the enterprise is on its feet, it will be found best to have the association incorporated, or to form a joint-stock company, under the statutes of the State in which the business is to be transacted. In such a case it will probably be found that the trustees must live in the county or State where the business is executed, and that a board with a member from each State is not practical. It may be that I am alone as to my ignorance in this matter, but I suspect there are many others who would like information on the subject.

J. W. HAMILTON.

COLUMBUS, O., June 12, 1883.

A PERFECTLY DEVELOPED MALE CHILD WITHOUT A PLACENTA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Thinking that a short history of this case may be of interest to many of your readers, and desiring to learn from them if any similar case has occurred in their practice (having searched the text-books in vain), I take the liberty of requesting space in your valuable journal for its insertion.

November 14, 1882, I was summoned to Mrs. C——, a well-formed and healthy woman, aged thirty-eight, a primipara.

Found the patient suffering from labor pain; pulse, 120; some vomiting; respiration rapid, and considerable cedema of the lower extremities. Vaginal examination revealed slight dilatation of the os, the vertex presenting. A specimen of urine was obtained and examined for albumen with negative results. Previous history of patient very good, having menstruated at the age of fourteen, and continued to do so regularly without pain until fecundation occurred nine months previously.

The pains being unsatisfactory, I left the patient, say-

ing I would return soon. At 11.30 A.M., about one hour after I left the sick-room, I was called in great haste to the patient, messenger saying she had a fit. Arriving at the bed-side found her in a very violent convulsion, which I learned was the second in half an hour.

Inhalations of chloroform were resorted to, which had the effect of modifying the severity of the spasm, for the time at least; full doses of bromide of potassium and chloral were administered, but without effect; the convulsions returning about every twenty minutes. Repeated efforts to dilate the os uteri failed, Barnes' dilators and the douche being frequently applied in vain, the uterus being anteverted, and the os extremely rigid. At 2 P.M. a hypodermic injection of sulphate of morphine combined with atropine sulphas was administered, the bowels having been previously moved.

A marked diminution of the spasms immediately followed the injection, the convulsions not returning up to 4 P.M., but the patient remained unconscious from the first convulsion. At 4.30 P.M. had her thirteenth convulsion. Morphine was again administered hypodermically, but as cedema of the lungs set in and the respirations reduced to 14 per minute, the morphine was suspended and the convulsions returned, the patient slowly sinking. At 5 P.M. a consultation was held, when the case was deemed hopeless. All efforts to dilate the os had to be abandoned. Distinct movements of the fetus being observed up to 5 o'clock P.M., a request was made to remove the child by Cæsarean section, but was refused. At 6.30 P.M., pulse 100 and feeble; respiration, 17; temperature in the axilla, 99.8°; patient rapidly sinking until 7.15 P.M., when she died after her twenty-second convulsion.

In about one hour after the death of the patient I was requested to take the child from its mother, some scruples on the part of friends demanding the separation of the child before interment. I accordingly commenced the operation by abdominal section. On reaching the uterus careful section of that organ was made, when a fetus was observed partly immersed in an inky-black liquid. An effort was now made to remove the child, but as something seemed to hold the fetus firmly, I inserted my hand into the cavity of the uterus, when I found the cord very rigid and unyielding. Having severed this obstacle, a perfectly formed male child, weighing about twelve pounds, was removed. Search was now made for the placenta, but without success. There was *no placenta*. The umbilical cord was found attached to the fundus of the uterus, and the length of the cord did not exceed four inches.

Permission to remove the uterus for examination was refused, and as every movement in connection with the operation was most earnestly and critically watched, I found it impossible to gain possession even of that portion to which the cord was attached. I did succeed, however, in dividing *this* particular part, but failed to observe any marked difference between it and that portion of the organ previously divided.

The amniotic fluid, which was excessive, measuring, I should say, over three pints, was exceedingly black, but in other respects normal.

VALENTINE BROWNE, M.D.

YONKERS, N. Y.

THE WAY OUT OF THE MUDDLE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE MEDICAL RECORD of May 19th is one of the most remarkable articles it has ever been my privilege to read, although accustomed to peruse and digest medical literature for more than twenty-five years.

It is head-lined "Inebriety from Obscure Physical Causes," by T. D. Crothers, M.D., Hartford, Conn. He states that he had previously written an article on the same subject. If the doctor had been familiar with drunkenness in its different degrees, and had seen its

every-day manifestations, he certainly would never have given expression to thoughts so widely at variance with the true inwardness of the matter. True, he claims to have discovered something new, if understood aright, and presents an array of cases, without names or places, to be used in an argument which proposes to remove the subject from the low plane of drunkenness, with all its horrible concomitants, to a level much more elevated and respectable, when the inebriate will be no longer known, as heretofore, but transformed, if not into a lovable, at least into a most unfortunate disease-afflicted person. No doubt this phase of inebriety would be quite acceptable to all excessive drinkers, who still have one spark of manhood dwelling in their bosoms.

It is the very thing every one of them would be pleased to have other people believe; and hence, every one, without a solitary exception, perhaps, would give some cause outside of the true one—a love of liquor—to account for their fallen, degraded condition. This is a part of human nature, and with the fallen ones of mankind it seems to be intensified. Who ever heard of an evil-doer, in any of the ways of transgression in this life, that did not have an excuse to offer for his waywardness—somebody or something to blame for the first false step? It has been ever thus since the day when father Adam so far forgot his manhood as to charge the responsibility to his helpless help-mate, and it doubtless will be to the end of time.

Now comes an excuse for the drunkard, more satisfactory to him than imagination could ever have pictured in his wildest flights of fancy.

Judging from the responses reported to have been received from A, B, and C, the doctor's former communication must have been a real godsend, enabling them to happily find their way out of what had heretofore been considered an inexplicable difficulty.

Were these views endorsed by the medical profession, it would give increased charms to the licentious indulgence of strong drink, and would afford all the protection and encouragement that the most ardent toper could desire. If they are unsound and without any foundation in truth, then they cannot be otherwise than detrimental to the best interests of every community, and should not be promulgated broadcast without a challenge from medical men, who view the subject from a standpoint as different as day is from night. Besides, it must be patent to every one that some unscrupulous doctor may take hold of this new discovery and ply it to his own selfish advantage in manufacturing a reputation and coining money, under the pretence of being a step in advance of his medical co-laborers?

Now every medical man is deeply interested in the truthful solution of this question; for, if the views set forth by the doctor are correct, then the profession was never so befogged and benighted on any subject since it had a beginning. This is a progressive age in all departments of learning. And in this race after something better and more perfect, medical science, in the past few years, has far eclipsed all others.

Still it must be admitted that only the threshold of medical research has been attained, and before the *Ultima Thule* of medical knowledge shall have been reached there can be no doubt that many things now held to be settled in accordance with truth will be set aside as unworthy, under a stronger and more searching light. With thoughts altogether impartial every new thing in medicine should have a fair consideration, and be weighed in the balance. Actuated by such motives, the attention of THE RECORD readers is invited to a careful study of the article in question.

Being reared, and having lived all his life in communities where drunkenness was no uncommon thing, the writer has had a most favorable opportunity for studying it under many different circumstances, and in all its phases, not theoretically, but practically and clinically. The caption, and many expressions throughout the doctor's article, to

say nothing of the main drift, sound very strangely indeed to one thus educated.

He says, for instance, there were "a number of cases in whom the causes of inebriety were unknown to the attending physician." How strange, when it cannot possibly be assigned to but one cause, the firm hold of the liquor habit. Further, that "the inebriate is not an enemy to society or civilization, but the victim of physical conditions;" "that inebriety is not a vice but a disease to be cured by treatment." Eight reported cases are given in the article published, to prove this proposition, and to place the subject "above the levels of the theories of reformers and clergymen."

With an eye single to the development of truth, and the general welfare of humanity, these cases have been thoroughly studied and analyzed several times, to see if there was really anything whatever in them; and a strict regard for what appears to be right and proper in the matter compels me to declare, unequivocally, that there is no difference between these reported cases and the thousands of others that have come under my own immediate notice, and about which information has been received from other sources. In other words, these cases portray a faithful picture of drunkenness, through all ages, from Noah's fall down to the present. Either all cases of drunkenness come from "obscure physical causes," or else these reported cases, like all the rest, must be attributed to the true cause, liquor, at first taken for its pleasurable effects, growing into a confirmed habit by repetition, and finally, getting away with them morally, mentally, physically, financially, and in every other way of which it is possible to conceive. No wonder the doctor's cases were changed from good, intelligent, moral, trusty persons, to characters directly the opposite. Such has been the history of intoxicants, where they have held sway, in all bygone time. When a person loses self-control, and gives way to strong drink, his character undergoes a complete change; and he is left an absolute wreck of former manhood, as every one must know who has much contact with drunkenness.

It was intended in the beginning to give an analysis of these reported cases, but time and space forbid. Neither is it necessary, since those who may see fit to read this article can refer to the number of THE RECORD indicated and judge for themselves. If they shall do so, the object of this article will have been accomplished.

It is said, "a whole volume could be filled with such cases," and this is not doubted in the least; for sixty thousand drunkards, including laborers, farmers, mechanics, merchants, lawyers, doctors, preachers, take their exit to the unseen world every year. And the question is asked: What shall be done to stay this terrible evil? What the means and remedies? The answer is given: Abstain from intoxicants of every description, as this is an infallible cure and the only one that has stood the test of time. To one who has lost self-control this is not an easy thing to do, by any means; indeed, there are many cases so entirely wrecked that it would be next to impossible for them to emancipate themselves, unaided, from this terrible habit, which holds with a force more vice-like than any other known.

This unfortunate class need help from their sober-minded brethren. They need treatment, it is true, but not to rid them of disease produced from "obscure physical causes." There is no sense in hunting for "obscure causes" when *liquor* is seen to be wrecking every one, on every hand, who dares to contest its strength.

The treatment they need, and the only kind that will meet the case, is to remove them beyond the influence of this mighty destroyer. How to do this, then, is the practical question, and one that comes home to every lover of his race. Many good people are now engaged in trying to solve this problem.

One way to meet the case, and it appears quite practicable, is for the general Government to establish one or more inebriate asylums in every State, or enough, at any

rate, to satisfy the demand. Let these asylums be regulated on the same plan as insane and other asylums, and receive their patients under the same rules as adopted by those institutions. Once within the asylum walls the toper would be free from his besetting vice, and under a little judicious toning up, in most cases, would soon realize the true state of the case—a thing not appreciated by him for weeks, may be for months and years before.

This treatment is in accordance with the doctrine, remove the cause and the effect will cease, and it certainly is a very sound, common-sense principle. Should other expedients be found necessary in connection with this place, the double-chloride-of-gold treatment—whatever that may be—could be tried. Not having had any personal experience with that particular medication, of course it is not herein endorsed, but it may be said, however, that reformed inebriates who were subjected to the treatment speak in the highest terms of its success. Very likely it acts on the principle of breaking a dog from sucking eggs by giving him, along with them, some tartar-emetic.

Another plan that will mitigate the evils of intemperance is to raise the liquor license so high as to practically strangle the traffic, and let it die a slow but tolerably sure death. Failing in these, the more radical plan of prohibition could be tried as a *dernier ressort*. The adoption of one or more of these plans, it is confidently believed, would meet the case, and save further trouble on the score of the "obscure physical cause" theory. It is hoped the questions have been answered, if not to the satisfaction of the doctor, at least in accord with the dictates of common-sense, which, after all, is a most excellent guide to follow, and will very surely lead one out of the inebriate muddle.

B. F. HART, M.D.

BROWNSVILLE, M.J.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 23, 1883, to June 30, 1883.

SMART, CHARLES, Major and Surgeon. Assigned to duty in the office of the Surgeon-General, U. S. Army, and in addition to his duties in the Surgeon-General's Office will continue to serve as a member of the National Board of Health. S. O. 147, par. 8, A. G. O., June 27, 1883.

BIART, VICTOR, Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Sisseton, D. T. S. O. 102, par. 1, Department of Dakota, June 13, 1883.

WINNE, CHARLES K., Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Winfield Scott, California. S. O. 69, par. 1, Department of California, June 19, 1883.

WORTHINGTON, JAMES C., Captain and Assistant Surgeon. Assigned to duty at Canonmont, on the Uncompahgre, Colorado. S. O. 128, par. 4, Department of the Missouri, June 21, 1883.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Oeur d'Alène, and assigned to duty as post surgeon at Fort Lapwai, Idaho. S. O. 81, Department of the Columbia, June 14, 1883.

STRONG, NORTON, First Lieutenant and Assistant Surgeon. Relieved from operations of S. O. 42, par. 2, C. S., Department of the Platte, and assigned to duty with Battalion of Infantry now on duty between Forts Thornburgh and Bridger, Wyoming. S. O. 83, par. 2, Department of the Platte, June 21, 1883.

To be Assistant Surgeons with the rank of Captain, after five years' service, in accordance with act of June 23, 1874: Victor Biart, William W. Gray, Louis Breche-min, Louis A. LaGarde, Junius L. Powell, Assistant Surgeons, June 6, 1883. A. G. O., June 25, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 26, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
June 26, 1883.....	0	11	61	4	87	39	0	0
July 3, 1883.....	0	7	74	6	91	20	0	0
<i>Deaths.</i>								
June 26, 1883.....	0	9	16	4	18	11	0	0
July 3, 1883.....	0	3	23	9	22	16	0	0

GOOD ADVICE TO TRAVELLERS IN NEED OF MEDICAL ADVICE.—Dr. C. W. Chancellor, in a recent letter from Geneva to the *Baltimore Day*, gives the following excellent advice to European travellers: "I feel I would be but ill acquitting myself of a duty were I to fail to administer an admonition to those of my compatriots who may one day journey into this land, and I hope they will take heed to what I say, for it is wholesome. I would strongly advise Americans who contemplate travelling upon the continent to be very chary of patronizing physicians recommended by *hotel or boarding-house keepers, concierges, porters, etc.*, etc., without first having inquired of their consul or their banker, or some friend as to the standing of the party recommended, for it not infrequently happens that these parties plot together exclusively as a matter of personal gain, and without any regard whatever for the well-being or interest of those whom they advise. It would be well for persons visiting Europe either to obtain the addresses of competent medical men in the various cities they propose visiting before leaving home, or on their arrival to get advice from some reputable person *out of business and above taking a commission*, otherwise they may have a tenth-rate doctor introduced as the 'former physician to the emperor,' the 'chief of the hospitals,' the 'doctor of the American Legation,' or some other high-sounding but fictitious title, and they may be left in his hands to be robbed, maltreated, and perhaps murdered. Travellers, in fact, should *make it a rule to take any other physician than the one proposed by a landlord or concierge or courier*, unless the medical man thus recommended be a *compatriot, or is endorsed by some disinterested person*; and they should *insist* upon having the doctor of their choice—if they have a choice—*really sent for*, taking no excuse for any delay or neglect in regard to the matter. There are reliable and *veritable* American physicians in nearly all the large cities of Europe whose addresses can readily be found by consulting the *Directory*, which is in the office of every respectable hotel, or by inquiring at the nearest drug-store."

YATES COUNTY (N. Y.) MEDICAL SOCIETY.—At the annual meeting of the Yates County Medical Society, held in Penn Yan, on Tuesday, June 5th, the following gentlemen were elected officers for the ensuing year: *President*, Benj. L. Holt; *Vice-President*, D. M. Smith; *Secretary*, C. C. Harvey; *Treasurer*, John Maloney. The New Code was adopted by the Society unanimously.

ASYLUM SUPERINTENDENTS IN SESSION.—The thirty-seventh annual meeting of the Association of Medical Superintendents of American Institutions for the Insane was opened at Newport, R. I., June 26th. Dr. J. H. Collender, of Nashville, Tenn., presided, and thirteen States, the District of Columbia, and the Provinces of

Quebec and New Brunswick were represented. Dr. H. R. Storer, President of the Newport Medical Society; Dr. Foster Pratt, of Kalamazoo, Mich., and Dr. Darius, of the Willard Insane Institution at Ovid, N. Y., were presented to the Association. It was voted to invite the members of the medical profession of Newport and the vicinity, and the surgeons of the navy in that port to be present at the sessions of the Association. The following officers were elected: *President*—Dr. John P. Gray, of Utica, N. Y.; *Vice-President*—Dr. Pliny Earle, of Northampton, Mass. The president then delivered an address.

PLENTIFULLY SUPPLIED WITH DOCTORS.—According to a late estimate, Atlanta, Ga., has one physician to every 277 of its population, or one to every 156 of its whites, and one to every 121 of its colored population.

THE WARREN TRIENNIAL PRIZE.—We wish to draw attention to the Warren Triennial Prize for 1886. The subject for the present year was "Chronic Bright's Disease (parenchymatous and interstitial nephritis); "The Nature and Mutual Relations of the Derangements in the Circulatory and Secretory Organs." No award, however, has been made. Beyond that fact we are not informed as to the character or number of articles presented for competition. It is to be supposed that the terms were too restricted to draw out any great number of articles. No complaint can possibly be made as to the narrowness of the subject for 1886. The terms of the competition are such as to give the widest latitude to literary or scientific medical men, the prize being offered for a dissertation on "some subject in physiology, surgery, or pathological anatomy." The amount of the prize, \$450, and the wide range of subjects, ought to bring out work of a high order of excellence. This is, we believe, the largest prize offered in this country for general competition, and the physicians and surgeons of the Massachusetts General Hospital are, *ex officio*, the committee who have the matter in charge.—*Boston Medical and Surgical Journal*.

RESOLUTIONS ON THE DEATH OF DR. JAMES L. BANKS.—At the stated meeting of the New York Pathological Society, held June 27, 1883, the following resolutions were unanimously adopted:

Whereas, It has pleased God to remove from this world the soul of our late associate, James L. Banks, M.D.:

Resolved, That we sympathize with his family in the great loss which they have sustained.

Resolved, That we cherish his memory as that of an intelligent and wise physician, a kind and genial companion, and a conscientious, upright, and honorable man.

Resolved, That a copy of these resolutions be forwarded to the family of our deceased associate, and that they be published in the medical journals of this city.

ALFRED C. POST,
CHARLES K. BRIDGON, } *Committee*.
JOHN H. HINTON,

PHYSIOLOGY AT OXFORD.—The sum of \$50,000 has been voted for the erection of a physiological laboratory for Dr. Burdon-Sanderson at Oxford.

THE HARVEIAN ORATION was delivered this year (June 27th) by Dr. Habershon.

HYPOPHOSPHITES AND CHILDREN.—Dr. H. Cullimore thinks that the hypophosphites should not be given to children between the ages of four and seven if they are at all precocious and inclined to too much mental activity.

THE APPOINTMENT OF GENERAL ALEXANDER SHALES to succeed Professor Chandler as President of the City Board of Health is well received. It remains to be seen whether he will have the courage to protect the city's sanitary interests against the politicians.

THE OPENING OF THE JOHNS HOPKINS MEDICAL SCHOOL.—The trustees of the above institution design to begin some work in the medical school without wait-

ing for the hospital to be finished. With this purpose in view, Dr. Remsen has been designated Professor of Chemistry, Dr. Martin of Physiology, and Dr. Billings of Hygiene. A chair on Pathology will be filled soon, and lectures will begin October 1st.

THE PHILADELPHIA POLYCLINIC has with great enterprise secured an organ. The *Medical Register* will assume the name of *The Polyclinic* (with a y) and will supply the long-felt want for a monthly medical journal in Philadelphia.

THE EDINBURGH MEDICAL SCHOOL.—One thousand guineas have just been voted by the Town Council of Edinburgh, toward the building fund for the new Medical Department of Edinburgh University. These new buildings, which are nearly completed, are extensions of the old, and will greatly increase the advantages of the school.

A MODEST TRIBUTE TO PASTEUR.—The *Publicateur*, a journal published in the arrondissement of Meaux, contains the following poetical tribute to Pasteur: "M. Pasteur has the glory of being the first to bring knowledge out of mystery and make it irradiate through the Department of Seine-et-Marne; and every sheep which grazes upon the fields sings the glory of the master, and of science!"

TRICHINOSIS FROM EATING HORSE-FLESH.—Several Austrian journals report the case of a woman who suffered from trichinosis, caused, it is claimed, by eating horse-flesh. The subject is being investigated.

WANDERING LIVER IN A MAN.—At the meeting of the Society of Physicians of Vienna, June 4th, Dr. Felix Schwarz showed a case of wandering liver in a man, a very great pathological rarity. There have been only two cases in men and thirteen in women reported.

CHLORINE WATER IN DIPHTHERIA.—Dr. Caroline R. Conkey, of Watertown, N. Y., sends us a very enthusiastic description of the value of chlorine water in diphtheria. She writes: "In a late number of THE MEDICAL RECORD, Dr. Binz, of Bonn, is quoted as predicting that a remedy would surely some day be found which should prove as effectual a specific antidote to diphtheria as salicylic acid and quinine are to rheumatism and malarial fever. Such an antidote, I believe, we already possess in chlorine water.

"The importance of this agent was first brought to my notice by Dr. Marshall Calkins, of Springfield, Mass., to whom, I believe, the credit of discovering this application of chlorine water is due. Since then I have used it with unflinching success in every case of diphtheria that has come under my notice; and claim its absolute efficiency in curing the disease, provided, always, it can be dealt with in the first stage; *i.e.*, before the membrane extends into the larynx. My plan of treatment is as follows: Fresh chlorine water must be made every day according to the following formula:

R. Potass. chlor ʒ ij.
Acidi muriatici ʒ j.
Aquæ ʒ viij.

Into an eight-ounce bottle put the chlorate of potash; on this pour the acid, and cork as quickly as possible to prevent the escape of the gas. Add the water as hot as convenient, at intervals. Dose: tablespoonful in an ounce and a half of water, to be gargled and swallowed every half hour in a severe case.

"This dose may be swallowed without gargling, if, for any reason, that is impossible, and may be sweetened to render it palatable to a child. The interval between the doses may be lengthened, according to the discretion of the physician; in milder cases, being given every one, two, or three hours, as indicated. When the membrane extends into the nose or posterior nares, syringe with the same solution.

"This constitutes my entire treatment, and its success

is invariable. I insist upon the most nutritious diet. Every two hours nourishment in some form is given; and an even temperature of about 70° F. constantly maintained in the sick chamber, together with the most thorough ventilation."

The history of an illustrative case is given.

[While we have no doubt of the efficacy of chlorine water, it is necessary to remind our correspondent that chlorine water has been used before in diphtheria, and that the same claims which she makes for it have been made for a large number of other substances—and still diphtheria exists and kills. We are inclined to think that the case whose history is given was one of follicular inflammation rather than diphtheria.—ED.]

"MUSCLE *v.* BRAIN."—This popular heading aptly illustrates the misconception that prevails in result of ignorance of the laws of physiological development. It is a radical error to suppose that one part of the organism can be or ever is developed "at the expense" of some other. One part may be neglected while attention is exclusively directed to another part, but the fault does not consist in the overcare of the one, but in the neglect of the other. It is important to recognize this, because the phrase "muscle *v.* brain" would seem to imply that if we have muscle we cannot have brain. It is needless to remind those who understand the physiology of the higher animal life that no such alternative is presented. Each and every part of the body grows as it feeds. The point which is too commonly forgotten is that it feeds as it works, and in that proportion only. If any part is unexercised, it cannot possibly be nourished in such manner as to produce full growth and good health. In the training of youth it is especially necessary to bear this in mind. To produce good brain tissue there must be good brain exercise. The work done should not be sufficient to exhaust the organ, or the faculty of recuperation will be itself weakened and exhausted, and then the function of repair will lag behind the function of special activity, with the result of deterioration instead of progressive development. The work done should not, as a matter of fact, exceed such limits as regards quantity or quality as shall suffice to stimulate growth without exhausting. An overburdened or overworked brain cannot be healthy, nor can one that is underworked. Fatigue—we mean mental weariness—should not be incurred by the young; that is, during the period of development. The same rule applies to muscle cultivation. Full exercise without exhausting fatigue is the best, and, indeed, the only, stimulant of growth. Other things being equal, the best organism, the healthiest man, will be one in which both brain and muscle have been developed side by side by a process of educational training in which time and strength have been so utilized as to afford opportunity for growth in every direction. In what we call *mind*—i.e., brain function—as well as in physical strength or muscle function. After the organism has passed through the stage of growth, and its several parts have been finally formulated, there may come a time when muscular activity will so drain the strength as to impoverish the brain; but this state of matters is not reached until long after the educational period, and in a well trained organism it will never be reached at all.—*The Lancet*.

TRANSFERRED IMPRESSIONS.—Dr. Joseph A. Stillwell, of Brownstown, Ind., writes: "Your editorial on 'Telepathy,' of May 26th, reminds me of an experiment I made on a young man with delirium tremens. I was alone with him in the night. He had stepped out at the door to a vine trellis and was picking at the vines as if he was searching for something. I concentrated my mind on him with a strained effort. He raised from a partial stoop and asked me, 'What do you want?' He was about thirty feet away, and could not see me, nor did I make any noise. He was outside, and I in the house. His voice broke my effort for a second or two

when I renewed my attention with all the power of concentration I could command. He then in a sudden move and with some impatience asked me 'What do you want?' again, and turned and did take a step or two toward me, but left his purpose and lapsed off. I again gave him all my attention, when, like the others, just at its culmination, or what seemed to be, he gave me his sudden attention and said, with some vehemence, 'What are you calling me so much for?' This might have all *happened* only, but there was such an exact synchronous motion on his part in response to my intense action, that I have always felt that I reached his mind with only this mental act of mine. So much so, that, particularly when he said 'calling,' I felt an alarm come over me at my success that disqualified me for further effort. That was twenty-seven or twenty-eight years ago, when I was a medical student. Since that I have never met with a case and surroundings, that I thought justified a renewal of the experiment. And while I have never regarded it as concluding anything, now offer it in this connection."

BROKEN THERMOMETERS.—In the matter of broken thermometers, it is evident, we have raised a ghost that we cannot lay. Dr. G. L. Chapman, of Polo, Ill., writes: "I took my thermometer-case to a jeweler and got a small hole drilled through the bottom below the cavity of the case and tied a small black elastic cord securely to the *bottom* of the instrument and the other end to a safety-pin. The cord being attached to the *bottom* need not be more than twice the length of the case, and all disappears when the instrument is returned, if carried in the upper vest-pocket. The cord is lighter and cheaper than a chain, and does not wear the pocket; it does not require a metallic case and staple to secure its attachment, and is, I think, every way preferable."

AN ARRAIGNMENT OF AMERICAN VETERINARY SURGEONS.—A person who called himself a veterinary surgeon read a paper recently before the New York Farmers' Club, in the Cooper Institute, on the diseases of cattle and their treatment by veterinary doctors, whose methods he condemned. There were, he said, on the farms of the United States in June, 1882, 10,357,981 horses, valued at \$1,035,798,100; 1,812,932 mules, valued at \$181,293,200; 993,970 oxen, valued at \$49,698,500; 12,443,593 milch cows, valued at \$321,089,725; 22,488,590 other cattle, valued at \$562,214,750; 35,191,156 sheep, valued at \$527,867,340, and 47,683,951 swine, worth \$476,830,510, making a grand total of the value of dumb animals on farms in the country, \$3,154,821,125. This estimate, however, the lecturer considered by far too low, and he felt certain that the value of dumb animals in the United States was about seven billions of dollars, judging from the fact that some animals are held at \$50,000, as in the case of Damascus, just sent by John W. Garrett, of Baltimore, to the King of Italy. It is a disgrace to the nation, the orator continued, that there is not one legally chartered, organized, and established veterinary college in the country. Veterinary science here lies deep down in the ditch of ignorance, and the billions of dollars invested in animal property, as well as the animals themselves, are left to the mercies and wantonness of chance. The country is flooded with bogus diploma mills, several of which are in this city and other parts of this State. The speaker went on in the above strain, but failed to mention where the New York diploma mills are. It is understood that parties in this city do practically sell veterinary diplomas, and it is to be regretted that some definite facts were not given.

THE REGULATION OF PROSTITUTION.—The Municipal Council of Paris has lately addressed a letter to the Prefet, demanding the immediate confiscation of the Lourcine and Midi Hospitals, and the abolition of all the *maisons de tolérance* in the city and the Department. More recently they have voted the suppression of compulsory examination and treatment of women, and the abolition of the *police des mœurs* is under discussion.

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Original Articles.

INFUSION OF JEQUIRITY, OR LICORICE BEAN,¹ IN INVETERATE PANNUS,

WITH A REPORT OF SEVERAL SUCCESSFUL CASES.²

By EDWARD S. PECK, M.D.,

SURGEON TO THE EYE AND EAR DEPARTMENT OF THE NORTHWESTERN DISPENSARY; VISITING SURGEON TO THE OPHTHALMIC DIVISION OF CHARITY HOSPITAL, NEW YORK.

THE treatment of chronic granulations and sarcous outgrowths of the conjunctiva and cornea has always been a chapter of great interest to the physician and the patient. It has elicited the efforts of the best surgeons of every country where affections of the lids and eyeball prevail. In England, Germany, and the United States clinical work in this department has been displayed from different standpoints. Within the past few years the direction of applied effort has been in the establishment of an acute ophthalmia in lieu of the chronic proliferous catarrh of these structures. Chronic trachoma of the eyelid and inveterate pannus of the cornea are the result of the same pathological processes, differing only in location, but amenable to the same remedial agencies. It will seem a strange statement, that a structure of so low an organization as the cornea should be involved in the same pathological processes as one of so high a type as the conjunctiva. The cornea serves at once the function of confining and protecting the contents of the eyeball, and at the same time of refracting the first rays of light which are transmitted to the dioptric system; while the conjunctiva, rich in nerves and blood-vessels, serves merely as a lubricating and protective layer.

It cannot be denied that the inoculation of eyes with pus of various purulent ophthalmias has taken a more and more prominent place in ocular surgery. It is well known that the measure of success of the experiment is, within limits, determined by the activity of the inoculation. The experiments of Critchett, Lawson, and Bader in London, of Warlomont in Brussels, of Abadie and others in Paris, are entitled to highest praise in view of their successes; while, at the same time, the procedure will always be unpopular on account of the severity of the resulting inflammation and the natural repugnance of the patient and operator. Such experiments ought to be conducted only where a large number of trachomatous patients are aggregated, and when there is a small per centum of operations on the eye.

The report for 1881 of the Ophthalmic Division of Charity Hospital, Blackwell's Island, gives details of the favorable results of six experiments in inoculation, conducted by the author of this paper, the first case of the series having been presented as a contribution to this Society at its semi-annual meeting in 1881, and published in *THE MEDICAL RECORD*, July, 1881. Although I hold to the same opinions as to the efficacy of this treatment, as a *last resort* in all cases of inveterate pannus, yet I welcome the proposition of any new remedy, whether of the mineral, vegetable, or animal kingdom, which shall do away with the immense risks to the patient, the surgeon, and the nurse, in the establishment of an artificial purulent

ophthalmia. Various aromatic infusions, and hot medicated compresses have been used for this purpose, but they all lack intensity and duration. The present agent, which I show you in seed and infusion, is known by the botanical name of *abrus precatorius*, of Linnæus' classification; the seed is called licorice bean (not the licorice known in commerce); and in Brazil, where it has been used for years in ophthalmic practice, the seed is called *jequirity* (Fr.). The literature, all of which I have at hand, with the exception of the first article, written in 1867 in Brazil, is very meagre. This article was a brief memoir, in the Portuguese language, calling attention to the dangers connected with its use in eye-practice. I may add, that I hope not only to secure this initial article on the subject, but to interest the Secretary of State at Washington, with the view of procuring all the native medical and lay testimony upon the use of the infusion in ophthalmias in Brazil. If we have here an agent which, in the majority of cases, will prevent blindness and helplessness as a result of inveterate pannus, it is an object of popular charity to acquaint ourselves with its history, preparation, and application.

The infusion has been prepared of various strengths. That used in the Northwestern Dispensary and Charity Hospital, New York City, was prepared as follows: Take of the *fresh* seeds 32, or 3.2 gm.; macerate in 500 gm. ($16\frac{2}{3}$) of cold water for twenty-four hours; add 500 gm. of hot water; when cold, filter, and preserve in well-stoppered, dark-colored phials. When fresh the solution should be clear and odorless; after standing a few days it becomes opalescent, and, what the literature in every instance fails to mention, it acquires a brackish, mawkish odor. In an experience of seventeen cases I have found that if the solution be made from old seeds, or if from fresh seeds and it has stood longer than two weeks, it loses its irritative character and will have no effect whatever. I am disposed to think that an increase of jequirity does not imply an increase of effect, so that the question of preparation becomes purely one of pharmaceutics; that is, as to how much water, whether warm or cold, and if both, how long shall the seeds remain in each? Shall the whole seed be used after being bruised, or only the cortex, cotyledon, or gemmule? The liability to fermentation is so great that it has been proposed to use a germicide in the solution—as salicylic acid, hydrate of chloral, or carbolic acid—a proposition to which, I think, a good chemist would object.

The rationale of treatment is that which obtains in inoculation, viz.: the establishment of an active purulent ophthalmia in place of a chronic, granular ophthalmia, with a view to carrying off the products of the granular conjunctivitis or keratitis: to such the name *jequiritic ophthalmia* could very properly be given. The first recent clinical use of jequirity was made by de Wecker, of Paris, whose report was published in the *Annales d'Oculistique*, for July and August, 1882. A translation of this report appeared in *The Planet*, a new medical gazette of New York, in January, 1883. Moura Brazil published an article on the treatment of acute and chronic granular conjunctivitis with jequirity in the *Annales d'Oculistique* in November, 1882, in which he detailed experiments on rabbits and patients; he found that granulations of the conjunctiva became diminished and sometimes were obliterated. Moyne followed with a paper on artificial purulent ophthalmia produced by *abrus precatorius*, in the *Boll. d'Ocul.*, vol. v., No. 3,

¹ *Abrus precatorius*, Linn

² Read before the Vermont State Medical Society, convened in Rutland, Vt., June 13, 1883.

November, 1882. He was the first experimenter in Italy. The patients were three children, in one of whom the trachoma was entirely removed in twenty days; in the other two the process was milder, but met with a like success. The cornea was not pannous in any of the cases. Simi had an article in the same journal in December, 1882. Jequirity infusion was used on two patients; inflammation and discharge followed, and on the twelfth day the process was complete. On one eye in total, on another in partial staphyloma, there was no change whatever. In the second patient the granulations were decreased, and the patient affirmed improvement in sight. Terrier detailed his use of jequirity before the Soc. de Chirurgie, séance du 13^e Décembre, 1882, in a case of trachoma; purulent conjunctivitis followed, but the granulations did not disappear.

The first published use of jequirity in this country, so far as I can learn, was by Dr. Gruening, whose sketch of two cases may be found in THE MEDICAL RECORD, March 17, 1883. These cases were admitted to the ophthalmic services of the Mount Sinai and German Hospitals of New York, and were perfect successes.

Dr. P. Callan has used the infusion at the New York Eye and Ear Infirmary on three cases without any effect. His cases, so far as I know, have not been published. An exceedingly interesting article from the pen of Mr. Charles Rice, associate editor of *New Remedies*, New York City, appeared in the June (1883) number of that journal, giving the curious history of the seeds, as well as the botanical and pharmaceutical properties of the plant. My own experience of seventeen cases comes next; and, aside from the two cases of Dr. Gruening's and three of Dr. Callan's, I know of no other use of the infusion in ophthalmic practice in this country.

It will be observed that Mr. Rice describes a different preparation of the infusion from that given above, which is the method followed out by Wecker and Gruening. The symptoms formulated by Mr. Rice are more severe than any of my cases developed. All of my patients were treated in the following way: Once a day the solution was applied to both inner lid-surfaces with a camel's-hair brush; the application is painless; two drops were ordered to be instilled into the eye every three hours; and all the patients who would devote the time and thought to the applications, applied compresses throughout the day and a part of the night. In a majority of the cases alteration was noticed within thirty-six hours, and consisted in an acute conjunctivitis followed by discharge, and the deposit of a croupous membrane upon their inner surfaces. The lids were swollen, and the eyes sustained the characteristic symptoms of an acute blennorrhœic conjunctivitis. Within from four to six days the inflammation began to abate, the infiltration of the lids to subside, and the membrane to disappear in shreds. The process of repair was hastened by one daily application of a five-grain solution of nitrate of silver, while a saturated solution of boracic acid was used at frequent intervals to keep the surface as clean as possible. The success in some of the cases was marvellous. The cases first undertaken were dispensary patients, three in number, every one of whom was cured of long-standing pannus. Two private patients, one very young, the other in middle life, were likewise cured—all five within a fortnight; the other twelve succeeded in a less degree, while the conditions of treatment were better fulfilled than obtained with the first five, these twelve being confined to a hospital with a complement of staff physicians and trained nurses.

The following conclusions are formulated from an experience of seventeen cases:

First.—The infusion must be from *fresh* seeds, transparent, odorless, kept from air and light; and must not be used after the development of an odor, or later than a fortnight after its preparation.

Second.—The ophthalmia induced by jequirity is strictly croupous; is limitable in severity by the assiduity and

regularity of the applications, and is not determined by the strength of the infusion.

Third.—The cornea runs no risk of perforating ulcer, and can suffer no more than a transient desquamation of epithelium.

Fourth.—Corneal and in some instances conjunctival granulations from one year to twenty years of existence are successfully removed, with but little pain and little discomfort, in from ten to twenty-one days.

Fifth.—A dense white opacity of the cornea, even of recent standing, remains unaffected by the infusion of jequirity.

It will be observed that in some respects these conclusions differ from those of Wecker, but essentially they are the same.

The following cases are here represented in tabular form:

CASE I.

Patient.	Diagnosis.	Treatment.
Male, aged twenty-eight; occupation, carpenter; treated at Northwestern Dispensary. Improvement in vision twentyfold.	Pannus and conjunctivitis granulosa for ten years. Vision in either eye, finger-counting at four feet.	Infusion of jequirity begun March 4th. Applications painless, but irritating. On third day profuse blennorrhœa, both corneæ covered with a deposit of sarcoous tissue. On fifth day corneæ began to clear; discharge less. On tenth day discharge ceased. On fourteenth day patient was dismissed with V = $\frac{20}{50}$ in each eye.

CASE II.

Woman, aged twenty-five; chambermaid; treated at Northwestern Dispensary. Improvement in right eye thirty-fold; left eye fifteenfold.	General, dense pannus for twelve years. Inversion of four lids, due to fibrous scars on their inner surfaces. Stubby and vicious growth of lashes; bands of symblepharon of both eyeballs. Upper lids had been operated on with benefit for entropion. V = finger-counting at two and four feet.	Infusion of jequirity begun March 3d. Applications painless, but during treatment eyes became painful. On second day free discharge, increase of pannus; later patient was led to the dispensary. On tenth day cornea clear. V = $\frac{20}{50}$ with either eye.
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CASE III.

Girl, aged eleven; treated at Northwestern Dispensary. Vision in each eye quadrupled.	Partial thin pannus; cornea steamy, not fleshy; trachoma like frog's spawn on all four conjunctival surfaces.	Infusion of jequirity begun March 28th. Little blennorrhœa and little pain; infusion continued twenty days. Cystic bodies of trachoma (?) removed from all the conjunctival surfaces by the infusion.
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CASE IV.

Lad, aged eighteen; occupation, apprentice to a decorative painter; private patient. Vision in each eye doubled.	Superior pannus of both eyes for more than ten years; trachoma of all the lids. Right eye, V = $\frac{20}{100}$; left eye, V = $\frac{20}{100}$.	Infusion of jequirity begun April 1st. Mucous discharge at the end of second day. Lachrymation, spasm, and photophobia considerable. On tenth day right eye had V = $\frac{20}{40}$, left eye had V = $\frac{20}{50}$.
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CASE V.

Female, aged forty-seven; had always lived at home; since widowhood a housekeeper; private patient. Improvement in V = eightfold.	Interior pannus of right eye for a number of years, extending up to the horizontal diameter of the cornea. V = finger-counting at eight feet.	Infusion of jequirity begun May 23d. On the third day the cornea was covered with new vessels; blennorrhœa profuse; strips of muco-purulent discharge; no pain; no smarting; lids infiltrated and shiny. On nineteenth day V = $\frac{20}{50}$.
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CASE VI.

Male, aged twenty-three; shoveler of sand; treated at Charity Hospital. Improvement in V = right eye, doubled; left eye, none.	Diffuse, dense pannus for five months; trachoma for seventeen years. Right eye, V = $\frac{1}{50}$; left eye, V = $\frac{1}{50}$.	Infusion of jequirity begun May 20th. Reaction slight; some discharge on second day; continued for eight days. On twentieth day, for right eye, V = $\frac{1}{50}$; for left eye, V = $\frac{1}{50}$.
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CASE VII.

Male, aged forty; laborer; treated at Charity Hospital. Improvement in V, doubled.	Dense, fibrous pannus for thirty years. Right eye, V = $\frac{1}{100}$.	Infusion of jequirity begun May 20th; reaction slight. On twentieth day V = $\frac{1}{40}$.
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CASE VIII.

Lad of seventeen years; worker in a plaster-mill; treated at Charity Hospital. Improvement in V, right eye, none; left eye, threefold.	Maculæ of both corneæ, with recurrent moderate pannus for five years. Right eye, V = $\frac{20}{100}$; left eye, V = $\frac{10}{100}$.	Infusion of jequirity begun May 20th. On second day slight discharge; on third to eighth day increase of discharge. On twentieth day, for right eye, V = $\frac{20}{50}$; for left eye, V = $\frac{10}{50}$.
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CASE IX.

Patient.

Male, aged twenty-eight; occupation, machine-tender; treated at Charity Hospital. Improvement in V = double in each eye.

Diagnosis.

Slight, diffuse pannus; and superficial keratitis for nineteen months. Right eye, V = $\frac{20}{80}$; left eye, V = $\frac{20}{120}$.

Treatment.

Infusion of jequirity begun May 20th; reaction slight. On twentieth day, for right eye, V = $\frac{20}{30}$; for left eye, V = $\frac{20}{60}$.

CASE X.

Lad of twelve years; was at school at the Catholic Protectory for eighteen months; treated at Charity Hospital. Improvement in V; right eye none; left eye quadrupled.

Dense pannus crassus of both eyes; profuse discharge; blepharospasm, and photophobia; duration, eighteen months. Right eye, V = inability to count fingers at six inches; left eye, V = $\frac{1}{60}$.

Infusion of jequirity begun May 20th; reaction slight; some conjunctival chemosis and infiltration of lower lids. On twentieth day, for right eye, V = the same; for left eye, V = $\frac{1}{60}$.

CASE XI.

Male, aged fifty; laborer; treated at Charity Hospital. Improvement in V = double for each eye.

A recurrent thin sarcomous pannus for eight years in both eyes. Right eye, V = $\frac{20}{120}$; left eye V = $\frac{20}{80}$.

Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $\frac{20}{80}$; for left eye, V = $\frac{20}{40}$.

CASE XII.

Male, aged twenty-two; stoker; treated at Charity Hospital. Improvement in V = double for right eye; none for left eye.

A dense, inveterate pannus of each whole cornea for eight years. Right eye, V = $\frac{5}{200}$; left eye, V = $\frac{20}{200}$.

Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $\frac{10}{200}$; for left eye, V = $\frac{20}{200}$.

CASE XIII.

Male, aged thirty-six; longshoreman; treated at Charity Hospital. Improvement in V, for right eye = double; left eye = treble.

A variable pannus crassus for eighteen years; very dense on entering the hospital. Right eye, V = $\frac{1}{60}$; left eye, V = $\frac{1}{80}$.

Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $\frac{2}{60}$; for left eye, V = $\frac{3}{60}$.

CASE XIV.

Female, aged thirty-five; domestic; treated at Charity Hospital. Improvement moderate.

Right eye: A variable pannus crassus in superior portion of cornea; dense leukoma of the inferior portion of cornea, V = perception of moving objects. Left eye: Leukoma corneæ, phthisis bulbi; total blindness.

Infusion of jequirity begun May 20th; Reaction slight. On twentieth day, for right eye, V = finger-counting at two feet; leukoma untouched; left eye unaffected by the infusion.

CASE XV.

Female of thirty years; scullery-maid; treated at Charity Hospital. Improvement of V = tenfold in each eye.

Pannus of both corneæ; granular conjunctivitis of four lids for several years. Right eye, V = $\frac{2}{200}$; left eye, V = $\frac{10}{200}$.

Infusion of jequirity begun May 24th. Reaction severe, beginning on third day. Blennorrhœa, swollen lids, but no pain. On fourteenth, for right eye, V = $\frac{20}{50}$; for left eye, V = $\frac{20}{40}$.

CASE XVI.

Female, aged twenty-two; prostitute; treated at Charity Hospital. Improvement of V = fourfold.

Pannus of upper cornea of left eye for five years. Syphilitic cachexia; patient anæmic and scarred; looked old. V = $\frac{20}{200}$.

Infusion of jequirity begun May 20th. Reaction slight. Patient not obliged, except for treatment, to go to bed. On twentieth day, V = $\frac{20}{50}$.

CASE XVII.

Male, aged twenty-five; laborer; treated at Charity Hospital. Improvement in V, right eye = eightfold; left eye = fourfold.

Dense pannus of both upper corneæ for many years; patient syphilitic, though had never had iritis. Right eye, V = $\frac{10}{200}$; left eye, V = $\frac{5}{200}$.

Infusion of jequirity begun May 20th. Reaction not severe; began on fourth day, and continued two weeks. On twentieth day, for right eye, V = $\frac{20}{50}$; for left eye, V = $\frac{20}{200}$.

I am under obligations to Dr. Amory Chapin for assistance in the care of the cases treated at the North-western Dispensary; also to Drs. Battle and Leipziger, House-Surgeons at Charity Hospital.

53 WEST FIFTIETH STREET, NEW YORK.

THE ARTIFICIAL CULTIVATION OF VACCINE.—A prize of \$500 is offered by the Company of Grocers, London, to any one who will describe "a method by which the vaccine contagium may be cultivated apart from the animal body in some medium or media not otherwise zymotic—the method to be such that the contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard vaccine lymph." Competitors must send in their treatises on or before December 31, 1886, and the award will be made not later than May, 1887.

THE INABILITY TO DISCRIMINATE BETWEEN RIGHT AND WRONG DISGUISED BY AUTOMATISM.

ILLUSTRATED BY THE DISASTERS TO THE BRAIN, TROPHIC AND FUNCTIONAL, ARISING FROM CHRONIC ALCOHOLISM.

By T. L. WRIGHT, M.D.,

BELLEFONTAINE, O.

A RECENT experience with respect to a trial for murder in one of our large cities has impressed upon my attention the importance of a clear understanding of the full significance of the questions so often propounded by lawyers when applied to criminals: "Could the prisoner, in your opinion, discriminate between right and wrong? Did he know, when he committed the act, that he was doing wrong?" The importance of a perfect familiarity with all the terms in these questions, as applied to ascertained facts in criminal cases, is the more apparent when it is remembered that they contain what the courts in England and America insist shall be considered as the real and only test of legal responsibility—the power of discriminating between right and wrong.

In order to prepare the *expert* for the questions indicated, it is usual to furnish him with hypothetical cases, wherein one side will claim a certain regular chain of sequences in the conduct of the accused, all pointing directly to the crime. The answer to the question in such an hypothesis, most likely, is that the prisoner probably did know how to distinguish right from wrong. The other side, with equal ingenuity, will furnish an hypothetical case wherein there are supposed to appear certain breaks, and unreasonable intervals, and inconsistencies, in the same chain of sequences. The same witness will decide that, in such contingencies, the prisoner did *not* know how to discriminate between right and wrong—leaving the case at last just where it was when the expert was called in to testify.

I hope to indicate that a certain regular series of sequences in approaching a criminal act, and made too in the interest of such act of criminality, is not of itself and *necessarily* proof positive that the criminal has sufficient mind to discriminate between right and wrong. Nay, I will endeavor to show that an unusually pertinacious and cunning approach to an act of criminality may even point to the presence of brain disease, which, in the form of some delusion dominating motive and will, proves by its unyielding obstinacy the absence of reason and the inefficiency of evidence, and may thus presuppose a mental defect which is incapable of discriminating between right and wrong.

I hope to make it appear that the knowledge of right, abstractly or automatically and in cold reason only—and the knowledge of wrong abstractly and by mere habit or rote—may be present, and yet the power of discriminating between the two, the power of using the reason and sensibilities in a comparison or analysis of the elements of right as relates to the elements of wrong, may be wholly absent, wholly destroyed. So that it is possible to have an abstract idea of right without feeling it, and an abstract idea of wrong without feeling it; and there may exist an utter incapacity to enter into the mental process of discriminating between the two so as to apply the results of such a discrimination to determining the character of conduct.

In illustrating these propositions, which I prefer thus to toreshadow rather than gradually approximate unto, I will consider some of the effects of alcohol upon the nervous system. I will in the first place, and in some detail, speak of alcohol as a destroying element—wrecking in many instances the integrity of the nerve-centres and of the nerve-tissue otherwise. I will then proceed to consider briefly a more common effect of alcohol, namely, its power of inhibiting nervous function; where the actual mental phenomena—those of paralysis of *function*—must appear very similar to the mental phenomena

associated with deterioration and wreckage of nerve structure.

Dr. Stearns, of Connecticut, says truly that many of the insane are rendered so through grief, business disasters, and other analogous causes. Yet of the whole number of persons suffering from grief and financial reverses, very few become insane. There must pre-exist some neurotic proclivity to the final mischief. So in chronic alcoholism there must also be a similar predisposition to insure the full effect of alcohol upon the tissues of the brain.

It is now the generally received opinion that about *seventy-five* per cent. of the cases of paralytic dementia have a history of alcoholism. Dr. Crothers claims that the percentage is as high as *eighty-nine*. Therefore, to fully appreciate the power of alcohol in wrecking the brain and thus depraving its functions, it is only necessary to observe closely the morbid appearances and changes which are most commonly observed in those who die of paralytic dementia.

"The nature of the most obvious initial change in the brains of the paralytic insane is a hyperplasia of the connective tissue." Certain minute changes observed in the cerebral substance of one who had suffered from this form of disease were owing, according to Dr. Maudsley, to an increase of connective tissue.

In regard to the particular kind of connective structure which is formed through the influence of alcohol, it will be proper to make one or two remarks. Alcohol is recognized as an element more prone than any other to excite the proliferation of the fibrous tissue, not only in the brain but throughout the entire system. Few structures, Dr. Bartholow remarks ("Practice of Medicine," p. 844), "escape the trophic influence of alcohol when it is habitually introduced within the body." The kidneys, the stomach, and the liver, all exhibit an hypertrophy of the connective tissue; "and the neuralgia of the brain also undergoes hyperplasia."

The peculiar nature of the fibroid adventitious structure produced under the influence of alcohol is strikingly exhibited in its subsequent changes. In the kidneys, for example, the alcoholic influence induces interstitial hypertrophy; but finally the hypertrophied tissue *contracts*, just as ordinary scars following burns or wounds contract. This contraction of the hypertrophied tissue produces interstitial nephritis. In the liver this contraction of fibrous tissue, confining and squeezing the true gland-structure among its meshes, produces hepatic sclerosis or hob-nail liver. In the brain a similar contraction produces a variety of disturbances in the condition of the capillary circulation and the nerve-fibres and nerve-cells. "As a consequence of the exuberant increase of the hypertrophied tissue, the nerve-element, as well as the delicate capillaries, are injured or destroyed," says Maudsley.

Of course, such a serious interference with the normal condition of the true nerve-cells implies a corresponding decay and deflection of mental function. It is easy to conceive of the impossibility of mental activity in healthy relationship with natural surroundings when the structures upon which such activity relies for projection—when the nerve-cells—are obstructed in function by the mechanical encroachment of an aggressive foreign substance.

But the injury done to the nerve-cells does not depend exclusively upon the pressure occasioned by hypertrophy of neighboring structure. The final *contraction* of the intrusive connective tissue, by a process of strangulation of the smaller blood-vessels, induces a failure in the proper nutrition of the nerve-element. From this defect in nutrition there often ensues various forms of cell-degeneration. Nerve-cells, for example, may undergo fatty degeneration. Becoming unfitted for physiological action, they may be absorbed, and in their place "fine elastic fibres contract, get closer and closer together, and remain as the constituent tissue of a cicatrix, which

sometimes causes considerable deformity. Whole sections of nerve-substance have been replaced by a relatively small quantity of an unyielding, compact, dry tissue."

The same authority says, in another place: "As the process of hyperplasia goes on, the circulation is shut off, and the brain becomes anæmic. Pigmentary degeneration of the ganglionic cells of the brain is observed in the various forms of paralytic dementia, as also are calcareous degeneration of the same class of cells. . . . In connection with the hypertrophied tissue are amyloid and colloid corpuscles, calcareous and fatty granules, all being products of retrograde metamorphosis" (Maudsley: "Pathology of Mind," pp. 511-512).

In the same direction, Professor Loggia, of Palermo, Italy, says: "When we bring to our aid the microscope, we begin to see and to understand the intimate fibro-cellular and interstitial alterations. It is by this means we succeed in determining the vascular and perivascular lesions of the cerebral substance, the colloid and cistoid degenerations, as well as the lesions of the nerve-element—cells, tubes, and neuroglia—which have, according to the most accurate investigations, undergone great transformations in this disease."¹

But there is still to be considered another important nerve-complication which is also brought about by the toxic power of alcohol—a complication having a very intimate relationship with the moral nature of man, and, of course, with the solution of the problems of this essay in particular.

Besides the cells and centres ministering to sensation, ideation, and motion, and besides the various avenues to and from these centres, there exists in the brain a large and important class of nerve-fibres known as *fibres of association*. To save time and space, I will here adopt the language of some authorities as found in their works on the subject.

Dr. Spitzka speaks as follows: "Many years ago attention was called to the presumptive physiological *role* of certain arched fibres which are known to unite adjoining as well as distant cortical areas with each other. . . . I should, if asked to point to the chief factor on which the higher powers of the human brain depend, lay less stress upon the cortical development as such than on the immense preponderance of the white substance due to the massive associating tracts. Both projecting and associating fibre masses increase in nearly a geometrical progression as we pass from the lower animals to man; but the ratio of progression of the associating fibre masses exceeds that of the projecting tracts. There are certain convolutions which are almost exclusively connected with *fibre arcuate*—that is, with associating tracts—and which enjoy but little direct connection with the bodily periphery. Such cortical areas and their subsidiary associating tracts, bound into the higher unity of the entire hemisphere, constitute the substratum of the metaphysician's *ego*. A disturbance of the intricate relations which are involved in the material basis of the *ego* must be accompanied by a disturbance of the *ego*, or may even render an *ego* an impossibility."

On this subject Dr. Maudsley remarks: "The habitual co-ordination of thoughts and feelings is the basis of consciousness and personal identity. When co-ordination of function in the brain is overthrown, the consciousness of personal identity and responsibility are also destroyed."

Pertinent to the same subject, and also showing a further step in advance in the discussion of our main topic, are the words of Seppilli:² "We must remember that cerebral activity is manifested under two distinct aspects—that of the *conscious* and of the *inconscious*. The conscious activity, or *consciousness*, is constituted of knowledge possessed by the *ego* of its own acts—that which happens within itself, which happens in its relations with the external world. On the contrary, in the unconscious

¹ Alienist and Neurologist, July, 1882, p. 343.

² Ibid, April, 1882, p. 169. Translated by Workman.

activity of the brain, denominated also automatism, all those actions enter in which the *ego* takes no part nor is aware of any; but these are combined and directed so as to *resemble* those which the *ego* perceives, wills, and directs."¹

It is therefore evident that the perfectly harmonious activity, or *consent*, of all the healthy nervous attributes and capacities is the one essential requisite to the display of sound mental function; and as such attributes and capacities are so held in activity through the integrity of the nerves of association, any disturbance or obstruction in the exercise of the functions of those nerves must give rise to serious defects in mental operation. When the interchange of nerve-influence between the various centres concerned in thought is free and unembarrassed, there is present in the mind a vivid sense of personal importance and individuality. The feelings of rights, duties, cares, and responsibilities are active, and they control all the serious avocations of life. This ever-present sense of *responsibility*, while it exacts duties, also confers power and dignity to character, and implies the freedom of the will. The sense of responsibility demands untrammelled freedom of conduct, assumes the weight of accountability, and challenges retribution. There is in the mind an acute sense of its ability to discriminate between right and wrong.

But in chronic alcoholism the free interchange and equilibrium of nervous association does not obtain. It is overcome by the intrusion of hypertrophied interstitial tissue upon the nerves of Meynert. And especially are these nerves of association injured, both in office and structure, by the final contraction of the connective tissue, which, by strangulation, annihilates their function.

Very important considerations of medico-legal interest are interwoven with the tendency of alcohol to impair brain tissue. It is easy to conceive of the unstable will, the impaired will, the imbecile will, when the *consciousness of personality* is weakened and the feeling of responsibility is lost in consequence of injury to the fibres of association. It is also easy to conceive that the power of discriminating between the qualities of right and wrong must be weakened when consciousness is defective. Unless the feeling of personal identity is clear and on the alert, it is impossible to apply personality with distinctness to conduct; impossible to perceive the relations of personality—the relations of the *ego*—to either things or acts; impossible to bring *self* into normal relationship with exact ideas of right and wrong.

It is conceded by all whose authority is of any weight, that one of the earliest symptoms pointing to the progressive paralysis of the insane is a marked change in the disposition. There is a change in the moral nature; not a change indicative of true vice, and exhibiting a reckless disregard of the principles of morality, but a change indicative of an inability to comprehend those principles, and founded, indeed, upon physical damage to the nerves and centres of association—those nerves and centres upon which the sense of morality is based, and through which the moral nature must find utterance.

There was a person within my knowledge who had been a steady drinker. He was honest and was a hard laborer. He suddenly began a course of stealing. It was not like ordinary theft. He would deliberately take and carry away with him things notoriously the property of near relatives and neighbors. He made no attempt at explanation. He claimed these articles to be his own, simply because they pleased his fancy. An infant whose associative organs have not been exercised displays the same ignorance of personality as relates to the personality of others. It cries for and claims as its own any shining toy which happens to engage its attention.

The person alluded to finally died in an insane asylum, demented. He could, without doubt, tell very well what

was the abstract idea of right as well as of wrong. They were ideas which had become *habitual or automatic* with him by life-long use. But practically his nervous organs, functioning the moral nature, having been injured, he could not make an active discrimination between right and wrong. All *feeling or sense* of right and wrong was destroyed through the ravages of alcohol. He was incapacitated, by trophic changes in brain-tissue, from bringing the *conscious ego* into relationship with the moral principles of right and wrong. And this is the difference between the automatic or abstract knowledge of right and wrong, which is to some extent always present, and the *conscious and responsible capacity to discriminate* between the two principles. In the infant, the fibres of association had never yet been brought into play. In the paralytic dement, they had suffered destruction.

But in the insane criminal, the fact often stares the inquirer in the face that the conduct of the accused is consistent throughout with the theory of depravity; that all the steps in the crime were those evincing rational design. This is, indeed, a serious point of consideration. For it not infrequently happens that atrocious criminals, exhibiting the attributes of fine reason and wicked pertinacity, soon after show such indications of insanity as to leave no doubt of their entire irresponsibility.

Certain considerations carefully noted may throw some light upon these undoubted facts.

Habits of thought are acquired slowly and painfully. It is not necessary to advert at length to the difference between man and the lower animals. The former acquires by long and laborious experiment a habit of mental activity fitted for his exalted sphere; while the latter are born with instincts sufficient for their lot in life. The tedious repetition of sensations, perceptions, conceptions, and the motor activities becomes at last a habit which it is impossible to dispense with. Mental and even motor life becomes in time mere repetitions of certain long-enacted powers which are applied to the usual phenomena of living.

The power of walking erect was acquired with much consideration, balancing of the body, and mental calculation. But at length the acts of walking, running, and jumping become by use strictly automatic, requiring no nice calculation, no exercise of the judgment or will in their performance. The undoubted insane walk and run well. Yet no one would claim that because an insane man can perform the act of walking well, an act in its abstract nature requiring judgment and nice calculation, he is therefore not insane, but is in possession of fine powers of judgment and discrimination. There is, therefore, such a thing as automatism, which may mislead the convictions as to the actual present mental capacity of a person of questioned sanity.

There are many other courses of nervous action of a more strictly mental or moral nature which may become automatic, as well as a merely motor capacity. The mature mind, like a bird of prey seeking its food, often comes to intellectual conclusions with wonderful directness and speed, and that, too, from the most remote and unexpected quarters. It is said that when the quarry falls in some deep glen, amid tremendous cliffs and mountain peaks, instantly the eagles flock from remote and hidden places and gather there. This has been ascribed to a mysterious form of impenetrable instinct. The fact is that birds of prey are of grand vision, and they are always upon the watch. The moment that a victim sinks, the watchful sentinel nearest by starts into life, and with rapid wing rises into the air; this movement is at once seen by others farther away, and they too fly aloft and follow the course of the first. And thus, in a few moments, the intelligence goes far and wide—like that from the smoke and torch upon the hills of the Norsemen when an enemy appears.

So the human mind acts. What was once slow and anxious training, what was once pursued in regular steps and over difficulties, becomes by practice instinctive and

¹ "The brain must always remain the essential organ of the manifestations of the *ego* and the *me*—the moderator and the supreme arbiter of the acts of life."—Loggia.

automatic. The alphabetical order of reasoning no longer obtains. Small things are taken for granted. An immense number of positions are habitually assumed; and in ordinary life the mental processes, like eagle-flights, are grand movements from point to point, from headland to headland of thought, not lingering to go through the tedious routine of detailed mental activity.

And thus men not only sane, but men insane, live, and think, and reason, automatically, in common circumstances. It is when some morbid delusion or hallucination intrudes that very considerable exceptions are observed. When we reflect that in the ordinary life of the insane the delusion is not always uppermost in the mind, we must perceive that, in so far as every-day business is concerned, there will usually appear the automatic phenomena and conduct of men in general. When the delusion of insanity takes precedence, there must of necessity be an absence of even automatic regularity in mental activity. So long, however, as the delusion does not intrude, it may be impossible to determine from the conduct of even an insane person that he cannot discriminate between right and wrong; for automatism calls for no active or real process of discrimination. The mind is acting in the groove of habit.

All rational thought, even automatic, is primarily founded upon evidence and reason; and while it may therefore be modified and changed by reason or evidence, a *delusion* founded upon disease cannot be modified or changed except through changes in the disease itself. Of course, changes in a morbid process in the brain are beyond the competency of reason or evidence or will.

The truly alcoholic mind, therefore, is powerless to discriminate between the properties of right and wrong, because it finds itself to be the victim of unusual and untried circumstances, which it can neither define nor correct by the appliances of evidence and reason. It is needless to point out the fact that where evidence and reason cannot come *discrimination* is impossible.

Many truly insane criminals are adjudged sane and responsible because their automatic and common life resembles the similar life of rational minds; while the ignorant cheat and pretender is acquitted because he shams under all circumstances and upon all subjects.

Having considered alcohol as an agent destructive of the integrity of nerve-tissue, and having noted somewhat in detail the effects of such nerve-disintegration upon the mental and moral faculties, we are in a position to determine, with considerable distinctness, what would be the effects of a toxic agent which—by inhibition of nervous function, as by anæsthesia—would render such nerve-function inoperative or defective. For it must be admitted that the suspension of nerve-function from a toxic agency will present the same phenomena as where a similar suspension or destruction originates in any other cause—as, for instance, degeneration of nerve-cells and disruption of nerve-fibres.

Now it is well known that alcohol is an agent which produces anæsthesia in some degree in every instance where it is taken into the system. We have heretofore been discussing alcohol as it affects certain constitutions predisposed to its destructive action upon brain-tissue. Such trophic effects are not the rule. They are comparatively infrequent. But we now come to view a common or universal impression by alcohol upon the brain and nervous system of man; and we infer, from its disastrous effects upon the few who suffer from it in structure, its equally calamitous effects upon those who suffer from it in function.

We will not be specific upon the various properties of alcohol as a disorganizer of the sensibilities. But the fact may be stated that alcohol always depraves or destroys sensation. This may become apparent in the production of true anæsthesia or insensibility to ordinary sensation. Alcohol may also, by its toxic qualities, induce morbid, unnatural, and misleading sensations,

and it may cause sensations to become localized in certain parts of the organism and absent in other parts.

The same confusion in the relations of sensation to perception which exists when the sensibilities are destroyed by deterioration of nerve-structure, exists also when the sensibilities are functionally impaired or destroyed. In either contingency there can be no accurate or reliable perceptions induced. Of course there can be no association of clear and normal ideation, and no certain knowledge or consciousness respecting the actual being and relations of *the self—the ego*. In addition, if the obtunding of the sensibilities continues for a long time through habitual drunkenness, the abnormal state of the sensitive powers becomes constitutional and hereditary, upon the principle of the *structuralization of function*, with its opposite when circumstances are favorable.

But it is time to stop—to turn our eyes from the still opening vistas of our subject. It is enough to add that the anæsthetic state partakes largely of the nature of the magnetic condition, wherein personality is divorced from normal consciousness and wherein man *non est animi compos*.

CASE OF SUCCESSFUL OPERATION FOR THE PERMANENT CURE OF RUPTURE.¹

By ROBERT W. JOHNSON, M.D.,

BALTIMORE, MD.

THE frequency of hernia and the dangerous position of those who are so unfortunate as to own one have made investigation and experiment into the permanent cure of this deformity one of the most prolific themes in surgery.

Probably, if we leave out the excellent and popular truss which girds up the loins of so many of our fellow-citizens, in no department of the profession can we find more labor lost if measured by actual results.

The various means adopted in inguinal hernia, and the various engines, if I may use the term for some of the more cumbersome apparatus, have so far met the approbation of that partial jury alone, the inventor, but have been pronounced by the sterner court of the public: "Tried in the balance and found wanting."

The more prominent methods of invagination, as Gerdy's, Signorini's, Wutzer's, Wood's of London, Wood's of Cincinnati, Dowel's, Chisolm's; Dzondi's transplantation, as practised in a single instance by Jamison of Baltimore; local irritation with compression by Belmas, Pancoast, Velpeau, Armsby, and Riggs—all have either sunk into a merited oblivion or appear in treatises to be tilted at by the author. Heaton's method of injection seems popular now, and with some right, as numerous successes are reported and but few, if any, deaths.

The corkscrew arrangement of Mr. Spatton, of the North Staffordshire Infirmary, has also met with success in *his* hands. The majority of these operations apply only where there is an inguinal canal; when the hernia is an oblique one, and not when the two abdominal rings are dragged into immediate juxtaposition.

With the absence of this canal the difficulty of cure increases, for practically we have a door into the abdominal cavity at which the external ring is at best but a drowsy sentinel. Take away the canal and you rob the operator of his field of action.

Mrs. L. S. C—, aged forty-three, married twenty-two years, six of whose twelve children live, first noticed a small tumor in her right groin, thirteen years ago, one month after the birth, a difficult but normal labor, of her fifth child. This from time to time gave her pain, but was not reduced. After her next labor the tumor increased in size to a hen's egg, and was reduced by Dr. Blackman, of Virginia, who applied a truss for the first time, two

¹ Read before the Clinical Society of Baltimore, Md.

years after the appearance of the hernia. This gave her ease and retained the bowel until the summer of 1881, when the strap having broken she failed to have it fixed, and was rewarded for her negligence by the return of her old enemy with reinforcements. Her physician being unable to reduce it, sent for another physician of this city, who reduced it and applied a truss, which failed to retain it. Coming down again, and being apparently irreducible, her doctor called in a surgeon, who reduced it and applied a truss; but, as she expressed it, before he got into his carriage it was out again. I mention these different attempts by different men to show how impossible it was to keep it up with a truss. The case soon after fell into the hands of Dr. Girter, who attended the woman religiously for some time until her frequent demands wore out his patience, and knowing that I was particularly interested in hernia, kindly asked me to see it with him, she having previously had Mr. Willms to see her twice with the hope of fitting a truss. Finding that I was willing to take the case, Dr. Girter handed it over to me in April, 1882, having called my attention to an apparent cyst, which he had frequently tapped with the intention of setting up adhesive inflammation.

I found on examination an entero-epiplocele about the size of a goose-egg, coming out through the conjoined orifice of the external and internal ring, passing to the labium majus. My finger entered through the ring the abdominal cavity, the walls of which were much relaxed from her numerous pregnancies. At the lower end of the tumor could be felt the cyst, and near it an almond-shaped body, which the patient insisted increased in size during her menstruation, a fact I myself could never verify and pressure of which would give the peculiar nauseous pain of pressing an ovary.

There was but little trouble in reducing the rupture and as long as the supine position was maintained it would not reappear, but whenever the calls of family or nature forced her to leave her bed, back would come the gut, and in spite of renewed trials of trusses, in which Mr. Willms' skill was again elicited, the pain of all of them forced her to remove the pressure, which, although she sometimes endured, did not retain the bowel.

Among other trusses I had one shaped like a horse-shoe, so that the permanent contents of the sac, which I considered irreducible, should not be pressed on, but the gut alone retained. All was in vain.

In the hope that time might accustom her either to the use of a truss or the presence of the rupture in the labium, I attended her from April to November, going sometimes as often as twice a day. Finally recognizing the fact that she could not be so hampered and prevented from earning a living or taking care of her children, and confessing that I was heartily sick of these monotonous visits, I suggested operating, pointing out the danger and stating the possible chances of recovery. After consulting with her husband and carefully considering the matter herself, she asked me to operate. There was no inguinal canal, so invagination was impossible. For the same reason Heaton's method of astringents was discarded. The only thing I saw to do was to reduce the gut, cut down, and tie the sac close to the external ring, and to give her every chance I determined on antiseptic precautions.

On November 28th, assisted by Drs. Gerter, Moah, Schaeffer, and Blumer of Utica, N. Y., I operated under ether. For a half hour previous the spray played in the room.

Having reduced the gut, with its characteristic farewell gurgle, I cut down on a grooved director until I reached the sac, which was, as I had expected, thickened from its long sojourn there. Convincing myself that there was no gut in the sack I ligated it near the external ring with cat-gut ligature, passed around with an artery needle. This was a fortunate procedure, for just at that moment the alcohol in the lamp caught, rendering it unfit for use during the rest of the operation.

Cutting out the piece below the ligature I did not open the peritoneal cavity. Having removed the lower part of the sac and checked hemorrhage by torsion I brought the edges of the wound together over a drainage-tube, including in the uppermost suture the stump of the sac and dressed with antiseptic gauze. Opium, gr. j, to put splints on the bowels, which acted spontaneously on the morning of the operation, and quin. sulph., gr. iij., were given. There was some vomiting from the ether, but that was not enough to strain my ligatures of the sac. Diet was principally light and fluid.

Except in the course of the drainage-tube the wound healed by first intention. At no time was there much discharge. Pain was confined to the wound, no tenderness on pressure except in the immediate zone of incision. Opium and quinine were given occasionally. Removed the sutures on the fourth day; drainage-tube a few days later.

At no time did her temperature, taken twice daily, reach 100° F. I did not allow her to get up for nearly a month after the operation, in order that the parts might get accustomed to their new relations without straining the soft inflammatory tissue near the wound. I have removed her corsets, and to prevent any compression of the parts have suggested shoulder-straps for her clothes as far as possible. I have kept a truss on her and will do so to make security doubly sure, though I think the external ring is now pretty well blocked up. I did not find any ovary in the sac, as her history and almond-like body led me to think possible. The ovular body was, I think, thickened omentum or inflammatory deposit of some standing. I am not casuist enough to think the end justifies the means, and I should have been as much ashamed to present my patient here on her legs as a specimen of her on a plate if I thought my operation unjustifiable. She knew its danger—that at best it might be successful and may be unsuccessful. On the other hand, she recognized that her condition in life would not permit her to be bedridden—that palliative means had had a fair trial. She chose the operation with its attendant danger, and asked me, rather than I her, to perform it.

The best test of my opinion of it is that I would do it again under the same circumstances. I consider it probably the most dangerous of the operations for permanent cure. I would prefer Heaton's or another where there is an inguinal canal. Of course the truss, when practicable, while only a palliative, is far superior to any chances of permanent cure by operation. What effect the spray had I cannot say, as it was not complete. Cleanliness I can vouch for as the best ally I had.

AN OBITUARY COMMENT.—It is rare that one observes the peculiar type of mind which permits itself to indulge in witticisms at the expense of the dead. A recent writer in *The Lancet*, however, who possesses this peculiarity, commenting upon the death of Dr. George M. Beard, says, epigrammatically, that he expended most of his attention upon matters which ordinary men did not think worth paying any attention to. Dr. Beard's studies, thus alluded to, covered such subjects as trance or hypnotism in its relations to evidence, and various problems in morbid and what may be termed "border-land" psychology. Dr. Oliver Wendell Holmes, who, some years ago, speculated upon these same things, anticipated the criticisms thus made by the kindly writer over the water. "There is," says Holmes, "just on the verge of the demonstrable facts of physics and physiology, a nebulous border-land which what is called 'common sense' perhaps does wisely not to enter, but which uncommon sense, or the firm apprehension of privileged intelligences, may cautiously explore, and in so doing find itself behind the scenes which make up for the gazing world the show which is called Nature." We do not know that anything could better offset *The Lancet's* ungenerous estimate of the kind of work which occupied, after all, only a fraction of the late Dr. Beard's attention.—*Medico-Legal Journal*.

PROBABLY A CASE OF TUMOR OF THE CEREBELLUM.

By EDWARD SWASEY, M.D.,
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ALTHOUGH I am unable to verify by post-mortem examination the diagnosis of tumor of the cerebellum in the following case, yet I think its history, symptoms, and the quite sudden death of the patient were so characteristic of a cerebellar lesion that the case is worthy of record.

Mr. B——, farmer. 36 years of age, married, and always in good, robust health until the past winter. His family history is good; a brother, however, died in early manhood of consumption. He denies any venereal taint.

During the past winter he has been conscious of failing health and strength, and thinks he is fifteen or twenty pounds lighter in weight than usual, but attributes this to unusually hard work during the fall months. No definite symptoms appeared, however, until about January 1st, when he began to have occasional attacks of vertigo, or, as he described it, "a rush of blood to the head." It was most noticeable when he would rise from a horizontal or sitting posture; it would last but a moment or two and then pass off. At times during an entire day he would be free from this trouble. This has been gradually increasing in frequency and becoming more pronounced in character, as not infrequently it was followed by some headache, mostly frontal and parietal.

This has not been very severe or troublesome. About four months ago, or two weeks after the foregoing symptoms commenced, stomach trouble began to appear in the form of atonic dyspepsia. There was partial loss of appetite, a coated tongue, foul breath, bowels at times constipated, but before they had always been very regular: generally some distress after eating, followed by eructation of gas, and very frequently the vertigo and severe headache would come on and remain until the stomach was emptied by vomiting. They would then immediately pass off and he would be comfortable.

He had been under the care of two other physicians a greater portion of these four months, who had treated him for dyspepsia, but he had received very little or no relief, and he says the symptoms have been slowly but surely increasing. He has slept well, and has been free from troublesome dreams. Four weeks ago, in addition to all these symptoms, he commenced to stagger in walking. He has had, during the present week, some occipital headache, but it has not been very persistent or severe.

Such was his past history up to May 4, 1883, when I first saw him professionally. His complexion had the appearance of good health, and he believed he would be "all right" if I could cause the stomach and bowels to perform their functions. The tongue was covered with a dirty white coat, except at the edges, which were clean and red; pulse 60, full and regular; examination of the lungs and heart negative. He was up and about the house. I gave him a powder of pepsin, bismuth, cinchonide, and ginger to take after meals; also a mild tonic of wine of iron, nux vomica, and Fowler's solution. I gave a powder of calomel and jalap to take as the state of the bowels should require. I considered it a case of derangement of the digestive track, and gave a favorable prognosis. On the 6th the appetite had improved as well as his digestion and strength; no vomiting, the bowels had moved slightly, but the head-symptoms were not in the least improved. To continue the treatment, and to assist the bowels to a free evacuation by the use of an injection. I directed that he take short rides and walks, and to be out of doors as much as possible.

On the 8th, the condition about the same, but the dizziness, staggering, and headache were certainly increasing; the latter symptom was still more frontal and parietal than occipital. On returning home from a near neighbor's on the day previous, so pronounced were these

symptoms that he would have fallen but for a fence near at hand, and from here he was assisted to his home by a neighbor.

He had tried to ride, but the jolting and jar had affected his head unpleasantly and caused headache. Fearing that these symptoms had a more serious import than I had at first attributed to them, I subjected the patient to a more careful and searching examination.

The urine was normal in quantity, slightly acid reaction, specific gravity 1.020, free from albumen, but the phosphates were quite abundant; no microscopic examination. There had never been any cedema of ankles or under the eyes. The eyes were perfectly normal in appearance, no nystagmus, pupils normal and responded equally to light; vision for near and distant objects normal. There had been occasionally, at times of dizziness, dyspepsia, but it was transitory. There had never been any trouble in the hearing, and the tick of a watch was heard four feet distant, and equally on either side. The tongue was protruded in a straight line, still covered with the dirty white coat. The facial muscles acted normally. No sign of weakness in arm or hand muscles. He was requested to fully extend the arm and carry it well back, then, with closed eyes, to bring forward the hand and touch the tip of his nose with the tip of index finger. This was done accurately with the right hand, with the left there was deviation of half an inch.

There was no anesthesia of face or extremities. The lower extremities were not tested for ataxic movements. The patellar reflex was normal. No pains in any part of the body, save the headache. In rising from a sitting posture he would have fallen backward, but the side of the room, three feet distant, saved him. He was assisted to gain his equilibrium, but when he stood with feet together there was a swaying motion of the body, but no tendency to retropulsion, or to fall in any definite direction. With the eyes closed these movements disappeared, and the body was stationary. He walked almost exactly like a drunken man. With eyes fixed on a distant object he would start forward, feet wide apart, and the body swaying and tottering about. He crossed and recrossed two rooms in this way without assistance. It brought on some headache, and he was glad to sit down. He felt quite comfortable after a short time, however.

I now came to the conclusion that this patient had a very interesting but a very fatal brain lesion, and that it was probably a tumor of the cerebellum. I gave him the iodide of potash in five-grain doses, and the bromide in ten-grain doses, with a liberal amount of water, three times a day; and ordered a blister to nucha. On the 10th, no special change, except that the iodide had deranged the stomach, as there was almost complete anorexia and a foul breath. The bowels were constipated, but would move by the use of powders and injections. The stools were "clay-colored." There was increased headache, and a disposition to remain in bed. To stop the iodide, but give the bromide and continue the stomach powders and the tonic.

On the 12th, while rising from bed to dress in the morning he fell, striking his face against the bed-frame, causing quite a wound on the cheek. There was no loss of consciousness, had never seen spasms or jerking of muscles in any part. He sleeps well.

On the 14th, no special change in his condition; mind perfectly clear. He has more headache, but sleeps well.

He walks now only with the assistance of his wife. I had him walk alone, however, and the same gait described above was present. The expression of the eyes was that of a drunken man while he was walking, but not afterward. There was not the slightest odor of alcohol about him, and his mind was perfectly clear. I had him take a pin between the thumb and fingers of either hand, and then try to touch their heads together, with arms fully extended. In this there was hardly any deviation from a perfect coaptation.

Has had more occipital headache than formerly. I

noticed for the first time to-day some irregularity of the pulse, but there was no definite rhythm noticed. The bowels respond to medicines somewhat better, and the stools are normal in appearance.

I was asked by the patient's mother for my opinion of her son's condition, and I told her that I took a very gloomy view of his prospects; that I was quite positive that he had trouble of the brain, which would before long prove fatal, but I could not tell her how long before fatal symptoms would appear; possibly weeks might intervene, but I thought not, but when they did appear he would probably have still more severe headache, but I thought the mind would remain clear to the very last, and that he would die quite suddenly. I thought there was little to do in way of medication, except to treat symptoms. That afternoon I met my brother, Dr. William B. Swasey, in consultation, and he took a more hopeful view of the case, regarding it as derangement of the digestive organs, and that the vertigo and headache were dependent upon this. He advised the use of lime-water and milk, and to keep the bowels open by use of calomel. During the examination the patient was in bed, and was laughing and joking, and said that his head was perfectly free from pain just then.

On the 16th I saw the patient at 10 A.M., and found him with head and shoulders raised on pillows, the body and face bathed in perspiration, severe occipital headache, and this was increasing. He still could place the tip of finger on the nose quite accurately. The pulse was 58, and irregular; respiration 25, and regular; no sighing. These symptoms commenced about two hours before my arrival. He had slept well during the night. I noticed slight nystagmus for the first time, and the pupils were in constant motion, they were so sensitive to the light. The mind was clear and it remained so to the very last. The occipital headache was excruciating. The speech was unaffected, though he had some difficulty in swallowing, from a thick secretion of the throat apparently. I promised to see him again that day, but warned the family of the near approach of death, and thought he would not live through the day. I ordered the bromide to be given freely, but in stated doses every half hour for the headache, and a blister to nape of neck for the same purpose. An hour after my departure he rapidly became cyanotic and died, free from spasm or convulsions. The wife told me that the heart beat very rapidly just before death.

Unfortunately I could not obtain an examination of the brain, but as a substitute for this I will briefly review some of the recent literature of cerebellar lesions, and the reader must with me be content to draw his own conclusions respecting the lesion in this case.

My friend, Dr. L. Putzel, of New York, in reviewing the literature of this subject in the past five years, makes these statements:¹ "Nothnagel is of the opinion that lesions whose effects are restricted to one cerebellar hemisphere can not be diagnosed, but this view is contrary to that of various other authors, so that the question must still be regarded as sub judice.

"Disturbances of co-ordination (tottering gait) and vertigo are characteristic of cerebellar disease, but these symptoms may also occur in other affections of the central nervous system, and cannot, therefore, be regarded as pathognomonic. The diagnosis must depend upon the combination of positive and negative symptoms.

"Nothnagel believes that the tottering gait and vertigo are always due to an affection of the middle lobe of the cerebellum; he acknowledges, however, that in exceptional instances the middle lobe may be implicated, although these symptoms are not observed."

In a foot-note to Dr. E. C. Seguin's lectures on "Localization of Spinal and Cerebral Diseases,"² I find this additional statement concerning Nothnagel's conclusions:

"In the large majority of cases the upper extremities remain free from incoördination."

My friend, Dr. L. E. Holt, of New York, has recently recorded an interesting case of tumor of the cerebellum, which I will briefly review:³

A girl, four and one-half years of age, had been in declining health for six months previous to December 11, 1883, when she was first seen by Dr. H. She had been listless and indisposed to any exertion, subsequently had some fever every other day. She vomited frequently, had neuralgic pains in forehead and epigastrium, and occasionally pains in the extremities. There was complete anorexia, and the bowels became obstinately constipated. Occasionally pain and rigidity in back of neck. Three months before she was first seen by Dr. H. she began to stagger in walking, which symptom gradually increased until "she walked like one drunk," and was brought to the Dispensary in her mother's arms. More recently severe occipital headache had occurred. At time of examination, she had a heavily furred tongue and fetid breath. The body was balanced awkwardly, rocking to and fro. Reflexes normal, and there was no decided incoördination, no facial or ocular paralysis, pupils normal, no deviation of tongue, mind unaffected. "On December 16th there was a very marked degree of ataxia of both upper and lower extremities." She was as liable to fall in one direction as another; no jerking movements, and closing eyes made no difference in movements. She improved under the use of quinia (for there was a history of chronic malarial poisoning) for one week, then the former symptoms returned with increased severity, and she died suddenly on January 4th. The mind remained clear to the last, there was some thickening of the speech a day or two before death and some trouble in swallowing. Autopsy revealed "a tumor occupying the situation of the inferior vermiform process of the cerebellum, but it was three or four times larger in size than the process, and it had encroached upon the fourth ventricle."

Dr. Holt gives Nothnagel's conclusions, and in addition to those already quoted, I will give the following: The incoördination from lesion of vermiform process is sufficiently characteristic to be distinguished, in most if not all cases, from that of posterior spinal sclerosis. Its peculiarities are a swaying movement of the body in walking, the legs widely separated, the feet raised but slightly, a staggering, a rocking to and fro, and a final falling in any direction. Closing the eyes may or may not increase the difficulty. The spasmodic character of the movements is usually wanting. The group of symptoms so closely simulates those of alcoholic intoxication that one of Nothnagel's patients was several times locked up by the police for drunkenness.

Vertigo is often an early symptom, and may be the first noticed, but it is of no diagnostic importance unless associated with incoördination. The optic is more frequently involved than the other nerves of special sense. Vomiting is wanting in the stationary and degenerative lesions, but is a more common symptom in abscess, hemorrhage, and tumor. In many cases, especially of tumor, we have occipital neuralgia as a prominent symptom.

I might review other interesting cases that I find on record, but space forbids, and they would but tend to strengthen the conclusions to which Nothnagel has arrived.

RAILROAD SURGERY seems likely in time to develop into a specialty of itself. We are told (*Chicago Medical Weekly*) that organizations have been formed by the surgeons of at least three large companies: The Chicago, Rock Island & Pacific, the Pennsylvania Central, and the Wabash, St. Louis & Pacific. The surgeons of the latter company recently held a successful meeting at Fort Wayne.

¹ Ziemssen's Supplement, edited by Dr. George L. Peabody, p. 550.

² MEDICAL RECORD, August 24, 1878, p. 143.

³ MEDICAL RECORD, March 31, 1883, page 342.

A CASE OF DISLOCATION OF THE HIP-JOINT IN WHICH THE HEAD OF THE FEMUR LAY IN THE ISCHIO-RECTAL FOSSA.

BY THEODORE R. VARICK, M.D.,

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CHARLES B—, a German, aged thirty-six, was admitted to St. Francis' Hospital, Jersey City, October 10, 1882, on account of a dislocation of the hip-joint, sustained forty-eight hours prior to admission. The accident occurred from jumping from the deck of an ice-barge, of which he was captain, to the wharf: a distance of eight feet. How he alighted it was impossible to ascertain, either from the patient himself or from his friends who brought him to the hospital. At the time of the accident the boat lay opposite the wharf at Barrytown, N. Y.

Ineffectual and persistent attempts had been made at reduction before his admission. On inspection the thigh was found to be flexed at an obtuse angle with the abdomen and abducted. A marked depression was observed over the seat of the great trochanter and the head of the bone lay in the ischio-rectal fossa, impinging strongly on the rectum.

In the presence of Drs. I. E. Culver, T. J. McLoughlin, B. A. Watson, and W. W. Varick of the medical and surgical staff, and Dr. H. A. Long, assistant surgeon, the patient was fully anesthetized, and reduction effected by firmly fixing the pelvis, and flexing the leg on the thigh, and the thigh on the abdomen; the limb was adducted and rotated toward the mesial line. The effect of these manipulations was to throw the head of the bone into the great ischiatic notch. From this position, by external rotation and abduction, the head of the bone was made to pass into the obturator foramen. The limb was next rotated inward, abducted, and gradually extended, which caused the head of the bone to slip into the acetabulum with an audible snap.

I have been unable to find any record of a case in which the head of the bone lay in this location. The nearest approach to it are the reports of four cases of dislocation into the perineum, as follows: Dr. Amblarce (quoted by Hamilton), in 1821, records a case in which the precise location of the head of the bone is not stated. Professor Pope, in the *St. Louis Medical and Surgical Journal*, July, 1850, mentions a case in which "the head of the bone was both seen and felt below the skin, and raising the raphe of the perineum." Willard Parker, in the *New York Journal of Medicine*, March, 1852, reports a case where the "head of the bone could be both seen and felt projecting beneath the skin of the raphe in the perineum." Dr. E. W. Hadder, in the *British American Journal*, March, 1861, also reports a case in which "the head of the bone was found under the arch of the pubes, the neck resting upon the ascending ramus."

MEDICINE AND POLITICS.—The Chicago medical institutions, judging from the complaints often made, suffer more from politics than those of most other cities. The County Hospital in particular is cursed by political management, says the *Weekly Review*, and indirectly figures in most of the local political campaigns. It is under the control of the Board of County Commissioners, and as a sample of its local importance the writer remembers when one of these commissioners had thirteen of his own or his wife's relatives engaged in some capacity about the buildings. Not within the memory of the oldest inhabitant has the warden of the institution been known to have been selected on account of any peculiar capacity or experience in such a place.

Something similar might be related of this city, where the city's charitable institutions are made to support a crowd of political heelers.

Progress of Medical Science.

A NEW METHOD FOR THE DETECTION OF SUGAR IN THE URINE.—At a recent meeting of the Clinical Society of London, Dr. Oliver gave a demonstration of the method he employs for the detection of sugar in the urine by means of test-papers. The test-papers were charged with the carmine of indigo and carbonate of soda. When one was dropped into an ordinary half-inch test-tube, and as much water poured in as just covered the upper end, and heat applied, a transparent and true blue solution, resembling Fehling's in appearance, was obtained. (A transparent solution could not, at the meeting, be produced from the London water. The characteristic reaction with grape-sugar was, however, unimpaired). If with the paper one drop of diabetic urine had been added, shortly after the first simmer, a beautiful series of color-changes appeared: first violet, then purple, then red, and finally straw-color: while, on the other hand, one drop of non-diabetic urine induced no alteration of color. The colors returned in the inverse order on shaking the tube, which allowed the air to mingle with the liquid. Reheating restored the colors again. Confirmation of the presence of glucose was obtained by dropping in a mercuric chloride paper, while the solution was still quite hot, after the complete development of the indigo reaction. Then there was produced immediately a blackish green precipitate. No such precipitation occurred when a drop of non-saccharine urine was under examination by the indigo test; then the blue solution was merely turned into a transparent green one. This test, as Dr. Oliver pointed out, discovers (a) the normal sugar; (b) the varying proportions of sugar which fill in the gap between the normal amount and that which characterizes diabetes mellitus, as in liver-derangements and vaso-motor disturbances; (c) diabetic proportions. It possesses the following advantages over Fehling's test: 1. It will detect sugar in any proportion in the presence of albumen, peptone, blood, pus, or bile, and as readily as in ordinary diabetic urine. 2. It gives no play of colors with uric acid. 3. It possesses portability, cleanliness, and stability. Moore's, Trommer's, and Boettger's bismuth tests are all inferior in delicacy.—*British Medical Journal*, May 19, 1883.

A NEW PROPERTY OF THE RED BLOOD-CORPUSCLES.—At a meeting of the Italian Medical Association (*Annali Univ. di Med.*) Dr. Fano related his experiments with peptone, and spoke of the rapid cessation of the reaction of peptone in the blood. He demonstrated the transformations of peptone absorbed by the digestive tract or transfused into the blood-current, and how peptone may be transformed and stored up by the morphological elements of the blood. The transformation consists in a process of dehydration, by which the peptones are changed into coagulable albuminoids. The active elements of this transformation are the red corpuscles which, assimilating the peptones that enter into the circulation, increase the specific weight. It is probably to the potash salts which the red corpuscles contain that this dehydration of the peptones is due, by which they are transformed into globulin. For this process to take place, the presence of oxyhemoglobin is an indispensable condition. The stored-up albuminoids serve as a reserve supply of aliment, which is given up to the tissues as required.

THE BLOOD-VESSELS OF THE SPINAL CORD.—Dr. Adamkiewicz (*Centralbl. für die Med. Wiss.*) says that, when the vertebral arteries are injected, the bulk of the injection finds its way to the cerebellum, and only a small portion enters the vessels of the medulla oblongata and of the cervical cord. The vertebro-spinal arteries are distributed to the spinal cord. The branches of these divide and ramify as far as the roots of the fourth and fifth cervical nerves, then anastomose and form one sin-

gle stem. Their branches are the arteria sulci distributed to the fissures, and the arteria radicinae, which spread laterally to the anterior roots. The so-called arteria vertebro-spinales posteriores spring from the vertebral between the dura mater and the cord itself, and take their course between the anterior and posterior roots as far as the fifth cervical nerve, anastomosing with other vessels and their own branches. The arteria penetrantes, so-called by the author, are the largest branches of these, and penetrate the posterior roots. The spinal cord itself is not supplied by branches of the arteria vertebro-spinales: it derives its blood from a considerable number of vessels—spinal arteries so called—branches of the intercostal, lumbar, and sacral, which enter the spinal canal beside the roots of the nerves. Adamkiewicz points out arteries (arteria magnae spinales) running deeply with the anterior nerve-roots. Each root of the brachial plexus has pretty constantly its own arterial twigs. Great variation is observable in the arteria spinales anteriores; each artery gives off an anastomosing branch. The distribution of the arteria spinales posteriores corresponds very closely with that of the anterior. While the anterior form one continued chain of anastomoses in the anterior fissure, there are two such chains on the posterior surface (anastomoses laterales et posticae). The veins on the surface of the spinal cord exceed the arteries in capacity. On the anterior aspect there are three principal venous trunks, of which the largest traverses the anterior fissure, the other two accompany the anterior roots. The blood passes from these to the median, lumbar, and sacral veins. The author notes more especially: 1, the abundant supply of blood-vessels possessed by the spinal cord; 2, the unusual number and extent of anastomoses which the spinal vessels establish. These conditions readily relieve local disturbances of the circulation by affording increased collateral circulation. The same circumstances explain why myelitis occurs most frequently where the anastomoses are most feebly developed, and where an injection penetrates least readily into the middle portion of the dorsal region of the cord.

THE EXTERNAL APPLICATION OF SALICYLATE OF SODA IN ACUTE RHEUMATISM.—Mr. Whiteley, in *The Lancet*, March, 1883, gives short notes on six cases of acute rheumatism, which benefited greatly from the external use of a lotion of salicylate of soda to the affected joints. The strength of the solution varied from 15 gr. to 20 gr. to the ounce. To those joints to which it was applied, relief followed very quickly, while those joints to which it was not applied were not relieved like the others.

FILARIAL HEMATO-CHYLURIA.—Dr. S. Mackenzie records the case of a soldier, a native of Madras, but born of European parents, who, after arriving in England, found that his urine became increased in quantity, turbid, slimy, and by degrees quite milky. A little later he was seized with a sudden violent pain, extending from the left loin to the left testicle, and was admitted into the military hospital, and thence transferred to Dr. Mackenzie's care. The urine averaged one hundred and twenty ounces in daily quantity, its specific gravity was about 1.010, neutral or faintly alkaline, and contained always some albumen, but no sugar. The urea averaged .6 per cent. Ether readily removed the milky color. It deposited blood, triple phosphates, rarely oxalates, bacteria, and embryo filariae sanguinis hominis. The blood, at night contained numerous filariae, the maximum being reached at midnight, but they were absent during the day. By inverting the order of his life, so that he slept by day and was up at night, this condition of things altered too, and the maximum of filariae in the blood was then at noon. After being under observation some time, patient got a chill, had a rigor, followed by signs of pneumonia at the left apex. This was followed by abscesses at the root of the neck and left shoulder-joint, which were opened. From the date of this illness the urine ceased

to be milky, and the filariae disappeared from the blood. The patient ultimately died, with empyema of right side of chest. The kidneys were slightly enlarged, and in early stage of suppurative nephritis. The mucous membrane of the bladder was thickened, covered with mucus, and contained extravasations. The abdominal lymphatics were carefully dissected, and found to be greatly dilated. The thoracic duct was dilated below and obliterated above. The lymphatics of the left kidney were especially dilated, and contained calculi. No trace of the parent worm could be discovered. No communication could be traced between the dilated lymphatics and the urinary passages.—*London Medical Record*, May 15, 1883.

SWALLOWING OF SHOT AND INSUFFLATION IN THE TREATMENT OF ILEUS.—In three cases with well-marked symptoms of invagination of the bowel (*Gazz. Med. Ital. Lomb.*, Feb. 10, 1883). Dr. Pedrini, after other remedies had failed to relieve, made the patient swallow five or six bullets and four pounds of No. 3 shot, at the same time using prolonged and repeated insufflation of air by the rectum. In each case the success of this treatment was complete, relief being quickly obtained, and the patient making a good recovery.

TAPEWORM A CAUSE OF APHASIA.—Dr. Armangué relates (*Journ. de Méd. et de Chir. Prat.*) the case of a woman of sixty who was seized with vertigo, and a few days later lost the memory of words for some days. After the expulsion of a tapeworm there was no return of her nervous troubles. He quotes a case of aphasia in a child cured by the expulsion of numerous tricocephali, published by Daniel Gibson; and a case of aphasia coinciding with tania, published by Siedel. The editor adds a case of reflex hemiplegia and hemianesthesia, with convulsive seizures, in a little girl of twelve, cured by expelling a tania, observed by Langer in Germany.

DECOCTION OF LEMONS IN MALARIAL FEVERS.—Dr. Maglieri (*Gior. di Clinica e Terapia*, March, 1883) has obtained quite as good results with this simple remedy as with quinine. He finds it efficacious in acute and chronic malarial affections. Given four hours before the onset of a fever, it averts the paroxysm. This it did even in cases in which quinine had failed. In malarial cachexia the general health improved, and the liver and spleen were much reduced in size.

CHYLIFORM EFFUSION INTO SEROUS CAVITIES.—A number of cases of this kind have been collected by Perice and Veil (*Journal de Méd. et de Chir. Prat.*). Veil relates a case of ascites, with milky effusion. The fluid contained a large amount of albumen, and, under the microscope, showed numerous fatty granules, and a small proportion of leucocytes. A post mortem examination showed traces of peritonitis, and gummy deposits in the liver. In two other cases the milk-like fluid was not found at each puncture, the fluid being sometimes clear. Veil believes that the origin of the fat is from the transformation of pus, which dies and then becomes emulsified.

IS THERE A CATARRHAL ULCER?—In the *Berliner klinische. Wochenschrift*, February 19 and 26, 1883, Virchow combats the teaching of Niemeyer, that in acute and chronic catarrh, ulceration or superficial erosion of the mucous membrane of the larynx may occur, and that the inflamed mucous membrane is then in a condition analogous to the denuded cutaneous surface after the rupture or puncture of a blister from a blistering plaster. At the same time, Niemeyer describes follicular ulceration. Virchow holds that from the mucous membrane in catarrh there is simply an excessive flow of its normal secretion, as may be seen in the nasal membranes. This secretion, flowing from an unimpaired surface, is the essential feature of catarrh, so much so that the phrase "dry" catarrh is meaningless to the author, a contradic-

tion in terms. Catarrhal ulceration is equally unintelligible to Virchow. A child, he observes, may have an irritating discharge of mucus from the nostril, which may accumulate about the nostril and lip and cause inflammation and ulceration thereof; but the ulceration being on the skin, and not on the mucous surface, cannot be correctly termed catarrhal. The ulceration of the larynx in phthisis is not catarrhal. The pavement epithelium which extends from the lips to the cardia, with the exception of a small spot at the border of the larynx, is not the seat of ulceration. Parts of the mucous tract that are lined with cylinder epithelium are not thus exempt from ulceration, as may be often seen in the intestines after persistent diarrhoea, and in other parts where glandular follicles exist. Virchow recognizes only as catarrhal the secretion flowing from a simple mucous surface, and repudiates the application of this epithet to any secretion from glandular structures.

EXPERIMENTAL MENINGEAL HEMORRHAGE.—M. Bonnot has published some experiments (*London Lancet*, May 12, 1883), on the effects of injecting fluid blood beneath the dura mater in dogs, with a view of reproducing the symptoms of meningeal hemorrhage. Some of the animals were, others were not, under the influence of anæsthetics. The effects did not appear immediately, but a certain period, termed by Bannot the latent period, intervened between the moment of the injection of three to five cubic centimetres of fluid blood and the first signs of impaired function. The second period was the period of painful excitation. Soon afterward tonic convulsions were observed, characterized by convulsive phenomena and respiratory syncope. The respiration was at first accelerated, but soon suddenly ceased. General convulsions of all the muscles then occurred, and a violent attack of opisthotonos was brought on. The heart at first preserved its rhythm, but, if respiration did not recommence, either spontaneously or induced by artificial means, death supervened, evidently from asphyxia; but if the respiratory process is maintained, the animal may recover, after exhibiting for a longer or shorter period the symptoms of coma, the coma being longer in proportion to the amount of blood injected. Thus, with fifteen cubic centimetres of blood injected beneath the dura mater, anæsthesia was complete and the coma was protracted for a long time. During this comatose anæsthesia the respiration was usually irregular, intermittent, and analogous to that form which is known as the Cheyne-Stokes respiration. The period of tonic convulsions was always short; it supervened more readily if the animal was rendered anæsthetic by chloral, and especially if the subdural injections had been made rapidly, so as to produce an immediate change of pressure in the brain. In no case was M. Bonnot able to obtain evidence of paralysis.

ABSORPTION BY THE PERITONEUM.—Maffucci's experiments (*Giornale Internaz. delle Scienze Med.*) were undertaken with the object of determining whether, besides the diaphragm, there are other absorptive points of the abdominal cavity, or whether it is an absorbing surface in all its extension. From experiments on dogs he arrives at the following conclusions: 1. The diaphragm, great omentum, broad ligament, gastro-hepatic and gastro-splenic ligaments, the folds of Douglas, the meso-rectum, and exceptionally the mesentery, are absorptive of corpuscular fluids. 2. Where absorption of these fluids takes place, there is a modification of structure in the peritoneum, in the epithelial lining, as well as in the subjacent tissue; in the diaphragm there are lymphatic lacunæ, in the rest of the peritoneum lymphatic follicles, which, from these experiments, receive their physiological importance, hitherto conjectured only. 3. Corpuscular fluids are taken up by the lumbar and aortic glands, those of the hilum of the liver and spleen, and of the curvature of the stomach. 4. These fluids, absorbed by the diaphragm, are poured as much into the more complex

glands of the mediastinum, as into the system of follicles. 5. Comparing the abdominal cavity, and also the mediastinum, with the general anatomy of the lymphatic system, in the dog, the first as well as the second may be justly considered as a lymphatic gland with the respective follicles.

IS THERE AN ARACHNOID MEMBRANE?—Dr. Tukes is of opinion that a separate arachnoid membrane does not exist, and that the theory of a subarachnoid space should be given up. In place of this he would describe the brain membranes as twofold, the pia mater and dura mater, and two spaces, the subdural and intrapiamatral spaces.

THE SIMPLEST METHOD OF DETECTING TUBERCLE-BACILLI.—Finding the staining methods of Koch, Auerficht, Ehrlich, Balmer and Fräntzel too complicated and slow, Dr. Zenkevitch recommends (*Mediz. Obozr.*, February, 1883) the following plan as simple, quick, and effective. A lump of sputa is crushed and rubbed between two cover-glasses; then the glasses are separated and allowed to dry in the air; after warming over the flame until the material becomes slightly brownish, the preparation is washed in water and put for one or two minutes in the staining-fluid, which is a saturated solution of fuchsin in anilin water (2 c.c. of anilin to 50 c.c. of water). Then the preparation is again washed in water, and placed for one or two minutes in alcohol containing nitric acid (one drop of acid to each 10 c.c. of alcohol). It remains now to once more wash it in water, dry in the air, warm over flame, and mount it in Canada balsam. The author states that this process of preparation makes the bacilli as clearly and brightly visible as Ehrlich's (or any other) method does. According to his description, a free bacillus, as a rule, has a length equal to one-fourth or one-half of the diameter of a red blood-corpuscle, the longest specimens being equal to three-fourths or even to the whole diameter. The longest rods contain from three to five intensely stained round granules (spores). Fuchsin stains also free spores, which are seen either isolated or grouped in colonies. The examination of the colonial spores allows all the stages of development of the microphyte to be traced from the form of granule to that of rod. Like Balmer, Fräntzel, and others, Dr. Zenkevitch found the bacillus only in phthisis. No rods were detected in the sputa of the patients with acute or chronic bronchitis, emphysema, or croupous pneumonia.

MEDICAL ADVERTISING IN THE NORTHWEST.—Dr. A. W. Parsons, of Bramer, Minn., writes: "In your issue of June 9th last I notice an editorial which reflects upon the professional probity of certain surgeons in the Northwest. I feel assured that the large majority of medical men in this portion of the country most heartily endorse your sentiments, but they will assuredly resent any inference that the practice of self-laudation is as common in this section as your notice would assume. It is a lamentable fact that certain practitioners, in all portions of the country, do not hesitate to divulge to the public, through the columns of their local papers, the results of their skill when such results redound to their credit. But I am sure that a careful acquaintance with the medical men of the Northwest would show you that the practice of quackery and self-praise does not exist among them to any greater degree than in other and older localities. Indeed, I feel called upon to state that the majority of physicians whom I have met during a two years' residence in the vicinity of St. Paul and Minneapolis, have impressed me with the belief that the rapid growth and wonderful development of this new country have been no more than commensurate with the advance in medical and surgical science, and the prevalence of professional intelligence, courtesy, and integrity."

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ACONITIA: ITS USES IN NEURALGIA.

ATTENTION has been again called to this valuable alkaloid by the interesting articles of Dr. Laborde in late numbers of the *Journal de Therapeutique*.

Aconitia (which exists in the root of the aconitum napellus in the proportion of about one drachm to twenty-six pounds) has been especially made the subject of study by the late Prof. Gubler, whose monographs on this medicament are of great practical utility. Gubler was one of the first to insist on the importance of this remedy in the treatment of trigeminal neuralgia.

Aconitia is found in commerce under two distinct forms: the amorphous and the crystallized. The latter, which is somewhat stronger and more reliable, is the best known, and is generally prescribed under the name of Duquesnil's aconitia.

Not to dwell on the toxic effects of this powerful alkaloid, which is only safe in very minute doses, we may sum up its therapeutical actions by the observation that it seems to have a special selective influence on the extremities of nerves of sensation, which it paralyzes. This elective affinity is especially manifest in the case of the fifth pair of nerves.

The beneficial effects of this medicament in neuralgia, in general and facial neuralgias in particular, have been attested by a multitude of observers, among whom we may mention Oulmont, Seguin, Franceschini, Merck, and Laborde. Gubler is fond of narrating an incident which occurred in his practice. It concerned a patient on whom Nèlaton had practised resection "of all the branches of the tri-facial" (!). The pains continued to be just as atrocious and just as persistent as ever. The patient, reduced to despair, and ready to commit suicide, was treated by Gubler with aconitia. Seven milligrammes a day of Hottot's aconitia was administered in granules with the most marked relief, and by perseverance in this remedy a complete cure was effected.

Laborde, in the *Journal de Therapeutique* above referred to, publishes reports of six cases of neuralgia, mostly of the fifth pair, in all of which marked benefit was obtained from aconitia; in some the benefit was permanent. In all these cases the medicine was given by mouth. He makes use of the granules of Duquesnil containing one-fourth of a milligramme. One granule is a sufficient commencing dose, and he advises that the dose should not be repeated under four hours. Generally the second granule will give relief, if the first fails to benefit.

A safe and efficient way, which we have often tried, is the following, which is in accordance with the directions laid down by Dujardin-Beaumetz: Duquesnil's aconitia is ordered—the one-fourth of a milligramme granules. Of these the patient is ordered to take one granule every three hours, till eight have been taken during the twenty-four hours. It is seldom that there is occasion to go any farther. Generally the second or third causes complete disappearance of the pain. Given in this way, we do not exceed two milligrammes a day. If this does not relieve it is vain to push the remedy farther. Sometimes after the second or third granule a little tingling of the tongue, and pricking of the skin of the face, with constriction of the mouth are experienced. Patients sometimes complain that their head feels "hoop bound" for a time.

There is no doubt about the superlative excellence of this medicament in all so-called congestive neuralgias, as we have notes of obstinate cases of sciatica which have proved amenable to treatment by aconitia. It is one of the remedies that should be first tried in severe sciatica and lumbago, *a frigore*.

Even in the case of symptomatic facial neuralgias, as well as protopathic, the pain is often alleviated by aconitia, as Laborde has shown.

GREEK OR GERMAN—WHICH?

A COLLEGE graduate, prominent in the profession, said to us recently: "If I could exchange my knowledge of Greek for German, it would be worth everything to me now. It is mortifying to be dependent on others for information as to what is going on in the great medical centres of the old world."

Our friend spoke the sentiments of multitudes who, in their collegiate days, spent in acquiring a knowledge of Greek the time which would have made them proficient in any one of the modern languages. Amid the cares of a busy life they have no leisure now for the German grammar and lexicon.

Charles Francis Adams, Jr., in the annual oration before the Phi Beta Kappa Society at Harvard recently, had the courage to advocate a radical change in the course of studies pursued at that University. It is seldom at college commencements that so much wholesome truth is told. He asserted that the traditional college course does not fit the graduate for the duties of life, but diverts him from them. He appealed, in confirmation of his charge, to the experience of his great-grandfather, his grandfather and his father, also to his own experience, and that of his brothers. John Adams, the second President of the United States, had learned what Greek was taught at Harvard, and at the age of forty-two was appointed ambassador to France. They did not talk Greek in France, and he found himself in an awkward predicament from ignorance of the language. The same was afterward true of John Quincy Adams, and of Charles Francis Adams, and had been true of the orator. He maintained that the study of Greek had been a hindrance and a waste of time to every liberally educated member of the family, and that this experience has been by no means exceptional. The same time devoted to the study of the modern languages would be of more advantage, though the speaker did not object to Latin,

since Latin is the parent of most of the European languages.

As for the vaunted discipline obtained from the study of Greek, it is no more than can be acquired from the study of German; he thought that Plato and the venerated names of Greek literature were greatly overestimated by tradition, and that the study of the Greek grammar was a total waste of time, and that as an intellectual exercise it would be just as beneficial to the student to memorize Kant's "Critic of Pure Reason." In short, Mr. Adams considered the Greek worship as fetich, and would reorganize college education by leaving out Greek and substituting German and French. All certainly that is valuable in those old writers, Plato and Aristotle, etc. (and there is very much that is rubbish), could be obtained through the medium of a translation.

For young men intending to enter the medical profession, it is a pity to waste a year of study and spoil a good pair of eyes over Greek declensions and dialectic variations, and in trying to get the hidden meaning of authors who give no more practical thought than can be obtained from the masterpieces of English literature, while the Continental languages still remain unknown, and the whole broad field of physical science remains unexplored. The radical change which Mr. Adams so eloquently urges must soon come.

BOOKS OR BACKGAMMON.

DESPITE the fact that Wood's Medical Library Series circulates largely in the West, it is said that the benighted physician still lives, in some parts of that vast indefinable region, who speaks of Astley Cooper as the "greatest living surgeon"—whether he votes regularly for Andrew Jackson is not known. Several years ago we met with a practitioner out "West," doing a comfortable business (so he said), whose library consisted of only two books, Hartshorne's "Essentials," and Druitt's "Vade Mecum." He had chosen wisely and well, but his enthusiasm for knowledge was somewhat too moderate. Unfortunately he had a strong predilection for certain games of chance, which, if they demand much time of their votaries, confer little discipline.

We think there are few in the profession who so little feel the responsibilities of the vocation which they have chosen as did our Western confrère, who notwithstanding the fact that he was liberally supplied with self-confidence, must not seldom have found himself insufficiently prepared for the serious duties before him; this we say without any disrespect for the eminent authorities whom he was in the habit of consulting. His case is, perhaps, not widely dissimilar to that of many who buy books and take journals which they never read. Better the "Essentials of Medicine," well studied, than all of Ziemsens, kept simply to ornament the shelves.

The great body of medical men throughout the country are, we feel assured, men who, feeling the gravity of the tasks which they daily undertake, seek all the light they can get. They are diligent students of all the great masters in medicine and surgery. They have no time for whist or for lounging. The more work they have to do the more time they must find to read and meditate. Preparation for their daily duties must be made, if the midnight lamp must be burned. They must diligently

con their medical journals, for they need the experience of others to guide them. Moreover, they must record their own experience, much of which is too valuable to lose. Thus, and thus only can they discharge their obligations to their constituency and to society, by assimilating the best thoughts of the age, and by helping on the car of progress.

MEDICAL EDUCATION THE FUNDAMENTAL FACT IN MEDICAL ETHICS.

At the last meeting of the American Medical Association, Dr. A. L. Gihon, U.S.N., read a paper upon the above title, at the close of which he submitted the resolutions given below. They were promptly rejected by the Association. It seems incredible that temperate and sensible men should fail to acknowledge that Dr. Gihon's views are in the main correct; and that what our profession most needs, and should most work for, is better educational requirements. The resolutions presented are somewhat radical, and their author would doubtless have made more impression if he had suggested, at the beginning, less sweeping reforms.

It may be questioned, also, whether the American Medical Association can carry out any serious medico-political measures, so long as it is an unchartered body with a shifting membership and without legal status.

We print the resolutions, which are at least very suggestive, in full:

Resolved, That the Section in State Medicine urges upon the Association the necessity for at once taking steps to exclude unqualified members from the profession, by refusing fellowship to illiterate, ignorant, and incompetent graduates.

Resolved, That the Association be recommended to authorize the Section in State Medicine to act as a Standing Committee on Medical Education, the several elected members being required to communicate without delay (1) with the several State medical societies and the Legislatures of the States they respectively represent, with the object of creating *State Boards of Medical Examiners*, where such are not already in existence, whose certificate shall be necessary to the issue of a license to practise medicine in that State; and (2) with the authorities of every regularly organized medical college in the State, which has not already taken such action, urging upon them, *First*, the requirement of a *proper preliminary education of matriculants*, to embrace at least a knowledge of English orthography and grammar, the etymology of the more common Greek and Latin derivations and the fundamental rules of arithmetic, to be ascertained by a written examination, preserved for reference; and, *Second*, *greater care in ascertaining the fitness of candidates for a degree*, by making their final examination in part a written one, to be kept on record and accessible for inspection by State Boards of Medical Examiners, Boards of Censors of Medical Societies, or other authorized persons requiring information as to the professional qualifications of graduates.

Resolved, That in the opinion of the American Medical Association, medical colleges should confer upon graduates the degree of *Bachelor in Medicine*, such graduates to be eligible to the degree of *Doctor in Medicine* at the end of three years, after having given satisfactory evidence of their qualification to the Board of Censors of the State Medical Society.

Resolved, That Article II. of the plan of organization of the American Medical Association be amended by this additional proviso :

Provided, That every permanently organized State, County, or District Medical Society entitled to representation in this Association shall be required to appoint a Board of Censors, who shall rigidly scrutinize the literary and professional qualifications of every candidate for membership therein, and hereafter no delegate shall be admitted to a seat in this Association who shall not have received the certificate of such a Board of Censors or of a State or National Board of Medical Examiners.

THE NEW TARIFF ON DRUGS AND CHEMICALS.
ON July 1st the new tariff regulations went into effect. Nearly forty per cent. of the entire number of listed articles comes under the head of drugs and chemicals. Hence the present change will have some effect upon those who make and dispense medicines. Heretofore a duty of 20 per cent. has been charged upon chemicals, and a duty of 40 per cent. upon medicinal preparations. Under the new tariff they are all placed at 20 per cent.

The general effect of this change will be favorable to manufacturers of drugs and chemicals on account of the reduction of the tax upon the articles used in manufacture.

The retention of quinine upon the free list has, says Mr. D. C. Robbins somewhat dolefully, destroyed its manufacture in this country. The United States, he says, consumes 1,600,000 ounces annually, of which one-half is imported, when it should all be made here. Not being manufacturers, but consumers, we can hardly see the force of this logic.

Among the more common articles on which the duty has been lessened, we present the following list.

ARTICLE.	Unit.	RATE.	
		Old.	New.
Glycerine, crude....	Value and lb.	30 per cent.	2 cents.
Phosphorus.....	Value and lb.	20 per cent.	10 cents.
Castor oil.....	Gallon.	\$1.00.	80 cents.
Croton oil.....	Pound.	\$1.00.	50 cents.
Oil, flax seed, linseed, cotton seed.	Gallon.	30 cents.	25 cents.
Mineral waters, artificial, imitation.....	Value and qt.	3 cents plus 25 p. c.	30 per cent.
Boric acid, pure..	Pound.	Free.	5 cents.
Potash, chromate and bichromate.....	Pound.	4 cents.	3 cents.
Copperas.....	Pound.	$\frac{2}{10}$ per cent.	$\frac{2}{10}$ p. c.
Magnesia, medicinal carbonate.....	Pound.	6 per cent.	5 cents.
Soda, caustic.....	Pound.	$1\frac{1}{2}$ per cent.	1 cent.
Zinc, oxide of dry..	Pound.	$1\frac{3}{4}$ cents.	$1\frac{1}{4}$ cents.
Oils, essential, expressed, n. o. p....	Gallon.	20 per cent. to \$1.00.	25 per cent.
Official medicinal preparations.....	Value.	40 per cent.	25 per cent.
Barks, beans, etc., ground or refined.	Value.	20 per cent.	10 per cent.
Chloroform.....	Pound.	\$1.00.	50 cents.
Opium, preparations of, n. o. p.....	Pound.	\$8.00.	\$10.00.

The increased duty on opium refers only to its preparations.

Besides the above, a considerable number of articles have been placed upon the free list.

The results of the new tariff as regards consumers ought to be a slight reduction in the price of many drugs. It will, however, be some time before the public finds any noticeable difference.

News of the Week.

THE BOYLSTON PRIZE, of \$200, for the best essay on "Measles, German Measles, and Allied Diseases," has been awarded to Dr. P. M. Braidwood, of Birkenhead, England.

MEDICAL EDUCATION VS. MEDICAL ETHICS.—The Bellevue Hospital Medical College announces itself as adhering to the old Code, but requires no preliminary examination of its matriculants.

DR. J. H. THOMPSON, of Rome, Italy, is on a short visit to this city.

DR. SPINA, Koch's opponent, has been nominated Professor of General and Experimental Pathology at Prague. This may be considered an endorsement of the value of Spina's work.

PORRO'S OPERATION was performed by Dr. Parrish in Philadelphia recently, upon a dwarf. The patient survived for several days, but finally died.

YELLOW FEVER TRANSMITTED BY DESPATCHES.—It is stated that one of the officials of the Foreign Department at Paris has caught the yellow fever through a despatch sent from Brazil. One of the daily papers wonders if it was a telegraphic despatch.

EXPERIMENTAL INOCULATION WITH SYPHILIS.—It is stated that Dr. Cory, the Director of Animal Vaccination at the Vaccine Establishment, London, England, has inoculated himself with syphilis while making experiments on himself as to whether syphilis can be communicated from one body to another through vaccination. One would have thought that the possibility of transmitting syphilis by means of vaccination was sufficiently well established without any further experiments, and certainly one would have supposed Dr. Cory could have had no doubt of the fact. At all events, if reports as to his sufferings from the inoculated disease are true, he must be thoroughly well convinced of the fact that at least one of the means of getting syphilis into the system is by means of vaccination. It has been officially stated, however, that "the result of transmitting the infection of syphilis was not attained without departing in essential respects from the Board's instructions to public vaccinators and from the recognized practice of all vaccinators."

THE SUMMER SANITARY INSPECTORS have been appointed by the City Board of Health. The total number appointed was fifty, and work was begun on July 9th. We observe a large number of new names upon the list. New brooms sweep clean, and there are some reasons for thinking that some change will not be disadvantageous.

YELLOW FEVER.—Infected vessels have appeared at Galveston, Pensacola, Ship Island, and at date one is on the way to this port from Havana. No cases have yet occurred, however, except on the vessels. A despatch says: There are two vessels at Ship Island in charge of the Surgeon of the Marine Hospital Service, who established himself in the quarters of the late National Board of Health yesterday, and one vessel at Galveston and two at Pensacola are under orders to proceed

thither. There has been undisguised bitterness of feeling between the retiring officers of the National Board and the incoming agents of the Marine Hospital Service, and the latter, when they took charge, found the quarantine station at Ship Island gutted of all conveniences and properties. Even the steam despatch boat, Day Dream, had been sent away, but she has since been discovered tied up to the levee at New Orleans and taken possession of by the Treasury Department. The officers of the National Board have had her up for sale for the past few weeks, but they were unable to obtain a purchaser. Upon the withdrawal of the inspection service of the National Board the Sanitary Council of the Mississippi Valley assumed charge of the same, it being decided at several up-river points that certificates of the Marine Hospital Service would not be recognized.

DR. HOLMES will deliver the address at the opening of the new building of the Harvard Medical School, October 15th.

A MONUMENT TO FABRICIUS is to be erected by the citizens of Acquapendente, Italy.

THE THIRD INTERNATIONAL CONGRESS OF ANTI-VACCINATIONISTS will meet in Berlin this summer. New York sends three delegates.

THE NINTH ANNUAL MEETING OF THE TRI-STATE MEDICAL SOCIETY will be held at Indianapolis, September 18th, 19th, and 20th. Especial efforts to make this meeting a success are being made by its energetic officers.

THE LATE DR. BEVERLY LIVINGSTON.—At a meeting of the Medical Staff of the Northern Dispensary, held July 6, 1883, the following resolutions were adopted:

Whereas, We learn with profound sorrow of the death, at the outset of a promising professional career, of our late associate, Beverly Livingston, M.D.; therefore be it

Resolved, That in the death of Dr. Livingston the medical profession loses a worthy member, the Northern Dispensary an efficient aid, and the members of the staff an associate whose genial qualities and untiring zeal will long be remembered.

Resolved, That our most sincere sympathy be extended to the family of our late associate.

Resolved, That a copy of these resolutions be published in THE MEDICAL RECORD and transmitted to the family.

A. F. PRAY, M.D.,
C. D. HAYWARD, D.D.S.,
R. W. GLASSFORD, M.D.,
Committee.

THE PROGRESS OF THE CHOLERA EPIDEMIC.—The number of deaths from cholera have, up to time of writing, been as follows:

	At Damietta.	At neighboring towns.
July 3d.....	124	43
July 4th.....	111	63
July 5th.....	116	63
July 6th.....	101	52
July 7th.....	98	60
July 8th.....	96	61
July 9th.....	87	9

The number of persons killed by the disease at Damietta (July 11th) now amounts to about twelve hundred, or over one-twenty-fifth of the population. It has been

very malignant, but has so far been confined almost entirely to the natives. The disease is travelling up the Nile, having already reached Shirbin, a small village thirty miles above Damietta, Mansurah, a town twenty miles beyond, Menzalen, and Samanoud, the last a small village only seventy miles below Cairo. It may possibly have reached Cairo by the time this appears. Some cases have been reported at Alexandria. The disease was due in Egypt in 1877, having appeared regularly every twelve years since 1781, spreading always to the west and taking about two years to exhaust itself. In all previous instances the epidemic has developed energy among the oriental races, whence it has spread to Europe. The exodus which has taken place from Egypt is likely to carry the infection to the adjacent towns of Syria, and particularly to Beyrout, whence it may spread to any point on the Mediterranean. A number of vessels from Bombay, carrying pilgrims to Mecca, are expected at Geddah, and it is likely that the epidemic will be brought by them. All the European Governments have established strict quarantine regulations as to vessels coming from Egypt except England. The Sanitary Council of Constantinople, in order to prevent the introduction of cholera, have resolved to ask the Porte to request the Egyptian Government to prohibit refugees from starting for the Turkish coasts, and to inform that Government that if any refugees do arrive at ports belonging to Turkey they will not be allowed to land. Sanitary cordons have been drawn around some of the infected towns.

Reviews and Notices.

MEDICAL ESSAYS, 1842-1882. By OLIVER WENDELL HOLMES. Boston: Houghton, Mifflin & Co. 1883.

THIS volume embraces nine essays, most of which are more or less familiar to our readers. They vary somewhat in merit and interest.

The essays on "Homœopathy and its Kindred Delusions" will always remain the most brilliant and masterly criticism that has ever been made of the development of medical isms. As a contribution to the subject of the value of human testimony also, no one can read it without being instructed. We mistake—there is the world of the pig-headed, of the unteachable Philistine—and besides (we crave pardon) there are the ladies—to these two classes Dr. Holmes's essay is unintelligible; hence our pathies and our patent medicines.

The essay on "The Contagiousness of Puerperal Fever" is of another character, and illustrates the capacity of the author for dealing with scientific questions. The issue for which Dr. Holmes contended with so much earnestness and effect is now a dead one, but dead because all agree with what Holmes laid down in 1843.

The essay entitled "Medical Currents and Counter-currents" is a pungent criticism upon the practice of overdosing, and a philosophical analysis of why we give and when men take medicines. But, although this chapter contains much that is witty and instructive, the subject of therapeutics now-a-days is looked upon from a somewhat different standpoint than it was twenty-five years ago, since which time the physiological school has developed.

Of the remaining essays those on "Bedside Instruction" and "The Young Practitioner" are perhaps the best. They especially illustrate the relations of our author toward medicine.

There is no transcendentalism about Holmes. He

preaches common sense, humanity, and small doses. He pleads for a knowledge of human nature as well as of the human body, for sound observation as well as for study. He has a little feeling of antagonism toward the present tendency to cultivate the medical sciences; a feeling which Trousseau showed when he said: "Good heavens, gentlemen, a little less science, a little more art!" Dr. Holmes is the essayist *par excellence* of the practitioner. We fear that, as regards pure science, he is a bit of a Philistine himself, and it is somewhat interesting to find that our author, who has attacked non-conductive dulness all his life, now shows a trace of it himself in his relations to medical progress. For it is certain that the advancement of medical art is not in the hands of our great and successful practitioners, but with the patient workers who are trying to follow nature into her last hiding places.

BRAIN-REST. By J. LEONARD CORNING, M.D. New York: G. P. Putnam's Sons. 1883.

DR. CORNING has given us a little work which is of considerable interest. It is written with evident care and in a scientific spirit. The author preaches the value of securing brain-rest by regular sleep at proper hours. He describes his own device for carotid compression, and mechanically regulating the cerebral circulation, with all of which our readers are familiar. Dr. Corning's discussion of pathology of "brain-exhaustion," with its cerebral hyperæmias and anæmias, appears to us to be a trifle amateurish. We might say the same regarding some of the theoretical parts. On the whole, however, the book is a very creditable and suggestive contribution to the important subject with which it deals.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF MISSOURI, at its Twenty-fifth Annual Session, held at Hannibal, Mo., May 16, 17, and 18, 1882.

This year's report gives a marked increase in membership since the last meeting. The president's address is devoted mainly to the exposure of quackery and the several classes of "quacks," with which the State is apparently pregnant. Very little in this direction can be accomplished by such means. We would advise an application to the State legislature through a properly appointed committee, as the true means of working out the reform needed. Considerable good work is, however, shown to have been performed during the year, much of which is indeed commendable.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF GEORGIA. Thirty-third Annual Session, held at Atlanta, Ga., April 19, 20, and 21, 1882.

MUCH praise is due to the secretary of the Society, A. Sibley Campbell, M.D., for his untiring efforts in securing the handsome appearance of the volume before us. We have no doubt, from the many very valuable articles of general interest to the practitioner contained in the text, that a sufficiently large number of copies will be disposed of to leave a balance in the treasury. The finances of the society are, we regret to say, in a poor condition, due, however, to the carelessness or unwillingness of members to support its interests by paying their just dues. This cannot be too severely censured. The book is handsomely printed on fine toned paper and elegantly bound in cloth for permanent use.

SIXTY-NINTH ANNUAL REPORT OF THE TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL AND MCLEAN ASYLUM. Boston, 1882.

FROM a comparison with the previous year's work, the report shows a slight increase in the number of patients treated at the Hospital, together with the receipt of several munificent donations, which, from the treasurer's report of the finances, owing to numerous improvements in the way of building, etc., during the year, were not among the least to be desired. At the Insane Asylum a similar increase in patients is noticed, but also a relatively

larger percentage of recoveries than for several years previous. Altogether, both institutions are in fair and prosperous circumstances. Superintendent Cowles is to be commended for the earnestness manifested in his work.

TRANSACTIONS OF THE OHIO STATE MEDICAL SOCIETY.

Thirty-sixth Annual Meeting, held at Columbus, June 14, 15, and 16, 1881.

THIS volume opens with the report of the Transactions of the society, the address of welcome being delivered by Mayor Peters. Following this and comprising the body of the work, are the reports from the several departments of medicine, together with a number of excellent papers on subjects of general importance to the profession, many of which will be read with profit.

FOURTEENTH ANNUAL REPORT OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, FOR THE YEAR 1882.

THE present report covers a period of nineteen months. The total number of patients received during this time is 1,918; during the past year, 1,202, or nearly double the number treated for the year ending April, 1881. An extraordinary large number of accident cases is also noticed, and owing to the great increase in these directions, the duties of the medical staff have been unusually severe. The superintendent's report is in the highest degree creditable. The finances of the institution are seen to be at an ebb and need replenishing; this should meet with prompt action from the proper quarters.

THE NEW YORK INSTITUTION FOR THE IMPROVED INSTRUCTION OF DEAF MUTES. By D. GREENBERGER, Principal. Reprinted from the *Archives of Otolaryngology*, Vol. XII., No. 1, March, 1883.

THIS pamphlet gives an exhibit of the workings, etc., of the institution, for the benefit of those devoted to this specialty.

ANNUAL REPORT OF THE MANAGERS OF THE WESTERN PENNSYLVANIA HOSPITAL FOR THE INSANE. Dixmont, 1882.

FROM this report we find that there were treated during the past year 768 patients, male and female; showing an increase of 173 over the previous year. There were discharged 267, and 46 died, giving a decrease in the corresponding rate of mortality.

SIXTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY, 1882.

THIS extensive and carefully prepared volume leads one to presume that the duties of the board have been unusually onerous during the past year. The mortality, we notice, shows a considerable increase (5,130) over the previous year, due, in a great measure, it is believed, to the exceptionally severe summer and winter. The report, moreover, goes very extensively into the sanitary condition of the State, the sewage, malaria, etc., an excellent exhibit of the duties to be performed, and which, it is hoped, will not be overlooked.

ELEVENTH ANNUAL REPORT OF THE NEW YORK INFANT ASYLUM. January, 1883.

JUDGING from the annual report, the duties of the past year have been remarkably arduous. The management has, however, been admirable, and the exhibit of the Medical Board is in every respect very gratifying. A steady increase in the number of patients is noticed, and the usual assistance and shelter has been rendered to friendless women. The professional labors of Dr. Kate Parker, resident physician at Sixty-first Street, are worthy of the highest commendation. Undoubtedly, however, the greater part of the work of this institution is unwritten and unappreciated by the community at large. Nevertheless, as an object of Christian charity, no one of our hospitals or asylums is more eminently deserving of the widow's mite.

FIFTH ANNUAL REPORT OF THE CONNECTICUT STATE BOARD OF HEALTH, FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1882.

FROM the elaborate volume at hand, an amount of labor and zeal in sanitary affairs is shown that is truly commendable. It is evidently the intention of the board to devote untiring energy in this direction toward improving the sanitary condition of several localities. Some original work may be expected during the current year.

ANNUAL REPORT OF THE DIRECTORS AND MEDICAL BOARD OF ST. MICHAEL'S HOSPITAL. Newark, N. J. January 1, 1883.

BESIDES the large number of cases treated, an important feature of the past year's work is the re-establishment of the eye and ear clinic, and we are glad to say, with satisfactory results.

LECTURES ON MEDICAL NURSING. BY J. WALLACE ANDERSON, M.D. Lecturer on Medicine, Royal Infirmary Medical School, and Physician to the Royal Infirmary Dispensary, Glasgow. Second Edition, pp. 224. New York: Macmillan & Co. 1883.

THE fact that this little work is already in its second edition would seem to be sufficient evidence of its practical usefulness. Besides the immediate care of the sick and attention to the several details of nursing, not only in a general manner, but also in special conditions and diseases, all of which, moreover, is exceedingly well presented, the employment of numerous therapeutic measures, cold in various forms, blisters, injections, leeches, etc.; the examination of the pulse, the urine, the temperature; administration of stimulants, narcotics, etc., and their indications, all receive the most careful consideration. A series of questions also supplement each lecture. In short, every minute detail of the clinical history of medical nursing, and its practical application, is presented in an exceedingly interesting manner: and to those who purpose making this subject a study, the work will prove not only instructive but a highly valued friend. Indeed, we doubt not that many general practitioners will find this book both interesting and suggestive.

THE "VANDYKE BROWN" POEMS. BY MARC COOK. Edited by his wife. Pp. xviii., 225. Boston: Lee & Shepard. New York: Charles T. Dillingham. 1883.

FOR the thoughtful physician who has come to regard his lifework in its broadest sense, as peculiarly a study of humanity, this unpretentious volume will possess a pathetic and more than passing interest. Apart from the portrait of the author which faces the title-page, and which presents that vivacity of intellect and sanguine temperament which so often are painfully combined and intensified by prolonged pulmonary disease, it does not require a great amount of professional acumen to read between the lines of the poems which follow, as plainly and surely as from a temperature-chart, the varied phases of the one-sided struggle for life.

The profession is already well acquainted with the history of the case of Mr. Cook, as embodied in his little treatise on "The Wilderness Cure" (William Wood & Co., New York, 1883), and his well-known article on "Camp Lou," published in *Harper's Magazine* for May, 1881, each of which were evidently written while the author was filled with new hope by the delusive invigoration of rest and the stirring air of the Adirondacks. Little more than a year from that time found him in his grave, another pitiful instance of the sarcasm of fate.

This collection of his stray poems, gathered and placed in permanent form by those who knew and loved him best, should plainly be viewed as an affectionate tribute to his memory, rather than a bid for notoriety. Read with the charity which in the nature of the case it demands, this book cannot fail to be appreciated.

Mr. Cook's chief claims to excellence as a poet are a sprightly and easy versification, and an aptitude, espe-

cially in his serious attempts, of enveloping each poem as a whole in the atmosphere, as it were, of his own peculiar mood; thereby not only fascinating the attention of the reader, but bringing him to that intimate sympathy with the subtler shades of the writer's mind which is so rarely attained. Like all young writers he is crude, and like all young writers he at times shows the influence of older minds upon his style. Thus, one may easily find instances when he reminds us forcibly of Holmes, Whittier, Bret Harte, and Aldrich. In our opinion, his style, notwithstanding an obvious individuality, closely resembles that of Aldrich. There are several of Cook's poems, notably "L'Envoi," "Her Cross," and "Awaiting the End," of which either Aldrich or Bret Harte might be proud. As was only natural for one whose innate sensitive disposition was accentuated by disease, his poems show him alternating between the most extravagant buoyancy and the blackest depths of despair. Thus, with a knowledge of his sad history, one reads his crisp, bright society sketches, and his easy flowing, well-handled humorous efforts, with as mournful an interest as the verses which express his earnest and manly thoughts as the gloom of his near future overpowers him. Here there is nothing of the lugubrious wailing of the lovelorn, fledgling poet, but the simple outpouring of a breaking heart.

LECTURES ON CATARACT: ITS CAUSES, VARIETIES, AND TREATMENT. Being Six Lectures Delivered at the Westminster Hospital. By GEORGE COWELL, F.R.C.S. With Illustrations. London: Macmillan & Co. 1883.

THIS treatise is meant for the use of students, and discusses the subject in an attractive style.

A NEW DEPARTURE IN THE THEORY AND PRACTICE OF MEDICINE. BY C. A. HARDY, M.D., Graduate of the University of Pennsylvania. New York: P. O'Shea, 45 Warren Street. 1883.

IT would be impossible for us, in the small space allotted, to enter into the several details and arguments promulgated by the various theories presented. The author says: "For over thirty years I have entertained the belief that the nerve-force was some form of electricity or galvanism; that there was more than muscular or mechanical action in the heart-throbs; that nervous manifestations indicated some form of magnetic force besides the functional action of the organs." Regarding the nerve-force or vital principle, he likens the brain to a magnetic pile, in the cells of which the nerve-force is produced by the action of oxygen upon the constituents of the blood; and in conjunction with which, also, the spinal cord and ganglia and the sympathetic system act as reservoirs for storing up and distributing it. The heart and circulation of the blood is then taken up, the constant motion and action of which is also supposed to be controlled and regulated by the nerve-force generated in the brain-cells, and the derangement of which is followed by disease. The double long and short beat of the heart is, moreover, compared to the positive and negative actions of electricity. In support of these theories numerous arguments and well-founded reasons are offered, most of which will admit of deep study and examination. Chill and its consequent fever are also shown to be due to derangement or great vital depression of the nervous forces, and the subsequent reaction. Upon this principle the treatment of typhoid fever is presented, for which method the author claims the highest satisfaction. Malarial and yellow fevers, and diphtheria, which latter he regards as an erysipelas of the mucous membrane, are also interestingly considered. The chapter on contagion is not the least important. This theory rests upon that applied to the circulation of the blood. Erysipelas and its cure, the action of snake and other poisons, rabies, hydrophobia, etc., are also entered into with much earnestness, together with antidotal and other treatment. Dyspepsia and various gastric affections of the mucous membrane are further noted.

Reports of Societies.

VERMONT STATE MEDICAL SOCIETY.

(Special Report for THE MEDICAL RECORD.)

THE Semi-Annual Meeting of the Vermont State Medical Society was held at the Bardwell House, in Rutland, June 13th and 14th. The meeting was called to order at 11 A.M. by the Secretary, DR. J. S. RICHMOND, the President and Vice-President not being present.

DR. CHARLES L. ALLEN was called to the chair.

The Board of Councillors reported favorably on the application for membership of sixteen gentlemen, and they were duly elected.

DR. J. M. CURRIER offered the following:

Resolved, That the Publication Committee be instructed to insert in future issues of the "Transactions" of this Society the names of the members of the Society.

Adopted.

The Society then adjourned.

The Society was called to order at 1.30 P.M.

The following was offered by DR. FOX:

Resolved, That this association learns with regret of the

DEATH OF DR. CYRUS PORTER,

one of Rutland's most worthy and oldest practitioners, and we hereby tender our heartfelt sympathy to the family of the deceased.

Adopted, and a copy ordered to be furnished to the family of the deceased and the press.

DR. C. L. ALLEN was appointed to prepare an obituary for the annual meeting.

DR. POND exhibited his

SPHYGMOGRAPH

with mirror attachment, showing the pulse on a screen by reflected light; also reported cases of heart disease, including mitral, aortic, tricuspid, atheromatous disease, with characteristic traces of each and photographs of post-mortem appearances. He also exhibited a rare specimen of atheroma of the arch of the aorta, having a pulse like "Kussmaul's," caused by a longitudinal blocking up of the innominate; also a case of crushed head and brains in which almost every variety of pulse-trace was seen, tracings of diphtheria, mild and malignant, meningitis, typhoid fever, etc.

The Chairman introduced DR. A. J. LONG as a delegate from the Medical Society of the State of New York, and he was invited to participate in the discussions.

DR. CHARLES S. CAVERLY read a well-prepared paper on "Tubercle Bacillus of Koch."

DR. A. T. WOODWARD presented

A COMBINATION SPECULUM

of his own construction, for examining the rectum and female urethra, also a modification of the "Smith-Hodge" pessary which he has recently made.

In the discussion which followed DR. Woodward's paper, DR. KIDDER claimed that there was no danger in dilating the female urethra, that he had repeatedly dilated it its whole length, and had had no other trouble than temporary paralysis; that dilatation with the forefinger will cure tenesmus.

DR. WOODWARD earnestly protested against more dilatation than was absolutely necessary. The meatus only should be dilated ordinarily. There is great danger of cystitis, paralysis, etc., from full dilatation into the bladder.

An obituary notice of Prof. S. W. Thayer, late of Burlington, prepared by DR. H. H. ATWATER, was read by the Secretary.

An obituary notice of Dr. R. W. Clark, late of Georgia, was read by DR. F. RUGG.

DR. EDWARD S. PECK, of New York City, read an interesting paper on the

USE OF JEQUIRITY IN CASES OF INVETERATE PANNUS OF THE EYEBALL,

based on an experience of seventeen cases (see p. 29).

The Society then adjourned to 7 P.M., at which time DR. C. L. ALLEN read a paper on

OLD AGE,

of which the following is an abstract:

Life, death; enjoyment, suffering; health, sickness—these are the never-ceasing objects of care and solicitude with every member of the human family. To secure the former and avoid the latter is the never-ending struggle of humanity. Individually or collectively, whatever is undertaken in the material world, whatever is manifested in the moral world, is but the evidence of this struggle—a struggle which will continue as long as sickness, suffering, death, are realities.

To live, to live happily, to live for a long time are the most universal desires of mankind. Yet there are no objects toward the attainment of which efforts are more blindly or less efficiently directed. To live happily, we may perhaps say, requires no effort or foresight on our own part. To live happily, without thought or care, may be the lot of some, but commonly it is the result only of long, well-directed, and unwearied labor, and hence really enjoyed by but few. To live for a long time requires such a rare combination of mental, moral, and physical qualities that only an occasional example is found.

The efforts of science have not yet been able to break the impenetrable seal which conceals the secret of life. We perceive life, we prove it, we enjoy it; its nature remains unknown, its essence beyond reach. But its principal acts, its most important phenomena are known and appreciated. These phenomena constitute the most solid basis for the study of man, in his totality, in his succession, in his growth, and in his decline. They show us that the life of man is one continual progression, and not only that, but a progression onward and upward, and of progression onward and downward.

The life of man has been variously divided into periods, or "ages," according to the object, fancy, or caprice of those who made the divisions. Several divisions were mentioned. The evolution of the human organism is not accomplished in all with the same degree of rapidity. There are old men at thirty years of age. On the other hand octogenarians are young and flourishing, by the vigor of their constitutions and the proper regulation of appetites and passions. The concatenation of acts by which life operates is invariable, but the rapidity of their succession is varied by a crowd of circumstances, some inherent in the being himself, others exterior to him.

At each period of life there is a corresponding form of health, a general manner of living. Idiosyncrasies change, temperaments alter, vital movements concentrate toward different cavities at different ages.

The infant is, as it were, a living sponge. The tissues are all soft, delicate fibres saturated with moisture, readily and rapidly losing or gaining in weight by the simple subtraction or addition of water. No organ or function escapes change as the necessary result of age.

The changes produced by age were then described as found in the bones, muscles, ligaments, skin, and hair. Then were noticed changes in weight, stature, digestion, nutrition, the ability to endure variations of temperature; changes in the circulation, including hæmatosis, and in the respiration. The effects of age were exhibited in the lymphatic system, in the nervous system, in the senses, in the intellect, in the reproductive function, and their organs. All these changes are in a constant progression in one definite direction. Commencing as near to a liquid condition as is compatible with life, it terminates in almost complete solidity. If death is the natural result of these changes, if they must all take place in a limited time,

can we know the limits of that time? Is there any definite period which is the physiological term of a man's existence? How many years ought a healthy man, with a sound constitution, to live? Nature is parsimonious in her labors, furnishing us with infinite variety of individual development, but with unity of type and design. Each class has its peculiar mode of evolution; each species has its definite period of existence; each stage of development bears a definite ratio to the whole life of the animal. Among mammals, to which class man belongs, the natural duration of life is from five to eight times as long as the period of growth (Hourens). By this standard the duration of man's life should be at least one hundred years, and ranging from that to one hundred and sixty or two hundred years. Instances were given of longevity ranging from one hundred and fifty to one hundred and seventy-five years.

But whether life be short or long, whether accident, disease, or physiological decay be its termination, death is sure to come—Death, the greatest mystery of nature; death, that phantom without a body, whose name alone stiffens us with terror; death, that horrible image of destruction, the idea of which, like a harpy, comes to infest all the courses of the banquet of life. Morals aside, man is certainly, in respect to his organic life, bound by a law of destiny more dire than that to which other animals are subject. Although of an inferior rank, they at least have pain without reflection, death without foreboding, an end without fear and without regret. With enlightened and intelligent man the thought of death is often present, openly or secretly, and the more often and more openly the older he grows. To the young man death seems so far off, and the cares, the duties, the joys, the incessant whirl of business are so engrossing that he has little thought and less fear of death. But to the aged man, whose mind has been enlightened by education, by reflection, by observation, by experience and contact with other intellects, the thought unceasingly recurs, and almost always with terror. Yet this fear of death is not simply the feebleness of age or weakness of mind. It is the instinct of preservation implanted in us by nature herself, which repulses the idea of destruction, and which acquires in the aged a power more despotic than in earlier years. In vain does the body waste; in vain do infirmities, cruel and painful, show themselves; in vain do the resources of the economy become exhausted; in vain does philosophy eternally repeat that life is fatiguing and vapid, that it is a heavy burden, that it is a tissue of weariness and evil, that it is a sombre tableau of misery and anguish. The old man accepts it all; he wishes still to live. Why does man so desire to live—so fear to die? Simply on account of his ignorance of what may be after death. We have no direct, sensible physiological evidence, even of existence after death, to say nothing of the modes or relations of that existence. It is true that the vast majority of men believe that to this short, material life succeeds another life, freed from organic molecular disaggregation, a life without relations with the constructive atoms of the material world; a life without change, without end, without death. But, revelation aside, neither reason, nor analogy, nor experience, nor the memory or testimony of men; neither inductive evidence, nor the action of the laws and metamorphoses of nature can enlighten us in the least upon this great subject. All is unknown, forever unknown; forever there is the silence of the tomb. This awful mystery may perhaps conceal the mysteries of another life, but the veil which covers it is as sombre as it is impenetrable. We walk by faith, by desire, by hope. We feel confident that Nature, however inflexible and implacable her laws, will not deceive us. She has given us intelligence, high aspirations and hopes, unlimited cravings for improvement, for perfection. She has implanted within us an innate desire, a powerful instinct, which excites us to hope for something permanent, something everlasting, beyond and above this finite world.

If the few short days we live here are all of our existence, why inspire us with a chimerical inquietude concerning a future never to be realized? Why poison all our joys by the sad reflection that they are so soon to end? Why embitter our days by the gloomy comparisons of what we are with what we proudly hoped to be, of what we have with what we fondly wished to possess? No, Nature, ever attentive and provident for all her creatures, will not cheat her most cherished children. If in a material and physical point of view science cannot demonstrate a future existence, neither can it demonstrate the contrary. Hence we are free to rely upon moral, upon psychological proofs. Proofs of sentiment, the natural tendencies and aspirations of man, evidences of the heart—these amount to almost if not complete moral certainty. For the individual, in this life, we have growth, maturity, decline, and decay. In the next, we hope for progress, ever onward, ever upward, improvement upon improvement, development following development in a never-ending series. For the race the progress here is always onward and upward; there is no decline, no decay. Perfectibility is an attribute of humanity, and each generation of mankind is becoming happier, wiser, and better, and enjoying life longer than its predecessor.

Life is short but the list of diseases is long. Old age and disease appear to be twin brothers, forever inseparable. The contrast between the diseases of early life and old age were dwelt upon. Then the pre-requisites of a long life enumerated; but these being only partially under the control of the individual most concerned, are not elements in the real problem to be solved. For the man approaching or passing the epoch of the plenitude of his physical forces, to him who, having arrived at the highest pinnacle of organic energy, can hereafter only go downward, the question, urgent, momentous, engrossing, is, What can now be done to prolong life, to retard the rapidity of descent down the slope of life, to smoothe the pathway so that the descent may be without shocks and jars, without pain and sorrow? The learned, amiable, and good Reveillé-Paëise lays down four universal and all-important rules: 1st, Know how to grow old; 2d, Know one's self; 3d, Arrange wisely the habits of life; 4th, Combat disease at its commencement. To these I would add another equally conducive to long life, and more important than any in its bearing upon the happiness of the aged: *Rule 5th*, Have education, general intelligence, culture.

As age advances the well-trained intellect, the richly stored, highly cultivated mind feels no weariness, but enjoys quietly and fully the fruits of his former labors. How often, in my intercourse with the aged sick or ailing, have I had occasion to notice the difference in the happiness of two of equal age, placed in circumstances almost identical, both endowed originally with good constitutions—the one educated, cultivated, enjoying scientific research or philosophic meditations, the other not ignorant, indeed, but pleased with only light, transitory or sensational literature; the one contented, happy, and a source of pleasure to all around him, the other fretful, morose, complaining, neither enjoying life himself nor allowing others to do so; the one retaining intelligence clear and unsullied to the last moment, the other gradually losing his mental faculties long before death occurs.

How beautiful, how sublime is the sight of the aged man of culture, enjoying his "*otium cum dignitate*." He has lived, he has flourished, he has played his part, perhaps, in public affairs, and now, respected and revered by all, he can pass serenely along the downward current, happy in the enjoyment of his intellectual faculties, in the remembrance of his early achievements, in the hope of a more brilliant hereafter.

The Executive Committee made the following assignment of subjects for the annual meeting, to be held at Montpellier, October 10 and 11, 1883: "Liver," Dr. S. S. Clark, St. Albans; "Blood-stains," Dr. E. S. Munger, Put-

ney; "Localization of Cerebral Symptoms," Dr. X. H. Towsley, Rutland, and Dr. John M. Currier, Castleton; "Obstetrics," Dr. H. R. Jones, Benson; "Physicians' Testimonials," Dr. O. W. Sherwin, Woodstock; "Localizing Bullets" (new method), Dr. S. J. Allen, W. R. Junction; Obituary Notices: "Dr. Cyrus Porter, late of Rutland," Dr. C. L. Allen, Rutland; "Dr. J. O. Crampton, late of Winooski," Dr. Richardson, Winooski; "Dr. John L. Chandler, late of St. Albans," Dr. O. F. Fassett, St. Albans.

The thanks of the Society were voted to the gentlemen who had presented papers. At 9 P. M. there was an adjournment to the banquet.

The physicians and druggists of Rutland entertained about fifty members of the Society at the banquet. The large dining hall of the Bardwell was filled to its utmost capacity by the doctors and élite of the city. The banquet was elaborate and sumptuous. After the feast Dr. L. M. Bingham, President of the Society, led off with a speech and introduced the toast-master, Dr. C. L. Allen. Sentiments and speeches followed until a late hour. On Thursday the doctors and druggists chartered a special train of cars and took the Society and other invited guests to the West Rutland Marble Quarries. On their return, by special invitation of President Merrill, they visited the Howe Scales Works.

At 1.30 P. M. the Society was called to order and listened to a lecture by PROF. J. L. LITTLE, on Bigelow's method of crushing and removing stone from the bladder. Prof. Little exhibited instruments and detailed a recent successful operation on a patient seventy-seven years old. Dr. Little has operated for stone in the bladder sixty-six times, seven times by Bigelow's method. His shortest time for operating, fifteen minutes; longest, one hour and forty-five minutes. He says Bigelow's is the safest operation.

The thanks of the Society were tendered Dr. Little.

Dr. E. S. Peck, of New York, was made an honorary member of the Society.

THE ARMY MEDICAL MUSEUM AND LIBRARY.

The following resolutions were adopted:

Whereas, It is well known that the interest and advancement of medical science in the United States have been largely promoted by the valuable collection of specimens in the Museum of Military Medicine and Surgery of the Medical Department of the United States Army, as well as by its magnificent Library of rare and valuable books and by its numerous publications; and believing that all national works of this sort that so eminently contribute to the interests of humanity and to the welfare of our people should be protected and encouraged by the Government and people of this country; therefore,

Resolved, That the State Medical Society of Vermont will exercise all proper influence with Congress to provide for the Library of the Surgeon-General's office and Army Medical Museum an adequate appropriation to allow for the erection of a suitable fire-proof building for the safe and permanent preservation of the said materials, which are now exposed to constant danger from fire and loss.

Resolved, That we also urge upon Congress the propriety of said Museum and Library being continued under its present management, and that we earnestly recommend that the Library be maintained separate from the Congressional Library.

Resolved, That we further petition Congress to make suitable pecuniary provision for completing the publication of the "Index Catalogue" of the Library of the Surgeon-General's office.

Resolved, That a committee be appointed to convey to Congress the views of this Society upon the matters hereinbefore set forth, and that each member of our Society be requested to use his influence with the delegation in Congress.

Resolutions of thanks of the Society were voted to the

physicians and druggists of Rutland, for their reception and entertainment, to the proprietors of the Marble Quarries, the Howe Scales Works, and to the several railroads for courtesies received.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

LORD WOLSELEY AND THE ARMY MEDICAL INQUIRY—
THE OXFORD PROFESSORSHIP AND VIVISECTION.

LONDON, June 20, 1883.

THE Army Medical Inquiry Report continues to excite interest and criticism. The closer Lord Wolseley's evidence is examined the more unjust does it appear. During the campaign he officially expressed his satisfaction with the medical service in his telegrams and despatches. After the campaign is ended he officially repeats the substance of verbal complaints he made in Egypt, most of which ought to have been made to another department. It is really not putting his action in a false light to say that he appears to have been somewhat double-faced. The most charitable supposition is that his lordship's head has been turned by his peerage and his pension, and the opposition to the latter has doubtless not improved his temper.

It was manifestly unfair to contrast the army hospital at Cairo with Lady Strangford's. The former was dependent upon army officials for supplies of every description, which could only be procured through the ordinary channels. The latter was supported by private resources and its sick attended by a civilian medical staff. The son of a London physician—Dr. Sieveking—went out to work in its wards.

The necessary funds for building a physiological laboratory, etc., at Oxford have been voted by a very narrow majority (3 in a meeting of 193 members of convocation) on Tuesday last, June 4th. The opposition was partly on the score of economy (£10,000 being asked), but mainly on the ground that vivisections would be performed. The opposition to vivisection is plainly on the increase. It is, of course, chiefly in non-medical circles that this is the case, though it is an interesting fact that a pamphlet on the subject for private circulation was lately issued by a distinguished army surgeon, in which the author—Dr. C. A. Gordon, C.B.—maintains that no discovery has ever been made by vivisection that has ever proved of direct service in medical treatment that could not have been made without it. Dr. Gordon states that he commenced his study of the subject as one prejudiced the other way and that he has arrived at his conclusions through a dispassionate investigation of the literature of the subject. I think your readers will agree with me that the total abolition of vivisection is an event not to be desired. The restrictions that have been placed upon it in this country are no substantial detriment to real scientific investigators and were fully called for by the needless cruelties that have been perpetrated in the name of science. I could name at least one well-known physiologist in this country who is utterly callous as to inflicting *unnecessary pain* on animals, who only employs anesthetics to keep the animals quiet and prevent them from biting, scratching, or otherwise annoying him, and who confessed before the Royal Commission on Vivisection that he had no feeling whatever for the animals he tortured. I refer to Dr. Klein. Some experiments on scorpions, made by Mr. C. Lloyd Morgan in Germany and deliberately described by him in *Nature* (February 1, 1883), were revolting in their cruelty. Mr. Lloyd tortured them in various ways to see if he could induce them to commit suicide. Amongst other ways he placed them in burning alcohol, in concentrated sulphuric acid, and burnt phosphorus on them, etc.

Mr. Lloyd admits himself that the phosphorus experiment was sickening. It is difficult to see what scientific value such brutalities can possess. It is such men and such deeds that bring odium on scientific and humanly conducted vivisection by such men as Foster, Sander-son, etc.

DOES THE RETENTION OF DEAD TEETH IN THE JAWS EXERT AN UNFAVORABLE INFLUENCE ON HEALTH?

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: The above question is the heading of a letter by Dr. Samuel Sexton in your issue of May 12, 1883, to which, if you will kindly allow me the space, I beg to answer.

In ninety-nine cases out of every hundred I should say yes, they do "exert an unfavorable influence on health," and for the following reasons: It is a well-known and generally understood fact that the dentine of a tooth (which forms the bulk of the tooth-structure) and the enamel receive their nourishment from the pulp; that the amount of organic material in dentine is about twenty-eight per cent., and that of the enamel from three to five per cent. When the pulp is destroyed the nourishment of this organic portion is cut off entirely, with the possible exception of a very limited amount, which may be furnished from the periosteum through the cementum, which surrounds the root; consequently the death of the organic portion of the dentine and enamel must necessarily follow. This dead substance remains as a part of the tooth-structure to constantly decompose. In the structure of the tooth the organic portion is united directly from the periosteum to the pulp, through the cementum and dentine alike. Consequently the dead and putrefying portion in the dentine is constantly in contact with the organic portion of the cementum, which is still living; that, under circumstances which determine an excessive flow of blood to the part, such as a severe cold, a blow upon the tooth, or a severe wrench in biting upon some hard substance, excessive absorption of the putrefying portion by the living takes place, I hardly think will admit of a doubt. No matter how perfectly the dead pulp may be removed and the canal filled, this condition still exists. The fact, however, is that the pulps *cannot* be perfectly removed from one-half the teeth where it is attempted, but a portion is left in the canals to putrefy and assist in the disturbance which too often follows. Another feature of the case is that not one-tenth of the teeth in which the pulps are dead is any attempt made at their removal. If any one will consider for a moment the number of people who have no dentistry done, and those who have it poorly done as compared with those who have the best dental services it is possible to obtain, they will, I think, readily admit the truth of the above statement.

The conclusion then is, that *no* pulpless tooth is absolutely sure to not make trouble. From the most perfect operation of removing the dead pulp and filling the canals (which by the way, should never be done with gold) to those where the entire dead pulp is allowed to remain in the teeth, there is more or less of a periosteal irritation, which is almost constant. It is true that the tooth, or teeth, may not be painful, but some remote part, such as the eye, or the ear, may be affected, or a neuralgia extending over the side of the face and head may be the result. Many cases like these have come under my observation, where the most perfect dental work had been done. In many cases, however, pulpless teeth, after treatment, are kept in the mouth for many years, and render good service without apparently producing any pain or distress whatever. Others will, upon the slightest provocation, become sore and very painful. This, however, in most cases can be sufficiently overcome by proper treatment, to warrant their retention, provided they are very useful. But when, after consul-

tation, it is determined that the irritation produced by such teeth is more injurious to the patient than can be overcome by their service in mastication of food or otherwise, in my judgment they should be removed at once. I might cite many cases bearing directly upon this subject, but for the present the above will suffice.

I am, very truly yours,

FRANK ABBOTT, M.D.

22 WEST FORTIETH STREET, NEW YORK, July 9, 1883.

MEDICAL MATTERS IN NEBRASKA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: You have doubtless received ere this a summary of the proceedings of the Nebraska State Medical Society, which met at Lincoln recently. In many respects it was a success, but as to any exposition in medical science it was lamentably deficient. Reports of sections were called for by the President, and for the most part answered by the Chairman of Committee in an avowal of ignorance that he was on the committee. Dr. Mansfelde, Permanent Secretary, made an exception to this, in the presentation, with notes, of a four-pound cystoid kidney. Discussions on diphtheria and hysteria were rambling and profitless—the report of a case of aconite-poisoning proved to be no such thing, and the only paper read (on vaccination) was a history and very incomplete. Discussion revealed the fact that non-humanized virus is in disrepute, and chiefly by reason of imperfection in the virus; but anything looking toward remedy of this was not effected. No action was taken in regard to ethics, in dispute at the National Association, but a strong supporter of the Association's action stated in a large gathering, that the sooner all *code* was abolished, the better. This I believe to be the general drift. The Committee on Medical Legislation reported informally that their efforts came to naught. In reality, those having it in charge were not the peers of homeopaths in the matter of *lobby*. The leading man is but a respectable fossil.

Being in hearty sympathy with the good work you have done, looking toward the elevation of the standard of medical education, I would like to note the advent of another medical school—in this West, to wit, the Medical Department of the University of Nebraska at Lincoln. It is in many respects a still-birth, for although the State Medical Society met almost in the shadow of this university building, no mention was there made of the same, while many seemed to think for the present it would not amount to anything. The Society, in its rounds, visited the Home for the Friendless (inaugurated last January), wherein the new school finds its hospital. This building is quite beyond the city limits, and at the time of our visitation, while not seeing any patients, we were told there was *one*. There is no excuse, in the light of education, for the school at all, and I take it the only incentive is that which too commonly exists: the furtherance in position of local medical men, who become associated with it. The Medical School at Omaha is fairly established, so its promoters inform us, but the position you took toward the same was undeniably just. The establishment of these schools is heralded by the press and public, even as they do any new institution, in a very gross and material way. Too often these are *institutes*, cure-all establishments, but all aflame with their disinterested greatness. It is the spirit of "boom," which at present is soul and body of our social fabric.

A feature of this year's State Society meeting was the simultaneous gathering of the homeopaths. While no reference was made in our meetings to distinctive position, our neighbors were brim full of it, and placed themselves on record. In striking contrast is it with the attitude exhibited at Albany by the New York homeopaths in their recent annual meeting. Their President, Dr. Mitchell, stated in his address that "our doses can vary from the largest old-school potion to the highest of our

infinitesimals," that the regulars "use our drugs in their true relation to disease," "understand the methods of palliation better than we do," and, moreover, that "there are cases where our law fails, or is inapplicable." Commenting upon which the *Springfield* (Mass.) *Republican* said, "It is plain if Dr. Mitchell fairly represents his own school, there is no longer any necessity for its separate existence." Here Dr. T. C. Duncan, of Chicago, in what is termed *the address*, stated, that "the difference between the two schools is as wide as ever." "Judging the future by the past, the union of the two schools is far remote," while "union could be brought about only in the recognition of their principles." Perhaps Dr. Duncan does not fairly represent his brethren; still, it is probably not their desire to sink distinctive titles at least, for with most of them this would be an appalling disaster.

Yours,

NEBRASKA.

THE QUESTION OF INEBRIETY AND DISEASE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: That advocate, *par excellence*, of the disease theory of inebriety, Dr. Crothers, again comes forward in a late number of THE RECORD, with a synopsis of cases, from which he deduces what he believes to be facts in support of his views. I see in none of them anything but a repetition of the old story of deficient will-power in the presence of an evil. His first case is that of A. B—, a prominent physician, by the way, who had graduated with honors, fell through the ice into the water, which event was followed by pneumonia, and this in turn by a condition of nervousness, for the relief of which he began the use of spirits! Verily, his knowledge of *materia medica* must have been meagre! Of course, his "nervousness" gradually required larger doses, and as spirits was the best sedative he could find, notwithstanding his efficient medical training, he became a confirmed inebriate—a coward, finally, in principle and in morals, for he endeavors to throw the blame from himself in that he says "his inebriety began from some physical condition, and that through the treachery of friends he was made worse." He finally landed in prison, where, in the absence of his scientific remedy for nervousness, he seems to have recovered both from it and his intemperance. Dr. Crothers thinks the pneumonia was followed by acute asystolism. This may be so, though it is hypothetical, and the treatment certainly questionable.

The second case, C. O—, was also a medical student of long training, and for some time professor in a medical college. One day he became "accidentally (?) intoxicated," and soon after was forced to resign, went from bad to worse, and finally brought up in an insane asylum, a lunatic from the excessive use of spirits. It transpires, however, that two years before he became "accidentally intoxicated" he had habitually made use of brandy for the production of sleep. It is a singular circumstance that, though a medical professor, he failed to find any remedy so effectual for this purpose as brandy. This gentleman too, seems to be blind to the true cause of his weakness and says, "his inebriety began from neurasthenia and heart exhaustion." The third case, that of a theological student, runs about the same course, and ends with the same sort of an apology. "He began to use spirits in the seminary for a tonic, used it quite freely while supplying his pulpit, but always at night." These are only a few of the doctor's synopsis of cases, and while I say nothing of the palpable fact that they represent an entirely exceptional class of inebriates, we can even in these selected cases plainly see the moral forces at work in their causation.

We have been told of heredity as being active in the production of drunkenness. That this is a prolific cause I do not doubt, but that it is wholly, or even in a great

degree a physical heredity, I do not believe. The inebriate is an inheritor, to some extent, of his forefathers' special curse; not of this particular sin necessarily, but rather of the atmosphere in which his progenitors lived, of the moral conditions which surrounded them, of the general depravity of tone which as a rule marks the homes where are reared the young inheritors of the parents' weakness. The child reared in the home where profanity is daily used and where no regard is had for good morals is very likely to grow up in conformity with his teaching; that one born into the home of the inebriate, subject to such environments as surround him there, will do the same. The heredity of influence and surroundings is a potent factor in the production of inebriety.

But suppose for a moment we allow that inebriety is always a disease, may we not with equal propriety assume that all sin—or that we are used to call sin—has a physical basis; that what we have heretofore regarded as a deficient moral status has really its origin in some congenital or acquired moral defect? Is it not as reasonable to suppose that an act by which one person commits violence upon another, or takes that which is not his own, has its origin in a physically diseased condition, as that this is true of the person who commits violence upon his own mind and person by subjecting them to the overwhelming influence of intoxicating drinks or narcotizing drugs. It seems to me that this is the legitimate conclusion, though the logical result of the argument would be that *all* action, right or wrong, has a physical basis, healthy or diseased, but for which in either case the individual is not responsible.

Dr. Crothers dwells frequently upon what he calls "obscure" causes. I confess they are so when viewed as he views them. It is doubtless true that obscurity will be thrown around any study when we try to bend facts connected with it to any single idea. We can study inebriety neither as moralists nor scientists wholly, but must be prepared to recognize the fact that some cases depend upon one cause, some upon another. That there are cases of inebriety that depend upon physical causes I am ready to admit, and have done so; but to say that "it is always a disease" is a dogmatism without even the redeeming quality of truth.

J. B. STAIR, M.D.

SPRING GREEN, WIS.

FISKE FUND.—The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence June 21, 1883, announced that they had made no award on the subjects proposed for the present year. They propose the following subjects for the year 1884: 1. "The Origin and Progress of the Malarial Fever now Prevalent in New England." 2. "Original Investigations in Household Hygiene." For the best essay on either of these subjects worthy of a premium they offer the sum of \$300. Every competitor for a premium is expected to conform to the following regulations, viz.: To forward to the Secretary of the Trustees, on or before May 1, 1884, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet, having the same motto inscribed upon the outside, and his name and place of residence within. Previously to receiving the premium awarded the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same, for the use, benefit, and behoof of the Fiske Fund. Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may be procured by their respective authors if applications be made therefor within three months. Job Kenyon, M.D., River Point; Oliver C. Wiggins, M.D., Providence; Horace G. Miller, M.D., Providence, Trustees. Charles W. Parsons, M.D., Providence, Secretary of the Trustees.

New Instruments.

TONGUE DEPRESSOR AND NASAL SPECULUM.

By D. H. GOODWILLIE, M.D.,
NEW YORK.

FIGURE 1 represents a new tongue depressor with the following description, viz.:

The portion that touches the tongue is concave, and as the base of the tongue is nearly always convex, it fills up this concavity when first placed on it. When pressure is made on the tongue it flattens out under the depressor and produces a vacuum in the concavity, thus holding it firm upon the tongue, which can now be drawn forward, or laterally, without any discomfort to the patient. When the tongue is depressed sufficiently, then let the shank, which is slender, rest on the lower incisor teeth.



FIG. 1.—Tongue Depressor and Speculum.

The handle is held to the depressor by a thumb-screw, and is so arranged as to hold it on either side, or in front of the chin. In some cases the handle can be so placed as to come under the chin, and so make the depressor self-sustaining. The depressors are of two sizes, for adults or children.

The advantages are that it depresses well the base of the tongue, and holds it securely by the suction power, and without any discomfort to the patient.

The handle is conveniently held by operator or patient, and to one side of the mouth. It can be easily kept clean.

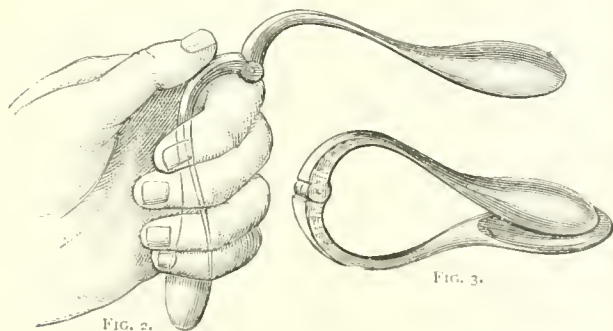


FIG. 2.

FIG. 3.

FIG. 2.—Folding Tongue Depressor.

FIG. 3.—Folding Pocket Depressor.

Figure 2 represents a folding tongue depressor, having two sizes.

Figure 3 represents a folding pocket depressor, having two sizes.

The nasal speculum is only introduced here to show the best way of using it. A description was given of it in THE MEDICAL RECORD some time since. The instrument is made by Geo. Tiemann & Co., N. Y.

A MODIFICATION OF LORING'S OPHTHALMOSCOPE.

By J. B. McMAHON, M.D.,
NEW YORK.

SOME five years ago Dr. Loring brought to the notice of the profession an ophthalmoscope, carrying fifteen lenses on a disk and four on a movable quadrant. In the number of possible combinations and the ease with which their values could be read, nothing was left to be desired.

In none of the forms of this instrument hitherto in use has it been practicable to rotate the quadrant without moving the instrument from the eye and so interrupting the examination.

To obviate this difficulty, and, at the same time, by a slight alteration in the arrangement of the lenses, to get a much more efficient "fine adjustment" has been the object aimed at in the instrument to which I would call the attention of your readers.

The instrument has the ordinary tilting mirror. The main disk, as in Loring's, has an aperture and fifteen lenses, ranging from, +1 D. to +7 D., and from -1 D. to -8 D. The second disk has four lenses, $\pm .5$ D., + -16 D., and an aperture arranged as shown in Figure 2. The cut indicates also the five small

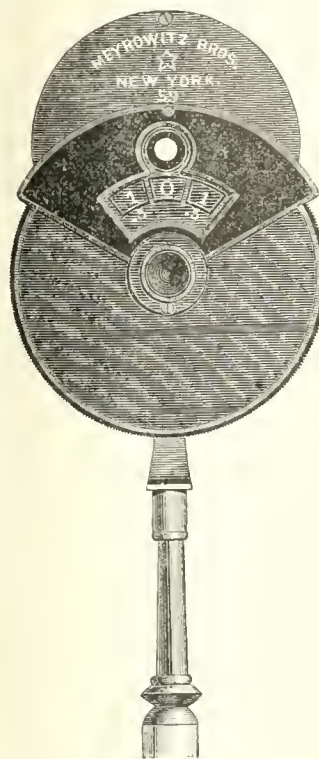


FIG. 1.

holes in which the pin of the centring spring plays. This disk serves as a cover for the first, its own lenses being protected by a metallic sector, partly cut away (*vide* Fig. 1).

The main disk is revolved by means of a milled edge the second, by a milling raised on its posterior surface just within its edge. Both disks are centred. The centring springs, one of which is seen in Fig. 1, surrounding the thumb-screw, secure a perfectly smooth, uniform, and independent motion of the two disks.

The instrument is light and compact. Its mechanism is simple. The glasses are efficiently covered. All the numerous combinations can be obtained without removing it from the eye, and with as much ease and certainty as in using the single disk ophthalmoscope.

For ordinary work the main disk suffices. If, however, a nicer determination of an error of refraction be desired, a slight movement of the second disk, in either direction, increases or diminishes, by a small refractive interval (.5 D.), the power of the lens of the main disk that is in use, thus affording a true "fine adjustment." In doing this, the finger is slipped from the milling on the edge of the first disk, to bear lightly on the milling and posterior surface of the second, and so rotate it, the motion being a very easy one.

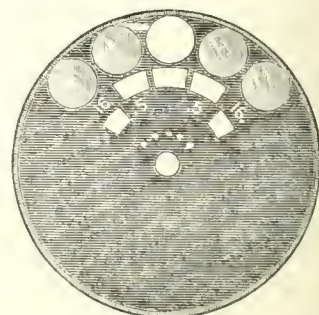


FIG. 2.

The use of the combinations in which the ± 16 D lenses take part is quite simple. For example, the revolution of the main disk gives $+7$ D. A movement of the second gives $+7.5$ D. Both disks can now be rotated simultaneously, still in the same direction, the resulting combination being $+8$ D. The higher combinations are obtained as in Loring's, by a continued revolution of the main disk. The reading of their value is practically the same in both instruments.

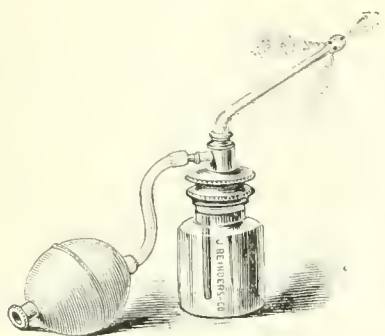
As so much depends on the accuracy of the mechanism, it is but just to add that Meyrowitz Brothers, after the expenditure of much time and labor, have succeeded in making the instrument at once handsome and reliable.

A PRACTICAL AND SIMPLE WAY TO MAKE THOROUGH APPLICATIONS OF POWDER TO THE POST-NASAL REGION.

By T. HAMILTON BURCH, M.D.,

CLINICAL ASSISTANT, THROAT DEPARTMENT, MANHATTAN EYE AND EAR HOSPITAL.

FINDING difficulty in some cases of making thorough applications of powder to the post-nasal region, without covering a great deal of unnecessary sound tissue, I have had Reynders & Co. make me two thin bulbous-pointed



hard-rubber tubes about three and one-half inches long, and in diameter tapering from one-fourth of an inch at base to one-third of an inch at apex (the dimensions will depend upon the size of the nares, and it would be well to take these measurements for the largest size) and perforated at the end; one with an opening looking directly forward, and the other with three openings, one looking forward and one at each side looking backward.

The terminal opening in the latter being one-half as large as the other two. The object being that the stream of powder will be diverted and an equal amount directed through the side orifices, thereby covering as much of the upper pharynx and post-nasal region as is desired. The tubes can be adapted too, and made with a thread so that they can be screwed upon the stopper part of the powder-blower.

This instrument is very simple and practical, and, if desired, patients can be fitted with the proper size and instructed how to introduce it and follow treatment at home.

It is not too much to say that the old way of deluging the whole nasal tract with powder does very often more harm than good. It is hoped by the aid of these tubes to render the application of powder more scientific than heretofore. The accompanying illustration will give a better idea of the instrument than my article.

New York, June 29, 1883.

THE MEDICO-LEGAL JOURNAL.—We have received the first copy of this new journal. It is published under the auspices of the Medico-Legal Society and contains papers read before that body. It has a well-filled editorial department. Being the only journal of this character in the English language, it may naturally expect success. The first number promises well.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 30, 1883, to July 7, 1883.

HEGER, A., Major and Surgeon. Relieved from the further operation of paragraph 9, S. O. 55, C. S., Department of Texas, and will return to his station, Fort Clark, Texas. S. O. 69, par. 2, Department of Texas, June 25, 1883.

HAVARD, VALERY, Captain and Assistant Surgeon. Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas. S. O. 68, par. 8, Department of Texas, June 22, 1883.

RAYMOND, HENRY I., First Lieutenant and Assistant Surgeon. Granted leave of absence from July 14, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted to take effect September 1, 1883. S. O. 150, A. G. O., June 30, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 7, 1883.

LEACH, T. W., Medical Inspector. Detached from the U. S. S. Tennessee, and as Fleet Surgeon of the North Atlantic Station, and placed on sick leave.

RHOADES, A. C., Medical Inspector. Detached from the Naval Academy and ordered to the U. S. S. Tennessee, and as Fleet Surgeon of the North Atlantic Station.

Medical Items.

MAY THE PROFESSION DEFY PUBLIC SENTIMENT?—An answer to the question which heads these remarks presupposes the profession to be as one man having to do with the great public. No one among the public can gainsay the firmness and independence of the profession as a whole, in the matter of observance of the standard of ethics which it set up some forty years ago. No one, moreover, but will admire its faithfulness to that standard. Is it not time, however, to inquire whether the almost universal condemnation and ridicule which the public is showering on that standard does not suggest a necessity for its revision with a view to conforming it to the spirit of the age, with which spirit the expressions of public opinion show it to be in conflict? And does not the persistence of the American Medical Association, in refusing to recognize the public sentiment in this matter, suggest a suspicion that its firmness and independence have degenerated into obstinacy?—*The Medical Age.*

DR. H. P. STRONG, one of the most prominent physicians in Wisconsin, for thirty years a resident of Beloit, died in that city on June 20th, aged fifty-one. Dr. Strong had received many honors in his own home, among them that of having held the office of mayor for five years. During the war he was surgeon of the 11th Wisconsin Regiment. As a member of the State Medical Society he had filled the offices of secretary and of president, and at the time of his death he was a member of the Wisconsin State Board of Health. Dr. Strong was a brother of William B. Strong, President of the Atchison, Topeka and Santa Fe Railroad, and of James W. Strong, President of Carlton College, Minnesota.

THE POSITION OF THE NAVAL MEDICAL SERVICE AS REGARDS THE CODE OF ETHICS.—In concluding a paper on "Medical Education" before the meeting of the American Medical Association, Dr. A. L. Gibon made the following remarks, which define his position as regards the Code of Ethics, a position which he states receives the approval of the Surgeon-General of the Navy: "It

is almost an insult to the intelligence of the members of the Association to explain that this paper ('Medical Education the Fundamental fact in Medical Ethics') is not intended as a sectarian attack upon the organic law of the American Medical Association, but as this interpretation has actually been given to it by over-sensitive partisans, I deem it proper to reaffirm my loyalty to the code to which I have subscribed, without, however, surrendering the right, which in common with every intelligent man I claim, to criticise what I may think objectionable, and to call attention to the inconsistencies of its avowed adherents who, attempting to observe its letter, injure its spirit. I fail to see why honest advocates of its principles should be placed in an attitude of 'rebellion' for merely defining these principles by the more liberal light of this day. The code properly interdicts any admission of the orthodoxy of the professors of exclusive dogmas, whether of homœopathy, allopathy, hydropathy, or the like, but it nowhere prohibits the intelligent physician giving his advice to whomsoever may seek it, especially when emergencies and the dictates of humanity demand. No one can more energetically discountenance than myself the impossible co-treatment of any case of disease by an educated physician and a charlatan, empiric, quack, or ignoramus however regular, but it is quite another matter when one's opinion is solicited in the interest of suffering humanity. I have yet to hear of any one of our profession soliciting an opinion from any of these, and without such an interchange of views there can scarcely be considered any *consultation* in the sense of the clinical co-operation properly denounced by the code. Any narrower assumption will, as I have endeavored to show in this paper, necessitate the ostracism of these your famous colleagues who have associated as fellow medical members with homœopaths and eclectics in the professional work of the National Board of Health, State boards of health, boards of medical examiners, etc., and I feel assured that the overwhelming sentiment of the American Medical Association will sustain the liberal interpretation I have here given the code."

VIVISECTION IN FRANCE.—Not long ago Professor Brown-Séquard, in lecturing at the "Collège de France," decided to have, as is customary with him, a public demonstration showing the anæsthetic action of carbonic oxide on the larynx. For this purpose he had provided a small monkey. Without administering anæsthetics, Professor Brown-Séquard was about to begin his experiments when a lady suddenly arose and with her umbrella knocked the weapon out of the hands of the astonished scientist. The lady was at once ordered to leave, but declined, and said that she would repeat her action as the only possible protest, so that at least the "barbarous methods of vivisection" should not pass in silence. The usher was equally unsuccessful in appeasing her, and it was only at the instance of a gendarme specially summoned that she consented to leave, which she finally did, accompanied by two of the professor's pupils to the "Commissariat de Police" for mutual explanations. The *Paris National*, in reporting the circumstances, says that the action of the lady was a little too severe, but thinks that France might at least, like England, limit vivisection to classes for original work, and forbid its public displays.

PARASITES IN THE LUNGS.—Dr. Thomas Mann, of Portland, Oregon, writes for information regarding a curious case in which the patient coughs up parasites from the bronchial tubes. The trouble has lasted for a year. Twenty-eight have been coughed up within two weeks. They are coughed up generally along with mucus and blood. The young ones have black heads and a thick white body about one-fourth of an inch long. The mature specimens are longer. The history of the case is as follows: Patient, female, aged twenty-one; native of England; well developed; weight, one hundred and

twenty pounds. Came under observation just one year ago, November 26, 1881. Arrived that day direct from England, suffering from sore throat and nostrils excoriated; breath fetid and offensive; pain in chest just below right and left clavicle; whole length of sternum and muscles of the neck sore to the touch; ulcer on right side of upper part of larynx to the right of epiglottis. All these symptoms have continued. In addition there was menstrual irregularity with hemorrhage from the air-passages at menstrual periods. This, however, is corrected.

Treatment thus far, after trying various remedies without permanent good result: On November 14, 1882, I gave inhalation of terebinthina to anæsthesia. On November 15th two parasites were coughed up, but with so much pain that carbolic acid was substituted as an inhalation, at times using hot water as a vehicle. From twelve to sixteen hours after this one or more parasites are coughed up. When mature ones are coughed up they come in pairs, and pairs are sometimes followed by from two to four young ones. The sputa, I might state, in which the parasites come up smells very strong of turpentine. The carbolic acid inhalations do not seem to be followed with such good effect. The patient is in good condition and attending to business. Dr. Mann has consulted Cobbold, but without getting any light.

LARGE DOSES OF MORPHIA.—Dr. J. A. Rafter, of Holton, Kansas, writes: "In your issue of May 5th appeared an article in regard to morphia poisoning, which has been pretty regularly 'sat down' upon nearly every week since. The dose of morphia supposed to have been taken was something like six grains. Ages of the men, I believe, not stated. A year ago I was treating a case of dysentery; had tried almost all of the usual remedies with unsatisfactory results. The case continually grew worse, and was in an extremely critical condition. Being sent for in great haste one day, on my way to the house I stopped at a drug store and got (by weight) six grains of acetate of morphia and thirty grains of oxalate of cerium, determined to give it a trial (though I had been using small doses of morphia sulph.). The powders were in separate packages. I took from each what I needed—about two-thirds grain morphia and eight grains cerium—Charts No. 2, with directions to give one, and if distress was not relieved in an hour to repeat. I then stowed the larger packages away in a stand drawer in an adjoining room. Called again three hours afterward, found that a mistake had been made in giving the powders. The large ones had been administered instead of the small—oxalate first, and an hour after the morphia. Patient completely narcotized; respiration two and one-half per minute, and the poisonous effect of the drug as well marked as I cared to see it. At once I gave an emetic, following it with strong coffee and belladonna. I administered good-sized doses of the tincture (ten or twelve drops), and repeated often; probably gave a drachm in all. Also gave shower baths and made every exertion possible to rouse my patient; at length succeeded, and, perhaps it is needless to say, he was troubled no more with dysentery. As this case was my own father, and his age over seventy-one years, at that time, I did not regard the case as Dr. Phelps does Dr. Williams's article, 'very funny.'"

HYDROPHOBIA AND THE BITE OF THE COMMON SKUNK.—Dr. Howard Jones, of Circleville, O., writes: "Upon careful inquiry throughout some of the Western States, I have collected the histories of fifty-two cases of bites from the common skunk—*mephitis mephitica*. Assuming these cases to have been accurately related to me, they may be classified as follows: Whole number of persons and dogs reported bitten, 52; number of persons bitten, 25; number of dogs bitten, many several times, 27. Whole number of persons and dogs that died from these bites with symptoms of hydrophobia, 8; number of persons that died from these bites with symptoms

of hydrophobia, 7; number of dogs that died from these bites with symptoms of rabies, counting a dog that was shot to prevent doing injury, 1. The above cases may be again divided into two classes, and each of these may be subdivided as follows: A—1, number of persons bitten while attacking skunks, 16; 2, number of persons attacked by skunks and bitten, 9. B—1, number of dogs bitten while attacking skunks, 27; 2, number of dogs attacked by skunks and bitten, 0. The number of persons that died with symptoms of hydrophobia out of the sixteen in subdivision 1 of class A=0; the number of persons that died with symptoms of hydrophobia out of nine in subdivision 2 of class A=7. The number of dogs that died (or was killed) with symptoms of hydrophobia, out of the twenty-seven in subdivision 1, class B=1. From the above considerations the following conclusions may reasonably be drawn: *First*.—All skunks are not rabid, or, if they are, only about fifteen per cent. of their bites inoculate on men and dogs considered together; while of men bitten, twenty-eight per cent. inoculate and prove fatal, and of dogs bitten, only about four per cent. inoculate. This difference in susceptibility between men and dogs evidently does not exist, and the difference in per cent. of inoculations must be accounted for in another way about to be suggested. *Second*.—When a skunk departs so far from its natural habits as to make an attack with its teeth without any provocation, it is fair to suppose that it is suffering from some disease which has largely changed its nature. This conclusion is strengthened by the fact that out of the twenty-five persons bitten while endeavoring to make angry or kill the skunks (in most instances the animals were in steel-traps), not one suffered any other effects from the wound save the ordinary soreness; while of the nine persons that were attacked by skunks and bitten (in most instances the persons were asleep upon the ground when bitten), seven died with symptoms of hydrophobia, making a mortality of nearly eighty per cent. It may be added that the dog mentioned in division 1, class B, which was killed on account of his having rabies, probably attacked a skunk suffering with the disease. That the bite of the common skunk is, under certain conditions, dangerous, and even extremely fatal, there can be no doubt, and there are many reasons for believing that the disease is identical with rabies in the dog or hydrophobia in man."

THE PHYSICIANS OF NEW YORK CITY AND NEW YORK STATE.—"The Medical Register" for 1883, just issued, gives a list of 2,684 physicians living in the State. The New York City list contains 1,661 names. According to this, the number of (medically) registered physicians in this city is nearly two-thirds of the whole number in the State.

The number of Brooklyn physicians in the list is 510. One hundred and twenty-six of those in the New York list are serving in the hospitals and asylums.

IS TENDENCY TO DEATH DURING PARTURITION HEREDITARY?—Dr. W. Henry Day, in a letter to the *Lancet* asks this question and cites some cases which seem to prove the affirmative. In one case, a mother, grandmother, and great-grandmother all died in their first confinement.

CHLOROFORM NARCOSIS DURING SLEEP.—Dr. W. A. Mansfield, of Champaign, Ill., referring to Dr. Girdner's article on this subject, writes (*Chicago Medical Review*) that he has recently successfully chloroformed a young man during sleep. He produced profound narcosis. The man did not know that the experiment was to be tried.

MEDICAL GEMS FROM "ENGLISH AS SHE IS SPOKE."—A work entitled the "New Guide of Conversation in Portuguese and English" has recently achieved a very wide celebrity. The author, Signor Pedro Carolino, has set forth Portuguese idioms, phrases, and anecdotes with their English equivalent, as he regards it. The result

has been most extraordinary and amusing, the more so as the book is evidently written seriously and in good faith. We append the following formula:

"*For to Visit a Sick:* How have you passed the night?—Very bad. I have not slept; I have had the fever during all night. I feel some pain every where body.—Live me see your tongue. Have you pain to the heart? Are you altered?—Yes, I have thirsty often.—Your stat have nothing from trouble some.—What I may to eat?—You can take a broth.—Can I to get up my self?—Yes, during a hour or two.—Let me have another thing to do?—Take care to hold you warme ly, and in two or three days you shall be cured."

The following comes under the head of Anecdotes.

"A physician eighty years of age had enjoied of a health unalterable. Their friends did him of it compliments every days: Mister doctor, they said to him, you are admirable man. What you make then for to bear you as well?—I shall tell you it, gentlemen he was answered them, and I exhort you in same time at to follow my example. I live of the product of my ordering without take any remedy who I command to my sick."

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE holds its thirty-second annual meeting at Minneapolis, Minn., August 15th, 16th, and 17th. Professor C. A. Young is the President-elect.

BEQUEST FOR A NEW MEDICAL COLLEGE.—The late Dr. Eliphalet Clark, of Deering, Maine, bequeathed several valuable lots of land with which to found a medical college.

THE CONSISTENCY OF OUR MEDICAL LAWS.—The Legislature of the State of New York has decided that "no person duly authorized to practise physic or surgery shall be allowed or compelled to disclose any information which he may have acquired in attending any patient in his professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon." "It is difficult to reconcile this pronouncement," says the *Medical Press and Circular*, "with the fact that in New York any physician is liable to be clapped into jail and fined \$50, if he does not give public notice that his patient is suffering from infectious disease."

We quite agree with our contemporary in this view. The obligation put upon medical men to notify, without compensation or return of any kind, the existence of infectious disease is an encroachment upon individual liberty which we trust the profession will in time resent.

WOMEN DOCTORS FOR INDIA.—The project for introducing medical women into Bombay is now fairly established, upward of forty thousand rupees having been already subscribed for this purpose. The *Hindoo Patriot* states that the scheme includes the bringing out of women doctors from this country; the establishment of a dispensary for the poor; medical education for female students, through the Grant Medical College; and, finally, the establishment of a hospital for women and children.

DR. SHOSHEE BHOOSUR MOOKES GEE is the name of the President of a new Homeopathic Medical College recently founded in Calcutta, India. The name carries with it a mystical significance well calculated to attract the transcendental.

THE EXTENSION OF VICE.—Professor J. Edwards Smith has devoted a year to the study and discovery of adulterations in homeopathic medicines! When adulteration strikes the attenuated and gossamer fabric of the *sim. sim. cur.* materia medica, we may well believe that vice reaches every fibre of our social system.

DIGESTION AND CONDIMENTS.—How digestion is affected by such condiments as salt and vinegar has been studied by M. C. Hasson, and the results presented in a paper read before the Academy of Sciences, Paris. Taken in moderation these condiments are useful. They pro-

mote the secretion of the gastric juice. But if they are indulged in to excess they irritate the coats of the stomach and render the food more indigestible. The proportion of salt should not exceed 5 to 10 grains to 0.5 kilogramme of meat, and of acid 1 to 4 per 1,000.

YELLOW FEVER AT VERA CRUZ.—For some months yellow fever has prevailed extensively at Vera Cruz, especially among the Americans and Europeans. It is said that one thousand deaths have occurred within the past two months.

DR. A. W. FOOT has just been elected Professor of the Practice of Medicine in the Irish College of Surgeons.

MEDICAL SCHOOLS FOR WOMEN IN CANADA.—Our Canadian brethren have a *penchant* for medical women. A Medical College for Women has been organized in Toronto, and a second one, it is said, is likely soon to be established. A similar college is likely to be organized in Kingston.

THE DELAWARE STATE MEDICAL SOCIETY held its annual meeting at Wilmington June 12th. Dr. Robert M. Hargadim, of Felton, was elected President; Dr. Willard Springer, Vice-President; Dr. George W. Marshall, of Milford, Secretary; Dr. J. W. Sharp, Treasurer.

DRIVING OUT A QUACK.—A man, calling himself Dr. Hale, of Edinburgh, came to Wheeling, W. Va., a short time ago and began to deliver lectures and practise medicine. He also distributed a paper of a low character, called *Health and Home*. He was promptly driven out of the State by the Board of Health.

THE HYPODERMIC INJECTION OF AMMONIA.—The value of intra-venous injections of ammonia has been attested. The following case sent us by Dr. Willis Cummings, of New Canaan, Conn., seems to show that ammonia may be equally valuable given hypodermically. We regret that our correspondent did not assure himself more positively whether the sun or alcohol had the most to do with his patient's prostration. Dr. C. writes: "Was called to see a young man said to be overcome with the heat. Found him in a stable lying on his back, in a perfectly relaxed and apparently anæsthetic state. Was unable to arouse him by pinching, slapping, shouting, or pounding his feet. He had been drinking largely of cider brandy in the morning, after which he took a long ride in the sun, wearing a silk hat. Had been unconscious about an hour and a half before I saw him, which was about 3.30 P.M. Found pupils slightly contracted, head cold, under jaw slightly fallen, extremities cold, and also the whole body, particularly the epigastric region; respiratory movements hardly perceptible to the eye, but little more so to the hand. Heart-beat greatly reduced in force, though pulse was about 100 and very weak. Before I came ammonia had been applied to nostrils and rubbed on back of neck. Cold douches to head, and rubbing extremities had been tried. After using the ordinary means of treatment and getting no satisfactory results whatever, I put four or five drops of ordinary water of ammonia to about a teaspoonful of water, and gave ten drops of this solution hypodermically in the left arm. Within five minutes he was conscious. Before coming to, his cervical muscles twitched a little, and the upper thoracic muscles seemed to contract slightly, making him expire freely with a short, full inspiration. Within the next ten minutes he was walking with the aid of a friend, fully restored to consciousness and able to swear at the pain in his arm. Of course there was a pretty active inflammation at the seat of puncture from the needle. Altogether it was less than ten minutes between the time that he seemed to be at the point of death and the time he was on his feet. He was kept in the shade for about two hours, when he got into his wagon and rode off, a little dazed, but perfectly conscious, especially of the red spot on his arm."

DEALING IN PAUPER CORPSES.—The Chicago Grand Jury has presented to court a strong condemnation of the practice of selling corpses which prevails in that city. It is thought the communication will result in putting an end to the traffic in the bodies of paupers which has convicted the county undertaker. The competition for this position was so great at the meeting of the Commissioners recently, that one party offered to bury paupers for \$1.23 each. The demonstrators of anatomy of the various medical colleges of the city, as well as other men eminent in the medical profession and thoroughly acquainted with the subject, have requested such a change in the system as would give the colleges, in *pro rata* quantities, the material to which they are entitled, the colleges promising to insure the county from expense by paying such prices for the materials as will cover the cost of its transportation to them, and they suggest that any balance arising to the credit of the county be applied to the better care of those bodies that must be buried.

ADULTERATIONS IN LARD.—It is openly admitted by the lard-dealers of Chicago that all lard is adulterated from ten to fifty per cent. In all but the worst grades the adulteration is harmless, being oleo-margarine, cotton-seed oil, vegetable oils, and tallow.

THE FIRST POST-MORTEM IN AMERICA.—Dr. J. R. Quinlan, gives an account of the first post-mortem made in America. It dates twelve years earlier than that which occurred in Massachusetts, and has been supposed to be the first: "At a Provincial Court, held at Patuxent, for the Province of Maryland, September 23, 1657, whereas, it is thought requisite that a view be taken of Henry Gouge, who is suspected to have been brought to an untimely death by his master, John Dandey, and whereas it is conceived that this cannot be had so conveniently in time, as by a competent jury to take a view of said corps, the Court doth order that Mr. James Veitch be hereby empowered to go to the place where the said Henry Gouge was interred, and to call so many of the neighbors as conveniently can be procured, with two *chirurgeons* viz: Mr. *Rd. Maddocks* and Mr. *Emperor Smith*, and after said neighbors and the two *chirurgeons* have taken a diligent view of the said corps, then the said *chirurgeons*, in the view of those present, *are to take off the head of said corps, and, after diligent view and search, to signifie, under their hands, how they find said head and corps, are to cause the said head to be carefully lapped up and warily brought to the Court, with what convenient and possible speed as may be.*" The return of this jury, rendered to the court September 24, 1657, runs thus: "Whereas, according to the order of the court, we have proceeded and diligently viewed the head of the corps of Henry Gouge, and laid open to us by the *chirurgeons*, which was ordered by the court to view and lay open to us. We detest (sic) under our hands that we can see nor find nothing about the said head, but only two places of the skin and flesh broke on the right side of the head, and the skull perfect and sound and not anything can or doth appear to us to be any cause of the death of the said Gouge, and also we do *detest* that we did endeavor what possible in us lay, to search the body of said corps and could not possibly do it, it being too noysome to us all and being put at first into the ground without anything about it, as the *chirurgeons* and the sheriff can satisfie you, this is the truth and nothing but the truth as witness our hands and seals, this 24th day September, 1657. And according to the order we have *delivered* the said *head* in the hands of the sheriff."

INTRA-UTERINE VACCINATION.—Dr. Truzzi vaccinated a number of pregnant women during the last three months of gestation, with a view to determine the protection, if any, afforded to the child. The results were negative, as the children were all successfully vaccinated a few days after birth.

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ON THE PATHOLOGY AND TREATMENT OF CERTAIN FORMS OF NERVE-WEAKNESS.¹

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As every physician knows, chronic functional nervous disorders of the neurasthenic and hysterical kind are most difficult to treat with success or even satisfaction. They are apt to be set down as "cranks" and nuisances, the victims of a morbid imagination. This is certainly not a correct or charitable view. Hypochondria, hysteria, neurasthenia, "irritable spine," nervousness, are diseases having a somatic basis as truly as has insanity. And it seems somewhat strange that while every one admits the physical basis of mental disease, physicians are reluctant to admit it for these milder, but most distressing and obtrusive disorders.

Before taking up the subject of treatment, permit me to discuss, as briefly as possible, the subject of the nature and proper classification of these neuropathies.

Nomenclature.—As regards nomenclature, every one has doubtless felt dissatisfied with the term neurasthenia, and especially with its ordinary translation (which is an incorrect one) of nervous exhaustion. Neurasthenia means rather nerve-weakness; and, perhaps, a still more explicit and significant translation is nerve-enfeeblement.

We cannot get rid now of the term neurasthenia, however, and it is not desirable; but it is desirable and possible to give it a much more definite meaning than it has yet had.

I believe that we should use the term nerve-weakness or nerve-enfeeblement, as a general one to include all the different functional neuropathies that are characterized by a diminution in the force-generating centres of the nervous system. It should include, therefore, *hysteria*, mild forms of nerve weakness known generally as *nervousness*, more pronounced and localized forms known now as spinal irritation and *neurasthenia proper*, it should include also such disorders as certain forms of *hypochondriasis*—which the older authors used to look upon with reason as the hysteria of man.

Etiology.—These various neuropathies have certain common methods of development which can be classified as follows:

1. A person inherits or acquires (by overwork, excesses, etc.) a neuropathic diathesis. Some special excess, powerful excitement or injury then induces a train of morbid symptoms characteristic of some form of nerve-weakness.

2. A person of neuropathic antecedents has some slight but chronic local disease (dyspepsia, uterine, ovarian or prostatic irritation, etc.); this, acting as an irritant sets up a train of morbid nervous symptoms. This general disturbance reacts and makes the local trouble worse. The causes thus work in a vicious cycle.

3. Direct, excessive, constant exercise of the nervous centres and mechanisms may lead to an increase of functional irritability with accompanying weakness, or eventually to absolutely less functional activity and

power. Continued disuse of previous actively used functions may lead to impairment in their power also, as we see sometimes in persons who have abandoned their special work or business.

All cases of chronic functional nervousness, neurasthenia as usually described, hypochondria, and hysteria will be found, I think, to have an origin in one or more of the foregoing ways.

Fundamental changes, anatomical and chemical, in nerve-weakness.—Modern physiology throws some light upon our conceptions of the essential changes in the various forms of functional nerve-enfeeblement.

Thus we can say with some confidence that underlying these disorders there are the following conditions:

1. An imperfect tissue nutrition and metamorphosis, a kind of tissue-dyspepsia which results in making the nerve-molecules unstable.

2. Coincidentally there is often, if not always, some derangement in vascular supply. This vascular change, I venture to say, is always an anæmia or a venous hyperæmia; true hyperæmia is not present, except incidentally and temporarily in chronic functional nerve-weakness, since it is always the correlative of increased functional power.

3. Some permanent chemical changes are very likely present. These changes cannot be great as regards the nerve-elements themselves, for all tissues, as long as they act and preserve their identity, must have about the same composition. I doubt if the balance of the chemist will ever tell us what are functional diseases. But the chemical products of tissue activity may be altered, as shown by the character of the excretions.

Referring now to the disturbance in the tissue nutrition of the nerve-centres, the view that the nerve-molecules are in an unstable condition is, I believe, a helpful one, although it may seem somewhat transcendental.

A nerve-centre may be compared (as was suggested by the late Professor Clifford) to a house of cards which is being constantly built up and as constantly knocked down in every functional act. Normally this house of cards has a certain relative stability and is only toppled over by its legitimate stimuli. But in the neuropathic state the foundations are less broad, the superstructure more frail and less lofty. It is knocked down more easily, it recovers itself more slowly; perhaps it can hardly be built up again at all. It is unstable. With such an illustration we can perhaps refer to "molecular instability" and have it convey a just notion of a real pathological condition.

Physiology of nerve-weakness.—The nerve-centres being in the morbid condition just described, give rise to certain vital phenomena which may be described under the head of the physiology or physiological pathology of nerve-weakness.

These phenomena may be tentatively classified as follows. I would not affirm that the divisions are exact or mutually exclusive:

1. A condition of irritable weakness.
 2. A condition of absolute weakness.
 3. A condition of lessened resistance to the passage of nerve-impulses.
 4. A condition in which the higher and inhibitory centres are weakened in power or entirely "shelved off."
1. The condition of "irritable weakness"—an excellent though ancient term. If you partly cut off the blood-supply from a nerve, then irritate it, the response will be

¹ Read at a meeting of the Practitioners' Society of New York, May 4, 1883.

unusually ready but weaker than normal. The anæmia has increased the nerve-irritability. The nerve prays for blood as Romberg has said. But if you diminish the nutrition of the nerve in any way, it will pray to have its food restored. The prayer comes readily but is short and weak. So it is with nerve-tissue anywhere in the body. Conceive the nervous system to be represented by a tuning-fork with strong, thick blades. When this is struck sharply it responds with a loud and long vibration. If now the blades are worn down till they are very thin, they respond to even a feebler blow, but the response is less vigorous and lasting. So it is with this or that part of the nervous system in functional nerve-enfeeblement.

2. The condition of absolute or almost complete weakness. Here the nervous centres are really exhausted. They respond not only more feebly but less readily, or perhaps not at all. Such a complete exhaustion rarely affects the whole system, but rather certain parts, certain neuro-mechanisms. Sexual impotence illustrates it; while sexual weakness illustrates the preceding phase of irritable weakness.

3. A condition of lessened resistance in the nerve-centres, so that impulses flow over from their natural channels. A slight stimulus causes a dozen reflexes instead of a single one (as we see illustrated in nervous individuals); or a simple sensation awakens a dozen active feelings (as in hysteria); impulses pass up from the viscera or from different parts of the body into consciousness, flowing beyond their natural channels, as in hypochondria; the patient seems to feel some of the functional acts of his intestines or his liver. This condition is necessarily present in over-irritable and unstable centres.

4. A condition in which higher and inhibitory centres are lessened in power. When general enfeeblement attacks the nervous centres it affects those higher and last evolved first. Yet these have important functions in keeping order and harmony among centres below. Reason, judgment, the power of making choice being weakened, the emotions are left more active and less controlled. Such a condition helps to increase the functional disorder in nerve-weakness.

Lest you think this "shelving-off" theory (though, of course, not original with me) a somewhat fantastical one, let me give an illustration to show that we do have controlling centres: Make a cross section of the medulla of a rabbit 3 ctm. above the point of the calamus scriptorius, and the spinal reflexes below will become disorderly and demoralized. Make the section 2 ctm. higher and the spinal reflexes continue normal and orderly; you have not, in the latter case, cut off from the spinal cord its controlling centre. It cannot be doubted that there are similar regulating centres in the human body.

Symptomatology.—The symptoms pertaining to nervousness, neurasthenia, hypochondriasis, hysteria, would fill pages.

In analyzing them, it appears to me very helpful if we look upon the body as a mass of physiological machinery, of which the nerves are the motive and regulating power. For the function of the nervous system is, in a word, to set free and to regulate the energies of the body. Regarding the living body, then, as a compound of many neuro-mechanisms, we can divide them up as follows:

1. Simple and compound muscular neuro-mechanisms.
2. Sensory mechanisms, general and special.
3. Vascular, secretory, and trophic neuro-mechanisms.
4. Neuro-mechanisms of vegetative life.
5. The psychical mechanisms.

It is, I believe, unwise and confusing to attempt to separate, physiologically or even clinically, the disturbances of the sympathetic from those of the cerebro-spinal system. They are anatomically and functionally closely united.

With the above as a basis, we may make the following analysis of the chronic functional disturbances of the nervous system:

1. Irritable or absolute weakness of the simple cranial and spinal muscular neuro-mechanisms: *e.g.*, twitchings.

2. Excessive, perverted or weakened activity of the compound muscular neuro-mechanisms: *e.g.*, contractions, convulsions, paralyses, muscular weakness.

3. Corresponding disturbances of the (*a*) general sensory mechanism: *e.g.*, hyperæsthesia, neuralgia, anæsthesia, spinal irritation; (*b*) of the special sensory mechanism: *e.g.*, disturbances of sight, hearing, etc.

4. Disturbances of the vascular mechanism: flushings, migraine, pupillary disturbance, anæmias and hyperæmias of organs.

5. Disturbances of the secretory and trophic mechanisms.

6. Disturbances of the neuro-mechanisms of vegetative life: *e.g.*, cardiac (palpitations); respiratory (sense of suffocation); gastric (dyspepsia, boulimia); intestinal (constipation, insufficient secretion, dyspepsia); hepatic; sexual.

These mechanisms are for the most part compounds of some of the others, hence their distinct separation is made largely on anatomical grounds.

7. Disturbances of the psychical mechanism: loss of co-ordinative power, inability to concentrate the mind or to use it continuously, morbid fears, emotional disturbances, impaired will-power, etc.

Classification.—It would be very fortunate if we could definitely assign the various forms of nerve-weakness to their proper category. This is not possible, however, since the different forms run into each other, and it is only the most pronounced cases which can be isolated and stamped as being of a particular class and no other. Neurasthenic persons are certainly nervous; hysterical persons often show plain evidences of a general nerve-enfeeblement; hypochondriacs may be also somewhat hysterical.

I venture, however, to lay down some distinctions:

Thus in ordinary *nervousness* there is simply an increased "irritability with weakness" of some or all of the nerve-mechanisms. The sensibilities are more acute, the reflexes more active. There may be some disturbance of the bodily functions, *e.g.*, dyspepsia, palpitations, neuralgias, insomnia. But these are not permanently localized, so that they in turn act reflexly and steadily increase the general trouble.¹

In that form of disease which has been described by Beard and others as *neurasthenia*, or nerve-enfeeblement proper, we have, in addition to various general nervous symptoms, special and quite permanent disturbances of function. The brain is decidedly enfeebled in some of its functions; the condition is so pronounced that doubtless vascular changes have ensued which react upon the disease to increase it. Or the stomach or sexual organs are crippled in the same manner.

A case is not one of *neurasthenia proper* unless the disease has specially localized itself upon some organ or neuro-mechanism to such extent that the local disturbance is a *locus morbi* reacting upon the general system. The distinction thus made is arbitrary, but a useful one, and I put it forth till a better is presented.

It follows, of course, that *hysteria* is only a neurasthenia. It is, however, markedly separated by the fact that it is much more, in its clinical aspect, a brain disease, a psychopathy, although the spinal cord becomes also involved. I also believe that all the phenomena can be explained on this view. Hysteria is characterized: 1, by the excessive irritability of the nerve-centres, culminating generally in convulsions; 2, by the extreme sensibility of the sexual reflexes; 3, by enfeeblement of the higher psychical powers, the result being excessive activity of the emotions; 4, by a morbid self-concentration upon the bodily sensations. By virtue of

¹ Many persons, especially Americans, are "nervous," but are yet in good health. In these there is an increased irritability or functional activity of the nerve-centres *without the weakness*. They are nervous but have not the disease "nervousness."

her peculiar psychical condition a hysteric is constantly throwing herself into semi-mesmeric states. Hysterical spasms, pains, paralyses, perversions of sense, are very analogous to those produced artificially in healthy persons susceptible of the hypnotic influence.

Hypochondriasis is still more pronouncedly a brain disease, though sometimes only a symptom of a general nerve-enfeeblement. Here we have also some of the features of hysteria—a morbid self-concentration, a morbid susceptibility to visceral impressions. But there is not the exaggerated irritability of hysteria, nor is there so great an enfeeblement of the higher psychical powers.

I present here the provisional classification above indicated:

I. *Nervousness*.—Characteristics: A general irritable weakness of brain, etc., cord, special neuro-mechanisms not seriously and chronically affected so as to react and increase the chronic trouble.

II. *Neurasthenia* (nerve-enfeeblement proper).—Characteristics: 1, irritable weakness of nerve-centres and mechanisms; 2, or absolute weakness; 3, a localization of the disease in various neuro-mechanisms, causing special (gastric, sexual, etc.) forms of neurasthenia, which react to keep up the disease. The phenomena of lessened resistance, of enfeebled controlling centres enter into the disease more or less.

III. *Hysteria* (a neurosis and psychosis combined, but more the latter).—Characteristics: 1, a "shelving-off" of higher controlling powers; 2, greatly increased irritability (with weakness) of lower centres, especially (a) emotional, (b) spinal reflex, culminating in *convulsions*; 3, localized disturbances of various neuro-mechanisms (motor, cardiac, gastric, sexual, etc.), these disturbances being more acute, more variable, more pronounced than in neurasthenia proper; 4, special irritability of nerve-centres to sexual stimuli.

IV. *Hypochondriasis*.—Characteristics: 1, special sensitiveness (i.e., increased irritability) of emotional and perceptive centres to visceral and sensory impressions (morbid self-concentration); 2, lessened resistance and overflow of visceral and sensory impulses.

The foregoing will I fear seem somewhat recondite. It may be asked: Is there any good in knowing when a hysterical woman comes into your office that her nerve-molecules are in a too explosive condition, and that the top-centres of her brain are functionally sliced off?

It appears wise to try and see as deeply as possible into the intimate nature of disease. Thus some of the practical conclusions from the previous analyses are that over-activity of a nervous system may signify weakness rather than strength; that such over-activity in one part may mean simply that another part is weakened, the check-reins dropped; that true hyperæmia does not characterize the nerve-centres in chronic forms of nervousness, neurasthenia, etc., since it is the correlative of increased functional power.

TREATMENT.

In discussing the subject of treatment I shall refer only to the treatment of the classes which I have described as the nervous, and the neurasthenic proper. It is intended not to go over the whole subject, but having outlined certain general principles to call attention to some special measures with which I have had experience.

General principles.—The points of attack in the treatment of the neuropathies under discussion are: 1, the general condition of health and general nutrition of the body; 2, the nutrition of the nervous system and the neuro-mechanisms specifically; 3, specific medication; 4, the treatment of local sources of irritation, cerebral, spinal, gastric, intestinal, genito-urinary, vascular (this may include surgical measures); 5, mental treatment.

It is an accepted principle in the general treatment of

most chronic neuropathic disorders that there should be two periods, one in which sedatives should be employed; in the other stimulants and tonics. A nerve made over-irritable by anæmia, can be quieted by giving a drug which directly lowers the irritability, steadying the unstable molecules, or, by enriching the blood and thus removing the irritant. It is found practically that often the sedatives and tonics can be given together.

Another most important principle in treatment, is the necessity for change of therapeutic method. No drug and no special measure should be kept up continuously. There should be intermissions from all treatment if possible, and the disease should be successively attacked by various remedial agents.

A third important factor is the treatment by measures diverted to the afferent nerves, calling into play the reflex inhibitory and other mechanisms.

I present here the various therapeutic measures to be employed in the treatment of nerve-weakness in its general and localized forms:

Hygiene.—Muscular exercise, massage, Swedish movements, climate-cure, moist and warm localities, sea-voyages, simple removal from ordinary surroundings. Mental hygiene: Amusements, change from ordinary tasks, the discipline of cures and special hospital establishments. Diet: Such as is best digested, slight excess of fats and nitrogenous food.

Internal medication.—Sedatives: Bromides, chloral, paraldehyde, hydrobromic acid, lupulin, camphor, scutellaria, cypripedia, digitalis, stigmata mais, valerian, gelsemium, conium, opium, cannabis indica, asafetida, hydrocyanic acid, ergot.

Tonics and stimulants: Phosphorus, strychnine, arsenic, zinc musk, cœnanthic ether, caffein, thein, coca, salicin, quinine, alcohol. The various aromatic and simple bitters, mineral tonics, iron, act indirectly as tonics. Nitrous oxide.

Surgical Measures.

External Medication.—Tonic: *Electricity*—general electrization, faradic, galvanic, static, special electrization of intestines, urethra, sexual organs, spinal cord, brain. Nerve-vibration.

Hydrotherapy.—Tonic: Cold douches over body or spine, cool to cold baths, plain or medicated; sea or river bathing; acid, aromatic, and sulphurous baths; baths with stimulating friction, and use of oils, aromatics (myrrh, rue, savine, rosemary).

Sedative: Turkish or Russian baths; warm baths, 80° to 95°; hot baths, 95° to 120°.

Revulsives and Inhibitors.—Blisters, seton, sparks of static electricity, hot iron, acupuncture, ignipuncture, aquapuncture; cold (ice-bags); heat. Moxæ.

Regarding the sedatives which may be used in nerve-enfeeblement.

The *bromides* here take the first rank. Every one is familiar with their value. Some statements about them, however, will bear repetition. They should be given generally in larger doses than is ordinarily done, viz. gr. xxx. to gr. xl. or 3 j. The physician should understand that bromization is often the thing needed, not simply giving bromides. Bromization will secure therapeutic results, when simply giving bromides is of no effect at all. A convenient test for bromization is in many cases the production of faucial anæsthesia, so that the finger or a pencil can be thrust into the back of the throat without provoking reflexes. The bromization need not be kept up long, but may need to be repeated. It has seemed to me beneficial to put a patient through a "storm" of bromides just as is done in epilepsy.

Much larger doses of bromide can be taken and the drug can be kept up longer by giving digitalis, or cod-liver oil and iron, or coca at the same time. One patient who was only comfortable when nearly bromidized, felt less depressed while chewing coca leaves. A frail and somewhat anæmic patient of mine takes gr. xl. of bromide three or four times a day with iron, oil, quinine,

and digitalis, and does not seem to suffer seriously from bromide depression.

The most powerful bromide is the lithium salt. But this is expensive and not always obtainable. Bromides are more powerful in combination, and one of the best combinations is, I think, that devised by Dr. Beard, and known as "Bromidi comp." The formula is as follows:

R. Brom. sodium,
Brom. potass.,
Brom. calc. āā gr. x.
Brom. lithiæ gr. v.
Iod. potass gr. ijss.
Fowler's solution gtt. ij.
Tr. capsici gtt. j.
Aqua q. s. ad ʒj.

M. Sig.—One dose.

Acne is to some extent prevented by drinking large quantities of water with each dose and by the addition of Fowler's solution.

If bromide of sodium be dissolved in carbonic acid water, ʒss. to a tumbler of the water, it makes a mixture very much like Saratoga Geyser, and New York ladies will drink it with much satisfaction. It is an improvement on the bromides with Vichy, as suggested by Dr. E. C. Seguin.

Hydrobromic acid.—For a year and a half I have been using hydrobromic acid quite extensively as a substitute for the bromides.

I find that it is a sedative like the bromides, that it does not produce acne nor constipation, nor does it often disturb the stomach. It may be substituted for the bromides in milder cases, even in treating epilepsy. It is convenient, because it can be given with iron, quinine, and other tonics. The objections to it are that in order to get powerful sedative effects one must give it in disagreeably large doses. The ordinary so-called Fothergill's solution has a strength of three per cent. of the pure acid, and it is altogether too weak to have much sedative effect. The doses which I usually employ are from ℥xl. to ʒij. of the ten per cent. solution. I have given ʒij. four times a day without causing any but sedative effects.

With some persons the bromides do not act well. They will even increase irritability and cause insomnia. For these a very efficient sedative is one suggested by Dr. Beard,¹ of which the formula is as follows:

R. Fluid extract scullcap,
Fluid extract cypripedii,
Fluid extract blue cohosh,
Fluid extract lupulin āā ʒj.
Fluid extract cannab. ind. ʒjss.

Sig.—One drachm dose. The cannabis indica can be omitted.

The value of *ergot* is well known. It sometimes increases the sedative action of the bromides, especially when there is venous hyperæmia at the bottom of the trouble. In the insomnia occurring in certain cases of hypochondria, hysteria, and melancholia, and in congestive headaches, it acts when even chloral and bromides fail.

Yet on the whole, ergot has not a very wide range of usefulness in chronic nerve-weakness, and its value, given alone, according to my experience, is not great.

Caffein is not generally considered a sedative, but in the first homœopathic dilution I have known it to relieve an obstinate case of insomnia with bad dreams. In other cases it has failed.

Paraldehyde is a new hypnotic recently introduced by Cerverlo, and tested in numerous cases by Morselli. It is claimed to be an excellent and safe hypnotic, acting like chloral upon the brain, but rather stimulating the heart. It seems to be a good hypnotic, perhaps not so

powerful as chloral, except in disagreeably large doses. In two cases it appeared to have a general sedative and anodyne effect. A nervous, hysterical woman, who had been taking it, said she had not felt so well for a long time. The dose is from ʒss. to ʒij.

Hyoscyamia is not a very trustworthy drug, and need rarely be resorted to in the nervous troubles of the kind under consideration.

The oleate of aconitia and aconitia internally, but especially the former, are often very useful in relieving some of the neuralgic pains. Nothing special need be said about the other sedatives, chloral, cannabis indica, etc.

Tonics and stimulants.—Of the tonics and stimulants to the general system I have nothing especial to say. One of the best of the bitter tonics is salicin in rather large doses. A formula which is not particularly original is the following:

R. Acid. hydrobromic. dil., 10% or 3%,
Tinct. ferri muriat.,
Acid. phosphor. dil. āā ʒj.
Strychniæ sulph. gr. ʒ
Salicin ʒjss.

Sig.—One drachm t.i.d.

The drugs which especially affect the nutrition of the nervous system are the following:

Arsenic.—In cases where the nervous troubles are kept up by a prostatic or urethral irritation the following formula was used by Dr. Beard:

R. Liquor potas. arsenit. ℥ v.
Tinct. cantharid. ℥ ʒ.
Tinct. hydrastis ℥ x.
Tinct. nuc. vomic. ℥ x.
Tinct. cannabis indica ℥ x.
Aque q. s. ad ʒj.

Sig.—A teaspoonful.

I have had prepared and used in several cases the liquor brom. arsenic. of Dr. Theo. Clemens, but have not been able to get any good results from it.

Zinc.—This may be given in a formula which includes a number of the zinc salts, as follows:

R. Zinci bromid.,
Zinci valerianat.,
Zinci lactate. āā gr. j.
Zinci phosphid. gr. ʒ.
Extr. belladon.,
Extr. nucis vomic. āā gr. ʒ.
Ft. one capsule.

The belladonna and nux vomica may be added or left off in accordance with the indications.

This combination is, I think, more efficacious than the single salt, yet I cannot say that I have used it often enough to speak dogmatically regarding it.

Coca is a very useful medicine if a good quality can only be got. It temporarily brightens up a patient. It is only palliative however. Dr. Beard several times told me that it had greatly disappointed him.

Caffein, in my experience, has not been of much service as a nerve-stimulant.

Damiana I have been disappointed in. Dr. Beard told me he had found it of about as much value as so much water. Possibly samples differ. *Celerma*, in my opinion, is a humbug.

In the treatment of old-standing nervous disorders of the class in question, I have learnt that there is little to be expected from nerve-tonics. Only rarely is our work brightened by a meteoric success apparently due to these medicines alone, except the cases where there is anæmia or chlorosis, and where large doses of iron often act remarkably well.

External medication.—*Static electricity* has markedly helped cases of hypochondria, hysteria, and general nerve-weakness. It is not so useful, however, as other forms

¹ During the summers of 1881 and 1882 I took charge of Dr. Beard's practice during his absence in Europe. He kindly gave me access to his private formulae, and described some of his special therapeutic methods. Hence my frequent reference to them now.

of electricity in most cases of nervousness and neurasthenia proper.

General electrization by the faradic and galvanic currents, it is well known, acts as a tonic to the nervous system and to the general nutrition of the body. My experience is that this electrization ought to be given oftener than is usually done, *e.g.*, every day or even two or three times a day. This is the view also of many German electro-therapeutists. It is known that electricity by improving the nutrition allays irritability and acts as a sedative. But I think it is demonstrated that by the "polar method" and by special electrodes we can undoubtedly get specific sedative effects on the brain and cord at each application.

In cases of unilateral chorea I have in numerous instances applied a large stable anodal electrode to the scalp over the region of the motor convolutions, the cathode is held in the hand of the opposite and affected side. A current of two to eight Stoecher's cells has been allowed to pass for about five minutes. In this way I have produced distinct amelioration in the choreic movements lasting for about twenty-four hours.

I have not had an opportunity of using anodal galvanism of the brain alone in cases of mental irritability and weakness, but others have done so, and Althaus especially recommends the measure most enthusiastically.

In some forms of very severe chronic headache, strong anodal galvanization with the foot on the cathode will, I believe, prove beneficial.

I have had made a special electrode by which I can get the anodal effects upon the spinal cord. The spinal electrode is a long narrow sheet of brass, tempered so that its shape can be changed. This is covered with sponge. It is placed over the spine, covering the whole length, and the indifferent electrode held in the patient's hands. Before turning on the current the superficial or skin reflexes of the thorax are tested; then a strong current of twenty-five or thirty cells is passed, and the reflexes tried again. If the irritability of the spinal cord is really reduced by the anode, the reflexes which are purely spinal would be less easily elicited. This has proved to be the case in some cases but not in others.

We have, I think, in electricity, an agent by which direct sedation of the over-irritable nerve-centres can be obtained. In a case of irritable sexual weakness with premature emissions, the patient after a few applications of my spinal electrode was greatly improved, though electricity had been tried before for a long time in vain.

I have here a special appliance for the treatment of sexual nerve-weakness. It was devised by Clemens, of Frankford, and was used upon a most obstinate case of impotence, a case which had been in the hands of many prominent neurologists in New York. The patient rapidly recovered and is now a new man. This which I know to be a fact is my excuse for showing the apparatus, which apparently has a good deal of hocus-pocus about it.

It consists of a zinc cylinder made to enclose the penis, with a funnel attached so that it can be filled with Rhine wine or weak alcohol. The positive pole is connected with it, and the negative pole, which is attached to a very large electrode, is placed over the spine. It is to be used three times a day for five or six minutes, a current of five to eight cells being employed. It is supplemented with a set of magnetic apparatus which seems to be of subsidiary importance. There is no doubt that the patient gets the sedative effects of the galvanic current very thoroughly. I am at present treating a case with it. The patient, who is a very intelligent man, in fact a doctor himself, was very decidedly improved, and is indeed now almost well.

Hydrotherapy.—As a *stimulant and tonic* we administer general cool and cold baths, medicated or otherwise; general tepid baths, gradually making them cooler; local baths of various kinds; cool and cold douches, hot douches or jets, and alternately hot and cold douches or jets; baths with massage or electricity.

Cold baths increase the oxidation of tissue and thereby act as a stimulus to nutrition. They increase the flow of urine. Reflexly they may relieve congestions and inhibit pains. Cold baths act as a tonic to irritable weak nerve-centres by thus relieving congestion, improving nutrition. Cold baths are invaluable to the nervous and neurasthenic when the general system is strong enough to react.

In sexual neurasthenia, with emissions, where the irritability is more prominent than the actual loss of power, cold sitz baths once or twice a day, or cold douches are indicated.

Cold douches to the back are of help to cerebral asthenia, with insomnia, morbid fears, hypochondriasis. Persons who cannot endure cold baths at first can be made to do so by beginning with tepid or cool water, and gradually lowering the temperature. Medicating the baths with salt and alcohol, or aromatics, adds to their effect.

Warm baths.—These also may be local or general. Warm baths relax the blood-vessels, weaken the heart-beat, increase diaphoresis, lessen the amount of urine passed, act sedatively upon the nervous system. The sedation is that of exhaustion, however. Warm baths are to be used temporarily and intermittently, therefore.

I have known warm baths at night to help greatly in relieving insomnia. I have not known much benefit to come from Russian or Turkish baths.

Electrical baths furnish a good way to apply electrization. They are not in high repute among electro-therapeutists. In my very limited experience they have acted well.

Revulsives and inhibitants.—Of these, the cautery applied at the back of the neck and along the spine often gives excellent results in cerebral or sexual nerve-weakness. It stands at the head of counter-irritants.

After the cautery come blisters. Large blisters spread thin or in spots, so that they keep up a slight vesication for a long time, are one of the best forms.

Of the value of acupuncture, ignipuncture, the electric brush or moxa, the seton, I have nothing to say. If there is reason to suspect cerebral or spinal venous hyperæmia, counter-irritants ought to be freely used.

They are often also very potent in arousing dormant or enfeebled centres, or dispelling unpleasant symptoms, acting perhaps by reflex inhibition; I have, therefore, referred to them as "inhibitants."

Dry cups.—A patient of Dr. Beard's, who suffered from a most exaggerated anthropophobia, was treated for some time with little success. He went home finally, and being a mechanic, made himself a kind of air-pump with large cups attached. These he applied upon himself daily and with the result of becoming almost well. Dr. Beard had one of these appliances made and had used it considerably. At the time of his death he had an article prepared giving his results. It had helped a number of cases, but by no means all. A patient of my own—a neurasthenic with hypochondriacal symptoms—dated his steady improvement from a systematic cupping which I gave him.

Massage.—Massage alone does not give much success. It is a luxury in therapeutics. Some neurasthenics cannot endure it. The *masseur*, if experienced, can tell after a few trials whether he can help the patient.

The *Weir-Mitchell treatment* by isolation, rest, massage, electricity, and overfeeding, is oftener applicable to women than men. The majority of male neurasthenics are, I think, not benefited by it, or, at least, will not submit to it. I believe that its good results are chiefly from the psychical effects of a rigid system of eating and living.

Diet.—Dr. Beard, just previous to his death, had been studying the subject of food, and had written a chapter upon the philosophy of diet, based on the principles of evolution. In it he announced the following very original views:

"First, living beings feed on that which is below them in the scale of development.

"Second, the best food for man is that which is just below him or nearest to him in the scale of development.

"Third, food is difficult of assimilation for man in proportion to its distance below man in the scale of development."

The following propositions he also announced as verifiable: "First, the earth feeds on gases; fruits and cereals feed on the earth; the lower animals feed on fruits and cereals, and on other animals; man, therefore, should feed mainly on the lower animals, with a small proportion of fruits and cereals. Second, in proportion as man grows sensitive through civilization or through disease he should diminish the quantity of cereals and fruits and increase the quantity of animal food."

According to this theory and the doctrine of evolution the best food for nervous invalids would be as follows: beef, mutton and lamb, fowl, eggs, milk, fish, butter, wheaten bread.

In discussing the above theory Dr. Beard brings evidence to show that monkeys are good eating, that man is good food for man, and that cannibals are the strongest and healthiest of savages!

Without discussing this subject now, it has been generally admitted that a nitrogenous diet is best for those of unstable nervous energy. We can explain this from the fact that nitrogenous food has more to do with structure and nutrition, non-nitrogenous with function, or discharge of energy. In the nervous we want a food that will give more stability to cell and axis-cylinder, and not a food which feeds the function and really increases instability. To return to an old simile, the nervous system may be compared to a delicately vibrating rod fastened at one end. Normally, vibrations take place without waste of the metal of the rod, or of the tissue of the nerve. In the case of this latter, however, over-vibration, too persistent vibration, and other causes finally wear away its textures. It becomes, so to speak, thinner, weaker, yet it vibrates more readily and delicately, just as does the rod when made thin.

The object of radical curative treatment is to make the nerve more, so to speak, solid. Nitrogenous food supplies tissue to the wasted nerve, and thus helps to do this. Fatty food is also essential, because fat also is a constituent of nerve-tissue, and a help to nerve-action.

I believe, however, that too much stress may be put upon special diets, and that after all a mixed diet of thoroughly digestible and palatable food is often quite as good as a special diet, unless some special gastric or intestinal trouble be present. The nervous system is not the only thing that has to be dieted.

Mental therapeutics.—I am profoundly convinced of the prominent place of mental influence in the therapeutics of functional nervous diseases. "The most powerful single remedy that can be used in the treatment of neurasthenia is the mind," was an aphorism of the late Dr. Beard, and all experience acknowledges its truth. Witness the success of faith-cures. I have seen a hypnotic fall very nearly lifeless when told to shoot himself with a stick which he thought was a loaded pistol. This mental therapeutics is the mainstay of charlatanry and the backbone of many a genuine professional success. Some persons are spoken of as born physicians, and I conceive it is because they have the tact and skill to manipulate the *psyche* of their patients. Such skill is particularly needed in treating chronic functional troubles. "It is not everybody," says Holmes, in describing Dr. Kittridge, "that enters into the soul of Mozart's or Beethoven's harmonies; and there are vital symphonies in B flat and other low, sad keys which a doctor may know as little of as a hurdy-gurdy player of the essence of those divine musical mysteries." One must get a mental grip upon the patient, and if the patient is intractable he had better have a change of environment.

It will not do in treating the undervitalized neurotic

to scoff at his troubles, or to try and "bulldoze" his symptoms. He must be persuaded that you understand his case, appreciate the reality of his suffering, and made to feel that you can help and perhaps cure him.

The application of remedies must be made also, so that some psychical stimulus, if possible, shall be mingled with their administration. It is not an easy thing to touch the stops and strings of an enfeebled nervous system so as finally to evoke harmonies. He who succeeds is more than a specialist, he is a true physician.

DISTURBANCES OF THE SEXUAL ORGANS IN THEIR RELATION TO AFFECTIONS OF THE EYE.¹

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It has been said that every specialist exaggerates the importance of the diseases coming under his own observation and treatment. Doubtless many reasons could be advanced why this should be true. To one who had not thought over the subject of this paper, or had had little experience with the disturbances of which it treats, it could well seem rather far-fetched to trace connection between the sexual and the visual apparatus or their affections. I hope, however, to convince any skeptic on the subject that there is more than simple coincidence in the occurrence of such, and I expect to show that almost every tissue of the eye is at times subject to change produced by certain conditions of the sexual organs; from the superficial and transient coloring of the skin of the eyelids during the menstrual period of many women, to disturbances of circulation in the retina and optic nerve of so serious a nature as to produce complete blindness. The study of the subject is connected with some difficulty, and this will explain the limited literature of the subject, as compared with its importance. Patients' statements (always to be taken *cum grano*) are particularly unreliable in this class of cases. It is not easy, and far from pleasant, to ask a girl, or woman, who comes for trouble of the eyes, about the condition of her sexual organs. Even with men the seeker after truths of this description is apt to be treated as inquisitive. The patient cannot see the use of the inquiry, and is apt to avoid a doctor who asks such irrelevant questions. In all disorders of the sexual system women are much oftener sufferers than men. The functions of menstruation, gestation, and lactation in the normal, healthy woman are of such magnitude and importance in her life, as compared with the sexual functions of the man, that naturally, due to the normal and abnormal, physiological and pathological changes in these functions and organs, the female sex furnishes a much larger number of the cases to be treated of here than the male. In the statistics prepared by Dr. Ludowigs² there were, out of 5,507 eye patients treated at Dr. Mooren's clinic in Düsseldorf, in 1880, of spontaneous troubles of the eye coming on after the years of puberty, 67½ per cent. women to 32½ per cent. men. There were naturally excluded from this calculation all cases of traumatism, of which men were the most frequent victims, and also all syphilitic affections. This percentage, however, is general. In certain affections of the eye there is a much greater preponderance of women. Of Basedow's disease there were 2 women to 0 men; episcleritis, 9 to 2; deep keratitis, 20 to 5; punctate keratitis and iritis serosa, 7 to 0; myodesopsia, 21 to 8; vitreous opacities, 12 to 4; hyperemia of nerve or retina, with hyperemia of the meninges or irregular menses, 36 to 7; amblyopia and metrorrhagia, 5 to 0; asthenopia from anemia, 40 to 5.

By these figures we see women in the proportion of from two to eight to one man. Eye affections can be produced either by reflex, nervous irritation, started in some

¹ Read before the East River Medical Association, May 9, 1883.

² Arch. of Ophthal., vol. xi., No. 3.

part of the sexual organism, or by changes in the circulation; or by both in the same individual. Irritation of certain kinds in one part of the nervous system can produce reflex disturbances of various kinds in the most distant part of the organism. Given an irritation of an afferent nerve, no one can tell where the reflex symptoms shall show themselves. A man steps onto a rusty nail, which produces the slightest punctured wound of the foot. In consequence of this injury he shall have tonic contractions of his risorius, masseter, and temporal muscles, and clonic spasms of different muscles of the trunk and limbs, joined to such exquisite hyperæsthesia of nerves of ordinary and special sensibility that a draught or a noise shall bring on a convulsion. This picture is familiar enough to us under the name of tetanus, and prepares us a little more for this statement: From irritation of the genital apparatus you can have spasm of the orbicularis muscle (blepharospasm), spasm or paresis of almost any muscle of the eye proper, affections of the conjunctiva, of the cornea, of the sclera, of the iris (mydriasis), of the ciliary muscle, of the choroid and vitreous, of the retina, of the optic nerve, and of the brain. Of this last, however, I mean to speak only incidentally, as it may be necessary to illustrate my subject. Of changes in the circulation I will speak later.

Spasm of the orbicularis muscle (blepharospasm) has been attributed of late, by most authors, to reflex origin. As early as 1810 Faurel (Sedillot's *Journal Gen. de Med.*) notices spasm of the lids so often accompanying chorea. He claims that all his choreic patients were onanists. Wendt (in his book on "Kinderkrankheiten," 1835) holds the same opinion. Michael (*Graefe-Saemisch*, vol. iv.), speaking of the etiology of these clonic spasms, says: "Increased predisposition is created by excesses in *venere et Baccho*, strong excitement." Ziemssen¹ thinks the statements of these patients too unreliable to found a positive opinion as to the cause of chorea thereon. Hermann Cohen (*Archives of Ophthal.*, vol. xi., No. 4) says: "I find so frequently the note in my journal, 'Confesses excessive onanism,' in cases of chronic blepharospasm (9-12 per 1,000 in 30,000 patients) that I cannot deny the probability of the connection between the spasms and onanism." There are cases on record in which the spasm occurred only when the patient attempted to speak and was spoken to.

Diseases of the conjunctiva, usually of a most stubborn kind, are not uncommon from these causes. Förster (*Graefe-Saemisch*, vol. vii.) mentions having seen a number of such in confessed onanists, from twelve to twenty years of age. They were mainly catarrhal and trachomatous inflammations with persistent hyperæmia. In this connection he calls attention to the intractable cases of pharyngeal catarrh, so often met in patients with spermatorrhœa.

H. Cohen (loc. cit.) gives six such cases, one of which had been treated for five years by himself and others with applications of copper sulphate and other astringents. Two of these patients were commercial travellers, who noticed in the morning, after having committed sexual excesses, great redness of the margin of the lids and of the conjunctiva. I have myself seen two similar cases in young men about town. I thought, however, that in their cases the loss of sleep and consumption of champagne was sufficient to explain the conjunctivitis.

Inflammations of the cornea are very much influenced by changes in the sexual organs. Parenchymatous keratitis shows itself more frequently at puberty than at any other period of life. Mooren² relates the case of a woman, twenty-eight years of age, who had never menstruated. She had a parenchymatous keratitis since she was fifteen years of age, much aggravated every four weeks. By strong emmenagogues an insignificant menstruation was induced a few times in succession, and "she was freed of her pain and photophobia as if by

magic." I can recall the case of a French-Canadian girl, twenty years of age, under my care at the New York Eye Infirmary during my resident surgeonship there, who had a keratitis and still showed extensive posterior synechiæ (I believe she was in Dr. Derby's division). She had violent exacerbations of her trouble at each period. I had overlooked the cause at the first exacerbation, but had my attention called to it by the nurse, who saw me puzzling over it. I may say that I observed this connection closely afterward, and in order to economize time and avoid tiring you with details I can give it as my experience that there is hardly any disease of the eye, or a wound after any operation in menstruating women which I have not seen influenced, more or less, during the monthly flow; or rather just before the beginning of the flow. I have seen wounds take on such alarming inflammatory action during this period that I am very careful now to ascertain the time when this is expected before operating. I would not operate for cataract at such a time as to have the catamenia appear during the healing process; unless there were some special reason for urgency.

Mooren³ tells the case of a woman, forty-five years of age, who had a retroflexion with a tumor of the cervix uteri. When she began being treated for this her right eye became affected with an episcleritis. Every touch of the cervix and every insertion of a pessary aggravated the episcleritis. This was cured and remained so for a year. Then fresh uterine trouble brought on an episcleritis in the *left* eye, which grew worse on each local application to the uterus. I have observed a vigorous German woman, of about the same age, who had a mimic spasm of the right side of her face for years. This was complicated at times by trifacial neuralgia and a sclero-keratitis of the same side. This woman volunteered to me the statement that she had noticed severe exacerbations of the pain and eye trouble during her periods. (I presented her at that time to the Ophthalmological Society.) When I lost sight of her her spasms and eye trouble had been relieved very much, but not completely, by antirheumatic remedies and massage.

The iris is never, so far as I know, inflamed by reflex irritation. In septic or puerperal metastatic attacks, however, it is usually implicated in the purulent inflammation; which has, as a rule, its beginning in the ureal tract and extends commonly to every tissue of the eyeball and even to the cellular tissue of the orbit. There are cases, however, of such irritation in which the muscular structure of the iris is affected, either by paresis or spasm. I refer to the cases on record of mydriasis (dilatation of the pupil) which is due either to irritation of the sympathetic nerve, or to paresis of the twig supplying the iris from the oculomotorius. These cases may be uni- or bilateral. Parametritis, of which I shall speak later if the time permit, endometritis, retroflexion, and hyperæsthesia with scanty menstruation are among the causes given. While interne in Charity Hospital I treated a young woman for granular vaginitis. The pupil of her left eye dilated at times without evident cause. She had no trace of brain trouble, goitre, or aneurism, for which I examined her carefully.

Her vision was not affected at the time. I examined the eye by the ophthalmoscope; but I do not think that my experience with the instrument was sufficient *then* to make my opinion reliable. I *thought* the fundus was normal. The connection between the vaginitis and the mydriasis did not occur to me at that time. Mooren² saw one case of myosis (contraction of the pupil) in a woman, sixty-eight years of age, whose uterus had been prolapsed for years, without paralysis of the legs or bladder. She had also a slight atrophy of the optic nerve.

The ciliary muscle may be partially or completely paralyzed by irritation of the genital organs. Miss N—, ³ twenty-four years of age, practised onanism since she was

¹ Handbuch, vol. xii., 2.² Arch. of Ophthal., vol. xi., No. 3.³ Ibid.² Loc. cit.³ From Mooren, loc. cit.

fifteen years of age. Her power of accommodation has decreased from year to year. Her labia minora were unusually large, her clitoris was prominent and so excitable that amputation was advised.

A South American woman who had masturbated since her early youth had complete loss of accommodation. In both of these cases the genitals were so excitable as to give rise to great dyspnoea at times. A single woman, thirty years of age, had the same symptoms produced by intense irritation of the mucous membrane of the vulva from acne pustules and the constant scratching provoked by them. Pregnancy and lactation are held by several authors to be the cause of accommodative asthenopia. Hutchison ("Oph. Hosp. Rep.," vol. vii.) thinks it not infrequent.

The *vitreous humor* is usually affected in connection with diseases of the choroid or retina, so I shall speak of it only in connection with these tissues.

Hyperæsthesia of the retina has been observed very often in cases of parametritis. In the three cases just mentioned with deficient accommodative power this hyperæsthesia was very marked. The South American woman could hardly bear the lustre of the eyes of other persons. A fourth, a French woman, could hardly enter an illuminated room. After the cauterization of one of these sensitive, papillary swellings she had at the mouth of her urethra, and the use of bromide for some time, her eye troubles disappeared. In another woman a rupture of the perineum and descent of the uterus seems to have been the cause of hyperæsthesia and *spasm* of accommodation. She had four children, and the birth of each seems to have aggravated the condition of the perineum and eyes. A girl, twenty-one years of age, with infantile uterus was a victim of this same trouble. Mooren says¹ it is most often met with in congenital stenosis of the orifice of the uterus and can be caused by inflammation producing alteration in the shape or dimensions in any part of the genital tract.

From retinal hyperæsthesia we come naturally to *photopsia*, which may be, at times, only an increase of the same irritation. H. Cohen² records seven cases, four men and three girls, addicted to onanism. All were between the ages of fifteen and thirty-one. Each one of these gave a history of subjective perceptions of light, such as the sensation of dazzling by some bright moving figure, as a window, for instance, or bright rings, or dots, or stars, or snowflakes. In all these cases the eyes were in other respects normal, all having $V=1$, or over. In all but two both eyes were affected, and the dazzling vanished when the eyes were closed. Most of them complained of neurasthenia, insomnia, and pollutions.

Strictly speaking this need not necessarily be a retinal trouble. An irritation of any part of the fibres of the optic nerve will produce these subjective symptoms. This point of irritation may be anywhere from their peripheral expansion in the retina, along the optic tracts, the ganglia, the cortex of the occipital lobe, the cerebellum, or the olivary body in the medulla, to all of which points fibres have been traced by recent investigators. Therefore, unless other symptoms (herdsymptome) will indicate it, it is always impossible to say exactly where the point of irritation exists. I will not mention here retinitis as due to pregnancy, because usually albuminuria exists in these cases. We are certain, however, that pregnancy predisposes to both these troubles and I have no doubt every one present has seen them.

Two very interesting cases of retinal detachment (Mooren) will end my remarks on retinal troubles. In the first, a few years after marriage the introduction of a speculum, for the removal of some prominent Nabothian follicles, produced violent pain in the back and legs and obscuration of sight. Later, injections of warm salt-water produced inability to move the legs, ice-cold ex-

trémities from the hip down, objectively as well as subjectively, while the upper part of the body was very hot. She was often absolutely blind for a few minutes at a time. A large detachment of the retina was observed, and seemed to be the result. The patient had, however, before this time sclerochoroiditis posterior in one eye and exudation in the other choroid. The second patient, unmarried, had always had scanty and painful menstruation. General health good. In her right eye she had an anæsthetic retina with reduced vision and field, and a rosy injection around the papilla. The left eye showed atrophy of the optic nerve and partial detachment of the retina.

In the *choroid* we have a condition of chronic inflammation, which seems to be caused by uterine disorders. This has been denied. I have now under observation a dispensary patient with this choroidal picture, who has a chronic metritis. I can find no other apparent cause for her choroiditis. A second patient, a lady at the climacteric, who is myopic $\frac{1}{2}$, has aggravated choroiditis and vitreous opacities since her menses began to be irregular.

Now as regards the *optic nerve*, we have on record all grades of changes which seem to be produced, either by reflex irritation, or vascular changes in the uterus or ovaries. These can show themselves functionally in all degrees, from the slight narrowing of the field, or the least reduction of vision or color sense by weak illuminations, to the fulminating attacks of blindness by the sudden cessation of the menses, or a phlebitis of the central retinal vein.

Samelsohn (*Berl. Klin. Wochenschrift*, 1875) tells of a woman, twenty-one years of age, whose standing in the water with bare feet caused a sudden menostasis. She complained of an unpleasant pressure behind the eyes the same evening. Within the month she was completely blind. Samelsohn thinks it was a transudation into the orbit compressing the optic nerve. The ophthalmoscope showed engorged veins. The woman's sight returned in a week. Congestion of the optic nerve in cases of chronic uterine trouble has been observed very often. These may terminate in recovery, or atrophy of the nerve.

Since Rokitsky has made his contribution to the study of chronic congestion, it is easy to understand how a chronic hyperæmia can cause an atrophy. He describes a condition which he insists is the result of hyperæmia and not of inflammation. It is a deposit of new, gelatinous, connective tissue; which in time becomes fibrillated, then contracts, and becomes cicatricial, destroying the nerve-tissue in the course of this contraction. This process he has observed in the brain and in the spinal, olfactory, and optic nerves. If, as we have seen, the physiological flux can produce such changes in a woman's eye, it must follow that any of the chronic engorgements of the pelvic tissues and sinuses is certainly capable of producing a chronic congestion of the optic nerve. Displacement and flexions of the uterus, chronic engorgement of this organ, and the extensive venous network filling the pelvis, from inflammations or what not, can thus become causes of eye-troubles. Let us look for a moment at the venous connection between the parts. We have the spinal veins, carrying four longitudinal columns of blood the whole length of the spinal canal, from the foramen magnum to the coccyx. These veins ramify and communicate in all directions. They have no valves. They connect with the uterine and pampiniform plexuses and the ovarian veins through the lumbar and sacral veins. At its upper end this column of blood is joined to the vertebral and inferior cerebellar veins, and the occipital and petrosal sinuses.

Thus we see that the cerebral, the spinal, and the pelvic venous system of a woman is practically continuous. Hence, we have the almost universal backaches and headaches in woman, with the most trifling menstrual disorders, and, in fact, in those whose catamenia are nor-

¹ Loc. cit.² Loc. cit.

mal, as far as we can tell. We know that both the origin and the course of the optic-nerve is in great part superficial, and therefore easily accessible to disturbances from irregular circulation in the meninges. Many facts of the clinical picture have been given, although necessarily short and imperfectly.

Lastly, I desire to call your attention for a moment to the fact that Graves' disease (exophthalmic goitre) has been considered by some authorities as having its origin through reflex action in disturbances of the sexual system.

We know that women are much more subject to the disorder than men: Emmert counts one man in ten, Von Graefe makes it one in seven, Mooren one in thirteen, Geigel one in seven, Von Dusch about one in five (11 in 57.5).¹

The only writer who has these proportions reversed, so far as I have looked, is Chvostek, an Austrian army surgeon. He naturally saw more men than women. If I make a grand average of all these it gives us about one man to eight women. Laycock calls attention to the fact that old women (after the menopause) never have Basedow's disease. Other arguments are that frequently the thyroid gland enlarges in girls at the time of puberty. H. Cohen (loc. cit.) has recorded one such case in which a regularly recurring exophthalmos during the menstrual period was verified by measurements.

These facts warrant us in concluding that Basedow's disease is influenced by sex and some changes and disturbances of the sexual organs. Freund, who has made an exhaustive study of some of these diseases states that in the last ten or twelve years he has not examined a single case of morbus Basedowi in women without finding a parametritis in the contracting stage. Förster (loc. cit.) gives an account of one case which seems to show that the female sex does not exclusively show this disease in consequence of sexual excitement. The case is so extraordinary a one that I thought it would be interesting to give it here translated in full. "In July, 1866, I saw a clerk, twenty-four years of age, with exquisite morbus Basedowi. Pulse 120, strong cardiac impulse, moderate swelling of the thyroid gland, with pulsation in it, and considerable protrusion of both eyeballs. The last symptoms brought him to me. The symptoms dated back three weeks, and appeared suddenly. He gave the following history: 'About the middle of June he struggled for about half an hour with a girl in the effort to have connection; but her energetic resistance prevented the consummation. He so overexerted himself with this effort that he finally felt very faint and had to take several glasses of Madeira to restore him partially. The violent heart action which began during the struggle has continued since. Two days later he first noticed the prominence of his eyes, which has steadily increased since then.' Both epididymes were painful and swollen. Professor Freund, who also examined the patient, corroborates this. Quinine, in large doses, was ordered and moderation in the exercise of the sexual function advised. The patient departed and presented himself again nine months later. He stated that the exophthalmos and violent heart action had gradually subsided after taking about 9.00 of quinine. However, in October (four months after the first appearance), the former, and in December (six months), the latter symptom had begun to show itself again. I found in April, 1867, essentially the same condition as in July, the exophthalmos even increased. The patient looked well, felt strong, and had retained a good appetite. No sign of anemia had developed. The inquiry into his sexual behavior was evidently disagreeable to him. He went off and I have not seen him again."

Finally, gentlemen, I should have liked to say something about a most troublesome class of cases, which are the terror of ophthalmologists. If I were to undertake

to tell you a tenth of all the symptoms of which they complain, I should have to detain you too long. The most careful examination rarely shows objective basis for the violence of the symptoms complained of. Phobias, pain on using the eyes, pains in various parts of the eyes and orbit, changing in character, but always of the most hyperbolic severity, inability to wear their glasses, etc., are at the bottom of the long tale of woe. These pains are never so severe as to prevent attendance at the theatre or ball and rarely intrude themselves when there is pleasant company in the house. The name of the disorder is kopiopia hysterica. For fear it should prejudice you against the female sex I will read you a case from Förster (loc. cit.) in your own sex. "A married man, thirty-seven years of age, with a long list of the most pronounced symptoms and no lesion to explain them, admitted that his sexual capacity had very much decreased. Coitus barely once a month, never a firm erection, immissio penis always problematical, ejaculation usually took place without it. The man had strikingly small testes and a thin, milky discharge from the urethra." Förster says that this case is not single, only that the patients' statements are usually unreliable on the subject. He suggests that one obtains more reliable data from their wives, who seem more carefully to note the difference between the past and the present. Kopiopia hysterica in women is almost always connected with a lesion in the pelvis; which Prof. Freund, who first noticed it, and who gives a most interesting clinical and pathological picture of it in his publications, calls "parametritis chronica atrophicans." I can do no better than to close with a quotation from Mooren: "According to my own experience," says he, "I would say that of all the eye affections of choroid, retina, optic nerve, etc., there are none which are not influenced either by the normal or pathological workings of the uterus."

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AN ERYTHEMATOUS ERUPTION FROM CHLORATE OF POTASSIUM.

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THE subject of "medicinal eruptions" has received considerable attention during the past few years, and at the hands of several writers has been exhaustively presented.¹ The excuse, therefore, of reporting fresh examples must lie either in the fact that the observation is one respecting a drug heretofore unsuspected, or that the eruption is characterized by unusual features. So far as I can ascertain, the chlorate of potassium has not been recorded as capable of causing cutaneous disturbance, and the former reason, therefore, is answerable for this communication. The patient—a male—in whom the eruption was observed was suffering from secondary syphilis, and had been under treatment for several months. The symptoms of the disease were of a mild type, and treatment had consisted in the administration of small doses of the corrosive chloride of mercury. About this time a few mucous patches showed themselves in the mouth. The stick of nitrate of silver was used, and tablets of potassium chlorate ordered, several daily; these were to be allowed to dissolve in the mouth slowly. Four days later the gentleman returned, much annoyed and worried concerning a fiery erythematous and papular eruption, which had made its appearance over the trunk and neck, especially well marked on the upper part of the back. There were no subjective symptoms. The eruption was similar in character to that of erythema multiforme, and of this nature I was inclined to

¹ Behrend: Zur Allg. Diagnostik der Arznei Ausschläge; Berlin, klin. Wochs., p. 714, vol. xvi., 1879. Morrow: On Drug Exanthemata; N. Y. Med. Jour., p. 224, vol. xxxi., 1880. Van Harlingen: Medicinal Eruptions; Arch. Derm., p. 337, October, 1880.

¹ Sattler in Graefe-Saemisch, vol. vi;

consider it. The possibility of its being due to the mercury was entertained, but as this had been taken off and on for several months without any such result before, and as, moreover, the dose had been very small, the idea was dismissed. At this time, the potassium chlorate, as a cause, was not even considered. Treatment with the mercury was continued. The tablets had all been used, and as the mucous patches had disappeared they were not renewed. In two days the eruption was gone. Six weeks later several mucous patches were again seen. These were cauterized and attention called to renewing the tablets. Three days afterward the patient returned with an eruption the same in character as before; the trunk and neck were involved, and several slightly raised erythematous spots were seen on the legs. The chlorate was immediately suspected, and its discontinuance ordered. In less than forty-eight hours the eruption had subsided. Since this outbreak the patient has, at my solicitation, twice used the tablets for a few days, and at both times its action on the skin followed. The tablets consisted of five grains each, and it required but fifteen to twenty to call forth the eruption. A similar rash has been recorded as occasionally following the use of mercury. The case here mentioned has suggested the idea that, in some of these instances, the eruption may have been due to the chlorate of potassium: as is well known, this is frequently employed to modify or lessen the action of the mercury on the mouth, and also for the purpose of influencing mucous patches. At all events, this possible action of the chlorate, as related in the above case, is well worth bearing in mind.

SURGICAL FRACTURE OF THE FEMUR.

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A SHORT time after the close of the late civil war the Surgeon-General of the United States army directed to be made to him army surgical reports of cases that might be of sufficient importance to incorporate into the "Medical and Surgical History of the War of the Rebellion." Of the number of cases I reported, whether from some oversight or of a disapproval of the surgical treatment of the case, my report of a surgical fracture of the femur did not make its appearance in the work among the operations of the lower extremities.

As the case was one of a formidable nature, and attracted at the time the attention of surgeons of both armies, I deem it of sufficient interest to place it on record, even at this late day.

In 1862-3, when in winter quarters at Buckhannon, W. Va., some of the surgeons of the brigade directed my attention to a Sergeant P—, of the First Virginia Infantry, who was shot with a musket-ball, through both thighs, fracturing the right femur, a little below the lesser trochanter, the ball being lost in the same limb. The case was generally considered as a suitable one for amputation at the hip-joint. As I had performed that operation a few years previously in civil practice, the patient was advised to place himself under my care. Following this advice he sent for me, requesting my services. Although he was confined at his home, about fifteen miles outside of our lines, from the general interest that was felt in the case I concluded to run the risk to reach him and perform the operation. It was strictly a volunteer duty, as the patient was never officially assigned to me.

By the aid of a guide I reached my patient in safety. I was there met by a neighborhood physician. I found the patient in bed, much emaciated, with the right thigh enormously distended and here and there perforated with fistulous openings. The ball passed through the left upper thigh (inflicting a wound that had healed up when I saw him) and penetrated the right thigh at Scarpa's triangle and fractured the femur.

He was wounded in a skirmish with the enemy, nine

months before the time I saw him. He fell into their hands and was examined by quite a number of their surgeons, but from the unfavorable prognosis of the case, no operation was attempted. His friends finally got permission to take him home, and to do so he was carried one hundred miles on stretchers. Not long afterward he was taken to a United States hospital at Wheeling, Va. Here, according to the patient's statement, he was examined by more than fifty visiting surgeons, and they, like their Confederate *confrères*, deemed it best not to operate on him, and under unfavorable prognosis he was held under a strictly surgical conservation. He gradually got weaker, as the suppuration and inflammation extended itself in the leg, and was finally permitted to return to his home.

Taking into consideration the condition of the patient I concluded not to amputate, but to enter into a dissection in search of the ball. By a careful palpation, I detected an ill-defined fluctuation, anterior to the upper third of the thigh. It took in a space nearly the size of my hand. The patient was placed under the influence of chloroform. I made here an incision in line with the femur into the deep fasciæ, and entered a large abscess. I carefully removed its contents, which was about a pint of sanious pus and a few spiculæ of bones that had exfoliated from the main bone. With my fingers I carefully explored the parts in search of the ball, and finally passed my finger into a sinus that terminated on the outside of the femur, where I detected by the touch a sharp projection of the ball. From the lower end of the longitudinal incision I made a transverse incision to the right, about six inches long. This gave me ample room to reach the ball and the necrosed bones. These incisions had necessarily to be extensive to correspond with the morbid enlargement of the limb. I applied bullet-forceps to the ball and made firm traction for its extirpation. But it was so firmly imbedded in ossification that I could not move it in the least. Persisting in my efforts to get it out, I broke and bent two bullet-forceps in the attempt, which were all the instruments of the kind I had with me. Here a painful crisis presented itself. There was but one question at issue, and that was that the ball and all foreign material in the limb had to come out and, owing to the condition of the patient, very quickly too.

To meet this terrible emergency I placed my left knee as a fulcrum under the hip-joint, or rather somewhat a little in advance of it, and struck the knee of the affected limb a sharp, firm blow, causing a fracture of the bone at the place where the ball was imbedded. This surgical fracture was easily effected at the proper place, owing to the presence of the ball and necrosed bones. I was now able to pick out with my fingers the ball, which was in two pieces, very much flattened out, and with the same facility removed all necrosed bones. I cleansed with care the entire wound with tepid water, and closed it up as the patient emerged from the influence of the chloroform, thus giving him more or less pain to favor reaction. Drainage from the cavity of the abscess was established, and to the outside of the wound I applied light compresses saturated with a weak solution of Labarraque's disinfecting liquid. The shock that followed the operation gave us much anxiety. For many weeks he was in a most critical condition, but being kept under a stimulating and sustaining treatment, finally convalescence was established, though long and tedious.

The cure terminated with considerable shortening of the limb, as might be expected, both from the original gun-shot fracture and the subsequent surgical fracture that was treated by position and not by splints. As I left the patient in an extremely exhausted condition, barely alive, so to speak, I advised the attending physician not to resort to splints, but to maintain the limb in the best and easiest position he could with the least tax to the patient. It was the life of the patient we struggled to save, and not the limb at the risk of life.

Progress of Medical Science.

THE INFLUENCE OF THE ELECTRIC LIGHT ON THE HUMAN EYE.—In discussing the value of any particular source of artificial light, says Professor Mauthner (*Wien. Allgem. Med. Zeit.*, No. 10, 1883), three qualities should be especially regarded: 1, the steadiness of the light; 2, the strength of the light; 3, its composition. From its complete failure in point of steadiness, the arc-light must be at once rejected from the category of lights suitable for the human eye. The incandescent lamp, on the other hand, deserves a prominent position. As regards its strength or intensity, it also fulfils all requirements, since it can be modified or intensified at will. The composition of the lights habitually used hitherto has shown a preponderance of yellow rays. In the electric light, however, the short-wave rays predominate—i.e., the violet rays. To the human retina, blue or violet tints are more agreeable than yellow, and hence from its composition, as well as from its steadiness and adaptability, the light of the incandescent lamp is especially adapted for the use of the human eye. Distinctness of vision and the perception of color are both increased under the electric light—facts which might be theoretically held to involve an overstrained retina. Such a theory is not, however, borne out by practical experience; it is only where the light employed is unsteady that any ill effects have been observed. It may be considered as an established axiom, that the brilliancy and composition of any light are as nothing, in respect of its value as an illuminating medium for ordinary uses, compared with its constancy and steadiness. In the incandescent lamp no combustion takes place, and hence no consumption or vitiation of atmospheric air is induced. From a theoretic point of view, therefore, no objection can be raised against the use of the incandescent electric lamp. Its full value as an illuminator is, however, not yet ascertained.

AEDOMINAL INUNCTION DURING PREGNANCY.—Dr. Burke, in the *New England Med. Monthly*, says: "In the last three or four months of pregnancy all women suffer discomfort from the distention of the abdominal walls, which I have found greatly relieved by the free use, at least once a day, of some unctuous material, as vaseline or sweet lard, and in many cases the formation of the lineæ albicantes is prevented."

THE SECRETIONS IN MORPHIA POISONING.—Dr. Marmé, of Göttingen, communicates (*Deutsche Med. Wochens.*, April 4th) a paper on his investigations of the urine and other excretions in morphia poisoning, undertaken partly on patients, partly on animals. He finds that morphia can be recovered unaltered from the urine when the amount taken is not less than one-seventh grain daily. When larger doses are taken, it is found also in the fæces. Instead of morphia, Dr. Marmé sometimes found "oxydimorphin" in the excretions and in the tissues, and he found by experiment that this substance was present when a poisonous dose had been administered in very small quantities at a time, and the symptoms resembled those of the abstinence stage of morphia intoxication. From his experiments Dr. Marmé has formed the opinion that morphia may be left off suddenly in very strong well-nourished individuals, but that in weakly persons it is necessary to diminish the dose gradually.

EXTIRPATION OF THE LARYNX.—Dr. Müller reports upon this subject in the *Gaz. Méd. de Strasbourg*. In April, 1881, extirpation of the larynx was performed by Professor von Winiwarter for an adeno-carcinoma of the larynx, with diffused epithelial infiltration. There was no return eleven months after the operation. The patient did not use her artificial larynx, finding that deglutition was impeded thereby. She wore a fenestrated tracheal

canula, communicating by the opening with the pharynx and provided with a mouth at its external orifice. She breathed quite freely and could swallow both liquids and solids with ease. Articulation was almost without sound, but was sufficiently distinct for her to be heard and understood. Of the forty-three cases of extirpation of the larynx hitherto published, thirty-two have been undertaken for carcinomatous, six for sarcomatous growths, and two for tertiary syphilis. Of the six performed for the removal of sarcomata in only one has the growth returned, the other patients up to this time having remained free six years, two years, seventeen, fifteen, six, and four months respectively. In the removal of carcinomata the prognosis is less favorable; of the thirty-two cases published, there are only two in which the patient has remained free eleven months, the frequency and rapidity of the return being almost always due to the great extent of the lesion and invasion of the neighboring parts. The mortality, moreover, is much influenced by septic pneumonia, this having been the cause of death of nearly all the patients who have succumbed in the course of the first few days after the operation. To avoid the entrance of foreign bodies into the air-passages, Dr. von Winiwarter brings the anterior wall of the œsophagus over and in front of the trachea, and fixes it with sutures to the cutaneous wound. To avoid septic pneumonia, the parts are dressed with iodoform and covered with iodoform gauze. Practised early, in the absence of glandular infiltration, and with the employment of iodoform to remove the danger of septic pneumonia, extirpation of the larynx would appear to be a more hopeful procedure than is generally supposed.

NITROUS OXIDE AS AN ANÆSTHETIC IN LABOR.—Dr. Tittel gives a report (*Wiener Med. Blätter*, March 15th) of over fifty trials which he has made of the inhalation of nitrous oxide gas in parturition. He employed it chiefly in primiparæ with very severe pains, and found a diminution of the suffering in every case. He found it acted better when given in the first stage, as its effects lasted into the second, and quiet inhalation was more difficult when it was attempted to be given in the second stage. The pulse was generally retarded, and the foetal pulsations, on the contrary, generally accelerated. The pains were in many cases increased in strength and frequency, and Dr. Tittel found this action of the gas very serviceable in multiparæ with few and weak pains. Vomiting was arrested in four cases by the inhalation of the gas, and the only evil results which were observed were two cases of convulsions, one hysterical and the other true epileptic.

MELÆNA NEONATORUM.—Dr. Epstein, of Prague, discusses this subject in the *Allgem. Wiener Med. Zeit.*, and points out that the occurrence of hemorrhage from the stomach and intestines of new-born children is by no means uncommon. He considers that a distinct disposition to hemorrhage from various organs must be recognized as belonging to the first few days of life. This disposition is made manifest or increased, when either disturbance of circulation, or disease of vessels, or of the blood itself, is present. The notable alteration in the circulation which takes place at birth must therefore be regarded as a principal cause of the hemorrhage, and especially in cases of protracted labor, or of children born in a state of partial asphyxia, or of weakly children with atelectasis of the lungs. Various conditions have been found in the gastro-intestinal mucous membrane: hyperæmia, hemorrhagic erosions, ulcerations, and actual hemorrhage. In many cases, where the mucous membrane of the stomach has been found sprinkled with small ecchymoses, small rounded ulcers have been discovered; and these have by some authors been regarded as the real cause of melæna neonatorum, the ulcers themselves being brought about by thrombosis or embolism of the gastro-duodenal vessels, secondary to thrombosis in the umbilical vein. This is probably, however, the

rarest cause for the hemorrhage; the most common cause being the hyperæmia and temporary congestion of the finer capillary vessels. Although ulceration may take place with extreme rapidity after birth, it would appear that it is usually of intra-uterine origin; and several cases are recorded where such ulceration has led to actual perforation of the intestine or stomach. Another group of cases is formed by those of children infected with septic diseases or the subjects of hereditary syphilis. In the latter cases the hemorrhage may be the only evidence of the disease, the liver being found free from any syphilitic mischief. In the cases in this group, the prognosis has been clearly shown to be unfavorable. About half of the cases end fatally, and the immediate cause of death is usually the hemorrhage itself. A few cases, however, recover with marked rapidity.

CERVICAL PACHYMEINGITIS.—Charcot (*Le Progrès Méd.* No. 19, 1883) describes a case of paralysis due to cervical pachymeningitis. He points out that such cases pass through three stages: 1, the neuralgic period, characterized by severe pains and sense of constriction in the chest, a stage which lasts four, five, or six months; 2, the paralytic period in which paralysis occurs, accompanied by muscular atrophy; and 3, the spasmodic period, in which the lower limbs are affected by a spasmodic paraplegia, the result of a transverse myelitis with descending degeneration of the lateral columns. The pathology of this affection is an inflammatory thickening of the dura mater, which may involve to some extent the nerves passing through it and the adjacent end, but in the main the symptoms are due to the compression of the inflamed membrane. Such cases occur independently of any diathesis or specific cause, often as the result of living in a damp place. Ultimately recovery may take place. In the case quoted this occurred partly spontaneously, partly as the result of treatment which chiefly consisted of the actual cautery over the seat of the disease. Afterward there remained great contraction of the hamstring muscles, but these were divided subcutaneously, and by electricity and friction the patient recovered so far that he could walk about the hospital and go the distance of a mile without much fatigue.

LAPAROTOMY IN THE NEW-BORN.—At a recent meeting of a medical society in Vienna (*Wiener Med. Blätter*, Dr. Felsenreich showed a child, two weeks old, on whom he had performed a radical operation for the cure of umbilical hernia. The birth had been easy and natural, and the child itself was strong and healthy, with no other malformation. A tumor of the size of a lemon was situated in the abdominal wall, the umbilical cord being attached to its summit. The separation between the recti muscles was eight centimetres long and four centimetres broad, and contained intestines and the margin of the liver. Twelve hours after birth the operation was made in the usual way, the hernial sac being attached to the edge of the skin-wound, which was closed by twelve silk sutures, and dressed with iodoform. The operation was completed in twenty minutes, without much sign of pain on the part of the child, which took the breast immediately afterward, and had a normal stool on the second day. The progress of the case was very satisfactory throughout, although the healing of the skin was somewhat slow.

INVISIBLE CUTANEOUS PERSPIRATION IN HEALTHY AND FEBRILE CHILDREN.—Dr. Eckert, in the *Pratch*, publishes the results of her observations on thirty healthy children from two to fourteen years of age, and on twenty-seven suffering from various febrile diseases. The age of the febrile children varied from eighteen months to thirteen years. The conclusions at which the author has arrived are summed up thus: *a. For healthy children.*—1, invisible loss of water by the skin in children proceeds with greater energy than in adults; 2, the loss is greatest in children of younger age (under five years), and gradu-

ally becomes less as age, height, and weight advance; 3, all conditions being equal, any rise of barometric pressure increases loss of water by the cutaneous surface, while any increase of the humidity of the surrounding air inhibits invisible perspiration. *b. For febrile children.*—1, in the febrile state invisible perspiration is augmented; 2, in enteric fever, the greatest loss of water by the skin coincides with the period of maximal mean daily temperature, afterward invisible perspiration decreases with the fall of febrile temperature, and in the period of convalescence it descends considerably below the normal level; 3, similarly, in the course of relapsing fever, there is observed more or less considerable increase in invisible perspiration during the attacks; having reached its maximum at the time of crisis the amount of evaporation rapidly falls, though during the first twenty-four or thirty-six hours after the crisis it remains still rather increased above the standard. During the apyretic intervals and after the termination of the disease cutaneous loss of water falls below the usual level; 4, in scarlatina invisible perspiration is considerably increased.

TROPHIC DISTURBANCES OF THE SKIN IN ATAXIA.—Drs. Ballet and Dutil report (*Le Progrès Médical*, No. 20, 1883) three cases of a sort of ichthyosis of the skin of the anæsthetic or hyperæsthetic regions in tabes. The skin was usually reddened, lax, thrown into folds, and the epidermis was increased in amount and sometimes desquamating. They summarize these results in the following propositions: 1. In tabes we may observe permanent trophic disturbances of the cutaneous system. 2. These trophic disturbances are very different in appearance and evolution from those hitherto described. The skin-eruptions (herpes, etc.), ecchymoses, and even perforating ulcer, are the effects of simply transient and accidental phases. Ichthyosis is, on the contrary, a dystrophy of slow evolution, apparently progressive, like the lesions of bone. 3. This dystrophy is manifested by a kind of thickening of the skin, with more or less deepening of its color, laxity of the integuments, desquamation of the epidermis, the *débris* of which sometimes accumulate so as to form true scales on the surface of the skin. 4. The regions in which these changes are observed are also those in which marked disturbances of sensation may be found, lightning-pain, anæsthesia, hyperæsthesia to cold, to pricking, sometimes to simple contact. The extremities are the parts generally attacked. The skin of the back of the hand may come to resemble the skin in pellagra. 5. The loss of the nails and their alterations, as described by Joffroy, Pitres, Roques, and Dorneaux-Juron, seem to be examples of this cutaneous dystrophy, affecting the matrix of the nail.

GALIUM APARINE AS A REMEDY FOR CHRONIC ULCERS.—Dr. Quinlan (*British Medical Journal*) has treated cases of chronic ulcer with great success, by means of poultices made from "Cleaver's" (*galium aparine*). It has been, he states, used with the most marked success in the following manner. Grasping in the left hand a bundle of ten or twelve stalks, with a scissors held in the right hand, the bundle is cut into pieces about half an inch long. These are thrown into a mortar, and pounded into a paste. This paste, which has an acrid taste and slightly acrid smell, is made up into a large poultice, applied to the ulcer, and secured with a bandage. It is renewed three times a day. Its action appears to be a slight, steady stimulant, and powerful promoter of healthy granulation. Its effect in one most unhelpful case was decisive and plain to all. Healthy action ensued, and has since steadily continued: and, after a month of treatment, the two ulcers have been reduced to considerably less than half their original size. A difficulty at once suggests itself as to its general employment, viz., that in winter and spring it is not to be had at all. It appears, however, that this difficulty can be effectually met by the method of ensilage, by

means of which green food for cattle has for the last few years been kept perfectly sweet and fresh by burying it in silos under the ground. This plan is generally known, but all particulars about it can be learned in the pamphlet of Mr. Thomas Christy, F.L.S. (Christy & Co., 155 Fenchurch Street, London, E.C.). In the case of the galium, the process would consist of cutting the herb very fine, ramming it down by screw-pressure into a glazed earthenware jar with an air-tight cover, and burying it in the ground. Thus secured from air, moisture, and heat, it would be likely to keep through the winter. This plan, if successful, might be extended to other pharmaceutical herbs; for Dr. Quinlan has always had the idea that green herbs are more powerful than dried ones. Indeed, the late Mr. Donovan, of Dublin, used to maintain that, to make tincture of digitalis properly, the alcohol should be brought to where the foxglove was growing, and the live plant plunged into it.

IMPERFORATE HYMEN PERSISTENT IN LABOR.—In the *British Medical Journal*, May 12, 1883, Dr. Edwards describes the following case: At 11 P.M., April 25, 1883, he was called to see S. O——, primipara, aged thirty-two, said to have been in labor since Monday morning, the 23d ultimo. He found the patient suffering from severe "pains." On digital examination, he was somewhat surprised to find that the orifice of the vagina was completely closed by a tough membrane. Anteriorly, it was comparatively thin, and attached to the edge of the vaginal orifice, whence it sloped gradually backward until, at the posterior wall, it was attached an inch and a half from the orifice. Here it was very thick, and gave the same sensation to the finger as the walls of the vagina itself. The foetal head could be easily felt through the tissue, which was perfectly lax, resisting all efforts at rupture with the finger. Having decided to give the uterus time to do its best, he left, calling again at 4 A.M.; but, though the pains had been strong and frequent, things were much in the same condition. By sawing with the nail at the thinnest part, he eventually got the end of his finger in, and tore the hymen by drawing the finger backward, until about half way across, but he could not manage it farther. He then waited an hour, in the hope that the remaining half would not be sufficient obstruction to delivery; but, "pains" becoming short and slight, he put on a forceps, and delivered without difficulty. The patient went on satisfactorily. This case is medico-legally interesting, as showing that one single act of copulation, in spite of the seeming difficulties of the case, sufficed for impregnation.

CYSTOTOMY BY A MODIFIED LATERAL METHOD.—Mr. Reginald Harrison writes to the *British Medical Journal* that the selection of a method for opening the bladder should have reference only to the object to be attained, or the contingencies that may arise. If, for instance, we desire merely to introduce the finger into it, as a preliminary to extracting a small stone, the median operation answers perfectly; while, if a larger stone, or an unknown quantity of anything has to be dealt with, the lateral incision will, as a rule, be preferable. It has been advanced by those who favor the median incision, which is practically an urethrotomy, that it is both simple and safe; its admitted disadvantage lies in the comparatively small space it provides for manipulating and extracting; while, on the other hand, the lateral incision, though affording more room, is considered to be attended with an increased risk and a greater degree of difficulty, so far as its performance is concerned. The median operation need not necessarily involve anything more than the opening of the membranous urethra. The completed lateral operation further includes the division of structures constituting the neck of the bladder; and it is to this part of the proceeding that any increased risk or difficulty is to be attached. A little reflection shows that it is possible to closely assimilate the lateral with the median operation, that is to say, to dispense with the incision, not to the

staff, but along the staff, should it be found, on exploration with the finger, that the additional room which the latter part provides is unnecessary for the object in view. It need hardly be said that this modification of the lateral method, where it is found, on digital exploration, to be feasible, frees the operator from executing the only portion of the operation to which any increased risk is attached; while, on the other hand, he has the consciousness that, should it turn out to be necessary, he can, by the completion of the deep incision along the staff, avail himself of all the advantages which are conceded by surgeons to the lateral method of opening the bladder.

THE OXYTIC ACTION OF QUININE.—Dr. Hartigan, in the *British Medical Journal*, June 2, 1883, says that, in three different cases he had to discontinue the use of quinine, because it brought on "labor-pains," though the doses used were small, varying from three to five grains. In one of these, during a previous pregnancy, another medical man used quinine, and discontinued it for a similar reason. All three were in fair general health, suffering only from slight malarious fever, and had never aborted. One case has come under his notice in which abortion took place, without apparent cause, after a ten-grain dose of quinine. The patient was the mother of several children, had not previously aborted, was in good health, and took the quinine to cure facial neuralgia. This action of the drug is known to the Chinese, who take it for the purpose of producing abortion, following its use by copious draughts of hot tea. Quinine certainly, in some cases, increases the menstrual flow.

HYSTERICAL TRANCE.—Dr. Rosenthal reports an interesting case of hysterical trance in which a country practitioner declared death to have ensued. A looking-glass held to the mouth did not show any moisture, and melted sealing-wax dropped on the skin caused no reflex movements. Rosenthal, who was accidentally present, found the skin pale and cold, the pupils contracted and insensible to light, the upper and lower extremities relaxed, the heart's impulse and the radial pulse imperceptible. Auscultation, however, showed a feeble, dull, and intermittent sound in the cardiac region. No respiratory murmurs were audible. All the muscles of the face and extremities responded well to the faradic current. Although the patient had been apparently dead for thirty-two hours, he thereupon informed the relations that it was only a trance, and recommended that attempts at resuscitation should be perseveringly followed. On the following day he received a telegram to say that the patient awoke spontaneously twelve hours afterward, and gradually recovered her speech and movements. Four months afterward the patient called upon him, and informed him that she knew nothing of the commencement of her attack of lethargy; that she had afterward heard the people about her talk of her, but had been utterly unable to give the slightest sign of life. Two years afterward she was still alive and tolerably well. Rosenthal appropriately likens this condition to that of "nightmare," where, in spite of distressing sensations, the dreamer is unable to call for help or to make any movement which might save him from some imaginary impending danger.

EFFECTS UPON LOCAL TEMPERATURE OF NERVE-STRETCHING.—Dr. Redard has determined, from experiments upon dogs and rabbits, that the temperature of a leg falls 1° to 2° C. immediately upon stretching the sciatic nerve. Exceptionally there is at first a slight rise, followed speedily by a lowering of the heat of the part. It is worthy of note that the temperature of the opposite leg also falls slightly, a fact which would go to show that nerve-stretching exerts some influence upon the central nervous system. The temperature of the sound side rises to the normal in a few days, while that of the other side requires months for its restoration.—*Centralbl. für Chirurgie*, April 21, 1883.

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CONCERNING HOSPITAL INTERNES.

THE letter of a late resident in one of our metropolitan hospitals brings up some questions which are not often discussed. They are eminently proper ones and can be viewed consistently from several stand-points. There is no doubting the fact that the relations at present existing between the visiting and house staffs of many of our large charities could be much improved by a better appreciation of mutual obligations.

It is too often supposed by the visiting physicians and surgeons that their whole duties are performed when the patients are simply prescribed for, and the necessary directions to such an end are given to the resident. By a large majority of men holding hospital appointments little else is done. The consequence is that the house staff becomes careless, apathetic, and shiftless. There is not that interest in the cases which they would, under other circumstances, gladly feel, not that incentive to study, which is always associated with the reception of new ideas with the opening up of new fields of inquiry. An interesting practical teacher always develops earnest and energetic learners. The steel and the flint are made for each other, and when each fulfils its function there is no trouble in getting the spark. But there are men in this city who occupy positions in some of our large hospitals who make no pretence at teaching; who feel no more concern for the resident than for the chief nurse. Hence the cause for just complaint on the part of our correspondent. The interne has a right to feel that something is due him in the way of practical and painstaking instruction at the bedside. There are many ways of doing this, but the nearer the student can get to the patient the better. There is nothing like feeling disease, so to speak. The house staff should have the fullest opportunities for this sort of study at the bedside, and under the direction of the attending physician or surgeon. It should be an education of the senses as well as of the intellect. As no one can get too much of such training nothing can be wasted on the student. No one feels a pulse intelligently, listens to a râle or murmur, appreciates a crepitus, recognizes a cast, passes a catheter, or even opens an abscess without learning something more each time. But how few of our hospital teachers care to take this trouble goes without the saying. There is altogether too much catering to the ordinary medical student, too much ambition to feed large clinics, too much of a desire to secure interesting cases for the amphitheatre to

allow of that more practical and profitable teaching in the ward, and in actual contact with the patient, which every student who wishes to treat disease finds sooner or later to be a fundamental necessity of his medical education. When so much is done by wholesale and long range, when patients are seen only through an opera glass, and the student merely told what he should hear and see, there is, of course, considerable difficulty in bringing the producer and consumer together. But the hospital interne has gone through this kind of instruction, he knows how little there is in it, and has a right to ask for better opportunities.

We should be sorry to say that this neglect of the internes was the rule, we hope it is not. We know that there are many hospital teachers who are doing this kind of teaching quietly and efficiently, and with very satisfactory results. But on general principles the foundation of the complaint of the ex-resident is a good one, and there is a great chance for the necessary improvement. The show of benefits is retroactive all around. Patients are better cared for, visiting physicians and surgeons become more attentive, internes more zealous, science more advanced, and the reputations of the hospitals better established.

It is not our intention to do more than allude to one or two points in the ex-resident's letter. Certainly a very important one is that which refers to the necessity of giving necessary instruction to gentlemen who are to administer anæsthetics. We are surprised to learn that this is not done more universally. To know how to administer an anæsthetic properly is high art. It requires knowledge in the first place and experience in the second place. From all accounts, those who administer anæsthetics, have as a rule neither of these advantages. Next to that of the operator himself, the administrator of ether or chloroform has the greatest responsibility of any around the table. In view of this fact, acknowledged by all experienced surgeons, it is certainly strange indeed that the junior assistant should be selected for this duty and that too without any other instruction than he can pick up from his own experimental endeavors. This certainly should not be. The most experienced man of all should be selected for this duty; in fact it would be wiser and better to have an anæsthetizer attached to each hospital. But the least of all that can be said when nothing better can be done, is that the juniors should be most carefully instructed before being intrusted with lives of patients during the critical periods of formidable surgical operations. And yet such is done in almost every large hospital in this city, and under the eyes of the most experienced surgeons. One is almost made to think that the administration of ether is a matter of very little consequence, that deaths do not occur from carelessness, and that the patient has little if any right to careful and skilled treatment during a time of utter helplessness and dangerous probabilities. Our correspondent does not put the case a whit too strongly, in urging a radical change in our ordinary methods of ether administration.

THE PROFESSION'S GREATEST NEED.

IF we were to ask the average practitioner in city or country what was the greatest single obstacle to his progress, he would doubtless say, a field too much occupied. It is the constant appearance of new men,

young, eager, and hopeful, which cuts off here and there the extension of his practice, and which threatens to narrow down that which he already possesses.

Protection against a horde of superfluous rivals is what the general practitioner, who is himself well equipped and competent, most needs.

How can he secure this protection? There is but one way which is at all practicable, and that is by elevating the barriers, so-called, which now mark the entrance to the medical profession.

If every college in New York State was obliged to give a four years' course, if the graduates and outsiders were obliged to submit to an examination by a Board before they could get a license, should we have ten thousand doctors in this State with only three thousand fit to go in the Green Book?

Now, since there is in our State, as well as in most others, an evil so palpable, so obtrusive, so pernicious, that not an educated physician fails to see and feel it; and since there is also a partial remedy for it at least, we say that the profession ought to devote its strongest energies to applying this remedy, to elevating the status of medical education, and to keeping incompetent excess from its ranks. Here is "something worth fighting for," as our contemporary of Buffalo has well said.

The practical result of changing the old Code to the new Code, or the reverse, will now be trivial. Doctors will act as their characters determine them to act. The President of the American Medical Association says that the by-laws of that association permit consultations with irregulars, others think they do not. He (the president) thinks these by-laws should be changed; the Judicial Council think not. The matter as it stands is in an admirable state of complexity.

Meanwhile we say to our readers and to physicians everywhere, work for what most affects your daily bread; protect yourselves by reforming the methods of educating and licensing medical students, by laying a hand upon the colleges, and saying, "We protest against college professors growing rich on the fees of these half-educated, two-term doctors whom you turn abroad every year to compete with us."

In the light of the real needs of the profession few things could be more scandalous, than that medical colleges should advertise themselves as supremely ethical when they have not the courage to sustain long courses or even to demand preliminary examinations. The matter is in a nutshell. There is money in being orthodoxly ethical; but a three-term course, a careful educational system, is expensive.

THE PRODUCTION OF HEAT IN THE BODY.

A DISCUSSION of certain heat problems is particularly appropriate at this season. The investigations of Helmholtz, Dulong, Frankland, and Barral have shown quite definitely the source, amount, and loss of heat in the animal body, in other words, the heat-balance during the twenty-four hours. The unit usually employed now in these measurements is the "Calorie," which is the amount of heat required to raise one kilogramme of water one degree Centigrade. An adult man breathes in daily about ten thousand quarts of air, of which one-fifth is oxygen.

This oxygen is distributed through the body, firing the different tissues. It is at last thrown off in union with C, as CO₂, of which the amount is 878 grammes daily (Scharling), and in union with H, as water, 13,615 grammes daily. The total amount of heat produced by this chemical action of the inspired oxygen is estimated by Helmholtz to be about 2,050 calories. It is an amount of heat that would raise 4,200 pounds of ice-cold water from 32° F. to 33.8° F.

But besides this, it is estimated by Dulong that about twenty-five per cent. more of heat is produced from other sources, *i.e.*, from the food. This makes a total of 2,550 heat units produced daily by an adult man who is not engaged in muscular work.

The heat thus produced is almost entirely lost by radiation and conduction (seventy-three per cent.) and by evaporation of sweat (14.5 per cent.) from the skin. Only about ten per cent. is lost by the lungs, and two per cent. by the excretions and the introduction of cold food and drinks.

The difference, however, between the amount of heat produced during a day of rest and one of work is very great, and the figures are suggestive, if not instructive at this particular time. During active muscular work the amount of heat developed by an adult is more than half as much again as when one is at rest. The ratio can be best expressed as follows: A man sitting quietly in his room, indulging in no excessive vituperation against obtrusive flies, generates about one hundred heat units (calories) an hour. If he falls asleep, this amount sinks to forty or fifty calories per hour. If he wakes up and insanely attempts to chop wood, the amount rises to one hundred and fifty calories or more per hour.

The hygienic deductions to be drawn from the foregoing are: Keep the body quiet, and the skin active. It is a fact, which should be mentioned here, that large draughts of water do not necessarily produce diaphoresis unless the water is hot. The absolute cooling effect of a large tumbler of ice-water is trivial. In raising it to the temperature of the body the equivalent of about ten units of heat is abstracted.

THE DIAGNOSIS OF MOVABLE KIDNEYS.

It is an evidence of the minuteness and care with which modern medical science attacks the various problems before it when we find a whole book devoted to the diagnosis of "l'ectopie renale," or misplaced movable kidney. Dr. Frédéric Buret is the author of such a work,¹ and it is a contribution of practical value to physicians. Although less than one hundred cases of movable kidney have been, so far, reported, it is a trouble which is no doubt much more frequent than is supposed. Such is the opinion of Buret, and Dr. William Roberts, and others, and it is strongly supported by the investigations of Oppolzer, who in a series of five thousand five hundred patients found that twenty-two had movable kidneys, giving a proportion of one in two hundred and fifty. It is not improbable, as Roberts says, that many cases of obscure abdominal pain and of gastro-enteric disturbance are due

¹ Du Diagnostic de l'Ectopie Rénale, par le Dr. Frédéric Buret, Aux Bureaux du Progrès Médical, pp. 93. Paris, 1883.

to this cause. Movable kidney occurs in women much oftener than in men, the proportion being as six to one. It is generally an acquired trouble, and its existence is due chiefly to parturition, tight-lacing, sympathetic renal congestion during menstruation, and violent exercise or injury. The most prominent symptoms are, a dragging pain in the loin, and gastro-intestinal disturbances, nervous symptoms, hysteria, and hypochondriasis may also be provoked by it. Epigastric pulsation is often present, but the only certain evidence of the trouble is, of course, the presence of a movable tumor which can be felt.

The chief value of Dr. Buret's work is in the collection of cases which he has made illustrating mistakes in diagnosis. These cases, fifty in all, he divides into three classes: 1st, those in which no tumor was recognized, and no idea of the real trouble was obtained; 2d, those in which a diagnosis was vaguely formulated; 3d, those in which a tumor was discovered but its nature not recognized.

In the first class he cites fifteen cases. These had been treated as cases of crural, or lumbo-abdominal neuralgia, of renal colic, hepatic colic, *embarras gastrique*, hysteria, and chronic peritonitis.

In the second class, the trouble had been mistaken for "abdominal tumor," and "affection of the liver." Moxæ were applied in some cases and operation suggested.

In the third case, a diagnosis was made of biliary obstruction, enlarged liver, tumor of right lobe of the liver, cancer of the liver, enlarged gall-bladder, biliary calculus, cancer of the pylorus, displaced spleen, and ovarian cyst.

The list thus given sufficiently illustrates both the inventive imagination of the doctor and the various symptoms which renal ectopia may produce.

SEXUAL ADVERTISEMENTS.

SOME time ago we called attention to the fact that certain enterprising medicine-vendors were hiring men to promenade Broadway, bearing dorsal and ventral placards, which announced the virtues of a certain drug in sexual weakness. The erotic procession referred to appeared then, as it does now, strikingly suggestive of the ancient orgies of Priapus; but it was only a sign of the times.

The Americans are the most advertising of all nations, and it is to be expected that helps for the erring and erythritic should nor be left out. Nevertheless, a line should be drawn, and we submit that remedies for sexual disease are now being forced before the public to an excessive, disgusting, and injurious extent. A person walking one of the side avenues of this city is liable to have thrust into his hand the card of a gonorrhœa specialist, or the advertisement of a safe, sure, and speedy cure for certain sexual ills. Telegraph poles and fences are placarded with condensed but significant descriptions of choice measures in urethral therapeutics; our larger concert gardens, in which beer and music are dispensed to the temporary comfort of the flesh, contain upon their programmes notices of potent "urethrines" and pocket syringes. As for the press, we have already commented on the drift of the religious impulse as evidenced by the advertisement of gonorrhœa cures in the religious

weeklies. The secular papers have long been filled with every sort of sexual advertisement.

Perhaps all this is part of our evolution and cannot be helped; nevertheless, it might be worth while making a little effort to check it. It is injurious to public morals and public health, this constant obtrusive forcing forward of sexual drugs and the sexual system. Besides, decent men and women would like to be able to look at a fence or a telegraph pole without finding the cut of "The Perfect Syringe" focussed on their retina. There is a law against committing nuisances, which perhaps Mr. Comstock might interpret to the public's advantage here.

THE NATURE OF PEPTONE, AND ITS FORMATION OUTSIDE THE DIGESTIVE TRACT.

DR. ALEXANDER POEHL, of St. Petersburg, in an inaugural thesis, has presented the results of his researches into the nature and formation of peptone. Some of the results which he announces are novel and deserve consideration.

Poehl investigated different tissues and fluids of the body in order to discover whether peptone could be found outside of the gastro-intestinal tract. His results confirmed what had already, to some extent, been shown, that peptone does exist in these places. Thus, it is found in appreciable quantity in the blood, in urine, sweat, sputa, the fluid of ovarian cysts, in hydrocele, in cancerous tissue, in the pus of cold abscesses, and in pleuritic exudation. Poehl found peptone in sixty-five per cent. of the specimens of urine obtained from two hundred and thirty-three febrile cases in Eichwald's clinic. He found it in cases where the urine was neutral or alkaline, thus disproving, as he thinks, the view that it is the result of a digestive action occurring in that fluid. He also found that normal filtered acid urine had no peptic acid when brought in contact with albumen.

In order to explain the presence of peptone in these various fluids, Poehl undertook a series of experiments for the purpose of finding whether there was not some peptic ferment in the tissues themselves. His results corresponded with his expectations. Fresh macerated kidney, acidulated and placed in solution with albumen, displayed a peptic action, considerable peptone being produced after a few hours. The same result was obtained with lung-tissue and with pieces of the small and large intestine. Poehl concludes, therefore, that the tissues of the body all (!) have some peptic power. In croupous pneumonia the ingenious hypothesis is offered that the ferment of the lung-tissue digests and dissolves the exuded fibrin. In confirmation of this view he cites the fact that in croupous pneumonia peptone is present in considerable amount in the urine. Our author also brings some evidence to show that not only animal but vegetable tissues have this digestive power. He seems to have experimented himself only with lettuce leaves, however, and it must be confessed that he draws his conclusions from a rather small series of experiments.

A chapter is devoted to the methods of turning peptone back into albumen, a process which is no longer new.

Poehl offers some original suggestions as to the real nature of peptone and the peptonizing process. There

have been three views held by physiological chemists as to this matter.

Thiry considered albumen and peptone to be simply isomeric. Herth, also Loew and Bokorny, consider the albumen, into which peptone is turned back, a "polymerization-product" of the latter.

Most physiologists, however, have of late held that the peptonization of albumen is simply a hydration and doubling-up of the proteid molecule. All admit that a certain amount of chemical action takes place.

Poehl contends, however, that peptonization, or, in other words, gastric and tryptic digestion, is a purely physical process, and consists simply in a soaking of the albumen with water to its utmost capacity. He finds that the ease with which the different albumens are digested or peptonized is in proportion to the rapidity with which this capillary imbibition takes place.

His view is based upon the fact that chemical analysis reveals no characteristic difference between albumen and peptone, and that the optical properties of the two bodies are also entirely alike. This latter fact he thinks could not be true if the two bodies possessed any real chemical differences.

News of the Week.

SUING FOR A DEGREE OF DOCTOR IN MEDICINE.—A medical student, Mr. Jacob M. Davis, applied for a mandamus to compel the Faculty of the Baltimore College of Physicians and Surgeons to confer on him the degree of M.D. Mr. Davis alleged that the Faculty refused to graduate him after he had attended a two years' course of lectures, on account of his parents, and not for any personal unfitness on his part. It was urged by his counsel, C. Dodd McFarland and H. M. Tiralla, that even if the objection to parents was a valid reason for rejection, it should have been made when he entered as a student. Mr. John T. Morris, for the Faculty, said the Faculty may not have known of the ground of objection earlier. He contended that the act of the Faculty could not be inquired into by the court. Judge Phelps said a mandamus ought not to be granted when there is a remedy by suit, and hence it was denied.

AN EPIDEMIC OF GLANDERS.—The State Veterinarian of Illinois reports that glanders is prevalent among the horses in nineteen counties in that State. He claims to have been prevented from killing the animals afflicted, the attorneys of the owners contending that he could only resort to this measure after the governor had issued a proclamation declaring the glanders epidemic. The Attorney-General is now expected to give an opinion as to the powers of the State Veterinarian under the State laws.

EIGHT MORE ASSISTANT SANITARY INSPECTORS were appointed by the City Board of Health this week.

THE PROGRESS OF THE CHOLERA.—The probability that cholera would reach Cairo, which we suggested last week, turns out to be realized. On July 15th the disease appeared in a suburb of Cairo, and on the 16th several cases were discovered in the city itself. The

number of deaths in Damietta has fallen to about thirty or forty a day, simply because the population has flown or has already been destroyed. The disease has been steadily going up the Damietta branch of the Nile. It has appeared in a few outlying towns. The efforts to limit it by military sanitary cordons have been failures, because the lines were broken through. Some of the soldiers themselves have been attacked by the disease. Cholera has appeared among the British troops at Malta, and caused great consternation. The English are trying to justify their alleged negligence in the matter of quarantine by throwing the blame on the medical officers. There is said to be great difference of opinion among the Indian Government's medical advisers as to the question of human propagation of the disease, and the utility of quarantine. This is mere cavilling and casuistry, however, since there is no question that the weight of medical opinion throughout the world is in favor of the view of the utility of quarantine, and a government should accept the safest view, not the one most acceptable to its mercantile interests.

DR. JOHN A. WARDER, of North Bend, O., died on July 14th in the seventy-second year of his age. He was a prominent member of the American Forestry Congress, and the author of several works on fruit-growing and tree-culture.

ROYALTY AT A MEDICAL SOCIETY.—The discovery of the *bacillus* appears to have lent additional dignity and social favor to medicine. The Emperor William has deigned to apply his imperial and presbyopic eye to a microscope in order to see these organisms. And recently the Prince of Wales and Prince Lucien Bonaparte attended a *conversazione* given at the rooms of the London Medical Society on the occasion of the opening of an addition to the old buildings. The annual oration was delivered this year by Dr. Edward Lund, of Manchester, who discussed and advocated Listerism. His Royal Highness, with great judiciousness, waited until the oration was over, and then came in to the sound of music. A number of interesting objects were shown. Among them were some microscopic specimens shown by Dr. H. Gibbes, including the fungoid growth or organism, producing what is popularly known as the salmon disease (this preparation being illuminated by a cleverly arranged adaptation of the incandescent electric lamp); the *bacillus tuberculosis* in sputum, magnified 1,350 diameters; the bacilli found, in cases of typhoid fever, magnified 1,200 diameters; the *bacillus anthracis* and *spirilla vibrionis*. Other parasites specially affecting the lower animals were shown by Dr. Cobbold, and Dr. Francis Warner lent apparatus for obtaining graphic records of the movements of various parts of the body, and for enumerating these movements and their combinations. The honorary librarian, Dr. Allchin, had selected for exhibition some books from the valuable collection of old works belonging to the society, which comprises many dated in the fifteenth and sixteenth centuries from the library of Dr. Sims. Among these was the manuscript diary of the Rev. John Ward, in one of the fifteen volumes of which, under date of the years 1661-63, the writer had made the following entry: "Shakespeare, Drayton, and Ben Jonson had a merry

meeting, and it seems drank too hard, for Shakespeare died of a 'feavour' then contracted." Another interesting work was Dr. Mead's imperfect reprint of the "Restitutio Christianismi" of Michael Servetus, in which that ardent theologian and observant doctor illustrates an argument by a reference to the passing of the blood from the right side to the left through the lungs.

THE LEGAL VALUE OF HUMAN BLOOD—A CURIOUS SUIT.—A novel law-suit has recently been decided in the District Court of this city. Last February, a man went to a hotel, engaged a room, went to bed and blew out the gas. He was found in a condition of advanced asphyxiation, and lay for hours in an unconscious condition. Drs. Garrigues, Valentine, and Anderson were summoned to attend him, and after consultation decided that the only way to save the man's life was by transfusion. The proprietor of the hotel was accordingly instructed to hunt up a healthy subject who was willing to undergo the operation, and a colored porter, named Edward Banks, was called upon. The proposed subject was by no means inclined to serve at first, but when he was told that only about eight or ten ounces of blood would be needed, and that the blood would be paid for at the rate of ten cents a drop, his cupidity overcame his fears, and he submitted his arm to the instrument. Dr. Garrigues drew eight ounces and transfused it into the arm of the patient, who rapidly convalesced. Banks afterward served the patient as nurse, and claims that he was so overcome by a sense of the obligation which he owed to his preserver that he promised to reward him to his satisfaction. All that Banks received, however, was a five-dollar note in discharge of all obligations, and accordingly he brought suit for \$250 which his counsel claimed was the value of the blood at the price agreed upon, 10 cents a drop, together with the value of the nursing given the sick man by the plaintiff. It was estimated that an ounce of blood contained 240 drops, and 8 ounces at 10 cents a drop would thus be appraised at \$192, the value of the attendance, etc., bringing the bill up to \$250. The examination showed that the promise to pay 10 cents a drop was given in a joking way by one of the physicians, that the plaintiff was a poor man, and that he was nursed by his wife after the first day. Decision for the defendant.

YELLOW FEVER.—Reports of cases being brought to American ports are constantly printed. At date of writing, however, no case seems to have eluded the vigilance of the quarantine officers.

DR. THOMAS F. SCOTT, the oldest and one of the most eminent physicians of Petersburg, Va., died lately, aged eighty years. He was a nephew of General Winfield Scott and an uncle of General P. B. Starke. He was a member of the Virginia Medical Association and was widely known.

A PHYSICIAN'S SELF-DESTRUCTION.—Dr. Lee Pinkston, residing about fifteen miles from Montgomery, Ala., committed suicide recently, by placing a double-barrel shot-gun to his head and discharging it. He was suffering from mental aberration, caused by giving one of his children a fatal dose of morphine for quinine some time ago.

PASTEUR has offered to go to Egypt and study the cholera. Since the Pasteur-Koch controversy pathologists will want Pasteur to refurbish his old-fashioned methods a little before undertaking new fields of investigation.

DR. HENEAGE GIBBES has been appointed to the Chair of Physiology and Histology at the Westminster Hospital. His microscopic work is too well known to call for comment.

THE AMERICAN OPHTHALMOLOGICAL AND OTOLOGICAL ASSOCIATION held its sixteenth annual session at the Hôtel Kaaterskill, beginning July 18th.

DR. DONALD MCLEAN, of Ann Arbor, has been appointed Surgeon-in-Chief of the Michigan Central System of Railroads.

DR. W. E. QUINE, late of the Chicago Medical College, has been elected to the Chair of Practice of Medicine in the College of Physicians and Surgeons of Chicago.

PROFESSOR ALFRED C. POST has been formally requested to resign from membership in the American Medical Association on the ground that he has signed a paper stating that he is opposed to the present Code of Medical Ethics of the American Medical Association.

Dr. Post has for years sustained the reputation of being one of the best surgeons in the country, as well as being a gentleman of very extensive learning, and of the purest personal character.

It is evident now, however, that he is not a really good man.

THE NEW YORK POST-GRADUATE MEDICAL COLLEGE.—Dr. Charles L. Dana has been appointed to the Chair of Diseases of the Mind and Nervous System. Dr. J. Leonard Corning has been appointed Lecturer on the same branch.

DR. W. T. BELFIELD has been appointed Assistant Pathologist to the Cook County Hospital.

THE SUPPORTERS OF THE OLD CODE IN THE STATE OF NEW YORK.—The Council of the New York State Medical Association for Upholding the National Code of Ethics has issued a circular, dated June 21st, in which the numbers of those who uphold the old Code in the various counties of the State are given as follows: Albany, 40; Alleghany, 14; Broome, 28; Cattaraugus, 14; Cayuga, 20; Chautauqua, 26; Chemung, 21; Chenango, 46; Clinton, 27; Columbia, 14; Cortlandt, 22; Delaware, 16; Dutchess, 40; Erie, 107; Essex, 14; Franklin, 15; Fulton, 10; Genesee, 15; Greene, 17; Herkimer, 25; Jefferson, 23; Kings, 148; Lewis, 11; Livingston, 11; Madison, 19; Montgomery, 16; Monroe, 53; New York, 742; Niagara, 25; Oneida, 58; Onondaga, 66; Ontario, 21; Orange, 18; Orleans, 16; Oswego, 20; Otsego, 15; Putnam, 7; Queens, 44; Rensselaer, 74; Richmond, 11; Rockland, 9; St. Lawrence, 13; Saratoga, 27; Schenectady, 12; Schoharie, 12; Schuyler, 12; Seneca, 21; Steuben, 18; Suffolk, 18; Sullivan, 17; Tioga, 19; Tompkins, 13; Ulster, 19; Warren, 18; Washington, 10; Wayne, 24; Westchester, 44; Wyoming, 12; Yates, 9.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 23, 1883.

ALFRED C. POST, M.D., PRESIDENT, *pro tem.*

DR. SATTERTHWAITHE presented, in behalf of a candidate, a specimen of *pulmonary tuberculosis with marked thickening of the pleura, slight endocarditis, and acute nephritis.*

DR. FERGUSON presented, in behalf of a candidate, a specimen illustrating *subinvolution of the uterus.*

DR. SATTERTHWAITHE, from the Committee on Microscopy, reported that the tumor presented by Dr. Robert Newman, at the stated meeting held February 28, 1883 (see MEDICAL RECORD, vol. xxiii., p. 331), was carcinomatous.

DR. FERGUSON presented a specimen of

ANEURISMAL DILATATION OF THE HEART AND MITRAL STENOSIS—FIBROID INDURATION.

It was removed from the body of a man twenty-seven years of age, a native of Germany, single, and a clerk by occupation. Both his parents suffered from rheumatism, and his father, he said, died from asthma. Three years ago the patient first suffered from rheumatism, and at that time and ever since has been troubled with dyspnoea and cardiac palpitation. Three weeks previous to his admission into the New York Hospital, on March 12, 1883, his palpitation and dyspnoea became so aggravated that he was unable to attend even to light work. At the same time he began to suffer from a severe cough, the expectoration being scanty, white and frothy, and at times streaked with blood. His general condition was poor, and his respiration was much embarrassed. The apex-beat was in the mammary line and sixth space. There was a sound, presystolic and systolic in character, heard most distinctly at the apex, and transmitted to the right toward the sternum and axilla on the left side. The præcordial area of dulness was greater than normal. He was put on tonics and stimulants, and improved considerably, although he constantly complained of præcordial pain. In the latter part of March and during the month of April he was allowed to sit in his chair, and at times to walk about the ward. His cough almost entirely disappeared, there was no dyspnoea except on exertion, and his heart-action was considerably improved.

While in the hospital, temperature ranged between 99° and 102°; his respiration was slightly accelerated, and his pulse, feeble and easily compressible, ranged between 80 and 140 beats per minute.

The latter part of April he began to feel very weak, and was more closely confined to his bed and chair, but did not need any special attention. On May 2d, at 6 A.M., he died suddenly, without aggravation of the symptoms of which he complained since his admission.

Autopsy was five hours after death. There were one hundred and seventy-five cubic centimetres of bloody serum in the left pleural cavity, and seventy-five cubic centimetres of fluid similar in character in the right pleural cavity. There were old adhesions all over the surface of the left lung. Both lungs were congested and cedematous and deeply bronzed. The heart is large; the anterior wall of the left ventricle is bound to the pericardium by a firm band of connective tissue. The left ventricle is enormously dilated, and the left ventricular wall, in places, is less than one-eighth of an inch in thickness, and at the apex there is a portion of the left ventricular wall where the endocardium and pericardium are separated only by the interposition of a thin layer of fat. Posteriorly the ventricular wall is much thicker, being uniformly nearly one inch. The papillary muscles are much hypertrophied. The right ventricle is moderately dilated; the valves on the right side of the heart are

normal. The segments of the aortic valve are slightly thickened and retracted. There is stenosis of the mitral valve, admitting only a cylinder one-half inch in diameter. The endocardium is markedly thickened, and throughout the entire left ventricular wall there is increase of the fibrous tissue between the muscle-cells (fibroid induration of the heart), especially marked where the ventricular wall is thinnest, except at the apex, where there is no muscular tissue to be found. There is atrophy of the fibre-cells and much pigment arranged around the poles of their nuclei. The cells in places contain a small amount of fat, but generally the transverse striæ are well preserved.

DR. H. KNAPP presented a specimen of

MELANO-SARCOMA OF THE CHOROID.

The eyeball was removed a few days ago, from a man of about fifty-eight, who two years previously had noticed a cloud in the centre of the visual field of his left eye. The cloud became more intense, was perfectly black in the course of some months, and spread toward both sides, so that six months after the beginning he could see objects only in the upper and lower parts of his field of vision. An oculist diagnosticated detachment of the retina. In a year the sight in his left eye was completely destroyed. He consulted several oculists: the diagnosis was detachment of the retina. When he came to Dr. Knapp, two weeks ago, the external appearance of the eye was normal; the fundus not to be illuminated; sight lost, the eyeball tension moderately increased; other eye healthy. From the symptoms, Dr. Knapp thought the diagnosis of melano-sarcoma behind the detached retina in the posterior part of the choroid was about as sure as it could be without directly seeing the tumor. The enucleation proved the diagnosis correct: a flat, slightly nodular, black growth occupies the posterior third of the choroid, encircles the optic nerve. The retina is united to its surface, thence passes through the vitreous contracted into a cord, and attaches itself to the posterior diaphragm of the eye ciliary processes, zonula zinnii and posterior capsule of the lens. Dr. Knapp pointed out the typically clear clinical history of the case. During the first six months it must have been possible to recognize the tumor directly with the ophthalmoscope; in the last stage the diagnosis was secured by the increased eyeball tension in connection with the detached retina.

DR. GARRISH asked why Dr. Knapp diagnosticated so confidently a melano-sarcoma of the choroid without mentioning the possibility of a retinal tumor. He asked further at what age choroidal sarcoma was observed.

DR. KNAPP said that the intra-ocular tumors, with rare exceptions, were either gliomas of the retina, or sarcomas of the choroid. Glioma of the retina was a disease of childhood, no authenticated cases having been observed beyond the age of twelve years. Sarcoma was met with in young persons, though rarely; in middle life it was commonly unpigmented and past middle life pigmented.

DR. BEVERLY LIVINGSTON presented a specimen which illustrated

MULTIPLE UTERINE FIBROIDS.

It was removed from the body of a colored woman aged thirty years, who was admitted to the Home May 21, 1883. The patient on admission, in the afternoon, did not complain of any severe pain. In the evening a diffuse swelling of the left lower extremities was discovered, extending from the lower third of the thigh to the tips of the toes. The skin was thick, of a livid color; there was marked pitting on pressure, and at numerous points the sense of fluctuation could be detected. On the internal surface, just above the ankle, there was a large circular ulceration, the edges of which were irregular, and the base had a grayish color. There were a number of bullæ filled with blood-stained serum upon the lower third of the leg, and one very large one covering the entire dorsal surface of the foot. The right limb

was œdematous and pitted on pressure. Pulse, 120; respiration, 30; temperature, $101\frac{3}{10}^{\circ}$ F. Urine, yellow, cloudy, acid; specific gravity, 1012, and contained *seven* per cent. of albumen, hyaline and granular casts, but no sugar. Heart and lungs not examined, because of the great size and feebleness of the patient. Diagnosis, erysipelas of leg.

March 22, 1883.—About 9.30 A.M., as the doctor was going through the ward, pulse, 90; respiration, 22; temperature, 98.2° ; a few minutes later the doctor was summoned, but on arriving found the patient dead. *Autopsy*, sixteen hours after death. Body well nourished; rigor mortis well marked; lower extremities markedly œdematous. Woman very fat. Some discharge from vagina; pericardium normal. Heart: Ceased in diastole; tissue soft, fatty, and pale; cavities dilated; aorta showed commencing atheroma, otherwise healthy. All the valves normal. Right lung: Pigmented on surface, irregular congestion; œdema and congestion in posterior portion of lower lobe. Left lung: Pigmented on surface; one small thrombus in posterior part of lower lobe; œdematous and congested like the other. Abdominal cavity—spleen: Not enlarged; post-mortem softening. Right kidney: Two small and one large cyst at upper end; very fatty; cortex irregular and granular; capsule partially adherent. Left kidney: Large cyst, holding one-half ounce of clear fluid in lower portion of kidney, which occupied whole thickness of organ; large, irregularly congested; on section granular appearance of cortex; capsule as in the other. Liver: Small; on section fatty and softened, partly due to post-mortem change.

The uterus was enormously enlarged and contains numerous fibroids, the largest of which is evidently calcareous. One was distinctly intramural. The walls of the uterus were very much thinned, the inner surface was of a grayish color, and emitted an exceedingly offensive odor. Within the cavity were two or three small fibroids, only very slightly attached to the uterus, and undergoing the process of softening. The external os was small, probably would not admit the little finger. The uterus contained a little over one quart of very offensive pus.

The leg did not contain any pus at all, it was simply œdematous, and in the hasty examination made he did not discover any thrombi in the veins.

APOPLEXY—FATTY LIVER.

DR. ROBERT T. NEWMAN presented the liver removed from the body of a man who died suddenly May 12th. The patient, so long as he could recollect, had suffered from derangement of digestion. Ten years ago he had an apoplectic stroke, was unconscious for a few days, the mouth was drawn to one side, and he was paralyzed upon one side, but subsequently regained his intellectual faculties entirely, and also fully recovered his motion. About sixteen weeks ago he was again found unconscious, and it was supposed that he had had another apoplectic stroke. When Dr. Newman first saw him, his abdomen was immensely enlarged, but there was no evidence of accumulation of fluid. The patient's stools were clay-colored, he suffered from diarrhœa, his urine was loaded with bile, and parts of the body were slightly jaundiced. Percussion gave evidence of enlargement of the spleen. At that time Dr. Newman was not able to find any evidence of paralysis, although the patient was unable to move himself in bed. Defecation and micturition were voluntary. He died suddenly eight days afterward from what appeared to be, from the description given, an apoplectic stroke. During life, so far as auscultation and percussion went, the heart seemed to be normal; at the autopsy, only a very limited one being permitted, the liver was removed, and found on microscopical examination to be fatty. It was increased in size, the gall bladder was empty, and there seemed to be some stenosis of the common bile-duct.

DR. SATTERTHWAITE remarked that the liver seemed to be of the nutmeg variety, and apparently indicated that

there was some obstruction of either the cardiac or the pulmonary circulation; probably also there was some increase of connective tissue, as was usually the case with this lesion.

The Society then went into executive session.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 5, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

DR. BEVERLY ROBINSON presented a patient with

DEFLECTED NASAL SEPTUM—OBSTRUCTED BREATHING—
—ADENOID GROWTH IN THE LARYNX.

The patient was a young woman who had been suffering for a year and a half from obstruction in the left nostril, for which she had recently applied for treatment. There was a suspicion of her having had syphilis. The nasal septum was deflected to the left, so that the air could not be drawn through the nostril of that side. There was a small adenoid growth in the vault of the pharynx. The patient was considerably more deaf, to the ticking of a watch, in the right ear than in the left. The points of interest were, that despite the obstruction and the adenoid growth in the pharynx, the patient's voice was not at all affected, and that the ear affected was on the opposite side from the obstructed nostril with its deflected and ulcerated septum.

DR. SEXTON examined the drum-heads and found evidence of an old inflammatory change which had probably occurred some years before, when the patient had had an attack of scarlet fever.

DR. C. L. DANA read a paper entitled

THE NATURE AND TREATMENT OF CERTAIN FORMS OF
CHRONIC NERVE-WEAKNESS.

[The paper is published in full on p. 57 of THE RECORD.]

The paper being open for discussion Dr. H. F. WALKER said that he had used the fluid extract of coca considerably. He had found it to act far better with men than with women, a fact which he was inclined to attribute to the more extensive use of tea by women.

DR. HUNTER said that he had once imported some of the fresh leaves, having been told by gentlemen who had lived in South America that these alone were of any value. They had given good results.

DR. BEVERLY ROBINSON had used a good deal of the Mariani wine of coca, and thought that it had acted very satisfactorily. He happened to have met M. Mariani several years ago, and had been led to place confidence in the genuineness of his preparation.

The speaker had used

HYDROBROMIC ACID

in two conditions: that of vertigo, presumably from stomach trouble, and that of dyspepsia. Its use in stomachal vertigo he had taken from a suggestion by Woakes. He had employed the Fothergill solution.

DR. W. P. GIBNEY, referring to the

PROGNOSIS

in these conditions of nervous invalidism, asked if these patients ever got well. In his experience the cases were most untractable, and however one helped them they were apt to fall back to their former condition.

DR. DANA said that he had once been inclined to take a very gloomy view of the prognosis. He did not know that now he could recall cases of pronounced and long-standing neurassthenia proper which he was sure had permanently recovered. He thought the prognosis better, however, than Dr. Gibney was inclined to paint it. He believed that almost every patient could be greatly im-

proved and life made more comfortable to him. Some cases, undoubtedly, got well.

DR. KINNICUTT said that in his experience these cases do improve, and even become to all intents and purposes well, continuing so for several years. He thought, however, that there was always a tendency to relapse. A case in point had occurred in his experience recently.

DR. POLK said that he supposed the nature of the troubles that go under the name of neurasthenia had never been very definitely made out. He asked if anything of importance had been written on the subject aside from the work of Beard.

DR. GIBNEY said that it was the same old group of symptoms which had been known for a long time. In women we are apt to call it spinal irritation, in men nervous prostration. Some authorities called it hyperæmia, etc.

DR. DANA said that in the first part of his paper he had discussed this question and endeavored to throw some light upon it.

So far as the literature was concerned, the subject had been treated by Bouchut, of Paris, in a work entitled "Du Nervosisme," published in 1877, and by Möbius, of Leipzig, in a work entitled "Nervosität," published in 1882. Erb also discusses it, and of late years many German writers (Glax, Burkart, etc.) had been studying the special forms of neurasthenia.

The speaker thought it would be long before we knew the morbid anatomy or chemistry of nervousness and chronic nerve-weakness. We could speak, however, much more definitely about its morbid physiology, and he had ventured to make a contribution to that subject.

DR. SAMUEL SEXTON referred to a case where he had used coca with benefit. He had found it difficult to get patients to take large doses of hydrobromic acid on account of its powerfully acid taste.

DR. HUNTER said that with reference to those cases of nerve-prostration and hysteria which were submitted to the Weir-Mitchell treatment, he had observed that even in patients who were improved, the symptoms often returned soon after passing from the treatment.

ONTARIO MEDICAL ASSOCIATION.

Annual Meeting, held at Toronto, June 6 and 7, 1883.

(From our Canadian Correspondent.)

DR. J. E. GRAHAM, of Toronto, read an exhaustive paper on

THE BACILLI OF PHTHISIS.

The paper treated fully of the question in its present bearings to medical opinion. From a careful analysis of forty cases in Dr. Graham's own practice he concluded that the bacilli are constant in cases of true phthisis. In some cases where they are not found at first, repeated examinations would reveal them. The second point of importance in the paper was that its author leaned very much in favor of the view that phthisis is contagious. He strongly recommended antiseptic inhalations and everything which was of any real value in sustaining the powers of the system.

DR. J. FERGUSON remarked that of 2,509 cases, the statistics of which he had collected, the bacilli had been found in 2,417. Of the cases in which the bacilli had not been found sufficient care was not taken, as in many of these cases few examinations of the sputa were made. After making all due deductions for error there seemed to be some relationship between the numbers of the bacilli and activity of the disease. Further he believed that phthisis is really a contagious disease; but thought observers might be led into error for the following reasons: 1, Phthisis from its very nature would be likely to have a long incubation period, and thus the true source of infection might be overlooked in many cases; 2, that the germs seemed, from carefully conducted experiments,

to lose their vitality soon after their ejection from the body in which they were produced; 3, few germs are contained in the expired air, yet if this be concentrated and passed through a cage holding small animals these can be rendered tubercular in this way; and 4, in many cases these germs came in contact with persons of sufficient power to resist them, just as in the contagion of other diseases. With regard to treatment he held: 1, that rest was of great importance, as the lungs had not so much work to perform; 2, good nourishment of every kind; 3, elevation to a height of about 4,000 feet; 4, antiseptic inhalations, which ought to be kept up almost constantly; and 5, isolation of the patient from sleeping with others in the family, or too close intimacy.

DR. I. H. RICHARDSON agreed in the view that phthisis was possibly one of the most contagious class of diseases.

DR. BURT, of Paris, exhibited a patient who had been a very severe example of

TRAUMATIC TETANUS.

The wound from which the disease originated was on the lower front part of the forearm. He practised complete insulation of the forearm by a thorough dividing of the nerves supplying it. The patient made an excellent recovery.

DR. STRANGE, of Toronto, read a paper on

ACETONÆMIA.

He thought that the presence of acetones in the blood was the cause of the coma in diabetes. He referred to the hopelessness of diabetic coma, and expressed the desire that ere long we would be in a better position regarding treatment.

In the discussion that followed DR. J. FERGUSON held that the coma was not due to acetones in the blood, and further that the acetones did not depend upon the sugar condition of the urine for its existence in the system. Jaksch, of Vienna, has found acetones to exist in the blood in febrile states of the body, in cases of carcinoma, and in hydrophobia. Frerichs, of Berlin, from an examination of four hundred cases, concludes that, 1, the nerve-centres are not the real cause of the coma; 2, that the changes in the blood do not sufficiently explain it; 3, that uræmia is not the cause, as coma is found without uræmia; 4, that fat emboli is not the cause, for in some cases of coma no evidence whatever existed to show that emboli had anything to do with the trouble; and 5, that acetonæmia is not the cause of the coma. Frerichs regards the necrotic changes in the kidneys as the real cause of the coma.

DR. J. FERGUSON read a paper on

THE LIGAMENTUM TERES IN ITS RELATION TO HIP-JOINT DISEASE.

He showed that the ligament prevented undue rotation of the leg outward; and secondly, that if of normal length it prevented the femur coming in contact with the acetabulum. In a normal hip-joint there is a slight interval between the femur and the os innominatum. Thus the pelvis is suspended from the thigh bones by the round ligaments. Should these ligaments be lengthened or ruptured from jumping or wrestling severe trouble may ensue. He gave an instance of a case where hip-joint disease was in its early stage. The boy had been greatly addicted to jumping from high places. The patient died of pneumonia; on a careful dissection of the joint the round ligament on the affected side was found slightly ruptured and lengthened, permitting the head of the femur and the acetabulum to come into close apposition.

DR. MCPHEDRAN showed

A CASE OF TRUE PRURIGO.

which he was treating with very good results by the hypodermic injections of nitrate of pilocarpine. As much as one-grain doses had to be given before diaphoresis could be produced.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CHOLERA IN EGYPT—THE HARVEIAN ORATION BY DR. HABERSHON—MEDICINE AND RELIGION—THE SUMMER SESSION—THE COMING ELECTION AT THE COLLEGE OF SURGEONS.

LONDON, June 30, 1883.

SOME alarm has been caused by the report that an outbreak of cholera has occurred in Egypt. Later intelligence seems to show that many of the cases are rather cases of typhoid, and that no genuine epidemic of Asiatic cholera has taken place.

The Harveian Oration at the College of Physicians for this year was delivered on Wednesday last, 27th inst., by Dr. Habershon. After referring to the successive discoveries made by physiologists in different ages, Dr. Habershon spoke of Darwin and struck a different note to most of his predecessors when he maintained that though Darwin's facts are true, his deductions are not. Dr. Habershon is not alone in this. Many distinguished scientists do not accept Darwin's deductions as necessarily true. It is in fact but a theory. One of our weekly journals has, however, seen fit to call Dr. Habershon to account for his statements and also because his oration had a religious bearing. It is unfortunate that paragraphs of this description should promote the idea—already too prevalent amongst the public—that medical men as a body are opposed to religion. This popular fallacy is very widespread and at times gives rise to curious statements. Not long ago I heard a gentleman state that he only knew two medical men who took any interest in religious matters, although he was in a position which brought him in immediate contact with a large number of the prominent practitioners of London. A gentleman who was present at the time, immediately corrected him by naming half a dozen others, amongst whom was Dr. Habershon, long well-known for his activity in this direction. It is not long since Dr. Lauder Brunton produced a volume on "Religion and Science," and Dr. Mortimer Granville—who not long ago was conducting *The Lancet*—has just produced a volume on "Some Difficulties of Belief." Perhaps a more important example is that of the work done by Dr. Chance, who, on account of his great Hebrew scholarship, is serving as a member of the company of the revisers of the Old Testament.

The summer session is now drawing to a close, and doctors as well as their patients are discussing the great question where to go? Another indication of the season is seen in the publishers' lists, where books on spas are numerous. Within the last few days several books of this description have appeared.

The coming election (next week) of two Fellows to seats in the Council in the College of Surgeons promises to be an exciting one. The candidates are fairly equal as to merit, but the question of allowing country Fellows to vote by proxy or by voting papers is a burning one and will probably decide the election. The Association of Fellows of the College of Surgeons has brought pressure on the candidates to elicit their views on this important question. The justice of the demand made by the provincial Fellows seems self-evident.

SEA-SICKNESS AND ITS TREATMENT.—Dr. G. L. Walton, in an article on this subject (*Boston Medical and Surgical Journal*), argues against the value of bromide of sodium as recommended by Beard. In brief, his view is that in small doses the bromide is useless, in large doses it may be dangerous. The author brings very little evidence to illustrate his views and quite ignores the very large number of cases where the bromide does give vast relief.

THE INTERNES OF THE HOSPITALS—DO THEY DERIVE AS MUCH BENEFIT FROM THE SERVICE AS THEY SHOULD?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The clinical advantages given to the medical student of this city are inadequate, and not in proportion to the immense amount of clinical material at hand.

There is seldom a time in the course of his college life when a student without special advantages can get the opportunity of examining a case of disease at his leisure after it has been demonstrated by the professor in charge. Take for example a medical clinic. There are perhaps sixty or eighty students seated at various distances from the pit. A patient is brought in, the professor asks his questions, makes his diagnosis, outlines the treatment, and the case is sent out. There is usually no time for the students to ask questions or to examine the case for themselves. The case passes from their view, and they, if at all skeptical, do not feel sure that the diagnosis is correct. No explanation is given as to why certain remedies are given in preference to others just as efficacious. In my mind, it would certainly be of greater advantage to the student to have one case thoroughly explained to him, giving the why and wherefore of questions asked and drugs prescribed, and then allowing him to examine the patient. Under the present arrangement it is perfectly possible, as was some time ago stated in one of our journals, for a student to pass three years at a medical college and graduate without having been near or questioned a single sick person.

The question I wish to ask, is this: "If the clinical advantages of the college student are so slight, do the Internes of our hospitals receive as much advantage from their positions (won by hard work) as they have a right to expect? I do not think they do. In such a matter a great deal depends on the character of the interne. But leaving that out of consideration, I ask, "Do the attending physicians and surgeons give their staff as much clinical instruction as they should? I think all who have experience in such matters will agree with me that they do not. The clinical advantages of the hospitals are very great, and in some of them they are taken advantage of to a limited extent. But in how many of them is it customary for the attending physician or surgeon to give the staff regular clinical instruction? It is certainly a rare thing to have a short lecture delivered on an ordinary case during the daily rounds with the attending physician. It does not seem to occur to the majority of them that it is their duty to give such instruction as often as it is possible. It is true that once in a while a few remarks are made on a case which is interesting either on account of its rarity or its severity. But such things are of no practical value to the young man just starting out in practice.

All ordinary cases are dismissed with a few words and their treatment is relegated to the gentleman at the head of the staff.

And how often is such a young man capable of treating the majority of cases unless he have received previous instruction from some one of experience? Because a person is intelligent and has a mind well stored with facts, it does not follow that he can apply these facts to the best advantage without a certain amount of guidance. But there is another side to the matter of instructing the staff. It is their duty to at least appear to enjoy and appreciate whatever it may please the attending physician to tell them.

One cannot expect a teacher to persevere long if his audience plainly show that they are bored. This is a trait more often found in the junior members of the staff. They are very apt to think that they know everything worth knowing and that it is hardly worth while to take up their time telling them things of apparently so trifling importance. These are the men who, after they have been in the routine of practice for a few years, regret the neglect of such advantage in the past.

Even the nurses in our training schools receive instruction in matters in which every physician should be proficient, but in which no instruction is given.

I refer to making and applying poultices, fomentations, stupes, blisters, in giving sponge-baths without endangering the patient's condition. No instruction is given in cupping and leeching. Where is there a young physician who can show their patients' friends or relatives how to change a sheet so as to disturb the patient the least? It may be said that the physicians of this city do not need to know such things. This may be true in a measure, but not all people, even in large cities, can afford to have a trained nurse to do them.

But the majority of physicians, graduates of the city colleges, are scattered over the South and West, and a country practitioner who cannot show his country nurses how to do these things is certainly wanting in his duties toward his patients.

Such things, trifling as they may seem, are practically of more importance to the country practitioner than a thorough knowledge of pathological appearances at autopsy. For, how often is a post-mortem examination made in the country? Hospital men, at least, should know how to do all these things.

Instruction in giving anæsthetics is practically unknown in this city, strange as it may seem. In hospitals the junior-assistant usually administers the anæsthetic. He may or may not have given it before entering the hospital. He has usually never seen it given except perhaps in the amphitheatre. He has not the remotest idea what symptoms indicate danger, but he gradually gains this by a sad experience. Under the present system there is great danger to the patient and a great waste of time and anæsthetics. I think all operating surgeons will agree with the assertion that ether and chloroform should be administered by a person specially trained and appointed for that purpose, or at least by the senior assistant, who has had six months in which to learn something about it in a practical way.

Respectfully,

AN EX-RESIDENT.

MEDICAL ADVERTISEMENTS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The criticisms of THE RECORD upon the practice of religious journals publishing advertisements of secret medicines prompted me to write to the managers of the Western Methodist Book Concern, Cincinnati, O., in regard to the loss to the income of their publications which they have sustained by their refusing to publish medical advertisements of any kind. There are published by this concern four papers, viz., *The Western Christian Advocate*, Cincinnati, O.; *Northwestern Christian Advocate*, Chicago; *Central Christian Advocate*, St. Louis, and *Christian Apologist*, Cincinnati, O. From all of these papers such advertisements have been excluded for three years. In answer to my inquiry they state that they lose annually several thousand dollars, and that during the week that my letter was received they refused such an advertisement, for the publishing of which they were offered one thousand dollars. They add, furthermore, that to exclude such advertisements does not pay financially. Be it said, though, to their credit, the present management have no idea of departing from their present course. I only send you this item to show that to the rule there are some exceptions. It is to be hoped that the example of the few religious papers that refuse to advertise a disreputable business, will be followed by others. And once these journals practise consistency, a great check will be put upon the actions of those ministers who so flippantly endorse such medicines. Evidently there is a brighter day dawning for the honorable practice of medicine, and since, as a profession, we are trying to educate the laity

above a belief in faith cures, patent medicines, etc., is it anything more than just that we should ourselves flee from the very appearance of evil?

Please allow me a few questions and thoughts upon the subject of medical advertisements in our own journals. Is it not a fact that to the readers of medical journals it has become almost obnoxious to see upon every page, and often half a dozen times on a page, such as this, "Beware of imitations." "Specify our make," and scores of other such admonitions? As though one were upon the brink of ruin and did not know it. Then the list of adjectives which appear in our advertisements compare favorably as expressing superlative worth with the laudations of the patent medicine vender. Do we not condemn patent medicines because they are advertised to cure almost every disease? And yet if we believe our own advertisers I can cure nearly all of the ills that flesh is heir to, with a few samples of mineral water, for instance, conditional only, as one professor says in his advertisement, "that it be taken in time." Can we with consistency, as long as we permit such things in our journals, say to the patent medicine advertisement in the religious paper, "Out, damned spot?" If these things are objectionable would not the manufacturers remedy the evil if the publishers declined to publish these advertisements? I would not presume to speak for any one else, but I would order A.'s pills just as often if he did not in his advertisement tell me in every other line to do so, and I would have as much confidence in their efficacy if a certain doctor had not said, "They are incomparably the best."

Please say to the manufacturer who is inclined to be exuberant in his praises of his goods, and to the physician who is already great enough to not need to advertise himself by thus publishing what may be nothing more than the pleasant effects of a good dinner—say to them, in the language of the boy upon the street, even though his language may not be strictly æsthetic, "Give us a rest."

T.

MILLBURY, O.

"A RARE CASE INDEED."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: An article under this title in the July number of THE MEDICAL RECORD, page 16, gives a case of extrusion of a foetus after burial of the mother; and the commentator offers as a reason for this unusual occurrence either that the woman was buried in a state of suspended animation or that the foetus was extruded immediately after death, leaving us to infer that uterine contraction is necessary to expel a foetus. In legal medicine this interesting subject has received much attention, and perhaps the best remarks upon it are to be found in "Tidy," vol. i., pages 71-72 (Wm. Wood & Co.): "It is important to note that the development of gases in the body has been known to produce certain effects closely simulating vital acts. Probably gaseous distention is the usual cause of the occasional movements of a corpse, such as its turning on the side after it has been 'settled' in the coffin. Again, it is recorded that the pressure of the gases generated in the abdomen has been sufficient to force feces from the bowels, urine from the bladder, and even a foetus from the uterus (Case 73). Dr. Aveling records a series of six cases collected from medical literature, where delivery is said to have occurred spontaneously after death. In one of the cases it is stated that the child was born alive. It is certain that, as a rule, this spontaneous post-mortem delivery results from the pressure exerted by the gases developed in the abdominal cavity, although another explanation of this unusual occurrence has been suggested."

"Tidy" here refers to the theory of post-mortem contractions of the uterus.

The author also refers to a case of inversion of the unimpregnated uterus from the pressure of gases devel-

oped after death in the abdominal cavity. It is perhaps hardly necessary to add that the development of gases of decomposition may be very great within a few hours after death.

I am, sir, etc.,

W. H. TAYLOR, M.D.

NEW BEDFORD, MASS.

HOT WATER IN THE TREATMENT OF INFLAMMATION OF MUCOUS MEMBRANES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of June 16th, you quote, from the *Medical Age*, Dr. Ritzy's method of treating throat troubles with hot-water gargles. I have used hot water as a gargle for the past six or eight years, having been led to do so from seeing its beneficial effects in gynecology.

In acute pharyngitis and tonsillitis, if properly used at the commencement of the attack, it constitutes one of our most effective remedies, being frequently promptly curative. If used later in the disease, or in chronic cases, it is always beneficial, though perhaps not so immediately curative. To be of service it should be used in considerable quantity (a half pint or pint) at a time, and *just as hot* as the throat will tolerate. I have seen many cases of acute disease thus aborted and can commend the method with great confidence.

I believe it may be taken as an established fact, that in the treatment of inflammations generally, and those of the mucous membranes in particular, moist heat is of service, and in most cases hot water is preferable to steam.

All are familiar with its use in ophthalmia and conjunctivitis, as also in inflammations of the external and middle ear, and I feel confident that those who employ it for that most annoying of all slight troubles to prescribe for, viz.: a cold in the head, or acute coryza, will seldom think of using the irritating drugs mentioned in the books, nor of inducing complete anæsthesia with chloroform in preference to the hot-water douche. It is important to recollect, however, that to be effective in aborting this disease, it must be employed during the first stage of hyperæmia.

Nor is the urethral mucous membrane any exception to the general rule. Cases of urethritis and gonorrhœa are benefited or cured by its use when applied at the commencement of the inflammation. In the cure of gleet, I know of no other agent so often serviceable. Where there is no stricture, almost any case of gleet will yield in a short time to the use of the hot-water douche followed by mild astringents.

Keep in mind the principle of its curative action, viz.: the removal of hyperæmia, and the local sedative influence, and there will be found few cases of inflammation of mucous membranes where it will not, at some stage of the disease, promote a cure.

GEORGE R. SHEPHERD, M.D.

HARTFORD, CONN., July 12, 1883.

THE ANTI-VIVISECTION AGITATION.—A recent number of the *Contemporary Review* contains an article on the anti-vivisection agitation by the celebrated physiologist, Dr. E. DeCyon, and a reply by Mr. Hutton. The former gives several examples of wholly dishonest use made by the anti-vivisectionists of England of diagrams and garbled or distorted sentences from his "Physiologische Methodik." Of course that was to be expected, but it makes the deed none the less disgraceful. When a party profess to be actuated by such high and lofty humane views as do these agitators, it certainly is most contemptible that they should use such dishonest means to prejudice the community. Cyon also shows that of the two German leaders against vivisection one knew absolutely nothing about the subject, and the other was actually insane, as is now known, when he attacked physiological experimentation so bitterly.—*Weekly Medical Review*.

New Instruments.

PREMATURE DELIVERY FORCEPS.

By STOYELL C. PARSONS, M.S., M.D.,

ATTENDING SURGEON TO NORTHEASTERN DISPENSARY, DEPARTMENT DISEASES OF WOMEN.

On several occasions, having to use forceps in premature delivery, with the misfortune of having the instrument slip off four to six times during the necessary manipulation, I thought it necessary to try and overcome the difficulty if possible, and after a successful experience of three cases with my forceps, as illustrated by accompanying woodcut, I think I have accomplished my object.

Dr. Brickel's, being about the only one of any merit, are excellent where the head is in the inferior strait, but in the superior they are at times applied with great difficulty on account of the handles being comparatively straight or without the pelvic or cradle curve, as used by



Dr. Sawyer, of Chicago. On being applied and tension made, the power is exerted in the line of the axis of the superior plane, thus forcing the head against the pubis and retarding instead of aiding delivery. As before stated, tension being made, the blades do not hold securely on account of their having a slight outward flare at the tip, thus weakening them where the greatest power of assistance is required. To obviate these difficulties, I have continued the original curve of the fenestra inward to the tip so that the power of resistance is equal throughout the entire blade, and the head once fairly inserted within it, it is impossible for it to slip, except by breaking or bending in consequence of poor material. The handles I give the cradle or pelvic curve, thus enabling the operator to introduce the same with less difficulty and exert all tension or force in the line of the axis of the pelvic canal. My thanks are due to Messrs. Shepard & Dudley, 150 William Street, New York, for their kindness in furnishing designs.

The forceps weigh two hundred and forty-two grammes and are illustrated by the accompanying cut, which is executed one-fourth scale.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 7, 1883, to July 14, 1883.

BAILY, E. I., Colonel and Surgeon. In addition to his present duties to take charge of the office of Medical Director, Military Division of the Pacific, during the absence of the Medical Director. S. O. 64, par. 2, Military Division of the Pacific, June 30, 1883.

SUTHERLAND, C., Colonel and Surgeon, Medical Director, Military Division of the Pacific. Granted leave of absence for one month with permission to apply to the Adjutant General of the Army for extension of two months. S. O. 64, par. 1, Military Division of the Pacific, June 30, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon. Medical Director Department of the South. Leave of absence on surgeon's certificate of disability granted by S. O. 50, Department of the South, May 21, 1883, extended one month on surgeon's certificate of disability, with permission to leave the Department of the South. S. O. 156, par. 7, A. G. O., July 9, 1883.

PERLEY, HARRY O., Captain and Assistant Surgeon. Assigned to duty at Fort Pembina, D. T. S. O. 118, par. 1, Department of Dakota, July 5, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 14, 1883.

GREEN, E. H., Past Assistant Surgeon, granted leave of absence for one month.

GRIFFITH, S. H., Past Assistant Surgeon, granted leave of absence for one month.

HUDSON, A., Medical Inspector, Assistant to Bureau of Medicine and Surgery, granted leave of absence for one month.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 14, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
July 10, 1883.....	1	13	42	4	81	20	0	0
July 17, 1883.....	0	18	38	4	68	23	0	0
<i>Deaths.</i>								
July 10, 1883.....	1	6	12	4	19	13	0	0
July 17, 1883.....	1	10	7	4	21	16	0	0

MEDICAL PRACTICE IN ENGLAND.—The *Student's Journal* says: "There are great complaints in professional circles, both East and West, as to the scarcity of money. I hear that many of the West End physicians find their incomes this year very seriously reduced in consequence of the general depression in trade and the straitened circumstances of many of the landed proprietors of the country. Every one is obliged to be content with smaller fees, and unfortunately there are fewer of them."

AN ANÆSTHETIST is the latest medical title. It has been bestowed upon a medical officer of the Chelsea Hospital. An anæsthetist may be described as a person who excites no feeling.

THE TRICHINÆ IN CHICAGO PORK.—In the present agitation over trichinous pork and adulterated lard, the investigations made some years ago by Dr. W. T. Belkfield, and Mr. H. F. Atwood, of Chicago, may be cited. They examined the pork in the various packing-houses of that city, and found trichinæ present in eight per cent. of the specimens, the parasites averaging about 20,000 to the cubic inch. These gentlemen believe that infection of human beings with trichinæ is very much more common and less injurious than is commonly supposed. They have made the interesting discovery that a small portion of sulphurous acid dissolved in the brine in which hams are pickled will kill all the trichinæ.

NERVOUS CONSTIPATION.—In nervous constipation the *Rivista di Bologna* recommends the following pill:

R. Pulv. ferri sulphatis 0.10 (gr. 1½)
Aloës soccotrinæ..... 0.05 (gr. ¾)
Ext. belladonnæ..... 0.005-0.01 (gr. 1/3-1/6)

From one to four of such pills may be taken during the day. Should intestinal atony be suspected, the extract of belladonna is to be replaced by ext. nucis vomicæ, 0.005-0.01 (gr. 1/3-1/6).

SUICIDE IN EUROPE.—According to Legoyt, the number of suicides to each million inhabitants in the various

countries of Europe is as follows: Germany, 261; Denmark, 257; Switzerland, 215; France, 160; Austria, 121; Belgium, 87; England, 69; Holland, 45; Russia, 30; Italy, 37 (27?); Ireland, 21; Spain, 17. In almost all of these countries suicide by strangulation is preferred. In Germany, of 100 cases of suicide, 64 were cases of strangulation; in Austria, 47; in Hungary, 60; in Denmark, 77; in Russia, 73. Second in favor of strangulation stands drowning, a method, however, practised less in France than elsewhere. Poisoning is not employed much except in Ireland and Italy. Suicide by means of the gas from charcoal occurs more frequently in proportion in France, and especially in Paris, than elsewhere.—*Gior. Int. delle Scienze Med.*

WINTER AT CATANIA.—The advantages of Catania as a winter resort have as yet received but little attention, although the climate is by medical climatologists claimed to be one of the finest. Dr. Ughetti recommends the place on account of its uniform temperature (mean for the year, 18.5°, mean for the winter, 13.1°), with its slight and graded oscillations, its freedom from winds, and because of the number of serene days without rain, fog, or snow. The atmospheric pressure also varies but little (from 768 to 750).—*Gior. della Soc. It. d'Igiene.*

THE PHYSIOLOGY OF SLEEP.—M. Vulpian in his lectures upon the vaso-motor system seems to have demonstrated that the present popular theory of cerebral anæmia causing sleep is not correct. He argues first that insomnia is a frequent attendant of general anæmic conditions. The idea that drowsiness after meals is caused by derivation of blood to the stomach and intestines is disproved, he says, by looking at the turgid countenance and throbbing temporals of the sleeping gourmand. Vulpian was never able to produce sleep by compressing or ligating arteries that supply the encephalon, nor by galvanizing the cervical sympathetic, and thus producing cerebral anæmia. He examined the membranes of the brain of numerous animals whom he had placed under anæsthetics or hypnotics. In none of them was there any notable change in the vascular supply. He concludes that the vascular supply has nothing to do with the causation of sleep; that any slight anæmia which may accompany this condition is a result, not a cause. M. Vulpian furnishes no substitute for the theory he destroys. He simply considers sleep to be a *habit* of the nervous system of relapsing into a state of torpor.

The most generally accepted theory now is probably that of Prof. Preyer.

THE DEATH OF THE REV. CHAS. W. CALHOUN, M.D.—Rev. Charles W. Calhoun, M.D., a medical missionary of the Presbyterian Church, stationed at Tripoli, Syria, died about three weeks since at Shevcifat, Mt. Lebanon. He was the only son of the late Rev. Dr. S. H. Calhoun, and was educated at Williams College, Union Theological Seminary, and Bellevue Medical College. He was a native of Syria and an intimate acquaintance with the Arabic tongue gave him easy access to the hearts and homes of the people. About a year since he was subjected to a series of vexatious persecutions from the Turkish authorities at Tripoli, and since then he has spent most of his time travelling among the villages. One of the insults heaped on him was the removal of the sign on his office. The American Minister at Constantinople, Gen. Wallace, was requested to demand redress for this act from the Turkish Government, and almost at the same time with the news of his death came a telegram stating that an apology had been demanded.

HABITUAL CONSTIPATION.—In the *British Medical Journal* Dr. J. Mortimer Granville offers three prescriptions which he claims are generally applicable to the treatment of all the well-recognized forms of habitual constipation. He sees three forms of the disease, one due to deficient peristaltic action, one due to deficient

glandular secretion, and one due to interruption of the habit of periodic evacuation. For the relief of the first form he prescribes:

R. Sodæ valerianatis..... gr. xxxvj.
Tincturæ nucis vomicæ..... ℥. lx.
Tincturæ capsici..... ℥. xlvij.
Syrupi aurantii..... ℥. iss.
Aqua..... ad ℥. vi.

M. Ft. mistura. Sig.—Tablespoonful in water half an hour before meals.

For the second form:

R. Aluminis..... 3 iij.
Tincturæ quassiae..... 3 j.
Infusi quassiae..... 3 vij.

M. Sig.—Dessertspoonful after meals.

For the third form:

R. Ammonia carbonati..... 1 j.
Tincturæ valerianæ..... 1 j.
Aque camphoræ..... 3 v.

M. Sig.—Take ounce as directed on arising from bed.

Dr. Granville insists upon a regular hour for going to stool, at least to make an effort at evacuation. He proposes to establish in this way the normal habit, and thinks aperients in habitual constipation do no good. One naturally inquires, when reading the above, what is to be done if two or even all three of these forms are united.

FACTS FOR OUR RELIGIOUS WEEKLIES.—Prof. A. B. Prescott says that the use of patent medicines without a knowledge of their composition does injury to the health of the people, for the following reasons: 1, they may, and in fact sometimes do, contain powerful or poisonous articles unsuspected; 2, they always may be, and often are, inert, and become a false reliance to the neglect of other and due measures in the care of health; 3, they are liable to be changed in composition, so that any experience of their effects as they are purchased at one time is not conclusive as to the same named articles purchased another time; 4, it is submitting health to the treatment of a distant and irresponsible stranger, and learning to hazard health in an apparent game of chance; 5, they are trusted to act as antidotes to disease in the sense in which no medicines can antidote disease; 6, they favor excessive recourse to medication and thereby increase the resort to physicians.

THE TREATMENT OF ACUTE GOITRE WITH THE BINODIDE OF MERCURY.—Dr. Mouat, of Bengal, was the first to notice specially the value of the use of biniodide of mercury in combination with the rays of the sun in the cure of goitre. His practice was to use the mercury as an ointment of three drachms to a pound of lard; a portion was rubbed in an hour after sunrise, the patient afterward sitting with his goitre well exposed to the sun as long as he could endure it. After this a fresh layer of ointment was carefully applied, and in ordinary cases a single application was sufficient. Of the value of this treatment in India there can be no question. Surgeon-Major Albert A. Gore, reports (*Dublin Journal of Medical Science*) thirty cases which he successfully treated in this way.

PROFESSORSHIPS AT CAMBRIDGE.—Dr. Michael Foster has been elected to the newly established Chair of Physiology, at Cambridge. Dr. Alexander Macalister, of Dublin, was elected to the Chair of Anatomy, and Professor Humphrey has been appointed to the Chair of Surgery.

IN PHTHISIS AND BRONCHITIS, Renzi and Rimmio report good results from the inhalation by spray of iodoform dissolved in turpentine.

PHENORESORCIN is the name of a mixture composed of carbolic acid sixty-seven per cent, and resorcin thirty-three per cent. The addition of ten per cent. of water makes a fluid which can be diluted p. r. n., making a powerful antiseptic wash.

SOMETHING WORTH FIGHTING FOR.—A State board of examiners, the greatest need of the medical profession in the State of New York—a “mixed board” the only efficient one attainable under present conditions.—*Buffalo Medical and Surgical Journal*.

THE POISONOUS PROPERTIES OF THE CASTOR BEAN.—Dr. R. S. Harden, of Waverly, N. Y., writes: “Upon reading the account of poisoning from eating castor beans, in THE MEDICAL RECORD of June 30, 1883, I was reminded of my own (personal) experience with the bean. While a medical student at Bellevue in 1872, our professor of materia medica, Dr. McCready, picked a handful of the beans while passing through the hospital grounds and during his lecture upon cathartics he passed them around among the class, facetiously remarking that if any of us were in need of physic we could eat some of them. Not requiring a cathartic, but simply out of curiosity, I ate one bean, the results were very surprising and alarming. I vomited and purged violently all night, and purged during most of the next day, being so extremely prostrated that I was very much alarmed for fear of a fatal termination of my experience with the professor's innocent castor beans.”

OUR ALARMIST CONTEMPORARY, *The Lancet*, makes the extraordinary statement that “it would be difficult to imagine a more powerful apparatus for conveying disease than a book.” Our esteemed but over-earnest contemporary goes on to picture the circulating library as a chamber of insuppressible horrors, and borrowed books as containing the promise and potency of the most deadly contagions. The question follows, Is it better to live illiterate or die of the measles, whooping-cough, chicken-pox, mumps and all the other ills to which flesh is heir, and circulating libraries are testators to? If the *Lancet* had only taken the trouble to give its alarmed imagination a rest, and had consulted some of the facts, it would have found that the question of contagion by books has been carefully studied, in this country at least, and very little made out of it. The *Lancet* has got into a condition of sanitary erethism, and is bound to make its readers uncomfortable. We are reminded of *Punch's* verses, which might very well be directed against

“THAT DREADFUL JOURNAL.”

“It warns us in eating, it warns us in drinking,
It warns us in reading, and writing, and thinking;
It warns us in foot-ball, foot-race, eight-oar “stroking,”
It warns us in dancing and cigarette smoking;
It warns us in wearing red socks and shampooing.
It warns us in taking champagne and canoeing,
It warns us of drains in our snug country quarters,
It warns us of fever in mineral waters,
It warns us in everything mortal may mention,
But—what gives rise
To but little surprise,
Nobody pays it the slightest attention.”

The last is certainly wrong, as regards our valuable contemporary, however, since its views are always widely quoted, being always forcibly put forth.

IN PRURITUS OF THE GENITAL ORGANS, Scavenzio recommends local hypodermic injections of morphine.

BEER IN THE PARIS HOSPITALS.—The *Progrès Médical* (June 9) criticises a rather arbitrary circular which M. Quentin, the Director of the Assistance Publique, has just issued to the directors of the Paris hospitals, with instructions to communicate it to the medical officers. In this he declares that the consumption of beer in the hospitals has for some time past so increased as to become a very serious charge upon the budget and deranging its equilibrium. This abuse, as he terms it, he can no longer permit, for beer he declares to be neither a food nor a medicinal agent, and therefore it must from this date cease to be furnished as one of the current articles of diet, and only become procurable by means of exceptional prescriptions of the *chefs de service* under the surveillance of the Central Administration. The *Progrès* disputes the assertion that beer is neither food nor medi-

cine, and states that the medical officers find it of great value in the treatment of disease, and regards it as somewhat surprising that the Director should have issued this decree (which really means almost entirely stopping the use of beer) merely for economical reasons, without consulting the medical body as to its propriety. If economy is the object in view, there is said to be ample means of accomplishing it in the hospital administration, which is far too numerous. The hospital physicians have also signed a protest against the withdrawal of the beer. Nevertheless, it is abundantly demonstrated in America that beer is not an essential to a diet list of a hospital.

SUCCESSFUL OPERATION FOR STRANGULATED INGUINAL HERNIA ON A MAN EIGHTY-ONE YEARS OLD.—Dr. H. S. Hendee, of Louisville, N. Y., writes: "On June 6th I was called to an adjoining town to visit a well-known citizen, Mr. A. A—. Found him suffering from strangulated hernia, and had been in that condition for fifty hours. At once attempted its reduction, but failed. Gave chloroform, with the hope that under its influence parts might relax and reduction follow, but with the intention if reduction failed, to operate. Dr. C. P. Kirby of this place was called, and gave efficient aid. After making proper, but ineffectual efforts to reduce the hernia, the operation was at once commenced. The opening was made to the bowels and ring, with very little loss of blood, not exceeding half an ounce. The bowel was highly discolored. Dividing the ring was but a moment's work. The bowel was carefully sponged and returned to its place. Three deep ligatures united the wound. Carbolic acid lotions were applied; morphine internally. By June 20th the patient was practically well. The points which make this case worthy of note are, first, the age; second, the time which elapsed after the strangulation and before the operation. showing, as it does, that age and lapse of time need not deter the surgeon from making the operation."■

POLITICS AND MEDICINE.—The Dayton, O., Board of Health has discharged the Health Officer, Dr. Thos. L. Neal, and appointed a vigorous Democrat, Dr. A. H. Iddings, in his place. The Dayton *Journal* adds that "it was the deliberate opinion of the Board that the sanitary condition of their party demanded a Democratic doctor."

THE AMERICAN MEDICAL MAN ABROAD, AND HOW HE IS REGARDED.—A correspondent of the *Cincinnati Lancet and Clinic* writes home regarding the status of American medicine abroad, giving perhaps a rather one-sided view of it. He says: "They know one thing at least, and that is that medical diplomas can be bought in our country, and that almost every American has one of them concealed somewhere in his inside vest-pocket. 'How are the *Doctors Philadelphia* progressing?' I heard one of them remark to a friend of mine the other day. 'Finely,' he said, 'the American Government issues them to us as passports, and they thus serve as an easy means of identification, besides serving as a medical diploma.' 'You don't say so,' he replied, and probably went off to communicate the fact to Bismarck. They get the idea that bushel loads of these bogus medical diplomas, or D. P. (Doctor Philadelphiae), as they call them, are sold to the highest bidder, that most of our colleges engage in traffic with them by the fact that these quack professors advertise their institutions in the German papers, probably intending to attract the back-door German candidates to our shores. No wonder their faith in our colleges is shaken somewhat; no wonder they look with suspicious eye on the title of M.D. (*Genus Americanus*). Here is another sample of their thoughts. One of the most celebrated gynecologists of this city thus addressed the class one morning: 'Gentlemen, I present you a case of abortion of not unfrequent occurrence in this part of the country, our American neighbors, however, annually have six thousand

abortions, besides a large number that never reach publicity.' The German students look amazed and surprised, and if perchance an American is present, he is eyed to see how an abortionist looks. Is the medical profession in America so steeped in wickedness that a German professor allows his students to infer that every practitioner practises abortions, and that it is just as common a thing to have an abortion as a broken leg or a case of tuberculosis, for instance?

ANOTHER CASE OF TRANSPOSITION OF VISCERA.—Dr. G. Frank Lydston, of Chicago, sends us the following account of a case of transposed viscera: "J. M—, twenty-four years of age, barber by occupation, consulted me a short time since with reference to a slight attack of bronchitis, and stated casually that his heart was 'on the wrong side.' On examination, I found that his statement was correct. The heart occupies precisely the same relative position upon the right side that it ordinarily does upon the left, the apex being in the right fifth intercostal space. There are no evidences of cardiac hypertrophy, and the valves are apparently perfectly normal. The chest is perfectly symmetrical, there being no more than the normal disparity of measurement of the two sides. The lungs are normal, and no causes of cardiac displacement involving either an increase of weight or extraneous pressure are present. No dyspnoea is complained of, and the patient is to all appearances in perfect health. At my first examination, he had just climbed several flights of stairs, in preference to waiting for the elevator, but was not at all inconvenienced thereby. The abdominal viscera are in their normal positions, a point to which I will call especial attention, inasmuch as such cases are usually accompanied by a transposition of the liver and spleen. Niemeyer states that in dextro-cardia the liver usually occupies the left hypochondrium and the spleen the right. Taking the various features of the case into consideration, I think we are warranted in the conclusion that it is an instance of a quite rare anomaly, 'congenital dextro-cardia.' Pathological displacements of the heart are, of course, not infrequently seen, as the heart is a very movable organ, and slight causes may suffice to displace it, but the present case is certainly quite rare."

SIR JOHN HILL AGAIN.—A correspondent informs us somewhat dogmatically that the epigram on Sir John Hill, quoted by us recently, was not written by Garrick, but by Samuel Foote. Our authority was that of Mr. John Timbs, and we shall have to abide by it until a better is given.

Sir John Hill was one of the quasi-charlatans of the eighteenth century, a man of immense ability and industry, but of a waspish temper and irrepressible impudence. He was consequently the victim of many epigrams. A "Hilliad" was even written, in which Sir John was described as

"A wretch devoid of sense and grace,
The insolvent tenant of unnumbered space."

Another witty individual, who had been called "a wooden-headed booby" by the distinguished doctor, retorted with the following verse:

"The worst that we wish thee for all thy vile crimes,
Is to take thy own physic and read thy own rhymes."

Some other friendly poet caught up the last and wrote the following:

"No! let the order be reversed,
Or else unlash his crimes;
For if he takes his physic first
He'll never read his rhymes."

THE REWARD OF A GOOD ACTION.—Those who do not believe in a readjusting hereafter should read the story of the good doctor of Lyons: As Dr. Monnet, the good man referred to, was passing along the streets one cold day last January, he saw a drunken man fall down and seriously injure himself. The benevolent physician hurried to the fallen and stupefied man, helped him up, and

led him to a neighboring drug store, where he bound up his wounds and gave him a soothing potion. Scarcely had he finished his work when the drunken man turned and struck him violently in the face. The doctor left in disgust, but as he was hurrying on his way the druggist came running after him with a bill of one franc and eighty centimes for the medicine given to the patient. The doctor refused to pay it and went his way. Some days after the doctor received two official letters, one calling on him to pay the druggist's bill, the other summoning him to court to testify with regard to his drunken patient. The doctor, who was a busy man, neglected both letters. He was soon after visited by a bailiff and compelled to pay a fine of forty-eight francs and also for the prescription, a total of forty-nine francs eighty centimes. Worse than all, the scandal aroused by the visits of the police so damaged his reputation before a prospective father-in-law that he missed "un beau mariage."

THE BACILLUS TUBERCULOSIS may have killed many men—it has made two, Koch and Spina.

BACILLUS LEPRÆ.—Cornil has recently demonstrated the presence of bacilli in leprosy tissues, and announces that he has found a new staining reagent by which the decomposition bacteria can be differentiated.

GERMAN VS. FRENCH SURGERY.—The *Medical and Surgical Reporter* calls attention to the alleged decadence of French surgery and quotes Verneuil's refutation thereof as follows: "If we appear to have thrown back operative surgery to the second rank, this has been in order to advance surgical therapeutics into the first rank. If we have shown but little eagerness to extirpate cancers of the larynx and uterus, to excise the œsophagus, the pylorus, or the lung, to tie the aorta, etc., this has been because our Gallic good sense has enabled us without difficulty to foresee the inevitable destiny of these extravagant vivisections, and that it appears to us of no utility boasting to-day of that which will be rejected to-morrow. If in our surgical wards we greatly hesitate to transport the results obtained in laboratory experiments, that is because we do not assimilate man with batrachians and rodents, or even with the mammalia, the most elevated in the animal scale." For all this, the Frenchman does not make out his case. The chief contributions not only to operative surgery, but to surgical pathology and therapeutics, have come in late years from other countries than France.

A METHOD OF RENDERING THE SKIN INSENSIBLE IN OPERATIONS WITHOUT CHLOROFORM.—M. Jules Guérin read a note at the Académie des Sciences upon a method of rendering the skin insensible in those operations which do not admit of chloroform by inhalation, and cited a case in which he had employed it to advantage. A lady, aged sixty years, consulted him three months ago for a tumor in the right breast of eight years' standing, which, on examination, proved to be scirrhus. The general health was bad, bronchial and cardiac troubles were manifest, and the kidneys were not in a very satisfactory condition. However, the operation was urgent. Chloroform having been considered dangerous, M. Guérin applied around the tumor a circular layer of Vienna paste, limited by a double band of diachylon. At the end of twenty minutes the caustic was removed, leaving in its trace a black ribbon-like line. The knife was then applied, and the tumor removed without the patient feeling the slightest pain, and who did not seem to be aware of the operation. The results were all that could be desired.—*Medical Press*.

THE TREATMENT OF WARTS.—Vidal recommends bandaging the wart-covered hands in flannel and green soap. After a number of applications the warts become softened and can easily be removed.

THE SOUND IN THE DIAGNOSIS OF GASTRIC DISEASES.—Leube calls attention to the very vague methods now

in use for determining the different forms of gastric trouble. He recommends the use of the soft sound for the purpose of more careful investigation. A healthy stomach should be completely empty seven hours after a moderate meal. By the sound we can determine whether it is really empty at this time. Specimens of the gastric juice can also be obtained, and its acidity tested.

CHRONIC CONSTIPATION.—Cascara sagrada, in doses of twenty minims three times a day, is said by many observers to be very efficient in the treatment of obstinate chronic constipation.

A SUBSTITUTE FOR IODOFORM IN THE TREATMENT OF WOUNDS.—Professor Ferd. Petersen, of Kiel, claims that zinc oxide is just as good as iodoform in the treatment of wounds, that it is not so poisonous, and is cheaper.

THE TITLE OF DOCTOR AND M.B.—Dr. N. O'D. Parks, of Ashton, R. I., writes: "I trust you will pardon me again troubling you to make more plain how preposterous is your London correspondent's contention. The sole ground on which the right to the title of doctor is claimed for the M.B., is that it is a University degree. On that ground, above all others, the claim is most untenable. Nobody ever hears, for instance, of a B.D. or LL.B. arrogating to himself the right to be called doctor, and there is no valid reason why a special privilege should be conceded to an inferior degree in medicine which is not accorded to the corresponding degree in law or divinity, both of which take precedence of the medical degree. There is one way, and one only, in which an M.B. can acquire the right to the prefix Doctor, and that is by proceeding to the higher degree of M.D."

CONCERNING THE REGISTRATION OF REGULAR PRACTITIONERS AND THE MEDICAL REGISTER.—A correspondent sends us the following: "In your issue of July 7th, it is stated that, 'In what for distinction's sake may be called the Physicians' Medical Register for 1883-84, a list of only 2,684 names is given, which *number represents the regularly educated physicians in affiliation with regular medical societies* (italics mine). The remainder are composed of homœopaths, eclectics, and non-descripts.' The above statement is incorrect for the following reasons: First, it mentions the Physician's Medical Register, as if its list were an official one, which, as I understand, it does not claim to be; second, the list does *not include* all regularly educated physicians in affiliation with, and in good standing in the Regular Medical County Society, or the Academy of Medicine; third, it is controlled by a 'private organization,' claiming the privilege of permitting or refusing registration to whom it will—the latter in cases where, to the best of my knowledge, it has not even attempted to allege, much more to prove, as cause for such refusal anything derogatory to the character or ability of such applicants for registration."

TO STOP HICCUGH.—Dr. W. E. Shaw, of Cincinnati, Ohio, writes: "I noticed the item by Dr. Martin Burke, in *THE RECORD*, of the 30th ult., 'To Stop Hiccough' by compression over the lower ribs. I have used compression successfully in quite a number of cases of persistent hiccough. The idea is not original, but was given me by my preceptor, Dr. W. P. Kincaid, of New Richmond, Ohio, about 1870. His method was to place the tips of the fingers of both hands in position of complete supination against the abdominal muscles, at the lower and outer junctions of the epigastric with hypochondriac regions. With the finger-tips in this position, firm and very gradual pressure was to be made backward and upward against the diaphragm. This pressure should be continued for some little time after the diaphragm has ceased its spasmodic contractions, when the fingers should be very gradually withdrawn."

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THE STATUS OF PROFESSIONAL OPINION AND POPULAR SENTIMENT REGARDING SEWER-GAS AND CONTAMINATED WATER AS CAUSES OF TYPHOID FEVER;

WITH ALLUSIONS TO A PAPER BY DR. ALFRED L.
CARROLL UPON THIS SUBJECT.¹

[By GEORGE HAMILTON, M.D.,
PHILADELPHIA, PA.]

IN the discussion following a lecture upon this subject before the College of Physicians, March 7th, by the writer, the pre-eminent sanitary engineer, George E. Waring, declared "that the sewer-gas theory in regard to typhoid fever was, in the opinion of sanitarians, exploded." This declaration is in opposition to the teaching and recommendations of not a few engineers, who insist "that every effort should be made to exclude the gas from dwellings, regarding it as the general, if not the sole cause, not only of typhoid, but also of scarlet fever and diphtheria." This doctrine and these recommendations are in accord with the opinions, and have gained the support of a large majority of physicians. Many professors and editors of medical journals coincide with this view, and successfully impress its alleged correctness upon the minds of the inexperienced student and practitioner. Recently there appeared in a medical journal a paragraph from a somewhat prominent physician to this effect: "Is it not surprising and incomprehensible that there can yet be found physicians who deny the agency of sewer-gas in causing typhoid fever, diphtheria, and scarlet fever?" When it is stated that the writer of this quotation is one of the most positive in regarding sewer-gas as the effective agent in giving origin to the diseases named, may we not imagine another and greater surprise when he learns that this cherished and popular theory is exploded!

The paper upon sewer-gas, by Prof. Frank H. Hamilton, published some months ago in the *Popular Science Monthly*, with its numerous quotations, cannot be regarded as antagonistic to the opinions heretofore and at present held by many physicians, sanitarians, and the public generally. The special object of that paper was, in fact, to devise more reliable measures to exclude from houses this asserted source of disease; and, to accomplish this object, scientific plumbing, with improved apparatus erected in an annex, outside of the residence, was recommended. Efforts to exclude the gas are unceasing up to the present moment; neither is this strange, in view of what has just been stated. Whether the typhoid, the scarlatinal, or the diphtheritic germ, or some special quality of the gas itself, dependent upon peculiar substances finding entrance to the sewers, and subjected to various degrees of warmth and moisture, be the supposed noxious agents in question, is immaterial; for, practically, to admit the gas is to admit one or all of these agents; to exclude the gas is to exclude them. Attempts have recently been made to underrate the agency of sewer-gas in causing typhoid fever and other diseases. Efforts in this direction are, doubtless, made by those who frankly confess that the reports of the Board of Health of this city, New York, and elsewhere, are strongly in opposition

thereto. Nor is this all; for a large majority of practitioners, who have had the most frequent and abundant opportunities to observe the origin, development, and progress of typhoid fever, either withhold their assent to the current views upon this subject or positively deny that sewer-gas is the sole cause of this fever, or that it exceeds all other agencies, combined, in its production.

In this connection, does it not seem passing strange that, while the Trousseaus, the Niemeyers, the Murchisons, the Bristowes, the Flints, the Jacksons, and many others of similar experience and capacity, entertain doubts in regard to certain points pertaining to the origin of typhoid fever, and express their opinions in relation thereto with calm, philosophic, commendable reserve, many others, of different qualifications and temperament, find no difficulty of this kind, but, on the contrary, armed *cap-à-pie*, are always ready and eager to solve any question in regard to this subject? Unfortunately, these attempted solutions are too often merely bold, positive assertions, having no real basis of support, as is exemplified in the declaration by some, "that the families located in the wealthy and fashionable parts of Philadelphia and New York, are most liable to attacks of typhoid fever;" while the reports of the Board of Health of both cities show, on the contrary, that the suburbs exhibit by far the largest number of cases. This accords perfectly with the testimony of the late distinguished Professor, John K. Mitchell, quoted in my paper of the 7th of March, who, in consultation, informed the writer and the late Dr. Louis P. Gebhardt, "that he seldom saw cases of typhoid fever except on the outskirts of the city," where water-closets were scarcely known. One of the chief embarrassments of those who would fain be wise above that which is written, is to account for the greater prevalence and fatality of this disease in the country, and to avoid this difficulty, *coûte que coûte*, a reason for this must be given. To escape the dilemma in which they are placed, the drinking-water in the country is declared to be contaminated from the adjacent or remote privy. Now, this assertion should, if believed, inspire far more dread than the sewer-gas theory ever did, even in its palmiest days, long before the recent decree that it had been exploded was announced. What must now be the state of mind of the laborious farmer and family in reflecting that to his own negligence or stupidity is he indebted for this sad condition of his household? But the mischief does not end here; for what, it may rationally be asked, is to become of the thousands upon thousands of our citizens who, every summer, gladly visit the country and seek boarding with the farmer, or select for a season the accommodations furnished by cottages or hotels, many of them for the express purpose of escaping, as they declare, the heated and impure air of the city, and the contaminated water of the Schuylkill, receiving, constantly, as it is said, an immense amount of impurity from Manayunk, and many other points nearer to Fairmount? As is well known, not a few of the country people, on visiting the city, alarmed by the exaggerated reports of the condition of the water, abstain as far as possible from its use. But admitting the supposition, and it is nothing more, to be true as to contamination of the water in the notably beautiful rolling country of the counties around Philadelphia, how are we to explain the fact that, at uncertain intervals, a severe epidemic will suddenly appear, fever sometimes, dysentery at other times, and will just as suddenly disappear, and neither of these

¹ See MEDICAL RECORD of June 9, 1883.

diseases again be seen to any extent for one or several years ; precisely as has often occurred in this city and elsewhere ? To suppose that the water has thus suddenly changed from purity to impurity, and again as suddenly to purity, without perceptible or conceivable cause, either by the family physician or the family, is simply absurd.

Such a statement as was made in the discussion alluded to, regarding the condition of what were termed country towns in New England, can have but limited application, and is completely at variance with the contents of a letter from a prominent physician in a New England State, who, after inquiry in reference to outbreaks of typhoid fever, had replies from about fifty practitioners in that State to this effect, that the rural sections suffered by far the most from epidemics of typhoid fever. Any one who has travelled over the rural sections of New England could not have failed to observe the generally good condition of the farms, whatever he may have noticed of an exceptional character in some places. But why go from our own city or vicinity ? Have we not in this city, or within an hour's journey, numerous factories and densely peopled districts, notorious, when compared with the country, for their filthiness ; with cesspools and innumerable privies almost in contact with dwellings ; and, in many cases, from the porous nature of the soil, filled to repletion, thus affording every opportunity for the contamination of the water in comparison with the country ?

To show how delusive plausibly written accounts of the origin and spread of typhoid fever may be, let the following suffice : A woman, after nursing a relative during several weeks, returned, after the death of the patient, to her own residence, distant three miles. In a few days she was prostrated with typhoid fever, the disease of the relative. In succession one after another was attacked until four out of seven members of the family were down with the disease, one death ensuing from perforation. In the discussion of the paper one of the speakers thought there could be no difficulty in accounting for the attacks of the last three patients, as the dejections from the bowels of the first patient were (probably) cast down in such way as to admit of drainage into the drinking-water, and that thus the typhoid germs were received into the stomachs of those last attacked. But, unfortunately for this solution, the drainage descended from the source of the water to the outhouse.

In another family of eight persons, quoted in the lecture of March 7th, seven were attacked with the fever, all of them dangerously, except a colored servant. As in the former case the disease did not originate upon the premises. A son had been sent into Maryland—distance forty miles—and after remaining there several weeks was brought home, affected with typhoid fever ; and in succession his two brothers, two sisters, and last of all, his father and the servant were attacked. The dwelling was upon the slope of a hill, and, as in the former case, the drainage descended from the water in the direction of the outhouse ; so that contamination of the water in either instance was impossible. Typhoid and scarlet fever, diphtheria and dysentery may not, under favorable conditions, be contagious ; but under opposite conditions, as when these diseases are malignant, and the patients crowded together—for example, three in the same room—as occurred in the family just alluded to, they are regarded by an immense majority of the most able, unprejudiced and experienced physicians as eminently contagious.

Colonel Waring, to his credit be it said, was commendably conservative in the discussion, not disposed to be dogmatic, and, in regard to this special point, said that "the literature of the subject *seems* to prove that typhoid fever in the country is due to drinking-water which has become contaminated," knowing, doubtless, full well that a score of probabilities are powerless when confronted by a single irrefutable fact.

To revert for a moment to sewer-gas, it appears from

the remarks of one of the disputants to be now placed in a worse position than ever ; for while it is admitted to be the *vehicle for conveying typhoid germs, when it contains them* (?), it is also declared to be "the most potent cause of the typhoid state." The importance of this statement will at once be appreciated when we call to mind that the typhoid condition is the almost invariable concomitant of the latter stages of nearly all dangerous and fatal diseases, whether acute or chronic. During the discussion repeated appeals were made on behalf of cleanliness. But who ever heard of any one, who had the least regard to the amenities of life, opposed to cleanliness ? for is it not said to be "akin to godliness ?"

The criticisms by Dr. Alfred L. Carroll upon my lecture of March 7th, published in THE MEDICAL RECORD of June 9th, are, the writer thinks, rendered in great measure nugatory by certain uncontroverted and incontrovertible facts above stated ; yet special notice will now be taken in reference to some points in the critique.

The diagnosis of typhoid fever is declared by Dr. C. to be unsettled. But why so ? Is it because it has been known to appear suddenly upon a mountain-peak in Tennessee or Western Virginia, in their almost pristine condition, far removed from sewers, or "the walled-up and leaching privies of cities or of filthy villages," where some may say it should not have appeared ; or, on the other hand, in the filthiest of cities in Asia and Africa it rarely appears, despite the filth and stench for which they are noted. The diagnosis depends upon no contingent, exceptional features in its history. Who that has ever read Louis, Andral, or Chomel, or Bartlett in our own country, and, in an especial manner, the works of that master-mind in medicine, Austin Flint, Sr., could say that the diagnosis of this disease is unsettled ? Like very many other affections, either from idiosyncrasy, or complications, doubts may arise ; yet this militates not against its normal aspect, one of most singular and pronounced character, so that he who is familiar with the disease will incur slight risk of a mistake in diagnosis. Error as to frequency and fatality in town or country is impossible, if statistics are consulted.

Dr. C. asserts that sanitarians have not ascribed prominence to sewer-gas as a cause of typhoid fever. The facts above stated on this point prove the contrary. According to Dr. C. a majority of cases of this disease have been *accurately* traced to contaminated food and water ; yet in my own extensive experience not one such case has (to my knowledge) ever occurred, and those reported are probably in the same predicament as those alluded to in the discussion as referable to contaminated water. The term sewer-gas is said to be misinterpreted, but is it not just as definite in signification as the terms spring-water, sea-water, river-water, mountain air, etc. ? Next it is declared that "the filth of the country is atrocious compared with that of the city, and that for one source of filth in the city there are three in the country ; and that one prolific cause of this may be found in the numerous unventilated vaults." In reply to this sum of abominations of the country and villages, compared with a city, the writer must declare that, after ten years of practice in the country, he has seen nothing that could present the shadow of a parallel to the statement just made. On the contrary, a walled, unventilated well was scarcely ever seen in the rural section where he practised, but in lieu thereof a simple fosse, not very deep, was dug, and from time to time the contents covered with fresh earth and in the fall or winter removed to the fields. This then is just the condition that Dr. C. regards as involving only slight danger, while the walled-up, unventilated privy is a nuisance worthy of the severest denunciation. Where then do we find these dangerous wells in great number ? As every one knows, in the cities, and in many cases, as in Philadelphia and New York, reaching to tens of thousands.

In my lecture it was stated that in "not more than one house out of five could any sign of sewer-gas be

detected. This, of course, had reference, to the city, not the country. While Dr. C. is quite excusable for this oversight, his thrust at the country physicians, in declaring that very few of them care to *learn how* to look for the causes of disease, may not be regarded in so favorable light, especially when we reflect that Trousseau designated the country physician as in the best position by far to discover the origin, development, and progress of typhoid fever; and truth compels me to assent to this declaration. In forty years of city practice no such opportunities for observing the origin and character of the disease were afforded the writer as during his ten years of country practice; and this may well appear from the fact that, in city practice, only one case in a family has occurred—three families alone excepted, in two of which two, and in the third family, four persons were affected. In this connection it may be stated that in the course of twelve months four cases of intestinal perforation occurred in my practice.

Dr. C. most truly informs us, "that facts are more forcible than words;" and what sane man can object to this forcible truism. Let us, however, put to the scrutiny a fact or two adduced: "Agricultural laborers," he tells us, "do not spend all their time in the fields," for they need sleep, and, thus far, very good. But when he asserts that "as a class they carefully exclude all ventilation from their rooms," we must dissent, *toto codo*. The most laborious and exhausting work of the laborer is during the hot weather of the harvest-time, and, as a rule he is apt to retire early in the evening. But, unfortunately, the room of the laborer is very often in the upper story or garret, and this very frequently is without ceiling, and the rays of the sun pouring down upon the roof during the long days of summer, renders the atmosphere of the room in a measure stifling; and, instead of excluding the air, he longs for the excessive heat of his room to pass away, as experience tells him it will, just as the night passes away, and the well-known refreshment of the morning hours draws near. In this connection it should be noted, that when epidemic dysentery prevails (in the country), many of the attacks are attributed to the excessive change of temperature from the early night to the morning hours, causing (during sleep) sudden and violent retrocession from the cutis to the abdominal organs. Healthy young males are said by Dr. C. to be especially prone to attacks of the fever, and here, we think, he is right, although in opposition to the view of Dr. F. H. Hamilton; but if, as he asserts, fragile women are better able to resist *infection* than strong women or men, it is contrary to general experience; for debility, no matter how produced, increases the liability to such infection or contagion; while it must be confessed that males or females of moderate physical conformation, if healthy, support acute diseases better, and are more likely to escape a fatal termination than the rugged and over-sanguine. Facts that have the appearance of causes are alluded to, but these, although constantly brought forward, can have, and should have but slight influence in determining questions of serious importance; for one proven, irrefutable fact, in contra-vention, outweighs a score of them.

About two columns of THE RECORD are taken up with a list of houses in which typhoid fever or diphtheria occurred. Every one of these houses, whether large, elegant, and furnished with conveniences, or small, and of an opposite character, had this in common, that in regard to filth, in one form or another they were simply abominations, and hence, were just the places (as many think) for an outbreak of these diseases, of which six were typhoid fever; and let it be borne in mind that Dr. C. has excluded cases where contaminated water might be thought to have had some influence in causing these outbreaks. But what of all this? If eleven cases of typhoid fever, as stated above, could occur in only two houses, having no such abominations of filth, nor of contaminated drinking-water, why may they not occur in houses

such as Dr. C. describes? for, beyond all question, filth should confer no exemption from these attacks. Dr. C. intimates that persons who are habituated to the influence of agents productive of typhoid fever are seldom quite well, and, on the contrary, my experience is that young and healthy men are, especially in the country, attacked despite their actual good health.

In connection with, and conclusion of this subject, the writer must again put on record the testimony of Dr. John Syer Bristowe, President of the Society of Medical Officers of Health, confessedly one of the most sagacious observers and logical thinkers of the day, who writes as follows: "If we look to the remarkable influence which *simple variations of temperature and peculiarities of season* exert on the mortuary returns, in respect both of the number of deaths and the character of the fatal diseases, and compare therewith the comparatively small effect on the death-rate of even one of the most fatal of the zymotic diseases, or with the insignificant influence of deaths from enteric fever, diphtheria, and other affections, *over which sanitary science is supposed to exert a specially valuable influence*, we can scarcely avoid seeing that, on similar grounds, the deaths saved directly by the sanitary labors on which we are engaged must, under any circumstances, be so few annually as to produce *no distinct and unmistakable effect on the mortuary rate.*"

This sincere and ingenuous avowal of opinion by one, not only distinguished as an author and teacher, but who, in his exalted official position, had every opportunity to scrutinize all facts regarding outbreaks of typhoid fever, scarlet fever, and diphtheria, as bearing upon the question of their prevention, may well be commended to the serious consideration of those who, for years past, have positively promised the extinction of these diseases, under certain impossible conditions, yet with no other result than that just presented by the above-named conscientious and eminent authority in medical science.

THE TREATMENT OF ECZEMA IN PRAGUE.

By ROBERT B. MORISON, M.D.,

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SINCE the introduction by Professor Pick of medicated gelatines for the treatment of various skin diseases, there has been a most decided advance in the simplicity of such treatment and the results have been correspondingly good. Jarisch¹ said of chrysophanic acid gelatine, introduced a year ago: "The problem is solved of retaining the favorable action of chrysophanic acid upon psoriasis, and at the same time of eliminating any injurious secondary effect."

For more than a year eczema has been treated in the dermatological wards under Professor Pick in Prague, by the so-called medicated gelatine bandage, and an interesting article on this subject was read by Professor Pick² before the Verein deutscher Aertze, January 26, 1883. The difference in treatment of this disease between Vienna and Prague is striking in the extreme. In Vienna there has been no change made since the great Hebra gave the rules which are so universally followed. With the exception of the introduction of naphthol by Kaposi, and which is used only in his wards, tar still holds the chief place in the Vienna treatment of eczema.

Though being far from criticising the excellent results obtained from this agent, I could not but be struck with its uncleanness and disagreeable odor. As one passes through the wards in Vienna the patients are seen lying upon beds between two blankets, which, from the constant use of tar, have become so impregnated with it that the picture is anything but an agreeable one. Add to this the patient himself, covered often with a thin layer of this dirty-looking mass from head to foot, and

¹ Centralblatt für die gesammte Therapie, Heft I., 1883.

² Prager Medicinische Wochenschrift, No. 6, 1883.

one realizes that such treatment can only be used as a *dernier ressort*.

The importance of tar, however, being recognized by every dermatologist, it has been the desire of each one to obtain from it some essential ingredient which they hoped could be used as effectively and yet do away with its unpleasant application, but unfortunately neither the resinone, or resinin, or carbolic acid, or any of the other products of distillation contain all its virtues.

Even naphthol, so highly praised by Kaposi, and which certainly has some virtues, has not been able to take the place he first hoped it would.

This latter drug is now used almost exclusively in scabies alone, and even in this disease great care must be taken not to produce an inflammation leading to eczema from its universal application. The intensity of inflammation which it sometimes produces, and which far exceeds the application of tar itself, throws it entirely out of the field as a rival of the latter. This is the conclusion which all authors have arrived at after a somewhat prolonged trial since its introduction.

The general laws laid down by Hebra in the treatment of eczema were soothing applications in the acute stage, tar in the dry stage, and macerating applications in the chronic stage.

A patient was powdered with some inert powder until the acute inflammation and moist stage were passed, then tar applied and a cure accomplished.

The amount of labor and nursing required to treat the patient thoroughly according to these rules, to say nothing of the time lost by the patient when in the hospital, where it was necessary he should be, was very great. In chronic cases the time was lengthened so much the more because it was first necessary to render the disease acute by the various macerating applications before the regular treatment could be entered upon. That the results of this treatment, however, were most excellent could not be denied, but that it left nothing to be desired was far from the opinion of the author himself who was always trying to improve upon it.

The efficacious action of tar is generally conceded to be due to the mechanical protection which it affords to the skin and to its antiseptic qualities. There is so much chance for a mycotic appearance to be engrafted upon the moist stage of eczema (*e. madidans*), that it is one of the strongest arguments for the application of a drug if it has antiparasitic or antiseptic properties. Recognizing to the fullest extent this important property of tar, and being unable to find in any of its derivations a substitute for it, Professor Pick conceived the idea of supplying its place with some other medicine, which also possessed antiparasitic and antiseptic qualities.

For three months I have been studying closely and critically, through the kindness of Professor Pick, his gelatine treatment of this disease, and I have been greatly struck with the simplicity of its application, its cleanliness, and its most excellent results. Instead of the troublesome use of powders and salves, which in Vienna must be applied at least twice a day, the patient in Prague has immediately wrapped over his diseased parts linen bandages smeared with unguentum saponis containing five or ten per cent. salicylic acid. This is applied in any stage and left *in situ* for a week.

After the bandages are applied they are covered with what is known as tricot, and which is manufactured, in various sizes and at small expense, especially for Professor Pick in England. A patient thus dressed is able to go about his work with no inconvenience to himself, and no injury to his clothes. After a week's time he appears at the hospital, the bandage is removed, and the disease examined. If it is found necessary, from the still remaining inflammation and induration, a fresh bandage is applied and left on for another week. Then the gelatine is applied in the following manner: A portion of a mass made by dissolving fifty grammes of the purest gelatine in one hundred grammes of distilled water, and

which has been allowed to cool previously, is melted by putting it in a cup and placing the cup in hot water. To this is added the required strength of salicylic acid, usually five per cent. When sufficiently cool this mixture is painted upon the diseased parts with a painter's brush made of bristles, such as is used in applying tar. The layer of gelatine is made about as thick as a sheet of writing-paper, and after it has dried is gently covered with a minimum quantity of glycerine spread on with the hand.

The use of glycerine is found to be necessary to render the gelatine layer pliable and to prevent its contracting, which it otherwise would do with considerable force; sufficient to irritate the skin. It is also worthy of note that it is not practicable to mix the glycerine with the gelatine before it is applied, as it prevents its hardening sufficiently and renders it sticky. It takes a very small quantity only of glycerine, after the gelatine has dried upon the skin, to render it soft and pliable. A few trials teach the nurse the amount required. This use of glycerine obviates the only bad effect which the gelatine can possibly have. With such a gelatine bandage a patient seldom feels the slightest itching, the diseased parts are seen through the transparent layer, thus rendering the progress of the disease visible without the removal of the application, and, what is much more agreeable to the patient, an ordinary bath removes all traces of it. So easy is this method of treatment that the patient can make his own applications in most cases, and there is no fear of a too strong action to be produced by the drug. In many cases of chronic eczema the application of this medicated gelatine is made immediately without the previous use of the above-mentioned linen bandages. Also in acute eczema, especially in *crusta lactea*, this rule may often be followed. There is no reason why the medicated gelatine should not be immediately applied in any cases of eczema at any stage; but experience has shown that salicylic acid first applied in the moist stage of acute eczema in the form of salicylicated soap ointment for a period long enough to reduce the inflammation, renders the use of medicated gelatine more prompt in its results.

Through the kindness of Professor Pick's assistant, Dr. Strach, I have been able to obtain the history of the following cases, which, among many others, I have personally watched:

CASE I.—F. D.—, a man, aged fifty-eight, book agent, entered the hospital May 23, 1883, suffering from chronic eczema. This had troubled him for ten years; it first began with intense itching, and the skin soon became chronically inflamed from scratching. Also suffered from constipation. The patient is a large, well-built man, but somewhat pale and thin. On both legs, extending from the toes to a little above the knee-joints, the skin is livid, somewhat tense, and here and there covered with easily removed crusts, leaving a moist surface exposed, the skin of the thighs on both sides thickened, and in some places covered with pustules and vesicles. The corresponding situations upon the arms show the same changes. On the day of entrance was ordered a ten per cent. salicylic acid soap plaster, made according to method above described. On the 28th salicylicated gelatine smeared upon all the diseased portions, except the knee-joints, which still retained the plasters. On the 30th all the plasters were removed and the patient sent out so far cured that he could himself apply further treatment at home.

CASE II.—M. K.—, aged fourteen, daughter of a shoemaker, entered the hospital March 6, 1883, suffering from eczema capillitii. A year ago the patient came to this hospital for the same trouble, and was sent home cured after ten weeks' treatment with white ointment and tar. This attack has existed fourteen days. The scalp, especially the posterior portion, is covered with a thick mass of crusts, piled upon each other so that the hair is closely matted together. The skin of the ears tense and

inflamed, moist and painful. On the 7th salicylated soap plaster was ordered; internally, cod-liver oil. On the 15th tar was applied to the scalp, while the forehead and ears were treated with salicylated plaster, and this was done in order to compare the two methods conjointly. This treatment was continued until the 18th of the following month. In the meanwhile the plasters on forehead and ears, having performed their required work, were removed, salicylated gelatine applied in their place, and the disease cured. The scalp treated with tar was still quite inflamed, and though better, had not progressed as favorably as the other parts. At this time the tar was discontinued and salicylic acid used in its place. On April 30th the patient was so far cured as to be sent from the hospital.

CASE III.—J. L—, wife of a house-porter, entered the hospital April 4th, suffering from eczema universale. The patient has had the disease on both feet for two years, which began to spread to other parts four weeks ago. Home treatment was used, and also white ointment and tar, which was ordered by a physician, without any change for the better. She is a large, fat, well-nourished woman. On the forehead was a papular efflorescence, on the face a vesicular eruption, which in places was covered with crusts, exposing when removed a moist surface. The same appearances on the neck, legs, arms, and trunk. On the 10th was ordered a ten per cent. salicylated soap plaster.

On the 18th, plasters taken off; skin found much less inflamed, and only in some places was the epithelial regeneration imperfect. To such places fresh plasters were again applied, while a five per cent. salicylated gelatine was ordered for the rest of the body. On the 16th, the patient was so far cured as to be sent from the hospital with instructions how to apply the gelatine at home.

CASE IV.—A. F—, wife of a shoemaker, aged twenty-seven, entered the hospital March 20, 1883, suffering from eczema chronicum faciei. The patient had suffered for three years. It began during pregnancy, disappeared just before birth, and came on again while nursing. Was treated in this hospital a year ago with white ointment and tar. The eczema is situated upon the face and forehead, extending behind the ears and slightly into the hair, also upon elbow-joints and knees. Was ordered to be applied ten per cent. salicylated soap ointment immediately to all the diseased parts. This was changed twice in two weeks, and the condition of the patient much improved. Gradually increasing doses of Fowler's solution of arsenic were ordered, but after two weeks was discontinued on account of the gastro-enteritis which it caused. The third week after entrance salicylated gelatine was applied, and on May 1st the patient was dismissed cured.

CASE V.—W. K—, a girl, aged twenty-two, entered the hospital, suffering from eczema impetiginosum universale. Was immediately ordered ten per cent. salicylated soap ointment, which was applied in the following manner: The toes and fingers were closely wrapped with short, narrow bandages, smeared with the ointment; legs, arms, and trunk with longer and wider bandages, while the head and face were completely covered in the same way. Over this was drawn the closely fitting tricot bandages, made to fit all the irregularities of the body by the skilful use of a few stitches. Thus covered completely, with only holes left for eyes, nose, mouth, etc., she could lie comfortably in a clean bed, or be dressed and wander around the wards. On the 23d, the soap plaster was removed and reapplied to all parts, except the face, which was painted with a five per cent. salicylated gelatine. On May 14th, the infiltration had so far disappeared that the plaster was taken off and the gelatine applied everywhere. On June 9th, it was found advisable to reapply the plaster to the knees and elbow-joints, and these were easily kept in place by slightly overlapping them with the gelatine. On the 11th, all plasters were removed, and the treatment confined to the

use of gelatine. On the 14th, the patient was dismissed cured.

The most satisfactory results, however, both to patient and physician are obtained in the chronic cases which appear so frequently at dispensaries. For instance, in cases due to varicose veins, I have seen the greatest benefit follow it. Instead of taking the patient into the hospital, he is simply bandaged and sent off, to return in a week's time. Nothing could be simpler, and it is satisfactory in the extreme.

In trying this treatment, there are a few points in the method of application which it is necessary to insist upon.

The salicylic acid must be thoroughly well mixed with the soap ointment whilst warm, and this must be spread, when at about the consistency of butter, evenly upon short linen bandages, which should not be more than one and a half inch in width, and even much narrower when applied to fingers or toes. The ointment should not be in a thicker layer than the back of an ordinary table-knife, and should be spread fresh every time it is used. It is well not to mix up too large a quantity of the ointment, as upon standing it hardens and is more difficult of application.

The gelatine should be prepared by dissolving in distilled water and heated in a porcelain crucible. After stirring thoroughly it is allowed to cool, and forms a cake, which takes the form of the crucible. This cake can be kept for any length of time in paper, and the necessary quantity broken off every time it is to be used.

The salicylic acid must be kept separate from it, and only added to the gelatine when it is melted. The mixture should not be painted upon the skin unevenly or in a thick layer. When properly applied it can be torn from the skin in quite large pieces, and it comes off without pain to the patient, or irritation to the disease. It sounds like the tearing of tissue-paper, and when thus torn off looks as if the patient was having his epidermis removed by force.

Any holes or rents in the gelatine covering may be repaired from time to time by a fresh application. The indications for the renewal of the whole covering are when it has worn off or after a bath.

After having seen as many as a hundred cases of eczema treated by this method, I consider it fully equals the old tar treatment in the results obtained, and that it far surpasses it in the simplicity of its application and in its cleanliness, a quality which recommends it immediately to the patient.

With its introduction, Professor Pick has made a great advance in the treatment of this most common of all skin diseases, and it is worthy of a most thorough trial in the hands of others.

THE MEDICAL VOYAGE OF LIFE.—First year: icterus neonatorum, hyperkinesis intestinalis, and vaccination. Second year: dentition, croup, cholera infantum, and fits. Third year: diphtheria, whooping-cough, and bronchitis. Fourth year: scarlet fever, worms, and meningitis. Fifth year: measles. Now half the children are dead. Seventh year: mumps. Tenth year: chorea and typhoid fever. Fifteenth year: hyperæsthesia sexualis. Sixteenth year: spermatorrhœa, chlorosis, and spinal irritation. Eighteenth year: blennorrhœa urethralis. Twentieth year: bubo, alcoholic cephalalgia, vertigo. Twenty-fifth year: matrimony. Twenty-sixth year: insomnia de infanto. Thirtieth year: dyspepsia, nervous asthenia. Thirty-fifth year: pneumonia. Forty-fifth year: lumbago, presbyopia. Fifty-fifth year: rheumatism, alopecia. Sixtieth year: amnesia, deciduousness of teeth, bony arteries. Sixty-fifth year: apoplexy. Seventieth year: amblyopia, deafness, anosmia, general dyskinesia, atonic digestive tract, rheumatismus deformans. Seventy-fifth year: finis.

AN EAR-RING.—A convention of Otologists.—Puck.

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE.¹

By SAMUEL SEXTON, M.D.,

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So long as the parts of the ear concerned in sound transmission remain in a normal state, sound may be said to almost exclusively reach the auditory nerve by means of their action, and since impulses of sound are thus practically excluded from all other channels (tissues) of transmission, the confusion which would otherwise arise is avoided.

Disease, however, may give rise to changes in the transmitting mechanism, owing to which vibratory impulses are but imperfectly conveyed in the natural way, *i.e.*, by aerial conduction, and then it is that the auditory nerve takes cognizance of sounds hitherto excluded from it by the peculiar arrangement of the transmitting apparatus; these unpleasant and strangely sounding undulatory vibrations are received through the osseous, muscular, and other tissues.

This altogether anomalous hearing, which may exist for a time continuously, or may be interrupted, as it were, by almost normal hearing, is dependent for the most part on the passage of sound to the ear through both aerial and tissue media at the same moment. Owing to the increased intensity of sound, thus partly heard coming through the better conducting medium of the tissues, an extremely confusing and disagreeable effect is produced, and the definition of an exclusively aerial transmission is wanting.

As is well known to otologists, hearing may thus become a very painful experience: if the patient then hears his own voice autophanously he feels that it has been much altered, or is not intelligible to others; indeed, it seems to be unrecognizable to himself even. The discomfort may be increased, if such a thing be possible where the physical and mental distress is almost unbearable, by the tinnitus aurium arising from the circulatory movements taking place near enough to the ear to be heard. Loud noises, such as the passage of railway trains, street trucks, the action of machinery and the like, owing to the better transmission of their more profound impulses through unaccustomed media of approach, fall upon the nervous centre of audition like a blow and thus give rise to dysacusma.

It being doubtful if the perceptive sense of hearing be increased by labyrinthine inflammation, we may suppose that so-called hyperæsthesia of the auditory nerve consists in the painfulness of the impression made by sound on the perceptive centre. If this be true, inflammation of the perceptive filaments of the auditory nerve in the labyrinth alone would scarcely be expected to increase the hearing power. On the other hand, it would be difficult to determine what degree of labyrinthine inflammation was necessary to impair the perceptive functions. Labyrinthine inflammation, viewed from a clinical point of view, is doubtlessly nearly always consecutive to middle-ear disease, but whether existing independently or in conjunction with middle-ear trouble, the transmission of sound would be more effectually performed by means of aerial conduction as regards intelligible perception. In middle-ear disease, however, the tuning-fork would be better heard through the tissues inversely to an increasing defect in aerial transmission, but not necessarily better heard, however, on account of labyrinthine defects.

Even if the perceptive apparatus were alone affected the tuning-fork would be best heard by aerial conduction, since the transmitting apparatus affords the better conduction and at the same time interferes with osseous conduction. But cases of labyrinthine disease alone are rare, and it is difficult to establish the fact that no middle-ear disease coexists in any given instance.

CONCLUSIONS.

I. When the vibrating tuning-fork, placed on teeth or vertex is better heard through the tissues on one side, it simply indicates that the better ear excludes wholly or in part such (tissue) transmission, but it does not prove that the auditory nerve in either ear is affected.

(Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.)

II. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aerial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork allowed to vibrate as before will, therefore, be best heard in the diseased ear, and its vibrations will be almost entirely excluded from the healthy ear.

III. In deafness from labyrinthine disease, pure and simple, the middle ear being normal, the tuning-fork would be best heard, if heard in any degree, by aerial conduction, because bone conduction would be excluded.

(In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures; thus the deaf-mute is conscious of the sound of thunder, artillery, drums, stamping with the foot upon a floor, and the like.)

IV. If the above deductions be true, we may conclude that the tuning-fork is of less value than has been supposed in the differentiation of aural disease.

A CASE OF HODGKIN'S DISEASE.

By W. U. TAYLOR, M.D.,

MOORE'S, N. Y.

In September, 1882, a child was brought to my office by its father, who gave the following history: L. M——, nine years of age; French; scholar; was in usual health ("never very strong") until June, 1882, when she was poisoned by some vine while picking strawberries. Her face and hands were badly swollen, and before the swelling went down erysipelas set in, lasting about two weeks. Soon after this some enlarged glands were noticed just back of each ear. These grew rapidly and others appeared below on each side of the neck and in each axilla and groin. They grew rapidly in spite of treatment until I saw the case, and, in fact, to its termination.

On examination the cervical, axillary, and inguinal glands were found enlarged, a dozen or more in each region, varying in size from that of a pea to a hen's egg, the largest being in the right axilla. In her left groin there was an enlarged duct the size of a lead-pencil and about three inches long. All the glands except the parotids were freely movable; were firm, elastic, and without fluctuation. The parotids were enlarged, so that at the first glance I thought the child had mumps. On opening the mouth the tonsils were found greatly enlarged so as to fill the isthmus of the fauces and prevent the use of the smallest laryngoscope I had. The bronchial glands were apparently enlarged, respiration being stridulous. The liver and spleen were enlarged, there being flatness on percussion from the fourth rib to the umbilicus and the lower border could be plainly felt and its position seen. The only resonance was in the left inguinal region. The pulse was rapid and feeble, respiration shallow and frequent; skin dry and hot. Pulse, respiration, or temperature not noted at this time; appetite variable; bowels regular at present, but is subject to attacks of diarrhoea; urine scanty and high-colored. Measurements at this date were: around the head at the upper lip and angle of jaw, 17 inches; around chest, at lower border of sternum, 24 inches.

The child living at a distance, it was not seen as often as I wished. It was ordered iod. potass. with syr. iod.

¹ Read before the American Otological Society, July 17, 1883.

iron and citrate of iron and quinine, and an ointment of iod. ammonium, to be rubbed upon enlarged glands and over the abdomen.¹

October 3d and 7th.—There was apparent improvement in its general condition. Able to go up and down stairs; plays about the house; appetite good; slight diarrhoea, checked by chalk mixture.

October 12th.—Has spasmodic cough, at times attacks of "croup;" pulse, 110; temperature, 100°; had high fever the day before; said to have "taken cold." Examination of the chest gave negative results, the tracheal râles obscuring any others. Measures: around head, 17½ inches; chest, 24½ inches; at ninth rib, 25 inches; at navel, 24½ inches.

October 17th.—Very weak; confined to bed; pulse, 130; respiration, 24; temperature, 99½°.

October 21st.—Weaker; extreme dyspnoea; unable to lie down; complains of pain about the heart; urine very scanty; on standing it seems composed of urates alone; no albumen found by either heat or nitric acid; specific gravity not taken. Given infusion digitalis, 5 ss., to be repeated in six hours. Measures: Face, 18 inches; chest, 26 inches; navel, 26½ inches. Cough paroxysmal; very severe.

October 24th.—Increased dyspnoea; has "boring" pains in throat, dorsal region, and colic pains in abdomen; oedema of right arm and leg.

Died of exhaustion, October 27th, at 2 A.M. The pain and dyspnoea continued until death. Patient was conscious until a moment before she died, though drowsy from effects of anodynes. The treatment consisted of use of iod. potass., syr. iod. iron, citrate iron and quinine throughout the case. Cod-liver oil was given a short time, but causing nausea, was stopped. Concentrated diet ordered, but not carried out, the child having about what it wished. The inunction of iod. ammonium ointment was continued until it caused so much irritation as to prevent sleep. It was not used after October 17th.

During the first two weeks there was marked improvement in the general condition, but none in the glands, the enlargement progressing steadily until death occurred.

The child was about the house and ate at the table until October 17th. After that there were several days when she was apparently better.

Authorities seem agreed as to the unfavorable termination of these cases, and it may be said of them as Dr. C. was wont to say, in lecturing upon "croup": "Gentle-MEN! If you have a case of *true* mem-branous croup—and it gets *well*—it's NOT CROUP!"

SYPHILITIC MAMMARY DISEASE.

REPORT OF A CASE OF INHERITED SYPHILIS—REMOVAL OF MAMMARY TUMORS BY THOMAS' METHOD—AFTER TREATMENT BY THE IODIDES.

By CHARLES C. F. GAY, M.D.,

SURGEON TO THE BUFFALO (N. Y.) GENERAL HOSPITAL.

I HAVE recently had under observation a case of so much interest to myself that I have thought report of it would be of interest also to the profession. Miss C. M—, aged nineteen years, came under my charge on March 7, 1883. She is an only child; her health had been good until four years ago, when she began to have pain in both mammary glands; more especially the left one. The glands were well developed.

During these four years she had been a great sufferer. The left breast became so sensitive that the weight of the bedclothes upon it could not be borne. Her menstruation was regular and in no way influenced the pain of the mammary gland, either to lessen or increase it. A day or two before the patient came to me, she was examined by the gynecologist of the hospital, who reported

the hymen unruptured. There was no question raised whatever against the virtue and morals of the patient. She was well educated, cultivated, and refined. Her left breast was hard, nodular; felt like scirrhus and would have been so pronounced, I am quite sure, had her age been forty-five instead of nineteen years. The breast was so excessively tender to the touch, that it could not well be examined without ether; the nipples were retracted. At a consultation, the tumors were pronounced non-malignant, but removal was advised. The young woman stated that eighteen years ago her father had a cancer cut out from his throat; but as the father was still living, this statement of the nature of his ailment was regarded as apocryphal, and did not contribute toward a diagnosis of cancer in the case of the daughter. There appeared to be three or four tumors of the size of a hickory nut in the left, and one of smaller size in the right breast. The patient was extremely anxious to have these tumors removed as soon as possible, and had travelled a considerable distance in order to have an operation performed, and as removal was decided upon at the consultation, the patient was, on March 14th, etherized, and Thomas' method for removal of benign tumors employed. This method consists in making a semicircular incision around the lower half of the circumference of the breast, in the crease formed by the junction of the gland with the chest, dissecting up the gland and turning it inside out. This being done, examination showed that the tumors so much involved the gland itself, as to necessitate removal of the greater portion of it. The integument was replaced, secured by sutures, and the wound treated antiseptically with the boro-glyceride.

In three weeks there was no union, nor signs of union, in any part of the wound; it looked and smelled like a syphilitic ulcer, and the tendency to disintegration preponderated over the process of repair. Diagnosis of syphilis was made, and the iodides of mercury and potash employed at once. In four days the whitish stroma was removed, and in its place red and healthy granulations appeared; the offensive odor was dispelled, and in three weeks more the wound was closed. After our patient left for home, search of the hospital records was made for the father's case and his record found, from which I learned that he entered the hospital with syphilis when our patient was a child just four months of age. He remained only a few days, but returned again four times during a period of two years. He entered the hospital twice for syphilis, once for secondary, and once for tertiary syphilis. It is fair to conclude, that this man had the primary lesion months before his first entrance to the hospital, and long before the birth of the child. His disease was recognized as syphilis at that time by the attending surgeon, and the record accordingly made. There is no record of cancer nor of removal of a cancerous tumor. The immediate effect of the anti-syphilitic treatment employed, in case of the young woman, proved the correctness of the diagnosis, and it was confirmed and corroborated by the hospital records. The records furnished sufficient evidence to establish the fact that the disease was inherited; that the poor child was conceived in sin and endured suffering in consequence thereof. The mother was pregnant but once, and her health had been impaired for a long time.

The conclusion is, that the husband communicated the disease to the wife, and she in turn gave it to the child in embryo; that the taint remained latent for a period of years, and at length manifested itself in the mammary glands. If one could have diagnosed the disease and have treated the patient for specific disease, the mammary tumors might have been dispersed and an operation forestalled. This, however, is conjectural only. The operation resulted in substantial benefit. The right recovered soon after the performance of the operation upon

¹ New York Medical Journal, vol. xxxv., p. 337, 1882.

the left breast. Whether it were neuralgic induration or an affection arising from sympathy with disease of the left breast, I have no means of judging. I am led, however, to suspect that in an occasional instance the so-called "neuralgic indurated breast," and the "painful breast" of authors, might be classed under the head of syphilitic mammary disease.

Progress of Medical Science.

ACUTE ANASARCA WITHOUT ALBUMINURIA IN PREGNANCY.—The following case is related by Dr. M. H. Rendu in *La France Médicale* of April 19, 1883. A woman, twenty-two years of age, pregnant for the second time, suffered greatly from fatigue and anxiety while nursing her first child, who was sick with meningitis. She took cold, as she supposed, one night toward the end of the child's sickness, and had repeated chills with lumbar pains and general weakness. Soon a persistent headache supervened, accompanied by nausea and anorexia, but without vomiting. About five days later the patient noticed that her legs were swollen, and the anasarca in a short time became general, but was especially marked in the eyelids and breasts. The pulse was 110; temperature, 103.5°. The urine was scanty, less than thirty ounces being passed in twenty-four hours, was red in color and deposited urates in abundance. It contained, however, no trace of albumen, although daily examinations were made for a month. The other organs seemed healthy, the heart was normal, and there was no history of recent scarlatina. The patient was placed on milk diet and diuretic remedies, but continued to grow worse until it was feared that œdema of the brain would ensue and give rise to eclampsia, or that the patient would die from pulmonary œdema. It was then decided to bleed the woman, and accordingly between nine and ten ounces of blood were taken. At the same time numerous punctures with a fine needle were made in the swollen vulva and legs, giving exit to an abundant flow of serum. Improvement at once set in, and every trace of œdema had disappeared in two weeks.

DIAGNOSIS OF THE DIFFERENT FORMS OF URETHRAL DISCHARGE.—Dr. Fürbinger thus distinguishes the different discharges taking place from the male urethra (*Centralb. für klin. Medicin*, April 21, 1883). Spermatorrhœa is a loss of seminal fluid which occurs during defecation or at the completion of micturition. The condition, which is much more common than is ordinarily supposed, is not a final stage of pollutions, but is caused most frequently by gonorrhœa and sexual abuses. Spermatorrhœa becomes azoö-spermatorrhœa when for any cause (usually from epididymitis) the testicles cease to produce spermatozoa. Prostatorrhœa is the discharge, sometimes continuous, sometimes only during defecation and urination, of the prostatic secretion. It is a rare condition, and is a symptom of chronic prostatitis, usually of gonorrhœal origin. Urethrorrhœa ex libidine is a phenomenon occurring usually in anemic and nervous individuals. It consists of a scanty discharge, without orgasm or ejaculation, accompanied by intense sexual excitement and strong erection. The last discharge to be considered is gleet.

Of these five processes two are easily recognized. Spermatorrhœa is evidenced by the presence in large numbers of spermatozoa (a few here and there signify nothing), and urethrorrhœa is readily recognized by its characteristic mode of onset. The secretion of the latter is the product of the urethral glands and Cowper's glands. It is clear, stringy, and contains but few epithelial and round cells. A very abundant discharge points to azoö-spermatorrhœa. The absence of pus-corpuscles also points to the same condition, though their presence has no weight on the other side, as urethritis

may exist at the same time. In such cases the presence of the specific secretion of the seminal vesicles must be determined. If one finds a jelly-like substance resembling in shape grains of sago, that is conclusive; but if this is not found, it may be that it is in solution, and may then be precipitated by a strong alkali. The secretion is allowed to stand for a time, and then a clear drop is placed in a watch-glass, and a drop of caustic potash added. If now the drop shows a thick white cloud, or streaks, it is evidence that the secretion contains seminal fluid. If this process shows that we have not to do with azoö-spermatorrhœa, there still remains the differential diagnosis between prostatorrhœa and gleet to be determined. In the latter the discharge is very scanty; in the former, digital examination reveals great tenderness on pressure of the prostate gland. Indications of prostatorrhœa are: 1, the presence, unfortunately not constant, of numerous amyloid bodies; 2, numerous typical cylinder cells, especially when in the double layer arrangement of glandular epithelium; 3, the large Böttcher's crystals. The presence of the latter is ascertained by mixing a drop of the secretion with a drop of a 1 per cent. solution of phosphorated ammonia upon an object glass. In about an hour numerous large, exceedingly beautiful crystals are formed. The secretion of the prostate, the author insists, is not clear, odorless and thick, as usually stated, but is thin, of a milky cloudiness, and possesses the characteristic odor of spermatic fluid.

An aid to diagnosis is also found in the time of the appearance of the secretion in the urine. The first and last portions are to be separated from the principal flow of the urine. The presence of the secretion in the first portion points to gleet; in the first and second portions to prostatorrhœa; in the third portion to azoö-spermatorrhœa. The latter appears in the form of nearly transparent, thick, stringy masses, and sometimes also in the shape of sago grains.

A RARE FORM OF IMPERFORATE ANUS.—Dr. Ramonet relates the case of a child, three days old, who was brought to him on account of imperforate anus. There were up to that time no symptoms of strangulation of the bowels. The perineum presented a perfectly plane surface without elevation or depression to indicate the point at which the rectum terminated. But at the upper and posterior part of the scrotum, at the median raphe, there was a small orifice through which a little meconium escaped. A sound introduced into this orifice could be passed backward just beneath the integument to the point at which the anus ought to be. The operation showed that there was no deviation of the rectum; it was well formed and ended in the normal situation. The anus, instead of opening directly, formed an elbow beneath the skin and terminated with a fistulous opening at the root of the scrotum.—*Revue Médicale*, May 12, 1883.

RESECTION OF THE WRIST.—From a careful study of upward of sixty cases of resection of the wrist, Dr. G. Nepveu is not led to think very highly of the operation as regards either the cure of the disease or the restoration of function of the joint (*Revue de Chirurgie*, May, 1883). The following conclusions are formulated by him: 1. Resection of the wrist is not usually dangerous to life, especially when performed under antiseptic precautions. 2. A good result is sometimes obtained in the cure of the local disease and restoration of function. 3. This is, however, rare, occurring in not more than one-fourth of the cases. More frequently the cure of the disease is incomplete and the restoration of function but partial. 4. A more grave termination is not uncommon: sometimes death ensues, and sometimes, owing to non-arrest of the disease, amputation is required. 5. One cause of this want of success in resections of the wrist is that the operation is often undertaken in unfavorable cases. The operation is contra-indicated in osteitis and

in synovitis with tubercular deposits. 6. To obtain the best results as regards the usefulness of the joint, as little as possible of the bone should be removed and the periosteum should be preserved as far as the conditions of the case will permit. 7. An operation should never be had recourse to until all conservative therapeutical measures have proved unavailing. Such measures are immobilization, compression, counter-irritation, prolonged antiseptic lotions, etc.

IMMUNITY OF COPPER WORKERS FROM CONTAGIOUS DISEASES.—At a recent meeting of the *Société de Biologie* of Paris, Dr. Burq presented an interesting communication upon the immunity enjoyed by workers in copper during epidemics of cholera and typhoid fever (*La Tribune Médicale*, April 29, 1883). He stated that of forty thousand such workmen, two only died during each of the epidemics of typhoid fever in 1876 and 1883. Furthermore, the statistics of a society of three hundred members, all copper workers, showed that during the entire period of the existence of the organization (sixty-four years) there had been but three deaths from epidemic diseases among its members.

SYPHILITIC LIVER IN A BOY.—Dr. Teissier relates the case of a boy, fifteen years of age, who came under his care suffering from ascites; there was also diarrhoea and a slight cough. The diagnosis was made of tuberculosis of the peritoneum, intestines, and lungs. Paracentesis was performed several times and the child was put upon a tonic and diuretic treatment, but he sank rapidly and died. At the autopsy there were no tubercles discoverable in any of the organs or serous membranes. Of all the viscera, the liver alone showed any changes. It was rather small and presented upon its surface yellow nodules, hard as a stone and covered with a fibrous envelope. This latter sent out white fibrous prolongations, following the course of Glisson's capsule, and giving to the liver a lobulated appearance. Examination, both macroscopical and microscopical, showed the case to be syphilis of the liver, and this was further confirmed by the statement of the parents that the child had acquired "a disease" from his nurse.—*Lyon Médical*, May 13, 1883.

CHRONIC MYOCARDITIS AND DISEASES OF THE CORONARY ARTERIES.—Cases frequently occur—more particularly among well-to-do people, more rarely in the poorer class of persons over middle age—in which death occurs suddenly, without previous symptoms, excepting, perhaps, a feeling of constriction or pain at the chest. Dr. Carl Huber (*Virchow's Archiv*) gives a number of such cases in which the cause of death appeared to be sclerosis of the coronary arteries, and subsequent chronic myocarditis. The consequences of this myocarditis are aneurism of the heart, thrombosis, dilatation, and hypertrophy. The clinical symptoms are angina pectoris, stenocardia, and asthma. These symptoms generally occurred in paroxysms some months before death, generally after excitement, either bodily or mental, several times after dinners. In some there was irregularity or intermittence of the pulse, occasionally cardiac bruits; sometimes there was a sudden giddiness with temporary loss of consciousness on stooping, walking quickly, or going up stairs. The attacks were sometimes also accompanied by symptoms of collapse. Death sometimes occurred almost at once, but at other times several minutes, hours, or even days elapsed, during which time there were the symptoms of cerebral apoplexy, paralytic conditions, and alterations in the cardiac rhythm. The peculiarity of this cardiac affection is that it has nothing whatever to do with endocardial or pericardial disease, but depends on arterial sclerosis. Cardiac apoplexy, the author considers, is a condition to be reinstated in its old place as a well-marked disease, like cerebral apoplexy. It sometimes occurs in young individuals, the general cause of such occurrence being alcoholism or syphilis.

THE EFFECTS OF DISEASE ON THE SIZE OF THE HEART.—This subject has been investigated by Dr. Spetz (*Deutsches Archiv für klin. Medizin.*). He finds that in typhus there is no characteristic change in the dimensions of the heart and the large vessels; the same is the case in puerperal pyæmia. In phthisis the heart is diminished, and especially the left ventricle. The right ventricle is often somewhat diminished, but not in proportion to the diminution in the weight of the body. It is sometimes even hypertrophied, but not as a rule. The ratio between the depth of the left ventricle and the circumference of the aorta is diminished, and as this is not compensated for by hypertrophy of the muscular walls of the ventricle, there is a diminution in the arterial tension. Consequently the pulse in phthisis is soft and small. In cancer the depth of the left ventricle is still more diminished than in phthisis, and the right ventricle is affected almost as much as the left. In granular kidney, both ventricles increase very much, but especially the left. The aorta is not correspondingly dilated. In consequence of this the tension in the arteries is very greatly increased. In myocarditis, also, the heart is dilated and hypertrophied, but the left and right ventricle are almost equally affected. In chronic emphysema both ventricles are much dilated, with very little thickening of the muscular walls. Both ventricles are nearly equally affected. The pulse is full, but small and languid.

MODE OF REPRODUCTION OF THE LIVER.—While conducting some experiments upon the spleen of a dog, Dr. Tizzoni accidentally wounded the liver at the edge of one of its lobes. Six months later he discovered a tumor at the exact point where the wound of the liver had been made. It had all the gross appearances of the liver-substance. A portion was treated with bichromate of potassium and alcohol, and then numerous transverse and longitudinal sections were made. From a study of these the author arrived at the following conclusions: 1. Under certain circumstances the liver may be reproduced at the point where it has been wounded; there is a new formation of hepatic cells and biliary ducts. 2. Unlike what occurs in the spleen, the great omentum adherent to the wound in the liver does not take part in the reproduction of the substance of the organ, but serves merely as the stroma in which the newly formed tissue arises and is developed. 3. The new tissue arises from the pre-existing hepatic cells, which, by cellular multiplication, send out offshoots which penetrate into the epiploön like the prolongations of an epithelial tumor in the connective tissue of the skin; the hepatic cells present numerous nuclei, sometimes as many as twelve, which are deeply stained by carmine. 4. Some of these cellular prolongations have a light centre and assume the appearance of bile-ducts, while others are filled with protoplasm and nuclei, and resemble then the hepatic cells. 5. The newly formed hepatic cells, which resemble histologically the old ones, have that in common with the hepatic cells of the embryo that they remain for a long time separated by true lacunæ filled with blood. 6. The acinous disposition is wanting, but large blood-vessels, especially veins, and biliary ducts can be seen. The author concludes from this that the regeneration of the liver is in all points identical with the embryonic development as described by Remak and Kölliker.—*Journal de Médecine de Paris*, April 28, 1883.

NAPHTHALINE IN FROST-BITES.—Dr. Lindenbaum has employed this remedy with success in a number of cases of frost-bite. The dressing is usually changed every seven to ten days. In some instances the patients complained for two or three hours after the application of severe sticking pains, caused probably by small crystals of naphthaline. As far as the author's experience will permit him to judge, the same remedy is equally beneficial in burns.—*St. Petersburger Med. Wochenschrift*, June 2, 1883.

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"THINGS WHICH [CANNOT BE SHAKEN.]"

UNDER the above heading the readers of a popular religious weekly have lately been entertained with a series of articles by an eminent theologian, who showed the applicability of this text to the dogmas which he professed. As medical men we are especially interested in knowing how far the text may be applied to the therapeutic doctrines which we hold.

To go at the subject in sermon-like fashion, we ought first of all to premise that much has been taught as medical truth which has been shaken, and shaken to pieces. Secondly, we might show that much is still taught in physiology, pathology, therapeutics, which will probably be shaken. Thirdly, we should consider the things which cannot be shaken.

Under the first head would come all absurdities which have characterized medical practice in the past, of which we will only mention the doctrine of the four humors; the psora theory of constitutional diseases; the doctrine of signatures; in short, all the crudities and abominations in theory and practice which were the offspring of ignorance or superstition.

The second head we hardly dare touch upon for fear of being called iconoclastic. There is much in current medical teaching which we venture to affirm may possibly be shaken. Thus, in physiology, we do not think that the functions of the cortex cerebri, of the basal ganglia, of the cerebellum, of the vasomotor nerves, of the spleen, the current theories of menstruation, the hæmatopoietic functions of the blood, vascular glands, and the spinal marrow, etc., are yet settled, so that important modifications may not yet be made in the views now held. In pathology it will doubtless be proved that false ideas are now prevalent as to inflammation, tuberculosis, the pathogeny of infectious diseases, etc.

In therapeutics how much will escape the condemnation of future criticism none can tell. Our best text-books are full of untruths, partial truths, and exaggerations. It is so in regular medicine, and it is so in homœopathy. Refer to any drug in any treatise on materia medica—calomel, antimony, arsenic, aconite, phosphorus, etc., and you will find medicinal virtues ascribed that have never been realized, and much that is as fanciful as the "provings" of the infinitesimals.

We come now to our third and last head. While we would express ourselves with due modesty and caution, we affirm that the great body of medical doctrine, outside

of therapeutics, is "unshaken as the sacred hills." There is no room for doubt as to the origin, insertion, and uses of the flexor longus pollicis; that gastric juice has a solvent action on food; that the ligature of a bleeding vessel stops hemorrhage. Our concern now is principally with therapeutics, for it is there that we brethren of one family disagree. It is because there is so much that can be shaken that there are so many divisions in medicine. As far as medicine is an exact science there is no rational basis for differences of opinion. There are no sects or pathies in science, nor will there be in therapeutics when the actions of drugs and their relation to diseased states of the economy are definitely known.

Truths must ever stand as firm as mountains. What we want above all things is to get at facts. Some medical tenets may be accepted provisionally as probable; here we must act to a certain extent "by faith." With regard to others we have a tolerable degree of certainty. There are numerous medicaments whose physiological effects have been sufficiently determined to warrant dogmatism with regard to them. Under such and such circumstances, certain positive results will be obtained. The same may be said of their therapeutical effects, as determined by clinical experience. Among these drugs we may specify bromide of potassium, chloral, belladonna (in part), digitalis, nux vomica, opium, ergot (to some extent), and many cathartics. With regard to the action of anæsthetics, there can be no doubt practitioners of all schools utilize ether and chloroform when the urgent indication is to relieve violent pain or spasm or to produce anæsthesia for a severe surgical operation.

If we were all as fully agreed on the actions and uses of other medicaments as we are on the actions and uses of those just mentioned, and especially the bromides, when we wish to depress reflex spinal irritability, opium and anæsthetics when we wish to relieve pain or produce insensibility, we are certain that there would no longer be any sects in medicine. Progress in therapeutics is fast tending in this direction. It is no use ignoring the fact. We are learning more of pathological states, of etiology, of accurate diagnosis, and our knowledge is fast being reduced to system. Disease being only morbid physiology, physiology aided by etiology is becoming the intelligent guide of the therapist. What shall restore the disordered organ to its normal state, if any restoration be possible? How far may hygiene contribute toward this end? How far medicine? This is the problem for which we are seeking exact data. Earnest workers in all lands are contributing to our knowledge. The past twenty years have witnessed a great advance. The "regular" of to-day who has kept up with the age might find little common ground with the "regular" of a bygone generation. What shall be the final outcome of this movement toward more complete knowledge and therapeutic unity and harmony?

THE THERMOMETER IN THE DIAGNOSIS OF STOMACH DISEASES.

SOME time ago M. Peter made some investigations into the changes in surface-temperature in lung diseases. He claimed that by careful measurements slight changes in temperature could be observed over the seat of congestive or inflammatory foci in the lung tissue. By his

method an earlier and more certain diagnosis of phthisical troubles could, in the investigator's opinion, be made. Not much use has been made of M. Peter's observations, either to refute or confirm them. The cost of sufficiently delicate instruments, the difficulty of making a sufficient number of examinations, and the problematical value of the results explains this.

Not discouraged, however, M. Peter is continuing his investigations, and now directs his attention to variations of surface temperature in diseases of the abdominal viscera. Some preliminary reports have been made in the *Gazette des Hôpitaux*. These refer to diseases of the stomach. There is no doubt that differences in the condition of this organ cause corresponding changes in the cutaneous surface over it. This is so strictly the case that careful observations have detected a constant difference in the temperature of the skin over the pylorus from that of the fundus. This difference varies between $.1^{\circ}$ and 1° C., or from $\frac{1}{8}$ to nearly 2° F. The normal surface temperature over the stomach, as determined by Levin and by Peter, was from 34.9° to 35.9° C. (94.6° to 96.5° F.). It is higher in the morning, sinks toward noon, rises for the first three or four hours after meals, then sinks. M. Peter has thought that by studying these local variations he can obtain great help in the differential diagnosis between simple neuralgic and inflammatory conditions of the stomach. In a case of gastric ulcer, he found the temperature over the stomach to vary between 37° C. (98.5° F.) and 38.2° C., that in the axilla being 36.8° to 37° C. In a case of alcoholic gastritis, he found it to vary between 36.8° and 37° C. On the other hand, in gastralgia, he found very little change from the normal, that change occurring only in the most excessive exacerbations of pain.

The distinguished Frenchman seems to be unaware that this subject has been investigated to some extent before, and with interesting results. In 1879 Levin wrote an article entitled "La Thermometrie de la Region Stomachale," in which he stated, among other things, that the local temperature in dyspepsia (after eating) and in cancer and dilatation of the stomach was increased 1° to 2° C. above the normal.

So far, the results of this kind of surface thermometry have been small. Yet they tend to show that there is a definite temperature relation between the stomach and the skin over it.

THE READING OF MEDICAL BOOKS TO JURIES.

THE propriety of reading medical books to a jury has been often questioned, and the courts of many of the States refuse to allow it. In a recent case in Wisconsin it was held that such books could not be read nor extracts be given therefrom by physicians from memory, nor could they be read by counsel on the argument. In "Rogers' Expert Testimony" it is stated that evidence of this kind is not admissible in Indiana, Maine, Maryland, Massachusetts, Michigan, North Carolina, Rhode Island, Wisconsin, California, and New Hampshire, and is admissible in Iowa and Alabama.

The case above referred to was a trial for murder, and the Court said, "The effect of the evidence given, under objection, by Dr. Cody was to put before the jury as evidence what the medical works laid down as evidences of

strangulation. If this may be done indirectly by the oral testimony of the person who has read the medical works, it would certainly be a much safer rule to permit the books themselves to be read to the jury, as being better evidence of the fact. We think the learned Circuit Judge also erred in permitting the counsel for the State to read the medical authorities to the jury in the opening of his argument. It is evident they were not read by way of illustrating the argument of the counsel, but to give the jury a clear view of what such medical writers laid down as the evidence of strangulation. The jury must have understood that the extracts read to them were so read for the purpose of having them considered in determining the question of fact whether the deceased came to her death by strangulation."

THE RIGHTS OF CORONERS TO HOLD INQUESTS.

THE extent of a coroner's right to hold an inquest has come before a Pennsylvania Court for decision, in a case where the family of the deceased strenuously resisted the attempt to hold an inquest, and insisted that the circumstances of the death made an inquest not only unnecessary, but an outrage.

The facts were that the deceased was an old man about eighty years of age and had been ill for several days, but was under the care of Dr. Atlee, a reputable physician of the city of Lancaster. The deceased died in his own house and surrounded by his family.

The disease was paralysis, and when the coroner, against all remonstrances, persisted in the inquest, the verdict brought in was "death from a paralytic stroke." Upon the trial the main question litigated was whether a coroner was a judicial officer in the sense that he was the only judge of the propriety of exercising the functions of his office. The Court repudiated this theory of a coroner's duties, and held that an inquest could only be properly held where there was a reasonable ground of believing that death was caused by violence or some other unusual means.

It was further stated that if an inquest could be held in a case like that stated, it would be permissible to make a post-mortem examination, an idea "preposterous and abhorrent to all the finer emotions of human nature."

A bill was presented to the Legislature of this State for the abolition of the coroner's office and the substitution of a board of medical experts.

The tendency seems to be setting strongly toward the opinion that a coroner's inquest is of comparatively little importance in determining the correct causes of deaths by violence, and if in addition to this it is found that coroners claim the right to hold inquests at their own sweet will, without regard to the circumstances of the case, it cannot certainly be long before the Legislature will abolish the whole system.

THE THIRD BLOOD-CORPUSCLE.

MUCH attention has been paid to the so-called third blood-corpuscle, or hæmatoblast, by various physiologists, and especially by Schultze, Hayem, Norris, Hoffman, Bizzozero, and lately by Carl Laker and Friedr. Rauschenbach.

Bizzozero's views are now quite well known. He believes that the blood of cold and warm-blooded animals

contains blood-disks, with parallel surfaces, one-half or one-third smaller than the red blood-corpuscle. Hayem describes them as small biconcave disks, of a slightly yellowish color. Laker recently confirms Hayem's view as to their shape, but thinks the yellow color artificial. Norris, like Hayem, considers them biconcave, but doubt has been thrown over the accuracy of his observations because he describes them as of nearly the same shape and size as the red blood-corpuscle.

The actual number of these bodies, as well as their physiological importance, must be very much greater than has been hitherto supposed, if we may believe the more recent investigations. Norris estimates that his colorless corpuscles rank in number between the white and red. Bizzozero does not venture any estimate. Laker, who has devised some special methods of coloring and studying them, counted in one field 180 blood-disks or hæmatoblasts, 44 red, and 9 white corpuscles; in another field the ratio was 830, 270, 0. This estimate, however, cannot give a true idea of their actual proportions in the blood.

It is as yet impossible to say whether these corpuscles precede the red or follow them in their development.

Their function has of late been studied with special reference to their relation to the process of coagulation. The prevailing view regarding the origin of the fibrin-factors has been heretofore that of A. Schmidt's, viz.: that while fibrinogen exists in the plasma, the fibrinoplastin and ferment are contained chiefly in the white blood-corpuscles; these latter dying, give up their factors, and fibrin is formed. Hoffman has claimed that in coagulation 71 per cent. of the white corpuscles are used up and destroyed.

Landois and others had, however, shown that the red corpuscles are also apparently concerned in fibrin-building, and Hayem has recently been arguing that the hæmatoblasts, not the white cells, are the chief contributors to the process. Three investigators, Laker, Bizzozero, and Rauschenbach, now come to his support, and cite evidence to show that the hæmatoblasts do play this important part. It is found, for example, that proplastic fluids like that of hydrocele, which contain fibrinogen but not the other factors of coagulation, do not coagulate when the fluid from the spleen or lymphatic glands, so rich in leucocytes, is added, but do so on the addition of the little blood-disks.

The evidence so far shows that the blood contains a third corpuscle, which plays a part in the process of coagulation; also that the factors in coagulation are derived not from any of the different blood-elements alone.

The extremely important part which fibrin and its factors play in septic fevers, when it is often rapidly developed with great rapidity and in extraordinary amounts, makes the study of its origin an interesting one. Recent experimental studies of Maissurians ("Inang. Diss.," Dorpat) upon the changes of the coagulability of blood in fever have shown this very strikingly. The importance of the coagulation process in its relation to operative surgery lends a further interest to the investigations into its ultimate nature.

THE HONOR OF KNIGHTHOOD has been offered to Dr. Pitman, Registrar of the Royal College of Physicians.

News of the Week.

THE INFLUENCE OF THE DOCTOR IN HEALTH RESORTS.—"Each winter resort," says John Richard Green in "Stray Studies," "brings home to us the power of the British doctor. It is he who rears pleasant towns at the foot of the Pyrenees, and lines the sunny coasts of the Riviera with villas that gleam white among the olive groves. It is his finger that stirs the camels of Algeria, the donkeys of Palestine, the Nile boats of Egypt. At the first frosts of November the doctor marshals his wild geese for their winter flitting, and the long train streams off, grumbling, but obedient, to the little Britains of the south."

BROMIDE OF SODIUM IN SEA-SICKNESS.—Mr. T. M. Kendall reports (*British Medical Journal*) the results of his treatment of two hundred cases of sea-sickness. He confirms the views of the late Dr. Beard, that bromide of sodium is the most efficient of all remedies. He found that in doses of ten grains, three times a day, it was effectual. Mr. Kendall condemns the too indiscriminate use of oranges, lemons, champagne, and brandy.

A POST-GRADUATE SCHOOL in Philadelphia has been organized in connection with Jefferson Medical College.

THE NEW MICHIGAN MEDICAL REGISTRATION LAW, which was approved June 6th, will go into effect on September 6, 1883. It allows all persons who have been in practice for five years, or who are regular graduates from legally incorporated medical colleges to register at the county clerk's office. It is made a misdemeanor for any person to practise without registering. The supervisor is required to make annually a statement of the number of physicians in his district. There appears to be lacking any machinery for carrying out the law efficiently. The *Medical Age* says: "The profession were given no opportunity to be heard on it during its passage, and although it was introduced by a physician it is eminently laymanlike in its construction. The hand of the lawyer is, moreover, very conspicuous in the absence of the faintest shadow of it. It is clear, from the careful perusal we have given it, that the number of doctors in Michigan cannot be increased after December 6th next, and until the act has been amended so as to permit of such increase. It is expressly provided that all registrations shall be made during the three months following the date on which the act takes effect (September 6th to December 6th), and no provision is made for those who may wish to commence practice in the State subsequently to December 6, 1883. This may have been designed by the framer of the bill. But whether a design or a blunder, all future graduates and students of our Michigan medical colleges, as well as all graduates and students from the colleges of other States and countries, will, it appears, be obliged to settle elsewhere than in this State while the provisions of our new medical act remain operative.

TELEPHONIC CONNECTION BETWEEN HOSPITALS AND THE ATTENDING STAFF.—The treasurer of St. Bartholomew's Hospital, London, has completed arrangements with a telephone company with a view of placing the principal hospitals in London in direct telephonic com-

munication with the surgeons and physicians belonging to those institutions. The scheme proposed is that the various hospitals should be made the centre of communication, that the telephone company should connect the large hospitals with the nearest telephonic exchange, free of any charge, the company being remunerated by the payments to be made by the surgeons and physicians for connecting their private residences with the exchange.

EXAMINATIONS IN STATE MEDICINE.—The Royal College of Physicians intends to institute an examination in State Medicine.

DR. JOHN A. OCTERLONY has been appointed Professor of Obstetrics and Diseases of Women and Children in the University of Louisville. The university is to be congratulated.

THE DRAKE MEDICAL SOCIETY is the title of a new and enterprising organization recently established in Cincinnati, O.

HOW TO DEAL WITH CHOLERA.—The *Lancet* takes a very positive and hopeful view of our ability to cope with cholera. It seems strange that the disease should so persistently spread when disinfection will so promptly stop it. The fact is, the *Lancet* is too sure of its statements. Cholera can be checked, but it cannot always be at once stopped by any method if it once gets a strong foothold. Our contemporary says: "What, however, we do assert, is that medicine, as a preventive art, in its dealings with the germs of disease, ought to be able to grapple instantly and successfully with cholera. We know that it is propagated solely through excreta, and that water is the great carrier of the infective germs. Obviously, if the excreta of a cholera patient are allowed to dry in contact with the air, they may float away in the atmosphere, and the air will then become infected; but in a primary sense it is the water to which we must look. In any case, it has been demonstrated that, provided all the excreta from a cholera patient are instantly destroyed—not merely disinfected—the disease will not spread. The malady can no more develop *de novo* than a plant can grow without seed. It is no use waiting until the disease has effected a lodgment in our midst. If choleraic dejecta have passed into the sewers before the nature of the disease has been recognized, as is most likely to happen, the seed has been already sown broadcast, and the production of a crop of cases in some locality—it may be seemingly far from the first case, but in connection with it—will be inevitable. The only effectual safeguard against the epidemic we desire to avoid is to begin at once to destroy *all* diarrhoea stools, lest too late they may be found to have been choleraic! As a matter of precaution we ought always to destroy the stools of fever and diarrhoea. It is wanton recklessness to allow them to pass into the sewers. This is how disease is spread and perpetuated, when it should be stamped out. Whatever disinfectant we employ should be used *at once*, and of strength sufficient to accomplish the object in view. These are hints which should be reduced to practice without delay."

THE SANITARY INSTITUTE of Great Britain will meet at Glasgow, September 25th to 29th.

GOLD MEDAL TO DR. BROWN-SÉQUARD.—The Royal College of Physicians has awarded the gold medal, founded in memory of the late Dr. Baly, as a mark of distinction in physiology, to Dr. Brown-Séquard.

DR. BENJAMIN BALL has been elected a member of the Académie de Médecine.

AMBULANCE SERVICE IN PHILADELPHIA.—The committee on Medical Charities of the Philadelphia Society for organizing charity, says the *Philadelphia Medical Times*, announced at a recent meeting that steps had been taken to supply all the police-stations with hand-ambulance wagons, and before very long every station-house will be supplied. In some of the stations they have been already in active use for nearly two years.

THE NEW JERSEY STATE DENTAL ASSOCIATION held its annual meeting at Asbury Park, July 18th and 19th.

IOWA VITAL STATISTICS.—The Secretary of the State Board of Health has just tabulated his returns for 1882. The number of births reported for the year was 7,753; marriages, 5,282; deaths, 10,059; still-births, 225. Scott County reports the birth of 22 pairs of twins, leading the State, but Marion and Warren Counties, lying side by side, return 20 each. Clark is the only county reporting triplets. Despite twins and triplets the death-rate is unusually larger than the birth-rate, an ominous condition of affairs.

THE BRISTOL MEDICO-CHIRURGICAL JOURNAL is the title of a new provincial journal, published under the auspices of the Bristol Medico-Chirurgical Society, and edited by J. Greig Smith. It contains a large amount of original matter, is well illustrated, but printing and paper are not quite up to British standards.

PROSECUTING IRREGULAR PRACTITIONERS IN CANADA.—At the triennial meeting of the College of Physicians and Surgeons, Province of Quebec, held at Quebec, July 11th, the president reported that systematic proceedings had been undertaken to prosecute violations of the medical act. Forty-nine suits were instituted, of which thirty-five were successful.

THE COLLEGE OF PHYSICIANS AND SURGEONS of this city has sustained a loss in the resignation of Professor Dalton from the Chair of Physiology. It is understood that the resignation is due to Professor Dalton's ill health. He is succeeded by Dr. John G. Curtis.

THE CENTRAL ASSOCIATION OF BOHEMIAN PHYSICIANS held its annual meeting at Kommutau on July 14th. Papers were read by Professors Chiari and Breiskey, and others.

THE ANATOMICAL BILL, legalizing the use for scientific purposes of dead bodies, has failed in the Georgia Legislature. The *Register* says that bodies will now be scientifically snatched.

CORONERS IN CONNECTICUT.—The Legislature of Connecticut has passed a law requiring that coroners in that State shall hereafter be attorneys-at-law, familiar with criminal practice and medical jurisprudence, and that one such person for each county shall be recommended by the State's attorney for such county to, and be appointed by, the judges of the superior court to

hold his office for the term of three years, and until another shall be duly appointed in his stead, unless sooner removed from office for cause. And the said coroner is required to appoint for each town of the county "an able and discreet person, learned in medical science, to be medical examiner." Upon these officers is devolved all the duties in detail which have hitherto *not* been exercised by coroners under the old régime, and such as are common throughout the United States outside of this commonwealth.

THE HOSPITAL CHAPLAINS have been withdrawn from the Paris hospitals despite some very earnest protests.

THE COUNT DE CHAMBORD.—Germany and France have united over the body of the sick king, but have not agreed as to his condition. Professors Billroth, Dratsche, Wiener, and Bamberger came all the way from Germany to view him, and Vulpian, with other eminent Parisians, have been in consultation. It is agreed that he is obese, has a fatty heart, and gastric derangement. Some have said that he was suffering from phlebitis.

DR. W. B. RIZNER, a prominent physician of Cleveland, O., dropped dead in his residence in that city on July 21st. He was fifty-nine years of age. He was the inventor of a mechanical finger used in microscopy, and President of the Cleveland Microscopical Society.

THE HUNTER'S POINT NUISANCES.—The Governor and the State Board of Health have for some time been quietly collecting evidence against the various Hunter's Point factories, and on the 24th thirty-two of them were surprised with an order forbidding any further stench-making manufactures. The penalty for disobedience is \$1,000, and two years' imprisonment.

Correspondence.

OUR PARIS LETTER.

CONTAGIOUSNESS OF PHTHISIS—THE LEAGUE AGAINST VIVISECTION—ASYLUMS FOR CHILDREN—NACHTEL'S AMBULANCE SYSTEM—COUNT DE CHAMBORD.

PARIS, July 16, 1883.

DR. DEBOVE, who was appointed temporarily to take charge of the late Professor Lasègue's wards at "La Pitié" Hospital, lately delivered a most interesting clinical lecture, in which he endeavored to demonstrate, by cases under his immediate care, as well as by other examples, the correctness of the view so steadily gaining ground that pulmonary phthisis is contagious. According to him "tuberculosis is *always* due to contagion, and that no one becomes tuberculous unless he receives from the exterior the germ of the malady, the bacillus of tuberculosis." The lecture was published in the *Semaine Médicale*, whereupon Dr. Henry Bennet, whose name is so intimately connected with the subject of phthisis, endeavored to refute the conclusions of Dr. Debove as being too positive, and pointed out the dangerous consequences of such a theory, which, if true, the disease would be worse than the plague, and each tuberculous patient would have to be treated like the lepers of old, that is, he would have to be completely isolated from the rest of the world to prevent contagion. Social intercourse would be simply impossible and the inconveniences to the individual himself and the risks of his presence anywhere would be so great that it would be as logically a charity, almost a duty to kill him as would be done with animals affected with rinderpest. Fortunately, however, adds Dr. Bennet, clinical experience proves that such a doctrine is

absolutely false. According to his own personal experience, extending to nearly half a century, during twenty-four years of which period he has had almost unprecedented opportunities of observing the malady in all its phases, he is forced to the conclusion that Dr. Debove simply misinterpreted the cases that came under his notice. The subject of the contagiousness of pulmonary phthisis was also fully discussed last winter by the Medical Society of Mentone, of which Dr. Bennet was President, and the members unanimously concluded that, admitting the possibility of the contagion of tuberculosis, it was so only in exceptional cases and under very special circumstances. That there was no danger of living with tuberculous patients even in the same room, provided the latter be well ventilated, but a person in health should on no account sleep in the same bed with a consumptive patient.

A league against vivisection is being organized in Paris, of which Victor Hugo has been elected Honorary President. The society, at present, is composed principally of ladies, newspaper writers, and literary characters, and the list of the members which has as yet been published is not a very long one.

Two new asylums for rickety and otherwise deformed children are to be established in the most populous districts of Paris, under the patronage of the Municipal Council. These institutions, which are to be designated "Écoles-dispensaires," will partake of the character of an infirmary and a school where the children will have the medical or surgical attendance required by their condition, and at the same time receive the education suited to their age and mental capacity.

The ambulance scheme for street accidents, submitted more than two years ago by Dr. Nachtel to the municipal authorities of Paris, has only now received official sanction. The entire plan proposed by Dr. Nachtel is to be carried out, but it will perhaps take three years at least before we see anything of it.

Long ere this reaches you the Count de Chambord, one of the noblest princes that ever lived, will perhaps be no more. His malady seems to be of such a complex nature as to defy the diagnostic powers of such men as Billroth, Dratsche, and Bamberger, who have been summoned to Frohsdorf, the Count's residence, to meet the regular medical attendant, Dr. Meyer, in consultation. Although they have been more than a week in attendance, they are not yet fixed as to the precise seat or nature of the malady before them. The seat, however, is said to be in the gastric region, where a tumor is felt, but the nature of the latter has not yet been ascertained. But, judging from the symptoms present: inappetence, frequent vomiting, and rapid emaciation, the tumor is evidently of a malignant character. This opinion has been emitted by the consultants, but they still hesitate between cancer and simple abscess, and even retrocedent gout has been mentioned in the nomenclature of the diseases from which the illustrious patient is said to be suffering. The medical men are, however, agreed as to the extreme gravity of the case, and everything seems to portend a fatal issue, the accomplishment of which is only a question of a few days, or, perhaps, only hours. The medical men in attendance are all foreigners, and it has been remarked that no physician or surgeon has been summoned from Paris.

[According to a cable despatch, Professor Vulpian has examined the distinguished patient and has failed to find any tumor.—Ed.]

AMERICAN HOSPITALS.—M. Poncet, in *Lyon Medical*, says "that nowhere has he seen in Europe a finer outfit than that of the New York Hospital and the Boston City Hospital. If no country can compare with France in ease and comfort, it is nevertheless true that in relation to certain hygienic conditions we ought to imitate what is done elsewhere, and especially in America."

Reports of Societies.

AMERICAN OTOLOGICAL SOCIETY.

Sixteenth Annual Meeting, held at Hotel Kaaterskill, Catskill Mountains, July 17, 1883.

MORNING SESSION.

THE Society was called to order at 10.30 A.M., by DR. J. S. PROUT, of Brooklyn, N. Y., Vice-President, the President, Dr. J. Orne Green, of Boston, Mass., being absent on account of sickness in his family.

Business Committee—Drs. E. Dyer, of Pittsburg, Pa.; E. W. Bartlett, of Milwaukee, Wis., and F. B. Loring, of Washington, D. C.

Committee on Membership—Dr. E. Dyer was added *pro tem.* to this committee, because of the absence of Dr. H. G. Miller, of Providence, R. I.

The Treasurer, DR. J. Y. B. VERMYNE, of New Bedford, Mass., read his report, which was referred to Dr. G. Strawbridge, of Philadelphia, for auditing, who subsequently reported that the accounts were correct.

DR. BARTLETT, Chairman of the Business Committee, announced the bulletin. The first paper was read by DR. W. W. SEELY, of Cincinnati, O., entitled

A CASE OF PRIMARY EPITHELIOMA OF THE AURICLE.—REMOVAL OF THE ENTIRE AURICLE BY THERMO-CAUTERY.

The patient was a male, sixty years of age, who, six years ago, was bitten on the ear by a rat. The wound never healed, but finally developed the growth removed. During the last year it had increased in size rapidly and bled easily on irritation. The original wound was near the summit of the helix. The tumor was removed by means of the thermo-cautery, the hemorrhage being only slight. The entire surface of the stump was covered with a thick layer of powdered boracic acid, and the patient was sent home within five weeks with a perfect scar. Dr. Seely regarded primary epithelioma of the auricle as rather rare. Although in this case the thermo-cautery acted well, he thought that the knife with torsion of the arteries was a preferable method. He also believed that under the boracic acid treatment the healing period of the wound was reduced at least one-half.

DR. KNAPP, of New York, thought it rare for epithelioma to arise from trauma.

DR. SEELY thought it generally accepted that epithelioma might be due to trauma, and asked what Dr. Knapp would regard as the cause in cases of epithelioma of the lip supposed to be due to using clay-pipes, etc. *

DR. KNAPP said that the pipe might produce constant irritation of the lip, but he thought that it was not exactly traumatism.

DR. SEELY regarded it as the perfection of trauma. The special point of interest in his specimen was its occurrence in a region where neither traumatism nor epithelioma is likely to develop.

INVITED GUESTS.

DR. STRAWBRIDGE, of Philadelphia, introduced Drs. Andrews and L. Webster Fox, of Philadelphia, and they were invited to attend the meetings of the Society.

A paper "On the Intermittent Perception of Sound, as Conveyed through the Air and the Cranial Bones, with a Brief Summary of the Results of Treatment in Chronic Aural Affections with Impaired Hearing," by DR. J. A. ANDREWS, of Clifton, Staten Island, was read by title and referred to the Committee on Publication.

Dr. Andrews then read a paper on

THE RECOGNITION OF BRAIN COMPLICATION IN AURAL AFFECTIONS,

which contained the clinical histories, together with the record of five autopsies, after death from brain disease

secondary to ear disease, under his own observation. Special attention was directed to the condition of the eye, and in all his cases the ophthalmoscope revealed either papillitis or a hazy, slight cedematous appearance of the optic-nerve disk, very valuable corroborative evidence of a cerebral complication, especially where the other symptoms were obscure. Dr. Andrews believed that most ophthalmologists would endorse the statement that optic neuritis and central vision of $\frac{2}{3}$ were not incompatible. The existence of a cloudy disk in cases of ear disease should excite suspicion, and he believed that the condition of the optic-nerve disk furnished evidence which has not received the attention it deserves. In the majority of reported cases the condition of the eye is only incidentally referred to. In one case there was a cerebral abscess which Dr. Andrews thought had undoubtedly existed for twelve years. It was also a significant fact, in connection with cerebral localization, that abscess secondary to ear disease is usually in the medullary substance and seldom in the cortex. The significance of special symptoms, as vertigo, vomiting, headache, more continuous and less paroxysmal than with brain tumor, edema over the mastoid, etc., were considered. Fever was very often absent. The sight was most affected on the side of the brain lesion.

DR. KIPP, of Newark, N. J., had published a number of cases in which eye-symptoms were present, and also stated that Dr. Knapp had since published several. Dr. Kipp's published cases preceded those reported by Zaufel.

DR. SEELY, of Cincinnati, had examined the eyes with the ophthalmoscope in cases of suppurative middle-ear disease, but so far with negative results, and he thought that definite results had not yet been obtained in that direction.

DR. STRAWBRIDGE, of Philadelphia, said that after Dr. Roosa directed attention to this subject at the last meeting, held at Newport, he had examined the eyes of all his patients suffering from suppurative middle-ear disease, but without satisfactory results. He had also made an analysis of the urine and had frequently found large quantities of albumen present when brain complication existed.

DR. KIPP said he had continued his observations and had found, in cases in which meningitis is present, that there was almost always a change in the fundus something like optic neuritis; something between edema and actual inflammation of the nerve. The change had been claimed only for those cases in which cerebral complications existed.

DR. ANDREWS said he alluded only to those cases in which brain complications were suspected. In all his reported cases he had examined the urine with negative results.

DR. SEELY did not doubt that, in cases of actual brain complication, more or less evidence would be found in the fundus oculi, but in such cases the ocular symptoms are less important than in those where the question of diagnosis is doubtful, or in the cases of suppurative middle-ear disease as they are generally seen. He had seen two or three cases in which there were marked changes in the eye on the side of the affected ear, but these passed away and he was left in doubt whether there was very much affection of the brain.

DR. KIPP believed that optic neuritis might exist with ear trouble and pass away as the cerebral affection ceased.

DR. BARTLETT, of Milwaukee, regarded ophthalmoscopic examination as very valuable in the acute stage of meningitis. A slight cloudiness of the fundus indicated that degeneration of the parts of the brain involved has not yet taken place, but when the degeneration has begun the appearances in the eye disappeared, sight improved, etc. For the alienist, therefore, such examinations were important.

DR. SEXTON, of New York, asked if the ophthalmoscope had been found of service as a means of diagnosis

where other symptoms have not been prominently observed, especially in fatal cases of meningitis and cerebral abscess.

DR. KIPP had examined many hundreds of cases of otitis media, and had not found any cases with eye symptoms in which there were not other symptoms of brain complication.

DR. KNAPP thought that the ophthalmoscope sometimes gave most valuable evidence, more so than could be obtained from the patient. In one of his published cases the œdema was very slight, while the pain and other subjective symptoms were marked and had existed for some time; but as soon as the symptoms became severe and pointed toward a fatal termination, the optic disk was swollen first upon one side and then upon the other. The recession of the ocular appearances had guided him with regard to allowing the opening made in the mastoid to close, and in just these cases ophthalmoscopic examination had been of great value. When the optic disk gets normal, and the discharge from the mastoid is slight, he thought the opening could with safety be left to close, and he thought he had, in this way, abridged the period of healing materially.

The paper was further discussed by Drs. Sexton, Strawbridge, Seely, Knapp, and Kipp.

A paper by DR. SEXTON, of New York, entitled "External and Internal Inflammation of the Mastoid, with Cases," was read by title and referred to the Committee on Publication.

DR. READ J. MCKAY, of Wilmington, Del., then reported a case of

ACUTE DESQUAMATIVE INFLAMMATION OF THE EXTERNAL AUDITORY CANAL—ACUTE OTITIS MEDIA—MASTOIDITIS AND CHRONIC MENINGITIS—RECOVERY.

DR. CHARLES H. BURNETT, of Philadelphia, read a paper entitled

A CASE OF MASTOID DISEASE—ARTIFICIAL PERFORATION OF THE BONE—TEMPORARY RELIEF—DEATH FROM PYÆMIA.

The paper contained an account of a case of chronic purulent inflammation of the middle ear inducing general increased vascularity of the pyramidal part of temporal bone, hyperostosis of the outer wall of the mastoid groove without necrosis. The mastoid cavity became filled with cheesy debris, and this furnishing a pyæmic source of embolism, was followed by embolism of a chronic form, as shown first by abscesses in the lung and then by infiltration of the liver with abscesses.

Dr. Burnett also expressed the opinion that the operation of trephining the bone is comparatively unattended with danger, and affords the one slim chance of escape from death in cases of true mastoid disease, which must necessarily furnish an embolic source for the products of inflammation, purulent, and cheesy debris pent up in the mastoid cavity. In such cases there are the chances of death from embolism, while there are none from the operation. In the case reported by Dr. Burnett, the patient survived the mastoid operation two weeks, and the wound nearly healed, when the man was seized with a chill and rapidly sank from embolic hepatitis.

These papers gave rise to an extended discussion concerning trephining the mastoid when involved as a complication in middle-ear disease.

DR. STRAWBRIDGE, of Philadelphia, had never performed the operation upon the living subject. He had seen about five thousand cases of purulent middle-ear disease during the last twelve years, and had not had occasion to trephine a single mastoid. Nor had he had but a single death, which occurred in a child six months old, that died a few hours after he first saw the case. In studying the subject he had been struck with the very small percentage of cases in which pus was found after the bone had been trephined. He would like to ask if the absence of pus was not evidence that the operation had not been indicated.

DR. KNAPP, of New York, said that the mastoid had been trephined with marked benefit in quite a number of cases in which pus was not found. Such cases had been reported by Hartmann and also by himself. His firm conviction was that, when chronic middle-ear disease, even without suppuration or perforation, was attended with more or less obstinate constant pain which has its origin in the mastoid process and radiates from there over the corresponding half of the face and side of the head, trephining the mastoid is indicated.

DR. SEXTON, of New York, had not seen so many cases requiring opening of the mastoid as had been mentioned by several authorities, as Buck, Schwartze, and others, and only a very few in which he had thought the operation might be necessary, without some further evidence than the pain in the mastoid. He thought there might be danger in attributing too much importance to pain as a symptom in these cases. With regard to operative procedure it had occurred to him to have the opportunity to liberate the pent-up secretion through the posterior wall of the auditory canal, and he thought that, in a large majority of cases, pointing takes place in that direction rather than toward the brain. He regarded early constitutional treatment as especially important, particularly by the use of the sulphide of calcium, of which he seldom, of late, had given more than one-tenth of a grain at a dose, and frequently a much smaller quantity, repeating it perhaps every one or two hours. Of course the liberation of pus when formed was a well-established surgical procedure and must not be ignored.

DR. THEOBALD, of Baltimore, said that his experience had been similar to Dr. Strawbridge's, and so far he had opened the mastoid only upon the dead subject. He did not believe that the indications for performing this operation occurred very frequently. Early constitutional and local treatment he thought would have cured most of the cases in which the mastoid had been opened. He regarded leeches as exceedingly serviceable.

DR. KIPP, of Newark, N. J., thought that the operation was essentially harmless, and believed it to be better to operate and not find pus than to allow the case to go on and the patient die with pus in the mastoid cells where by an operation it could have been removed. He maintained that there were cases in which suppuration occurred in the mastoid, irrespective of constitutional treatment.

DR. BARTLETT, of Milwaukee, had not found it necessary to trephine the mastoid. He had relied on poultices applied every half hour, as hot as the patient can bear, and had seen several cases in which pointing took place within twelve hours, and the pus was then let out with an ordinary scalpel, cutting through into the mastoid.

DR. STRAWBRIDGE corroborated Dr. Bartlett's experience concerning the value of poultices.

DR. BURNETT thought that poulticing could not produce much effect upon the mastoid cells if the external wall of the process is intact.

DR. JONES, of Chicago, thought no general rule could be laid down, but that each case must be treated independently, according to conditions present.

DR. E. E. HOLT, of Portland, Me., had had forty cases of mastoid disease in two thousand cases of ear disease of all kinds. He had not perforated the mastoid, and had not had but three deaths, all of which could be explained without reference to the condition of the mastoid. He had used leeches more than any other measure, unless it was incision.

The subject was further discussed by Drs. Sexton, Burnett, and Knapp.

DR. E. E. HOLT, of Portland, Me., then read a paper in which he reported a case of

TERATOID TUMOR OF BOTH AURICLES,

having a clinical history of recurrent fibroid. The patient was a woman, twenty-nine years of age, of light complexion and good average health. These morbid

growths were of unusual interest in the following respects : 1. they promptly followed perforation of the lobe and wearing of gold ear-rings ; 2. they have repeatedly occurred during a period extending over twenty years ; 3. they have undergone remarkable change in structure. In proof of this latter assertion a portion of a letter was read from Dr. John H. Ripley, of New York, who had removed the tumors several times, and who stated that they contained nothing but dense interlacing fibrous tissue. An exhaustive examination of the recent growths, by Dr. Edward Preble, of Portland, Me., determined, however, that the said tumor contained germinal matter in abundance with the following tissues, namely : myxomatous and adenoid tissue, giant cells, fibro-plastic tissue, loose areolar tissue with infiltrated fat, innumerable elastic fibres, fine and coarse fibrous tissue, hyaline reticular and fibro-cartilage, smooth muscle, fragments of large blood-vessels, well-developed skin with corium, papillae, rete mucosum and epidermis, hair-follicles, hair and sebaceous glands, together with certain unclassifiable structures.

Drs. E. D. Spier, of Brooklyn, and John Van Duyn, of Syracuse, N. Y., were

PROPOSED FOR MEMBERSHIP,

after which the Society adjourned to meet at 7.30 P.M.

EVENING SESSION.

The Society was called to order by the Vice-President, Dr. J. S. PROUT.

Drs. L. Webster Fox, of Philadelphia, and Swann M. Burnett, of Washington, D. C., were

PROPOSED FOR MEMBERSHIP.

Drs. Murdoch, of Baltimore ; Williams, of Boston ; and R. H. Johnson, of Philadelphia, were introduced and invited to remain in attendance.

AMENDMENT TO THE BY-LAWS.

DR. JOHN GREEN, Chairman of the Committee on Membership, offered the following : The first by-law, relating to the election of members, shall be amended so as to read "after the report of this committee has been received, and *at the same meeting*," etc.

DR. SEXTON, of New York, presented a patient who had formerly been under his care for

CHRONIC INFLAMMATION OF THE MASTOID CELLS WITHOUT PERFORATION OF THE MEMBRANA TYMPANI.

When under his treatment the case was complicated with ozena.

This case opened the discussion again on the question of trephining the mastoid, which was participated in by Dr. Gruening, of New York, who argued very strongly in favor of the operation, Drs. Kipp, Bartlett, Theobald, Burnett, Sexton, and Webster.

DR. E. E. HOLT, of Portland, Me., then read a paper entitled

OBSERVATIONS ON THE HEARING POWER IN DIFFERENT CONDITIONS,

in which was given the results of examination of four series of cases : 1, twenty-four cases of chronic non-suppurative otitis media from private practice ; 2, twenty-four machinists ; 3, twenty-four boiler-makers ; and 4, twenty-four persons with normal ears.

The hearing power was tested by the voice, tick of a stop-watch, tuning-fork, and Koenig's rods. and the average age ratio of bone to aerial conduction and the audibility of Koenig's rods in three series of tests were compared with each other and with the normal ear. It was ascertained that the ratio between bone and aerial conduction diminishes in a corresponding degree to that of the hearing power for the voice, and that the average audibility for the upper limit of Koenig's rods was quite equal to the average normal of 40,000 V. S., as deter-

mined by Dr. Blake ; therefore the conclusion was drawn that the loss of hearing in the machinists and boiler-makers was due much more to a defect in the conducting than in the perceptive part of the organ of hearing for the following reasons : 1. Because of history or present condition of catarrh of the middle ear and naso-pharynx. 2. Because the tuning-fork when placed vibrating in the centre of the teeth, was heard louder and longer in the more affected ear, and the sound of it was invariably increased by pressing on the tragus and closing the meatus. 3. Because, had there been any considerable disease of the labyrinth, they would not have responded so nearly to the normal average audibility for the upper limit of Koenig's rods, since such an astute observer as Dr. Blake, who has made extensive use of them, has never had a case of labyrinth disease without a "*marked loss of hearing*" for the Koenig's rods."

In regard to hearing in a noise, several of the three series of persons made a voluntary statement that they could not hear better in a noise. These were carefully tested in a quiet place and then in a noise, and in every instance there was no improvement of hearing in the noise ; on the other hand, when the voice was used at the same time it was not heard quite as well in the noise as in a quiet place.

DR. KIPP, of Newark, N. J., read a paper entitled

ON THE ASSOCIATION OF AURAL DISEASE WITH SIMPLE SPARKLING SYNCHISIS OF THE VITREOUS HUMOR.

In six of the seven cases of synchysis of which he has record aural symptoms were present ; in the seventh case it is not known whether or not ear trouble existed. In five of the cases the synchysis scintillans existed in only one eye, and in two of these the ear of the same side only was affected ; in the other three both ears were diseased. In four of the cases the ear-trouble was probably situated in both the middle ear and the nervous apparatus. In one case there was chronic suppuration of the middle ear, which had been preceded for years by impairment of hearing without otorrhoea. In the sixth case there was absolute deafness of the one ear since infancy. Otological literature contains no record of similar cases, and the author thinks that the association of the two affections in his cases may have been merely accidental. They are published with a view of inducing others to examine their cases of synchysis for aural trouble, and thus settle the question.

The paper was discussed by Dr. W. S. Little, of Philadelphia, and Dr. Webster, of New York.

A paper by DR. CHARLES A. TODD, of St. Louis, on "Anomalous Sebaceous Gland in Immediate Proximity to the Auricle," was read by title and referred to the Committee on Publication.

DR. SEXTON, of New York, then read a paper (see p. 90) on

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE.

It was discussed by Drs. Burnett, Holt, Andrews, and Kipp.

DR. SEXTON then exhibited fourteen photographs of various forms of ear affections ; also two ear-syringes, together with a *hooked curette* for removing foreign bodies from the ear, where it is necessary to use forceps.

DR. H. KNAPP, of New York, read a paper on

OBSTINATE PURULENT DESQUAMATIVE OTITIS MEDIA,

in which he reported a case that was finally cured. He laid special stress upon the fact that when there is desquamative otitis media palliative treatment produces only temporary benefit, and that to effect a cure it must be converted into an acute case that will produce a condition that can be cured. The case was a new confirmation of views which he expressed before the Society two years ago concerning the treatment of granulations and polypi. He then stated that in cases of diffuse

granulations, and broad sessile polypoid excrescences he abstained from destroying them by caustics or sharp instruments, because these procedures are likely to destroy essential parts of the drum-cavity, and terminate in replacing the mucous membrane by cicatricial tissue, thus bringing about an unpleasant condition known as sclerosis. The only reasonable plan is to change the condition of the parts, and this he accomplishes by instillations of warm water and keeping the parts moist by applying cotton steeped in glycerine. A somewhat prolonged discussion followed on the question whether or not a new drumhead is ever actually formed after being destroyed by disease.

The Society then went into executive session, and afterward adjourned to meet in 1884.

New Members—Dr. W. S. Little, of Philadelphia; Dr. B. E. Fryer, U.S.A., Fort Leavenworth, Ks.; Dr. R. O. Born, of New York; and Dr. J. A. Lippincott, of Pittsburgh, Pa.

President—Dr. Charles H. Burnett, of Philadelphia, Pa.; *Vice-President*—Dr. J. S. Prout, of Brooklyn, N. Y.; *Secretary and Treasurer*—Dr. J. J. B. Vermeyne, of New Bedford, Mass.; *Committee on Membership*—Drs. John Green, of St. Louis, Mo.; H. G. Miller, of Providence, R. I., and A. Matthewson, of Brooklyn, N. Y.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at Kaaterskill, N. Y., July 18 and 19, 1883.

WEDNESDAY, JULY 18—FIRST DAY—MORNING SESSION.

THE Society was called to order at 10 A.M. by the President, DR. HENRY D. NOYES, of New York, who made a few congratulatory remarks and then appointed the following committees:

Committee on Bulletin.—Drs. F. B. Loring, of Washington, and E. W. Bartlett, of Milwaukee.

Business Committee.—Drs. John Green, of St. Louis; E. Gruening, of New York; O. F. Wadsworth, of Boston; S. Theobald, of Baltimore, and E. Dyer, of Newport.

The Treasurer's report was read and referred to Dr. David Webster, of New York, who subsequently reported that all the accounts were correct. The report was adopted.

CANDIDATES FOR MEMBERSHIP.

The following were nominated: Drs. Charles S. Turnbull, of Philadelphia; Miles Standish, of Boston; J. L. Thompson, of Indianapolis; W. T. Bacon, of Hartford; Stephen O. Ritchie, of Washington, and John Van Duyn, of Syracuse.

NEW MEMBERS.

The following were elected: Drs. B. E. Fryer, U. S. A., of Fort Leavenworth, Ks.; J. A. Andrews, of Clifton, Staten Island; L. Webster Fox, of Philadelphia; J. A. Lippincott, of Pittsburgh; J. L. Minor, of New York; and E. E. Holt, of Portland, Maine.

INVITED GUESTS.

The following were invited to attend the sessions of the society: Drs. T. Y. Sutphen, of Newark, N. J.; R. H. Johnson, of Philadelphia; Miles Standish, of Boston, and Swann M. Burnett, of Washington.

The Secretary, DR. R. H. DERBY, of New York, read the *resignation* of Dr. Thomas J. Morton, of Philadelphia, which was accepted.

INFLUENCE ON REFRACTION OF FOUR YEARS OF COLLEGE LIFE; ILLUSTRATED BY STATISTICS OF THE LAST FOUR CLASSES GRADUATED FROM AMHERST COLLEGE.

A paper on the above subject, sent by DR. HASKET DERBY, of Boston, was read by Dr. Miles Standish, of Boston.

The author had been able in 254 instances to trace the refraction through the whole term of four years. The examinations were all personally conducted with glasses, and in the majority of cases, certainly in all doubtful ones, with the ophthalmoscope. The results given are those obtained by glasses. The use of atropine was entirely impracticable, as the students could not have been allowed even temporarily to be disabled from the active prosecution of their studies. Dr. Derby followed the example of Emmet and Loring in stating degrees of ametropia as slight as O. 5 D., and included nothing less. The average age of those examined was at entrance 19 years, at graduation 23. The number of cases was small, it is true, but it is one of the few attempts yet recorded to trace the movement of refraction among the more highly educated during this particular period of life and for a continuous term of years.

The general results were, hypermetropia at entrance, 39, at graduation, 47; myopia at entrance, 90, at graduation, 120; emmetropia at entrance, 125, at graduation, 87.

Analyzing the ametropia he found under the head of manifest hypermetropia, of which there were 39 cases at entrance, 1 changed to myopia, 2 diminished, 27 remained stationary, and 9 increased in amount.

Of the myopia there were 90 cases; 32 remained stationary, 58 increased in amount.

The observations concerning emmetropia possessed peculiar interest, the results somewhat militating against theories that have found general acceptance. There were at the time of entrance 125 cases of emmetropia. Of these 86 remained emmetropic, 10 developed hypermetropia, and 29 developed myopia. The average age of those thus developing myopia was very nearly nineteen at entrance, twenty-three at graduation. The average myopia developed amounted to nearly 1 D. (0.982).

So far as these figures go they tend to show, first, a large amount of myopia, even in this country among the educated classes. The author said it was difficult to compare Dr. Loring's figures with his own, because Dr. L.'s statistics were based upon observations made between the ages of six and twenty-one, and his observations were made between the ages of eighteen and twenty-three. But all researches at the latter age go to prove that one-half, or very nearly, of the educated community is myopic in this as well as in other countries. Moreover, contrary to the impressions so long entertained, myopia may be acquired at or near twenty years from the same causes that produce it at an earlier age, and it may continue to progress until the course of study is completed.

The paper was discussed by Drs. Webster and Mitten-dorf, of New York; Gruening, of New York (who directed special attention to the use of the term dioptric, urging that some uniform mode of spelling be adopted); Carnalt, of New Haven; Little, of Philadelphia, and Hutchinson, of Utica.

SOME IMPROVEMENTS IN INSTRUMENTS AND APPLIANCES FOR CATARACT OPERATIONS.

DR. RUSSELL MURDOCH, of Baltimore, read a paper with the above title. He exhibited an ophthalmostat, or a self-holding eye-forceps, and an eye-speculum, which were modified from those exhibited to the Society in 1874. The distinguishing features of the speculum were "absence of spring and set screw." The change in the ophthalmostat was such that it seized the conjunctiva in a vertical fold, and rotated the eyeball without dragging it, and the substitution of three little hooks for one pair, which secured greater steadiness.

The new instruments consisted, first, in the combination of Graefe's knife, end to end, with Wecker's scissors. Second, a combination of iris forceps with the cystotome and shell spoon. The advantages claimed for these instruments were that an assistant is dispensed with,

and that seven instruments are reduced to three in performing the modified linear extraction of cataract.

Dr. Murdoch also exhibited a bandage which could be quickly made and easily applied.

Dr. GRUENING, of New York, thought that outside of the limits of civilization such complicated instruments might be useful, but that within the limits they should be discarded entirely, and that a cataract operation should not be undertaken without an assistant. Concerning the bandage, he said, an ordinary flannel bandage could not be replaced by anything which had yet been brought forward. No bandage can produce the pressure that can be applied by the use of the flannel roller. It is necessary to immobilize the eye, and this cannot be done by any substitute for the ordinary flannel bandage.

THE PRESIDENT remarked that he had had some experience in the use of the little forceps in fixation, and had long ago discarded the instrument, because it did not give so much control over the eye as one might imagine. He had reached the conclusion that the operator's hand should guide the forceps.

Dr. MURDOCH remarked that he was well aware the gentlemen in New York could obtain an assistant at any time, but he thought there were occasions outside where it was impossible to secure an assistant, and that the instrument had been devised especially to meet such emergencies.

Dr. THEOBALD, of Baltimore, believed that the eye could not be immobilized by any bandage whatever which was at all permissible, and that there was a decided objection to the long flannel bandage, especially during hot weather.

Dr. GRUENING said he would not insist upon the flannel bandage, but that he would insist upon the long bandage, and of late he had used gauze, dipping it into water before applying it. He believed that the eye could be perfectly immobilized if the bandage were properly applied. The first thing to be done is to fill up the orbital depression, so that when the hand is placed over it the brow and the bridge of the nose are not felt, but that the hand rests entirely upon the pad, and upon that pad pressure with the bandage can be made which will render the eye entirely immobile.

Dr. THEOBALD thought if Dr. Gruening would apply the bandage in the manner described to his own eye he would find that the eyeball had not been rendered immobile.

Dr. HENRY S. SCHELL, of Philadelphia, reported a case of

TUBERCLE OF THE IRIS.

The patient was a boy nine years of age, who applied for treatment at the Will's Eye Hospital, August 29, 1881. The left eye had been painful for four days, and exhibited the general signs of ordinary plastic iritis. Atropine and mercurial ointment were prescribed. On the 16th of September no effect had been produced by the treatment. In the latter part of October the boy came to the Children's Hospital suffering from well-marked coxalgia in the second stage. There was a distinct history of phthisis on the mother's side. The left eye was still somewhat painful. The pupil was immobile, and there was a ring of circumscribed injection, and projecting from the nasal side of the pupillary margin was a small yellowish-white nodule the size of a pin's head and tinged with pink. This nodule gradually increased in size. The hip-joint disease progressed. The eye was enucleated, and was examined by Dr. G. B. Lawrason, of New Orleans, who reported that it consisted of two or three tubercular masses embedded in inflammatory product. The tubercles seemed to have developed in the organized inflammatory product, which nearly filled the anterior and posterior chambers.

THE PRESIDENT said that within the last year a case had been under observation in New York which illustrated the difficulties in diagnosis. The patient was four

years of age, and the gross appearances presented by the eye were absolutely indistinguishable from a glaucomatous condition or a metastatic choroiditis. The patient continued under observation for several weeks without much progress in the disease. The eye was then enucleated, and tubercular disease was found to be the true nature of the lesion. It was felt at the time by those who examined the patient that, in some cases, the differential diagnosis between glaucoma and tubercular disease is impossible.

TUBERCULOSIS OF THE CILIARY MUSCLE AND IRIS.

Dr. O. F. WADSWORTH, of Boston, reported a case of the above character occurring in a girl three and a half years old. Dr. Hasket Derby, of Boston, saw the patient when the process had lasted two weeks, and regarded it as a case of kerato-iritis. The pupil contracted and remained so in spite of atropia; the cornea was hazy; the lids were natural. Afterward, when Dr. Wadsworth saw the patient the cornea was hazy, the conjunctiva was moderately congested, there was no marked ciliary congestion, there was good anterior chamber, and the pupil was of good size. The patient died about six months afterward. The eye after it was removed contained a mass about six millimetres in thickness. The vitreous was replaced by serous fluid, there was nothing of the lens to be seen. The iris and choroid were in place and behind the mass. Microscopical examination, made by Dr. Ernst, of Boston, revealed that the growth was tubercular in character, and he was also able to demonstrate the presence of bacilli. There was no evidence of pulmonary disease. It was learned late in the history of the case that the father and the father's brother died of phthisis, and that other members of the family were subject to bronchial attacks, so called.

The paper was discussed by Drs. Prout, of Brooklyn, and Webster, of New York.

Dr. S. F. MCFARLAND, of Oxford, N. Y., read a paper which contained

A PERSONAL EXPERIENCE WITH PRISMATIC GLASSES.

During his boyhood he had a slight divergence, occurring and disappearing at times, although seldom sufficient to attract attention. Still he had the full use of his eyes, could judge of distance as well as others, and was even expert in the sports of youth requiring binocular vision. He had no inconvenience during his studies, always enjoying the greatest comfort during the most severe and protracted application. During the autumn of 1862 he contracted typho-malarial fever in the army, and after recovering from this he found that he had lost the full and comfortable use of his eyes, which continued with the usual pain and annoyance attending a futile effort to use both eyes in conjunction, and he was compelled finally to discontinue reading almost entirely until in January, 1866, he consulted Dr. H. D. Noyes, who gave him plain prisms of seven degrees each, bases inward, for distance, and eight degrees each with plus thirty-six spherical for reading. At that time he had been nearly three years unable to obtain binocular vision even for a moment, but at once he was able to see distinctly. He has never discontinued their use, they have been varied from time to time, but he has always adhered to the prisms. He suffers the inconvenience that he cannot maintain continued binocular vision, but can obtain and retain it long enough for an iridectomy, or the extraction of a cataract, and even during very protracted operations, although at the expense of pain and very distressing lassitude following the effort. Without the prism he could not do these things, inasmuch as slight differences in distance would not be appreciable. With bifocal sphero-prismatic glasses he is able to do all his office work without changing, and with a reasonable amount of comfort.

Dr. R. J. McKAY, of Wilmington, Del., said that a music teacher came to him in September, 1879, who, while standing directly in front of his class and moving

his eyes from right to left extremely without moving his body, weakened the external recti. Dr. McKay ordered prisms with the bases external, which the patient had worn ever since with comfort for distance only.

DR. O. F. WADSWORTH, of Boston, then read a paper ON THE APPARENT CURVATURE OF SURFACE PRODUCED BY PRISMS.

The phenomenon is very familiar that when we look through prisms with the bases inward, with a plane surface, the surface appears convex, and with the bases outward the surface appears concave. He had not met with any exception to this phenomenon, and the communication was intended to explain it, and was the theory which had been worked out by Dr. Pierce. It was illustrated with diagrams.

DR. S. W. BURNETT, of Washington, on invitation, presented a specimen of

TUBERCLE OF THE CHOROID,

accompanied with the clinical history of the case, which occurred in a colored girl fifteen years of age.

DR. J. A. SPAULDING, of Portland, Me., then read a paper in which he reported a case of

SYMPATHETIC NEURO-RETINITIS.

The author first referred to the able works of Mauthner and Kneis, whose views are so diametrically opposed, the latter believing that the so-called cases of sympathetic neuro-retinitis are open widely to criticism. It seemed desirable, therefore, to publish, and thus to offer to careful criticism, every case of apparent sympathetic inflammation of the retina and optic nerve (either alone or conjoined), and above all does this appear necessary when we have, as at present, to offer one in which so far as accurate and repeated examinations have availed, the retina and optic papilla of one eye underwent inflammation after an injury to its mate, while at no time from the beginning of the case were there ever any visible signs of inflammation of any portion of the uveal tract. The patient was a Danish woman, fifty-six years of age, and healthy in every respect. On January 6, 1883, she was struck in the eye by the horn of a cow, which rendered her at once and forever totally blind in that eye. The patient saw a flash of light and then the sight was gone. Eleven weeks after the injury to the right eye the patient, much reduced in health on account of the pain and irritation in the right eye and its neighborhood, came to Dr. Spaulding for consultation. On March 30th, about four weeks after first seen, the right eye was enucleated on account of the excessive pain from which the patient was suffering. The operation was followed by excessive hemorrhage, which could not be checked by pressure or hot water, and only ceased after ligature of the artery deep in the orbit, and of a second one which appeared to spring from a band of connective tissue uniting the globe and upper eyelid. The case subsequently progressed favorably, and the patient was sent home. No medicinal treatment was adopted. The result appears to justify the opinion of the truly sympathetic nature of the neuro-retinitis in the left eye, for the sight gradually returned to the remaining eye. The pain in the head disappeared with considerable rapidity. July 14, 1883, examination with the ophthalmoscope revealed normal left eye, vision $\frac{3}{8}$. The enucleated eye was lost. The presence of this neuro-retinitis with total loss of vision in the eye five weeks after an injury to the other, and without any other visible or possible cause, such as idiopathic iritis, syphilis, cerebral lesion, etc., indicates the sympathetic nature of the disease. Iritis was excluded in any form as the possible cause of the difficulty in the left eye.

DR. WEBSTER, of New York, said he had reported two cases of sympathetic neuro-retinitis in which he enucleated the eye giving rise to the trouble and with excellent results. The neuro-retinitis subsided, and the eye re-

covered with much better vision than existed before the operation was performed.

DR. PROUT, of Brooklyn, said, concerning the hemorrhage in Dr. Spaulding's case, that in one instance, after resorting to various methods unsuccessfully, he arrested the hemorrhage by digital pressure with the finger in the orbit.

DR. MITTENDORF, of New York, had employed sponge-pressure, that is, applying a good-sized, soft, moist sponge over the orbit, and securing it with a roller bandage after enucleation, to be worn for twenty-four hours, then changed and worn for the next twenty-four hours, and he had never experienced any trouble from hemorrhage or from infiltration of the lids or the orbital tissues.

DR. H. W. WILLIAMS, of Boston, said he had never had any difficulty in arresting hemorrhage by means of the sponge-tent, and was unable to see how it is possible for hemorrhage to go on if the orbit was properly plugged in that way. However, since he had adopted the circular suture of Bowman, he did not recollect of having had a case where it was necessary to apply the sponge-tent.

DR. PROUT thought the removal of the tent would be exceedingly painful.

DR. WILLIAMS remarked that the patients did not like it at all, but the pain could be reduced to its minimum by removing the sponge very quickly.

DR. DYER, of Newport, while in charge of an army ward, had between two hundred and twenty-five and two hundred and fifty cases of enucleation, and in not a single one did he experience any annoyance from hemorrhage. He always used a large sponge from which ice-water was gently squeezed into the orbit, rarely for more than ten minutes, and afterward applied a double thickness of linen, covering it with one thickness of bandage.

DR. GREEN, of St. Louis, referred to a case in which ice-water and digital pressure had been employed without success, and finally he tamponed the orbital cavity with a narrow strip of linen and made external pressure with a bandage, which controlled the hemorrhage. The tampon was allowed to remain twenty-four hours, when it was removed without difficulty by a process of unravelling, as it were. He subsequently learned that the patient had a hemorrhagic diathesis.

DR. KNAPP, of New York, referred to a procedure for avoiding hemorrhage after enucleation, and it was to keep close to the sclerotic. If this precaution is observed there will be very little danger from hemorrhage. The most profuse hemorrhage occurs when the optic nerve is cut, because we are likely to go into the naturally cavernous tissue of the organ, but the division can be made without undue loss of blood by pressing the speculum into the orbit and allowing the eyeball to pop out, as it were, which will facilitate the division of the nerve and removal of the ball very materially.

THE PRESIDENT had never had but one case of serious hemorrhage which required digital pressure. He had had one case of enucleation of the eyeball for a tumor in the antrum, and in which the bleeding was so profuse that it was necessary to tampon the cavity with the ordinary kite-tail tampon made of pledgets of lint. The tampon was effectual and was readily removed.

The paper was further discussed by Drs. W. W. Seely, of Cincinnati, and F. Buller, of Montreal, Canada.

DR. DAVID WEBSTER, of New York, then reported

THIRTY-FIVE CASES OF CATARACT EXTRACTION.

They included all the cases which he had had, good and bad, from the beginning, and all the operations were performed at the Manhattan Eye and Ear Hospital. A brief clinical history of several of the most interesting cases was given. Thirty-one different patients were operated upon—males, 20; females, 11. Their ages varied from thirty to eighty-three years. Under forty years of age there were 2; between forty and fifty, 3; between fifty and sixty, 9; between sixty and seventy, 9; between seventy and eighty, 6; above eighty, 2. Twenty-eight

eyes were operated upon while the patient was under ether. Of these, 23 were successes, 2 partial successes, and 3 failures. Seven eyes were operated upon without the use of an anæsthetic; 5 of these did well, and 2 were failures. The method of operating known as "Von Graefe's modified" was used in all cases in which it was practicable; where a preliminary iridectomy was done the incision for the extraction of the lens was made in the same position as in the other cases. Preliminary iridectomy was performed in 6 cases; 4 by himself, and 2 by another surgeon. In only 1 case of the 35 was there loss of vitreous, and this was the only case in which the scoop was introduced into the eye for removing the lens, and in 3 cases there was dislocation of the lens into the anterior chamber during the preliminary iridectomy. In 1 case iridodialysis was produced during the operation, and in 1 case the iris fell before the knife on account of premature escape of the aqueous, and was cut through. In all these cases in which accidents occurred during the operation the eyes recovered with good sight. In 3 cases the cornea was thin and flaccid, and became wrinkled or collapsed after evacuation of the lens. In 8 cases there was hemorrhage from the iris immediately following the iridectomy. In 4 cases a considerable quantity of soft lens matter was left in the eye. In 1 case some inflammatory reaction was noted during recovery; this eye did well. In 4 cases there was iritis. Sloughing of the cornea occurred in 1 case, panophthalmitis in 2 cases, and in 1 there was irido-cyclitis with sympathetic inflammation of the fellow eye. A secondary iridectomy was performed in 2 cases, in both resulting in a clear pupil, but in one failing to restore sight on account of deeper disease. Keratonyxis for pupillary membranes was performed in 7 cases, and in all successfully.

The successes, taking the results of all the cases, complicated and uncomplicated, were 27; partial successes, 2; failures, 6. Dr. Webster believed, however, in justice to himself and cataract statistics, he ought to exclude the cases of extensive corneal opacity, a case of detachment of the retina, and one other case with vitreous and perhaps deeper complications. The figures would then stand: successes, 27; partial successes, 1; failures, 2. By success he meant the standard adopted by Dr. Knapp, namely $V. \frac{2}{3} \text{ or } 0.6$; partial success, ability to count fingers; failures, nothing more than perception of light.

The paper was discussed by Drs. Heyl and Strawbridge, of Philadelphia; Theobald, of Baltimore, and Carmalt, of New Haven.

DR. W. W. SEELY, of Cincinnati, then read a paper entitled

NOTES ON OCULAR THERAPEUTICS.

He directed attention, first, to the use of yellow oxide of mercury in external ocular troubles. Ten grains to the ounce of the vehicle is the best for all purposes. The less bichloride the preparation contains the less pain produced by its application. A practical point with regard to the use of yellow oxide and vaseline in conjunctival affections where there is profusion of tears, such as washes the salve out, was to substitute eserine or the bichloride in solution, to contract the blood-vessels. The strength of the bichloride solution that seems to answer every purpose is one grain to sixteen ounces of water. Such a solution is entirely painless, and has often, in his hands, set aside an acute catarrhal conjunctivitis of a violent type, after from one to three or four thorough drenchings of the conjunctiva. In corneal affections he uses a four-grain solution of eserine *once a day*, and believes that it acts altogether better than more frequent applications, either of the same or of a weaker solution. This remark applies to all classes of cases.

For the reduction of intra-ocular tension eserine has, for him, done away entirely with paracentesis.

Every one has met with cases of iritis in which atropia does not seem to act promptly and satisfactorily, possibly *because of the extreme vascularity of the iris*.

In such cases, instead of making paracentesis and extracting blood, he instils once a day a few drops of a four-grain solution of eserine. The habit of instilling eserine once a day in iritic cases has become a routine practice with him, the patient at the same time using the mydriatic in the ordinary manner. In more than one case had he seen adhesions let go after the combined use of a myotic and mydriatic that had resisted the latter alone. Iritis is the only disease in which he employs a mydriatic as a fundamental remedy.

Eserine is the remedy *par excellence* in corneal affections. In cases in which mydriasis is necessary the latter can be produced perfectly, and still the satisfactory effects of the myotic be maintained. This is illustrated in suppurative inflammation after cataract operations, formerly so unsuccessfully treated by heat and atropine.

DR. MCKAY, of Wilmington, had used yellow oxide of mercury with very favorable results in conjunctival troubles.

DR. GRUENING, of New York, said the alternate use of mydriatics and myotics for breaking up adhesions was not entirely new. He had resorted to this method as long ago as 1868. He regarded the use of eserine in iritis as an extremely dangerous practice.

DR. KNAPP, of New York, thought the alternate use of eserine and atropine was advantageous in some forms of iritis, especially the serous variety. Again, where there is increase of pressure which produces intense pain, as in certain cases of glaucoma, the pain is considerably relieved by one drop of eserine. In serous iritis the pressure is sometimes intense, and he thought that eserine could be so regulated as to prevent the noxious effects of the drug.

DR. SEELY said he did not speak of the alternate use of eserine and atropine, but wished simply to speak of the use of eserine *once a day* for the purpose of contracting the "blood-vessels," of course maintaining mydriasis by atropine. He had never seen a case in which eserine had produced iritis.

The paper was further discussed by Dr. Kipp, of Newark, Dr. Knapp and Dr. McKay.

The Society then adjourned, to meet at 8 P.M.

EVENING SESSION.

The Society was called to order by the President.

The Minutes of the Morning Session were read and approved.

DR. W. F. MITTENDORF, of New York, then read a paper on

THE TREATMENT OF DETACHMENT OF THE RETINA.

During the last three years he had treated several very extensive detachments of the retina, occurring in patients that had only one useful eye, the other being entirely blind or absent. Although no new remedy or new method had been used, it was the combination of the different plans devised for the treatment of this affection, and the mode of administering the remedies that had led to the success.

After briefly referring to the causes of detachment of the retina, the author stated that the object of the treatment must be, first, to keep the eye as free as possible from all irritating influences, which is best done by closing both eyes, or by putting the patient into a dark room; second, to keep the eye as quiet as possible, and to avoid all accommodative efforts, and for this purpose the eye must be kept under the influence of a mydriatic; third, to place the absorbents in the most favorable condition—this is accomplished by means of a pressure bandage, and he had found elastic pressure procured by means of a rubber bandage to be of the greatest assistance; fourth, to hasten the absorption of the effused fluid, if this be the cause of the detachment—this can be accomplished by the use of jaborandi or pilocarpin. He had given a hypodermic injection of one-

fourth to one-sixth of a grain of pilocarpin early in the morning, and then kept up the diaphoresis by the use of an infusion of jaborandi leaves, from forty grains to one drachm to twelve ounces of water, administered in wine-glass doses during the afternoon and evening. This treatment should be kept up for three or four weeks. He had not seen a single case in which the remedy administered in this way had to be discontinued on account of unpleasant symptoms.

If the detachment complicates a specific choroiditis, or if it follows a serous iritis demanding specific treatment, this may be used at the same time with the other remedies mentioned. In these cases the disease yields, as a rule, sooner than in other cases, and it will not be necessary to push the pilocarpin to so great an extent.

Dr. Mittendorf then reported in detail three cases, all of which were successfully treated. They tended to show: 1, that in marked detachment of the retina the energetic use of jaborandi and pilocarpin will do good, especially if the patient can be kept under the influence of the drug during the entire day and for a period ranging from twenty to thirty days; 2, that the elastic pressure bandage must be used at the same time; 3, that the patients must be kept upon the back for most of the time; and 4, that the use of atropia, which is employed without causing any inconvenience to the patient, should likewise not be neglected.

The paper was discussed by Drs. Gruening, of New York; Little, of Philadelphia; Andrews, of Clifton, Staten Island; Webster, of New York; Theobald, of Baltimore, and Spaulding, of Portland, Me., who spoke of operative treatment in these cases. He referred to a suggestion made by Mooren that an attempt be made to remove the effusion by means of the hypodermic syringe. Having a case on hand, he tried the operation. Although he succeeded in removing a considerable quantity of the subretinal effusion there was not much improvement except temporarily. He suggested that the method might be cultivated by placing a piece of rubber tubing between the needle and the tip of the nozzle, thus making an instrument somewhat similar to that used in the treatment of soft cataract. At least he thought that some form of aspiration might be made applicable in these cases.

Dr. WILLIAM S. LITTLE, of Philadelphia, then reported

TWO CASES OF CONGENITAL ECTOPIA LENTIS, ONE SYMMETRICAL, THE OTHER NON-SYMMETRICAL.

The first case occurred in a man twenty-three years of age. The non-symmetrical position of the lenses in this case was of interest, and the question arose as to what influence glasses which the patient had worn might have had in producing divergence in the left eye, which is now going on, the right eye doing the work. The immunity for three years and freedom from trouble favored strongly the opinion that the glasses had not entered as a factor in the etiology of the divergence.

A sketch of a case by Dr. J. M. Taylor, which occurred in the practice of Dr. C. S. Turnbull, of Philadelphia, was also presented. The patient wore glasses with comfort for more than a year, when he was accidentally killed.

The paper was discussed by Dr. Mittendorf, of New York, who related the history of a case.

Dr. GEORGE T. STEVENS, of New York, then read a paper on

THE EMPLOYMENT OF NITROUS OXIDE AS AN ANÆSTHETIC IN OPHTHALMIC OPERATIONS.

He had employed it in operations about the nasal duct, iridectomy, cystotomy, and similar short operations, and believed that it possessed several advantages, such as being less dangerous, unattended with nausea and other symptoms which are incident to the use of ether, and that it demanded for its administration far

less trouble than ether or chloroform. He thought it doubtful if it could be relied upon for cataract operations.

THE PRESIDENT had employed it more or less during the last ten years, and stated that the oxide had the advantages claimed for it to a certain extent. He had, however, noticed two features: first, there is apt to be a good deal of rigidity on the part of the patient in some cases; second, it is apt to be attended with a great deal of venous congestion which gives rise to considerable hemorrhage in wounds about the eye.

Dr. R. H. DERBY, of New York, had employed the nitrous oxide preliminary to prolonged anæsthesia with ether, and with very gratifying results.

Dr. BULLER, of Montreal, said that for some time nitrous oxide was used in the Moorfields Hospital in London, but with unsatisfactory results. He had resorted to the primary anæsthesia produced by ether with exceedingly gratifying results.

Dr. ALBERT G. HEYL, of Philadelphia, then presented

A CONTRIBUTION TO THE OPERATIVE TREATMENT OF GLAUCOMA.

After giving the ordinary method of treatment employed, and detailing the history of a case which had been under his observation, and in which he had resorted to operative treatment, he recommended the following plan as a modification of that which he had employed. It was to ligate the frontal artery and then open the supra orbital artery and allow a few ounces of blood to escape, and then close the vessel with a ligature. He discussed at considerable length the physiological basis of the operation, and said that he wished simply to place upon record a piece of clinical experience which he thought would shed some light upon the condition of acute glaucoma. The patient upon whom he operated was suffering from chronic glaucoma when he saw him, but the case had been one of acute glaucoma in its inception.

Dr. WEBSTER, of New York, recalled a case in which a California surgeon advocated the ligation of the carotid early for glaucoma, performed the operation once and cured his patient.

THE PRESIDENT stated that the natural history of acute glaucoma must be considered before deciding with reference to the influence produced by any modification of the circulation by operation.

Dr. SEELY, of Cincinnati, said it should be borne in mind that the influence of the Californian operation was directly the reverse of that suggested by Dr. Heyl.

Dr. GUSTAVUS HAY, of Boston, then made a communication on the

ASTIGMATIC PENCIL.

It was discussed by Dr. Knapp, of New York.

Dr. CHARLES J. KIPP, of Newark, N. J., then reported cases of

SARCOMA OF THE CHOROID WITH INTERESTING CLINICAL FEATURES.

The first case was that of a woman seventy years of age, first seen six weeks before the eye was removed. Sight had been lost only a few months. There was no pain, nor was there any sign of inflammation of outer parts of the eye. In the outer half of the eye behind the lens was seen a large white mass of round form, on the surface of which were numerous hemorrhages. The retina was detached in the inner half. The diagnosis of intra ocular tumor was made and enucleation advised. Four weeks later symptoms of secondary glaucoma developed, and after the patient had endured the pain for two weeks she consented to have the eye removed. The operation was not attended by accident, and the wound healed rapidly. On examination of the eye a large dark tumor was found which nearly filled the eye, and which had started from the outer half of the choroid. It was

covered in part by the retina, and extended anteriorly to and involved the ciliary body. It consisted of spindle-shaped cells, and contained much pigment.

The second case was that of a man thirty-four years of age, who was first seen seventeen months before enucleation was performed. At that time the anterior parts of the right eye were apparently quite healthy. On the nasal side of the eye a semi-globular protuberance was seen to project nearly to the visual axis; upward and downward it extended apparently nearly to the vertical meridian. Anteriorly it did not reach quite to the ciliary processes. The tumor was of a greenish-red color, and was covered by transparent retina; its surface was smooth, and its vessels were distinctly visible. The retina was slightly detached at the base of the tumor, but nowhere else. The optic disk was very pale and its margin slightly blurred. The other parts of the choroid and retina presented nothing abnormal except an atrophic patch in chord below disk. Tension was normal; visual field defective in outer half, and much contracted upward, downward, and inward. The other eye showed numerous atrophic spots in choroid and pigment deposits in retina. From the patient it was learned that twenty years ago he had had a severe attack of some eye disease which seriously impaired the left and somewhat the right eye, the one now containing the tumor. Since then his sight remained the same until two months ago, when he noticed that his right eye failed. The disease from which he suffered twenty years ago was doubtless a choro-retinitis, the results of which were plainly visible in both eyes. Seventeen months later the patient was seen again. There was now great pain, and the eye presented the usual symptoms of secondary glaucoma. The eye was enucleated and the wound healed rapidly. On examination the tumor was found to have started from the choroid in the region of the macula lutea. It was very large. The retina was detached completely. The microscopical examination of the tumor showed it to be a spindle-celled melano-sarcoma.

The third case was that of a woman forty-one years of age, who was first seen fifteen months before the eye was enucleated. At the first examination nothing abnormal except a prominence and opacity of the retina at macular region was found. The retina for a space of about two diameters of the optic disk was grayish, and the retina veins here were dark in color. The summit of the prominence was best seen with a +4 dioptric glass. The retina was not detached, neither over the prominence nor anywhere else. The eye was as it had been practically blind for some months. The case was seen from time to time for two months, during which period no marked change in the eye was observed. Thirteen months later she was seen again. She had the secondary glaucoma, which had come on about two weeks before. The eye was enucleated and the wound healed rapidly. On examination a large tumor of irregular form, and with very broad base was found, which originated in the region of the macula lutea and from there spread over the optic.

The fourth case was that of a woman forty-two years of age. Sarcoma of the ciliary body and iris. Secondary glaucoma was present when the patient was first seen. The tumor did not extend to the choroid, and the microscopic examination showed that it had probably originated in the connective tissue of the ciliary muscle. It was composed of spindle-cells and contained much pigment. Five years after the operation there was no relapse.

Dr. Kipp also read a paper describing a case of very extensive ossification of the choroid occurring in a young man who, when first seen ten years ago, had a chalky cataract, to which the pupil was everywhere adherent. As there were at that time no symptoms of irritation of the eye, and the case was hopeless so far as sight was concerned, no treatment was advised. The boy had been born with the cataract, according to the mother's

statement. Ten years afterward the eye became painful and presented when then seen the appearance of iridocyclitis. The eye was removed, and on examination the osseous plate lined the inner side of the choroid and as far as the ciliary processes.

The communication was discussed by Dr. Howe, of Buffalo, who presented a specimen, the President, and Drs. Mittendorf and Webster, of New York.

DR. S. THEOBALD, of Baltimore, then read a paper on

TRITURATION OF THE CORTEX.

He reported two cases in which this operation was practised in connection with preliminary iridectomy to hasten the development of slowly ripening cataracts. The operation consists in a kneading or bruising of the anterior cortical layers of the lens by pressure on the cornea after iridectomy and while the anterior chamber is still empty, and is in accordance with the suggestion put forth by Professor Förster, of Breslau. The trituration was done with the angle of the strabismus hooks, and in the first was imperfectly performed. In the second case the operation was performed with the smooth end of the Bowman tortoise-shell cataract spoon, which seemed better adapted to the purpose. In the first the operation was followed by but slight change in the condition of the lens. In the second case, however, a very rapid development of the cataract ensued. In each case there occurred a sufficient amount of iritis to cause slight but persistent adhesions between the iris and lens at the pupillary angle of the coloboma, and in the second case it was found by oblique examination a day or two after the operation that near the cut edges of the iris the pigment layer had been detached from the muscular coat in a manner which was quite peculiar. That the iris should be more or less bruised as well as the lens, however carefully trituration be performed, appears unavoidable, and the risk of exciting inflammation in this manner seems the chief objection to the procedure. It would appear, however, that Professor Förster has not had serious trouble from this source, as he makes no special reference to it in his paper.

DR. GRUENING, of New York, had performed the operation twice during the last year. In the first he performed large iridectomy upward and with the angle of the strabismus hook trituated the lens in the *area of the pupil only*. No iritis followed, and the lens became completely opaque within one week. He extracted it three weeks later with very good results. In the second case he performed iridectomy upward and again treated the lens only in the area of the pupil, and in four days the lens was completely opaque. He thought there were certainly cases in which the operation was indicated, and was attended with great gain.

DR. KIPP said that he performed the operation some time ago, the lens became opaque, and four or five days afterward it cleared up again.

DR. MITTENDORF, of New York, thought the operation was indicated, especially in certain cases in which two cataracts were forming, and his experience in the operation had been equally favorable with that reported by Dr. Gruening.

DR. KNAPP, of New York, had performed the operation once; but it did not seem to hasten the ripening of the cataract.

DR. WADSWORTH, of Boston, had performed the operation once in a patient eight years ago. There seemed to be no effect at all, so far as ripening of the cataract was concerned. He thought that probably in some cases maturity of the cataract might be hastened very much by the method, while in other cases probably the result would be very slight.

THE PRESIDENT had operated eight times, and in seven cases had subsequently performed extraction. In one case marked iritis developed, but did not interfere with the subsequent recovery, and extraction was entirely satisfactory. He hoped to make a communication upon the

subject which would embrace the history of all his cases, with remarks.

DR. GRUENING remarked that by the area of the pupil he meant the new pupil, including the coloboma.

The paper was further discussed by Drs. Webster, of New York; Fox, of Philadelphia; Dyer, of Newport, and Theobald, of Baltimore.

The Society then adjourned to meet at 9 A.M. July 19th.

SECOND DAY—THURSDAY, JULY 19TH.

The Society was called to order at 9 A.M. by the President.

THE TREASURER moved that the annual assessment be five dollars. Adopted.

VASELINE CERATE A CONVENIENT BASIS FOR OINTMENTS INTENDED FOR APPLICATIONS TO THE EYELIDS.

DR. THEOBALD, of Baltimore, read a brief paper on the above subject, in which he stated that he had been using with much satisfaction for several months, both in private and in hospital practice, as a basis for ointments intended for application to the eyelids, a cerate made of yellow wax and vaseline, which is prepared without difficulty by melting the wax and vaseline together by gentle heat, and stirring the mixture until it hardens, combining one part of yellow wax with four of vaseline, which proportion gives the ointment sufficient firmness, except, perhaps, in very hot weather, when the proportion of wax may be increased to one to three. Dr. Theobald also exhibited a specimen of ointment of the yellow oxide of mercury, containing two grains to one drachm of vaseline cerate, which, though prepared nearly four months since, and kept with no special care, still retained its bright yellow color and had undergone no appreciable change. He had been told that cerates prepared by vaseline were in use, but was not aware that attention had been called to the convenience of employing them in the manner suggested.

DR. H. KNAPP, of New York, then read a paper in which he reported a case of

BLINDNESS FROM RETINAL THROMBUS IN CONSEQUENCE OF FACIAL ERYSIPELAS.

There is on record a certain number of cases of blindness in consequence of facial erysipelas. Their symptoms vary considerably. There is lack of ophthalmoscopic examinations during the first stage of the affection. Not long ago Dr. Knapp had the rare opportunity of observing such a case almost from the beginning to the end. Mr. E. F.—, forty years of age, had lived in the tropics, had had syphilis with secondary and tertiary symptoms which were aggravated when his business called him north. On March 20, 1883, while in New York, he had an attack of erysipelas which began upon the nose, proceeded to the pharynx, cheeks, and orbits. The patient was under the care of Drs. Gulecke and Schottke, who kindly allowed Dr. Knapp to publish the case. The erysipelas progressed, and on March 28th he was totally blind in both eyes. Reserving a detailed discussion of this case for publication in the "Archives of Ophthalmology," Dr. Knapp restricted himself to the following remarks:

First.—The blindness was produced by compression of the central retinal arteries and subsequent thrombosis of the retinal veins, both having been directly observed with the ophthalmoscope one day after the occurrence of the rapid, almost sudden loss of sight.

Second.—The ophthalmoscopic appearances observed from beginning to end showed no neuro-retinitis, but the successive stages of a thrombosis.

Third.—The degrees of the swelling of the orbital tissue or the establishment of collateral circulation from the choroid permitted the return of a limited flow of blood into the retinal arteries, which, however, was impeded by the blocked veins, leading to renewed extrava-

sation to the thrombosis and shrinkage of the arteries, and finally to atrophy of the optic nerve.

Fourth.—Perivasculitis played no, or only an unimportant part in the pathology of this case.

Fifth.—The white segments in the veins and arteries were white thrombi and not hypertrophy of the walls of the blood-vessels.

Sixth.—The thrombus was present in all probability also in the orbital veins, but did not, as in other cases, extend to the cerebral sinuses.

The paper was discussed by DR. KIPP, of Newark, who stated that the cases in which he had seen the condition described by Dr. Knapp, the retina and its immediate vicinity was in a state of inflammation or, at least, opaque, but not between the veins; by DR. KNAPP, who thought that the segments of the veins becoming white could be used as a diagnostic symptom of embolism; by THE PRESIDENT, who had seen a case in which the process was confined more particularly to the optic nerve, with swelling and neuro retinitis, and subsequent atrophy and nearly absolute blindness; and by DR. SEELY, of Cincinnati, who had seen a case in which iodoform used as a dressing had produced facial erysipelas in three distinct instances.

DR. KNAPP felt certain that the iodoform had no unfavorable influence whatever in his cases.

DR. W. H. CARMALT, of New Haven, Conn., read a paper on

CHANGES IN REFRACTION RESULTING FROM A BLOW.

R. A. S.—, twenty years of age, student in the sophomore class in Yale College, myopic since twelve years of age, consulted him on October 23, 1882, stating that while practising in the gymnasium the day before, he had fallen violently forward, striking his right eye upon a bolt projecting from the floor. The blow was sufficiently severe to give rise to disturbance that obliged him to keep quiet for the remainder of the day and evening, neither going about nor studying. But at the time of his visit he felt quite well again, except with reference to his eye, wearing his glasses habitually for all purposes of vision, near or far. He now felt an uncomfortable sensation in looking through his right glass, and could see much better at a distance without it, better, indeed, than he remembered ever to have seen before without glasses, but for all that he had a very confused sensation when looking with both eyes either with or without glasses. Four months afterward he was again consulted, when he found on ophthalmoscopic examination that there was no conus at the nerve, nor other evidence of retino-choroidal trouble. By oblique illumination no opacity of the lens was detected. On the following day he saw, at Dr. Carmalt's suggestion, Dr. Loring, of New York, in consultation. To summarize the facts of this, to his knowledge, unique case, it seemed established that in a case of myopia of very considerable and nearly equal degrees in the two eyes, one was reduced by the impact of a blow to a condition of astigmatic myopia which resolved itself finally into a cross astigmatism without any loss of acuity of vision or range of accommodation. After endeavoring to account for the mechanism of this change, five possibilities presented themselves: 1, a change in the shape of the cornea; 2, a diminution or shortening of the axis of the globe; 3, a displacement or dislocation of the lens backward; 4, a change in the relative position or arrangement of the lenticular fibres; 5, a pre-existing spasm of accommodation, the tonic effect of which had been released by the paralytic effect of the blow.

Dr. Carmalt excluded, as did also Dr. Loring, change in the length of the eyeball, also dislocation of the lens, also the previous existence of spasm of accommodation. The remaining alternative cannot be urged from any knowledge we have of such a condition having been positively determined. It is urged rather as a refuge, all the other explanations having been disproved or not being

satisfactory. Is it not possible that a sudden and violent impulse could have shaken and so displaced the denticulate articulations of the lens fibres that they became fastened in a position to correspond to (or cause) the error of refraction indicated above?

The paper was discussed by Drs. Knapp, Noyes, Seely, Webster, Buller, McKay, and F. B. Loring.

DR. E. W. BARTLETT, of Milwaukee, Wis., then read a paper entitled

A FURTHER MODIFICATION IN CATARACT EXTRACTION.

The modification proposed is to make the preliminary iridectomies in certain difficult cases, one upward and one downward. Dr. Bartlett then reported two cases which illustrated the modification. The modification was suggested in difficult cases only, as when the eye is very prominent, when the iris does not react to atropine or attachments have formed between the iris and capsule, when the one eye has been lost and the least amount of risk should be taken with the other eye, and when the patient is very infirm and danger from shock is very great, and when the cataract is maturing very slowly. In such cases this modification gives the patient a better chance of securing a certain amount of sight than the method of making the whole operation at one time.

DR. GRUENING, of New York, then read a paper entitled

BLEPHAROPLASTY ACCORDING TO THE ENGLISH METHOD.

A young man sustained an injury of the face by the explosion of a petroleum lamp. As a result of the mishap the integument of almost the whole forehead, the right temple, the right cheek and corresponding half of the nose was changed into dense cicatricial tissue. The upper lid was wholly everted and its free border attached to the supra-orbital margin. To correct the deformity the lid was detached from the orbit, the neighboring tissues undermined, the deep scar excised, the free border of both lids brought in apposition and united by free sutures. The surface of the wound measured 40 mm. in the vertical, and 55 mm. in the horizontal direction. In order to cover the defect a flap was transplanted from the inner surface of the left arm and placed upon the wound. The flap was prepared according to Wolfe's suggestion, *i.e.*, deprived of its subcutaneous cellular and adipose tissue. After careful coaptation of the flap to the edges and the surface of the wound gold-beater's skin and a bandage were used to maintain the flap in its position. No discoloration, no displacement of the flap ensued; it united firmly with the wound, and the ectropion was corrected. To-day, *i.e.*, nine months after the operation, the flap measures 15 mm. in the vertical, and 30 mm. in the horizontal direction. The shrinkage took place during the first four weeks after the operation. No further shrinkage during the last eight months. The result is very satisfactory, and would not have been obtained by any other method.

The paper was discussed by Drs. Wadsworth, of Boston; Kipp, of Newark, and Andrews, of Staten Island.

DR. MCKAY, of Wilmington, then reported a case of

LOSS OF AN EYE FROM SEWER-GAS AFTER EXTRACTION OF A CATARACT.

John H—, a German brewer, sixty-one years of age, was operated upon April 16, 1882, for senile cataract, without an anæsthetic, by Graefe's method of linear extraction. The upward operation was performed satisfactorily, and without any accident whatever. He counted fingers immediately after the operation. The eye was covered with absorbent cotton and a light flannel pressure bandage without the further introduction of a mydriatic. Three and a half days after the operation the bandage became somewhat loosened. This eye was examined, and atropia was introduced. The incision had closed, the cornea was clear, the pupillary field dark, and vision, tried for a moment, was very encouraging. The

patient subsequently developed symptoms of some general disease, evidence of contamination of the atmosphere by sewer-gas was detected, and finally the eye was lost, as Dr. McKay believed, in consequence of the poisoning of the general system produced by this noxious agent.

DR. MCKAY also reported a case of

SYMPATHETIC NEURO-RETINITIS OCCURRING DURING PREGNANCY.

The patient was twenty-six years of age; she had been married ten months. In infancy she had scarlet fever, since which time the right eye had been weak. Five years ago the eye was treated for a painful inflammation by an oculist in Philadelphia, but during the last two years it had not annoyed her. When Dr. McKay saw the patient the eye was in a quiescent state of chronic irido-choroiditis with partially occluded pupil and dense opacity of the vitreous. She complained of her left eye, and reported that after a week's crocheting a sudden pain was felt in it while looking at a white wall. She was debilitated by malarial and pulmonary troubles and was three months advanced in pregnancy. Ophthalmoscopic examination revealed hypermetropia and a faint opacity of the deep portion of the vitreous, with decided congestion of the optic disk and retina, and within two weeks the appearances of sympathetic neuro-retinitis were fully manifested, and vision was reduced to counting fingers six to eight inches in a dimly lighted room. After three months' treatment in a darkened room, with a dark bandage over her eyes, and the occasional use of a solution of atropia to prevent iritic adhesions, inunctions of mercurial ointment to the temples, several leechings to the left temple, and a general sustaining and tonic treatment, she improved in general health, and the vitreous opacity as well as the exudation of the optic nerve and retina disappeared, and she recovered good vision. Her pregnancy, Dr. McKay thought, greatly modified the course of the sympathetic neuritis favorably. The ophthalmoscopic appearances of retinitis albuminuria were looked for repeatedly, but never were found, and the fact of her vision not being again impaired while she had general anasarca, which developed later in the progress of the case, enabled him to regard it as a case of neuro-retinitis.

DR. L. HOWE, of Buffalo, then read a brief paper and presented a specimen which illustrated

THE DIFFICULTIES IN MAKING A DIFFERENTIAL DIAGNOSIS IN GLAUCOMA.

The patient was four months old. When first seen, two months of age, a yellowish reflex was noticed in the interior of the eye which had been previously somewhat reddened, and vision, so far as could be determined, was much impaired. Increase of tension was scarcely perceptible, but after some hesitation it was regarded as + 1. After enucleation it was found that the entire vitreous had contracted into a small cone as a result of previous inflammation, and that the apex touched the retina, having its interior filled with a semi-purulent yellowish substance.

DR. E. E. HOLT, of Portland, Me., then read a paper entitled

COMMOTIO RETINÆ, OR SOME OF THE EFFECTS OF DIRECT AND INDIRECT BLOWS TO THE EYE.

Dr. Holt reported four cases. In two of these the patient was struck more or less directly by a stick of wood, in one by a round rod or cane, and in the other by a flat piece of coal, striking the forehead, nose, and cheek, not hitting the eye itself. In three cases recovery was uninterrupted. In one there was a relapse. Vision was reduced to a perception of light for four days, after which it began to return, and in the course of two weeks became nearly normal. Relapse then occurred and vision sank, but not so low as it was after the receipt of the injury, and recovery with a perfect eye took place

much more slowly than at first. Dr. Holt gave a detailed history of this case and also of one of the others.

THE PRESIDENT remarked that Dr. Holt had reported four cases manifestly dissimilar in character. From a thorough study of the affection referred to he had become convinced that commotio retinae is a phenomenon which had been entirely explained upon the supposition of a fissure running through the optic foramen of the orbit, and is almost entirely mythical when taken by itself.

DR. SEELY, of Cincinnati, thought the subject could not be dismissed so summarily as Dr. Noyes had supposed. He had reported one case which could not be explained away so readily, because a single application of electricity restored a vast amount of vision, and there was no explanation of the extreme lowering of the vision from which the patient suffered.

DR. KIPP referred to a case in which there was a fracture and subsequent blindness, and suit was brought for damages. The question which arose was whether the case was one of congenital blindness with divergence, or was it due to injury. On further examination of the patient and the surroundings he discovered that the mother had the same condition in the corresponding eye, and taking this into consideration he concluded that the blindness was not due to the injury.

The paper was further discussed by Drs. Gruening, Knapp, Wadsworth, and McKay.

A paper entitled "Two Cases of Ophthalmoplegia Externa, Associated with Disease of the Optic Nerves from Brain Tumor, with an Account of the Post-mortem Examination," by DR. CHARLES STEADMAN BULL, of New York, was read by title and referred to the Committee on Publication.

INJURY TO THE EYES BY HANGING.

DR. F. B. LORING, of Washington, said that since the series of experiments reported by Dr. Dyer, he had seen no communications concerning the effect produced upon the eyes by hanging, except the case reported by Dr. Green, of St. Louis, which was not corroborative. He had had opportunity to observe one case, which he wished to place upon record. In that instance both eyes were affected, although one was not affected so markedly as the other.

DR. GREEN remarked that his case was not corroborative of Dr. Dyer's conclusions in a certain sense, but he did not consider it valuable either as corroborative or otherwise, because the time limited for examination after the execution was too short, not being more than one hour.

DR. HOWE, of Buffalo, referred to one case in which he examined the eyes thirty-five minutes after the execution, and was unable to see any change.

DR. R. H. DERBY, of New York, referred to three cases which he had already reported in which there were marked changes in the eye produced by hanging.

COLOBOMA OF THE CHOROID.

DR. MCKAY, of Wilmington, wished to place on record three cases. In one there was coloboma of the iris. Two cases occurred in children, aged respectively seven and ten months. The other occurred in a woman twenty-eight years of age. In the child seven months of age the coloboma of the iris occurred.

DR. THEOBALD, of Baltimore, presented an additional modification of his bandage, which he regarded as a substantial improvement. It consisted in cutting the eye-piece biasing in order to prevent the tendency to wrinkling.

DR. MITTENDORF called attention to a new method of applying remedies to the eye, namely, in the form of impalpable powders or triturations. He presented several specimens of remedies prepared in this way.

THE PRESIDENT remarked that he had employed homatropin prepared in this way, and had been well pleased with the preparation.

DR. JONES asked if this method was preferable to the disks prepared by Savory & Moore.

DR. WADSWORTH, of Boston, spoke of the loss of power in a solution of eserine. Recently he had found a solution which was three years old, and it still worked perfectly well.

DR. SEELY, of Cincinnati, said that for ordinary purposes he preferred an old solution of eserine to a fresh one.

The following officers were elected for the ensuing year: *President*—Dr. H. D. Noyes, of New York; *Vice-President*—Dr. William F. Morris, of Philadelphia; *Secretary and Treasurer*—Dr. R. H. Derby, of New York; *Publication Committee*—Drs. E. G. Loring and D. B. St. John Roosa, of New York.

The place of holding the next annual meeting is Kaaterskill, N. Y., and the time the third Wednesday in July.

The Society then adjourned.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 14, 1883, to July 21, 1883.

MAGRUDER, D. L., Lieutenant-Colonel and Surgeon. Medical Director Headquarters Department of the Missouri. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 145, Department of the Missouri, July 12, 1883.

ELBREY, FREDERICK W., Captain and Assistant Surgeon. The leave of absence granted on Surgeon's certificate of disability, by S. O. 26, A. G. O., January 31, 1883, further extended six months on Surgeon's certificate of disability. S. O. 162, A. G. O., July 16, 1883.

POWELL, JUNIUS L., Captain and Assistant Surgeon. Assigned to duty at Fort Columbus, N. Y. H. S. O. 130, Department of the East, July 18, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Adams, Newport, R. I. S. O. 130, Department of the East, July 18, 1883.

PERLEY, HARRY O., Captain and Assistant Surgeon. Assigned to duty at Fort Pembina, D. T. S. O. 118, par. 1, Department of Dakota, July 5, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 21, 1883.

SCOTT, HORACE BROWN, appointed as Assistant Surgeon.

RUSH, CHARLES W., Assistant Surgeon, promoted to Past Assistant Surgeon.

DIEHL, OLIVER, Assistant Surgeon, promoted to Past Assistant Surgeon.

BRYAN, J. H., Assistant Surgeon, promoted to Past Assistant Surgeon.

GATEWOOD, J. D., Assistant Surgeon, promoted to Past Assistant Surgeon.

WHITE, C. H., Surgeon, detached from the Lackawanna, and placed on waiting orders.

HEFFINGER, A. C., Past Assistant Surgeon, detached from the Lackawanna, and granted leave of absence for three months.

WOOLVERTON, T., Surgeon, detached from the Naval Hospital, Philadelphia, on July 31st, and granted leave of absence for one year, with permission to leave the United States.

MR. ALFRED ROBERTS, Surgeon to the Prince Alfred Hospital, New South Wales, has received the honor of knighthood.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 24, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
July 17, 1883....	0	18	38	4	68	23	0	0
July 24, 1883....	0	16	39	7	87	12	0	0
<i>Deaths.</i>								
July 17, 1883....	1	10	7	4	21	16	0	0
July 24, 1883....	0	4	11	5	19	10	0	0

HARDLY EVER—BROKEN.—Dr. F. H. Darby, of Morrow, O., writes: "I secure my thermometer case in the upper vest pocket, by wrapping it three or four times around near the shoulder with a common half-inch No. 00 rubber band. If the pocket is wide divide it in two compartments by a pin or a few stitches, the other side can then be very properly used for a pen-holder, comb, or pencil. For cheapness, the cost being a pin and a rubber band, simplicity, and facility of changing from one vest to another, we submit the above, if you will pardon egotism, as being *the very best of all*."

HOW PATENT MEDICINES PAY.—The *Milwaukee Sentinel* in a very sensible article on "Patent Medicines," truthfully says: "It is advertising that is the secret of success in the case of patent medicines, if there is any secret about it. There is not a patent medicine which is superior to the preparations provided for by the standard medical publications. It is much simpler, however, for the person who wants a medicine, to buy a bottle of patent medicine, good for every human ill, than go to a physician. By advertising a patent medicine extensively and persistently the people are brought to recognize certain common and simple sensations as evidences of a disease which this particular remedy will cure. About all that is required to succeed in the patent medicine line is money and nerve to use it in advertising. It makes no sort of difference what medicine it is—the combination of drugs is the item of least importance. It is well, perhaps, to put the drugs, if any are used, in spirits, so that a man can take his whiskey with a clear conscience—indeed, with a sense of his own worthiness in taking care of his health. Occasional changes in the name of the medicine and of the maker are desirable, for after a few years the public demands something new. The same medicine may be used, but a change of name and of the character of the illustrations is demanded. After a long run of a patent medicine as a cure for lung troubles, a new run may be established by calling it a remedy for stomach troubles. When a fortune has been made out of lung pads, they can be cut down in size and another fortune made out of them as kidney pads."

VIOLENT HEMORRHAGE FROM THE LEFT EXTERNAL AUDITORY MEATUS FOLLOWING A COLD ABSCESS—SUBSEQUENT RUPTURE OF THE LEFT INTERNAL CAROTID, CAUSING DEATH IN A FEW SECONDS.—Dr. R. B. Davy, of Cincinnati, reports the case of a little girl three years of age suffering from restlessness, coated tongue, sore throat, and slight fulness of left side of neck. In the act of examining the throat (the child resisting) an abscess of the left ear broke and discharged about a teaspoonful of reddish pus. After a few hours violent hemorrhage from the ear set in, and in the course of two days fully a quart of blood had been lost. Most of this quantity

was discharged at two bleedings, the pillows being stained only with small spots in the intervals. The hemorrhage ceased spontaneously and for nearly a week the ear discharged pus, gradually losing its reddish cast. The ear was examined with reflected artificial light and the membrana tympani found to be intact. The child was improving, though very pale. On the fifth day after the last hemorrhage another, quite as violent as the first, occurred. The ear was now plugged with a bit of sponge, which checked the bleeding. Simultaneous with the plugging there appeared a swelling about the size of the longitudinal half of a hen's egg extending from the left mastoid process downward and forward. This swelling increased in size until late in the afternoon, when the plug was forced out of the ear, the blood spurting at least a foot from the child's head and the swelling beneath the ear diminishing in size. The ear was now more firmly plugged and ice-bags applied to the swelling which had returned immediately. The next day the swelling was perceptibly smaller and had a leathery feel on firm pressure; but the third day afterward it again increased in size, and showed signs of suppuration, though there was no pointing externally. On the following afternoon the left internal carotid ruptured in the mouth, and the child bled to death in a few seconds. The post-mortem revealed at the site of the swelling a deep-seated abscess whose contents had come in contact with and injured the coats of the vessel in question, causing them to give way. The loss of blood during the fatal hemorrhage amounted to but little over half a pint. Careful inquiry was made but no history of hemorrhagic diathesis was obtained, and the doctor concluded that the first hemorrhage had been caused by ulceration of the coats of the posterior auricular artery. The case will be reported in full in the *Cincinnati Lancet and Clinic*.

THE RODS AND CONES in the ninth layer of the retina have generally been considered to have an important function in vision. Dr. Borysikiewicz has recently asserted that they are entirely absent in the eyes of tigers and leopards which he has examined. Yet these animals have acute vision.

CASE OF CUTANEOUS CALCULUS.—Dr. G. W. H. Kemper, of Muncie, Ind., sends us the following report: "On May 9, 1878, I removed by incision one of these rather rare morbid specimens. The patient, a lady, aged fifty-five years, stated that about twenty years previously a small tumor developed in the right eyebrow, and gradually grew to the size of a hazel-nut. She had experienced no pain from it until the last year before its removal, when its presence became rather annoying, and at times caused neuralgic pains by pressure upon the supra-orbital nerve. It probably began as a sebaceous cyst and eventually was transformed into a calcareous mass. I was uncertain of the character of the tumor until my knife came in contact with the stone. It is of an oval shape, rough surface, and weighs at this time seven grains. No further trouble was experienced after its removal."

TONSILS BY THE BUSHEL.—Dr. W. N. Williams, of Indianapolis, Ind., writes: "In the discussion on Dr. William C. Jarvis's paper, 'Tonsillotomy without Hemorrhage,' read before the American Medical Association at its late session in Cleveland, O., you report Dr. J. P. Thompson, of Indianapolis, Ind., as saying, 'He did not intend to overestimate in the least, but believes that, without exaggeration, he has excised *two bushels* of tonsils,' etc. (see page 667, MEDICAL RECORD, June 16, 1883). The italics are yours, Mr. Editor. Suppose we figure on that statement a little. A bushel contains 2,150 $\frac{1}{2}$ cubic inches (see 'Ray's Practical Arithmetic,' page 83. One thousandth Edition). Discarding the fractions, we have 4,300 cubic inches in the two bushels. Assume that each tonsil would occupy a space of one-half cubic inch, it would require 8,600 tonsils to fill out

his measure of two bushels. Now, if the doctor excised one tonsil each day in the year, it would have required twenty-three years, six months, and twenty-five days to have completed the job. If his instruments were in good order, and he really felt well, and excised a pair of tonsils each day, he could have done it in the little matter of eleven years, nine months, twelve days and a half. If Dr. Thompson has really excised two bushels of tonsils in his practice, how many bushels have our other specialists excised? Speak out, gentlemen, or acknowledge by your silence that the championship of America in tonsil-cutting belongs to Indiana. It may be if some other gentlemen were to file their broad axes, grind their hand-saws, spit on their hands and sail in, that they could capture the champion's belt at the next meeting of the American Medical Association."

CHLOROFORM NARCOSIS DURING SLEEP.—Dr. Hunter H. Powell, of Cleveland, O., sends us the following case bearing upon the subject of chloroform narcosis during sleep: "On June 15, 1883, I was called to see a boy four years of age, who had fallen upon a piece of glass and cut the palm of his right hand badly, I found him asleep and determined to try the experiment of chloroforming in that state, as I had been interested in the various articles bearing upon the subject which have lately appeared in *THE RECORD*. I took my time about it and found no difficulty in getting him fully under its influence, examined the wound for bits of glass, put in necessary stitches, and put on the required dressing before he became conscious. I believe this will become a popular method for administering chloroform to children and am surprised it has not been resorted to more frequently. By it we save the little ones from the fright with accompanying excitement experienced by many of them at the first approach of chloroform, a gain certainly to be desired for the sake of child, mother, and doctor."

THE METHODS OF MONTHLY NURSES.—Dr. Alexander, in a series of articles in the *Medical Times and Gazette* on the management of parturition and the puerperal state, remarks on the habit of nurses of having each some special point which she considers of importance in the management of labor cases, and which, in her ignorance of the true principle involved, she is apt to overdo, or to do wrongly. For instance, one dreading hemorrhage will compress every uterus; another will drench every woman with cold water, etc. He says the best plan of finding out these faults is to "blow up" the nurse generally when troubles arise that we cannot get at the origin of, and wherever she in her self-defence shows herself to be most zealous, it is *there* we must look for the errors that are producing the mischief.

AN ANALYSIS OF INDIAN TEA.—Water, 5.849 per cent.; extract, 37.800 per cent.; total ash, 5.790 per cent.; ash soluble in water, 3.667 per cent.; ash insoluble in water, 2.123 per cent.; ash insoluble in acid, 0.149 per cent.; insoluble leaf, 50.100 per cent.; tannic acid, 13.040 per cent.; theine, 3.240 per cent.

THE INSANE ASYLUMS OF ITALY.—Italy has sixty-two insane asylums, which contain 17,471 insane inmates; of these, 9,000 are men, 8,471 are women. Since 1877, the number of admissions has been constantly increasing.

ABSENCE OF VAGINA. UTERUS, OVARIES—ENORMOUS DISTENTION OF URETHRA, WITHOUT INCONTINENCE.—Dr. James F. Ferguson, Visiting Surgeon to the Charity Hospital, N. Y., relates the history of a prostitute admitted October 25, 1881. Father was consumptive; mother died of pulmonary hemorrhage. The patient was the tenth child. She denied all previous venereal trouble. Although eighteen, had never menstruated, nor did she give any history of vicarious phenomena. She noticed a pimple on the posterior commissure at the time of admission, followed by a discharge, with scalding on micturition. There were three small chancroids in the

posterior commissure. The chancroids were touched with carbolic acid and dressed with iodoform. On the 29th of November, the parts having healed, a further examination was made, when no vagina was found; the meatus urinarius and urethra were very much enlarged. The sores above mentioned prevented an earlier examination. The labia are well developed. An examination was made by Dr. Ferguson, with Dr. Walter R. Gillette and Dr. E. S. Peck. They failed to find a uterus or ovaries. Investigation was made by the finger in the urethra; also bimanual touch through the rectum, and by sounds. The outer portion of the urethra was greatly dilated; she did not have incontinence of urine. She was well developed—breasts well formed, also the nipples. The mons of normal size. The labia nymphæ and clitoris presented the usual appearance. In this very remarkable case the unusual feature is exhibited of a urethra largely distended, with no incontinence of urine.—*The Planet, New York*.

REPORT OF A CASE OF CYANOSIS IN WHICH THE INTERAURICULAR AND INTERVENTRICULAR SEPTA WERE BOTH DEFICIENT.—A correspondent has sent us an interesting report under the above title, but has omitted to affix his name. We shall be pleased to hear from him.

ECHINOCOCCI IN THE LIVER OF A CAMEL.—A large camel from the Central Park was brought to the hospital of the Columbia Veterinary College almost in a state of collapse. No previous history was obtained. The animal was only in the building for a few hours. At the necropsy the principal lesion worthy of note was found in the liver, which was filled with hydatid cysts, which resulted from the migration of the larvæ of the tænia echinococci. These cysts were in various states of retrograde change. Some were almost calcareous, some in a suppurative state, and some nearly cystic. The hooklets diagnostic of this lesion were easily demonstrated.—*Journ. of Comp. Medicine*.

A CASE OF TRANSMISSION OF TUBERCLE FROM THE HUMAN SPECIES TO THE DOMESTIC CAT.—In the culture of medical science in these days the question of the transmission of tubercle from animals to man is proposed. I take the liberty of narrating a fact referable to a diametrically opposite problem, namely, the transmission of tubercle from man to animals. The case was that of a cat, two years of age, which died tuberculous after having repeatedly eaten the expectorated matter from a lady who died soon after of phthisis. On my first visit, by request of the owner of the cat, the animal presented a cadaveric appearance, with a physiognomy of suffering, and stiff and lustreless hair. For some time previous it was noticed that it had lost its natural beauty and vigor, lost appetite and suffered from severe cough and other symptoms which threatened a fatal termination. The cat died and I made a post-mortem examination which verified my diagnosis. It was true tuberculosis. On opening the thoracic cavity I found white nodules of irregular form disseminated throughout the entire substance of both lungs, isolated or confluent and varying in size from millet seed to a grain of corn. I found some of these tubercles on the costal pleura, some on the pericardium, and, note the circumstance, only one (of the size of a grain of wheat) on the right side of the heart near the apex. I did not have time to examine these nodules microscopically. Examined thus superficially I found variation in their consistency, some hard and calcareous, others soft and containing pus. Will these data be sufficient to prove the cat tuberculous? I believe so. (*G. Brezzo in Il medico Veterinario*).—*Journ. of Comp. Medicine*.

DENVER, COLORADO.—There are more physicians in Denver in proportion to the population than in any other city in the United States, says the *Denver Medical Times*. A Microscopical Society has recently been organized and a Woman's Hospital established.

The Medical Record

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Original Articles.

ON SOME RECENT ADVANCES IN THE SURGERY OF THE URINARY ORGANS.

BEING THE ADDRESS ON SURGERY DELIVERED BEFORE THE FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, AT LIVERPOOL, ON AUGUST 1, 1883.

BY REGINALD HARRISON, F.R.C.S.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

(Special for THE MEDICAL RECORD.)

Mr. President and Gentlemen:

THE honor of addressing you on this occasion having been conferred upon me by your Council, I cannot enter upon the task that is before me without expressing my consciousness of inability to accomplish it in the manner I would desire. This sense of insufficiency is by no means lessened when I look at the names of those who have preceded me; when I remember the interest with which I, in common with you, listened to their words; and when I consider how completely abreast this great Association is kept by means of its *Journal* with everything relating to the advancement of surgery. On the other hand, long connection with this Association gives me the assurance of having to address a sympathizing audience, one disposed to overlook defects in any honest endeavor to set forth the advancements made in our art.

Surgery, I need hardly tell you, has long been cultivated in the new city which has now the honor of receiving you. The hospitals of Liverpool and their records show that the same ardor prevails here as elsewhere, both at home and abroad, while its position as a school of surgery indicates that it has entered not unsuccessfully into honorable rivalry with its competitors. But it may be asked, especially by those visiting Liverpool for the first time, Are there no traditions here? Are there no footprints of those who have left behind them works which place us in their debt, and which will render their names famous wherever and as long as surgery is known? It seems to me that one advantage connected with the itinerant character of our meetings is, that places suggest references to local celebrities of the past whose works cannot be thought over without advantage. In our desire to push forward, we sometimes forget to look back, and to reflect upon that which has been achieved and how it was brought about. Such reflections cannot fail to be of service in reminding us that surgery is not entirely of modern creation, that we have a few distant relations whose connection it is desirable to keep up, and that there still remain links which associate us with the great ones of the past. These links connect us, not here alone, but everywhere, with the names of Park and Alanson, to whose work I now wish for a moment to refer.

Henry Park was surgeon to the Royal Infirmary from 1767 to 1798. I cannot do better than quote a passage which our local historian, Sir James Picton, has selected¹ as paying a deserved tribute to his memory: "In the latter portion of the last century, when a vigorous flash of originality seemed to light up the annals of surgery, Park, of the Liverpool Infirmary, may be said to have

accomplished the first act of conservative surgery. His patient being a sailor, to whom the loss of a foot and leg would have been tantamount to the loss of his means of getting bread, determined him to make the experiment of simply excising the diseased part, the knee-joint, and retaining the foot and leg. This he did so successfully that, to use his own words, the patient some years after the operation 'made several voyages to sea, in which he was able to go aloft with considerable agility, and to perform all the duties of a seaman; that he was twice shipwrecked, and suffered great hardship without feeling any further complaint in that limb.' This was a crucial test of success, that should have stamped the operation as one of the greatest surgical triumphs of the time; but, like so many other great strides taken in that age of extreme vivication, it was in advance of its fellows, and was destined to be arrested for the better part of another half century."

I need not on this occasion dwell on the claims that excision of the knee-joint has to be regarded as one of the recognized operations in surgery. Though there may be differences of opinion in reference to the circumstances indicating it, there can be no doubt that it will for ever remain as a brilliant memorial of the surgeon whose name is associated with it.

Of Mr. Alanson, Park's colleague, and surgeon to the Royal Infirmary from 1770 to 1794—whose work has been aptly referred to by Mr. Sampson Gamgee¹ as "one of those forgotten surgical classics which I would venture strongly to impress on the attention of my younger brethren"—I will speak in the following passage from the Presidential Address of the late Dr. Vose, delivered on the last occasion this Association met in Liverpool: "To Mr. Alanson, formerly a surgeon to our Royal Infirmary, we are indebted for many important suggestions, made at a time when the science of hygiene was but little regarded anywhere. His remarks upon the ventilation of hospitals, the use of iron bedsteads, the necessity of frequent whitewashing, and the establishment of sanatoria in the pure air of the country for convalescent patients, testify to the correctness of his professional judgment and to his zeal for the welfare of his fellow-creatures. It is by his treatise upon amputation, however, that the memory of this gentleman, as an original thinker in surgery, has the strongest claims to our gratitude and regard. He tells us that among upward of forty amputations performed upon the old system, which had come under his notice, ten died of tetanus, two of bleeding, three from mortification, four from exhausting suppuration; while eighteen experienced hemorrhage, and nearly all had excessive fever. Most of the patients suffered from exfoliation of bone—conical stumps or wounds that would not heal. After the adoption of his improved method of procedure he had the satisfaction of being able to announce that out of upward of thirty amputations, taken indiscriminately, which were performed at the Infirmary, not one died, and none had secondary hemorrhage, while in a month after operation the wound was either altogether or as nearly as possible healed in all the cases.

As is well known, in Alanson's method of amputating, provision was made for the covering in of the bone, after its section, by the integuments.

Such, then, are illustrations of the useful work which was being done by surgeons in this comparatively modern

¹ Edinburgh Review, October, 1872.

¹ Transactions International Medical Congress, 1881, vol. ii., p. 352.

city about one hundred years ago. Gratitude for improvements the value of which is still fully and freely acknowledged justifies the foregoing brief references to the work of these distinguished men.

The selection of material for presenting to you to-day has occasioned me no little anxiety. Following immediately upon an address which will for ever render our jubilee year memorable—an address in which justice was done by the distinguished representative of surgery from Ireland to the great subject of surgical progress generally, whilst its prominent features were forcibly brought out, I may well hesitate where to tread.

In considering the position of surgery as detailed in Dr. Stokes' admirable address, the thought naturally occurs that its diffusion is as remarkable as its progress. Compare, for example, the condition of surgery prior to the existence of our Association with its position as set forth in the columns of our own *Journal*, or in those of the other great representative of medical opinion in this country—the *Lancet*. In the former period departures from the ordinary routine of surgical procedure were confined to a few hands, and the benefits resulting from improved methods of treatment were shared in by a very limited number. Now, no sooner is a method of treatment or an operation proved to be efficient, than it is taken up and practised wherever scientific surgery can reach; the peer is no better off than the peasant, and the cottage hospital rivals in its successes its more palatial representative.

So beneficently catholic is our profession that it hails with the greatest satisfaction, not only the discovery of new means of relief, but the adaptation of others to a form which permits of their more general adoption and usefulness; while, on the other hand, it regards with suspicion all methods of treatment which unnecessarily restrict or conceal that which was intended for the common good.

I propose to occupy the remainder of the time at my disposal by a reference to some of the more recent advances and work in connection with the surgery of the urinary organs.

Commencing with the kidneys, we are at once struck with what surgery is doing for them. Until quite recently the diseases of these organs were regarded as belonging almost exclusively to the province of the physician, and probably they would have remained so had preventive medicine obtained fuller development.

A more extended acquaintance with the pathology of the kidney has brought to light conditions in which the work of the physician requires to be supplemented by that of the surgeon. Pain arising from an undue mobility of the organ, tumors, deposits, hemorrhages, and collections of fluid within it—all these morbid states are now recognized as capable of relief or cure by fixing, opening, or extirpating the abnormal or disordered organ; whilst numerous illustrations have already been afforded of the successful removal of stones from positions where they must have ultimately led to the disorganization of the kidney in which they had become impacted.

It would be premature at present to endeavor to formulate anything like precise rules in reference to the application of the various operations on the kidney to which I have briefly referred; they are at present comparatively new to us, and we must occupy ourselves in cautiously moving in the direction they indicate, and in collecting experience rather than in drawing conclusions other than very general ones.

Among many valuable contributions to the literature of this subject which have appeared, I would include one by Dr. R. P. Harris,¹ of Philadelphia, which contains an analysis of one hundred cases of nephrectomy. From this, as well as other communications which have more recently been published in this country, we may draw at least three conclusions of value, so far as the operation of extirpation of the kidney is concerned. These are—

First.—That nephrectomy has been the means of saving many lives under circumstances where no other method of treatment was likely to be of service.

Second.—That this operation has been practised in cases where the probability of a successful termination appeared to be very remote.

Third.—That a method of effecting the removal of the organ different from that which was selected, or a procedure less heroic, might, in some instances, have tended to increase the chances of success.

In these directions then—in selecting cases for operation, in rejecting others as unsuitable, and in determining relatively to the case in question the best method of procedure—I take it that good work has yet to be done.

It appears to me that among the difficulties we have to contend with in the application of nephrectomy, two stand out prominently: 1, the kidney it is proposed to remove may be the only one; 2, the opposite organ may be similarly affected, though in a less degree, yet sufficient to interfere with those compensatory changes being carried out which are essential when one excretory organ has to supply a lack of service on the part of another. The literature of this subject will already be found to illustrate the class of difficulties to which I am referring.

The lesser proceedings, which include the exploration of the kidney, and the removal of calculi and of pent-up fluid, are necessarily attended with a diminished risk, and have already proved of much value.

In undertaking a new class of operations, we must bear in mind the past history of many methods of treatment, now justly regarded as successes, but which severally had a very unpromising commencement. Look at the unsatisfactory position held by ovariectomy only within a period represented by the memory of the majority of us here present to-day. Yet the high dignity to which it has been raised in the rank of surgical operations, by the skill and enterprise of Sir Spencer Wells, Keith, and others is frankly and fully admitted by the whole medical world.

In the treatment of certain affections of the bladder we shall find that much progress has been made, and that the way has recently been opened for prosecuting other important advances. These will be chiefly illustrated by the modern practice of lithotripsy and the treatment of tumors and intracystic growths.

Till a few years since the removal of stone from the bladder by crushing had been conducted on the lines laid down by Civiale some half-century ago. Though this method of proceeding has included amongst its advocates, past and present, surgeons of eminence, it cannot be said that as then practised it was either gaining ground or confidence. Indeed, I think I may say there was an increasing tendency to limit its application and to substitute lithotomy in all cases but those of the simplest kind. The mortality consequent upon the retention of broken calculi within the bladder was sufficient to induce all but the most ardent admirers of lithotripsy to hesitate to give it the preference over a proceeding in which, whatever might be the risks, there was at least a guarantee that the whole of the stone had been removed.

While the surgical mind was thus to some extent in doubt as to the limits to which the crushing operation of stone might safely be pushed, two important communications followed rapidly upon each other. That both of them should have emanated from America merely indicates that the desire to advance the art of surgery is not limited to the old country, but is a natural outcome of advancing civilization and humanity.

The first of these papers was by Dr. Otis, of New York, who demonstrated beyond all reasonable doubt, and in a manner which had not previously been attempted, that the male urethra was capable of safely receiving far larger instruments than were generally employed. Following upon this, and probably influencing the views of the author, came Dr. Bigelow's paper on the removal of stone from the bladder by crushing and withdrawing it at

¹ American Journal of the Medical Sciences, July, 1882.

a single operation; the latter communication clearly showing that the bladder was tolerant of much more prolonged manipulation than had previously been believed.

It appears to me that the originality of Bigelow in no way detracted from the importance of the work that had previously been done in this country and elsewhere, or compromised the acumen of those who were most interested in the progress of this department of surgery.

That Bigelow's method of procedure is a great step in advance—that it has extended the limits of lithotripsy and curtailed those of lithotomy—there cannot be the least doubt. But to suppose that it is capable of universal application, or ever likely to be so, is as unreasonable as to suppose that the art of surgery in no way differs from the art of administering Holloway's pills. But does the lithotripsy of to-day represent the finality of its perfection? I trow not. When we consider what chemistry, electricity, and other agencies are doing—how physical force is in many directions being supplanted by other means—can we doubt that there are yet improvements in store in the methods of effecting the destruction of concretions within the body? Nay, are there not already significant indications that such improvements are nigh at hand? Is it likely that the fruit of the labors of Garrod, of William Roberts, of Ord, of Vandyke Carter, and others has been already gathered? May not a more perfect knowledge of the physical and physiological laws which regulate the production of concretions in the human body result not only in enabling us more surely to prevent them, but to destroy them?

Considering the great activity that has within recent years been shown in demonstrating the preventable nature of many diseases and the energy that has been displayed in grappling with them, it seems remarkable that no adequate steps should have been taken to ameliorate the hygienic condition of certain parts of this country where the amount of calculus disease is excessive and the inhabitants consequently are exposed to an inordinate risk of contracting it. The admirable address by Mr. Cadge before our Association at Norwich, in 1874, furnishes abundant data for the further prosecution of inquiries of this kind.

I cannot help thinking that if it could be shown to be even probable that the dogs, cats, rabbits, or frogs of the aforesaid districts were inconvenienced in a like manner with their owners, the matter would long ago have been forced upon our legislature with all the exaggeration that usually characterizes agitations of this kind.

Though surgery has invariably shown itself equal to the circumstances and emergencies with which it has been called to cope—though the prevalence of stone in a district has always been compensated for, as far as this is possible, by the appearance of those most competent to deal with it—these are no reasons why such conditions should be permitted to continue. Had time or occasion offered, I think it would not be difficult to prove that circumstances, either fortuitous or by design, have been found to exercise a marked influence in diminishing or increasing, in certain places, the tendency to calculus disease.

One word in reference to lithotomy before I leave the subject of stone. There is no great operation in surgery, I believe, which furnishes more successful results than this. Taking the experience of the two hospitals in this city with which I have been associated, I find there have been within my recollection one hundred and two cases of lithotomy in persons of all ages, but chiefly in children, and operated on either by my colleagues or by myself. In only five of these cases could I ascertain that a fatal result followed. My late esteemed friend, and our former associate, Mr. Southam, speaking of his own experience of lithotomy at Manchester, informed me that he had operated one hundred and twenty times, and could only recall one death. In the great majority of the Liverpool cases the stones were not exceedingly large, and I have no doubt that many of them might

have been removed by lithotripsy. I question, however, whether the small mortality these figures indicate would thereby have been still further diminished, even if the calculation were made on a basis corresponding with the most successful statistics in lithotripsy that have hitherto been obtained.

Passing to tumors of the bladder, it is not surprising, seeing what has been done for tumors of the ovaries, uterus, and intestines, by Sir Spencer Wells, Keith, Lawson Tait, Treves, and others, that growths occupying the interior of the bladder should have received special attention. Though the literature relating to this subject has been of a somewhat fragmentary character, such compilations as Stein's recent work, "A Study of Tumors of the Bladder," conclusively show that some gratifying results have already been attained in both sexes. The great distress connected with this class of growth, the uncertainty as to the precise nature of the affection, in the first instance, and subsequently the kind of symptoms that accompany it, have naturally suggested the employment of means having for their object their removal by operation.

Sir Henry Thompson has done good service in giving prominence to the employment of digital exploration of the bladder, and in furnishing illustrations of the great advantage that this proceeding is capable of affording in suitable cases.

From a consideration of some of the extremely valuable records which have been published by various surgeons, where the bladder has been opened for the removal of tumors, it appears to me that it might have been better had the operative proceeding terminated with the detection and exploration of the growth by the finger. The chief dangers which experience has shown to be liable to attend the performance of this class of operations are:

1. The chance of rupturing a bladder, the coats of which have been rendered less resisting than natural.
2. The provocation of a hemorrhage which it has been found difficult to control.
3. An incomplete removal of the growth.

On the other hand, an examination of many tumors of this kind, of which villous growths or tufts furnish the best examples, shows that there is nothing in their connections or relations which need necessarily interfere with their complete removal. Precise information as to the presence and attachments of these growths we may now obtain with comparative safety. Whether their removal is to follow upon their discovery will be matter for further consideration.

With the view of extending our knowledge of these growths, a committee of this association is occupied in collecting information relating to them. The report of this committee, will, I hope, form the basis of an interesting discussion in the pathological section which will be opened by Mr. Paul.

I now come to speak of the prostate, and I shall do so in reference to the part it takes in obstructing micturition, for the reason that it is this symptom which in some form or other brings the patient under our care.

It appears to me that enlargement of the prostate is specially interesting to us in relation to its earliest and to its most advanced forms, and it is to these points that I shall more directly refer.

If we take the obstructive disorders of the urinary apparatus, and inquire what feature of them is most detrimental to the associated parts, the answer undoubtedly will be, the misdirection of the muscular force that is thereby entailed. How can we explain the structural alterations which take place behind the obstructed point, and which manifest themselves in different ways, except as the results of urinary retention and retrograding pressure? How frequently do we find, in cases of stricture or enlarged prostate, that the whole of the apparatus behind the primary constriction consists of little else than dilated saccules and tubes! Is not this back-pressure go-

ing on, though it may be imperceptible, from the moment that impediment arises to the escape of urine from the bladder? The more we study animal mechanics, either in their physiological or pathological application, the more can we appreciate the truism that force is never lost; if it is not permitted to act for good, it must be productive of evil; if it is not exerted toward the legitimate fulfilment of a normal act, it must inevitably exercise a corresponding pressure in an abnormal direction. Whenever I see in the post-mortem room an ordinary specimen of dilated kidney, tortuous ureter, or sacculated bladder, associated with an enlarged prostate or a stricture, the expression "misdirected force" almost involuntarily escapes from me.

Such considerations as these have long led me to believe that our treatment of prostatic stricture commences, as a rule, far too late; we delay until the bladder shows, by the formation of a pouch or a sacculi behind the prostate, the first bad influence of back-pressure before we seek to rectify it.

I have endeavored to prove how much good may be done by the adoption of judicious mechanical treatment on the appearance of indications that the prostate is commencing to obstruct micturition, and I have founded my suggestion upon a condition which may be seen illustrated in any museum—viz., one in which, though the gland has become large, obstruction has not been known to occur. An extended adoption of this practice has convinced me that the pressing symptoms connected with an enlarging prostate may be kept in abeyance by the timely employment of those principles of treatment which are generally recognized as being applicable to any tubes within the body which are threatened with occlusion, and are within our reach.

In the more advanced forms of prostatic enlargement, where the bladder has been converted into a receptacle little better than a chronic abscess in which urine stagnates, surgery has done much to afford relief.

When the comfort that catheterism is capable of affording has ceased to be effectual, other plans of establishing a drain for the urine are at our disposal. It is not necessary that I should discuss the various means of effecting this; let me, however, say a few words in reference to two which have more recently come under notice; these are—first, incision into the bladder from the perineum, and secondly, paracentesis through the enlarged gland.

For the purpose of securing a more or less permanent channel for the escape of urine from the bladder, other than that by the urethra, I must admit that following the practice of Syme, and to some extent of Edward Cock, I have a decided preference for an incision through the perineum, on the twofold ground of safety and comfort. We have had numerous examples of the great advantage that cystotomy is capable of affording for bladder affections, dependent on a large prostate—none perhaps more striking than the case narrated by Mr. Lund, on the memorable occasion of the meeting in London of the International Medical Congress. The paper closes with this observation: "I have thus placed on record this case, unique in its character, and interesting and encouraging in its results, with the hope that should a similar case occur to any surgeon now present, he will not hesitate to give his patient the chance of benefit from a course of procedure so simple in its nature, and so likely to be followed by temporary, if not permanent, benefit."

I may be permitted here to submit to your notice a method of puncturing the bladder through the enlarged prostate which has afforded very gratifying results. It consists in passing the trocar through the gland, and retaining it in the perineum, so as to afford a permanent as well as a convenient drain for the urine. I should have had more diffidence in commending this operation to your notice had it not received the approval of our distinguished associate, Professor Gross, whose contribu-

tions to the surgery of the urinary organs are held in deservedly high repute on both sides of the Atlantic.

Though the primary object of cystotomy, as usually practised, is merely to place the bladder at rest, by providing a continuous drain for the urine as well as the products of cystitis, it occurred to me, as it had already done to others, that it would be possible to extend this proceeding, with the view of removing those barriers to micturition which the hypertrophied gland so frequently presents.

It was to meet conditions such as these that Mercier introduced and practised division of the prostatic bar by means of a cutting instrument introduced along the urethra. This plan, though admirable in its conception, was open to the objection that in its execution it was necessarily uncertain, there being no means of ascertaining with certainty that the section was confined to the obstruction to be removed. On carefully considering the position of matters, as well as the proposals that had been made, it appeared to me more reasonable to attempt to divide the prostatic obstruction at the neck of the bladder from an opening made into the membranous urethra, than by means of instruments which had to traverse the whole length of the canal. I have recently brought under notice a case¹ in which I thought it desirable to explore the prostatic urethra from an opening made in the perineum, through which I was enabled to divide with precision a prostatic barrier. The division of this portion of the gland was followed by complete restoration of the power of micturition, and has so far proved of permanent advantage.

The proceeding which I have thus put into practice seems first to have suggested itself to Mr. Guthrie, but I cannot find that he ever employed it; that it is not identical with the somewhat extensive incision of the prostate as for lateral lithotomy which was practised by Sir William Blizard is at once obvious. Its aim is to divide the obstruction—and the obstruction alone—by an opening so planned as not to expose the patient to undue risk; while, at the same time, it is capable of affording the greatest amount of room for manipulation by an extension of the incision, should this prove to be necessary.

I need hardly observe that a proceeding of this kind should be undertaken before the bladder has passed into a condition of confirmed and irremediable atrophy; otherwise, though we may succeed in removing an obstacle to the introduction of the catheter, our prospect of restoring the power of micturition will be as hopeless as it has proved to be under somewhat similar circumstances where the operation of lithotomy has been undertaken.

It is impossible to avoid the conclusion, from their examination after death, that many atonied bladders might have been prevented becoming so by the timely removal of the obstruction by which a condition of permanent paralysis was induced and maintained.

The operative treatment of the enlarged prostate, when it obstructs micturition to a degree that cannot be met by judicious catheterism, is yet, I believe, open to considerable improvement.

Though the literature relating to either complete or partial excision of the prostate is very limited, there is much in it of promise. In one case, where I extirpated the whole gland for malignant disease, the benefit that followed far exceeded my expectations. It was that of a middle-aged man, who, by reason of a carcinomatous prostate, was threatened with a speedy and painful death. I cut down upon the gland in the median line, and succeeded in enucleating it tolerably cleanly with my finger. I saw this patient eight months afterward in very fair health, and quite able to go about his business. So far he has enjoyed an immunity from the symptoms which induced me to perform this operation, and though his

¹ Transactions International Medical Congress, vol. ii.

¹ British Medical Journal, June 9, 1883.

disease is a malignant one, we have every reason to be content with the results obtained.

Then we have numerous examples where considerable masses of the prostate have been removed with very great advantage in the course of operations on the bladder. Amongst these I would specially mention an important case by Mr. Bickersteth; and, more recently, another by Dr. John Ashhurst, of Philadelphia, in which the whole of an enlarged third lobe was successfully removed.

Cases such as these seem to favor the hope that operative surgery will be found capable of affording more relief to exceptional instances of this kind, and of extending to the large prostate the treatment which in some degree is applicable to other deep-seated growths.

Passing to the urethra, I would again take the opportunity of adverting to the value of Otis's work in regard to the dimension and dilatibility of this canal; if he had done no more than contribute to the improvement of lithotripsy—and this cannot be questioned—we should still be largely in his debt. I cannot, however, follow him in his views relating to the performance of internal urethrotomy as a means of treating stricture of the urethra. My impression is that this operation is losing instead of gaining ground in the opinion of those who have had ample opportunities of judging fairly of its merits. That it is an operation fitted for the treatment of stricture in its early stage is a conclusion I am disposed to take exception to, on the ground that it is neither necessary nor safe as compared with other methods. I believe that the early stage of stricture may be successfully combated by the employment of thorough cleanliness combined with the judicious use of dilatation, as we are accustomed to practise it in this country.

If internal urethrotomy gave a greater immunity than other operations from a recurrence of stricture, or did away with the necessity for subsequent mechanical dilatation, then, perhaps, with the view of avoiding other risks to which all persons suffering from stricture are liable, we might feel more disposed to employ it. But as such is not the case, and the risk attending its performance is not inconsiderable, I cannot concede the importance which is claimed for it by its numerous admirers. That internal urethrotomy in some cases is a necessity—as by it we are enabled to render amenable to treatment a stricture heretofore intractable—I am willing to admit, but to recommend it as capable of effecting a permanent cure is quite another thing.

The treatment of impassable stricture of the urethra has received an important addition by the practice which Mr. Wheelhouse has introduced, the great credit of which he seems desirous rather of sharing with his surgical colleagues than of appropriating to himself, as I see he always refers to it as the "Leeds operation." Like other conditions which may be spoken of as relative to something else, rather than as fixed or defined, the impassable stricture is, I believe, gradually becoming rarer, a circumstance which is largely due to the great improvement that has taken place in the construction of instruments specially adapted to their treatment, amongst which I may mention the filiform bougies and the tunnelled instruments of Gouley, of New York. For the purpose intended, I do not think there is any proceeding equal to that which Mr. Wheelhouse has introduced, and I have no hesitation in including it among the improvements to which I am now referring.

Permit me, without apology, in this mechanical age, where invention after invention for the treatment of stricture comes upon us with marvellous rapidity, to claim a moment's consideration for what Mr. Savory has called the medical aspect of this question. We all know what irritation is: there is such a thing as irritating a stricture, either by what passes through it naturally or is introduced to correct it. Let us not disregard, as a principle of our treatment, the importance of securing for the urethra that physiological rest of which the late Hilton wrote so well.

The question may here very properly be asked whether, in our search for novelties as improvements in treatment, we have discovered any new diseases, the better management of which, by reason of our recent acquaintance with them, we may in all fairness leave to our descendants to determine. The admirable Bradshaw Address of Sir James Paget will no doubt have the effect of quickening our perceptions in this direction.

Though I cannot point to any discoveries of this kind as affecting the region which is now occupying our attention, I may note one gratifying result of extended clinical and pathological investigation: I refer to the juster assignment of symptoms to the causes producing them—symptoms which not very long ago were looked upon as constituting independent diseases. But if we have not discovered any new diseases, we must remember that varying circumstances may at one time add intensity to some disorders and considerably modify the progress of others. I have a strong impression that the times through which we are passing, characterized as they are by the production of great and continuous nerve-tension, have brought into prominence a state of brain-strain which is apt to show itself in any organ which may happen to be deranged or is overtaxed.

A recent author seemed rather to conclude that tension of this kind was most injuriously shown and felt by our American cousin, while the Britisher, for some reason or other, was less injuriously influenced in this manner. Whether this is so or not I am not prepared to decide, but I am disposed to believe that purely nervous affections—affections associated, as far as we can determine, with no obvious structural alteration—are more common than they used to be. That they occasion much distress and cause persons who suffer from them to be unduly apprehensive will be generally admitted. Nay, further, by their mimicry of more certain diseases, they induce a condition of suspense which is often intolerable. It is well, too, to bear in mind that the interpretation of symptoms, as also their prevention and amendment, are frequently to a large extent dependent on a recognition of the possible existence in a patient of exaggerated nerve-tension.

Before an audience of this kind it would be presumptuous on my part to indicate in detail the many improvements that have taken place in the treatment of the surgical disorders of the urinary organs; further, where there have been so many contributors toward this progress it would be invidious in me to particularize.

Let me, however, in common fairness, say one word in reference to the advance that has been steadily made in the construction of the appliances used for these purposes.

I can remember some instruments which five-and-twenty years ago, or even less, were then regarded as improvements, but have now passed into obscurity or to the shelves of the museum. In no department of applied mechanics has greater perfection been obtained than by the surgical mechanician, and nowhere is this better illustrated than in the instruments employed in the treatment of urinary diseases.

It seems almost ungenerous, after referring to several proceedings of an operative kind, the doing of which entail pain and involve risk for the sake of advantages to follow, that I should allow to pass unnoticed the work of those who have removed the one and lessened the other. In chloroform and anaesthetics we have a priceless boon, without which surgery would long ago have been at a stand-still, and many persons now living in comfort and enjoyment would ere this have ceased to exist. I am not old enough to remember the pre-anaesthetic age, and, therefore, am unable to draw a contrast which will be a vivid one to some of the 'elder brethren' I am addressing to-day. I am reminded, however, of an incident bearing upon such a contrast, which with your permission I will briefly relate.

Some two years ago a sea captain, a patient of mine,

and by no means a bad amateur doctor, on returning from sea, told me somewhat gleefully that he had successfully performed amputation. Whilst his ship was at Ruruta, an uncivilized island in the South Pacific, a poor native got his arm entangled in a sugar-crushing machine. As there was no doctor on the island, my friend the captain was summoned, and at once recognized the necessity for removing the shattered fragments of the limb. The shrieks and struggles of the powerful aboriginal were most fearful. Recognizing the necessity for taking steps to save the man's life, the captain hurried off to his ship, and returned with the necessary implements, and, in addition, a quart of the newest and most potent rum. In the absence of chloroform he induced his patient to swallow this fiery compound, wineglassful after wineglassful, until intoxication was induced, and subsequently profound alcoholic insensibility. Then the tourniquet was applied and amputation successfully performed. Recovery rapidly took place. So pleased was the savage with the effect of anæsthesia that he subsequently offered to let my friend cut off some of his toes provided that the process of inducing insensibility was repeated.

Next in importance to chloroform and anæsthetics are those means which have been recently promulgated for diminishing some of the greater risks contingent upon wounds and surgical operations. About antiseptics, I desire to speak in no uncertain terms. Though our views may not be unanimous, though some of us may be skeptical about the import of germs and of sprays and other details, can we doubt that when the surgical historian of the nineteenth century has to recount the men as well as the measures that have favorably influenced the progress our art has made, the name of Lister will occupy a conspicuous place?

I have now done: it has not been my ambition to hold up to you a golden calf, to attempt to dress it in flowers of rhetoric and to ask you to worship it. I have rather endeavored to remind you of some of the directions in which surgery is now travelling and to estimate in a measure the pace at which it is going. It is impossible to engage in a work of this kind without being fully conscious that though our art is an imperfect one, it is distinctly a progressive one. In the course of your visit to this, which has been aptly referred to as the second city of the empire, you will find almost all the arts and sciences laid under contribution for the development of commercial enterprise. The activity displayed in the development of trade and commerce will probably suggest the inquiry whether we are equally progressive, whether we are in correspondence with the times in which we live.

There need, however, be no hesitation in asserting that, whether we are regarded as preventers of disease, or as practitioners of surgery or of medicine, every one of us in his daily practice carries with him a proof that year by year something additional is contributed by our profession to the comfort and the life of man.

DANGER OF ERGOT IN LOCOMOTOR ATAXIA.—Dr. J. Grasset relates the case of a patient, thirty-eight years of age, suffering from progressive locomotor ataxia, to whom Charcot gave ergotine in doses gradually increased from four grains to fifteen grains daily. When the dose had reached the latter figure the patient became, with but slight warning, totally paralyzed; sensibility at the same time was markedly diminished. As soon as the drug was stopped the paralysis quickly disappeared, leaving the original trouble slightly increased. The author recalls the investigations of Tuczeck into the changes in the posterior columns in ergotism; those would indicate that ergot will not only not cure ataxia, but can even, under certain circumstances, induce sclerosis of the posterior columns. In any case, great care should be used in the administration of ergot in this disease.

ON FÖRSTERS OPERATION FOR RIPENING IMMATURE CATARACT.

By HENRY D. NOYES, M.D.,

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THE rule is founded upon long experience, and is in the main sound, that a cataract should not be extracted until it is wholly opaque. So long as a patient can count fingers it is held not proper to operate. To this rule exception is made in the case of cataracts which progress with great slowness, and as they mature exhibit a deep amber or mahogany hue, or sometimes only a smoky tint and seem to have no cortical layers. Such cataracts are very hard and uniform, and never become so deeply opaque as to make it impossible for the patient to count fingers within a foot's distance. It is good practice to extract such lenses, and they generally do well. But for the commoner forms of cataract, in which opaque and transparent parts are intermingled, permitting the fundus to be illuminated with the ophthalmoscope and giving back a red reflex it is the recognized rule to postpone operating until the lens has, as the phrase is, grown ripe. The reason is that the lens separates from the capsule imperfectly, and leaves a residuum of semi-transparent material which evades expulsion and may bring on serious inflammation, either in the iris or in the capsule, or in both. Fortunately it is seldom that cataract begins at the same epoch or progresses at the same rate in each eye. Hence a patient usually has one cataract ready for removal before useful vision has ceased in the other eye. To all this good fortune does not occur.

It will be inferred that the writer approves of operating for cataract when *one* eye is fully ready for its performance. There is scarcely any dissent from this approval at the present day, provided the second eye begins to be seriously implicated in the disease. It is, however, not superfluous to call attention to this point, because the feeling exists among the laity, and to some extent among physicians, that an operation should not be done until the patient is quite blind in *both* eyes. Formerly the proportion of failures was so considerable and the rigor of after treatment was such as to make the operation a serious matter, and hence the inclination to wait for complete blindness in both eyes. As stated, the judgment of ophthalmic surgeons is in favor of operating so soon as one eye is ready, and in case the second eye begins to exhibit cataract. This is the general judgment, notwithstanding what is known respecting the occasional occurrence of sympathetic inflammation in the fellow eye.

In one eye the lens may be decidedly opaque, but the broad shadow at the edge of the pupil shows that its superficial layers are semi-transparent and sticky, while in the other eye the irritative symptoms which often attend the beginning of lenticular opacity make work difficult, although there may remain the capacity to read ordinary print. On the other hand there may be little difference in the degree of opacity in the two eyes.

Again, the patient may have lost one eye through accident, or some other disease than cataract, and in the remaining eye lenticular changes have begun.

When the patient can no longer do fine work, such as sewing, or writing, or reading ordinary print, or cannot follow his occupation, he may for months or years retain vision sufficient to count fingers at one foot. During this period he can feed and dress himself, and may walk about in safety. But he finds his situation most trying. The great trouble is want of occupation, and many complain bitterly of the tedious idleness which they have to endure.

It will be readily appreciated that weariness of mind may act unfavorably on the state of health, and inasmuch as predictions as to the rate of progress of cataract cannot be made with any definiteness we leave a patient small consolation when we tell him it is better to wait

for the lens to ripen, than to take the risks of failure by a premature operation.

It was once a common practice, now less frequently resorted to, to perform iridectomy some weeks prior to extraction, to diminish the risks of the operation. I have noticed that immature cataracts appeared to grow opaque more rapidly after the iridectomy than they did before. This incidental effect has not been kept in view as an indication for the operation, but it deserves mention.

It has been proposed to bring about full opacification of cataract by discission of the capsule with a needle. It would appear that this proceeding might justly be employed in view of the experiences of the late Mr. Jacobs of Dublin, who favored the treatment of senile cataracts by discission alone. But surgeons have seldom adopted the needling operation either to ripen or to cure senile cataract. As a means of cure the proceeding calls for too much time, as a method of ripening cataract. It is apt to be ineffectual and as I have verified by experience it is not devoid of danger.

Mooren ("Fünf Lustren Ophthalmologischer Wirk-samkeit," 1882, page 207) gives his experience on this point to the following effect. That in all cases of arterial sclerosis, and whenever there is undue tension of the globe, no operation for artificially ripening cataract should be performed. If done, glaucomatous complications will be almost certain. In other cases Mooren resorts to the following method. An iridectomy is first made, and the greatest care must be given to the avoidance of pupillary adhesions afterward. About three weeks afterward he opens the capsule, not with a needle but with a Graefe's knife for about three-fourths its diameter from above downward, and takes the utmost pains to avoid luxation of the lens. For two days the patient is kept in bed. Ripening ensues in from a few days to a few weeks, according to the quality of the lens. Great respect is due to Mooren's opinions on such a subject, because he has had an uncommonly large experience with cataract. He reports (p. 211) having performed two thousand three hundred and thirty extractions by what he calls the scleral incision. It is also to be said that the technical skill and the judicial capacity which he possesses will greatly surpass what ordinary operators can claim.

It is to be desired that the least danger should be incurred in all operations in the eye, and the method of artificially maturing cataract now to be described seems worthy of cultivation.

Within two years Professor Förster, of Breslau, Germany, has published an account of a method for bringing about the maturity of cataract which seems worthy of imitation. His proceeding was made known to the Ophthalmological Congress of Heidelberg in 1881, and afterward announced in the International Congress of London in 1882. He has also written about it in *Archives of Ophthalmology*, vol. xi., No. 3, p. 344, 1881. He performs iridectomy upward, and while the anterior chamber is empty strikes or rubs the cornea with the convexity of the iris forceps or with the convex portion of a strabismus hook. In doing this rather firm pressure is made upon the lens as it now lies against the cornea, and the friction is chiefly confined within the area of the pupil and of the coloboma. The manœuvre is similar to that commonly employed for expelling blood from the anterior chamber, but the pressure is deeper. Necessarily care must be taken not to dislocate the lens and not to cause prolapse of vitreous. The instrument which I have employed in all cases but one has been a Daviel's silver curette or a narrow spoon of hard rubber.

The movements are mostly in a rotary direction, and are continued for perhaps a minute, but I cannot pretend to say for how long time they were kept up, any more than I can tell how much pressure was employed. (The manœuvre has been entitled trituration of the lens, but this surely is a stronger word than the facts warrant. It were better, perhaps, to speak of it as massage or compression.)

My experience extends to eight cases, which are summarized in the following table:

No.	Name, sex, age, date of operation.	Duration and incidents of treatment.	Period of maturity.	Extraction of cataract—incidents.	Result—vision.
1	Mrs. S—, female, 68, March 23, 1882.	Five days, slight iritis.	Three months.	October 10, 1882, ten days, Graefe, normal.	V = $\frac{3}{10}$ +.
2	Mrs. Meta J—, female, 70, April 14, 1882.	Seventeen days, severe.	Three months.	July 14, 1882, Graefe, severe iritis, forty-three days, normal.	After iridectomy, October 29, 1882, V = $\frac{7}{10}$.
3	Mrs. Ellen McC—, female, 70, May 5, 1882.	Seven days, normal.	Five days.	October, 1882, Graefe, normal, eighteen days.	V = $\frac{4}{10}$.
4	Patrick C—, male, 45, May 19, 1882.	Ten days, normal.	Two months.	July 14, 1882, Graefe, normal, fourteen days.	V = $\frac{3}{10}$.
5	Matthew T—, male, 62, October 20, 1882.	Five days, normal.	One month.	November 24, 1882, Graefe, normal, fourteen days.	After two cystotomies V = $\frac{3}{10}$.
6	Mrs. Meta J—, female, 71, February 16, 1883.	Seventeen days, considerable reaction, but no iritic adhesions.	Three months.	May 28, 1883, twenty-nine days, mild iridocapsulitis.	Thin membrane in pupil—awaiting operation—V = $\frac{2}{10}$.
7	Mrs. Mary S—, female, 61, May 18, 1883.	Seven days, normal.	One week.	June 30, 1883, eighteen days, normal.	Thin membrane in pupil—awaiting operation.
8	Thos. McC—, male, 70, May 25, 1883.	Seven days, normal.	Three weeks.	Extraction not performed.	

In all cases the subjects were above sixty years of age. Four were females, three were males. In one female both eyes were operated on at an interval of ten months. In this patient alone did any serious reaction take place—and this occurred in both eyes, and at both operations for ripening, and also at the extraction of the lenses. When her first eye was operated on severe iritis followed Förster's method (Case 2), and numerous posterior synechiæ occurred. The extraction was done three months later, and was not as normal in its performance as I could have wished. For this reason, as well as because of the irritable condition of the eye, the healing occupied a long period (forty-three days), a dense membrane formed in the pupil and iridectomy became needful. The ultimate result, V = $\frac{3}{10}$, was good. The patient desired to have the other eye treated, and better fortune attended the operations, but it was evident that she was unusually prone to inflammatory reaction. The result in this eye is yet incomplete, because a thin pupillary membrane remains to be divided (Case 6). In one other case, viz., No. 1, iritis, with few synechiæ took place, but no prejudicial effect was thereby produced. The period of confinement after Förster's operation varied from seven to seventeen days, the average was 9.4 days. In one patient, Cases 2 and 6, cataract had for four years been in the stage which prevented "working" sight. In other patients the period which had elapsed since they could see to work was from a few months to a year. The exact period was not always obtained.

The time required to mature the cataract varied from five days to three months. The long period occurred in two patients, viz.: in Case 1 and Cases 2 and 6. The latter, who had the most severe experience, had cataracts which were devoid of all cortical opacity, and the ripening process was slow. Cases 3, 5, 7, and 8 had abundant cortical opacity, and the effect in them was prompt and without unpleasant reaction. In none of the cases did the lens seem to swell or did any glaucomatous symptoms arise. It would not be prudent to say that such mishaps might not take place, the presumption is that swelling of the lens would occur, and if so, glaucomatous complications would be expected. It is, however, safe to state that such accidents are far less likely than after Mooren's method of incising the capsule.

It will be observed that in no instance was the extraction done sooner than two months, while in some cases it was not done until six months after the accelerating iridectomy. The postponement was not in all cases because of unreadiness of the cataract. An increase in opacity was in all cases noted as ensuing immediately, but the rate of increase was not always alike. It did not show itself chiefly upon the anterior surface of the lens, but seemed to come up from the deeper layers. It did not appear to depend on direct disintegration of the lens-fibres or of the capsular epithelium, but rather it may be conjectured, on disturbance of the suspensory ligament. It was much more regular and evenly distributed than the opacity which takes place after a traumatic interference, by a needle or by a foreign body.

It is too much to expect of an operation that it should never present a shady side, and this larger experience will doubtless bring out. I have heard a case verbally reported which was followed by irido-cyclitis and loss of the eye, and we know that iridectomy alone is sometimes followed by loss of the eye. I have stated that, in two of my operations there was some reaction on the part of the iris. It follows that the operator must not venture with a heavy hand, and must confine his friction to the centre or the cornea, while the moderate experience already collected indicates that Förster's proceeding merits further trial.

ON THE TREATMENT OF NON-SPECIFIC ULCERS OF THE LEG.¹

By SMITH BAKER, M.D.,

WHITESBORO', N. Y.

To engage successfully in the treatment of ulcers of the leg, whether indolent or irritable, requires a most exact appreciation of the system as well as the local condition.

General or specific debility from any cause, near or remote interference with the local blood-supply, irritation of the nerves proceeding to the part, mechanical or chemical irritation of the part itself, are all important factors in the etiology of cutaneous ulceration, and are just as important in retarding progress toward recovery.

Writers upon this subject generally recognize this more or less, as a cursory survey of the more recent literature reveals.

Thus, whether it be Christopher Heath's² opium, arsenic, and potassium iodide treatment; or the skin-transplanting and grafting plan of Drs. Hamilton³ and Bryant;⁴ or the subcutaneous resection of the irritable and irritating nerve, as taught by Mr. Hilton;⁵ or the local application of emollient and nutritive substances, as suggested and practised by Dr. Cowen;⁶ or Mr. Holt's⁷ plan of removing all hypertrophic tissue, elevating the leg, sealing hermetically, and attending strictly to the general health; or that of Dr. Braithwaite,⁸ which consists in applying lead lotion, plus a small proportion of carbolic acid,

and exposing several hours to the air; or the exercise, poultice, chalk and lard treatment of Dr. Spender;¹ or that by Dr. Mandelbaum² by scraping the surface, applying iodoform, and following with equal parts of mercurial and soap plaster; or the pure-rubber bandage treatment of Dr. Martin; or the combination of the latter with the local application of liquor carbo-detergens, as carried out by Mr. Hutchinson;³ or the use of a saturated solution of potassium chlorate, as advocated by Dr. Rochester; there is in each an attempt to apprehend the etiology as well as the indications for treatment.

Yet many general practitioners seem to fail in this respect. They apparently forget that the application of caustics when the system is already debilitated, the giving of tonics when there is every evidence of good health save the local affection, the effort to secure resolution by attention to the special locality where the nervous or circulatory system is at fault, is in each case an endeavor to accomplish the impossible.

This is suggested by reference to one of my earlier cases.

CASE I.—A buxom, hardworking widow, aged forty, mother of five children, and of no particular constitutional taint, received a blow on the inner aspect of the right leg, which in five weeks after had resulted in an ulcer $2\frac{1}{2} \times 4$ ctm., having a dry surface, and so sensitive as not to allow of the application of the softest poultice. A weak lotion of carbolic and hydrocyanic acids, glycerine, and water, freely applied and covered with oiled silk, relieved the pain at once, and by touching edges with silver nitrate and painting vicinity with tr. iodine, healing to the extent of one-half was secured in twenty days, and nine-tenths in twenty days more. At this point, however, it resisted all efforts until the fourth month, when it healed of itself.

Now in this case there were three months required, three-fourths of which time was lost time simply because bandaging was not adopted and the slight œdema of the adjacent subcutaneous connective tissue kept down—thereby relieving the skin tension, and permitting a reparation of the local nutritive processes. This case may be contrasted with the following:

CASE II.—An unmarried, scrawny woman aged forty, with catamenia still regular, a hard-working weaver, had, during most of the time for eighteen years suffered from an ulcer of the left leg, with a thin edge and irritable surface, and quite as much from the different plans of treatment proposed and carried out by many doctors. Five applications of galvanism (positive pole to the ulcer) plus the alternate use of potassium permanganate and potassium chlorate lotions, and the daily wearing of a well and snug-fitting elastic stocking soon enabled her to assume her duties, and secure a healed leg in addition.

The indications to clean and support the part, and to encourage a better nutrition, were here met as the result attests.

CASE III.—Married woman, aged forty-nine, housewife, mother of several children, who at the age of fourteen suffered a severe strain and some injury of the lumbar region, which was treated *by two years in bed, sixteen setons, and innumerable blisters to the back!* Since then she has had a frequently recurring, irritable ulcer on the right leg, which is always preceded by pain in, and tenderness over, the lumbar vertebra, and frequently by pain in left ovarian region, with dysmenorrhea and profuse leucorrhœa. These ulcers have always defied the efforts of the neighborhood surgeons, and after long sieges have healed of themselves. She came to me with a recently ulcerated surface of 8 ctm. in diameter, surrounded extensively by eczema, and which had been preceded as usual by several weeks of backache. The use of ergot and potassium bromide internally, and of a weak carbolic acid lotion externally, secured resolution in about three weeks. This case seems to show, as

¹ Read before the Oneida County Medical Society.

² New York Medical Journal, 1871.

³ Rest and Pain, New York, 1879.

⁴ Braithwaite's Retrospect, 1873.

⁵ Practitioner, 1869.

⁶ British Medical Journal, 1872.

⁷ London Lancet, 1872.

⁸ British Medical Journal, 1873.

¹ London Lancet, 1873.

² Medical Times and Gazette, 1878.

³ Medical Abstract, 1877.

Charent¹ says, "there is nothing better established in pathology than the existence of tropical troubles consequent on lesions of the nervous centres or of the nerves."

CASE IV.—An Englishwoman, aged ninety-three, the last child of a consumptive family, the mother of seven children—two of whom were delivered with forceps, and all but one of whom have died of tuberculosis—herself a lifelong sufferer from neuralgic troubles, also from severe deafness for fifty years, and from complete prolapsus uteri for forty years, had at the age of seventy-six a severe illness, which was followed by a three years' standing ulcer of the left leg, which at the end of this time healed spontaneously. Five years after she took to crutches (aged eighty-four), but otherwise enjoying her usual health. Two years ago she accidentally injured the inner aspect of the left leg, and got, in due time, under domestic care, as a result, a large, irritable, indolent ulcer, which resisted all treatment for weeks, but finally healed under the use of salicylic acid in vaseline. Nine months since, however, it broke out again, and after three months was found to be $3\frac{1}{2} \times 6\frac{1}{2}$ cm., and so sensitive that a breath of air caused intense suffering. An attempt to use a Martin bandage was hopelessly frustrated by her whimsical repugnance to its use. A severe prostration from diarrhoea supervened, and after this for weeks, although a multitude of plans were faithfully tried, there was no progress toward recovery. Finally, by simply alternating a lotion of potassium permanganate with one of potassium chlorate, the ulcer has, three months since, entirely healed.

In this case the extremely low vitality and interference of the patient nearly negated all efforts at treatment. The result under the circumstances may be considered a happy one.

And it is equally true that lowered vitality from any cause may favor the development of any case of non-specific ulcer of the leg; while subsequent irritation, whether from mechanical or chemical sources, may be the means by which the cutaneous necrobiosis is kept up.

Hence treatment may be considered as properly consisting of giving tonics when needed, and especially will galvanism, phosphorus, and strychnia be found indicated in a large proportion of cases; or of allaying nerve-irritation or irritability by exhibiting opium, potassium, bromide, or ergot; and of attending strictly to hygiene, which includes specifically cheerful surroundings, *exercise*, and good food.

As regards local treatment, there are only two important indications, namely, cleanliness and protection.

For what do the various lotions and applications more than to clean the sore of the discharge that has become decomposed and consequently irritating, and to prevent further decomposition from taking place? and what does the bandaging or strapping more than to protect the sore from engorged blood-vessels and oedematous adjacent tissue, or from external irritants of all kinds?

Hence what can be better for local treatment than to order the surface cleansed thoroughly at bedtime with a weak solution of potassium permanganate, also in the morning with a medium solution of potassium chlorate, and after having covered it lightly with absorbent cotton, to have drawn on over all a *well and snug-fitting* elastic stocking, with instructions to go about the usual labor using the limb freely but not senselessly? At any rate, in nine-tenths of cases this, according to my recent experience, seems to be all-sufficient; while in the other one-tenth a few days rest and preliminary treatment with the same lotions and a pure-rubber bandage seems to be equally necessary.

This plan of treatment is simple, and perhaps not convincing. But I am satisfied that in this plan lies the disposal of the whole class of non-specific ulcers, securing a minimum of suffering and loss of time to the patient, and a maximum of credit to the profession.

THE TREATMENT OF CHRONIC BRONCHITIS.

By T. J. YOUNT, M.D.,

LAFAYETTE, IND.

"WINTER cough" has been known for untold centuries. Nebuchadnezzar no doubt had this disease, for the physicians after dosing him with villanous decoctions, nauseous infusions, and diabolical extracts, turned him out to grass. They did not find a single specific or panacea in all the medical literature of their forefathers for chronic bronchitis. The chronic bronchitic then, as now, was a victim to be pitted.

During the winter and spring months he sits in the house, in a snug corner near a roaring fire, huddling together his skin and bones lest they get separated and lost. He sits there in his corner with his cuspidor handy, morose, dejected, and irritable to those around him. His face is pinched and his color yellow, he eats little and sleeps less, worried and worn out with cough. In the summer, like the ground-hog, he comes from his hole, wrapped up in a thick ulster with fur collar, and cap drawn down over his ears, and his feet encased in large arctic overshoes. He walks slowly and swears rapidly at his ill-luck in having such a disease. He likes to tell how he feels and gives all the blame for his illness to the weather and his liver.

The chronic bronchitic, like the white corpuscle, is of a very migratory character, migrating from one physician to another and travelling from one end of the earth to the other. It is seldom that you see a patient that has not been treated by at least half a dozen physicians, and he rarely tarries long with any one, but seeks new fields and medicines. In the treatment of this disease we must support our patient, ease cough and pain, promote digestion and appetite, and render substantial aid during an acute attack.

Suppose, now, you are called to see a patient during an acute attack, where there is a swollen condition of the bronchial mucous membrane, with scanty secretion, harassing cough, urgent dyspnea, and great pain. He sits upright, face livid, pulse weak and rapid, and the respiration shallow and frequent. He begs in Heaven's name for a moment's relief—for just five minutes' rest and sleep. You have all seen him.

Relieve this sufferer now and he is your life-long friend and patron. You must act, and act promptly or all is lost. You are like the man in Texas, who, when he wanted a revolver, wanted it *awful* bad. Just so with you: you want to help the patient, and you want to help him very bad. Suppose you give him a dose of morphine, that would surely ease him, but the probabilities are that it would be permanent, and you could no doubt next day read his obituary notice. Opiates act first on the hemispheres, by dulling their sensibility; this dulling of sensibility extends to the medulla oblongata, which becomes paralyzed and your patient dies, simply because the carbonic acid in the blood fails to irritate this centre of respiration and have it call on the expiratory muscles to assist in throwing off this accumulated carbonic acid poison. If it is, therefore, not safe to give opiates or chloral, what will you give? We must rely on respiratory stimulants, good ones that will not fail us. There are three well-known stimulants that are considered perfectly reliable and potent, viz.: ammonia, strychnia, and belladonna. Of the preparations of ammonia, I prefer the aromatic spirits, or the carbonate. In very serious cases, twenty drops of the aromatic spirits, or ten grains of the carbonate, with twenty drops Squibb's compound spirits of ether, given hourly or every half-hour, affords great relief. If the heart is feeble and rapid, ten drops tincture digitalis should be added once in two hours. If they are nervous and want rest, give bromide of ammonia in one-half or one drachm doses as often as is needed. Rokitanski first found that strychnia was a potent respiratory stimulant. T.

Lauder Brunton, J. Milner Fothergill, and H. C. Wood have long recognized strychnia as a very reliable and rapid stimulant. Fothergill, in severe cases, gives as large as one-tenth grain doses of strychnia every four or five hours, and oftener if necessary. He says desperate cases demand desperate remedies. His favorite prescription for ordinary acute attacks is :

R. Ammon. carb. gr. v-x.
Tr. nucis vom. ℥ x.
Tr. scillæ. ʒ ss.
Infus. serpent. ʒ j.
M. et sig.—Take every three or four hours.

He adds ten minims tincture digitalis to this mixture if the right ventricle is weak. Belladonna is also a reliable stimulant. It is of special value where there is general want of tone, giving rise to profuse night- and day-sweats. You have all given atropia for night-sweats of phthisis, and you have noticed that the patient, while benefited by the arrest of the sweats, was also greatly benefited in his breathing, breathing less rapidly, taking deeper breaths, and less dyspnoea in walking about. In some cases where it is absolutely impossible to get relief from severe pain in the side by other means than opiates, give atropia, and morphia combined.

I have often given persons suffering from a mild attack of chronic bronchitis the muriate of pilocarpine, in one-tenth to one-twenty fourth grain doses, every hour or two with great benefit. It has many advantages over ipecac and squills. It is pleasant to take and does not nauseate. It is very prompt in loosening the phlegm, distressed breathing, and annoying cough. It has a decidedly stimulating action on the skin, mucous membranes, heart, and kidneys. Fothergill's father always taught him "never to give squills until the skin is moist and the phlegm loose, and always to give ipecac as long as the skin was hot and phlegm tough." If such is a safe rule, and Fothergill says it is, then we ought to use pilocarpine in all acute stages of disease of the bronchial mucous membrane with great advantage. Inhalations and sprays may often be used with benefit. I have derived the most benefit in my own case from sprays of benzoate of soda, ten to twenty grains to one ounce, followed by prolonged sprays of compound tincture of iodine, ten to thirty or forty drops to one ounce. These used in this manner three times a week generally result in a decided arrest of the profuse secretions and start up a healthy action. Sprays of nitrate of silver, carbolic acid, tannic acid, potassæ chlorate, and zinc sulphate can be used, either in sprays or inhalations, with benefit where the secretion is too profuse. The application of irritating liniments and solutions often scatter and relieve pains like magic. My favorite application is :

R. Tr. iodini. ʒ ss.
Ætheris sulphurici. ʒ ij.
Ol. tiglli. ʒ ij.
M. et sig.—Apply as directed.

Where the patient is suffering from an acute pain in the side and is feverish and nervous the application of an ointment composed of acidi salicylici, ʒ ij.; morphia sulph., gr. j.; acid. oleici, ʒ j.; adeps, ʒ ss. should be made.—Applied three or four times a day or oftener, until relief is afforded. By this application you avoid giving opium by the stomach, which as a rule destroys the appetite, impairs digestion, and renders the liver inactive by arresting the normal secretions and perverting their healthy action. In cases of chronic bronchitis, where the secretions are scanty and dry, full doses of iodide of ammonia, say of twenty grains, three times a day. By combining the iodide of ammonia with copaiba, cubebs, encalyptol, or arsenic you produce a decided effect upon the secretions, often arresting them and having a decided curative action. The liver should also be looked after in this climate, and its action should be assisted by an occasional dose of calomel, podophyllin, or elixir wahoo.

Quinia in tonic doses, taken for weeks, is of decided benefit. Fellows' compound syrup of hypophosphites, containing, as it does, quinia, with potent nerve-tonics, is a valuable preparation.

Gardner's syrup of hydriodic acid, a non-irritant preparation, containing it is claimed, ninety-nine per cent. of iodine, has a decided curative effect on this disease. I have used it on myself and many patients, and have experienced almost immediate benefit by the arrest of the profuse secretions and cough. The only objection to it is the strong and pronounced metallic taste which invariably follows its prolonged administration, causing loss of appetite and consequent debility.

It should be given in teaspoonful doses three times a day at the commencement, and gradually increased to two or three teaspoonfuls three times a day well diluted in Burgundy wine, porter, or water. In my own case I have had the most prompt and decided benefit from Declat's syrup of nascent phenic acid. It is pleasant to take, and its action has in my hands been very pronounced. It should be given in larger doses than the directions on the bottle. I experienced no benefit until I had taken six drachms three or four times a day. Under the six-drachm doses in one ounce of whiskey or a wineglassful of Hoff's malt, my light, harassing cough was relieved, the exhausting night-sweats ceased, the appetite improved, and sleep was rendered natural. In fact, under ten days' administration of the acid, more rapid and permanent improvement was made than ever before in any previous attacks. Its administration in such large doses should not be persisted in longer than two weeks at a time: then it should be suspended a week or ten days, and commenced and kept up as before, gradually lessening the dose as the disease disappears. I have often prescribed this syrup in obstinate coughs where relief was not obtained by the ordinary remedies, and have had good results.

To obtain good results you must give the syrup of the nascent phenic acid, and you must give it unsparingly. You will get no appreciable results from half a tablespoonful, and may be compelled to give it in two tablespoonful doses. In cases where there is great debility and no appetite, great advantage may be obtained from taking frequent egg-nogs or milk punches. These may often be preceded by a wineglassful of Hoff's fluid malt, etc. When there is great despondency and nervous prostration, decisive advantage may be had from ext. cannabis ind., gr. ʒ-j.; ext. hyoscyam., gr. ij.; quinia sulph., gr. ij.; taken three or four times a day. The sleeping-room and bed should be warm on arising and retiring, for the reason that the chill from getting into a cold bed and getting up in a cold room gives rise to severe and prolonged coughing. It is also a good idea to take a good alcoholic night-cap before retiring, as it tends to produce sleep and quietude. Patients with chronic bronchitis should not take alcoholics before going out into the cold air, for the reason that alcohol dilates the capillaries in the skin and makes the patient more liable to take cold. If he wants a drink let him take it after he comes into the house. He should wear flannel underclothes the year round, and during the cold and changeable weather should wear a chest-protector.

It is advisable that the patient should take a trip to some equable and mild climate, such as San Antonio, Los Angeles, Aiken, S. C., or New Mexico, during the cold spring and winter months. New Mexico is to be preferred above all as the sanitarium of the world for lung and bronchial disorders. Let he who doubts this statement go and see for himself, and he will return a healthier and better man.

The Creator in his all-wise and all-powerful mind saw that sufferers from chronic bronchitis needed a special habitat, he therefore gave unto the world and the sufferer the United States, because it had New Mexico in it, that one State created for no other purpose than invalids.

Progress of Medical Science.

PAGET'S DISEASE OF THE NIPPLE.—Dr. Duhring reports in the July number of the *American Journal of the Medical Sciences* two cases of Paget's disease of the nipple, which he holds is not an eczema, but a peculiar disease with a malignant tendency. It must be distinguished from eczema, which it resembles, and from ordinary cancer, which it is altogether unlike in its earlier stages. It seems to occupy a ground having the characters of both diseases. The report is interesting as showing the natural history of the affection. This is peculiar. The course of the process is emphatically chronic. In both instances, moreover, the progress of the disease was insidious as well as slow. Nothing of a malignant nature was suspected until after the lapse of five and ten years respectively. The itching, which eventually became such a marked symptom, was in both cases insignificant until the affection had existed several years. It may be said not to have manifested itself until after the process had been well established. In this respect the disease differs decidedly from eczema, where itching is one of the first signs noted. The circumscribed, sharply defined outline of the lesion, and the slightly elevated border, are also symptoms which do not obtain in eczema. The brilliant color of the lesion is striking, and is more marked than in eczema. The absence of the "eczematous surface," characterized by appreciable discharge or by vesicles, pustules, or puncta, coming and going from time to time, and the absence of exacerbations, so usual in eczema, may also be referred to. A point to which attention may also be directed is the infiltration, which is firm or even hard, but is not deep-seated. It is rather superficial. In eczema, on the other hand, it is soft. The pains coming on later in the course of the disease, and the indurated, lumpy, or knotted lesions within the gland structure, of course point strongly to the malignant or cancerous nature of the disease, the existence of which cannot be doubted.

CHAUFFAGE OF THE GENITAL ORGANS IN VENEREAL DISEASE.—Following in the line of Chauveau's experiments in weakening virus by heat, Dr. Aubert suggests that the virus deposited upon the skin or in the tissues may be modified by raising the temperature of the part to 108° or 109°. He remarks upon the cure of paronychia sometimes obtained by immersing the finger in hot water, and suggests that we might avert by this means the consequences of snake-bite, dissection wounds, or a suspicious coitus. M. Aubert has made a few experiments in this direction with chancroidal pus. He exposed a part of this pus for twelve hours to a temperature of about 109°, while the rest was preserved at the ordinary temperature. Inoculations with the warmed pus were without result, but a chancroid followed the introduction of the other. He therefore concluded that chauffage destroyed, or at least rendered innocuous the chancroidal virus. The author has as yet made no experiments with the virus of syphilis or gonorrhoea. He suggests that the high temperature is the explanation of the subsidence of syphilitic manifestations during the course of typhoid fever or other febrile disease. He further asks if the fact that chancroid is not developed in the interior of the body and never passes beyond the superficial lymphatic glands, may not be explained by the destruction of the virus by the heat of the deeper tissues. —*Journal de Médecine de Paris*, June 2, 1883.

HYDATID CYST IN THE BICEPS MUSCLE.—The following case, only three similar ones having been previously recorded, is reported by Dr. Picqué (*Journal de Médecine de Paris*, May 26, 1883): A woman had noticed a tumor on the anterior part of her left arm for about ten years, but it was of small size and never occasioned any pain or inconvenience. Suddenly, about two months be-

fore the patient came under observation, the tumor began to grow rapidly until it had attained the size of a child's head. It was elastic, fluctuating, of regular contour, movable upon the subjacent tissues, and not adherent to the integument. The humerus was unaffected, the radial pulse was normal, and sensibility was but little changed. There was no pulsation in the tumor, nor any other sign of aneurism. The axillary glands were not enlarged. The diagnosis lay between a cold abscess, a hæmatoma, or a hydatid cyst. Upon puncture of the tumor a quantity of pus was evacuated in which were found the characteristic hooks. The treatment consisted in a free incision, followed by scraping the walls of the cyst with a sharp spoon, and was successful in its results.

PERIODICITY OF CERTAIN SYMPTOMS IN HEPATIC DISEASE.—Dr. J. Cyr (*Journal de Médecine de Paris*, June 2, 1883) says that although various writers have remarked upon the periodicity of some particular important symptom (pain, jaundice, vomiting, etc.), in disease of the liver, the observations have been isolated and so few as to attract little notice. He has collected upward of forty cases, occurring in his own practice, in which some symptom, usually pain, presented a more or less marked intermittency; often the same symptom returned with most striking regularity. This periodicity was peculiar, in that it was in most cases uninfluenced by quinine, but disappeared under treatment directed to the hepatic disorder. From these observations he draws the conclusion that the periodical element in hepatic symptoms has a greater importance than has hitherto been attached to it. And he states that often in doubtful cases, as has occurred in his own experience, the determination of the fact of intermission in one or more of the symptoms may be of great value as an aid to diagnosis.

CONTUSIONS OF THE BRAIN AND SPINAL CORD.—The late lamented Dr. John A. Lidell, in an elaborate paper on this subject in the *American Journal of the Medical Sciences*, July, 1883, discusses the clinical history, diagnosis, prognosis, and treatment of this large and very important class of injuries. While much is said in our text-books on the subject of cerebral concussion—of its dangers and of its importance—but small if any mention is made of the contusions of the brain which so very often complicate the concussions, and impart to them whatever of gravity, be it much or little, that they may chance to possess. And still less mention is made of the contusions of the spinal cord. No wonder, then, that bruises of the brain-structure and of the spinal cord substance occur much more frequently than is generally supposed, that the relationship which exists between these injuries and concussions is not well understood, and that the bruises of these organs often escape even all suspicion during life. That slight or even moderate concussions of the brain sometimes, perhaps not unfrequently, occur without being complicated with contusions of the brain, the author does not doubt. Contusion of the brain is, therefore, he believes, not synonymous with concussion of the brain; but, at the same time, all the evidence now collected tends to prove that the severe instances of cerebral concussion are always complicated with cerebral contusion. Concussion of the brain, however, derives its chief importance from the fact that it is very often associated with contusion of the brain; and, in examining a case of cerebral concussion, the question of most importance for the surgeon to decide is whether or not cerebral contusion is also present. These are points of doctrine which practically have much interest for patients as well as practitioners, because of the influence they are likely to exert in the direction of procuring a correct diagnosis, and, consequently, a wise treatment. For in the disorders of no other parts of the body is it more true that an accurate diagnosis begets a wise plan of treatment than in those of the brain and spinal cord.

CHANCER OF THE TONSIL.—The following case is reported by Dr. Hue in *La France Médicale* of May 31, 1883. A man, thirty-seven years of age, of unusually good health, had complained for about six weeks before admission to hospital of slight pain upon the right side of the throat in swallowing. This pain gradually increased in intensity, and at the same time a swelling appeared in the right submaxillary region. He did not trouble himself much about it, but continued to work as usual; soon, however, he began to have poor nights, he was troubled with headache, had fever, a general feeling of malaise, and sometimes slight vertigo. Upon the right tonsil was seen an ulcer about the size of a ten-cent piece, with sharp-cut edges, marked by a red border with a yellowish-gray centre of irregular surface, emitting a sanious discharge. The tonsil was enlarged, and indurated about the base of the ulcer. There was a characteristic agglomeration of the maxillary glands upon this side, of about the size of a pigeon's egg, but varying according to the conditions of repose and external warmth. The cephalalgia was more violent during the night than during the day, and occupied only the right side of the head. The diagnosis wavered for a time between epithelioma and chancre, but was finally settled upon the latter. Appropriate treatment was pursued with some benefit, but without success in preventing the appearance of secondary symptoms.

SUDDEN DEATH AT THE BEGINNING OF CHLOROFORM INHALATION.—Dr. Janovitch Tschainsky relates in *Medizinische Westnik*, Nos. 12 and 13, 1883, the case of a peasant, twenty-eight years of age, upon whom he was about to operate for the removal of a lupoid growth from the under lip. Hardly had the patient taken two whiffs of chloroform when respiration ceased and he was dead. The necropsy revealed fatty degeneration of the wall of the right ventricle, while that of the left appeared to be normal. The reporter attributed the death to psychic causes, the dread of the operation. He relates several similar cases, among which was that of Cazenave. In this case the surgeon desired to operate upon a very nervous patient without chloroform, and in order to deceive him held a bag of pure air before his mouth; he breathed four times and died. Desault, being about to cut for stone, drew his finger-nail across the perineum to indicate the line of incision. The patient in his alarm gave a shriek and died.

THE FEEBLE INFLUENCE OF IODINE OVER MALARIAL FEVERS.—There have recently appeared numerous reports from medical men in various parts of the world, reciting the virtues of iodine in the treatment of malarial fevers. It is true that these do not all agree as to the exact degree of reliance that may be placed on this agent as an antiperiodic. There are, however, those who claim for it an efficacy not less than that of Peruvian bark, as far as the immediate control of the attack is concerned, and even greater than bark in preventing its recurrence. It must be confessed, however, that the results reported by various observers do not entirely agree. Here we find an assertion that in chronic malarial poisoning iodine does its work most effectually; there, that its value is nil; in another article we find that it is recommended to render permanent the cure that quinine has begun; in still another, that it is given in combination with quinine, arsenic, etc. On the other hand, we find that by some, antiperiodic properties are denied to iodine. Attracted by the testimony in its favor, and with the desire to definitely ascertain the powers of iodine as an anti-malarial remedy, in view of the ease of its administration and of its comparatively small commercial value, Drs. J. E. Atkinson and Hiram Woods availed themselves of the opportunity of treating malarial fevers afforded at Bayview Asylum, Baltimore, during the late summer and autumn of the past year (1882), and they record the results in the July number of the *American Journal of the Medical Sciences*. Their experi-

ence leads them to draw the following deductions as to the use of iodine in acute malarial poisoning: 1. In intermittent fever it has some feeble influence in controlling the paroxysms. 2. It takes usually from three to eight days to exercise this influence. 3. In cures effected there is great danger of a relapse; certainly as great as with Peruvian bark. 4. It is certain to add to any existing diarrhoea or nausea, and is liable to cause each if they do not already exist. 5. In remittents, its effect, if any, is seen in a slow and gradual reduction of temperature, and this reduction is liable to sudden interruptions. 6. In both forms of malarial fever it is infinitely inferior to either cinchonidia or quinine: certainly as regards the immediate control of the fever, and as far as we are able to judge, as regards relapses also. 7. From an economic point of view, the slowness and uncertainty of its action makes its use in hospital practice fully as expensive as Peruvian bark. 8. There seems to be ground to believe that it can cause albuminuria. 9. In the large majority of cases of ordinary acute malarial poisoning it has no influence whatever.

CONGENITAL CARDIAC CYANOSIS.—The following case was reported to the Société Anatomique de Paris by Dr. Toupet (*Le Progrès Médical*, June 9, 1883). The patient, seven years of age, had been the subject since birth of cyanosis. The face and extremities were blue, the eyes prominent, and the nails enormously hypertrophied. The temperature was 96.5°, the respiration rapid and labored. The heart was greatly enlarged, and a loud blowing murmur with the first sound was audible at the level of the third costal cartilage near the left border of the sternum. During the four years that it remained under observation the child passed safely through measles and whooping-cough, but finally died in an attack of pulmonary congestion. Upon opening the chest the heart appeared to lie nearly in the median line, owing to the greater size of the right ventricle. The right auricle was of normal size and well formed, while the left was merely rudimentary. The aorta was greatly dilated up to the origin of the left subclavian artery, where it resumed its normal dimensions. The pulmonary artery was seen alongside of the aorta and only about one-fourth of its size. The walls of the right ventricle were very thick, the tricuspid valve seemed healthy. The infundibulum was separated from the right ventricular cavity by a sort of partition pierced by an opening the size of a small goose-quill. The mitral valve was normal. The interventricular septum presented a solution of continuity at its upper part large enough to admit of the introduction of a finger. The aorta arose exactly at the septum, opening into both ventricles. The valves in the inter-auricular septum closing the canal of Botal were not adherent, and were pierced also by two openings the size of a crow-quill. The lungs were congested but presented no trace of tubercles.

ENLARGEMENT OF THE BRONCHIAL GLANDS AS A CAUSE OF IRRITATION OF THE PNEUMOGASTRIC NERVE.—Dr. Edward T. Bruen, in the July number of the *American Journal of the Medical Sciences*, discusses the effects of enlargement of the bronchial glands in producing reflex irritation of the pneumogastric nerve. The difficulty in the diagnosis of such cases consists in separating them from cases of early phthisis. One must rely mainly on the absence of the combination of physical signs required to render the presence of incipient phthisis certain. These are impaired percussion resonance, some form of bronchial breathing, possibly fine moist râles and increased vocal resonance. The last two physical signs are not present in cases of bronchial enlargement. Pain in the back and disturbance of the respiratory rhythm are not often present in phthisis. Hysteria, uterine, or spinal disorder may be eliminated by careful examination. Finally, the beneficial results of treatment may be appealed to to sustain the theory of the etiology of the cases.

LESIONS OF PERIPHERAL NERVE-TRUNKS.—In the July number of the *American Journal of the Medical Sciences*, Dr. Weir Mitchell publishes an interesting paper on nerve-lesions, illustrated by five recent cases, which he has very carefully noted and studied. Nothing which we know as yet explains all the clinical phenomena of these interesting cases, and, in all probability, some of the variations in the symptoms observed are to be attributed to differences in the character of the disorder affecting the nerve-trunks, or even to the nature of the causes originating the active pathological condition. In one of the cases, among the various points of interest none exceeds in value the abrupt extension of the areas of lessened sensation which was seen after section of the median and radial nerves. This was not to be accounted for upon any knowledge which we now have of the peripheral distribution of nerves, since in one case the dysæsthesia spread far beyond the region tributary to the nerve stretched or cut; and, in the other, in some directions did not cover the whole regions usually affected after radial nerve-sections. Generally speaking, the symptom is to be considered as one of the many forms of shock. A sudden injury to a nerve already morbidly altered gives rise to an inhibition of function in certain closely related centres. The disturbance might be in the direction of motor or of sensory inhibition, and both forms are among the rarer phenomena of nerve-wounds from rifle-balls. The fact itself is less surprising than its permanence, nor is it easy to comprehend the precise nature of an influence which may act on such varied functions, and act so persistently. In a case of section of the infra-orbital nerve for facial neuralgia, the remarkable feature was the fall of temperature, a symptom exceptionally rare in any form of neuritis, whether of internal or traumatic origin.

EARLY CEREBRAL SYMPTOMS OF TUBERCULOSIS IN THE ADULT.—Dr. Daremburg relates at some length in the *Archives Générales de Médecine* for June, 1883, the histories of four cases of tuberculosis in which the actual onset of the disease was preceded for several years by a very noticeable change in disposition. The patients, who were of a lively and amiable disposition, attentive to their friends and families, and interested in all that was going on about them, became morose and sullen, neglected their business and displayed an unwonted irritability and peevishness. No cause could be discovered to account for this change of character. In the course of a few years the symptoms of tuberculosis manifested themselves, and the patients eventually all died of tubercular brain affections. From a study of these cases the author concludes: That when in an adult there is observed a marked change in character, consisting especially in a general apathy and a notable indisposition for study or work, for which no cause can be determined, there is reason to suspect the possibility in the future of the development of tuberculosis. The prognosis is yet more grave if there be an hereditary predisposition to this disease. And further, when once the existence of tuberculosis becomes established a fatal termination from tubercular meningitis may be looked for.

PASSAGE OF A LUMBRICOID WORM THROUGH THE EAR.—Dr. Paul Dagand writes to the *Journal de Médecine et de Chirurgie Pratique* for June, 1883, concerning an epidemic of measles occurring during the first quarter of the present year. In every case he observed a peculiar complication in the presence of a large number of lumbricoids, which were discharged from both the mouth and the rectum, sometimes to the number of fifty or more. He was called in haste, one day, to see a child suffering from measles and secondary pneumonia, from whose ear the father said a worm was coming. The child had complained for two days of violent earache, and Dr. Dagand, upon his arrival, discovered a piece of a worm, about a line in diameter, in the external auditory canal. A piece about two inches in length had

already been torn away, and the attempt to remove the rest was successful. The entire length of the lumbricoid was about five inches. The worm had apparently passed up through the Eustachian tube and perforated the drum. There was an otorrhœa for some days, which gradually disappeared. When seen two weeks later the child was well with but slight impairment of hearing.

RHEUMATISMAL CONJUNCTIVITIS.—Dr. Maurice Perin, in a previous communication to the Academy of Medicine of Paris, related a number of facts tending to prove the existence of a form of conjunctivitis due to rheumatism. This resembles, especially in the rapidity of its development and the gravity of its symptoms, gonorrhœal ophthalmia. He has now collected (*Journal de Médecine et de Chirurgie Pratique*, June, 1883) a number of cases of different observers, which would seem to establish without doubt the existence of this variety of conjunctivitis, in which the integrity of the cornea is seriously endangered in spite of the most skilful treatment. This affection is sure to be confounded with gonorrhœal ophthalmia whenever there is any urethral discharge, even though the latter is not specific. The rheumatismal conjunctivitis is not always purulent, and may, in a less degree and without changing its nature, affect the form of simple catarrhal conjunctivitis. To the treatment by nitrate of silver in mitigated stick or in solution, it is well to add frequent lotions or spraying of the eye with alcohol and water of the strength of one part to four.

EXPERIMENTAL KERATITIS AND STRICKER'S THEORY OF INFLAMMATION.—Dr. J. L. Minor, of New York, in a brief paper in the July issue of the *American Journal of the Medical Sciences*, claims the establishment of the immigration theory; because the pus-cells are similar in appearance to the white blood-corpuscles; they can be traced from the corneal periphery to the point of irritation; and having also gained access to the corneal tissue through the eschar, they are most abundant immediately around this centre, where we can still recognize dead, but intact, corneal corpuscles. The corneal corpuscles show signs of proliferation some time after the cell immigration has set in. And this proliferation gives rise, not to pus-cells, but to new corneal corpuscles, and they are strictly limited to the zone surrounding the dead corneal corpuscles; whereas leucocytes, or pus-cells, in abundance, can be found in various parts of the cornea, at a distance from this point.

ALIMENTATION OF INFANTS AFFECTED WITH THRUSH.—When new-born children, affected with thrush, refuse to take the breast or the bottle, Dr. Wiederhofer (*Journal de Médecine de Bordeaux*, June 10, 1883) advises the pouring of milk by means of a funnel through the nasal fossæ. This mode of alimentation is not difficult. When the milk enters the pharynx it provokes reflex movements of deglutition and is propelled into the stomach. The author has been enabled by this means to nourish infants for three and four weeks in succession. The same procedure is useful in children born before term, in whom there are no spontaneous movements of deglutition.

SALT WATER EXCURSIONS IN THE TREATMENT OF ASTHMA.—Professor Münter, upon the strength of his personal experience, recommends a daily excursion of three or four hours' duration upon the water as affording a remedy of the greatest value in certain cases of asthma. He regards it as very useful also in anæmia, and remarks upon the longevity and excellent health of seafaring people as confirmatory of his experience.—*St. Petersburger Med. Wochenschr.*, June 9, 1883.

A DAILY EDITION of the *Peoria Medical Monthly* was published by its enterprising editor during the session of the Illinois State Medical Society.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AND OUR CABLED REPORT.

IN the present issue we have the pleasure of presenting by cable despatch the report of the meeting of the British Medical Association, held in Liverpool, England, during the past week. In connection with this report we are also enabled to publish in full the admirable address on surgery, delivered before the Association on Wednesday, by Mr. Reginald Harrison, of Liverpool. We take a special pride in so doing, as we are thus enabled to bring within the reach of our readers, in the shortest possible time, the doings of an Association in which the American profession is very much interested.

To such as read the report, and the able address to which reference has already been made, we believe it will be quite apparent that the end justifies the means. At least, our readers are enabled to secure very much in advance of the arrival of the English journals the publication of the proceedings of this model Medical Association, and learn with the least possible delay what business it transacted during the past few days.

It may not be unpardonable, in connection with the cabled report itself, to allude with satisfaction to some of the possibilities of medical journalism in this country. We have demonstrated, we believe, the fact that a scientific medical meeting in Great Britain can be accurately reported and published in New York within a few hours after the final adjournment has been announced. This too, we are assured, is the first time in the annals of telegraphy that the report of a medical meeting has been cabled. But ordinary telegraphing of medical meetings is now so common, and even daily editions of medical journals so frequent, that we have a becoming pride in believing that our readers are prepared for any novelty which may combine enterprise with utility.

As will be seen, the meeting was largely attended and considerable interest was manifested in its proceedings. The addresses before the general sessions, as well as those before the sections, were duly appreciated as creditable productions. Mr. Harrison's address speaks for itself. The address of Dr. Creighton on Pathology, as a candid exposition of the present status of a special department of our science, was fully representative as to learning of author and scope of subject. But we shall have

an opportunity of presenting this address in full in a future issue.

Of course many topics, having more or less reference to the government of the Association, were discussed in the meetings of the Council and general session, but those having reference to state medicine and professional relations will be of more or less interest to the medical men on this side of the Atlantic. Ethical questions bother our English cousins as they do ourselves. The same problems regarding proper ethical associations present themselves there as here, and the same indefiniteness of conclusion and hesitancy of positive and decided action manifest themselves. But these questions always gain in importance by discussion, and the general medical mind is gradually becoming prepared for the adoption of broad, liberal, and consistent principles.

The reports of the Sections, which will be presented in full to our readers in due time, will show how much of useful work was done during the afternoon sessions, not only in the number and value of papers presented, but in the earnest and instructive discussions which they called forth. The importance of some of these is foreshadowed in our cable despatches. How different indeed from similar exhibits in the sections of the American Medical Association.

The Meeting of the British Medical Association, to use the words of our correspondent, "was admitted to be one of the most successful yet held." This could hardly have been otherwise, considering the extensive preparations made to that end, the admirable organization of the Association, and its extensive working capabilities. It is safe to say that no medical or scientific body equals it in these respects. There are peculiar facilities offered to such an end which do not exist elsewhere than in Great Britain. Take, for instance, the American Medical Association as the corresponding medical organization in this country. By comparison with that in Great Britain it suffers in every way. In the latter country the profession is compactly associated in a comparatively limited area. Its main interest centres in London. There are its leading medical journals and its leading medical influences. This medical centre is within easy range of every part of the kingdom. The attendance of the best men can always be secured without much sacrifice of individual time, and with comparatively small personal inconvenience. In this country the National Association has a membership necessarily widely scattered, has, so to speak, an ever-changing and floating constituency, and there is little, if any, stability to its organization. But this is more by way of hoping for what may be than what is.

Socially our English brethren, on occasions like the present, generally manage to make the most of surroundings. There is one feature in their entertainments, they are not peculiarly burdensome to the local organizations, as extra expenses are divided among individual members. This is also a matter worthy of more extended imitation among those of our medical brethren so given to entertain and to be entertained. There does not seem to be any lack of enjoyment on these occasions, nor of sumptuousness in the character of the banquets, due to the fact that each individual is willing to discharge his own indebtedness. The gathering at

the soirée on Wednesday evening was unusually large, numbering fully three thousand guests, and including a large proportion of ladies.

It is gratifying to note the national interchange of courtesies at the annual banquet on Thursday evening. The honored president of the American Medical Association, Dr. Flint, worthily represented his countrymen in his admirable toast to the British Medical Association, while Mr. Ernest Hart paid, in eloquent terms, a fitting tribute to the distinguished guests who graced the occasion. Nothing could be in better keeping with the spirit of fraternal professional feeling existing between the two countries, nor better represent the cordial reciprocity of good will and generous emulation in the higher professional pursuits. Each year the opposite shores are being brought nearer together, and even now we feel pulse-throbs along the wire.

CONTAGION AND QUARANTINE.

THE situation in regard to the yellow fever is considered quite satisfactory, notwithstanding the fact that the disease is "knocking at the door" of many of the Northern as well as Southern ports. The action taken by the New Orleans authorities in requesting the Governor to order all infected vessels out of the Mississippi River, and to allow no more such vessels to enter its mouth or come up to the quarantine station, is regarded as one of the most important events that has occurred in connection with the efforts of the Government in preventing the yellow fever's introduction into that port. Governor McEnery at once telegraphed to the Surgeon-General of the Marine Hospital Service to ascertain whether vessels turned out of the Mississippi quarantine would be received at the Ship Island Refuge Station, and was promptly informed that all infected vessels would be received there. This action at once obviates all necessity for the continuance of the inspection service of the "Sanitary Council of the Mississippi Valley" at Memphis, Vicksburg, etc., which has created some dissatisfaction amongst steamboat lines assessed by the "Sanitary Council" to keep up the inspection.

Medical officers have been stationed at London and Liverpool, England, for the purpose of informing the Government as to the condition of said ports, and to make sanitary inspections of all vessels sailing to United States ports, notifying the Government by cable whenever an infected or suspicious vessel departs for the United States. Dr. Robert Mainegra, of New Orleans, has been appointed Sanitary Inspector for the port of Vera Cruz, Mexico, and is now on his way to that place to perform similar duty. Pending his arrival, the consul at Vera Cruz has been requested to cable the departure of all vessels from that port. Dr. Burgess has been on duty at Havana as Sanitary Inspector since July 1st. The consuls at other ports where infectious diseases prevail, as well as those mentioned above, have been directed by the Secretary of State, at the request of the Secretary of the Treasury, to inform all out-going ships to put in at Ship Island, or Sapelo Refuge Station, before proceeding to their port of destination, for the purpose of being inspected, thereby saving detention, as

they will be ordered there by the municipal authorities if they attempt to enter any Southern port.

The Secretary of the Treasury decided a few days ago that the quarantine law of April 29, 1878, is again in force, the law repealing it having been a temporary law, which expired by limitation on June 2d last. This decision is of the utmost importance, as it relieves the apprehension that has been felt regarding the powers of the Government in controlling quarantine. The law as it now stands, with the power given at the last session of Congress "to maintain quarantine [stations] at points of danger," gives us the best and most powerful quarantine law we have ever had. Acting under this decision, the Secretary directed the Collector of Customs at Boston to enforce the law and regulations against the British steamer *Bavarian* with a cargo of Egyptian rags, which was expected to arrive at that port. The regulations referred to are as follows:

"Until further orders, no vessel from any port of the Black Sea, or the Sea of Azof, conveying any rags, furs, skins, hair, feathers, boxed or baled clothing or bedding, or any similar articles liable to convey infection, nor any vessel from any port of the Mediterranean or Red Seas having on board such articles coming from Southern Russia, shall enter any port of the United States until such articles shall have been removed from the vessel to open lighters, or to some isolated locality, and the vessel disinfected and thoroughly ventilated; and the suspected articles shall be disinfected, either by chemical agents and exposure to free currents of air, or by burning, as shall be determined in each case by the Surgeon-General of the Marine Hospital service.

"The certificate of the State or municipal quarantine officer of health may be accepted as satisfactory evidence of compliance with these regulations on the part of the vessel."

A sanitary conference was held at Fortress Monroe on July 28th, to consider the question of establishing a national quarantine station near the Capes; there were present Surgeon-General Hamilton, U. S. Marine Hospital Service; Dr. Smith Townsend, President of the Washington Board of Health; Dr. George H. Benson, Health Commissioner of Baltimore; Dr. J. G. Cabell, President of the Board of Health of Richmond; the Health Officer of Norfolk and Newport News; Hon. H. Libby, Member of Congress; Colonel Loder, Commander Fort Monroe; Captain Evans, U.S.N., Lighthouse Inspector; General Grover, Member Norfolk City Council; the Mayors of Newport News, Portsmouth, and Norfolk, and many other prominent men of the various towns in the vicinity. After a full discussion of the subject it was decided to establish a National Quarantine Station at Fisherman's Island, some twenty miles from Norfolk, near Cape Charles; and pilots were instructed to take all vessels from foreign ports there for inspection. By the establishment of this station all cities on the Chesapeake are protected from the approach of infected vessels. Heretofore Baltimore has permitted such vessels to come up to her quarantine station and take care of them there, but the fear of panic has decided the Health Commissioner to join in urging a national quarantine station between the Capes where all infected vessels can be cared for without endanger

ing Baltimore. The Revenue vessels and hospital steamer John M. Woodworth will also be on guard at the Capes to prevent vessels passing up the bay until inspected.

A NEW THEORY OF THE NATURE OF BRIGHT'S DISEASE.

PROFESSOR SEMNOLA, of Naples, has for some years been studying the subject of Bright's disease with the view of demonstrating the humoralistic origin of the disease. At the International Congress in London, two years ago, he propounded the view that nephritis is consecutive to an albuminous dyscrasia—a view which Gubler had already suggested before him. Semnola's theory was received with respect, but gained no adherents. Recently this industrious student came all the way to Paris and laid before the Académie de Médecine the results of his further investigations. In brief, he has injected or transfused into the blood of various animals different kinds of albumen, and he finds that the effect is first to produce albuminuria, then nephritis, the results varying with the kind of albumen. He also states that in Bright's disease there is a general transudation of albumen, this substance being found in the bile (where it does not exist in health), in saliva, and various other secretions and fluids. The cause of renal albuminuria, therefore, is to be looked for in the blood. Here the normal serum-albumen, which does not easily transude, becomes changed and passes into the urine. In so doing it sets up the different inflammatory and degenerative processes which characterize the kidneys in Bright's disease. Professor Semnola found in his experiments that the form of albumen which is most apt to transude and cause irritative trouble is the ordinary egg-albumen. This stands at one end of the list, serum-albumen at the other.

Professor Semnola's exposition of his views was received with great applause by the Parisian academicians. No discussion, however, followed. It was not stated whether there were any practical deductions to be made from this dyscrasic hypothesis. The inference is, however, that egg-albumen should be forbidden and serum-albumen prescribed as an article of diet.

LUPUS AND TUBERCULOSIS.

DR. J. DOUTRELEPONT, of Bonn, has examined seven cases of lupus with the view of determining the presence of the bacilli tuberculosis. In the diseased tissue of all of these cases the organisms were found, though in varying amount. The investigator concludes, therefore, upon this and certain clinical grounds, that lupus is a tuberculosis.

Dr. Demme has also investigated this subject and has found the tubercle bacilli in the nodules of lupus nodosus and in lupus serpiginosus. He also argues therefrom the identity of the two diseases. On the other hand, a writer, presumably Spina, in the *Wiener Medizinische Zeitung*, takes an entirely different view and asserts that the presence of these bacilli simply shows that they are not pathognomonic of tuberculosis, or that, though different bacilli, they take the same staining. The writer in question arrays all the clinical and pathological evidence possible against the view of the identity of the two diseases.

HOW TO SLEEP ON A RAILROAD TRAIN.

MANY weary persons have tried to solve this problem, and have tossed about for hours in restless disappointment.

Dr. Outten, a German physician, has applied the laws of physiology to the matter and announces (*Allg. Central-Zeitung*) a satisfactory solution of it all. If a person lies down with his feet toward the engine, the movement of the train tends to draw the blood from the brain to the feet, cerebral anemia is produced, then sleep. If, on the other hand, the person lies with his head nearer the locomotive (as is the custom in Germany), the movement of the train produces a cerebral hyperemia incompatible with sweet repose. Dr. Outten has verified his view with many experiments.

Dr. O.'s directions are hardly needed in America, where the berths of sleeping-cars are generally made up so that the position is as indicated by physiology and our German *confrère*. In this connection, however, we would say that many persons are unaware of the fact that additional comfort and better sleep in travelling can often be obtained by judiciously using the bromides.

THE YELLOW FEVER AND ITS CONTROVERSIES.

THERE has for some time been much lack of harmony among the sanitarians of the Mississippi Valley. The discord has been intensified since the National Board of Health gave up control of quarantine. The Sanitary Council of the Mississippi Valley, the Louisiana State Board of Health, the United States Marine Hospital Service, and the New Orleans City Board of Health have been the active participators in the sanitary dissensions. The quarrel, though unfortunate, has perhaps had one good result: it has forced the authorities to be extremely alert against the yellow fever, lest the reproach of allowing that disease to get into our ports be made against them.

It appears, however, that matters have become a little too personal and acrimonious. On July 20th Governor McEnery, of Louisiana, issued the following proclamation:

"In accordance with the preamble and resolution of the Louisiana State Board of Health, adopted July 12, 1883, a copy of which is hereto annexed, and in consideration of the imminent danger that the city of New Orleans, the State of Louisiana, and the Mississippi Valley are now in from the arrival at quarantine of infected vessels, any unnecessary intercourse between the Mississippi quarantine station and other quarantine stations and the city of New Orleans is hereby strictly prohibited, and any permission for that purpose heretofore granted is hereby revoked. The laws of Louisiana and the rules and regulations of the Board of Health must be rigidly enforced and obeyed in this and all respects while danger continues. Intercourse between the quarantine stations and New Orleans must be under the exclusive control of the Board of Health. I invoke the vigilance and co-operation of all good citizens during this season of threatened calamity. This order will be communicated by the Board of Health to all persons concerned therein."

Shortly after this, the Louisiana State Board of Health held a meeting and unanimously passed the following resolutions:

Whereas, Dr. J. H. Rauch, the Secretary of the Board of Health of the State of Illinois, has recently visited New Orleans and directly interfered and tampered with the health operations of the State Board of Health of Louisiana; and

Whereas, Since the dissolution of the National Board of Health there has been an effort made by illegal bodies to assume to perform its pernicious functions and mischievous tendencies; be it

Resolved, That the President of this Board be and he is hereby requested to respectfully suggest to his Excellency the Governor of Louisiana to confer with his Excellency the Governor of Illinois on the propriety of confining Dr. J. H. Rauch to health operations within his own State, and to instruct him to cease his designing efforts to impair public confidence in the State Board of Health of Louisiana.

This is a rather severe snub to the energetic Illinois official; it at least does the injustice of not saying that he is Secretary of the Sanitary Council of the Mississippi Valley; and evinces, we fear, the need of some moral sanitation in the great Southwest.

This Sanitary Council has undertaken to continue part of the work of the National Board of Health, acting in antagonism to the Marine Hospital Service. It has, however, been beaten in the various measures it has adopted, and has had to give up its steam-launch.

News of the Week.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—The first two numbers of this Weekly have come to hand. While fully appreciating the difficulties under which the editor, Dr. N. S. Davis, has labored in starting a new medical journal, we confess to some disappointment at the result. The first number contains the address of the President of the Association, which has been published in full by several journals, lay and medical, two months ago. This should have debarred it, according to the rules which governed the publication of the Transactions, from appearance in the official journal, and would appear to establish the precedent that those papers which, in violation of the rules, have already been published elsewhere, will ultimately find a place in the official Transactions. Both numbers are largely made up of the doings of the Association. There are also departments for progress of medical science, news, reviews, correspondence and editorials. We bespeak for this enterprising periodical all the success which it may deserve, and welcome the veteran Editor to the higher walks of medical journalism.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The next annual meeting will be held at Lake George, August 29, 30, and 31, 1883. Dr. R. W. Taylor, of New York, President, and Dr. Arthur Van Harlingen, of Philadelphia, Secretary.

DR. H. N. HEINEMAN, of this city, has been elected Professor of the Principles and Practice of Medicine at the Woman's Medical College of the New York Infirmary.

MOUNT SINAI HOSPITAL.—Professors A. L. Loomis and A. Jacobi have resigned as visiting physicians to this institution, and have been made consulting.

THE INDIANA STATE BOARD OF HEALTH is a failure, according to the *Fort Wayne Journal of Medical Sciences*. The provisions of the law are not so much for the benefit of the public health as of the politicians. Board of Health failures are becoming unpleasantly numerous.

PASTEUR OFF FOR EGYPT.—M. Pasteur having offered to organize a mission for investigating the cholera in Egypt, the Hygiene Commission has endorsed the scheme. The mission will consist of M. Roux and M. Thuillier, of M. Pasteur's laboratory, M. Strauss of the Faculty of Medicine, and M. Nolaco. M. Pasteur has written to Lord Granville to solicit the grant of facilities to the mission in Egypt.

THE OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN held its third annual meeting on July 6th, electing Mr. Jonathan Hutchinson President.

THE CHOLERA continues to be confined to Egypt, being particularly severe at Cairo. Between three hundred and four hundred deaths are reported daily. It is believed that many more deaths from cholera occur in Alexandria than are reported. The English, who reject quarantine as interfering needlessly with commerce, have undertaken their system of inspecting incoming vessels and disinfecting those having disease on board. It is reported that cholera exists in Rio Janeiro. Precautions against the importation of Egyptian rags are being taken by the authorities in American ports.

THE LOUISVILLE MEDICAL NEWS.—Dr. L. S. McMurtry has retired from the *News*, and is succeeded by Dr. H. A. Cottell, formerly one of its editors.

DR. FRANCIS DELAFIELD has been elected full Professor of Principles and Practice of Medicine, College of Physicians and Surgeons, New York.

A SANITARY CONVENTION.—Our Western brethren revel in sanitary conventions. One is to be held at Muskegon, Michigan, under the auspices of the State Board of Health, on Thursday and Friday, August 23 and 24, 1883. The objects are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness.

THE DEATH OF DR. GEO. H. FISHER.—Dr. Fisher, son of Dr. George J. Fisher, of Sing Sing, N. Y., died suddenly, July 23d, at Baltimore, Md., aged twenty-nine years. After receiving his preparatory education at the military schools of Dr. Holbrook and the Mt. Pleasant Academy, he was graduated at the Medical Department of Columbia College in 1878. Dr. Fisher practised his profession for some time in connection with his father, and afterward at Round Hill, Conn. On the 22d of February last he was married to Miss Florence Jobbins, of Brooklyn, and in the following April went to Baltimore, Md., in the interest of a New York mercantile house. He remained in Baltimore until the time of his death. Dr. Fisher retired to his room in usual good health on the evening of July 23d, and at an early hour of the morning was found dead in his bed, his spirit having passed away apparently without a struggle. The profession will deeply sympathize with the distinguished father of the deceased in his deep affliction.

THE LONDON HOSPITAL SCHOOL.—Mr. Jonathan Hutchinson has resigned his position as senior surgeon, and has been appointed Emeritus Professor of Surgery. Dr. Tidy has resigned his position as Lecturer on Chemistry.

THE UNIVERSITY OF COLORADO announces the opening of a Medical Department at Denver, with preliminary examinations and a four-years' graded course. We trust that the effort at higher medical education is a sincere one and will prove successful.

ETHICS IN VERMONT.—A member of the Vermont State Medical Society is shown by a correspondent of the *New York Medical Journal*, to have advertised a "sure cure" in a local paper. The State Society in its ardor to keep out New York delegates, forgot to look at home.

POLITICS AT THE GERMAN HYGIENIC EXHIBITION.—The German correspondent of the *Medical Press and Circular* gives the following account of some of the true inwardness of the German Hygienic Exhibition. Speaking of the Presidents of Sections in the Exhibitions, and of the fitness of the appointment of Professor Guret, of Berlin, as President of the Section of Field Hygiene, the special correspondent of the *Allgemeine Wiener Med. Zeitung* goes on to say that, if the choice in this case was in every way suitable, it has aroused a decidedly disagreeable feeling of surprise in medical circles to observe that the choice of Presidents of Sections has fallen upon some not in the first rank, whilst a Virchow and an August Hirsch have only received appointments as *members* of the Sectional Committees. The reason why Virchow, the first hygienist—a man to whom the city of Berlin is so much indebted, and of whom it is proud—was not placed at the head of the committee (in case he had not the choice of being so, and declined it) can only be found in political causes. "But what grounds have caused the setting aside of Professor Geh. Med. Rath. August Hirsch? August Hirsch is esteemed in professional circles as one of the first epidemiologists, and outside the scientific world he has been only once spoken of. That was when he returned from Russia, three years ago, from a journey of investigation into the plague at that time rife in that country—a journey undertaken at the instance of the Imperial Government. He had sent in his report to the proper authorities, the Imperial Health Office, and awaited their decision. As this was too long in coming, and as the Health Office made no sign of noticing his work, he withdrew it and published it at his own expense. This procedure later on cost Director Struck a very uncomfortable quarter of an hour in the Reichstag, and therefore it may well be said that since that time Herr Hirsch has not been a *persona grata* in the higher regions. Such reminiscences cannot be often enough freshened up. They afford in the present case, and in still higher degree for our own *epigonen*, a small but valuable measuring-staff, which will aid us in forming a judgment of persons and of the movements of the times."

SUPPOSED SUICIDE OF A YOUNG PHYSICIAN.—A very sad event was the sudden death last Sunday of Dr. Milligan Patchin, of this city. While engaged in cleaning and examining a pistol it went off, with a fatal result.

British Medical Association.

FIFTY-FIRST ANNUAL MEETING.

Held in Liverpool, Tuesday, Wednesday, Thursday, and Friday, July 31, August 1, 2, and 3, 1883.

(BY DIRECT CABLE TO THE MEDICAL RECORD.)

TUESDAY, JULY 31ST—FIRST DAY—MORNING SESSION.

THE opening exercises of the Association consisted of Church service at 10.30 A.M., held at the Pro-Cathedral. A sermon was preached by the bishop of Liverpool. The cathedral was crowded. The music was inspiring. The responses were those of heartfelt welcome. The sermon was eloquent, and the venerable and scholarly clergyman dwelt at length on the intimate relation existing between the physician and his patient, the moral obligation of the former to the latter, the dignity and paramount importance attached by the Christian religion to the human body, and the zeal and devotion thus called forth for untiring efforts in behalf of its healthful preservation.

One thousand members were present, together with a large number of Americans and other foreigners.

FIRST DAY—AFTERNOON SESSION.

The first general meeting of the Association was held in the College, Shaw Street, at 3 P.M. WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester, President, in the Chair.

DR. C. G. WHEELHOUSE, of Leeds, Chairman, presented the

REPORT OF THE COUNCIL,

in which important topics requiring the action of the Association were set forth. Among the items of business liable to give rise to much stormy discussion were The Medical Act Amendment Bill, which involved eligibility to registration in the Medical Register as a medical practitioner, unless, in addition to the licence of the General Medical Council, he shall be attached subsequently to one of the universities or medical corporations, and be authorized to register the title so acquired.

The Parliamentary Bills Committee of the Association had proposed the above qualification, to which some of the branches of the Association had already manifested a vigorous opposition, and were prepared to argue against the restrictions involved in the propositions.

The Homœopathic question startled our brethren here as manifestly as it did those of the American Medical Association; but when the book was opened, the same knotty problems were found on page after page, and they seemed no nearer solution than in our own country, especially when it was learned that they had a close relationship to lawyers and the High Chamberlain.

The Bill requiring

NOTIFICATION OF INFECTIOUS DISEASES

will create as much dissension here as did the question of the abuse of medical charity in New York, and there was no well-grounded prospect that the question

was any nearer a satisfactory answer in one case than it was in the other. The law requires every medical practitioner attending on, or called in to visit any person suffering from any infectious disease, to forthwith fill up, sign, and deliver or send to the medical officer at his office a certificate or declaration stating, etc. In one instance, at least, the Town Council appointed as their medical officer of health a *homœopath*, and the significant question had been asked, Was it likely that such a man could expect active support from the medical profession, or that they would report their cases to a man who was a *homœopath*? The energies and anxieties of the medical profession throughout the United Kingdom are likely to be taxed to their utmost for a satisfactory answer.

FIRST DAY—EVENING SESSION.

The Association met at 8 P.M. The meeting was largely attended and the audience listened attentively to

THE ADDRESS OF THE PRESIDENT-ELECT,

A. T. H. WATERS, M.D., F.R.C.P., of Liverpool.

The President of the Association, next delivered his address, confining himself to a review of the progress and prospects of medical science. During the past few years no science had made greater strides, or had more largely increased its following in earnest and determined workers. As a striking evidence of this was the continued prosperity of the Association, its increase in membership, and its extension of influence. Not only was the spirit of progress manifested in every department of original research, but it had infused itself in the work of the general practitioner, who was eager to receive and adopt advanced views and improved practices. He also sketched somewhat in detail the various advancements that had been made in the different departments of medicine, not only in Great Britain but throughout the civilized world, and argued that the prospects of the future were never more promising, with a field constantly enlarging, and with continued increase of earnest and determined workers.

After the adoption of a resolution of thanks, formally seconded, to the President for his address, and the trans-action of some miscellaneous business, the Association adjourned to meet at 11 A.M., August 1st.

WEDNESDAY, AUGUST 1ST—SECOND DAY.

The second general meeting of the Association was called to order at 11 A.M. by the President, PROF. WATERS, of Liverpool.

The special order was the

ADDRESS IN SURGERY,

which was delivered by REGINALD HARRISON, F.R.C.S., Surgeon to the Royal Infirmary, Liverpool.

(For the address in full, see page 113 of this number of THE RECORD.)

The speaker was listened to with profound attention by a large audience, and at the close received a hearty applause, followed by a resolution of thanks, with a second, expressing a high appreciation of the ability and character of his discourse.

It was then arranged to hold

THE NEXT ANNUAL MEETING

at Belfast, Ireland, under the presidency of James Cum-
ing, M.D., F.K.Q.C.P., Prof. of Theory and Practice of
Medicine, Queens College, Belfast.

This was in accord with an invitation received from the profession of Belfast at the semi-centennial meeting held in Worcester, England, last year.

WORK IN SECTIONS.

Among the papers and discussions before the Sections noteworthy mention is made of the following:

Section in Public Medicine.—T. Pridgin Teale, M.D., F.R.C.S., of Leeds, President. Paper "On the Injury Done to the Health of the Young by the Present System of Education," by Martin Johnson, Esq.

A communication on "The Sanitary Condition of Liverpool" gave rise to a stirring discussion, and was especially interesting at the present time, in view of some apprehensions which have been manifested since the outbreak of cholera in Egypt. The authorities and the profession were on the alert, and it seemed very improbable that the disease would succeed in making an ingress into that port.

Section in Ophthalmology.—T. Shadford Walker, M.R.C.S., of Liverpool, President. Discussion on tests for color-blindness, opened by Dr. W. A. Brailey, of London, who was followed by Dr. Snellen, of Utrecht. The subject was discussed with special reference to the acuity of vision and color-sense in students and sailors.

Section in Psychology.—T. L. Rogers, M.D., of Rainhill, President. Discussion on the employment of the insane, opened by Dr. D. Yellowless, of Glasgow, First Vice-President of the Section. The general tone of the discussion was in favor of discriminate employment of this class of unfortunates.

SOIRÉE IN THE EVENING.

The President and Local Committee gave a *soirée* in the Art Gallery, at which three thousand guests were present. The affair was entirely successful.

THURSDAY, AUGUST 2D—THIRD DAY.

The third general meeting was called to order at 10 A.M. by the President, Professor Waters, and was devoted entirely to business matters pertaining to the Association.

WORK IN SECTIONS.

The day was spent chiefly in work in the various Sections which were largely attended and noteworthy papers were read and subjects discussed as follows:

Section in Diseases of Children.—SAMUEL JONES GEE, M.D., F.R.C.P., of London, President, delivered an address which consisted in a historical sketch of the literature of children's diseases. Beginning with the ancients he referred especially to Hippocrates' description of *mumps*, and next spoke of Rhazes as the author of the first treatise on the subject of diseases of children. No addition was made to our knowledge until the appearance of Glisson's book on *ricketts* in the seventeenth century. The speaker also alluded to Lydenhain's description of

measles, scarlet fever, whooping-cough, and St. Vitus' dance. In the last century, croup, acute hydrocephalus, and the eruptive fevers were especially referred to, and in the present century the study of morbid anatomy and the methods of physical examination of the living subject.

Section in Public Medicine.—DR. NORMAN KERR, of London, read a paper on "The Present Position of the Habitual Drunkards Movement."

DR. C. R. DRYSDALE, of London, read a paper on "The Mortality of the Rich and the Poor," in which he compared the mortality of total abstainers with that of moderate drinkers.

DR. FRANCIS IMLACH, of Liverpool, read a paper on "Quarantine," and DR. STOCKER, late Government Emigration Inspector at Queenstown, on "The Sanitary Condition of the Mercantile Marine." The author of the last paper made special reference to the inspection of ships in America as being very complete, and also referred to the import of rags as a probable means of conveying infection.

CAPTAIN DOUGLAS GALTON, C.B., F.R.S., read a paper on "Hospital Construction." The author reviewed the subject thoroughly and maintained that hospital buildings should be of the simplest kind; that they should not be built on the supposition that they can remain as enduring structures, and for the reason that they are very liable to become dangerously infected.

A portion of the day was set aside for visiting

PLACES OF INTEREST

including the docks, some of the large steamships, art galleries, public halls, hospitals, and public libraries.

BANQUET IN THE PHILHARMONIC HALL.

In the evening a public dinner was given at Philharmonic Hall.

Over four hundred members were in attendance, and numerous guests. Dr. Austin Flint, of New York, was present, and was received with great applause when he proposed in most cordial terms and in behalf of the American Medical Association the toast: "To the British Medical Association."

Mr. Ernest Hart, editor of the *British Medical Journal*, proposed with ready and expressive words the toast, "To our Visitors," which was responded to by Dr. Fenwick, of Montreal, who hoped that on some future occasion the British Medical Association would hold a meeting in Canada, where it would meet with a hearty reception.

FRIDAY, AUGUST 3D—FOURTH DAY.

The Association met in general meeting, at 10 A.M., and was called to order by the President. After the transaction of some routine business the

ADDRESS ON PATHOLOGY

was delivered by C. CREIGHTON, M.D., formerly Demonstrator of Anatomy, Cambridge University. The speaker showed how diseases such as cancer and tubercle acquired an autonomy and assumed an individual existence in the bodies of those in whom they took origin and subsequently infected. The address was listened to with marked attention by a large and appreciative audience throughout its entire delivery.

The author received a cordial vote of thanks for his address.

The concluding general meeting was held at 2 P.M., when hearty votes of thanks were accorded to the local officers, with an interchange of congratulations, and thus terminated most successfully the fifty-first annual meeting.

In the evening the Mayor of Liverpool gave a *soirée* at the Town Hall, where were entertained a brilliant gathering of ladies and gentlemen made up of members and guests.

Arrangements were perfected for numerous excursions to places of interest near Liverpool, to take place on Saturday, August 4th, for the members and their friends.

Reviews and Notices.

DIE ANÆMIE. VON S. LAACHE. Universitäts-Programm für das 2 Semester, 1883. Christiania: Die Malling-sche Buchdruckerei. 1883.

THE very elaborate monograph before us presents the results of a long series of investigations by Dr. S. Laache, made under the direction of Professor J. Worm Müller, of Christiania. It contains so much that is new and valuable that we shall take an opportunity to discuss it fully at another time.

A TREATISE ON THERAPEUTICS: Comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. WOOD, M.D. Fifth Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1883.

THE exhaustion of the fourth edition of this work in six months is a very emphatic evidence of its value and appreciation by the public. Its merits have frequently been extolled in these columns and we need add nothing now. We would suggest that the chapter on electricity should be revised by an expert; and that it would be very desirable to have something about diet-cures, climate-cures, hydrotherapy, and movement-cures in a book which is a treatise on therapeutics. We trust that the author may have an opportunity to make these additions in another six months.

ON THE RELATION OF THE CHEST MOVEMENTS TO PROGNOSIS IN LUNG DISEASE, and on the Application of Stethometry to Examinations for Life Assurance. By ARTHUR RANSOME, M.D., M.A. (Cantab.). With Illustrations. Pp. 100. London: Macmillan & Co. 1882.

THE author has devised an ingenious set of instruments by which the upward, forward, and outward movements of the chest-wall are measured and registered. With the aid of this, he has determined some interesting physiological facts, and has also, as he thinks, obtained data by which more exact diagnosis, and especially prognosis in lung disease can be given. The author is modest in his claims for stethometry, and what he does claim is supported by a large number of tabulated observations. His results are confirmed independently by Drachmann, of Copenhagen. The author has evidently expended great care and labor upon his work, which is beautifully printed.

DR. W. S. LITTLE, of Philadelphia, writes: "Please make the following correction in the report of my paper on Congenital Ectopia Lentis, read at the meeting of the American Ophthalmological Society, appearing in your journal July 28, 1883. For *divergence* please read *detachment of the retina from hemorrhage*."

Correspondence.

HOW TO PROCURE THE BEST POSSIBLE PHYSICAL CONDITION AFTER PARTURITION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the issue of your highly esteemed journal, for June 30th, I find a rather severe and, in my opinion, unwarranted criticism on my paper entitled "How to Procure the Best Possible Physical Condition after Parturition," read before the New York Academy of Medicine, Section of Obstetrics, April 26, 1883. My critic charged me with having advised to close all wounds, suppressing all lochia, and conveys the idea that I advocate a sort of "kolpokleisis" after parturition. The doctor evidently labors under a misapprehension in regard to what I did say. I desired to call especial attention to the beneficial effects of strictly hygienic and antiseptic measures before, during, and after parturition; as they have proved in my hands, as well as in those of Tarnier, of Paris, Barnes, of London, Braun and Spaeth, of Vienna, Thomas, Lusk, Barker, Wiley, Mundé, J. E. Taylor, and many others in this city, to be the only safeguards against those manifold diseases which were formerly collectively termed "childbed fever," and claim in this city alone about *five hundred victims annually*, many of whom would live to-day, had they been attended by antiseptic and hygienic measures instead of acting under the old rule of "beware of meddling midwifery." The secretions and excretions of the parturient must also be kept in as normal condition as possible.

The touch-me-not plan having proved a rather dangerous one even among the "Indian Squaws," who cannot avail themselves of the advances in science and art, the gentle artificial dilatation of the cervix uteri during labor pain; the careful pushing back of the anterior labium oris externi uteri, the use of chloroform or chloral hydrate when indicated, the rupturing of long delaying tough membranes, the compression of the fundus uteri before and while the child is being born, the advantages of Orede's method of expressing the placenta, *but, contrary to Dr. MacGaughey's advice, without even a little tension on the cord*, is, by no means, an overrated measure—as proved by my own and that of many able accoucheurs, among whom Professor Carl von Braun, of Vienna, under whose supervision over one hundred thousand children were born, where the method had been most successfully applied. As to checking profuse post-partum hemorrhages, and to control the uterus until it had firmly contracted after parturition; the sewing up of extensive lacerations of the perineum, immediately after labor, etc.; upon these points the doctor seems to agree with me; he finds no fault with the advice to use the binder after the placenta and the secundines are born, although it has been discarded long ago in the Vienna lying-in wards; the immediate application of the child to the mother's breast as soon as she had some rest and refreshing sleep, and been made comfortable, is also approved of by my critic. But now, *mirabile dictu!* I am taken to task by the learned doctor for unnecessarily interfering with *nature* and the natural post-puerperium physiological processes, and he charges me with going too far when I remark that a little hemorrhage after parturition is a dangerous thing and should be arrested, etc.; and he lays stress upon my remark, used in a figurative sense, of course, in answer to Dr. Carpenter's question, that not a single drop of blood should appear after the completion of the third stage of labor, and that napkins removed should be perfectly free from color, etc.

In regard to this question I desire again to reiterate what I did actually say, and it was this—that Housmann's reliable experiments, in 1868, instituted upon rabbits, by injecting fluids taken from persons who died of infectious peritonitis, *inevitably caused the death* of pregnant animals; even healthy pus injected into the genitals of

animals shortly before or soon after labor, if their *vaginal* or the *mucous membranes of their uteri were wounded* or eroded, caused *always pyemia or septicæmia and death*; thus showing conclusively the great susceptibility to infections, with consequent fatal results, during the puerperal state. Especially those suffering from primary endometritis and vaginitis during pregnancy, are then usually liable to attacks of parenchymatous metritis or metrophlebitis after childbirth. Even catarrhal secretions, according to Braun, cause ulcerations of the denuded mucosa, which becomes the gate of infection and the starting point of phlegmonous inflammations of peri- and para-metritis, etc. Many cases of puerperal fever undoubtedly originate from the absorption of the foul stuff of decomposition from retained blood-clots, portions of retained placenta, the membranes, purulent matter formed in utero, and from *wounds and bruises and subsequent gangrene of the tissues of the genital tract*, where the puerpera takes the poisons of her own making, says Barnes. Now, with these facts before us, I ask is it not unjustifiable and, to say the least, ungenerous that Dr. MacGaughey says, "As for examining the genital passages of *all* puerpera after removal of secundines, and directing that all slight lacerations should be promptly closed, the advice is very good on paper, but very awkward and difficult and often very unnecessary at the bedside. Besides, the 'meddlesome midwifery' of exposing all women, and of closing slight lacerations or wounds, would involve more, much *more, danger* to the patient than letting them alone." I will, for the satisfaction of the doctor, quote the highest authority in Europe upon this point of the controversy which my critic, not I, has invited.

Braun says: "Slight lacerations of the perineum, or wounds made by episiotomy, are closely united by serres-fines or, if extensive, by metallic sutures; bruised wounds of the vagina should be pencilled with pure tincture of iodine, muriated tincture of iron, thymolized oil, or, according to Fehling, with salicylic powder (one to five of starch) applied two or three times daily. Under this treatment they usually heal in from three to five days."

Regarding the prevention of the least hemorrhage post-partum, I will quote Barnes, of London, certainly as good an authority as there is to be found anywhere. He says: "To obviate hemorrhage post-partum is to oppose septicæmia." I therefore always give, in accordance with the late lamented Prof. Elliot's advice, which I learned from him in 1866, in Bellevue Hospital Medical College, one drachm of Squibb's fluid extract of ergot (or Wyeth's), even in natural labor, after its completion, and I repeat the dose, given in sugar water, on account of the nasty taste of the stuff, until the uterus has firmly contracted, and it becomes evident that no portion of the placenta, the membranes, or of *blood, has remained in the vagina or the uterus*. The least hemorrhage from the *genitals*, again says Braun, is treated "by the application of iodine, persulphate of iron, hot-water injection, the silver wire or carbolized silk ligature." I shall continue to adduce proofs—not arguments, but undisputed facts—to convince Dr. MacGaughey that it is a good advice to close up even slightly lacerated wounds after parturition, and thus prevent bleeding and septic infection. When I speak of thus treating wounds, I do not mean to close either the uterine or vaginal canal beyond where it is injured, leaving room enough for the shedding of the degenerated lining membrane of the uterine cavity and cervical canal, which cause the lochia, and ought to be colorless and not cruenta, which means bloody. If they become so there is danger of puerperal fever, which can be avoided if all wounds are treated as stated above; nay, according to Prof. Pallen, of this city (now, I understand, of London, England), even a lacerated cervix had better be sewed up soon after parturition than to be left to nature.

Does not Prof. Pallen's advice require exposure of the parts? Does not immediate perineorrhaphy require the same? But, however, I think I have already taken up

too much of the valuable space of THE RECORD to refute the uncourteous remark of Dr. MacGaughey, when he, in a scientific criticism, uses the words "*too ridiculous, a work of supererogation*," and other not very complimentary epithets on subjects about which he seems to have a great deal to learn yet.

I am very respectfully, yours,
 RUDOLF TAUSZKY, M.D.

THE DISEASE QUESTION IN INEBRIETY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The courteous criticisms of my article on "Obscure Causes of Inebriety," by Drs. Hart and Stair, in Nos. 661 and 662 of THE RECORD, tempt me to make some suggestions.

The question cannot be solved by argument, because it is one of accurately observed facts and their meaning.

Like any other question in physical science, we must have all the facts before we can reach any clear conclusions.

We must accurately study and record the physiological and psychological symptoms, or phenomena of inebriety, and from these histories will appear the laws and forces which govern its origin and progress.

When such a study is made of a large number of cases, by many persons who are more or less competent to judge, in different parts of the country, covering a period of years, their conclusions, when unanimous on certain points, are the best authority, and are entitled to great consideration. Conclusions reached in any other way are open to question and doubt. If the asserted fact that inebriety is always a disease, cannot be sustained by clinical evidence it is an error. It is equally erroneous to deny the disease theory, unless such negations are supported by study of cases. We have repeatedly urged our critics to send clinical histories of cases, that seemed to sustain their views; or cases where the early stage was one of vice and sin, pure and unmistakable, but no one has responded so far.

For over twenty centuries inebriety has been considered a physical disease, and as a student of this phase of mental disorder we are fully conscious that the border lines of its study have hardly been touched. The wide ranges of the unknown before us are far more impressive than any present knowledge of the subject, or opinions of to-day.

If my critical friends will rise above the dogmas of to-day, and examine inebriety independent of all theory or popular notion, its magnitude will silence all doubts, and the great ocean of the unknown will stretch out before them, where each may be a discoverer, untroubled by the notions and theories of others.

Respectfully yours,
 T. D. CROTHERS, M.D.

HARTFORD, CONN.

HOW TO ABORT TYPHOID FEVER—A CRITIC CRITICISED.

[We insert the following letter in order to give *altera pars* a hearing. We must add the criticism that the writer makes only assertions, and entirely fails to prove anything whatever. A long series of carefully noted clinical observations can alone prove anything as regards the power of a remedy to shorten or modify a disease of so variable a type as typhoid fever.—Ed.]

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the *Medical Age* of June 10, 1883, is an article criticising an article in THE MEDICAL RECORD, which article was criticising the *Age* for using very strong language toward any one who said he could abort or cut short typhoid fever. The *Age* winds up its article by saying: "Dr. Davy now has the floor." Thanks for his liberality. The *Age* accuses THE RECORD of summing up the results of the recent research and debate in

France in rather a "pessimistic spirit." That old legend no doubt flitted across THE RECORD's mind when he soliloquized to himself! again the mountains labored! with minute results. The *Age* does not appear to be impressed in that way, for he says, "the debate strengthened the rational therapeutics of the disease." If the *Age* would prefix it to rational (irrational) he would be much nearer the truth; for if it was the rational system of treatment, why such pessimistic comments.

What the immortal Jenner did for small-pox has been done for typhoid fever; it has been demonstrated in over one hundred cases, and extending through five years of time, that that much dreaded disease is amenable to the proper treatment, and that an attack can be broken up and the disease cut short after passing the forming stage. Patients treated according to the hereinafter given plan, have been able to be up and about their rooms from the twelfth to the sixteenth day of medication, and some out riding on the eighteenth day. The fever leaving them, some as early as the fourth, and some as late as the eighth day, depending upon the severity of attacks and faithfulness of nurses. The above good results have been attained by the use of the following prescriptions and plan of treatment faithfully carried out:

PRESCRIPTION NO. 1.

R. Cohothedrae compound..... ̄ iv.

Sig.—Thirty drops every four hours in two tablespoonfuls of water.

PRESCRIPTION NO. 2.

R. Quinia sul..... grs. xx.
 Camph. pul..... grs. vi.
 Ginger pul..... grs. iii.

M. Ft. cht. No. 6. Sig.—One powder every four hours alternating with prescription No. 1. Plan of treatment as follows:

First.—Prescription Nos. 1 and 2 must be given on time, alternating each other, two hours apart, not omitting any doses; if patient is asleep, wake him up; thus keep up medication until the temperature reaches within one-half degree of the normal line; then you may stop medication at 10 P.M. and begin at 6 A.M. After the normal line has been reached and held for two days, you may drop to four doses of each powder per day for four days; after which you can drop to three doses of each per day, until the patient is able to be put upon full diet. Patient should be sponged off with tepid (slightly alkaline) water each evening, until the temperature has reached 100° F., or as long as it feels grateful to the sick.

Second.—Temperature of room must not fall below 68° F. regulated by a good thermometer.

Third.—Patient must lie quietly (not sit) in bed until all tenderness, gurgling, diarrhoea is gone; talking, laughing, or exertion retards the healing of bowels and should be avoided.

Fourth.—For the extreme weakness or profuse perspiration which sometimes sets in when the fever is rapidly declining, use the best old rye whiskey, made slightly bitter with gentian or cimicifuga, and give from one to two teaspoonfuls, as is necessary.

Fifth.—For diarrhoea use fl. ex. guarana in ten to fifteen-drop doses every three or four hours, and bromides for delirium. Any complication which may arise must be met by attending physician. Diet: Milk, toast, hard-boiled eggs, rice, crackers, coffee, lemonade.

To abort typhoid fever, give Prescriptions 1 and 2, alternating each other every two hours (*i.e.*, each in their place every four hours). Patient must lie down and be quiet from one to three days, owing to the severity of the attack, and take at least five doses of Prescriptions 1 and 2 per day for the first two days, then slowly diminish in number of doses as patient improves.

Ere this you have asked in your own minds what is cohothetra compound? As per analysis by Professor Powers, it is as follows (*verbat. et literat.*):

"PHILADELPHIA COLLEGE OF PHARMACY,
145 North Tenth Street. Founded, 1821.

PHILADELPHIA, November 25, 1831.

J. A. Davy, Esq., Troy, Ohio:

DEAR SIR—The substance submitted to me for analysis has been examined with the following result: It is a bright reddish-yellow liquid, having an aromatic odor, a pungent taste, an acid reaction, and contains (1) 78 per cent. by volume or 71.3 per cent. by weight of absolute alcohol; (2) 0.9098 per cent. of *nitrous ether*, corresponding to 21.8 per cent. of spirit of nitrous ether of the United States Pharmacopœia; (3) a small amount of the alkaloid morphia or morphine (too small for quantitative estimation); (4) very small amounts of the volatile oil of caraway and of resinous and coloring matter.

Respectfully yours,

FRED. B. POWERS,
Professor of Analytical Chemistry."

The resinous and coloring matter found by the professor is from the saturated alcoholic tincture of cohothetra, which composes the body of the compound, which seems to have no alkaloid. The compound now contains a small amount of carbonate of ammonia, which is used in preparing the cohothetra, which addition changes the color to red.

Cohothetra is indigenous to the United States, flowering in July; and is perennial.

The *Age* desired the knowledge and plan of treatment by which such good results were obtained, and as he was so gentlemanly in his last criticism, to withhold it from him would be unkind.

The *Age* now has the floor.

Faternally yours,

J. O. DAVY, M.D.

SPRINGFIELD, OHIO.

BIBLICAL ETHICS vs. PERCIVAL'S ETHICS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: From what has been said of late in the medical journals and in the daily press with regard to the nature and necessity of different codes of medical ethics one would imagine that physicians are a different order of beings from common men, and that they need a special and peculiar standard of morals by which to regulate their conduct. The old-fashioned idea of right and wrong seems to be lost sight of in most of the discussions. It seems to be taken for granted that there is need for a special standard of ethics for the physician, a standard which he himself has made and which does not apply to other men or other professions. The physician is not to ask, Is my conduct right and just according to the standard by which other men regulate their conduct? but Is my conduct in accordance with the Code of Medical Ethics?

Now in other professions and callings most intelligent men in this day hold that there is a code of ethics, commonly called Christian or Biblical, which binds all men and which is equally applicable to all under all circumstances, in all professions, in all ages. It is a code which is founded in right and justice. And, furthermore, any code of ethics which is not founded upon the principles of right and wrong as set forth in the Bible, and which does not conform to its teachings in this regard, should not be accepted as a rule of conduct. The teachings of the Bible and the dictates of an enlightened conscience are in harmony. Any code of ethics which leads a man to violate his conscience or do that which the word of God or his conscience tells him is not right and just is not to be obeyed.

In that portion of the world called Christendom Christian ethics must sooner or later prevail, even among physicians. Since the Reformation of the sixteenth century the fundamental principle of ethics, as applied to all men, no matter what their calling or profession, centres in the Golden Rule, "As ye would that men should do to you do ye also to them likewise," Luke vi. 31, and "Thou shalt love thy neighbor as thyself." To love thus and to act thus is the sum of human virtue.

Allow me to offer the following brief code of medical ethics as derived from the Bible. Does the physician want more than this standard by which to regulate his conduct?

I.—DUTIES OF PHYSICIANS TO THEIR PATIENTS.

The physician should treat his patient—

1. *With charity or love.*—"Love worketh no ill to his neighbor; therefore love is the fulfilling of the law," Rom. viii., 10. "Let all your things be done with charity," 1 Cor. xiv., 14. "Above all things have fervent charity," 1 Peter iv., 8.

2. *With conscientiousness.*—"He that walketh uprightly walketh surely," Prov. x., 9. "That which is altogether just shalt thou follow," Deut. xvi., 20. "What doth the Lord require of thee but to do justly," Micah vi., 8. "Herein do I exercise myself to have always a conscience void of offence toward God and toward men," Acts xxiv., 16.

3. *With faithfulness.*—"Doing faithfully whatsoever thou doest to the brethren, and to strangers," 3 John v.

4. *With honor.*—"Exact no more than that which is appointed you," Luke iii., 13. "See that none render evil for evil unto any man; but even follow that which is good, both among yourselves and to all men," 2 Thess. v., 15. "Abstain from all appearance of evil," 2 Thess. v., 22.

5. *With patience.*—"Be patient toward all men." "Let patience have its perfect work," 2 Thess. v., 14.

6. *With cheerfulness.*—"A merry heart doeth good like a medicine," Prov. xvii., 22. "A merry heart maketh a cheerful countenance," Prov. xv., 13.

7. *With candor.*—"A man that flattereth his neighbor spreadeth a net for his feet," Prov. xxxix., 5. "Wherefore putting away lying, speak every man truth with his neighbor," Eph. iv., 25.

8. *With helpfulness.*—"But to do good and to communicate forget not," Heb. xiii., 16.

9. *Without boasting.*—"Let another man praise thee and not thine own mouth; a stranger and not thine own lips," Prov. xxvii., 2. "The Lord shall cut off flattering lips and the tongue that speaketh proud things," Ps. xii., 3.

II.—DUTIES OF PHYSICIANS TO EACH OTHER.

Physicians should treat each other—

1. *With justice.*—"To do justice and judgment is more acceptable to the Lord than sacrifice," Prov. xxi., 3. "And what doth the Lord require of thee but to do justly," Micah vi., 8. "The way of the just is uprightness," Is. xxvi., 7.

2. *With peaceableness.*—"Let us therefore follow after the things which make for peace," Rom. xiv., 19. "Be at peace among yourselves," 1 Thess. v., 13. "He will surely reprove you if ye do secretly accept persons," Job xiii., 10. "Blessed are the peacemakers," Matt. v., 9.

3. *With unselfishness.*—"Look not every man on his own things, but every man also on the things of others," Phil. ii., 4.

4. *Not meddlesome.*—"For, brethren, ye have been called unto liberty, only use not liberty for an occasion to the flesh, but by love serve one another," Gal. v., 13. "Happy is he that condemneth not himself in the thing which he alloweth," Rom. xiv., 23. "Who art thou that judgest another man's servant? to his own master he standeth or falleth. Let every man be fully persuaded in his own mind," Rom. xiv., 4, 5. "Why is my liberty judged of another man's conscience," 1 Cor. x., 29.

5. *With generosity.*—"The liberal deviseth liberal things; and by liberal things shall he stand," Is. xxxii., 8. "The liberal soul shall be made fat," Prov. xi., 25.

6. *With honesty.*—"Ye should do that which is honest, though we be as reprobates," 2 Cor. xiii., 7. "Provide things honest in the sight of all men," Rom. xii., 17.

7. *With considerateness.*—"He that despiseth his

neighbor sinneth," Prov. xiv., 21. "Be patient toward all men," Thess. v., 13.

8. *Not quarrelsome.*—"Where envy and strife is, there is confusion and every evil work," Jas. iii., 16. "And be at peace among yourselves," 1 Thess. v., xiii. "Not of the letter but of the spirit, for the letter killeth, but the spirit giveth life," 2 Cor. iii., 6.

9. *The golden rule.*—"Therefore all things whatsoever ye would that men should do to you, do ye even so to them," Matt. vii., 12. "Be kindly affectioned one to another, with brotherly love, in honor preferring one another," Rom. xii., 10. "Finally, be ye all of one mind, having compassion one of another: love as brethren; be pitiful; be courteous," 1 Pet. iii., 8.

III.—DUTIES OF PHYSICIANS AS CITIZENS.

"Submit yourselves to every ordinance of man for the Lord's sake; whether it be to the king as supreme; or unto governors, as unto them that are sent by him for the punishment of evil-doers, and for the praise of them that do well. For so is the will of God that with well-doing ye may put to silence the ignorance of foolish men. As free, and not using your liberty as a cloak of maliciousness, but as servants of God. Honor all men. Love the brotherhood. Fear God. Honor the king," 1 Peter ii., 13-17. "Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report: if there be any virtue and if there be any praise, think on these things," Phil. iv., 8.

"Thou shalt love the Lord thy God with all thy heart, and with thy mind, and with all thy strength. This is the first and great commandment, and the second is like unto it. Thou shalt love thy neighbor as thyself."

Will not a diligent study of Christian ethics enlarge the understanding and elevate the feelings even better, perhaps, than a study of Dr. Percival's disquisitions?

Very truly yours,

CLERICUS.

COXALGIA AND SUBCUTANEOUS OSTEOTOMY.—In a paper in the July number of the *American Journal of the Medical Sciences*, Dr. H. R. Wharton records eight cases of coxalgia followed by marked deformity, in which eleven subcutaneous osteotomies of the femur were performed. The results obtained were most satisfactory, not only as regards the immunity from danger in the operation, but also as regards the correction of the deformities and restoration to use of comparatively useless limbs. The amount of constitutional disturbance following the operations was insignificant, as little, or even less, than that which follows a simple fracture of the femur; in no case was there excessive hemorrhage at the time of operation, nor did there follow in any case marked febrile reaction or suppuration; the wounds healed as ordinary tenotomy wounds, and by the end of the first week were generally found entirely closed, so that further dressings could be dispensed with. The facility with which the wounds healed in these cases can only be explained by their subcutaneous character, for although by the operation a compound fracture of the femur is produced, it must be remembered that the original puncture, which is made down to the bone by Mr. Adams's knife, is small, and that when the saw is introduced and cuts the bone, the wound is entirely filled by its shank, by blood and by dust from the sawn bone, so preventing the admission of air to the deeper parts. The results of reported cases bear strong testimony to the general safety of the operation, and there is no doubt that the selection of proper cases, and care as to the position at which the section of the bone is made, will render this operation one of the safest in surgery. The paper concludes with a full and careful discussion of the various details of the operation.

New Instruments.

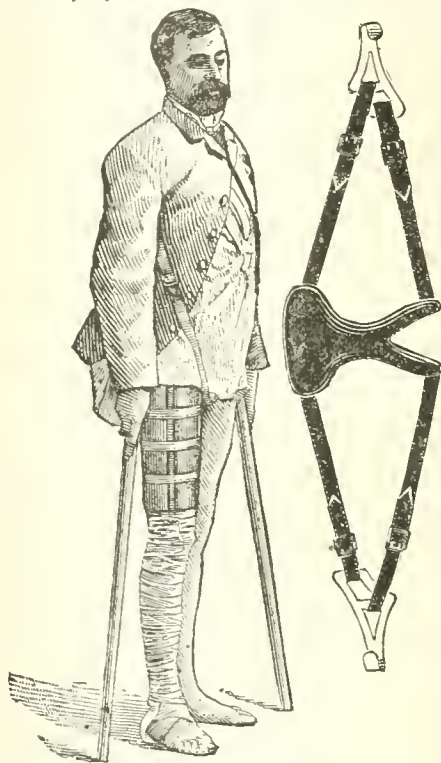
A NEW SADDLE-CRUTCH.

By JAMES R. TAYLOR, M.D.,

NEW YORK.

It consists of a small saddle so arranged that it can be worn without inconvenience inside of the clothing. A pair of suspenders are attached to the saddle on each side, which terminate in steel hooks that are adjusted to the tops of the crutches. When the suspenders are fitted to the patient these hooks reach up to within about two inches of the axillæ, where the ends appear outside of the clothing, and are the only parts of the apparatus visible. The saddle is well padded to fit the perineum, and of such form that the patient rests upon it without discomfort while sitting.

When the crutches have been placed in the suspender hooks and the patient walks, the weight of his body is carried entirely upon the saddle, and without the crutches



reaching the axillæ, so that no discomfort is experienced, even in taking long walks. He swings easily between his crutches, taking long steps if he chooses, and, if otherwise strong, the weakness in his legs will not prevent him from exercising all that is necessary. The saddle-crutch possesses special advantages over the ordinary crutches, because the weight of the body is borne by the well-cushioned pelvic bones resting upon a comfortable saddle. While designed by nature for the purpose, the inconvenience and suffering attending exercise upon ordinary crutches with the weight of the body suspended upon cross-heads in the axillæ, is gotten rid of; and because the danger of injuring the axillary nerves and blood-vessels is avoided.

The device is designed for use with ordinary crutches, in all cases of lameness of the lower extremities necessitating artificial aid in walking, and has been employed with satisfactory results by several patients, male and female, who have suffered from fracture.

THE POISON OF LIZARDS.—Drs. Mitchell and Reichert find that the full-grown lizard will bite, and cause a wound that may prove fatal. Unlike that of other reptiles, its saliva is alkaline, not acid. A little injected into a pigeon caused the death of the bird (which was long, fat, and plump) in less than nine minutes.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 21, 1883, to July 28, 1883.

SUTHERLAND, CHARLES, Colonel and Surgeon, Medical Director, Military Division of the Pacific and Department of California. The leave of absence granted by S. O. 64, Headquarters Military Division of the Pacific, June 30, 1883, is extended two months. S. O. 168, A. G. O., July 23, 1883.

BAILY, JOSEPH C., Major and Surgeon. Assigned to duty as Post Surgeon at Fort Concho, Texas. S. O. 87, Headquarters Department of Texas, July 19, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 30, Headquarters Military Division of the Atlantic, July 20, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 28, 1883.

GATEWOOD, J. D., Past Assistant Surgeon. Detached from the New Hampshire and ordered to hold himself in readiness for sea service.

LEUCH, PHILIP, Assistant Surgeon. Detached from the Receiving-Ship Franklin and ordered to the New Hampshire.

SCOTT, HORACE B., Assistant Surgeon. Ordered to the Receiving-Ship Franklin, Norfolk, Va.

McMURTRIE, D., Surgeon. Detached from the Receiving-Ship Franklin and granted sick-leave.

WHITING, ROBERT, Past Assistant Surgeon. Granted one month's leave.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 31, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
July 24, 1883.....	0	16	39	7	87	12	0	0
July 31, 1883.....	4	43	29	6	52	22	0	0
<i>Deaths.</i>								
July 24, 1883.....	0	4	11	5	19	10	0	0
July 31, 1883.....	1	8	4	6	12	17	0	0

A NEW THEORY OF THE CIRCULATION OF THE BLOOD IN THE ARTERIAL SYSTEM.—A Spanish physiologist, Dr. Ramon Turro, has put forth an ingenious theory as regards the mechanics of the arterial circulation, and we venture to offer an analysis of his views to your readers. The leading ideas are that the elastic fibres in the arterial walls cause dilatation rather than contraction—which latter is the result of the muscular action, and that the muscular walls of the arteries help to propel the blood along.

Turro first exposes what he calls the fundamental error of the reigning theory of the circulation, *i.e.*, that arterial elasticity causes diminution of the calibre of the tube.

It is the muscular and not the elastic tissue, says he, which causes retraction of the canal, as can be proved by removing a small piece of an artery and destroying the

vitality of its muscular elements. What is the result? The elastic tissue causes dilatation of the tube, although there is now no pressure to oppose its contraction. On the other hand, elasticity if it acts in the direction of arterial retraction cannot be brought into play until the pressure of the blood has distended the vessel. Now, this pressure, if it really existed, would seriously injure the delicate tissues in the same way that the violent introduction of a large cylinder would do. But the arterial system is not distended; on the contrary, it is contracted by the tonus of its muscular tissue, which is equivalent to saying that its elastic tissue tends to reopen the contracted vessels.

He then tries to prove that even without the presence of muscular tissue in the arterial walls the vessels could not be distended by the pressure of the blood. The sectional area of the base of the cone which represents the arterial system is eight hundred times as great as that of the summit or aorta (Vierordt). Can we, therefore, he says, suppose that the capillaries or base of the cone can be so contracted as not to admit one eight-hundredth as much blood as might enter at other times without causing distention? The theory states that arterial tension is caused by peripheral resistance; if the resistance did not exist this tension would be impossible. Very well, this resistance does not exist; on the contrary, that part of the arterial system which ought to be the smallest is precisely that which is the largest.

It is undoubtedly true that if the vessels tended to close, as the theory affirms, the force of the heart would be insufficient to drive the blood through them. This has been proved by experiments on contractile tubes. Nor is this all. If the conditions supposed by the mechanical theory to exist did so, the heart would have the weight of the whole organism to raise, for movements of elevation and depression are observed in all parts of the body synchronously with the heart's beat. In *résumé* we see that elastic tissue does not exist in the sense of arterial retraction, 1st, because it does not act at all; 2d, because, although the arteries have elastic walls, they act as if they had none; 3d, the supposition being true, the force of the heart would be inadequate to drive on the liquid column. After this general refutation of the mechanical theory of the circulation, Turro attacks Marez's theory in particular. According to Marez if we lessen peripheral resistance, the arteries send on the blood more easily, so that with augmentation of the venous flow we have diminution of arterial tension and increased activity of the heart's beat. Now these conclusions of Marez are negatived by the experiments of Ludwig, Thirz, Czorn, etc. (called *vitalistes*, in contradistinction to Marez and his followers, who are called *mechanicistes*), experiments which proved that blood-pressure could be raised at the same time that the frequency of the heart's beat was increased. The *vitalistes* have shown that when vascular paralysis is produced, stasis supervenes, because there is no force to drive the blood on to the heart, which seems to become feeble on this account. If the mechanical theory of the circulation were correct the vessels ought to urge on the blood and increase the venous flow, peripheral resistance being diminished. Instead of this we find the arteries more dilated than when we supposed them distended by eccentric pressure, the venous flow unchanged, and the rate of the heart's beat diminished.

Marez states that when arterial tension augments, the arteries above corresponding to the capillaries are gorged with blood. Now this arterial tension is only an *ens rationis*, besides, the application of the douche shows, that when the blood cannot pass along the capillaries as easily as before, the muscular tissue of the higher arteries relaxes (it is the artery which enlarges, and not the blood which distends it) and makes large channels for it. These changes of diameter are due to vaso-motor innervation. If we accept Marez's theory we must admit that the condition of the small vessels is

opposed to that of the large; the muscular tissue, however, of large and small vessels is continuous, hence the state of the peripheral circulation is in equilibrium with that of the arteries supplying the capillaries. To sum up, we find that the energy of the heart augments and diminishes with the venous flow, but we are not yet acquainted with the true mechanism which modifies its rhythm. Since the elastic tissue is retracted the more that the calibre of the vessel is diminished, we see that we have two forces at work, one tending to close, the other to reopen the canal; dilatation, then, is elastic tension which becomes free. Thus, while the theory affirms that the elastic tissue retracts because it has been distended, we say that it does so because it has been pressed together by the rhythmical action of the muscular elements. The blood having passed that part of the circulatory system where it is urged on by the cardiac systole alone, reaches the arteries possessed of muscular tissue, which contract behind the wave. Thus a slow vermicular movement creeps along. Another important factor is the elastic tissue, which dilates spontaneously at the place that the muscular tissue relaxes, and allows the blood to move along more freely.

Tonicity is a cohesion of the contractile plasma and is in inverse ratio to the quantity of blood which nourishes the muscular fibre. As soon as the flow of blood is diminished, the vessel contracts and adapts itself to the lessened stream. This adaptation is due to the nutritive modification of the fibre. Contraction and dilatation are only two phases of the mechanism of nutrition. The vessel will maintain itself in a permanent state of tonicity at a determined degree as long as a repairing assimilation will compensate for the incessant disassimilation which takes place in its contractile substance by the formation of new products due to its combustions. When equilibrium is disturbed by an excess of nutrition, tonus will be weakened by the nutritive relaxation of the muscular elements; when there is an insufficient amount of nutrition, movements of contraction will take place which may continue up to post-mortem contraction. When the flow is suspended the same disassimilation goes on, or the muscular substance coagulates and uses up its own substance to repair waste until its power is exhausted and it yields to the elastic tension. The contracted condition found in rigid muscle is only a development of the tonic cohesion normally present. Contractility resides in the muscle plasma—elasticity in its envelopes (sarcolemma, perimysium). The activity of the heart is also regulated by its nutrition; its energy must necessarily become less when less blood reaches it, because then its tonicity increases, its substance becomes impoverished, and its contractions become weaker each time. Cardiac rhythm is increased or retarded with the venous flow—energy is in inverse ratio to acceleration. It is in the chemical activity of the muscular substance of the heart that we must seek the secret of its rhythm.

Since the arteries contract when the amount of blood circulating in them diminishes, we must admit that there are rhythmical contractions, because the heart sends the blood on intermittently. The artery conducts onward the powerful impulsion imparted to it by the heart. How do the vessels dilate? The vessel or portions of vessels which are half bloodless retract in virtue of the increasing tonicity by which the plasma exhausts itself in producing contractions; but as contraction increases the elastic tissue is retracted and opposes resistance greater or less according to the contraction, like a spring. The blood exercises a pressure on the walls of the vessel for the reason that they are retracted. This pressure and elastic tension assist in passage of blood-plasma through the vessel, which being nourished, relaxes. Circulation is more active in brain than in crural artery, which seems to indicate that it is richer in muscular elements. The kidneys, spleen, etc., have rhythmical contractions which urge on the blood, so that we may speak not only of one circulation, but of several.

ITCH IN THE CAT.—A correspondent of the *British Medical Journal*, Dr. John Reid, writes as follows regarding a case of "acarus" in a cat: "The cat in question, when seen for the first time (it being a stray cat), was greatly emaciated, and died on the following night (January 5, 1883). The hair on one side of the face and neck, including the ear, was matted so as to resemble one large scab. The itch-insect and eggs were detected in large numbers. The cat's liver contained many abscesses of the size of a pin's head; the lungs, etc., appeared to be normal. Does the cat infect children, etc.? do these infect the cat? or is there mutual infection?"

ELECTRICAL FLANNEL FOR RHEUMATISM.—An electric curiosity which will soon be in the hands of charlatans has been invented by a Dr. Claudet. It is a flannel to cure or alleviate rheumatism. It contains, per kilo, one hundred and fifteen grammes of the oxides of tin, copper, zinc, and iron. A series of threads of this fabric is impregnated with these metallic products, and each series is alternately separated by raw threads. The flannel thus prepared constitutes a true dry pile. It is said to develop electricity by simple contact with the body, or better still, with the products of perspiration.

A NOVEL METHOD OF REMOVING A FOREIGN BODY FROM THE ŒSOPHAGUS.—Dr. Neuman was called to see a horse which was choking; the animal had been eating carrots. Dr. Neuman was unable to reach the foreign body with his hand. The horse's mouth was then opened, and held open by a mouth speculum. Then a common water hose, which was at hand, was passed through the speculum down the Œsophagus until the foreign body was reached. The water was turned on full force, and the obstruction disappeared.—*Journal of Comp. Medicine.*

TALMAGE ON DOCTORS.—We all like to be patted on the back once in a while, and brother Talmage does it in the following very vivid and unexaggerated manner: "Encourage all physicians. You thank him when he brings you up out of an awful crisis of disease; but do you thank him for treating the incipient stages of disease so skillfully that you do not sink as far down as an awful crisis? There is much cheap and heartless wit about the physician; but get sick, and how quickly you send for him. Some say doctors are of more harm than good, and there is a book written, entitled, 'Every Man His Own Doctor.' The author ought to write one more book and entitle it 'Every Man His Own Undertaker.' Do you think physicians are hard-hearted because they see so much pain? Ah, no! The most eminent surgeon of the last generation in New York came into the clinical department of the New York Medical College when there was a severe operation to be performed upon a little child. The great surgeon said to the students gathered around him: 'Gentlemen, there are surgeons here who can do this just as well as I can. You will excuse me, therefore, if I retire. I cannot endure the sight of suffering as well as I once could.' There are so many trials, so many interruptions, so many exhaustions in a physician's life that I rejoice he gets so many encouragements. Before him open all circles of society. He is welcomed in cot and mansion. Children shout when they see his gig coming, and old men, recognizing his step, look up and say, 'Doctor, is that you?' He stands between our families and the grave, fighting back the disorders that troop up from their encampments by the cold river. No one ever hears such hearty thanks as the doctor. Under God he makes the blind see, the deaf hear, the lame walk. The path of such is strewn with the benedictions of those whom they have befriended. Perhaps there was in our house an evil hour of foreboding. We thought all hope was gone. The doctor came four times that day. The children put aside their toys. We walked on tip-toe and whispered, and at every sound said, 'Hush!' How loud the clock ticked!

and, with all our care, the banister creaked. The doctor stayed all night and concentrated all his skill. At last the restlessness of the sufferer subsided into a sweet, calm slumber, and the doctor looked around to us and whispered, 'The crisis is past.' When, propped up with pillows, the sick one sat in the easy chair, and through the lattice the soft south wind tried hard to blow a rose-leaf into the faded cheek, and we were all glad, and each of the children brought a violet or a clover-top from the lawn to the lap of the convalescent, and little Bertha stood on a high chair with the brush smoothing her mother's hair, and it was decided that the restored one might soon ride out for a mile or two, our house was bright again. And as we helped our medical adviser into the gig we saw not that the step was broken or his horse sprung in the knees. For the first time in our life we realized what doctors are worth. In some of our minds among the tenderest of our memories is that of the old family physician."

THE CURE OF ONYCHIA AND INGROWING TOE-NAIL.—Dr. M. A. Veeder, of Lyons, N. Y., communicates the following: "For the cure of onychia and ingrowing toenail the following plan is simple and effective: Destroy the fungous granulations by means of strong carbolic acid, or silver nitrate, and then press back the diseased tissue away from the sharp edges of the nail by means of a piece of the ordinary felt-plaster so much used for corns, which is to be applied as follows: Get a piece large enough, such as that used for bunions if need be, and cut it the size of the exposed surface of the nail. Moisten the adhesive surface of the plaster, and apply it directly to the surface of the nail, pressing the margins of the felt firmly against the diseased parts surrounding the nail. It should be held in place until dry, when it will be found to be strongly adherent, and it may then be covered by a bandage, as a means of exerting still further pressure on the diseased parts. This dressing may require to be renewed repeatedly, at intervals of several days. The length of time required for a radical cure depending upon the extent to which the nail has been disintegrated, the cure not being complete until the parts destroyed are replaced by a fresh growth of nail substance."

THE GROWTH OF CHILDREN.—Some inquiries have been made by Dr. George W. Peckham, of Milwaukee, Wis., regarding the growth of children. The data were collected in Milwaukee. It seems that the density of population acts upon growth by affecting the health conditions, and by making the struggle for existence more intense. The greater height of males than females he finds is due to two causes: First, the arrest of growth of lower extremities in girls of about fourteen and a half years, boys experiencing no retardation in their growth; second, the falling off of the rate of growth in the bodies of girls at about the fifteenth year, and the termination of their growth at about the seventeenth year.

WHO WOULD NOT BE A DOCTOR?—Quite a number of our young men are studying for the medical profession. We do not wish to deter them from this laudable pursuit, for a physician's calling is one of the most honorable, ennobling, humanizing, and useful in the world. But all is not gold that glitters, and the following are some of the sweets of a doctor's life: If he visits a few of his patients when they are well, it is to get his dinner; and if he does not do so, it is because he cares more for the fleece than the flock. If he goes to synagogue regularly, it is because he has nothing else to do; if he doesn't go, it is because he has no respect for the Sabbath nor religion. If he speaks reverently of Judaism, he is a hypocrite; if he doesn't, he is a materialist. If he dresses neatly, he is proud; if he does not, he is wanting in self-respect. If his wife does not visit you, she is "stuck up;" if she does, she is fishing for patients for her husband. If he has a good turnout, he is extravagant; if he uses a poor one on the score of economy, he is deficient in ne-

cessary pride. If he does not write a prescription for every trifling ailment, he is careless; if he does, "he deluges one with medicine." If he makes parties, it is to soft-soap the people to get their money; if he does not make them, he is afraid of a *cent*. If his horse is fat it is because he has nothing to do; if he is lean, it is because he isn't taken care of. If he drives fast, it is to make people believe somebody is very sick; if he drives slowly, he has no interest in the welfare of his patients. If the patient recovers, it is owing to the good nursing he received; if he dies, "the doctor did not understand his sickness." If he talks much, "we don't like a doctor to tell everything he knows," or, "he is altogether too familiar;" if he don't talk, "*we like to see a doctor sociable.*" If he says anything about politics "he had better let it alone;" if he don't say anything about it, "we like to see a man show his colors." If he does not come immediately when sent for, "he takes things too easy;" if he sends in his bill "he is in a terrible hurry for his money." If he visits his patients every day, it is to run up a bill; if he don't, it is unjustifiable negligence. If he orders the same medicine, it does no good; if he changes the prescription, he is in league with the druggist. If he uses any of the popular remedies of the day, it is to cater to the whims and prejudice of the people, to fill his pockets; if he don't use them, it is from professional selfishness. If he is in the habit of having frequent consultations, it is because he knows nothing; if he objects to having them, on the ground that he understands his own business, "he is afraid of exposing his ignorance to his superiors." *If he gets pay for one-half his services* he deserves to be canonized. Who wouldn't be an M.D.?—*The Hebrew Standard.*

THE EMPRESS OF GERMANY.—The wife of the American Minister at Berlin, Mrs. Sargent, in a letter describing a call upon the Empress, said: "Her Majesty surprised me by asking about my daughter Lizzie. She had heard that Lizzie began the study of medicine in California, and was now continuing it in Zurich. 'We are much interested in medicine,' the Empress added, and then spoke of the civil war in America and the Franco-Prussian war, saying that the Germans had gained much valuable information from the Americans as to the treatment of sick and wounded soldiers, which was put to good use in their last war."

A CASE OF GLOSSO-LABIO-PHARYNGEAL (OR BULBAR) PARALYSIS WITH THE LESION IN THE CEREBRAL HEMI-SPHERES.—Dr. C. K. Mills, at the June meeting of the College of Physicians of Philadelphia, said that the present was a good opportunity to put on record an observation on cerebral glosso-labio-pharyngeal paralysis. It is well-known that this affection is usually attributed to degeneration of the cranial nuclei; in fact, it is often called "bulbar paralysis." A patient presenting the oral, labial, lingual, and pharyngeal symptoms of this disorder, had died about two years before at the Philadelphia Hospital. Examination showed no lesion of pons or medulla. Along the outer border of both lenticular nuclei, and extending into the external capsule and claustrum, were long, narrow, and somewhat irregular areas of degeneration; softened or broken-down districts surrounded by walls of harder, darker tissue. Kirchoff and others had since reported similar cases, but up to the time of making the observation he had never seen such a case reported.

THE SIXTH AND SEVENTH CRANIAL NUCLEI.—At a meeting of the College of Physicians of Philadelphia, June 6th, Dr. Harrison Allen called attention to the curious apparent discrepancy between the anatomical and physiological relations of the sixth and seventh cranial nuclei. He said: "The cranial nerves at their nuclei of origin and in the course of their intrinsic fibres may be involved in diseased action. It would seem to be more than a coincidence that the nuclei of the ninth, tenth, and eleventh nerves are arranged in a definite series, forming the trineural fasciculus; and that the nerves themselves are

associated in function. But this line of reflexion is useless when applied to the nuclei of the sixth and seventh nerves. These nerves appear to have no function in common, and yet they arise, in part at least, from the same nucleus. In their range of variation they have no relation with one another; nor in any animal known to the writer does the sixth nerve spring from the facial trunk, but always (in variations from the human type) from the third. The third, fourth, and sixth nerves are naturally associated; but no reason is assigned for the withdrawal of the nucleus of the sixth from the mid-brain; where the nuclei of the third and fourth nerves lie, to the hind-brain, where it is in association with an alien, namely, the seventh. Associated paralysis of the third, fourth, and sixth nerves is common; but paralysis of the sixth and seventh is rare.

HUMAN PARASITES.—Dr. George Sutton, in an article in the *Cincinnati Lancet and Clinic*, gives the following list showing the principal parasites which infect the human system:

Microzymes.—Micrococci: Probably of small-pox, cow-pox, measles, scarlatina, varicella, erysipelas, syphilis, gonorrhœa. Bacilli: Probably of typhus fever, typhoid fever, tuberculosis, anthrax, leprosy. Vibrio. Filaria: Probably of elephantiasis. Spirillum: Probably of relapsing fever. Bacteria: Probably of septicæmia.

Entozoa.—Vermes—Cestoda: Probably of *tænia eliptica*, *tænia flavo punctata*, *tænia medio canellata*, *tænia nana*, *tænia solium*, *tænia bothriocephalis candatus*, *tænia bothriocephalis latus*. Nematoda: Probably of *ascaris lumbricoides*, *ascaris mystax*, *oxyuris vermicularis*, *filaria medinensis*, *dochmius duodenalis*, *trichocephalis dispar*, *trichina spiralis*. Trematoda: Probably of *monistoma*, *distoma*.

Epizoa.—Insects—Acarus *scabei*. Pediculida: Probably of *pediculus capitis*, *pediculus vestimenti*, *pediculus tabesentium*, *pediculus pubes originalis*. Pulix: Probably of *pulix irritans*, *pulix penetrans*. Ixodia: Probably of *ixodes americanus*, *ixodes numarias*, *ixodes erenatus*.

Undoubted vegetable parasites and their diseases.—Microphytes—*Achorion schonleinii*: Probably of favus. *Trichophyton tonsurans*: Probably of porrigo scutulate. *Microsporon andonini*: Probably of porrigo decalvans. *Microsporon mentagrophites*: Probably of mentagra. *Microsporon furfur*: Probably of tinea chloasma.

SEA-BATHING.—At the present time, when the sea-bathing season is about to commence, it may be useful to recall the chief general indications and contra-indications which respectively sanction and forbid bathing in the sea. "Shall I bathe?" This is a question which thousands of health-seekers will be asking of their doctors during the next few weeks. While the stimulus of a fresher air, of change of scene, and of new occupations, together with rest from accustomed work, are the elements from which the weakly, the worn, and the worried reap physical and mental restoration in a sojourn on the sea-coast, it is unquestionable that bathing in the open sea is, in itself, a powerful restorative agency, which many persons may employ with very great advantage. The universal experience of our race, through unnumbered ages, has shown the value of sea-bathing in both preventive and curative medicine. A good rule, laid down by an experienced physician, is this: In all cases showing impaired functional powers, without any manifestation of inflammatory symptoms—in short, in those cases in which the exhibition of alteratives and tonics is indicated—sea-bathing, may, with proper precautions, be resorted to; it is contraindicated in persons of plethoric habit of body, in cerebral congestion, in organic disease of the heart, in aneurism, and in all persons who have the inability safely to encounter a comparatively severe shock; while it is also to be forbidden at certain periods in which the female constitution is not prepared for the application of powerful remedies. Because it tends, in certain conditions of impaired health, to cause determination of blood to the viscera. Bathing in the open sea is

generally unsuitable for persons disposed to congestive disorders of the lungs, kidneys, liver, and brain. Albuminuria, advanced anæmia, and a liability to hæmoptysis, are also conditions with are usually accepted as contra-indicating sea-bathing. It is hurtful to bathe babies in the sea; children under two years of age are too young to bear with advantage the comparatively severe shock of a cold sea-bath. In old age, when the bodily powers are unequal to a vigorous reaction, sea-bathing may do much harm, especially in the subjects of extreme arterial degeneration. In suitable cases, and under proper precautions as to time of bathing and duration of exposure, a daily bath in the open sea is a valuable restorative. In individuals who are fairly robust, it is a stimulant alterative and tonic, promoting appetite, tissue-change, and excretions, and bracing up the nervous, vascular, and muscular systems. Sea-bathing is especially useful as a powerful and unsurpassed tonic in delayed convalescence from acute diseases, in many chronic affections, and in persons whose strength has become enfeebled by injurious excesses, by mental strain, or by unhealthy occupations.—*British Medical Journal*.

AWAY WITH THE SPOON.—A contemporary proposes to get rid of the use of "spoonfuls" as doses by the following expedient: "Let each bottle (vial) be provided with a strip of paper pasted on, which strip is accurately divided with as many lines (marks) as the bottle contains doses to be taken, the lines to be numbered, beginning with the topmost, and let the directions read: Take one eighth (fourth, twelfth, etc.), part, etc., as the direction shall run, or, perhaps better, take one division, etc. The strip to reach from the bottom of the bottle (vial) to the top of the liquid, not farther."

PROFESSOR VIRCHOW AND THE SWISS PILL.—Professor Virchow has fallen under the displeasure of the Congress of German Physicians, a society which meets annually to take cognizance of medical ethics and allied matters. He has been charged with giving a testimonial to a secret remedy, the *pilulæ helveticæ* of a Dr. Brandt, of Schaffhausen; and doubtless many of our readers have themselves received the laudatory notices which accompany these famous "pills," the distribution of which has not been limited. Virchow, in a letter to the *Berliner Medizinische Wochenschrift*, marvels at the amount of displeasure which he has apparently incurred. He says that he received some of the *pilulæ helveticæ* last winter, with a letter from Dr. Brandt asking him to give them a trial. Some time afterward came another appeal, and, being himself in the need of such a remedy, he tried their effect on himself. The result was so satisfactory that he penned a few lines to the inventor, which the latter forthwith published without Virchow's sanction, pleased, no doubt, when such testimony came from so high a quarter. From that time Virchow has had no peace—letters and circulars, signed and unsigned, have been addressed to him complaining that he was violating the ethical law in giving a testimonial of a secret remedy; and this has culminated in the remonstrance addressed by the chairman of the committee of the *Aerzte-vereinbund*. The committee also procured an official analysis of the pills, which, however, only went to show that their composition was nothing very extraordinary. Virchow denies that he ever gave a testimonial at any time for these or any other pills. He withdraws from the Bund, and appeals from its arbitrary action to his medical brethren at large to pass a judgment free from the paltry and narrow trades-unionism which characterizes this act.

ANSWERS TO MEDICAL CORRESPONDENTS.

Dr. S. W. G., Iowa: Yes, two grains of strychnia was a large dose for that baby.

No, his convulsions were not entirely due to teething.

No, it does not make any difference if you did pass second in your class when you graduated; the law will hold you just as responsible.

Yes, before a jury it would perhaps be a mitigating circumstance that you had graduated without ever seeing a case; but the father of the child could not prosecute your medical college.

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THE PRESENT ASPECT AND FUTURE PROSPECTS OF MEDICINE.

AN ADDRESS DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.¹

By A. T. H. WATERS, M.D., F.R.C.P.,

SENIOR PHYSICIAN TO THE ROYAL INFIRMARY, AND PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, LIVERPOOL, PRESIDENT OF THE ASSOCIATION.

GENTLEMEN: I esteem it an honor of no common kind to be elected President of the British Medical Association, and to be called upon to take the chair at one of its annual gatherings; and to me the honor has a special value, for I can look back on many years of close relation with the society; it has been the means by which I have formed friendships whose importance I cannot overestimate, and its meetings have been among the most interesting circumstances of my life. Your kindness, therefore—the kindness of my fellow-residents and of the Association at large—in placing me here to-day, deserves my warmest thanks, and will always be held in grateful remembrance.

Twenty-four years have passed since the Association met in Liverpool to celebrate its twenty-seventh anniversary. These years have been marked by the uninterrupted prosperity of our society, by a large increase in our numbers, and an increasing interest in the proceedings of our annual gatherings. With reference to our success, it may, perhaps, be sufficient to say that, whereas at that time and up to the year 1866 we numbered about twenty-three hundred members, we are now ten thousand strong. May the future progress of the society be ever in accordance with its experience of the past; and may he who shall open its next session in this city be able to say, with as much truth as I can to-day, that the Association has increased in strength with its increased years.

But, gentlemen, while we congratulate ourselves on the success of our efforts in connection with this large Association, let us never forget that we are all members of a still larger body—that we belong to the great commonwealth of medicine, which knows no distinction of race, or clime, or people; and that, while it is our duty, and should always be our aim, to promote the special objects for which our society was founded, our highest duty and our noblest aim should be to foster the general interests of medicine, and to endeavor to advance it as a science and as an art; and, in the few remarks which I have to address to you on this occasion, I purpose to dwell, very briefly, on some of those points which seem to me worthy of our attention with reference to the present condition and future prospects of our profession; for, although there are many topics of local interest to which I might refer, all that relates to Liverpool—its medical history, its hospitals, its school of medicine, its University College, its public buildings, its river, and its docks—has been so well treated of in some recent numbers of our *Journal*, that any further observations on the subject are altogether unnecessary.

When last we met, in Worcester, we celebrated our jubilee, and it was well to look back on the period which had elapsed since our society was founded, and to refer with satisfaction to the good work which it had done, and

the progress which medicine had made during the previous fifty years. And while echoing to-day all that was then so ably expressed, I think it would be well if we were to consider that we have now entered on a new phase—that we have taken, as it were, a new departure, and that with the great advantages we possess we should, as a society, and also as a profession, strive to develop our science more rapidly in the future than it has been developed in the past, and that our progress should be more marked in all that relates to the higher aspirations of our calling.

Nor are there wanting signs which point to the probability of such a consummation. We now see a higher standard of medical education insisted on; we see, on all sides, the inductive method of investigation brought to bear on the great problems of medicine; more and more we see dissatisfaction with our present uncertain and inexact knowledge; and we cannot doubt that the observations which are being carried on, and especially those which are being conducted under the auspices of our Collective Investigation Committee and of the Society for the Cultivation of Medicine by Original Research, will before very long bear fruits, and lead to generalizations of the most important kind.

To my mind there is nothing in the present aspect of medicine more satisfactory, or more likely to raise it from the region of empiricism and place it on a higher scientific level, than the endeavor now being made to render our knowledge more definite and exact; and if I were to point to one circumstance which, in my opinion, has, probably more than any other, contributed to this result, I should say it was the introduction into our practice of *instruments of precision*. These have furnished us with means by which the senses may be placed in immediate relation with the actual phenomena of disease, and these phenomena are sometimes of so simple a character, and yet so indicative of the general morbid state, and require so little mental analysis, that the very tyro can almost read their significance.

No more important step was ever made in practical medicine than that of the application of physical principles to the diagnosis of diseases of the chest. In what condition would now be our knowledge of diseases of the lungs, had the researches so largely associated with the name of Laennec never been made? In what condition was the knowledge of cardiac diseases before the investigations and experiments of the physiologist gave us definite information with reference to the movements of the heart, the action of its valves, and the causes of its sounds? The differentiation of lung and heart affections by the aid of physical inquiry, the possibility of making an exact diagnosis without investigating one single general symptom, constitute a triumph for medicine which is not to be surpassed in the practical application of scientific principles in any other department of human knowledge; and we must not forget that this marked advance has been achieved in a comparatively short space of time, for it was not till 1819 that Laennec gave his observations to the world.

What can be more striking than the results of physical inquiry in pulmonary or cardiac diseases? Let us suppose a student in medicine following, for the first time, a competent teacher through the wards of a hospital. He sees him stop at the bedside of a patient suffering from one of these affections; he watches him as he makes his examination; he hears a few leading ques-

¹ Held in Liverpool, July 31, and August 1, 2, and 3, 1883

tions put, he sees a few gentle blows struck; a brief application of the stethoscope; and then, without any hesitation, the physician, turning to his class, tells of the nature of the case—that there is consolidation of a lung; effusion into the pleura; disease of a particular valve of the heart, hypertrophy of its walls, or degeneration of its fibres. He speaks of the mode of origin of the affection, the course it will probably take, and the issue that will come. Our student is struck with astonishment at the apparent facility of the diagnosis, and the rapidity with which it has been made. He watches the progress of the disease, and he finds becoming developed the conditions which were foretold; and (if, unhappily, the case terminates fatally), on a subsequent day, following his teacher to the *post-mortem* theatre, he sees the body of the patient submitted to examination; he sees revealed by the scalpel the condition which exists. He sees that there is consolidation of a lung; effusion into the pleura, valvular disease of the heart; hypertrophy of its walls, or degeneration of its fibres; he sees, in fact, a verification, in its minute details, of the diagnosis that was made, and he is apt, perhaps, at once to conclude that medicine is one of the most exact of the sciences.

It would be well if in all departments of medicine there were the same facilities for exact diagnosis as in diseases of the heart and lungs; but what the application of acoustic principles has done in these affections, the application of chemical principles, and the use of the microscope, the ophthalmoscope, the laryngoscope, and the sphygmograph, have in a measure done for the diseases of some other organs. And may we not hope that, with reference to the diseases of the nervous system—the most obscure of all which come under the notice of the physician—the researches of the present day, and the attempts now being made to clear up our knowledge of the physiology of the brain, and to localize its various functions, may be followed by results which will add largely to our powers of differentiating nervous affections, and of successfully treating them?

Again, in referring to instruments of precision, let me observe how important are the results which have followed the use of that instrument which, when the Association last met here, was scarcely ever used in this country, but which is now the constant companion of every practitioner—the clinical thermometer. How valuable is the information which it gives! How intimately does it place that important factor of fever—increased temperature—under our observation! Without attempting to discuss the relations of heat to the other phenomena of fever, I may observe that, in a large number of cases of disease, the measure of the temperature is undoubtedly the measure of the danger; and that the immediate recognition of its rise to an inordinate extent is the first step toward the application of means on which the life of the patient may depend. Were this the proper occasion, I should like to dwell on the great value which the scientific use of the thermometer has been, and is likely still further to be, to the practical physician. Not only has it enabled him to recognize conditions of hyperpyrexia fraught with extreme peril, and thus to use at the right moment measures for reducing temperature which have been followed by the most beneficial results; not only has it afforded a means by which the constant attendant on the sick can ascertain the development of serious symptoms; but its further application, and the recognition, by its use, of the special oscillations of temperature which characterize some diseases, have enabled the physician to differentiate between affections in which other means of diagnosis have been insufficient; while, by still more extended observations with the instrument, we shall perhaps be able to explain, more fully than we now can, the causes which underlie the variations of temperature which are so marked a feature of some affections; and possibly this knowledge may influence beneficially our treatment of them. And, in referring to this

subject, I cannot refrain from alluding to the fact that it was a Liverpool physician, Dr. Currie, who, early in the present century, was the pioneer in the use of cold applications to the surface of the body in the treatment of fevers; and, although Currie's practice fell into disuse, the merit of initiating a method of reducing temperature, which the use of the thermometer has enabled us in the present day to place on a more successful basis, may, I think, be fairly claimed for him.

How often has the use of the laryngoscope enabled the practitioner to recognize the true bearings of certain laryngeal symptoms, and to differentiate between organic disease of the larynx and the results of pressure from a thoracic tumor! How often has it enabled him to decide on the nature of a laryngeal growth, and the possibility or otherwise of successful medical or surgical treatment! How much do we not owe to the introduction of the ophthalmoscope—an instrument which has literally thrown a flood of light on the affections of the eye, and may be said, indeed, to have revolutionized the whole practice of ophthalmic medicine; while, by enabling us to recognize certain conditions of the eye, and to interpret their significance with reference to other morbid states, it has materially aided the work of the general physician.

The sphygmograph is an instrument which, though largely employed in hospital work, has not hitherto found its way into general use. It cannot be said to have had much influence on our practice; but I think we often derive important indications from it with reference to the state of the arterial system and the degree of arterial tension which exists; and possibly by a more frequent employment of it we might be able to recognize, at an earlier stage than we now can, those manifestations of incipient disease which frequently pass unnoticed, and therefore untreated. Further, in certain acute diseases, the sphygmograph often gives indications which are important in regard to prognosis. The hyperdicrotism of the pulse, as shown by the instrument, may indicate the extreme gravity of a case which other symptoms fail to point out.

I am glad to see that in the Section of Medicine a discussion is to take place on the subject of arterial tension, and I hope that some valuable information may be elicited from it. I believe that important results may be expected to follow from more exact observation on the condition of the arterial system.

The great results which have followed the application of physical principles to the recognition of disease, constitute the common-places of medicine of the present day; and perhaps I ought to offer some apology for dwelling upon them; they are, nevertheless, the great facts of medicine, they are the facts to which we can point as showing the scientific basis of our art, and their value can be appreciated only by those who are engaged in the practical application of therapeutics. They are, moreover, the main guarantee which we have for progress in the future; for who shall doubt that the next half century will be more fertile in the production of instruments of precision, and in bringing scientific principles to bear on the work of the physician, than that which has just passed? Who shall doubt that as the result of the more rigid application of the inductive method of research, and more careful and combined clinical investigation, our powers of generalizing on disease, and of differentiating between the variations which it presents, will be largely increased; that diagnosis will be more easy, and treatment more successful?

In considering the standpoint of medicine, we should always bear in mind that medicine must be judged by the therapeutic results which it achieves; and in proportion as we can show that the researches of the physiologist, the pathologist, and the chemist, and the application of scientific principles, have enabled the physician to deal more successfully with disease, to anticipate its development, to recognize its earliest symptoms, to mitigate its severity,

and reduce its rate of mortality, so do we establish for our art a claim on the confidence and gratitude of mankind; and in this respect the present state of medicine shows no slight advance on the past, and promises a more rapid progress in the future. The past five and twenty or thirty years—not to go further back—have been marked by the general development of views with reference to many diseases, such as have largely and beneficially influenced our treatment of them; and as I took an illustration of the value of physical investigation from diseases of the chest, permit me to refer again to some of these affections in speaking of the question of treatment. With regard to the affection which we term pneumonia, have we not seen the introduction into practice of a mode of treatment which has deprived the disease of much of its terror, and greatly reduced its mortality? Whatever be the views which we entertain of the nature of pneumonia, the important fact remains that we may enumerate among the successes of medicine of the present day a large reduction in the mortality from the affection.

Again, the recent development of the practice of tapping the chest in pleuritic effusion, an operation comparatively rarely performed thirty years ago, is, in my opinion, a very marked improvement in therapeutics. Those who have carefully watched the progress of medicine in this matter, know full well how great have been the changes which have taken place within the last quarter of a century, and especially since the introduction of the aspirator. It is impossible to refer to all those to whom we are indebted with reference to this subject, but Trousseau, as a pioneer, and Bowditch, whose large experience and satisfactory results exercised so beneficial an influence, I must not pass over; while there are many in this country to whom we owe no less a debt of gratitude. There is, perhaps, from the facility with which tapping may be performed, and the almost entire absence of risk when it is properly performed, a fear that it may sometimes be resorted to unnecessarily. But, from what I may term a somewhat large experience in the operation, I can speak with confidence of its value and safety in both acute and chronic effusions; and I cannot but think that, as the result of the early performance of the operation, we shall see, every year, fewer of those cases of deformed chest which so frequently follow neglected pleuritic effusion.

How satisfactory have been the practical results which have followed the researches that have been made, within the past half century, into the nature of continued fevers! It is now about forty years since Stewart (whose recent loss we have to deplore) published his investigations in typhus and typhoid, and showed their distinct and separate individuality. Other laborers have since worked in the same field, and have established, beyond a doubt, the facts which he then demonstrated, the knowledge of which has largely tended to the prevention of these affections, and enabled us to trace to their source many outbreaks which, in former times, would have been involved in mystery. Nor can we point, perhaps, to any one circumstance which has had a more beneficial influence on the treatment of these diseases than the recognition of the pathological changes by which they are characterized. The precautions which we consider imperative during convalescence in the one disease—precautions which may be, in large measure, neglected in the other, are but the outcome of the careful investigations which have been made into the morbid changes by which the two affections are attended. And if we have abandoned the idea that these fevers can be cut short by any measures, or the administration of any drug; if we have no faith in any specific line of treatment, and are, for the most part, content to watch our patients carefully, and to guide them, as it were, through their attacks, this is not scepticism—it is the result of a more intimate knowledge of these diseases, of a better acquaintance with their natural history, and a better appreciation of their pathological changes. We

wait for further insight into their essential nature, and we are not without hope that fresh discoveries will give us increased power, in regard both to their prevention and their treatment.

It is impossible to enumerate the various affections in which there is a marked improvement in treatment, and those which I have referred to must be considered simply as illustrations of my position; but while I speak with satisfaction on this subject, I must not forget to mention that, in the midst of many successes, we have instances of, I will not say actual, but comparative failure. Our knowledge of the pathology of some affections remains very imperfect, and our therapeutics are in some respects very unsatisfactory. Although rheumatic fever is one of the most common diseases, it must be confessed that we are ignorant of its pathology. During the past few years there has been introduced into practice a mode of treating the disease by the compounds of salicylic acid, which has met with general adoption, and has been largely successful. I can add the testimony of my experience in its favor; but still, with all the opportunities which we possess of studying the affection, we are as yet unable to give any satisfactory explanation of its essential nature.

Again, how unsatisfactory is the knowledge we possess with reference to the pathology of diabetes! We have long recognized its clinical features, and we are often able to modify its course, and mitigate its symptoms; but of its real nature we are ignorant, and nothing has tended to show this more than the discussion recently carried on at one of our societies. But this confession of our ignorance is one of the most promising features of our day, it is that which gives us assurance that every effort will be made toward increased knowledge in the future. Whence comes this want of success in the investigation of the nature of diabetes? We have approached it from the physiological side, from the chemical side, and from the pathological side, and have failed. Can we hope that by combined observation of its clinical features, of its life-history, and its relation to families and individual peculiarities we may elucidate its nature? May we hope that it is one of those subjects which will be inquired into, and the problems of which will be solved by the labors of our Collective Investigation Committee? I recommend it to their consideration.

And here I must express the great satisfaction with which, in common, I am sure, with every member of the Association, I have seen the establishment of this Collective Investigation Committee, how strongly I feel that it is capable of accomplishing most valuable work, and how much I think we are indebted to Professor Humphry for initiating the movement. Doubtless, a large part of the work of the committee will consist in collating facts with reference to specific diseases; but there is one line of inquiry which, I trust, will receive from it a share of attention. I mean the consideration of the points of difference between functional disturbances, and the early symptoms of organic affections. How difficult is it sometimes to say, when some slight symptom presents itself, and when no objective signs of organic disease can be discovered, whether that symptom indicates incipient structural change or mere functional disarrangement! Upon the right appreciation of the phenomenon, however, the safety of the patient may depend; for, although we stand almost powerless to arrest the course of confirmed structural changes, there can be no doubt that, could we recognize the earliest steps in these changes, could we see clearly the points of departure from normal conditions in various chronic and hitherto incurable maladies, we might do much to check these alterations of structure, and prevent the further progress of the disease.

In an investigation of this kind, our hospital work is comparatively useless. There we are brought into relation, for the most part, with disease already well marked—disease which has produced its easily recognizable re-

sults; and if patients present themselves with slight symptoms, they perhaps soon recover, and are lost sight of. It is in the daily work of private practice that observations such as I have referred to can alone be satisfactorily made; and it is, therefore, to the great bulk of practitioners throughout the country that we must look for aid in this matter. It involves a lengthened study of each individual case; a close watching, not for weeks or months, but for years; and perhaps the facts gathered in a lifetime might be but few. It relates to the consideration of subjective symptoms which we cannot accurately estimate with our present physical means, but which are intimately associated with individual peculiarities and idiosyncrasies, and often form the most important elements in our diagnosis, prognosis, and treatment. It may be that, with more refined instruments of precision and greater scientific knowledge, we shall bring many of these symptoms within the range of physically recognizable facts; but, in the meantime, inquiries such as I have referred to may materially aid us.

But, gentlemen, of all the questions which now engage the attention of the pathologist and physician, there is no one which surpasses in importance that which relates to the dependence of certain diseases on micro-organisms. The subject is one of the greatest possible interest, and fraught with bearings of a practical character which already have had, and are doubtless destined still further to have, a vast influence on the prevention and treatment of disease. The establishment of the fact that *pébrine*, chicken-cholera, and splenic fever depend on the presence of specific microbes, and that relapsing fever has associated with it, if not indeed causing it, a like organism, must be classed among the most striking discoveries of the present day, and undoubtedly mark an epoch in the history of pathological science; while the gradually accumulating evidence that tuberculosis is the result of a parasitic element seems likely to lead to its being placed in the same category as those affections the pathology of which appears now to be clearly established. Moreover, the brilliant results which have followed the process of attenuative culture of the virus of some of the affections to which I have referred, and the protective influence of vaccination by these attenuated fluids, as carried out by Pasteur, lead us to hope that, by further researches in the same direction, we may yet discover some means for checking the ravages of tuberculous and other allied diseases, as certainly as the great discovery of Jenner has enabled us to check the ravages of small-pox.

Nor is it possible, perhaps, to point to any single fact in connection with the practical application of science which is more striking than that of the relation of disease to minute organisms. The whole subject has been evolved from the researches of a few naturalists who studied the smallest of living beings. What possible use, might it not have been said, could investigation of this kind have in reference to the maladies either of man or the lower animals? And yet we have seen that these studies of minute life have led to the prevention of a disease which threatened to destroy the source from which we derive one of our staple products of manufacture; they have been largely instrumental in checking the ravages of a malady which is so fatal among the flocks and herds of various countries; they have led to the introduction into the practice of surgery of a mode of treatment, the beneficial effects of which it is not for me to dilate on; and, lastly, it seems likely that they will materially alter our views with reference to some of the most serious diseases to which mankind is subject.

These facts tend to show on how wide a basis the science and art of medicine rest, and how closely their advance is mixed up with, and dependent upon, the progress of other sciences. In truth, there is nothing in the whole range of nature which the physician may not make use of for the purposes of his work.

Of the many problems which await solution in con-

nection with the subject which I have just considered, no one is more pressing than that of the dependence, or otherwise, of pulmonary consumption on the bacillus which has been so largely found, not only in the morbid deposits which result from the disease, but in the expectoration of phthisical patients. Should it be found that in all cases of genuine tubercular phthisis the bacillus tuberculosis is present, and should future researches show that the disease is caused by the parasite, a solidity will be given to the pathology of the affection, and perhaps the therapeutics of it will be materially aided. Speaking from clinical experience, I cannot but conclude that the disease to which we give the name of phthisis has more than one mode of origin. Further investigation will perhaps clear up the doubt which exists on this point; and here I should like to observe that there are some affections of the lungs which closely resemble, in their clinical features, acute phthisis, and yet which, under careful treatment, do not go on to a fatal issue. Of such cases I have now seen several. Their general symptoms, their physical signs, their temperature-ranges made me conclude that I had to deal with cases of acute pulmonary tuberculosis, and I have expected a fatal result, but recovery has taken place. These cases occurred before attention was directed to the presence of bacilli in the sputum of phthisical patients, and no examination of this secretion was made. In instances of a similar kind, we shall now be able to use this method of investigation, and possibly it will afford a valuable means of differential diagnosis, and enable us to give, in cases where the bacilli are absent, a more favorable prognosis than the general symptoms would otherwise warrant. I may say, in regard to the cases to which I have referred, that they were treated by free nutrition, generally the exhibition of quinine, and a somewhat liberal quantity of alcoholic stimulants.

The great point which remains to be decided, and which I hope the discussion which will take place at this meeting will help to decide, is, whether the so-called *bacillus tuberculosis* is the cause, or the consequence of the tuberculous disease.

I have spoken of the advance which medicine has made as the result of the application of scientific principles, and an improved knowledge of physiology and pathology; and I would further remark that the past years have been fertile in the introduction of substances which are of the highest value to the physician in the actual treatment of disease. The bromide compounds, chloral, croton-chloral, the various forms of pepsine and pancreatine, the salts of salicylic acid, may be enumerated, among others which the chemist has furnished for our use; and, while we may perhaps feel that he will best serve the ends of medicine who shall teach us how to employ most successfully the remedies we already possess, and while we would deprecate the incessant desire for the introduction of new chemical compounds, let us by no means discourage the laudable ambition of enriching our Pharmacopœia with agents of sterling value. We must never forget that, in addition to the useful drugs to which I have already referred, the present age has given us, by the agency of the chemist, means by which we can annihilate the pangs of the most painful manipulations of surgery, and obviate the tortures formerly incidental to all operative procedures.

In the face of such a fact as this, we may be pardoned if we express a doubt whether we have arrived at the limit of our therapeutical discoveries, and whether we may not hope that the labors of the chemist will, in the future, give us new elements for our use, or that some of those compounds which now possess only a scientific interest may, in course of time, pass into the hands of the practical physician, and add to his powers of controlling certain forms of disease.

It is not for me to speak of the triumphs of modern surgery, and the successful results which have followed the application of scientific principles in this great de-

partment of medicine. We are apt, perhaps, to conclude that it is here that the most striking advances have been made; but I venture to think that, in proportion to the difficulties which have had to be solved at the hands of the physician, medicine pure has made a progress as great as that which has characterized the sister art of surgery, or, indeed, any other art in which science has been brought into practical application. Consider how difficult are the problems which disease presents; the complexities of organic life; the many peculiarities and tendencies of each individual man; the inherited liabilities; the subtle influences of habit, of diet, and of climate; and those social and moral forces which exercise so great a power on the varying conditions of civilized life; and then say whether it can be expected that we shall be able readily to arrive at grand generalizations on disease. In the great progress which has been made during the past fifty years, we have the strongest possible indication of increased progress in the future. The labors of each generation will correct some errors of the preceding one, and will carry us somewhat nearer to the truth; but the temple of medical science can never be crowned. Each addition to our knowledge will but point out to us fresh fields for labor—new subjects for investigation; and we may rest assured that the demands which will be made on the practitioners of medicine will ever be increasing, as it shall become more apparent how intimately their labors, and the sciences on which medicine depends, are associated with the well-being of mankind.

And there is, I think, a favorable circumstance in connection with our profession at the present time which is likely not only to have a beneficial influence on its actual advance, but with reference to the estimation in which it will be held by the public at large. Resting, as it does, on a basis of scientific observation, and depending for its progress on scientific researches, it will meet with more and more recognition in proportion as it appeals to a public which is more and more scientifically educated; and we now see that physical science is assuming, more and more, its proper position in the education of the young. While I would express a hope that, in the general education of the people, and especially of those who are in the higher walks of life, the cultivation of literature in its widest sense will always maintain a due prominence, I trust that the movement which is now so perceptible, with regard to the teaching of physical science, will continue to meet with that support which I think it so fully deserves; and in connection with this subject I cannot but express the satisfaction which I, and I am sure I may say we all, have felt in seeing rise up, in the various great centres of population in this kingdom, those institutions for higher education which add so much to the teaching power of these centres. The movement is really a comparatively recent one, and we in Liverpool were somewhat backward in it; but a few years ago, some of those who had long felt the want which existed, determined to make a strenuous effort to give to this city what Manchester, Birmingham, and other cities had already provided for themselves. Relying on the liberality of the public of Liverpool, an appeal was made for the foundation of a college in which the higher branches of the arts and sciences should be taught. That appeal was largely responded to, and now I see in our midst a college, with a staff of professors, which I trust is destined to do a work which will reflect honor on itself, and credit on those who founded it. It is true that, as yet, the organization of the institution is not complete, and that a further sum of £50,000 is wanted, in order that the full advantage of affiliation with the new Victoria University may be reaped. But we are sanguine that this amount will soon be forthcoming, and that the position of equality with Owen's College with regard to university degrees will be assured.

The School of Medicine, so long known in connection with the Royal Infirmary, has now become the Medical Faculty of the College.

Since we met in Liverpool, as I have already said, nearly a quarter of a century has elapsed; and by the gaps which time has made in our ranks, and the fact that the Association is now reassembled here, we are reminded, that while individuals pass away, societies and communities may remain. I trust that the time is far distant when our society will show any symptoms of degeneracy or decay; but in its very magnitude and its great prosperity there exists an element of danger. I have, however, the strongest possible conviction that the wisdom of the Association guiding and directing its executive body, which shall be at once the representative and the reflex of the whole constituency, will conduct the society safely through the dangers and difficulties which may beset its path. United, we are all-powerful. Acting in unison, and animated with one feeling for the progress and well-being of our profession, there is no subject in connection with its scientific, its political, or its social aspect which we may not grapple with, and grapple with successfully. As year by year rolls on, we may hope that our numbers will increase, until at length it shall be a very exceptional circumstance in this country for a member of our calling not to belong to the British Medical Association. In concentrating, as we may then be able to do, the whole force of the body medical on any given object, we shall exercise a power which may either compel nature to reveal her innermost secrets, or influence a government in the legislation of the state.

But time warns me that I must bring my remarks to a close. Looking to the results which have been achieved, I feel warranted in saying that, with our present advantages, and working from our present standpoint, we have every reason to believe that the progress of medicine in the future will be marked by more rapid strides than those which have characterized it in the past; and, standing here to-night, I can look forward, with confidence, to the time when a future president of the Association, inaugurating the centenary of its birth, shall speak with triumphant voice, and in glowing language, of the advances which our profession shall have made. He shall tell of improved methods of research, and new instruments of diagnosis. He shall speak of the important generalizations which the collective investigation of disease, carried on for fifty years, has led to. He shall point to the greater facilities with which the differentiation between functional disturbances, and the early symptoms of organic disease may be effected. He shall, perhaps, be able to show how many affections which ultimately lead to great alteration of structure, and eventually to a fatal issue, have their origin in functional disarrangements neglected in their beginnings, and gradually inducing changes which at length become irremediable; and thus he shall show how closely physiology and pathology are connected. He shall, perhaps, be able to point to the establishment of the true pathology of those diseases which from recent investigations appear to be dependent on the presence of micro-organisms, of tuberculosis, and other allied affections, and, as a result of this, he may possibly tell that, by the adoption of a practice analogous to that which has had so marked a result in reference to splenic fever and chicken-cholera, and which has rendered famous the name of Pasteur, an almost complete immunity is enjoyed from those terrible maladies which have hitherto in large measure baffled the skill of the most accomplished physicians.

And, gentlemen, among the many changes which, I venture to think, these revolving years will bring, may we not hope, that, with the higher status as a science which medicine shall have attained, and the higher estimation in which the profession shall be held, will have come a fuller recognition of the claims of its members to some of the higher honors of the State, and perhaps the president of that occasion, or some of those who may listen to his words, may belong to that upper branch of our legislature to which hitherto no practitioner of art

has reached. The votaries of medicine want no other encouragement than that which comes from advancing their own science to stimulate them to the highest exertion for the general weal, but it cannot be doubted that both in the interest of the public, and in reference to the promotion of the health and well-being of the people, the presence of medical men in the House of Lords would strengthen the powers of that House and beneficially influence legislation.

But if the results to which I have alluded, and the advances which I have ventured to foreshadow, are to be realized, if medicine is to be raised from the region of empiricism, and to be placed on a higher scientific level, and if we in this country are to take our part in the researches by which the great problems now awaiting solution are to be determined, then must all unwise legislative restriction on the work of the physiologist and pathologist be withdrawn; then must all measures which fetter the action of the original investigator be removed; and I trust that, by the labors of the society which has been established for the cultivation of medicine by original research, a more enlightened public opinion will be formed, which will aid in bringing about these results.

Medicine must more and more proceed on the lines of exact observation and careful scientific inquiry; and in connection with this it is satisfactory to know that one of our great guilds is about to devote a portion of its means to the encouragement of work such as I have referred to: and I trust that our own society will be able yearly to devote larger sums than at present to a like cause.

And now, gentlemen, in conclusion, permit me, in the name and on behalf of the local members of the Association, to bid you all a cordial welcome to Liverpool. Our Association is now so numerous and so powerful, its meetings offer so many features of interest and attraction, that, wherever they may be appointed to be held we look forward with confidence to large and influential gatherings; but we desire that this meeting shall not only be successful in a scientific and professional point of view, but shall also be rendered interesting and agreeable to all who may honor us with their presence. We cannot show you grand architectural monuments mellowed by age and famous in the annals of history, such as characterize our metropolitan towns; we cannot take you to classic halls like those which give so great a charm to the visits which we pay to our university cities; but we trust that in traversing the different parts of this great centre of commerce, and in visiting the docks which line the shores of the Mersey, you may see something that will interest you; and that when your temporary sojourn among us shall be over, you may feel that, not only have you assisted at a successful anniversary of the British Medical Association, and contributed to the promotion of those objects for which it was founded, but that your visit has been one of satisfaction and of pleasure.

THE CHLORAL HYDRATES.—Mr. Joseph Bemrose, Lecturer on Practical Chemistry in Bishop's College, states that what is usually prescribed as croton chloral is really a butyric chloral. He says: To show clearly the relation existing between the acids—acetic, crotonic and butyric—and their aldehydes and tri-chlor derivatives we may formulate them as follows:

	Acid.	Aldehyde.	Chloral.
Acetic.....	CH_3COOH	CH_3COH	CCl_3COH
Crotonic....	$\text{CH}_3(\text{CH}_2)\text{COOH}$	$\text{CH}_3(\text{CH})\text{COH}$	$\text{CCl}_3(\text{CH})\text{COH}$
Butyric.....	$\text{CH}_3(\text{CH}_2)_2\text{COOH}$	$\text{CH}_3(\text{CH}_2)\text{COH}$	$\text{CCl}_3\text{CH}_2\text{COH}$

The hydrates of the first, $\text{CCl}_3\text{C}(\text{OH})_2\text{H}$, and of the third, $\text{CCl}_3(\text{CH}_2)_2\text{C}(\text{OH})_2\text{H}$, of these chlorals only are in use in medical practice; and although this has been pointed out many times since 1876 we still find the latter more frequently prescribed by the wrong name, croton chloral hydrate, than by the right one butyric (or butyl) chloral hydrate.—*Canada Medical Record*, February, 1883.

ON THE AUTONOMOUS LIFE OF THE SPECIFIC INFECTIONS.

BEING THE ADDRESS IN PATHOLOGY DELIVERED BEFORE THE BRITISH MEDICAL ASSOCIATION AT LIVERPOOL, AUGUST 3, 1883,

By CHARLES CREIGHTON, M.D., M.A.

LONDON, ENGLAND.

MR. PRESIDENT AND GENTLEMEN: I have unusually good reasons for prefacing my address with an apology. I cannot claim to speak from the fulness of experience which has given so much value and distinction to the addresses that have been delivered before the Association, and I have a subject assigned to me which demands experience and a mature judgment in no ordinary degree. Pathology is a growing science, its aspects are constantly changing, a single year's work brings us a multitude of new and often puzzling facts; and although the issues are of the most momentous kind, not even the wisest and most judicial minds in the profession can always see their way to a clear and definite opinion.

But, amidst all this uncertainty, there is one central and guiding principle in the doctrine of disease which we may hold fast to. It is the physiological principle, or the idea that diseased states of the body are but modifications of healthy states, deviations from the beaten track, perturbations of the normal life, shortcomings of the physiological standard. Thus, even in so formidable a malady as diabetes, we are still within sight of the line of health; there may be a physiological glycosuria; and that fact, as Dr. Bence Jones says, proves to us that the disease is only a little way distant from health. "Here, as elsewhere," says that eminent chemist and pathologist, "there is no definite limit where health ends and disease begins." To find the proper physiological analogies for diseased processes is the task of modern pathology; and I do not think that there is, in the whole range of science, any better kind of intellectual exercise than to expose the working of the ordinary laws of structure and function under the mask of disease. The physiological idea is, indeed, the hope and inspiration of pathological science, as it is also of medical practice. But there is no reason why I should attempt to say again what has so often been well said before. Members of the Association who heard Professor Michael Foster, at the Cambridge meeting, discourse on the "Relations of Physiology to Pathology," will not have forgotten how he proved that the difference between these two sciences was merely a superficial difference, whether as regarded method or subject matter. We shall, most of us, also recall Professor Huxley's lucid exposition before the International Medical Congress, of the "Connection of the Biological Sciences with Medicine," wherein he showed that pathology was that branch of biology which concerned itself with perturbations of the normal life.

That view of pathology is one that we all share; and as I have endeavored, according to my opportunities, to work out physiological analogies of disease in particular instances, I shall not be suspected of any want of sympathy with the general principle. But I am none the less confronted with the difficulty that a great deal of pathology appears to be quite different in kind from any physiology known to us. What are the physiological analogies of the infective and constitutional diseases, and how large a part of pathology do the diseases of that class stand for?

There is, I believe, a serious difficulty here, and a difficulty that made itself felt in the very first system of physiological medicine that was given to the world. Broussais was the author of the first attempt at a physiological scheme of disease; and it was only a year or two ago that Professor Charcot was claiming for his brilliant countryman the credit of having broken down the dualism of health and disease, and of having eradicated that old and pernicious habit of regarding disease as a separate entity. But Professor Charcot said no-

thing of the rock on which Broussais is generally accounted to have made shipwreck. The author of the first physiological medicine was thorough-going, and it was because he endeavored to be comprehensive and consistent that he failed. He left out no great disease from his physiological scheme, not even typhus nor Asiatic cholera; they were all perturbations of the normal life, and a good many of them were forms of gastro-enteritis. Professor Charcot may be right in claiming the physiological medicine of Broussais as the example for all subsequent times; but it is quite certain that it served also as a warning to those who next took the physiological medicine in hand. They were careful to lighten the ship by throwing overboard Asiatic cholera, typhus fever, and, in fact, the whole of the acute and chronic infections. Just about the time when the thorough-going system of Broussais had provoked the inevitable reaction, Professor Henle had made his suggestion about minute parasitic organisms being the causes of the specific infective diseases; and it is curious to read, at a distance of forty years, in the first volume of the German *Archives of Physiological Medicine* (p. 88), how Griesinger, one of its sponsors, promptly availed himself of the parasitic hypothesis of Henle in order to account for all those diseases which had been prudently omitted from the physiological programme.

But I venture to say that, when we congratulate ourselves upon the physiological basis of pathology, we do not always reflect how much of disease is thus excluded from the class of disturbed physiological processes, and how small a fraction remains to fill the physiological categories. There are several passages in Sydenham's works in which he gives his estimate of the proportion that the species of disease—the *morbi typo induti*—bear to the rest; he estimates diseases of a specific type at two-thirds of the whole; and it will be admitted, I think, when we look abroad as well as at home, and we read history as well as contemporary records, that this estimate shows his fairness of mind and his sense of proportion.

The serious difficulty, then, which I spoke of—the difficulty that must have been present to the mind of Broussais, and must occur more or less to every one—is that a physiological medicine, which leaves out the larger and more formidable half of disease, is hardly worthy of the name. The doctrine that morbid processes are after all merely perturbations of normal processes, or, as Hunter said, "a perversion of the natural actions of the animal economy," is the great principle of scientific pathology; but we shall have to speak less enthusiastically of it, if it should appear that it has no place for the long list of infective diseases—for plague, for cholera, for yellow fever, for typhus, for small-pox, for leprosy, for syphilis, for cancer, for consumption. If the physiological idea is to be good for anything, it ought to be good for those; for they are the real difficulties of pathological science, and the real *opprobria* of the medical art.

I am sanguine enough to believe that the physiological doctrine will one day be shown to be as large in its application as it is rational and hopeful in its spirit. It is for that reason that I have decided to use this public opportunity that has come to me—and come to me most unexpectedly, and, I feel, most undeservedly—in order to speak of certain aspects of the specific infections, which are perhaps not the aspects most commonly brought before us at present. One would wish to think of these diseases, strange and terrible though they be, as still joined in continuity with the common disorders of structure and function; and I am accustomed to express for myself this connection by a formula, which has no other value than belongs to a mode of thought or a form of words, but may still serve as a convenient or empirical standing ground for those who seek to observe a certain unity and sequence in their study of disease.

I shall endeavor, then, to discover some relation be-

tween common aberrations of structure and function and the specific infections, or a relation between disordered states of the body and the self-existent species of disease; and I shall make this attempt with two or three representative instances. It will be convenient to begin with cancer, for the reason that the suggestions that I have to make arise most naturally out of the study of cancer.

Cancer is an infection, although its infective power does not extend, except in heredity, beyond the individual body in which the disease takes its rise. I do not forget that some pathologists consider cancer to be no more than an overgrowth of epithelium. But we shall find it difficult to explain to a patient with cancer that he is suffering merely from an overgrowth of his epithelium. All the world knows what cancer is, and no microscopic analysis will ever persuade men that cancer is anything but the devouring thing, the implacable enemy that the common eye sees it to be. What the microscope does show us, is that a cancerous tumor has not always been cancerous. If we take any of the common seats of cancer—the stomach, or the uterus, or the breast—we shall find that the disease may be traced back to a point at which it comes within the category of structural and functional irregularities. I say structural and functional, because it seems to me that if we attend only to the structural features of the disorder, as some of our German colleagues are content to do, we are likely to miss the central idea of the deviation from the normal. In the favorite seats of cancer, the secretory function is not always or altogether what we often take secretion to be. Under certain circumstances, solid products, or cells, form part of the secretion, and those cells do not always get carried off, as the cells do in an ordinary catarrh, by discharge from the surface, or by way of the lymphatic drainage, but they may stagnate and accumulate in the deeper textures of the organ or part. So far, there is nothing in the morbid process for which we may not find close physiological analogies. In some of the secretions of the invertebrata, and even in certain glands of the higher animals, the secretion retains its solid or cellular character for a considerable time. Again, the heaping up of the solid or by-products of secretion, in the spaces of the underlying connective tissue, is found to occur in the breast as a perfectly natural incident.

Still further, the free space of a gland may become filled with cast-off epithelial cells; or the epithelial lining may be raised into wart-like growths. Even a whole gland, like the breast, or a whole lobe of the gland, may be uniformly affected in the way of overgrowth, producing an adenomatous condition, or the condition of simple glandular tumor. There is nothing cancerous in all this; we are still within sight of the line of health. The cancerous element comes in usually after a particular time of life, and it consists in the implication of other tissues than the glandular or secreting structure, whose irregularities were the exciting cause. Epithelial cells that have not been used for secretion can become mischievous as infecting cells, and if we now examine the region of disease, we shall find the marvellous spectacle of an epithelial kind of structure springing from the tissues around, where there is no epithelium naturally; a little later, the same epithelial pattern is, as it were, carved out of the parenchyma of lymphatic glands, or of the liver, or in the deeper layers of the skin, or even in still more unexpected places. The pattern of this widely distributed structure is always the same in a given case, and there is always something in it which reminds us of the primary seat of glandular disturbance. An intelligible disorder of structure and function, not without its close analogies in physiology, has acquired a kind of individuality or independence, and a power to reproduce itself throughout the body; or, in other words, it has become a ravaging cancer.

I shall not delay here to go into the particulars of this extraordinary process, or to enter upon controversial

matters. I take cancer as a striking instance of a disease which may be traced along the track of physiological perturbations for a certain distance, after which it becomes what all the world knows it to be—a semi-independent life, an *imperium in imperio*, a power inseparable from the general life of the body, compatible even with blooming health for a time, but in the end sure to gain the mastery.

In taking a full and fair view of cancer, of its physiological beginnings, and its ultra-physiological course, we cannot but admit that there is some truth in that hard saying of Paracelsus: "In such a disease, a man is himself and another, he has two bodies at one time, enclosed the one in the other, and yet he is one man." This kind of Platonic mysticism is not what one would choose to import into exact science. But we are bound by a regard for facts; and I do not see how the facts of cancer, whether they be microscopic or clinical, can be done justice to unless we admit that a state of the body may be raised to the power and dignity of a life of semi-independence. I purpose speaking, in the sequel, of this semi-independence under the name of autonomy; and I shall endeavor to show, in the case of two or three other representative infective diseases, how a perturbation of the physiological life has acquired its autonomy, or what the pre-autonomous stage of those infections may have been. This doctrine of acquired autonomy and the pre-autonomous stage is the formula in terms of which I would express the relation between ordinary perturbations of structure and function and the specific infections, the relation between disordered states of the body and the self-existent species of disease.

If cancer has always been the great popular instance of a disease enjoying a kind of life of its own within the body, consumption hardly yields to it in its relentlessness, and it far exceeds it in its prevalence. Is it possible, in the case of consumption, to show that a wasting infection has arisen out of common disturbances of the physiological life? Before so critical an audience, I shall not have the hardihood to speak of consumption in general—of the disease about which so great masters in pathology as Laennec and Virchow have differed widely. But there is a form of tubercle, the bovine form, in which the facts are much less ambiguous, and much easier to deal with, and, as it happens, more familiar to myself; and for bovine tubercle, or, as it is sometimes called, the pearl disease, I shall venture to inquire whether the small beginnings of it may not be found in a certain kind of disturbance of ruminant nutrition, just as we find the pre-cancerous stage of cancer in certain irregularities of the apparatus and process of secretion. Those beginnings would correspond to what I have called the pre-autonomous stage; while the autonomous life of the disease, as a semi-independent thing, would be shown in its infectiveness.

Bovine tubercle is a more complete example of infection than cancer. It is a constitutional disease, pervading the whole body; it is likely to end in wasting and cachexia; it is very liable to be inherited by the offspring; it can be given to other animals, by inoculation or by feeding, in experiments, and probably also by accident; and there are recorded cases, in veterinary practice, which lead us to think that it hangs about a stall, or spreads from stall to stall by volatile contagion. There is, in fact, no disease, in human or veterinary pathology, that shows a more complete autonomy; it is constitutional, hereditary, infective, and contagious.

The pearl disease is peculiarly a ruminant malady, and it is curiously limited within the ruminant order itself. It does not occur in the sheep, nor, as far as we know, in the deer; and by far the larger number of cases are found in the domesticated bovine species, in which it is, indeed, much too common. I have been on the outlook for specimens of it among the animals that die in the Zoological Gardens in London, and my experience hitherto has been curious and suggestive. I have

hitherto found the peculiar anatomical characters of this form of tubercle in only three species: the eland, a large South African antelope, like a cow; the nil-gau, a large Indian antelope, whose name means "the blue cow;" and the prong-horned antelope, from America, another of those half-way animals between the bovines and the antelopes, which the late Mr. Forbes, the prospector at the Zoological Gardens, took much interest in as a transition species. It is certainly a remarkable thing that those antelopes, which resemble the bovines so closely in zoological characters, should resemble them also in their liability, under confinement, to a distinctive kind of new formation. This kind of tubercle is not only an affair of the ruminant order, but it is an affair of a small group of ruminants, mostly belonging to one genus.

What, then, are the distinctive anatomical characters of this distinctively ruminant disease? The morbid anatomy of bovine tuberculosis has been written with as little reference to theory or preconceived opinion as could be wished. It has been, in great part, observed by those whose business lies with cattle; and the popular names of the disease in all countries will show us how it has presented itself to the common observer. The various names show that it is primarily an affection of the serous membranes; the Germans have called it the "pearl disease," from the rounded whitish nodules attached to the abdominal and thoracic surfaces; the French have named it "pommelière," from a fancied resemblance of the nodules to clusters of potatoes; in England, it has been called "the grapes;" and, in Scotland, "angle-berries." I am merely repeating the language of all authorities, including Professor Virchow, when I say that the disease is primarily one of the serous membranes—a growth of multiple nodules, usually small and flattened, often suspended by a stalk, and sometimes as large as a cherry or an apple. These are the beginnings of the disease; but it extends from the serous membranes, by infection, to the lymphatic glands, which become changed into the same mortar-like substance that is found in the degenerated nodules. The lungs, also, are very apt to get infected, as they so often do with new formations of a sarcomatous nature; and the infection may, in the end, reach most of the organs, as well as the bones and joints, causing the animal to die of general cachexia and wasting.

Such is the usual sequence of events where the disease is originally acquired; but in the cases of inheritance—and these are now estimated at more than one-half—there may be some departure from this order; in them, the formations in the lymphatic glands, lungs, and other viscera, may be more conspicuous than the serous-membrane nodules; but even in the inherited disease, the pleural or peritoneal surfaces will usually show characteristic traces of the primary new formation. Some allowance must be made for certain modifications in the order and distribution of the disease, when it is communicated directly to the offspring by a sire or dam which had acquired it; and it is all the more necessary to be clear on this point, since, at the present day, the hereditary taint would seem to be so widely distributed throughout the bovine stock as to obscure somewhat the original characters of the disease. In what I have to say, I must speak of the disease as it is primarily acquired, and as it is described in the earliest writings, and by its popular names.

It starts, then, as a multiple nodular condition of the abdominal and thoracic serous surfaces, it acquires the character of a constitutional disease, it goes all through the body, it passes directly to the offspring, it may be inoculated upon healthy animals or communicated to them by feeding, and it is not improbable that it passes by volatile contagion. The infectiveness within the original body, and the faculty of passing to other animals, is what I would call its autonomous life, and I would look for its pre-autonomous stage in the peculiar groups

of multiple nodules on the serous surfaces. What then is the origin of these nodules, in what relation do they stand to any known disorders of ruminant nutrition, or, rather, of the nutrition of those ruminants that are closely confined, artificially fed, and over-milked?

I am not aware that the suggestion which I have to make has occurred to any one before, and I put it forward, therefore, with some diffidence. This suggestion arises out of a consideration of the forms and favorite seats of the nodules, and of their structure, and degenerations. One cannot help observing that these multiple nodules are especially apt to grow in the seats of fat-formation, and to assume the external form of deposits of fat, either the stalked and pendulous form, or the flattened form of confluent lobules or patches. Now the bovines are somewhat peculiar in the way in which they lay on fat. They have not so much of subcutaneous fat as the sheep or the pig, but they are very apt to have internal formations of adipose tissue, sometimes in situations where one would imagine that it could serve none of the ordinary purposes of fat. Besides the common deposits of fat about the abdominal organs and in the thorax, there may be lumpy masses of it even on the pleura covering the ribs, and on the diaphragm; and, in highly fed animals it is not unusual to find a lobulated layer of the same tissue all over the surface of the spleen, and even on the surface of the liver. It can hardly escape us that those serous surfaces which are invaded in the course of this excessive fat-forming habit, are just the localities where the pearl nodules are found. There is, indeed, one rather important exception to this rule, namely, the borders and surfaces of the lungs. I cannot say whether a border of fat ever occurs round the margins of the lungs in cattle, as it occurs round the spleen and liver, or under the pulmonary pleura, as it is found under the costal pleura; but, if that should be the case, the analogy with the pearl disease would be complete, so far as situation goes; otherwise, we must explain the nodules of the pulmonary pleura on the hypothesis of secondary infection. As regards form, the resemblance between the physiological and the pathological formations is most striking; in both cases we may find either a finely lobulated stratum of translucent tissue, or coarser lumpy masses, or pendulous nodules.

But, after all, the diseased nodules of the serous membranes are not fat, or, at all events, they are not composed of adipose tissue throughout most of their extent. They are not multiple lipomata; but it would be strictly correct to describe them as multiple fibromata, or sarcomata, with a deficient blood-supply, or rather as a multiple tumor-formation, containing a mixture of those two kinds of tissue, growing in the seats of fat-formation, and assuming the lobulated, or lumpy, or pendulous forms of the sub-serous fat.

I do not think that I have gone beyond the facts in this statement of the naked-eye characters of the primary new growths to which the bovines are so liable, and I cannot help thinking that there must be some connection between them and vicissitudes in the nutrition of those animals as manifested in that tissue which would be most affected in nutrition, namely, the fat-tissue. The facts may be explained in two ways, both of which may be applicable, although I would regard one of them as more probable than the other. Either the formations on the serous membranes are atrophied or degenerate masses of fat in which the blood-supply has failed to a great extent, or they are radically new growths which have sprung up in the old lines of fat-formation, or where fat may once have been. The description in a veterinary text-book of retrogressive clauses in the multiple lipomata of the serous membranes, reads very much like a description of some of the bovine tubercles that we meet with; the oily contents of the fat-cells disappear, the connective tissue hardens and thickens, calcareous matter is deposited, and a mortar-like substance takes the place of what once was fat. But there is another

and perhaps better way of accounting for the fact that the morbid growths are found in some of the favorite seats of the internal fat, and in its peculiar shapes. It is a well-known zoological characteristic of the bovines that their fat is naturally apt to come and go from time to time, in the wild state according to the periodicity of the seasons, and in the domesticated state according to a multitude of artificial practices in the management of dairy and farm stock. Nothing can be more artificial, for example, than the conditions which cows in town dairies are subjected to: the close confinement, the unnatural feeding, and the excessive milking. It is quite conceivable that an animal, under those circumstances, and more especially when it is growing old, would depart from its natural fat-forming habit, and put on, instead, an embryonic kind of tissue, which is neither fat nor anything else of a physiological kind, although it occupies the old seats of adipose tissue, runs into the familiar mould, as it were, and grows to the old pattern.

Whether we take the one explanation or the other, or the two together, there is, I think, a pretty strong chain of evidence that bovine tubercle begins as a disorder of nutrition. It is oftenest acquired by animals that are farthest removed from their natural conditions—by cows imprisoned in town dairies; and the disease that those animals are so peculiarly liable to begins as a kind of multiple morbid growth, which occupies the very seats of the internal fat, and runs into its very shapes. Now, the abdominal and thoracic fat is precisely the tissue that might be expected to show the effects of malnutrition in the way of structural changes. The tubercles are simply collections of embryonic tissue in which the formation of blood-vessels has been inadequate, and in which degeneration has inevitably followed; and any one who has studied the development of fat will readily admit that the same embryonic cells growing in the particular localities might have become fat-cells if the blood-supply had been sufficient.

Whether I have indicated truly or not the circumstances in which we should seek for the beginnings of this peculiar kind of new growth, I am confident, at least, that we must look for these beginnings in some physiological disorder or other within the small group of ruminants, and not elsewhere. Disordered nutrition appears to me to be able to account for this kind of multiple tumor disease, just as I believe that disordered secretion can account for the beginnings of cancer. Disordered nutrition shows itself in various ways within the body; but there is only one tissue that it specially affects, and that is the adipose tissue, just as the glandular tissue is the proper seat of secretory disturbances. In the one case as in the other, the disorder of function finds a structural expression; it acquires length, breadth, and thickness; or, in other words, it results in a tumor. The functional disease thus acquires the degree of individuality which may be ascribed to a tumor, and that must be the beginning of its life of semi-independence within the body. In both cases, the pre-autonomous stage is a common disorder of structure and function—of secretion in the one case, and of nutrition in the other; and each goes on to acquire the mysterious power of infection. But they become autonomous in different ways, or under different circumstances. I have already spoken briefly of cancerous infectiveness, and I have elsewhere endeavored to trace the connection between it and the antecedent glandular disturbances. In bovine tubercle, I should ascribe the infectiveness to the *multiplicity* of the primary nodules, and to the fact of their being seated on the serous membranes, which are so fundamental a part of the lymphatic system. Multiple tumors of the serous membranes are favorably situated for infecting the lymphatic glands, and the infection of the lymphatic glands is only the beginning of an autonomous career. Professor Virchow has shown, in his great work on morbid growths, how the lobules of abdominal fat may become multiple stalked lipomata, each lobule becoming a

kind of individual tumor and growing as such; and he adds the following remarkable words: "There is no doubt that this kind of multiplicity does not differ altogether from what we find in malignant tumors or in an infective dyscrasia;" and if that can be said of multiple lipomata still retaining the proper structure and nutrition of fat, it can be said, with even greater truth, of those multiple growths of the abdominal and thoracic surfaces which we have good reason for taking to be rather the degenerations or substitutes of the fat.

There is one other point to be noted in connection with bovine tubercle. It may or may not be primarily due, as I have supposed, to an error of nutrition in the abdominal and thoracic deposits of fat, but its morphological characters are certainly peculiar, and they belong, in a sense, to the bovine organization. If I may so speak, it has sprung out of bovine soil, and the marks of its bovine origin never quite leave it, even when it is set up in the bodies of animals widely removed from the ruminants. A mere condition or state of the ruminant body can be abstracted, as it were, from all other ruminant conditions, and made to live in another body; and that is an extreme instance of what is meant by the autonomous life of the specific infections, or of the semi-independent existence of the species of disease.

Having presented cancer, and one of the varieties of tubercle, in this light, I shall next inquire whether the formula of an acquired autonomy may not be applied to a third great disease, representative of another class of infections, I mean small-pox. Small-pox may be looked at from more than one point of view without losing sight of its main features. Our great English dermatologist, Willan, looked upon small-pox as a skin disease; but Willan was also one of the first to investigate the history of small-pox epidemics throughout the world, and he was not likely, therefore, to underrate its importance as a pestilence. Hebra also ranks small-pox among the cutaneous disorders, and the authorities of the Allgemeine Krankenhaus at Vienna have given practical effect to Hebra's doctrine so far as to place the small-pox wards under the department for diseases of the skin; and I can testify, from an experience of the Vienna small-pox wards, that the disease does not lose any of its contagious power by being classified among skin diseases. An experience gained under those circumstances is apt to make an impression, and, from that time, I have never quite been able to think of small-pox except as an ill-smelling condition of the human skin which one person may impart to another. It is a skin disease which has been reproduced with the greatest accuracy and fidelity in millions of copies for hundreds of years, and the extraordinary closeness of the mimicry has given rise to the opinion that the disease is really the uniform effect of some unknown poison. But the anatomical structure and evolution of the pock is too elaborate to be the simple and direct effect of an intrinsic poison; it is not like a flea-bite or like the nettle-rash which comes out in some peculiarly constituted persons after eating shell-fish, or, as I have known, even from eating a single wholesome strawberry. The pock is a complicated affair, and there is a history written in it, a history of characters acquired bit by bit, as in the evolution of living things, a history which has been transacted within the body; and the stages of this history are run through with more or less completeness in every case of the communicated disease. The papules had developed fluid in their summits, they had grown in a peculiar way to the breadth, the original centre had become a distinct depression, and in the course of this evolution certain partitions had been formed in the interior of the pock. Further, the pock is more deeply rooted in the skin than most skin diseases known to us; for its base goes down to the vascular layer of the corium, and, when it scabs it leaves a considerable defect of substance (more particularly in those localities such as the face, where the vascular layer of the corium is well-developed), a peculi-

arity among skin diseases which can hardly be matched unless it be in some of the tropical forms of "impetigo." This skin disease is ushered in by much constitutional disturbance or fever; and, as in some other skin diseases which are not contagious, the fever abates when the eruption has come out, and the subsequent constitutional disturbance is exactly in proportion to the number of the pocks.

The remarkable thing is that all this complex of anatomical structure, of stages of evolution, and of characteristic fever, should have preserved its unity and individuality through so many transmissions, in all sorts and conditions of men, and in all parts of the world. The disease possesses what I would call autonomy in a high degree, and, from that point of view, it becomes a matter of no ordinary interest to inquire into its pre-autonomous history.

Professor Hirsch, in his "Handbook of Geographical and Historical Pathology" (a work which we are soon to have in an English dress), concludes an elaborate review of the historical evidence about small-pox, with the opinion that we have to go to tropical countries, to Hindostan and to the interior of Africa, for its original seats, and to go back to a remote antiquity to find the beginnings of it. Lichtenstein, one of the early explorers of Africa from the southern end, found small-pox to be prevalent wherever he penetrated to, and he found it among tribes who professed to have got it from nations still farther from the sea. According to Pruner, the disease is peculiarly an African disease. We may take it, therefore, that small-pox was originally a disease of the black skin, and it is in keeping with that historical and geographical induction to find that the black-skinned races are by far the most susceptible of the disease even nowadays, when it is set up only by contagion.

It is impossible to speculate to any purpose on the rise and development of small-pox out of some common and frequent disorder of the black skin under such influences as tropical heat and moisture, or under the peculiar conditions which obtain among the swarming populations of tropical countries. One naturally thinks of a complex form of "febrile lichen," a skin disease which Dr. George Gregory admits that he could not always diagnose from small-pox; and if we imagine a widely prevalent kind of febrile lichen to follow somewhat the same development that Willan describes in a remarkable case of lichen agrius, we should have a not very remote analogy for what I should call the pre-autonomous stage of small-pox, both in the structural characters and in the constitutional fever. We are, at least, justified in thinking of some form of tropical skin disease, widely spread within a certain zone, very apt to recur in the individual, and with each recurrence to become more inveterate and to develop a more complex structure. Given a number of people suffering from such a cutaneous disorder at one time, and some great migration or invasion, and we shall probably have the circumstances under which the skin disease would become communicable, would pass by contagion to the skins of those who had never incurred the disease by natural causes, and pass all the more easily to them if they belonged to an entirely different race, or presented the ordinary contrasts of civilization and barbarism, of white skin and black.

I do not say that it is an easy thing to construct the circumstances under which this disease of the black skin acquired, what I would call, its autonomy. It was probably a gradual process; its semi-independence must have been hardly won and slowly consolidated, until, at length, it was ready to start on its devastating campaigns. Small-pox has been a disease on so stupendous a scale that it must seem to be mere hardihood to speak of it as a condition of the skin, originally acquired in the tropics, which has been passed on from one body to another. But, even if history and geographical distribution had told us nothing, the loathsomeness, the peculiar odor, and the no less peculiar scars of small-pox, might of

themselves suggest another skin than ours; and I have seen too many instances of the minute mimicry that goes with every infection to feel any surprise that a disease which is native under a tropical sun should impress upon its victims in every country something even of the primary ethnological characters.

And now let us compare the autonomous disease, as we know it, with the original skin disease out of which it must have grown. The contagious small-pox is distinguished by what Sir Thomas Watson calls "the very curious fact" that it generally occurs but once in a person's life. "In this," says Watson, "the contagious disease offers a remarkable contrast to inflammations, which, having happened once, are, for that very reason, more apt to happen again;" and he goes on to show the impropriety of ranking small-pox under the head of cutaneous diseases; it would "more rightly be called a blood disease." But there need be no antagonism between the view of small-pox as a cutaneous disease, and the view of it as an infection. This formula of an acquired autonomy, and of a pre-autonomous stage, which I have been recommending as a sort of nostrum for our intellectual difficulties, appears to me to be a means of reconciling those antagonistic opinions which have arisen, not so much in connection with small-pox, as in the controversies about some other infective diseases, which are supposed still to develop *de novo* from time to time. Small-pox, in its pre-autonomous stage, would be precisely that kind of skin disease which, having happened once, is, for that very reason, more apt to happen again; it would recur in the same spots, as in the early stages of leprosy, and it would become more rooted and more inveterate each time it came back. The inveteracy of this morbid condition of the skin, due in part to neglect, would be its first step toward acquiring that remarkable power of semi-independence within the body, which I have been endeavoring to illustrate under the name of autonomy; it is this acquired power which enables it to pass to another person's skin as an individual state of the body, which can be, as it were, abstracted; and its individuality is proved by the best of all tests of what constitutes an individual—the test of parentage; for the skin disease that springs up in the contaminated body is exactly like the skin disease which must have been originally acquired. But the infected or impregnated body runs through all the stages of the malady—papule, vesicle, pustule, scabbing, and scarring—in rapid succession in two or three weeks, and it is thenceforward done with that particular form of skin disease for ever. The autonomous form of the disease is a brief abstract and chronicle of its whole protracted development or evolution; it sums up the past, and just as it sums up the past, so it anticipates the future.

Small-pox appears, then, to be a clear case of a morbid condition of the body, namely, a cutaneous condition, which has been enabled to lead a kind of independent life. But small-pox is one of those diseases that always pass directly from one body to another, and the direct succession of cases does not appear ever to have been broken. There is, however, another large class of infections, corresponding to Pettenkofer's division of the exogenous contagia, which are not only able to subsist for long periods outside the human body, but which even require a certain amount of external putrefaction in order to make them potent. Cholera is one great example of a disease of the exogenous group, and yellow fever is another; and I shall ask your attention for a few minutes to some facts relating to the latter disease; for here, at least, it must seem as if we had got quite away from common disorders of structure or function, and into an absolutely separate region of disease, where the physiological principle does not serve us.

Yellow fever is one of those maladies in which historical and geographical facts are of even greater importance than microscopic or chemical, and hardly less important than clinical; and, as I have been lately occupied in

turning into English the German sentences of Professor Hirsch's treatise on "Geographical and Historical Pathology," I have had occasion to reflect upon the more salient facts in the history and geography of yellow fever. The first point that strikes one is, that it appeared in the seventeenth century as a new disease; for more than a century after the Spanish conquest of America, and for many years after the first English and French colonization in the West, there was no yellow fever, and, when it did come to Guadaloupe and Barbadoes, it was recognized as something quite different from the ever-present malarial fever. The next point is, that there is something quite peculiar in its geographical distribution. At the present day, we are apt to think of yellow fever as the fever of the Gulf of Mexico and Brazil; but it had been the scourge of Philadelphia, and even of New England, for many years before it broke out in New Orleans at all (1796); and its first appearance at Rio was in 1849. In reading Bancroft's treatise on this disease, published in 1811, it is curious to notice how much yellow fever has shifted its ground; it has always remained true to certain shipping-places in the West Indies, but the other great centres in Bancroft's time have absolutely ceased to be the seats of yellow fever; and some of the places that are among the worst seats of the fever now are not even mentioned in Bancroft's pages. In fact, it is not latitude and longitude that explains the peculiar distribution of the disease. There is only one thing that covers its history and its geography and the remarkable changes in its distribution, and that is the slave-trade. Disregarding its occasional and widely ranging excursions, and confining the attention to the localities where it is or has been, at one time or another, endemic or repeatedly epidemic, these are found to be the creeks and wharves and low shipping-quarters of the ports of debarkation of the slave-trade, together with a few much less endemic, but not less significant spots in Spain and on the west coast of Africa—the places to which vessels engaged in the contraband slave-trade had gone on their return voyage. The single exception to this curious rule is Peru; but Peru is hardly an exception, when we bear in mind the many points of resemblance between its coolie trade across the Pacific and the old African slave-trade.

It was an inquiry into the disastrous outbreak at Barcelona in 1821, in which five thousand persons died, that gave the first clue to the connection between yellow fever and the slave-trade. The circumstances were investigated by Dr. Audouard, for the French government, and the same physician was sent again in 1823 to inquire into a more limited epidemic at a small port in Biscay. The facts were very much the same in the two outbreaks; ship-carpenters, engaged in repairing vessels that had arrived some time before from the West Indies, were seized with a prostrating illness, which they attributed to putrid emanations from the bilge-water, and they became the first victims of an epidemic which proved to be yellow fever.

Dr. Audouard found that the vessel which started the infection in the 1823 epidemic was a slaver; and, on recalling the facts of the Barcelona outbreak two years before, he found that the two vessels chiefly concerned in it were also slavers, in proof of which, he said, they might still be seen with the irons for securing the slaves fixed in the planking of their holds. It was ascertained also that one of them had had an extraordinary amount of dysenteric sickness and mortality among her human cargo on the previous voyage. He calculated that about sixty Spanish vessels had been engaged in this contraband trade in 1820, that they had taken out about fifteen thousand slaves from Africa to the West Indies, and had returned to Spain with merchandise before going down to the African coast for their next cargoes. This was, in fact, the time of the irregular slave-trade, when the vessels were not adapted for it, and the crowding and sickness on board was at its worst; and this period corresponds to the remarkable outburst of yellow fever, both in

America and Spain and on the west coast of Africa, from about 1790 to 1820.

It is a perfectly well-known fact, admitted equally by Lind and Bancroft, that the slaves on board a slave-ship did not suffer from yellow fever, although they suffered much from dysentery and from what used to be called the "horrors of the middle passage;" so that a slave-ship would arrive at her destination with no contagious fever on board, but saturated with the filth of her human cargo. The facts discovered by Dr. Audouard in two Spanish outbreaks suggested to him a general theory of yellow fever; it was a peculiar form of typhus due to emanations from the putrid dysenteric discharges of the negro, and the fever owed its well-marked specific type to the fact that the matters which excited it could be traced to the negro body. There was something, he said, quite peculiar in the negro's constitution, and it was not surprising that the discharges from his sick body should be able, when fermented, to produce in others a typhus fever of a peculiar type.

Dr. Audouard's papers were communicated to the French Royal Academy of Sciences, and accepted for publication. The Academy, however, did not adopt his opinions, and they pointed out, after the manner of academies, that his facts related to only three slave-ships and to only two outbreaks. But the author had shown that a great part of the West Indian trade with Spain was carried on by ships engaged in the contraband slave-trade, and that the same circumstances which led to the epidemics investigated by himself must have arisen often at all the Spanish ports where yellow fever was an almost annual occurrence. Not only so, but the whole history and geography of yellow fever in America was on his side; seaports where cargoes of slaves had been landed year after year had presumably become saturated with the peculiar filth of the trade, and it is just the landing-places and shipping-quarters of those ports that are the foci of infection. In some of them, such as Vera Cruz, the poison seems to have become peculiarly fixed in the soil, so as to defy all attempts at getting rid of it. But in the great cities on the Atlantic seaboard of the United States, the fever was practically eradicated soon after the importation of negroes ceased. During the sixteen years after that date (1808), yellow fever appeared only seven times in the different ports of the Union, whereas in the sixteen years preceding the abolition of the traffic it had broken out fifty-eight times.

In the Spanish seaports also, the great epidemics of yellow fever are an almost forgotten tradition. But in Brazil they are of recent date, the first of them as recently as 1849, and Brazil was then and had been for some time the great market for the African slaves, when the ports of other countries except Cuba were closed to them.

A still more unlooked-for confirmation of Dr. Audouard's theory may be discovered in the establishment of yellow fever in the seaports of Peru within quite recent times; the first outbreak having been at Callao and Lima in 1853. An account of it was sent from Lima to the *Edinburgh Medical Journal* by Dr. Archibald Smith, who says: "The first cases of the Lima fever were vulgarly attributed to the excessively crowded shiploads landed at Callao of poor and sickly Chinese, who were ill-fed, ill clothed, and badly cared for on the voyage from their native country. But," he adds, "I, as a practitioner, could not trace any symptoms of this fever to them." But Dr. Smith's objection to the popular explanation of the yellow fever in Peru is precisely the strongest argument in favor of it; the Chinese, like the negroes, did not suffer from yellow fever, and they are said, indeed, never to take it on shore; but they suffered from those dysenteric and other non-contagious ailments which were the antecedents of yellow fever. The disease, since that time, has appeared at various other ports on the Peruvian coast; its outbreak at one of them, in 1868, was so sudden that the populace attributed it to an earthquake; but a communication sent to the French

Foreign Office more reasonably connects it with the Chinese immigration, which, as the report says, has profoundly changed the sanitary condition of the whole Peruvian coast.

But there is another argument for Dr. Audouard's theory, which he makes hardly any use of. It is the immunity of the negro from yellow fever, notwithstanding his great liability to cholera and the common forms of typhus, including ship-typhus. This immunity is perhaps not so striking now, when the negro blood is less pure, but all the earlier authors were much impressed by it. Thus, Doughty, who saw much of yellow fever in Jamaica at the beginning of the century, says: "In the natives of Africa the constitution appeared to me as secure against yellow fever as a person who has had the small-pox"—and he might have said the yellow fever itself—"is against its recurrence." Fenner, a more recent authority in New Orleans, says: "It is a well-established fact that there is something in the negro constitution that affords him a protection against the worst effects of yellow fever, but what it is I am unable to say." Mr. Clarke, the author of a paper on the "Topography and Diseases of the Gold Coast," in the first volume of the "Epidemiological Transactions," says: "I have heard and read of negroes taking yellow fever, but in no case did it happen at Sierra Leone during its prevalence in 1837, 1838, 1839, 1847; nor, so far as I understand, in 1859; and no example of it occurred to any of my medical brethren in the course of their practice." This is certainly a remarkable testimony, when we consider that ninety-nine hundredths of the population of Sierra Leone are negroes. And to show that this is the immunity of negro blood, and not of acclimatization, I take the most remarkable experience of all, that of the French expedition to Mexico from 1862 to 1866. There was a heavy mortality from yellow fever among the motley gathering of troops at Vera Cruz in the summer of 1866; not only the French soldiers, but Arabs from Algiers, Indians from the interior of Mexico, and Creole troops from the West Indies, were decimated by it; whereas, in a body of four hundred negro soldiers from the West Indies, there were only three cases, with one death; and in a black regiment of five hundred men, raised in the Soudan and Nubia, there was not a single case.

If, then, we put together the facts of this remarkable disease: when we consider that its advent into the world coincided with the rise of the slave trade; that its habitat is or has been the ports of debarkation of the slave-trade, and those places in Spain and the West Coast of Africa to which slave-ships went on their return voyage; that its exacerbations have coincided with the most lawless period of the negro traffic; that it gained a footing in the ports of Brazil in 1849, when the slave-trade flowed into that channel; and that it has become endemic subsequent to 1853 on the Pacific coast of South America, in those parts of Peru which were the seat of an infamous coolie traffic—we can but see in all this concurrence of testimony a proof that Dr. Audouard was right in describing yellow fever as a peculiar form of typhus, originating in all its endemic centres in the filth of slave-ships, just as he showed that it had so originated, as a matter of fact, in two of the Spanish outbreaks. But if that evidence should not be enough, we have only to add the fact that the negro cannot take the disease, although it rages most in the very quarters where negroes live. The yellow fever still lurks about the wharves and shipping quarters of towns where cargoes of slaves used to be landed (e.g., the barracoon at Havana); and every few years, when the weather is at the hottest, it rises into a pestilence, as if it were the ghost of the slave-trade walking. But it passes by the negro, as if it recognized the ties of blood; and I want no other fact than that to prove that even this infection, belonging to the exogenous group, is but one step removed from perturbations of the normal life, and that it carries with it the indelible stain of its origin.

The connection between yellow fever and the dysenteric and other discharges of the negro body is only a part of that general connection between dysentery and typhus which has often been noticed in wars and famines. It formed the subject of a debate, in 1861, before the Epidemiological Society, in which the late Dr. Murchison gave an outline of the argument that he afterward maintained with so much learning and research in his treatise on "Continued Fevers." The celebrated cases of jail-fever, in which prisoners brought up at the assizes gave typhus to the judges and counsel and jury, are full of pathological interest; and it may be well, at the present day, to recall the fact, which arrested the attention of Lord Bacon, that the prisoners were not suffering from typhus themselves. But we need not go farther back than twenty years ago, or farther away than the city of Liverpool, for proofs of the *de novo* origin of a specific fever; no more striking proof was ever given of the genesis of typhus out of dysenteric and other filth than in the case of the Egyptian frigate which came from Alexandria to the Mersey in 1862 to be refitted. There were four hundred Arabs on board, who had suffered a good deal from diarrhoea and dysentery; they had met with rough weather all the way from Alexandria, and the hatches had been battened down for two or three weeks continuously. When the ship arrived in the Mersey, the 'tween decks were in a disgusting state of filth, and the pilot who took the vessel up the river remarked to his wife when he went home that that ship would be heard of again. He was himself the first victim, for he was seized with a fatal form of hemorrhagic typhus about a week afterward. More than one hundred of the crew were on the sick-list, chiefly from dysentery, but it was carefully ascertained that none of the cases were typhus. Most of the Arabs went to a public bath in their filthy state, and in a few days typhus broke out among the bath attendants. Some of the crew were admitted into the Southern Hospital for various non-contagious disorders, and there also typhus broke out.

All the facts of this most interesting case were communicated to the Epidemiological Society by the late Dr. Duncan, medical officer of health. It was Dr. Duncan's opinion, and also Dr. Cameron's, the present President of the Medical Section, that the outbreak was clearly traceable to the Egyptian ship and her filthy crew, but that it was not traceable to pre-existing cases of typhus, whether on the voyage or in Alexandria before sailing.

There is one other class of cases which I shall just mention—the cases in which the mere contact of human beings in an average state of health and cleanliness sets up various epidemic disorders among the inhabitants of remote islands, where strangers rarely come. Mr. Darwin, in his narrative of the voyage of the *Beagle*, quotes instances of this in the South Seas, on the excellent authority of Williams, the missionary; and it is to typhus that Mr. Darwin compares these cases. "It would almost appear," he says, "as if the effluvium of one set of men shut up some time together was poisonous when inhaled by others, and possibly more so if the men be of different races."

I shall take one other illustration of the doctrine of acquired autonomy, and I shall take both the facts and the doctrine from Sir Thomas Watson. The English troops that served in Egypt in 1801, under Sir Ralph Abercrombie, suffered much from the ophthalmia of that country, which is always brought on by exposure to cold after being heated, by the glare of the white and parched ground, by the dust in the air, and such-like causes peculiar to the climate of Lower Egypt. No one, in those days, thought that Egyptian ophthalmia was a specific infection. But some of the English soldiers returned with it uncured, and it soon became contagious in the home garrisons; and it was found, after a lapse of eight or nine years, that there were no fewer than two thousand three hundred and seventeen soldiers pensioners upon the public bounty from total blindness in conse-

quence of ophthalmia. Those who knew the disease as it occurs in Egypt denied that it was contagious, and those who saw it in England were as positive that it was contagious. Watson reconciles the two views. He says that "there is nothing absurd nor unlikely in the supposition that diseases may first arise from some other source, and then become capable of spreading by contagion;" and he says elsewhere: "My own creed upon the matter is this—that the disease may, and often does arise, independently of contagion, from the agency of ordinary causes of inflammation; and that, having so originated, it acquires contagious properties, which develop themselves only under circumstances that favor the propagation of most of the contagious complaints." A parallel to the Egyptian ophthalmia of 1801 may be found in certain cases of syphilis described by Baron Larrey in his surgical history of the same campaign. The Alexandrian syphilis, which the French troops contracted largely, was peculiarly free from "grave symptoms," and "easily cured;" but it proved very "obstinate and difficult to destroy" in those who brought it back with them to France.

In choosing to speak of infective diseases from a standpoint which is not the dominant standpoint of the time, I fear that I have laid myself open to the charge of taking advantage of a public opportunity in order to get a hearing for a somewhat peculiar view; but the words which I have just quoted from Sir Thomas Watson will show that this doctrine of common disorders acquiring specific power has not been absent from the thoughts of those who lived in the philosophical period of medicine. Nothing would be more agreeable than to adduce other instances of the same kind from the history of medicine, and I especially regret that time will not permit me to say something of this principle of autonomy as it was held by the thoughtful and talented writers who were known in Germany fifty years ago as the Natural History School. But in anything that concerns the natural history of disease, we may go direct to Sydenham, who was the author of the phrase, and in Sydenham we shall find a very explicit statement of the doctrine of an acquired autonomy and a pre-autonomous stage in the specific diseases. Sydenham uses the language of the humoral pathology of his time, but that matters little. The humors, he says, may, under certain circumstances, be raised to the dignity of a substantial form or to a species, a specific disease being one that takes its rise in the specific exaltation or specification of some juice of the body; and he expressly mentions the antecedent condition of the humor before it had put on its species—*antequam hanc induerat speciem*. If I have preferred to speak of the acquired autonomy of a disease, and of its pre-autonomous stage, I mean no more than Sydenham means here, as the context of the passage would show.

Sydenham compares these species of disease to the species of animals and plants, only that their life is an integral part of the general life of the body; and as we have an origin of species for animals and plants, it is natural to think of the origin of disease species. But there is a difficulty in the latter which the Darwinian problem is free from. In the origin of species we are dealing with individual things, each with its well rounded, independent life; but where is the individual life in disease? In my humble opinion, the germ will not serve our purpose, for, according to the great Darwinian analogy, the germ is always a part of the individual, and always presupposes the individual. The germ, or the sperm, is no doubt a peculiarly important part, and it is charged with the most marvellous representative powers, but it is always representative of the individual, and it derives its powers from the individual. Such, at least, is our only analogy.

If, then, we must have the individual to start with, before we can apply the "origin of species" to disease, we come back to the old question, how a morbid state of

the body can become a semi-independent thing, how it can exist, not in absolute independence of the body, but autonomous within it, an *imperium in imperio*. This is the perplexing question which I stated at the outset with reference to cancer, a disease which, in the popular estimation, is almost synonymous with a semi-independent life; and I quoted the words of Paracelsus: "In such a disease a man is himself and another; he has two bodies at one time, enclosed the one in the other, and yet he is one man." I have spoken to several metaphysical friends of the difficulty of conceiving how a mere state of the body, a complex or integrated morbid state, can become an individual existence with the power of propagating itself; but I cannot say that I have got anything satisfactory out of them. We shall probably have to settle this question within our own science as a part of the subject-matter of pathology. Pathology is indeed varied enough in its subject-matter. It studies disease on many sides, as the founder of this Association planned that it should be studied—the side of its anatomy and its physiology, of its geography and its ethnology, of its history and its natural history. Its aspects are as various and attractive as the fruit trees in the Mohammedan paradise. But there is nothing in all this boundless field of inquiry that is more likely to occupy the mind of the profession for years to come, as it has occupied it in times past, than the difficulty of conceiving how a state or condition of the body can become a species of disease.

THE PRACTICAL TREATMENT OF ABDOMINAL HERNIA.

By W. B. DEGARMO, M.D.,

NEW YORK.

1.

THE following remarks on abdominal hernia are placed before the profession with the sincere hope that they may lead, in some instances at least, to the better treatment of these affections, and to the more thorough study of a part of this subject, now much neglected.

It is probable that no subject within the domain of surgery has received more thoughtful and careful study than that which has been bestowed upon the surgical treatment of hernia from the days of Hippocrates to the present time. It is in the writings of Hippocrates that we find the first account of this affection that is in any degree correct. In later years it is described in the works of Celsus, Antoninus, Galen, Oribasius, Aëtius, and Paulus Aeginetus, the latter in the seventh century, and those first mentioned prior to that date. From that early period up to the present time we find prominent among other writers the names of Albucasis, Roger de Parma, Franco, Benedictus, Ambrosé Paré, Fallopius, Vesalius, Scultetus, Percival Pott, Scarpa, Lawrence, and Sir Astley Cooper.

In our own time the works of Wood, Dowell, Heaton, and others, relating to special operations or methods, will hardly bear favorable comparison with some of those earlier writings.

In the writings of the authors mentioned, and from the ably written articles on hernia contained in the standard works on general surgery, we can obtain accurate knowledge of the anatomy, pathology, and surgical treatment of these affections; in fact, so faithfully did Sir Astley Cooper study the subject that very little new material has been added to it since his time. The study of the management of and operation upon strangulated hernia has been exhaustive, and all teachers of surgery endeavor to impress their students with the importance of a thorough understanding of this branch of the subject. Many ingenious operations have also been devised for its radical cure, most of which receive stronger endorsement by their authors than by more impartial judges.

All of this is good in the line in which these studies

have been pursued, and beneficial in many instances, but they are of little service to the average patient suffering from, perhaps disabled by, a neglected hernia, who has not strangulation, nor the time, money, or inclination to attempt to obtain a radical cure. It is to this latter class that I desire to call the attention of the profession, and it is for their relief that I ask for a more rational treatment of hernia. It surely is as much the physician's duty to prevent strangulation as to relieve it when present. To treat disease only after it has arrived at its most dangerous stage is not, and should not be, in this instance, the practice of the conscientious physician.

In this country there are at a safe estimate five million persons suffering from some one of the various forms of abdominal hernia. In spite of poor treatment a few get well, others manage by their own ingenuity to prevent an increase in the bulk of their hernias, others by accident get something nearly suited to their cases; but a great majority of this vast number are growing worse every year until wholly or partially disabled, and many are saved from death only by timely and judicious surgical aid.

I speak advisedly when I say that the greater part of this suffering is entirely unnecessary, and due to the fact that when patients of this character apply to that source from which they should naturally expect and obtain relief, they are most frequently referred by their physicians to persons ignorant of the requirements of the case, who attend them on a purely speculative basis.

It is a crying shame that these numerous cases, so deserving of relief, so susceptible of alleviation in the hands of the professional man, are still neglected by the majority of practitioners, who shift all responsibility to the druggist, instrument maker, equally incompetent truss vender, or allow them to drift into the clutches of that chief of charlatans, the self styled "rupture doctor," who is ever ready with his testimonials of cure to exact an exorbitant fee from his easy victim.

It would be a poor surgeon who should leave the application of splints in the hands of the manufacturer, and devote years of study in trying to remedy the bad results sure to follow such practice, and yet this is done in cases of hernia. It needs no statistics, however, to prove that there is more danger to life, and of disability in an ordinary hernia, than in an uncomplicated fracture of the humerus, allowing that both are equally neglected. Why this difference in practice in the two cases? Why is the one dismissed with scarcely a second thought, while the other receives the surgeon's most careful attention? The answer, I believe, may be found in the prevailing, but certainly erroneous idea, that for a person afflicted with hernia there is positively no cure, and probably no relief.

To inform a patient suffering from hernia that no relief can be obtained, sending him off to buy a truss, thus dismissing the case, is doing that person a very great injustice, and the writer has seen most unfortunate results following this common practice. On the contrary, the sufferer should be informed of the importance of remaining under the observation of his physician, and carefully instructed in the proper use of the necessary appliance.

An eminent authority across the water has truly said: "The expediency of judiciously pursuing the mechanical treatment of every variety of hernia cannot be too strongly urged upon the laity by the profession. In both sexes it should be carefully conducted the moment that the slightest protrusion shows itself. Whether the hernia occurs in infancy, youth, at middle age, or at later periods of life, if properly watched and judiciously supported, it usually gives but little trouble; in many cases it is even cured. But, on the contrary, if it be neglected, increase in bulk, and sooner or later diseased states of the rupture, often leading to the death of the individual, will almost infallibly occur."¹

¹ Holmes' System of Surgery, vol. ii., p. 676.

Percival Pott, writing in 1779, recognized the importance of giving these cases early and careful attention in order to secure the best results. It is to be regretted that the writings of this and other authors have not made a deeper impression upon the general profession. He says: "There are many circumstances attending ruptures which will require frequent assistance in order to render a cure more probable, and there are many ruptures in persons of mature age which will admit of perfect cure if properly and judiciously managed from the first."¹ The remarks of the same author upon the charlatans who thrive upon this class of cases is, it is to be regretted, still applicable: "It has in all times, from the most ancient down to the present time, rendered those who labor under it subject to the most iniquitous frauds and impositions. No disease has ever furnished such a constant succession of quacks as ruptures have." In this, as in other instances, those branches of practice overlooked or neglected by reputable and educated physicians are the fields in which quackery best thrives. By keeping these cases within the profession, and bestowing the same amount of time and study upon them now given to surgical cases of even less importance, methods of treatment would improve, results now considered impossible would be attained, and sufferers will not, as heretofore, be obliged to submit to the impositions of incompetent and dishonorable persons.

As the limits of this article will not admit of a detailed account of the proper treatment of each variety of hernia, I shall at present make only a few such suggestions as are applicable to all cases; at a later date I intend making some observations on the best practical methods of treating each form, in order to secure the greatest number of cures, and the maximum amount of improvement in those considered incurable. In order to form an opinion in any degree correct upon which a prognosis may be based, it is important at the outset to get a full history of the cause, development, and past treatment of each individual case. A hernia produced suddenly by heavy lifting, violent coughing, or other similar causes, is far more susceptible of cure than one coming on gradually with a relaxed and flabby condition of the abdominal parietes, and a distinct hereditary predisposition. Hereditary predisposition will be found an important factor in some cases. The writer has under observation one family in which nearly every male member for four successive generations has been afflicted with inguinal hernia; another family where in three generations almost all of the female members have suffered from either umbilical, inguinal, or femoral hernia.

The exact cause of this predisposition is, I think, left for future study to determine. Sir Astley Cooper believed it due to the width or shape of the bony pelvis, but, after accurate observations under favorable conditions I am unable to endorse this view, having found by diagrams representing the exact shape of a section of the pelvis, taken from several members of the same family in which hernia was undoubtedly hereditary, that they did not on comparison show any striking resemblance in size or shape.

By a thorough search for the immediate cause of a hernia much may be accomplished in many instances, especially if the case be a recent one, as, if the cause be found to be one which may be removed, the chances of complete cure are thereby greatly enhanced. For example, if a person has recently produced a hernia by straining at stool, due to constipation, this cause must be removed at once, and then with suitable treatment, immediately applied, there is more than a mere chance of complete recovery. The same remarks apply with equal force to cases of stricture and to children suffering from congenital phimosis.

The writer has seen several instances wherein the latter has produced the most rebellious hernias, which

have entirely recovered when the cause was removed. At the Children's Hospital, London, Mr. Kempe found in fifty consecutive cases of congenital phimosis, thirty-one cases of hernia which had developed since birth. Improvement began in every instance as soon as circumcision was performed, and in five cases immediate cure of the hernia resulted.¹

One of the most obstinate scrotal hernias the writer has ever had to contend with was caused by vesical calculi in a patient over fifty years of age. After the operation for the removal of the stone the hernia so far improved as to enable him (contrary to advice) to go days at a time without his truss and still no protrusion occurred.

The variety and condition of the hernia should receive careful consideration. It is quite essential in inguinal hernia, for instance, to determine with certainty whether we are treating a direct or an oblique protrusion, as in the former the centre of pressure used for its retention should be at the external ring, while in the latter it is of the first importance that it should be worn over the internal ring. The methods of diagnosis are so fully given in all text-books on surgery as to make their mention here unnecessary, and their treatment will be taken up later.

Is the hernia reducible? In the majority of cases it will be so found; in a few, attempts at reduction will not be attended with success. Do not decide this point hastily, however, and thereby consign your patient to the lifelong danger, discomfort, and disability sure to result from irreducible hernia. In order to illustrate the importance of this statement the following case is cited:

E. C.—, merchant, aged thirty-eight, consulted me, September 10, 1879, respecting a very large scrotal hernia, which had not been reduced for six years. Originally small and easily controlled, it had arrived at its present condition through the use of inferior trusses, bought of the druggist to whom his physician had sent him, selected and applied according to his own judgment. Now, after having abandoned all support for several years, it has been pronounced, by four physicians, irreducible hernia, and is so troublesome as to unfit him for business. In character it is an entero-epiplocele, the largest part of the protruding mass being omentum, which in places appears firmly adherent.

Gentle but constant taxis, with hips elevated, was continued for *one hour*. No perceptible effect was produced, and the patient was instructed to return to his hotel and remain in bed twenty-four hours, the diet to be the lightest possible.

September 11th.—Taxis again employed for about half an hour, and with better results, about one-third of the mass being returned. Efforts at reduction discontinued, patient instructed to remain in bed as before.

September 12th.—After twenty minutes' trial entire mass gradually returned within the abdomen. A suitable retentive appliance was adjusted, and instructions given that should colic, nausea, or vomiting occur, it was to be removed at once and the hernia allowed to descend; patient to remain in the recumbent position. About one hour later discomfort in the umbilical region was experienced, soon followed by vomiting. Support removed and greater portion allowed to descend, after which unpleasant symptoms soon subsided. No further attempts at retention were made on this day.

September 13th.—Hernia reduced with very little difficulty, and retained for three hours before discomfort was occasioned.

September 14th.—Support worn six hours, and on the following day all day.

Four months later I made the following note in my case-book: "Improvement in this case rapid, and to an unexpected extent; hernia never descends, even under

¹ The Chirurgial Works of Percival Pott, vol. ii., p. 48.

¹ The Lancet, July 27, 1878.

light pressure. Attends actively to his business, and experiences no inconvenience either from his hernia or the appliance worn." This case has been given in full because it clearly illustrates three very important points, viz.:

First.—That an apparently irreducible hernia can, in some instances at least, by judicious and persistent taxis be returned to the abdominal cavity.

Second.—That extreme caution is absolutely essential to the safety of the patient, after as well as during reduction.

Third.—That great improvement is possible, under favorable conditions, even in extreme cases; that the patient can be brought from disability, suffering, and the constant dangers of strangulation, to a condition closely approximating a cure.

In employing taxis only the most gentle manipulation is admissible, and the patient should not be subjected to any amount of discomfort. The necessity of closely watching the case after reduction can not be over-estimated; omentum after a long residence outside of the abdominal cavity becomes hardened and changed in character, so that when returned it acts upon the peritoneum as a foreign body. Petit has recorded a death due, as was found post mortem, to peritonitis produced by returning and keeping within the abdomen omentum which had long been protruded.

These hernias of long standing are worthy of the surgeon's most careful and persistent attention, and when this is given, he will frequently be rewarded by the most gratifying results.

M. Thiry, in a carefully written paper read before the Royal Belgian Academy of Medicine, arrives at the following conclusions:

First.—Old hernias of large extent, constituting a variety of eventration, are susceptible of reduction in most cases.

Second.—The large volume of a hernia is never a contra-indication to its reduction, although it necessitates the adoption of certain precautions, and the employment of considerable time.

Third.—The diminution in the capacity of the abdominal cavity in old hernias is never antagonistic to a slow, methodical, and progressive taxis.

Fourth.—By slowly re-entering the abdominal cavity the extended parts gradually resume their former places.

Fifth.—The best method of reduction is "compressing taxis," which consists in only restoring organs to their natural position after they have been relieved by pressure of any vascular engorgement. Those organs which effected an exit last should be first replaced."

In attempting the reduction of these old hernias considered irreducible, it is best that the patient be fully informed at the start of the importance of having the protruding viscera returned to the abdominal cavity, otherwise he may become impatient under the confinement to bed.

In hernias of this class, when strong pressure is necessary to retain the mass after reduction, great trouble is sometimes experienced in keeping the skin beneath the pad in a healthy condition. To accomplish this, strict cleanliness of the appliance as well as of the person is absolutely essential, combined with such local medication as may be indicated. In the hands of the writer the following powder applied beneath the pad on a thin layer of absorbent cotton has proven more efficient in action than any other means resorted to for hardening the skin and keeping it healthy:

R. Amylum.....	iv.
Creta gallica.....	ij.
Alumen ust.....	i.
Acidi boraci.....	ij.
Acidi carbolici,	
Ol. limonis.....	āā. ʒ ss.
Ft. pulv.	

The parts should be thoroughly washed every night, and freshly powdered absorbent cotton placed beneath the pad every morning for the first week that the support is worn. The results will fully compensate for the extra trouble involved.

The writer in his earlier experience in the treatment of hernia, had the importance of employing these precautions impressed upon him by the following circumstance: The case was an extremely obstinate oblique inguinal epiplocele, and very strong pressure was required for its retention. After the adjustment of the appliance, which was perfectly successful in its retentive action, the gentleman failed to present himself for examination on the following day as requested, and at the end of one week I was asked to see him at his house. I found that he had experienced no great amount of discomfort, but on removing the support on the night previous, the skin had adhered to the pad, and he had removed a piece of the integument which had sloughed away, corresponding in size with a silver half-dollar, leaving the subcutaneous tissues completely exposed. Suitable dressings were immediately applied, but with the most careful attention the patient was confined to the recumbent position for three weeks before the process of healing by granulation was complete, and for this amount of discomfort and detention from business he had only himself to blame for disobeying the instructions given him.

THE DIAGNOSTIC SIGNIFICANCE OF IMMOBILITY OF ONE VOCAL BAND.—Dr. J. Solis Cohen, in a paper in the July number of the *American Journal of the Medical Sciences*, points out: *First*, that laryngoscopy may sometimes be the sole or most efficient means of diagnosis in affections located exterior to the larynx; and *second*, that a liability to error might often be incurred, were we to place too exclusive a reliance upon the objective symptoms, as presented by the image seen in the laryngoscopic mirror. From a study of cases under his observation he concludes: 1. That whenever the left vocal band is immobile in abduction, or in the cadaveric position (positions in which the patency of the glottis is not interfered with), and there is cough or dyspnoea (or both), without cardiac or pulmonary lesion to account for these symptoms, we are justified in suspecting aneurism of the aortic arch; and difficult deglutition will be almost certainly confirmatory of the diagnosis, notwithstanding the absence of tumor, pulsation, thrill, and bruit. The only, and exceedingly improbable source of error, would be intrathoracic neoplasm. 2. That ankylosis of the crico-arytenoid articulation may fairly be suspected in cases of immobility of one vocal band, not referable to mechanical interference with the transmission of nervous force; unaccompanied with evidence of central or local nervous disease; and in which failure to respond to appropriate treatment will warrant us in excluding muscular atrophy. But the diagnosis can be finally established only by the application of direct pressure to the affected arytenoid cartilage. 3. That whenever one vocal band is immobile in the cadaveric position or in abduction, and there are no other signs or symptoms to assist the diagnosis, ankylosis being eliminated, we should not be satisfied with a diagnosis of neuropathic paralysis; but should keep the patient under observation with a view to detecting the earliest manifestation of aneurism, consolidated lung, or other mechanical cause for the impaired innervation.

WESTERN CRITICISM.—Bellevue Hospital Medical College, while ostentatiously proclaiming in her announcement her fidelity to the Code of Ethics, places no restrictions on the admission of students to her classes, other than that involved in the price of her tickets. It is, of course, much more important that a physician be ethical than that he should be at all prepared by previous education to take up the study of medicine. Great is reform!—*Medical Age*.

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THE GERM THEORY OF TYPHOID FEVER AND THE TREATMENT OF THIS DISEASE BY SALICYLATE OF BISMUTH.

THE tendency of the age is undoubtedly to account for all the contagious febrile affections, as well as many chronic diseases, by the hypothesis of a specific microphyte, whose ravages constitute the pathogenetic element. This tendency is exemplified in the theory, recently formulated, and ably supported by Klebs, of Prague, and Eberth, of Zurich, as to the etiology of typhoid fever.¹

According to these pathologists typhoid fever is due to a peculiar microbe which presents itself in the form of rods or filaments, some of which contain spores. Between the rods and the filaments transition forms are observed, which make it probable that the latter are derived from the former.

These micro-organisms have been found by Klebs, in accordance with the period of the disease from which death resulted, in the following localities: 1, in the intestine, first in the glands of Lieberkuhn, later in the interglandular tissue and in Peyer's patches, still later in the submucous cellular tissue, and even in the muscular layer; 2, in the mesenteric glands; 3, in the spleen; 4, in the lungs (the parts affected with hypostatic pneumonia); 5, in the brain.

He has also found them in abscesses complicating typhoid fever, in ulcerations of the larynx, in the kidneys, the myocardium, etc. In these various sites he has detected the same microbe, and in numerical abundance proportioned to the disorder of function of the organ where the bacillus has been found. Klebs has made many cultures of the microbe, and has inoculated animals with the final product, reproducing in hares, pigeons, guinea-pigs, etc., the characteristic anatomical lesions of typhoid fever.

Eberth, of Zurich, after an independent series of investigations, has found in the lymph-organs of the abdomen—intestinal mucous membrane, mesenteric glands, spleen—certain rods whose characters correspond with those noted by Klebs. These rods have, in fact, been identified with Klebs' bacilli.

Klebs gives a graphic *résumé* of the march of this malady. The bacillus typhosus, or its spores, are taken into the mouth and pharynx in the air of respiration and

are carried to the stomach with the saliva or food. Arriving in the small intestine they produce by their multiplication a diffuse catarrhal inflammation, and commence to penetrate the mucous membrane. This anatomical stage corresponds to the period of incubation of the disease, a period characterized by anorexia, prostration, and a slight febrile movement. At this epoch the disease is still local; it is not till later, when the bacillus has effected an entrance into the blood and has invaded the organs, that we witness the second "classic" stage, the stage of infection, characterized by fever, cerebral symptoms, etc. At the same time the intestinal inflammatory process concentrates itself on Peyer's patches, which finally become necrosed and eliminated. The microbes, moreover, may multiply in the spleen, brain, lungs, and produce there grave disorders.

It sometimes happens that the bacillus first undergoes development in the lungs; the disease then commences as a pneumonia (typhoid pneumonia); at the autopsy the intestinal lesions (when they exist) are more recent than the pulmonary lesions.

The primitive lesions of the intestine are not always in such direct relation to the secondary lesions of other organs, that to the intestinal alterations, however extensive and profound, corresponds a proportionate perturbation of other functions of the economy. The autopsy often demonstrates that the intestinal ulcerations may be most marked and grave, at the same time that the general infection may have been almost nul; such are the cases described as *typhus ambulatorius*, or walking typhoid. On the other hand, with general infection and serious constitutional symptoms, the local intestinal lesions may be inconspicuous or wanting. In a word, typhoid fever comprehends two distinct diseases; the local intestinal lesion, and general infection with localization in different organs. These two factors of this complex disease are synchronous in a part of their duration. The first precedes the second, and the latter is in full evolution while the lesions of the former are undergoing reparation.

The germ theory of typhoid fever is far more probable than the chemical theory; in fact, we can imagine no chemical ferment or "poison" which is capable of producing such phenomena, while the hypothesis of a *contagium vivum*, infinitesimal in its commencement, pululating in the system, and invading important vital organs, which are robbed by it of their life-sustaining oxygen and pabulum, till the enviroing conditions are no longer favorable for the maintenance of the parasite, well explains all the striking phenomena of the disease. Moreover, important inductive evidence is every year making the microphyte theory less an hypothesis and more a fundamental fact in pathology. The inoculation experiments of Klebs, above alluded to, constitute the kind of proof now demanded.

Almost all pathologists being convinced of the germinal origin of all contagium, there is a dominant desire on the part of therapeutists to attack the microbe by suitable germicides in the alimentary canal or in the blood, to prevent its multiplication and effect its destruction. There is very general agreement that we are not yet in possession of any sure and safe means of combating the germinal *materies morbi* when once it has effected entrance into the blood. No one has more clearly shown

¹ Bulletin gen. de Therapeutique, June 30, 1883, Desplat's article, to which we are indebted for this summary.

this than professor Germain Sée in a late lecture.¹ Quantities of any known antiseptics, such as would be necessary to rid the blood of the parasitic contagium would be toxic and speedily fatal to the organism. This is notably the case with such germicides as bichloride of mercury, chlorine, iodine, carbolic, and even salicylic acid. Salicylic acid, the only acid seriously to be thought of in this connection, has never yet been given in sufficient doses to arrest typhoid fever in its march, or even materially to modify its evolution. Professor Sée has known of a rheumatic patient who, while taking ten grains every two hours of salicylic acid for several days, was nevertheless attacked by typhoid fever, which pursued its usual course.

Being then debarred from any safe and certain chemical antidotes against the morbid bacillus when it has pervaded the system, our therapeutical efforts are diverted to other indications, such as the support of the vital forces in the struggle in which they are engaged. But can we do nothing to effect the destruction of the disease-germ while it is in the alimentary canal, before it has penetrated the tissues or gained the circulating fluids? Not a few distinguished therapeutists have answered this question in the affirmative, notably Gueneau de Mussy, Herard, Hallopeau, Liebermeister, Wunderlich, and in this country Dr. James C. Wilson and Roberts Bartholow.² The treatment of the last two authorities is essentially identical. Calomel is given in full purgative doses several times during the first week. This is exhibited for a double purpose, to restore heat production and to destroy typhoid germs in the intestine. Iodine is given throughout the disease in combination with carbolic acid, or as Lugol's solution. Bartholow's formula is two parts tincture of iodine to one of strong carbolic acid; of this from one to three drops every three hours during the day and night.³ By this medication it is intended to arrest the multiplication of germs in the intestine and prevent fermentation.

Professor Henri Desplats, of Lille, is favorably known by his numerous theses on the antiseptic treatment of fevers, especially by a memoir published last year on the treatment of typhoid fever by carbolic acid. After long experimentation with various salicylates in typhoid fever, he has found in the salicylate of bismuth the great desideratum. It is sparingly soluble, and therefore is more likely than most medicaments to escape absorption in the stomach and to reach the diseased intestine. It moreover has an energetic action on the organized ferments, and is a bactericide of great power. Taken during the prodromic period, when the infection is purely intestinal, the microbes not having entered the blood and tissues, its efficacy is greater; in Dr. Desplat's experience it has even had a marked abortive action. Thus, out of twenty cases reported by him, eleven (or more than one-half) treated in the first stage were cut short in four or five days under the free use of salicylate of bismuth. At least this is the belief of the professor, who gives the particulars of these cases with great minuteness,

showing that the patients had all the characteristic symptoms of the disease with varying degrees of severity. In four cases the bismuth salt had a very decided moderating effect on the temperature, but the disease was prolonged by complications. In five cases, all of which were very grave, the action of the medicament was null. The ordinary dose was about a scruple. This was repeated sufficiently often, so that the daily quantity taken should equal about six grammes (or about one drachm and a half). In some instances, where the fever-heat was excessive, the salicylate was given in one full dose of three, or even six drachms, but these large doses proved somewhat depressive. The medicament is not unpleasant to the taste and is easily borne. In short, the perusal of this article seems to justify the hope that in the salicylate of bismuth we have a new medicament of very great antiseptic value.

PREHISTORIC SURGERY.

In a paper read before the Surgical Section of the Fifty-fifth Convention of German Naturalists, Dr. Tillmanns presented some interesting conjectures concerning the state of surgical art in the stone age (*Centralblatt für Chirurgie*, June 23, 1883). He first reviewed the surgery as practised at the present time by peoples supposed to occupy the same plane of development as prehistoric man in the stone age. Then, from articles found in the caves of the men of this age, he formed his conclusions concerning their surgical practice. Among the peoples still living in the stone age he reckons the Australians, the South Sea Islanders, and the Esquimaux. Dr. Miklucho-Maclay has given an account in the *Zeitschrift für Ethnologie* of castration and ovariectomy as practised among the Australians. He states that girls are robbed of their ovaries in order that they may serve as "hetaïra" to the young people. The operation is performed through an incision by means of sharp flints, on each side parallel to Poupart's ligament. The operation looking to the sterilization of men is performed by cutting away the under wall of the urethra from the meatus to the scrotum. This is done by means of a knife formed of a splinter of quartz set in a handle made of the dried sap of an indigenous tree. The South Sea Islanders trephine for injuries of the brain or skull. A T-shaped incision is made through the scalp and the bone scraped away with a splinter of glass. The operation is fatal in about one-half of the cases. In case of recovery the hole is covered with a thin piece of coconut shell. If the brain is found to be injured the destroyed portion is replaced with a piece of the brain of a recently killed hog. This procedure is said to promote recovery. The natives of Tahiti possess a large surgical armamentarium, consisting of flints, bistouries made of shark's teeth, sharpened bones, etc., similar to those found in the caverns of the stone age. They make saws also from shark's teeth. The Esquimaux produce abortion by pressing or striking against the womb with a whip handle. They also use the sharpened rib of a walrus or a seal, which they guard with leather and introduce into the vagina to puncture the membranes.

Much has been learned of the operation of trephining in prehistoric times from the researches of Prunières and

¹ *Traitement de la Fièvre typhoïde*, Paris, 1883.

² *Utile Wilson on Continued Fevers*, p. 228. New York, William Wood & Co. Also an able statement of Wilson's and Bartholow's antiseptic method of treating typhoid fever in the *New York Medical Journal*, vol. xxxvii., page 27.

³ *Boston Medical and Surgical Journal*, February 1, 1882.

Broca. The former found a so-called "rondelle," an oval piece of bone, one and one-half by two inches in diameter, taken from the parietal bone, in the excavations at Lozere. Such "rondelles" were worn as amulets. They were taken from the skulls of those who in life had survived the operation of trephining. Such men were regarded as holy. After their death fragments of bone were taken from about the trephined part and worn as charms. Many skulls showing this treatment were found. The operation seems to have been performed by scraping away the bone with a flint, as the oblique edges of the hole in the skull would indicate.

THE ALLEGED CURABILITY OF TUMORS BY THE PARENCHYMATOUS INJECTIONS OF OSMIC ACID.

SOME time ago we had occasion to comment upon a report published by Dr. Delbastaile concerning the favorable results obtained in the treatment of tumors by the injection of osmic acid. The cases referred to were observed at Winwarter's clinic in Liege. A soft sarcoma, the size of a child's head, seated upon the right side of the neck, after an unsuccessful attempt at extirpation, was treated by the daily injection of three drops of a one per cent. aqueous solution of hyperosmic acid. After fourteen days the new growth was softened and discharged through the wound in the skin. In a month the tumor had entirely disappeared without any unfavorable local or general symptoms. Equally favorable results were obtained in the case of a multiple lymphoma, cervical adenitis, and a sarcoma near the shoulder.

Upon the strength of this report, the late Professor Bruns, of Tübingen, was led to make a trial of the remedy in a number of instances. The cases are reported at length by Dr. Pfeilsticker in the *Med. Correspondenzblatt des Württemb. Aerzt Landesvereins* of May 31, 1883. There were four cases of multiple tubercular lymphomata, one of malignant lymphoma of the neck, and one of a sarcoma, the size of a man's head, upon the left side of the chest. Unfortunately, not the slightest effect was observed in a single case, even after long-continued trial of the hyperosmic acid injections. The procedure was painless in most instances. The only obvious result, however, was the matting together of the tumor and the neighboring tissues, thus increasing the difficulty of extirpation by the knife. This want of success is explained by the strictly local action exerted by the acid. It causes a necrosis of the tissues at the point of injection, but produces no change in the surrounding parts. Evidently modern surgery commands better methods of dealing with neoplasms than the hypodermic injection of osmic acid.

FAVORABLE RESULTS OF TRAINING UPON THE SENSE OF COLOR.

It has been stated by Magnus and others that color blindness is capable of correction by means of special training. And this seems not at all improbable, reasoning from analogy, since other senses may be developed to such a wonderful degree in certain directions by careful education. An observation made recently by Dr. W. Kroll is of interest in this connection (*Deutsche Medicinal-Zeitung*, June 7, 1883). He examined a large number of men in Crofeld and its vicinity, but found

only 0.6 per cent. affected with color-blindness. The usual proportion is three per cent. of all examined. The principal industry of Crofeld, for nearly two centuries, has been the manufacture of silk stuffs and velvet, and it seems reasonable to attribute the low percentage of color-blindness among the inhabitants to the education of their sense of color perception consequent upon their occupation. It would be easy to pursue these investigations further among operatives in print works and in other places where colored materials are manufactured in this country, and the results thereby obtained might prove to be of interest, and would certainly have a real practical value.

News of the Week.

CONCERNING ACONITIA.—Dr. J. O. Tilton writes us to know if the granules of aconitia ($\frac{1}{200}$ grain Duquesnel) administered according to directions given in an editorial article in this journal, July 14th, are safe. We have seen nothing, and we are able to find nothing which would lead us to fear any unfavorable results from this drug given with the precautions which we have urged, namely: not to take more than $\frac{1}{4}$ milligramme at a time, and not to repeat the dose oftener than once in three hours, and not to exceed 2 milligrammes ($\frac{1}{30}$ grain) a day. Granules of aconitia, containing $\frac{1}{200}$ grain, are sold in our drug stores. These granules contain somewhat more than $\frac{1}{4}$ milligramme, and should be used with more caution. We have prescribed these granules in several instances with good effects, directing one granule every four hours till some tingling of the tongue, pricking of the face, or tightness about the temples, was experienced. Generally decided amelioration has attended these symptoms, which indicate that the physiological effect of the alkaloid is being realized. In fine, it cannot be claimed that $\frac{1}{200}$ grain aconitia is in any sense a poisonous or a dangerous dose, and we should not hesitate to repeat it every four hours till either the pain is subdued, or till some or all of the minor toxic phenomena above mentioned are felt, watching the actions of the medicament, and being ready at any time to interrupt its administration, as we would do with any powerful remedy.

THE ADDRESSES BEFORE THE BRITISH MEDICAL ASSOCIATION.—We have the pleasure of presenting in the present issue the addresses of Drs. Waters and Creighton, delivered before the British Medical Association last week. These comprise, with Mr. Harrison's address (published last week), all those delivered before the General Meeting of the Association. Both articles will be read with interest on this side of the Atlantic, and will amply repay the extra space given them. Dr. Creighton's able exposition of his subject, and the arguments used in support of his views will be especially interesting and instructive to advanced pathologists and earnest students in the higher professional studies.

THE CHOLERA.—The news from Egypt is becoming less alarming. It is said that some of the leading physicians of Smyrna do not regard the scourge as cholera. By last report there were thirteen deaths in Alexandria, and the number of cases of the disease was decreasing in the interior.

NEW YORK POST-GRADUATE SCHOOL.—DR. A. H. Smith has been elected Professor of Clinical Medicine and Therapeutics, dividing the former chair with Dr. T. E. Satterthwaite, Professor of Pathology and Clinical Medicine. Dr. Alex. J. C. Skene, of Brooklyn, has been elected Professor of Gynecology, dividing the chair with the present incumbent, Professor B. F. Dawson.

OUR CABLE DESPATCHES.—We beg to return our thanks to the numerous subscribers who have sent us so many kind congratulations regarding our cablegrams of the recent meeting of the British Medical Association.

THE ATLANTIC STEAMSHIP SERVICE.—A deputation of the British Medical Association and several members of Parliament called recently upon Mr. Joseph Chamberlain, President of the Board of Trade, and asked him to appoint a committee to consider the inadequate medical and sanitary management of Atlantic steamers. They commented strongly upon the want of proper precautions on emigrant vessels, from which a large annual sacrifice of life resulted. They suggested that ship-owners be compelled to increase the pay of ship surgeons, and that the American Government be requested to contribute a small sum toward the expenses of vaccinating passengers on board of vessels. Mr. Chamberlain replied that he intended to introduce in Parliament, in 1884, a bill dealing with the subjects mentioned and amending the shipping act.

THE GERMAN POLIKLINIC OF THE STATE OF NEW YORK.—We are informed that some of the German physicians of this city, have organized a Poliklinic (with an i). It is located on Sixth Street.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CHOLERA—THE WATER-SUPPLY OF LONDON—MEDICAL HONORS IN LONDON AND DUBLIN—THE CASE OF DR. BLADES—THE LATE DR. STEWART.

LONDON, July 28, 1883.

CONTRARY to expectation, cholera has continued to spread in Egypt. The Government are doing what they can to arrest its spread, and have just sent out twelve civilian medical officers to the affected district. Meanwhile a conference of medical officers of health on the subject has been held and arrangements made in readiness in case cholera should unfortunately reach our shores. The possible advent of cholera has again revived the question of a purer water-supply for London. We still drink only filtered river water in London—mostly from the Thames—and although the companies now have their intake higher up than London, the river is still not wholly free from sewage contamination from towns higher up the stream, although of late years great efforts have been made to lessen its pollution from such sources. There seems to be not the faintest chance of a water-supply for London from any purer source so long as the supply rests with the water companies. We shall have to wait, first, till the next session of Parliament for the London Municipal Bill; second, for a purchase by the new municipality of the companies' works and rights; third, for the construction of a conduit from a purer source. Meanwhile, while not improving the quality of the water, several of the companies have taken advantage of their parliamentary powers to largely increase

their rates, which, by the way, may probably prove an advantage from a sanitary point of view, as it will direct the attention of the ratepayers to the general subject of London water-supply.

Two more baronetcies have just been given to London medical men, viz., to Dr. Andrew Clark and to Mr. Prescott Hewett. The former is the Premier's medical attendant, and has one of the largest practices in London as a general physician, having the repute of realizing over twelve thousand guineas a year. He has written on pulmonary diseases, especially on "Fibroid Phthisis," and lately delivered an important address on "Renal Inadequacy." Dr. Clark is an enthusiastic advocate of the temperance cause. He is at present senior physician to the London Hospital, and is very popular with his students. Dr. Clark is, if not the most eloquent, one of the *readiest* speakers in the profession. For getting up and delivering a lengthy impromptu speech on any subject he is—within the profession—probably unequalled.

Mr. Hewett holds an equally important position on the surgical side of the profession, being senior surgeon to St. George's Hospital, holding several appointments to the Royal family, and is an important contributor to "Holmes' System of Surgery." Mr. Hewett enjoys an extensive consulting practice among the élite of fashion at the west end.

Some Irish honors recently proffered have given less satisfaction. The lesser dignities of knighthoods have been offered to Surgeon George Porter and Dr. Banks, both of Dublin. The latter promptly declined the honor as not commensurate with his professional position; the former has, after deliberation, finally accepted. The feeling among the profession in Dublin is very bitter on the subject, and a deputation of medical men has waited on the Lord Lieutenant who told them he could not intervene in the case of honors awarded by the Crown.

The recent apparently arbitrary dismissal of a police-surgeon for his alleged neglect of a constable suffering from obscure diabetic symptoms terminating fatally, continues to excite attention, and *The Lancet* has started a memorial to the Home Secretary on the subject.

One of the latest losses to the London profession by death is that of Dr. A. P. Stewart. Dr. Stewart practised as a general physician at the West End for forty-three years, and was a very widely known member of the profession. Very early in his career he wrote a lengthy paper in which he differentiated typhoid and typhus fever, and to a large extent anticipated Sir W. Jenner's later but more complete researches. But Dr. Stewart did not follow up the clue he had obtained, and thus did not acquire the fame and position which might have been his. He was on the staff of the Middlesex Hospital for many years, and at the time of his death Consulting Physician to that institution. He also lectured at the school on materia medica and medicine successfully. He held important offices as a member of the British Medical Association, and after being for many years one of the secretaries to the Metropolitan Counties' Branch (a post in which he was succeeded by Dr. Farquharson, now M.P.) was presented with a handsome testimonial subscribed among the members. He was once offered the presidency of the Branch but declined it. Dr. Stewart was one of those of whom it can be truly said that he sought not the material rewards of his profession. His practice was never extensive. He was nevertheless beloved by all with whom he came in contact. His manner was genial and attractive, his character consistent and upright. He was well-known for his interest in all religious movements, and he made an attentive study of the revised version of the English Testament. He was a Scotchman by birth, and distantly related to the family of the Prime Minister. Had Dr. Stewart been more energetic and business-like he might have reaped a richer harvest in practice, but he was not pushing, and even declined to lecture at the College of Physicians when asked to do so a short time since.

Progress of Medical Science.

SALICYLATE OF SODA IN DIARRHOEA.—In an article on the pathology and classification of the various forms of diarrhoea, and on the indications for the employment of salicylate of soda in this affection, Dr. Calleza concludes as follows: 1. The products of the putrefaction of the contents of the intestinal tube are the sole cause not only of a number of varieties of idiopathic diarrhoea, but also of many secondary diarrhoeas, in which the pre-existing disease has engendered a predisposition to decomposition. 2. Salicylate of soda is the most efficacious agent for preventing putrefaction in the intestinal tract without interfering with the normal digestive processes. It should always be employed when the stools have a putrid odor, especially if this character has been noted from the commencement. 3. Two or three doses of fifteen grains each per diem are sufficient for the speedy cure of strictly idiopathic diarrhoea. 4. In the secondary forms of the disease (which are far less common) a trial may be made of the salicylate rather as a prophylactic measure than with the hope of any marked therapeutic effect. 5. In syphilitic and phthisical diarrhoea, in that accompanying visceral abscess, especially of the liver, and in dysentery, salicylate of soda has produced the best results.—*Lyon Médical*, May 20, 1883.

THE USE OF COFFEE IN STRANGULATED HERNIA.—Dr. Antonio Sarra relates that he was called one evening to attend a man, sixty-three years of age, suffering from a strangulated femoral hernia. The patient was nearly moribund, there was no appreciable radial pulse, the face was pinched, the extremities were cold, and the attempts to vomit were almost incessant. Happening to remember the report of a similar case relieved by coffee, Dr. Sarra ordered an infusion of this substance to be employed as a drink and also externally, and then took leave of the patient, warning the family that death was inevitable unless a prompt amelioration ensued. Upon returning early the next morning he was surprised to find his patient in perfect health. The man stated that soon after taking the coffee he experienced a feeling of warmth and returning strength, then a large quantity of gas was expelled above and below, and when he put his hands upon the tumor it at once slipped back into the abdominal cavity, much to his astonishment as well as joy.—*Lyon Médical*, May 20, 1883.

CARDIAC AND PULMONARY SYMPTOMS DEPENDENT UPON GASTRO-HEPATIC TROUBLES.—In an exhaustive memoir upon this subject, embodying the results of a large number of observations, Dr. Barié concludes as follows: 1. Certain dyspeptic conditions arising from the stomach, intestine, or bile-ducts react upon the cardio-pulmonary apparatus and occasion morbid phenomena, which may be divided into four clinical groups: A. In the first form the heart alone is affected, as evidenced by palpitation and intermission of the pulse. B. The second form is characterized by phenomena affecting both the heart and lungs. There is more or less oppression in breathing, amounting sometimes to orthopnea and threatened suffocation. It appears almost immediately after eating and ceases when the process of digestion is completed, coming on again after the next repast. The cardiac troubles consist in dilatation of the right side, secondary tricuspid insufficiency sometimes following. There is a *bruit de galop*, which has its seat in the right heart, and also an accentuation of the diastolic sound at the level of the pulmonary artery, indicative of increased tension in the lesser circulation. During the attacks of dyspnea there are observed a small, soft, and compressible pulse, cyanosis, coldness of the face and extremities, and sometimes even slight hæmoptysis. C. The symptoms arranged under the third group resemble very closely angina pectoris. D. In the last form the phe-

nomena are scarcely noticeable; there is a little oppression in breathing after meals, and examination reveals a slight accentuation of the second sound at the pulmonary orifice, but there is no trace of dilatation of the heart. These varieties may be entirely distinct or there may be a combination of the symptoms of several forms. 2. These different phenomena are the consequence of a reflex action starting from the seat of digestive disturbance. The pulmonary capillaries are thrown into a state of spasmodic contraction, causing suddenly an exaggerated tension of the pulmonary system, and the right heart, struggling against this obstruction ahead, becomes first dilated and then hypertrophied. 3. Experimental physiology has demonstrated that this reflex action takes place wholly in the sympathetic system; nevertheless, clinical observation permits one to believe that the pneumogastric nerve is not entirely unconcerned in the production of these reflex symptoms. 4. These cardiac and pulmonary phenomena are observed to occur only with the milder dyspeptic troubles, and are never met with in the course of the more serious affections involving tissue changes (chronic inflammation, organic degeneration, etc.). 5. The above-described symptoms are met with usually in individuals whose nervous system is most impressionable. Women are more often affected than men (in the proportion of three to two according to the author's observations). Chlorosis and hysteria are predisposing causes. 6. The dyspeptic conditions giving occasion to these cardio-pulmonary symptoms are, as regards the stomach, simple idiopathic catarrh, and dyspepsia consequent upon tuberculosis, kidney disease, uterine affections, and heart disease; as regards the bile-ducts, catarrhal jaundice, biliary calculi, etc. 7. The prognosis, as a rule, is not grave, but the phenomena are subject to a recurrence in persons who are careless on the subject of alimentary hygiene. When the primary cause persists for a long enough time (as, for example, in impaction of a calculus in the bile-duct) and the dilatation of the heart is extreme, tricuspid insufficiency may be produced, and the patient may finally succumb to cardiac disease. 8. An exclusively milk diet is the only efficacious remedy. It works wonderfully well in gastric dyspepsia, but its action is indifferent and inconstant when the liver is the cause of the digestive troubles.—*Journal de Médecine de Paris*, June 9, 1883.

THE BILIARY CAPILLARIES.—The precise histological structure of the capillary network of bile-ducts in the lobules of the liver has not been satisfactorily settled. Is there a special epithelioid lining to these minute channels or not? M. Kanellis has communicated to the Académie des Sciences a note of some investigations made on the livers of rabbits with the aid of injections of nitrate of silver. The conclusion at which the histologist arrived (*London Lancet*) was to the effect that there does exist a flat, thin, tessellated epithelial lining of the ultimate biliary canaliculi, and that the larger ducts possess a coat of prismatic cells. This observation is believed to afford grounds for a belief in the existence of a distinction between the biliary and glycogenic functions of the liver; the epithelium of the biliary channels presiding over the functions of bile secretion, while the hepatic cells proper are devoted to the formation of glycogen. When the small size of the intralobular biliary capillaries is borne in mind, the determination of the presence or absence of a special epithelial lining, even with the aid of injections of argentic nitrate, will certainly not seem to be an easy matter, especially when we remember that an inference in histology is seldom or never a matter of direct observation. The distance, too, between such cells of doubtful existence and the genuine hepatic tissue is so infinitesimal that the relegation of one function to one structure must be an act of discrimination of so delicate a nature that we do not think much weight ought to be attached to the suggestion offered.

THE CAUSATION OF MUSICAL CARDIAC MURMURS.—As a result of observations extending over a considerable period of time, Professor Schrötter communicated to the Vienna Medical Society (*Allgem. Wien. Med. Zeit.*, No. 1, 1883), his views on the causation of musical murmurs heard over various parts of the heart's area. Following Hamernik, he regarded the fine, musical, high-pitched note sometimes observed over the left ventricle as due to the abnormal tension of one or more chordæ tendinæ, and demonstrated in illustration thereof the heart of a man of forty, in which a fine, tendinous thread traversed the cavity of the left ventricle. In some other cases, however, viz., those of musical murmurs heard over the aortic area, similar conditions have been observed, especially in perforated aortic valves, a thin, tendinous thread corresponding to the free edge of the valve being left free to vibrate in the current of blood. Such perforated valves are not uncommon, but it is only in the cases where the thread-like margin is able to be vibrated that the musical sound is produced.

TEST FOR IODINE IN THE SYSTEM.—Dr. Starke makes use of the following test to ascertain whether his patients have followed his directions when he prescribes iodides. It might also be made use of by a physician to learn whether a patient has taken iodides against his wish. He lets the patient spit on a strip of white paper and then spreads some calomel over it, or he sprinkles calomel on any sores that the patient may have. The calomel turns bright yellow if there is any iodine in the system.

CALOMEL AND MICRO-ORGANISMS.—Dr. Vassilieff has published some interesting researches concerning the action of calomel on the contents of the intestines (*Zeitschr. für Physiol. Chemie*). He alleges that he has proved that this drug leaves the gastric, hepatic, and pancreatic secretions absolutely unchanged. But it prevents certain processes of retrogressive metamorphosis and putrefaction, by destroying bacteria and micrococci naturally present in the alimentary canal. Hoppe-Seyler has rightly attributed the bright green color of calomel stools to the presence of unaltered bile in the feces. Under normal conditions the coloring matter of bile is destroyed in the process of digestion. But Dr. Vassilieff argues that calomel prevents this destruction, and the coloring material remains to give to the feces their peculiar hue under these conditions. The pancreatic secretion is peculiarly complicated, and particularly liable to very rapid decomposition, with the consequent formation of indol and allied products. Calomel entirely prevents this change, and also alters the characters of the gases evolved in the process of pancreatic digestion, especially diminishing the evolution of carbonic acid. Experiments on artificial pancreatic digestion proved that, when calomel was mixed with pancreatic juice, proteids, starch, and fats were all acted upon in the usual manner, trypsin, amylase, and steapsin being unaffected by the drug, but indol, long recognized as a product of decomposition, is not formed. Dr. Vassilieff, in a further series of experiments, found that this prevention of decomposition was due to the distinctly aseptic and antiseptic properties with which calomel is endowed. He discovered that it prevented the formation of bacteria and micrococci in food removed from the intestines and freed from these micro-organisms, and that it also destroyed them where they were present. Dr. Vassilieff administered fifteen grains of calomel to a dog, in two equal doses, and killed the animal a few hours after the second dose. The contents of the intestine were collected and analysed with every precaution. No indol or phenol could be found, but much leucin and tyrosin, generally destroyed at an early stage of digestion, were detected. This experiment appears to have been repeated more than once. Other experiments, with cheese, showed that calomel prevents butyric acid fermentation.

CREDE'S METHOD.—The value of Credé's method of expelling the placenta has recently been tested by comparative trials. Fehling used Credé's method in ninety cases. The placenta was left to come away itself in ninety-five cases. The following were the results: In the first series (Credé's method) the average loss of blood for each patient was five and one-half ounces. The time before the placenta came away averaged 7.7 minutes. In the second series the average loss of blood was six and seven-tenths ounces. The time before expulsion was 13.4 minutes. In eighty-five of the ninety cases treated by Credé's method the membranes came away entire. In ninety-one of the ninety-five cases left alone the membranes came away entire.—*Ohio Medical Journal*.

TREATMENT OF INFANTILE GASTRO-ENTERITIS.—From observations made in the Children's Hospital, at Pesth, Dr. Epstein concludes (*Prager Medic. Wochens.*) that a liquid diet, poor in fatty matters, is the basis of treatment of gastro-enteritis in young infants. He recommends particularly an albuminous lemonade, obtained by beating up the white of an egg with a pint of water, previously boiled, the resulting mixture being then carefully filtered. At the Pesth hospital this is prepared fresh three times daily, and is kept in a bottle well corked and placed on ice. In a word, all precautions are taken to prevent the introduction of micro-organisms into the system. Nursing from the breast should be completely stopped for the first few days. Every three hours two ounces of milk at a lukewarm temperature may be given to the child, either with the bottle or by spoonfuls. The child should not be put back to the breast until the loss of flesh, which is considerable at first, commences to diminish. Again, when at the commencement there is violent vomiting and rejection of yellowish curds, Epstein washes out the stomach daily, for from eight to fifteen days, by means of the œsophageal tube. As regards direct remedial measures he employs the following potion:

R. Sodæ et magnes. benzoat. ʒiv.
 Sp. vini gall. ʒss.
 Aquæ ʒvj.
 M. Sig.—Teaspoonful every two hours.

CONGENITAL DIVERTICULUM OF THE LEFT VENTRICLE.—A rare and curious example of cardiac abnormality has been recorded by Dr. Gibert (*Le Progrès Médical*, June 9, 1883) as occurring in an infant who lived to the age of ten months. The child was born with a ventral hernia, the abdominal wall being defective in the middle line from the umbilicus upward. A large pulsating vessel was noticed to be present together with the hernia, and as time went on this vessel increased in size till at the time of death it was as large as the finger. On examination it was found that the diaphragm was also defective, so that the pericardium opened into the peritoneal cavity, and projecting into the abdomen was a pouch-like diverticulum, connected with the apex of the left ventricle, with muscular walls, and internally marked by fleshy columns like the ventricular cavity itself. This diverticulum was thirty-eight millimetres in length, and shaped like the finger of a glove. Dr. Gibert suggested that the non-closure of the ventral wall was probably due to the presence of this cardiac deformity. But the converse hypothesis, that the pouching of the ventricle depended on the defect of the diaphragm and abdominal wall, seems to be held by Dr. Blanchard, who made a further dissection of the specimen, for he speaks of it as being the congenital formation of a kind of true infundibular form of aneurism of the apex of the left ventricle—a fact the more curious, because at that period of life the left ventricle only plays a very subordinate part, and this protrusion of a portion of its wall cannot therefore be attributed to an excess of internal pressure. However, we are not aware that in any recorded case of pericardial deficiency a similar ventricular

aneurism has been observed. Dr. Peacock, who refers to several cases of defect of the pericardium, including the classical one referred to by Baillie, makes no mention of such an abnormality in his work on "Malformations of the Heart."

GRUBS IN THE INTESTINES.—No insect, properly so-called, has ever been proved to take up a permanent abode in the human alimentary canal. Their presence, when they were found, was accidental, as when swallowed on a piece of meat upon which the eggs had been deposited. But occasionally larvæ may give trouble. Dr. Wacker (*Med. and Surg. Reporter*) has published the case of a boy, aged twenty-one, with colicky pains, fullness in epigastrium, constipation, and frequent fits of nausea and tendency to syncope, especially when in a close atmosphere, such as that of his cottage or a stable. Dr. Wacker prescribed some Hunyadi János water, to be taken every morning on an empty stomach. On the third day a vast mass (over two litres) of larvæ, partly alive and partly dead, was passed from the rectum. The patient at once recovered, feeling no more unpleasant symptoms, even when in a hot room. On examination, the grubs were found to be larvæ of a common dipterous insect, *anthomyia cuniculinæ*, closely allied to the house-fly and blue-bottle fly.

VESSELS AND NERVES.—The nervous system dominates not only the physiology but also the pathology of the highest animal organisms. This fact is a corollary to at least two important principles—the indivisibility of physiology and pathology, and the supreme importance of the neural tissue in all the superior classes of animals. The truth and the value of these considerations can receive no better illustration than the all-powerful influence of the neural apparatus in the production of disease of the various tissues. A careful and valuable series of experimental researches on the influence of the nervous system in the causation of disease of the vessels has been contributed to a recent number of Virchow's *Archiv* by Dr. Lewaschew, of St. Petersburg. The conclusions at which this experimenter arrives are definite, and correspondingly easy of comprehension, especially in the light of what we already know concerning the origin of tissue changes as the result of neurotic lesions. The method of investigation is worthy of mention. Generally the chief nerve-trunks of the hinder extremities of dogs were the parts subjected to irritation by means of a solution of muriatic or sulphuric acid. It was found that rabbits and cats were unfit for this continuous form of stimulation, because the action of the acid on the exposed nerve-trunk brought about gangrene and, as a strong stimulus was wanted, milder means could not be employed. The observer then noted chiefly the vaso-motor changes which ensued. But the most important part of the research consisted in the examination of the various vessels which received their nerve supply from branches of the irritated nerve-trunk. The most satisfactory results were obtained from the sections hardened in picric acid and stained with logwood. The alterations were most advanced in the smaller vessels—in those provided with a good coat of muscular tissue. The duration of the constant irritation was variable, some animals being examined, after a few months, whilst others lived for a year and a half or more. The microscopical examination of the vessels of the limb experimented on was compared with that of those of the other limb, which had been under precisely the same conditions, with the exception of the special form of irritation. No change was detected in the unirritated limb. It must first be mentioned that the pathological changes found in the vessels of the limb operated upon were not equally distributed over all parts of the vessel, but the areas of disease, of varying size, were separated by areas of sound tissue. The investigation of the arteries of animals in which the sciatic nerve had been stimulated a moderately short time, or in the least affected vessels of those animals in which the stim-

ulation had endured for a lengthened period, resulted in the detection of alterations chiefly of the adventitious coat. New formation of vessels, with the presence around them of a great number of indifferent cells, was observed; and this process was seen to extend itself more or less into the muscular tissue, whereby the bundles of plain muscular tissue were separated from one another. In vessels which had been irritated for much longer periods, a development of connective tissue which had undergone fibrillation and had displaced and destroyed the middle coat was witnessed. In brief, the changes detected were those of periarteritis, mesarteritis, and endarteritis, in the order here mentioned. Such inflammatory alterations are of great importance in the production of aneurisms, and the bearing of these recent experiments on vascular pathology is too evident to need a long description. The ascertained relation between the pathological processes in nerves and the diseases of the vessels suggests an explanation of the frequent disease of the cerebral vessels. The similarity of the lesions described above to those which have been delineated by various histologists need not lead to the conclusion that *all* fibroid vascular diseases are the result of nerve irritation; it must ever be borne in mind that a variety of causes may produce identical results.—*The Lancet*.

A THREE-BARRELLED PENIS.—Dr. Luxardo describes a rare anomaly of the penis which he observed in a young man under treatment for gonorrhœa. The meatus presented three openings, which corresponded to as many distinct urethral canals. The upper one gave passage exclusively to seminal fluid, the lower one to urine. The middle tube appeared to communicate with the lower one. The gonorrhœa affected only the two inferior canals.—*L'Union Médicale*, No. 54, 1883.

A CASE OF PRIMARY MONOMANIA.—The circumstances connected with the trial of Guiteau brought prominently to notice a peculiar form of insanity, the so called primary monomania. In view of the professional interest attaching to this variety of mental disease, the publication of the case reported by Dr. C. B. Burr, of the Eastern Michigan Asylum, in the July issue of the *American Journal of the Medical Sciences*, is timely, and attracts attention on account of the resemblance it bears to that of Guiteau. Disregarding the moral traits of these two individuals, their cases are strikingly similar. In contradiction of the oft-repeated assertion that the execution of an insane criminal now and then has a deterrent effect upon others of like propensities, Dr. Burr's case may well be cited, inasmuch as his homicidal assault was made less than five months after the hanging of the murderer of the President, and in face of the strong popular sentiment against the so-called "cranks" and lawless fanatics. There are few more striking illustrations of the impotency of moral and legal measures to restrain or control a morbid impulse than is afforded by this case.

A CASE OF CARDIAC ANOMALY.—Dr. Horace Grant, of Louisville, reports in the July number of the *American Journal of the Medical Sciences* a remarkable anomaly of the human heart, interesting not alone from its striking singularity, but as well from its clinical importance. In a post-mortem examination of a mulatto girl, sixteen years of age, the right ventricle was found to communicate directly with the aorta; no pulmonary artery was to be seen attached to the heart. The left auricle was normal; the left ventricle presented only one-half the usual attachment of the aorta. In a word, both ventricles opened with equal freedom into the aorta. At the pericardial attachment to the aorta two arteries were given off, each about one-fourth of an inch in diameter; they passed right and left backward from the front of the aorta, and evidently supplied the blood to the lungs. This curious anomaly is discussed in connection with the clinical symptoms observed during life.

Reviews and Notices.

HANDBOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE, AND NASO-PHARYNX. By CARL SEILER, M.D., Lecturer on Laryngoscopy, at the University of Pennsylvania, etc., etc. Second Edition, thoroughly revised and greatly enlarged. With seventy-seven Illustrations. Small octavo, pp. 295. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS edition is twice as large as the first, containing new methods and much original matter. While making extensive additions to the wood-cuts, it would have improved the work to have omitted more of the old ones. The position of the mirror shown in Fig. 3, resting high upon the forehead, instead of a perforated reflector over the eye, is probably an oversight or a relic of the author's abandoned methods, since it is entirely at variance with laryngoscopy as now practised. The author's ingenious utilization of electrical incandescence for laryngoscopy and rhinoscopy has paralleled if not preceded the invention of a somewhat similar instrument by the French electrician, Trouvé. His convenient disposal of the various forms of laryngeal paralysis by employing the frequent symptom "aphonia" is hardly justifiable. Even a division of paralyses constructed upon modified symptoms, as aphonia, dysphonia, and altered voice, must prove inferior to one based upon motion. Attention is attracted to an original anatomical feature in the larynx, a cartilage described as running along the edge of the cord on a line with the processus vocalis. It only occurs in the female, and we fail to find it mentioned in the literature of the subject. The anæsthetic effect of nitrate of silver applied in full strength to mucous membranes is a therapeutical point first discovered by the writer. There are several wood-cuts of instruments shown for the first time in book-print. Among them we observe the Burgess blow-pipe, recommended for the practice of atomization, also a very useful automatic hydraulic air compressor.

We do not agree with the author in taking exception to text-books which refuse to recognize the existence of ulcers due to catarrhal changes in epithelia. His explanation of hypertrophic changes in chronic coryza, produced in part by catarrhal proliferation of cells, does not completely harmonize with this statement. Undoubtedly, the abrasion caused by the constant removal of adherent inspissated mucus may result in perforation of the nasal septum. This passive condition is, accurately speaking, no more an ulcer than the erosion caused and kept up by the pressure of a markedly deviated septum. The chapter on "catching cold" is a well-arranged and ingenious explanation of this common phenomenon. Decided preference should be given to the section devoted to diseases of the nose. New and original ideas are constantly presented to the reader, and the matter is conveniently and attractively arranged. Nasal medication receives ample attention, the surgical treatment of diseases of the nose being more fully considered on account of the positive result obtained. A galvano-cautery apparatus, convertible at pleasure into a galvanic or faradic battery, is probably the most interesting of the author's inventions.

Among the illustrations is a powerful sewing-machine electric motor, recommended as a convenient substitute for the surgical engine. Jarvis' operations are advocated by the author. Some of the new wood-cuts representing hypertrophic changes in the nares seem to have originated more in the draughtman's memory than from clinical experience, judging from the appearance of Figs. 49, 56, and 57. A number of the wood-cuts, however, are well and correctly executed. Taken in its entirety, the work may be considered as one of the most satisfactory and complete manuals on this subject. There is abundant evidence that it is not an effort of mere compilation, but also the result of original thought and careful investiga-

tion. The faults of omission and commission are not numerous or serious, and are more than counterbalanced by the merits of the work. The simplicity of the style and freedom from technicalities recommend the book to the beginner, and the valuable information, representing the experience of a well-known authority on diseases of the throat, makes it a desirable addition to the library of the advanced reader.

HANDBOOK OF ELECTRO-THERAPEUTICS. By DR. WILHELM ERB. Translated by L. PUTZEL, M.D. With thirty-nine Wood-cuts. New York: William Wood & Co. 1883. Wood's Library of Standard Medical Authors.

THE publishers have done a good service by presenting a translation of this book to American readers, since it is probably the best work on the subject of electro-therapeutics, considered especially from a scientific standpoint, yet published. A certain amount of humbug has always surrounded the therapeutic application of electricity, and it is refreshing to find an author who endeavors to measure everything as much as possible by physical and physiological law. Very nearly one-half of the present work is devoted to electro-physics, electro-physiology, electro-diagnosis, and general electro-therapeutics. These parts are particularly good. Few practitioners yet appreciate the value of electricity as a help to diagnosis and prognosis; and no doubt Erb's work will do something to call the matter to their attention.

Some of the principal things which the author insists upon are the use of galvanometers, of large electrodes, and of the polar method. Under special electro-therapeutics the author tries evidently to give a fair estimate of the value of electricity in each disease. Every electro-therapist, however, when he becomes a writer, is apt to become biased in favor of the potent agent concerning which he discourses. Erb has not entirely escaped this fault. Furthermore, we might complain at his too ready acceptance of cases reported by such quasi-authorities as Nefel, Benedikt, and Clemens.

A TREATISE ON INSANITY IN ITS MEDICAL RELATIONS. By WILLIAM A. HAMMOND, M.D. New York: D. Appleton & Co. 1883.

THE appearance of numerous works upon insanity during the last two or three years is a striking evidence of the increased interest everywhere taken in this subject. The works of Voisin and Luys in France, of Krafft, Ebring and Arndt in Germany, as well as of three treatises published almost simultaneously in America, are sufficient proofs of the fact referred to. The present work of Dr. Hammond's is likely to attract particular attention, both because of its being the first American work upon insanity, and of the well-known ability of its author. Dr. Hammond has the faculty of presenting every subject which he touches in a clear, interesting, and positive manner, so that the reader can hardly fail to be impressed, and (at least if non-expert) to be decidedly affected by his views.

In the preface of his work the author states the opinion which he has expressed with much positiveness before, that the ordinary conception of insanity is much too narrow, that a slight mental aberration is as truly insanity as is acute mania. Many persons, however, with but slightly unhealthy minds are, he believes, responsible. He would, therefore, make a division practically between "medical" insanity and legal insanity. The point thus made is a most important one.

It may be remarked, however, that the attempt to include under the technical term "insanity" all individuals whose minds deviate markedly from the normal, would oblige us to include nearly all constitutional criminals and a vast number of persons with inherited or acquired neuropathic constitutions, the "cranks," the markedly eccentric and the moral imbeciles, e.g., Pascal, Samuel Johnson, Henry Bergh, and Dr. Tanner. We would be deluged indeed with this medical insanity. It may be

questioned, therefore, whether it would not be better to give to this class another name, indicating that their mental impairment is differently accentuated. Yet, after all, the question is not of fundamental importance. In time, society will learn to treat all bad and all eccentric men, as well as all insane men, as really sick men.

Dr. Hammond begins his treatise with a section on the Physiology and Pathology of the Human Mind. His psychology is of the simplest kind. This is a merit which few others have attained, and it is attained at the expense of some inaccuracies. The mind, says our author, is a compound force, made up of perceptions, intellect, emotions, and will. We confess that this simple analysis disturbs our previous psychological views a good deal. Perception, according to the author, is the force which places the individual in relation with external objects. Its seat is thought to be in the optic thalamus. It is the starting-point of ideation; it is not inherently associated with consciousness.

It is evident that the writer has confused the terms perception and sensation; and we think that mental process can be explained without the use of the latter term. Indeed, of the two we might better abandon the term "perception," as the elder Mill did.

Sensation is the simplest form of consciousness. A simple sensation is the consciousness of a single sensorial impression. Only brutes and infants have it. Our sensations are generally the compound of a number of sensations—sensation-clusters, so to speak. Perception is the process by which a fresh sensation is united to or correlated with previously registered impressions. By its aid ideas are formed, and ideation and ratiocination take place. Neither perception nor sensation are located in the thalamus, for they are associated with consciousness, though doubtless these ganglia are closely associated with the elaboration of the ingoing impulses which are the raw material of the mental phenomena in question.

The definition of will as a special mental force is perhaps practically necessary, though the tendency at present is to do away with the word and substitute that of "volition," which indicates action rather than special power or choice. There is no such thing as free-will, which, as Arndt says, "is the shibboleth of the ignorant; and a will not free is no will at all." What is known as will is rather the resultant of certain antecedent forces which can not always be analyzed.

We have discussed this part of Dr. Hammond's work at perhaps undue length. We have felt justified however, in so doing, because his psychological divisions are made the basis of his future classification and symptomatology. The fact that they are not rigidly accurate is, therefore, important to point out.

The remainder of the section in question is devoted to such subjects as the Influence of the Mind upon the Body, Eccentricity, Idiosyncrasy, Genius, Habit, Temperament, Constitution, Hereditary Tendency, Age, Sex, Race. Much more space than usual, and perhaps than is needed, is devoted to these various subjects. We confess, however, that we do not ourselves regret it, since they are written in an attractive style and show the results of a most extensive reading, observation, and thought.

The second section contains two chapters upon the Nature and Seat of Instinct. The discussion of the nature of instinct contains a good many quotations which are interesting but inconsequential. The author's own definition and view are unquestionably correct. His attempt to locate instinct in man in a particular part of the nervous centres can hardly be considered successful. Instinct is the expression of a nervous mechanism whose paths and centres are probably extensive, and not to be definitely circumscribed. We might make the same criticism of the section upon Sleep, viz., that it is an unnecessarily long, though an instructive one. We are surprised not to find among the numerous au-

thorities quoted the name of Preyer. While the author has undoubtedly established the fact that in sleep there is a cerebral anæmia, he strangely enough still insists that this anæmia is the primary cause of the condition. The blood-vessels, however, are the servants of the nervous system and cannot decrease in calibre except at its bidding.

The last section is upon the Description and Treatment of Insanity. We find that before reaching it we have already exceeded our allotted space. We can only say now, therefore, that though much elaborated and improved it is based mainly upon the chapter on insanity in the author's work on "Nervous Diseases" (earlier editions). There is no doubt that, whatever its deficiencies, it will give the general practitioner a clearer idea of insanity than he can get from any other text-book in the English language.

We can, on the whole, heartily commend Dr. Hammond's book to our readers. While the author is not a trustworthy guide in all the subjects upon which he touches, yet his errors are not dangerous, and the book in its entirety is so broad in scope and so rich in material that it will be an education for the physician who reads it.

INSANITY: ITS CAUSES AND PREVENTION. By HENRY PUTNAM STEARNS, M.D. Pp. 248. New York: G. P. Putnam's Sons. 1883.

This work is not a scientific treatise intended for physicians alone, but is rather a contribution to a most important branch of sociology. It consists of a series of essays upon the nature of insanity, the various factors which produce it, and finally upon its prevention. The essays are pleasantly written, and contain in some instances evidences of considerable research. In most cases, however, the chapters are simply the impressions and opinions of a man of wide experience, rather than the results of special study and investigation. The tone of the book is throughout healthful and sensible, and we should be very glad to know that the work is widely read, for it certainly deserves to be.

LA CIRCULATION DU SANG. Examen critique de la Théorie Régnante. Sur le Mouvement Circulatoire du Sang, et Essai sur la Théorie par laquelle on doit la remplacer. Par le DR. RAMON TURRO. Traduit de l'espagnol par JULES ROBERT. Paris: O. Berthier. 1883.

The author endeavors to prove that the arterial walls have an independent rhythmical contraction which assists in the propulsion of the blood.

A HISTORY OF TUBERCULOSIS, FROM THE TIME OF SYLVIVS TO THE PRESENT DAY. By DR. ARNOLD SPINA, First Assistant in the Laboratory of Professor Stucker, Vienna. Translated, with Notes and Additions, by Eric E. Sattler, M.D. Cincinnati, O.: Robert Clark & Co. 1883.

The publishers state that the first five chapters of this book are a free translation, with a few notes and additions, of the first of the very valuable work of Dr. Arnold Spina, which has just appeared in Germany. Every careful medical reader of to-day knows that Spina is the most formidable critic and opponent of the theory advanced by Koch concerning the Tubercle Bacillus. To these chapters Dr. Sattler has added two which contain an account of the investigations of Koch and of the various subsequent experiments of other investigators; also a full description of the latest experiments of Dr. Spina, in which he claims to have disproved Koch's theories, together with Koch's reply. The book, therefore, gives the position of the combatants down to March, 1883, and is a monograph of 184 pages, well printed upon good paper. It is one of the most concise *résumés* of what has been said concerning the pathological anatomy and histology of tuberculosis.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 28, 1883, to August 4, 1883.

TURRILL, H. S., Major and Assistant Surgeon. Granted leave of absence for one month, to commence September 1, 1883. S. O. 77, Department of the Platte, July 26, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 4, 1883.

COLES, J. W., Surgeon, ordered to the Naval Hospital, Philadelphia, Pa.

MARSTELLER, E. H., Passed Assistant Surgeon, detached from the U. S. S. Hartford and granted sick-leave.

BRANSFORD, J. F., Passed Assistant Surgeon, detached from the Naval Academy and ordered to the Hartford.

BOGERT, E. S., Medical Inspector, detached from the Navy Yard, Norfolk, on August 30th, and ordered to the U. S. S. Trenton, September 1st.

TIREBEE, N. MCP., Passed Assistant Surgeon, detached from the Navy Yard, Norfolk, on August 30th, and ordered to the U. S. S. Trenton, September 1st.

GATEWOOD, J. D., Passed Assistant Surgeon, ordered to the Trenton, September 1st.

KIDDER, B. H., Surgeon, detached from the Naval Station, Port Royal, and ordered to the Navy Yard, Norfolk, August 30th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 7, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
July 31, 1883.....	4	43	29	6	52	22	0	0
August 7, 1883.....	1	46	32	1	49	34	0	0
<i>Deaths.</i>								
July 31, 1883.....	1	8	4	6	12	17	0	0
August 7, 1883.....	1	10	2	3	12	18	0	0

HOW, IN A CROWDED PROFESSION, BANGS GOT A START.—The little village of Millbrook was disturbed in its calm serenity by the advent of two new doctors. Now there will be more sickness, people said, for so many doctors must find work to do. From time immemorial Millbrook had never had so many physicians before. Not that three medical men might not be well supported, for Millbrook and vicinity numbered twenty-one hundred inhabitants; and is it not a (social) law of nature that every seven hundred people must support one doctor? Four doctors, however, were one too many, and only the strongest and fittest would survive in the struggle for existence.

Brown and Bangs were the new-comers: Brown from the important medical college of Grande Montagne; Bangs from the little *one-horse-power* concern of Camperdown. Brown had the most titles. He was an A.B. and an U.D.M.C., the last two letters meaning master of surgery. Bangs had done no good work at college,

but had somehow managed to get through with a diploma in classic sheepskin, and in Latin, signed by ten professors, which hung in his office in an elegant frame. Brown's friends said that Bangs could never succeed, for in medicine, as in *Sabbath-school library books*, it is always the good boy and good student that is rewarded, while the bad boy that shirks his lessons and "slopes" examinations comes to grief. Besides, Bangs' diploma, coming from *such* a school, would be no help to him, while Brown's Grande Montagne diploma would powerfully recommend him to favor. So Brown's friends thought, and so it seemed to Brown. Moreover, it was known to a few that Brown had written a prize thesis of great merit on "Pityriasis Versicolor," which contained some original drawings, and in which the parasitic origin of this cutaneous affection was ably maintained. He had also made some personal investigations, while a hospital interne, of that curious insect the sarcoptes hominis, in which the habits and habitats of the parasite were well described. As a therapeutic measure he had proposed the ingenious plan adopted by hunters in the case of wolves, of smoking the little animal out of his haunts by the fumes of burning brimstone applied to the orifice of entrance. There was, however, nothing especially new in this medication (as was very properly pointed out by the faculty), sulphur having been for more than a hundred and fifty years, from empirical considerations, employed against this common pest of mankind. Brown was well grounded in the general principles of therapeutics, but he had not yet learned that while sound theories are very necessary in applying them to practice, you have the whims and caprices of the patient to contend against, and that you never really have *diseases* to treat, but only *sick people*. Symptom-treating, he believed, was irrational; you must seek out the diathesis, and "go for" it; find the point of departure of the morbid phenomena, and attack it, rather than the symptoms, which would disappear with the disappearance of their cause. This is very good theory, but is not to be followed too rigidly. If Bangs had any theory of therapeutics, it was that symptoms are the key to disease, and the physician's highest art is to attend to and treat symptoms. A furred tongue generally requires an evacuant; pain calls for an anodyne; diarrhoea a corrective or an astringent. Bangs had pored earnestly over certain treatises on "Specific Medication," believed a thousand or more improved and very doubtful statements contained in them, and thought himself on the path of progress.

Brown believed that his services would be in demand, and that he might "select" his patients and patrons. Bangs was willing to take "anything and everything that came along," and improve every opportunity to "rush in where angels might fear to tread." It was a boldness and an impudence that very often in this misconstrued world give success. To cut short our tale, Brown did not obtain a foothold in Millbrook, and left discouraged in less than six months. Yet he might have succeeded but for two circumstances. Do you wish to know what these were?

He had not been in Millbrook many weeks when, one stormy evening, late in autumn, a messenger came in hot haste for a physician—one of the Wilsons, of Dogtown, ten miles distant. The weather was cold, and the road very muddy. There was a sick child in Dogtown, and the case was urgent. Dr. Grimes would not go on account of the roads, and Clay, the homœopath, had declined for the same reason. Brown, too, declined, when he was informed that the pay was doubtful. He would not expose himself to such inclement weather "with an uncertainty before him." Here he made a grave mistake, as we shall see. Bangs was summoned, and in five minutes time was ready, equipped, and in his saddle. In one hour and ten minutes he had gained the cottage of his patient. It was a case of typhoid fever, and the sick girl had been suffering from a prolonged

attack of epistaxis. Bangs plugged the nostrils (he fortunately had a flexible catheter in his pocket) and stopped the hemorrhage. He came the next day and the next, and so on, and the little patient eventually recovered. His brilliant surgical operation of tamponing the nostrils (which had never before been performed in that part of the country) gave him great repute in Dogtown, and henceforth he could claim all the families of that rural district as his. This was an excellent start for Bangs, and one that he well improved. The fever proved epidemic in Dogtown, and that very year Bangs scored one hundred and fifty visits to that distant agricultural settlement. This professional work, at three dollars a visit, gave his small family for a long time a comfortable support.

"Aunt Jane Hopkins," as she was familiarly called, was a spinster of large influence in Millbrook. Brown, who early in his professional career had been honored by being consulted by this mistress of gossip, had severely offended her by making light of the back-ache, the side-ache, and a host of neuropathic troubles. He had recommended a diet treatment for her dyspepsia, when Aunt Jane knew that she needed medicine. He had even called her neurasthenic ailments *hysteriform*! and had counselled greater firmness of will.

Aunt Jane gave him up in disgust, and called in Bangs. Here was just the man who could enter into sympathy with her infirmities, and who had a specific for every symptom. She was "doctored" for "womb trouble," and "spinal irritation," and "dyspepsia," and "liver complaint," and finally got well after taking six different kinds of medicine daily for eight weeks! Henceforth Aunt Jane acted as though her principal mission in life was to sound the praises of her favorite physician. Those who know anything about the elements that usually constitute village society, can well appreciate the benefit that Bangs derived from such persistent advertising among the gossips of Millbrook.

In short, Bangs' bread was soon "battered on both sides," and Brown, as before said, left discouraged.

INDICATIONS AND CONTRA-INDICATIONS FOR THE USE OF DIGITALIS IN MENTAL DISEASES.—Dr. Pedro Ribas, in an article published in the *Revista frenopática Barcelonesa*, gives the following as the indications and contra-indications for the use of digitalis in mental diseases:

Indications.—1. In acute mania with anæmia, dilated pupil and feeble heart-beat. 2. In chronic mania of tranquil form, especially in those cases characterized by hallucinations of sight and hearing. 3. In hypochondriacal mania, especially where thoracic and pulmonary troubles are complained of. 4. In suicidal mania and melancholia. 5. In religious ecstasy and fear. 6. In the melancholy and depressive stage of general paralysis, especially if anæmia be present. 7. In simple, primary dementia.

Contra-indications.—1. In acute, violent mania. 2. In simple, chronic melancholia. 3. In cataleptic ecstasy. 4. In most forms of general paralysis.

Dr. Ribas, as will be seen, draws some fine distinctions. —*El Siglo Medico*, April 1, 1883.

THE DIFFERENT KINDS OF QUACKS.—According to the *Gazette Hebdomadaire* the genus of the quack varies in France with his nationality. It may be interesting to know that the American quack, as he flourisheth abroad, is "high in color, loud in voice, noisy and impudent." That is the rôle he usually plays also in this country, but he does not confine himself to it. In his great versatility he adapts himself to the peculiarities of his dupes. We have seen him pale, of smooth and delicately modulated voice and exceedingly demure. The Spanish quack abroad is, we are told, "mystic, sombre, the crucifix in hand, always ready in prayer." That lay has not been worked here to any great extent, and it might be made to pay. "The Dutch impostor, writing his consultation

with a flask of urine in hand, as in the famous 'Dropsical Woman' of Gerard Dow," would scarcely be adapted to the genius of this country. There are some, however, who are favorably impressed through the urine. But the kind which carries the palm abroad, and is the peculiar abomination of the French profession, is the German quack, "surrounded with piles and electric apparatus; a professor of occult physical science; who cures with the same spark pulmonary tuberculosis and cerebral debility; a distinguished lecturer and the apostle of a newly discovered art." The latter quack should emigrate. Untold wealth awaits him here. The arrant, blatant, ignorant quack is beginning to lose his grip as our people grow more intelligent, and the "occult" would catch them. They have much more faith in the incomprehensible than they have in that which is reasonable. The theological quack has cultivated this weakness very successfully, and there is no reason why the medical quack should not find it profitable.

THE ACTION AND THERAPEUTIC USES OF ACONITINE.—Laborde has an elaborate article upon the above subject. His experience with aconitine in neuralgia is favorable but not many cases are cited. —*Journ. de Therapeut.*, May 25, 1883.

NAPELLINE AS A SUBSTITUTE FOR MORPHINE.—Napelline, an amorphous alkaloid obtained from aconite root, has been successfully used by Laborde to relieve neuralgia pains, and as a substitute for morphine in a case of the morphine habit. It was given hypodermically in doses of from one to four centigrammes in the twenty-four hours. —*Journ. de Therapeut.*

THE VALUE OF COLOR AND OF MUSIC IN THE TREATMENT OF THE INSANE.—Dr. H. Sutherland refers to Tonga's suggestion that different colors may be used advantageously in the treatment of the insane, and to Dr. Clay Shaw's view that music might also be utilized in the therapeutics of mental disease. He says: In my own experience, the efficacy of such therapeutic agents has been found to depend upon the previous education of the patient and the various crises of his disorder; a change to a more cheerful room, associated with pleasant reminiscences, often exercising a marked influence for the better on the course of the mental disorder. —*British Med. Journ.*, May 5, 1883.

THE THERAPEUTIC VALUE OF THE WATER OF LOURDES.—Drs. Labadie, Lagrave, and Dérignac, give an interesting account of a patient, a woman aged forty-five, not neuropathic, who suffered from a double otorrhea, followed by symptoms of meningitis, epileptiform attacks, contractures, paralyzes, atrophy, mental and sensory disturbances. She was treated for meningitis without success. After being in the hospital for nine months, she went to Lourdes and was immediately cured *secundum artem*. The case illustrates the diagnostic value of faith-cures. —*Archives de Neurologie*, May, 1883.

THE TREATMENT OF THE FILTHY INSANE.—Schüle discusses the measures best adapted to preventing and remedying the filthy practices and habits among the insane. It is very necessary to break up these habits and secure cleanliness whenever possible. Moral treatment, special appliances in the way of beds, hydrotherapy, faradization, coercion in some cases, are the measures recommended. The use of sedatives, medicinal and mechanical tonics, are generally indicated. Non-restraint should not be carried too far. —*Allg. Zeitschr. f. Psych. u. Psych.-Gerichtl. Medic.*, xxxvii., 6.

HYPODERMIC INJECTION OF COLD WATER IN SCIATICA.—Dr. Pollak has communicated to the St. Louis Medical Society a case of sciatica, in which he injected ice-cold water hypodermically deeply into the tissues, with the effect of speedily alleviating the pain. The relief was lasting. —*Philadelphia Medical Reporter*, February 3, 1883.

NERVE-SUTURE.—Johnson cites fifty-two cases of nerve-suture which he has found in literature, to which he adds some cases communicated to him personally. He has performed sixteen experiments in nerve-suture; uniting in these cases the totally dis severed ends of a sciatic nerve with a catgut suture. He recommends nerve suture as deprived of all danger. In fifty-two cases of the operation in man there was no bad result, and nervous conduction was established with comparative rapidity. Indirect suture is preferable to direct. Kaufmann, in 1880, successfully transplanted a dog's sciatic nerve in the human being, and from experimental results Dr. Johnson believes that this example should be followed in cases where indicated. He leaves to future experimenters to determine whether nervous conduction is established most promptly and thoroughly by suture, or, as was proposed by Vanlair, by placing between the severed ends a tube of calcined bone (*Nordiskt Medicin. Archiv, Band xiv., No. 31.*)—*Weekly Medical Review.*

MEDICAL PRACTICE IN PERSIA.—Dr. C. J. Mills, an English physician who has resided for fifteen years in Persia, has recently written an interesting work entitled "The Land of the Lion and the Sun." Some of his medical experiences are given. The author had the privilege of attending Persians in their illness. At first he was astonished at receiving no emoluments, but found out that his servants pocketed his legitimate fees. One day a poor patient sends him some money inclosed in a handsome purse. The doctor returns the money, but keeps the purse. Then a rich man hears of this, pays the doctor in money, and puts it, too, in a handsome bag. The doctor keeps the money, and very much to the disgust of his patient, sends back the purse. A well-to-do baker has a cataract, and our medico cures him and receives about four pounds for his fee. When the Persian regains his sight he insists that he is still blind, worse than ever, demands back the money, and is clamorous for an additional sum for an indemnity. The medico knows him to be a rascal, and suddenly flourishes an amputation-knife before the blind man, who at once runs away as fast as his legs can carry him. Demands were constant for quinine, and the doctor had been particularly instructed to distribute it freely when cases required the febrifuge. But the cry for quinine became so constant that the author was certain that it was obtained under false pretences. Then, as a rule, he administered it in solution, or if his servants wanted it he put it in a dry state in their mouths. Then the cry for quinine diminished. In the case of his servants, it was the legitimate *mokadel*, or perquisites of office they were after. They collected the quinine and sold it.

WHAT THE ABUSE OF MEDICAL CHARITY HAS DONE FOR ENGLISH PHYSICIANS.—A correspondent of the *St. Louis Courier of Medicine*, writing upon the subject of the status of English doctors, says: "The social position of the whole medical profession in England is much lower than it ought to be. The distinctions lavished on other professions are very rarely conferred on medical men; but the profession has itself to thank to a great extent for this difference. The amount of gratuitous work done by the profession in no way raises it in the public esteem. It is well known that it is not performed from motives of charity, but for the position which is gained by being attached to a hospital staff, and the hopes of a good practice ultimately accruing therefrom. This custom of gratuitous services to the hospitals has grown on the profession, and many a young physician and surgeon now is exhausting himself in mind and body by attending patients gratuitously at hospitals whose incomes are in some cases much greater than his own. This injustice the public, as represented by the people who support the hospitals, in nowise wish; they would be quite willing that the first charge on the incomes of the hospitals should be to adequately remunerate the medical men who attend upon the sick. But any

reform in this direction must emanate from the heads of the profession. No profession can be expected to rise in social position when kept in a state of penury; and this poverty-stricken state of the medical profession, as it is in England, is a great deal due to the action of those who hold the highest position in it. They preach to the younger members, who are getting nothing from their hospital appointments, to keep up the dignity of the profession by never taking from a private patient less than their guinea or two guinea fee, when the same patient can see men of the greatest reputation and obtain their advice for the same amount. The senior men with high reputations ought never to take less than five or ten guineas; there would then be a chance of the junior members of the profession sometimes obtaining a patient."

MEDICINE IN JAPAN.—A recently published official report gives the number of physicians who have passed satisfactory examinations in medicine and surgery at 1,625; those who have not undergone such examinations, 769; those who have pursued their profession from the time when there was no system of examination, 30,700; oculists, 502; surgeon-dentists, 124; accoucheurs, 417; bone-setters, 86; licensed apothecaries, 415; those who have been in practice from the time when there were no license regulations, 6,426; government principal hospitals, 3—branches, 19; public principal hospitals, 192—branches, 40; private principal hospitals, 202—branches, 11. It will be seen from the above that by far the larger number of practising physicians are still unlicensed, and probably practise according to the old Chinese system. It must be borne in mind, however, that the regulations requiring physicians to pass an examination in anatomy, physiology, materia medica, pathology, practice of medicine and surgery, and obstetrics, and to take out licenses to practise, only came into vogue a few years since, and did not affect those already in practice for three or four years. Medical schools are now increasing in number, and consequently the number of students educated in Western medical sciences. The last annual report of the Medical Department of the University of Tokio shows the actual number of students as follows: medical students, 169 (course conducted by German professors); those following the same course in the Japanese language, 760; pharmaceutical students, 71; making a total of 1,000. There is one licensed physician to about every 22,000 of population, and one unlicensed to every 1,200; or one physician, licensed or unlicensed, to every 1,109.—*Correspondent of Philadelphia Medical Times.*

THE AIM OF LIBERAL HOMŒOPATHY is well set forth in a recent issue of the *Hahnemannian Monthly*, which says: "A few years ago the editors of the *New York Medical Times* dropped from the title of their journal the distinctive word 'Homœopathic;' now they boldly urge the renunciation of the word as applied to our school of medicine. If we are emancipated from the thralldom of *sect*, we shall not only save our school from imminent dissolution, but shall also become an integral part of the medical profession of the day, honored as true, broad, liberal, progressive physicians. But if we cling to a name which by no means represents the catholicity and spirit of the new school, we are doomed to annihilation; and more, we become the common enemy of all allopaths and also of all progressive homœopaths. The neutral ground upon which a lasting truce is to be consummated is the common acceptance of the dual action of drugs. No one denies that ipecac in one dose will vomit, and in another will allay vomiting; therefore no one will contend with another if only this plain truth is adopted as the universal motto of the medical profession."

TREATMENT OF PAINFUL THROAT.—A correspondent asks what is the best treatment for cases of "sore throat," so called, in which there is much steady pain, some dysphagia, and hardly any signs of congestion or swelling.

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THE CORPORA QUADRIGEMINA.

WITH REMARKS CONCERNING THE DIAGNOSIS AND LOCALIZATION OF LESIONS AFFECTING SIGHT.¹

BY AMBROSE L. RANNEY, M.D.,

NEW YORK.

THE aqueduct of Sylvius (*iter e tertio ad quartum ventriculum*) is covered on its superior and dorsal aspect by two pairs of rounded eminences, mainly composed of gray matter, called the corpora or tubercula quadrigenina (the so-called "*nates*" and "*testes cerebri*"). A median groove separates these parts. Anteriorly, a transverse white prominence (the *posterior commissure*) limits this groove; behind, it is continuous with the velum by means of a small median strand of longitudinal fibres, called the *frenulum veli*. The pineal gland which projects backward and downward from the posterior wall of the third ventricle overlaps the anterior portion of this groove, resting between the two upper quadrigeninal bodies (the *nates*). In fishes, reptiles, and birds, these bodies are two in number, and are called the *optic lobes*. They are also hollow in these species. In the human fetus they are developed early, and form a large part of the cerebral mass. The anterior tubercles are darker in color and less prominent than the posterior. Laterally, each tubercle is prolonged upward and forward into a prominent strand of white substance, the brachium or arm of the corresponding tubercle. The *brachia* are to be regarded as fasciculi sent to each tubercle from the cortex cerebri by means of the corona radiata. They may also be considered as affording a communication with the optic thalamus. The *upper or anterior brachium* passes between the inner geniculate body and the posterior extremity of the optic thalamus, or the *pulvinar*, where it may be demonstrated to join one of the roots of the optic tract, of which it really is a continuation. This is more apparent in some animals than in man. The *lower or posterior brachium* loses itself underneath the inner geniculate body, which is situated at the side of the upper end of the crus cerebri.

The *upper quadrigeninal bodies*, or *nates cerebri*, are covered externally with a thin layer of nerve-fibres, called the "*stratum zonale*." This constitutes the only place in the brain where fibres of the first projection system of Meynert are exposed to view upon its exterior. Beneath this may be seen a layer of gray matter, called the "*stratum cinereum*," which is thicker at the prominent part of the tubercle than at its margins, and which contains numerous nerve-cells of small size. Beneath this, again, lies a layer of nerve-fibres which are arranged in longitudinal bundles, the so-called "*stratum opticum*." These fibres are continuous with the upper brachium and the optic tract. Scattered nerve-cells are found between the bundles of which it is composed. Finally, between the stratum opticum and the gray matter which surrounds the aqueduct of Sylvius, a layer of nerve-fibres, derived from the upper fillet or *stratum lemnisci*, may be demonstrated. This layer is thickest at the margins of the tubercle and thinnest at the median line, where a few of

its fibres decussate. This gradual thinning is to be explained by the passage of some of its fibres to the optic layer, and some to the gray matter surrounding the aqueduct of Sylvius (Tartuferi).

The *lower quadrigeninal bodies*, or the *testes cerebri*, are composed almost entirely of gray matter formed of numerous small and some large nerve-cells. A thin layer of the fillet separates the gray nucleus of this body from the gray matter surrounding the aqueduct of Sylvius. A connecting band of gray matter unites the gray nuclei of the two bodies. Transverse fibres of the fillet bind this gray commissural band both superficially and deeply. Those lying superficially are continuous, in part, with the brachium of the lower quadrigeninal body, and in part, also, with the fibres of the lower fillet; the fibres of the lower fillet are described by Meynert as being continuous with the brachium of the opposite side. If this continuity really exists, the communication is probably an indirect one by means of interposed nerve-cells in the gray matter.

The *posterior commissure* of the third ventricle, which lies above the upper end of the aqueduct of Sylvius, seems to be a direct continuation of the commissural fibres of the fillet which have been mentioned. It apparently springs from the tegmentum, and, after decussating, appears to traverse the substance of the thalamus, and then to radiate in the white substance of the hemisphere of the cerebrum. A few of its fibres are connected with the pineal gland; some also probably act as commissural fibres between the thalami.

This hasty and somewhat imperfect *résumé* of the anatomy of these bodies will enable us to intelligently consider some of the views which have been advanced respecting their probable functions, and the effects of lesions within their substance.

Functions of the Corpora Quadrigenina.—Among the investigators who have devoted special attention to these bodies may be prominently mentioned Adamuck, Knoll, Budge, Hensen, Voelkers, Flourens, Schiir, Ferrier, McKendrick, Gudden, and many others of note. Some have observed the effects of their removal in animals; others have studied the results of stimulation of their superficial and deep parts; while a few have recorded the results of destruction of the optic apparatus and certain convolutions of the cerebral hemispheres, as possessing a peculiar bearing upon points in dispute regarding these bodies. From these different sources a mass of evidence has been accumulated which appears in some instances to lead to contradictory conclusions. It is only by comparing the views of the investigators mentioned, and bringing to bear upon the subject what is also taught us by anatomical research, that the web may be partially disentangled.

The connection of the anterior quadrigeninal bodies, or the *nates cerebri*, with the optic tract and the sense of sight appears to be far more intimate than that of the posterior lobules, or *testes cerebri*, as was first pointed out clearly by Gudden. This observer found that the extirpation of the eye on one side of a young animal was followed by a degeneration and atrophy of the *natis cerebri* and its brachium; the testis and its brachium remaining unaltered. This view is apparently sustained also by the fact that the mole has the *testes cerebri* largely developed, whereas the *nates cerebri* are markedly atrophied. Adamuck believed that he had clearly demonstrated the existence of a centre within the *nates* which

¹This article formed a part of my course of lectures during the winter of 1882-83 before the students of the Medical Department of the University of the City of New York.

presided over those movements of the eye and pupil which are essential to the *accommodation of vision for near objects*, as well as the *co-ordination of all ocular movements*. Knoll found, however, that reflex contractions of the pupil remained after removal of the corpora quadrigemina; and Hensen and Voelkers have been apparently successful in mapping out the topography of the centres which preside over ocular and pupillary movements with greater accuracy than their predecessors. They were able to produce at will, by carefully applied electric stimulation in the region of the floor of the aqueduct of Sylvius, independent movements of the eye and pupil. In the dog, upon which animal these experiments were made, a centre which governed the *accommodation of vision*¹ was found to be situated in the posterior part of the third ventricle near to the aqueduct, while a centre for pupillary contraction and one also for its dilatation were found in the front part of the floor of the aqueduct of Sylvius, the former lying in the median plane and the latter more to the sides. The same observers state that a centre, which governs those muscles of the eyeball which are supplied by the third cranial nerve, can be found in the floor of the aqueduct, immediately behind that which presides over pupillary contraction. Whether we accept these statements as demonstrated or not, we know positively that such centres exist somewhere, and are so associated in their action that, when the eyeballs are directed inward and downward, as for near vision, the pupils are at the same time contracted; and when the eyeballs are directed upward and returned to a state of parallelism, the pupils are dilated to a corresponding extent. On the contrary, when the eyeballs are moved sideways in unison, the pupils remain unchanged. A most positive proof that the pupillary movements are not of a psychological nature is afforded by the experiments of Adamuck, who produced movements of *both eyes* by stimulation of the corpora quadrigemina of either side, and who also observed that the pupils were at the same time made to perform their proper movements. When, however, the corpora quadrigemina of the two sides were separated by a median incision, stimulation of the centres of either side caused movements of the corresponding eyeball only. In both experiments, changing the seat of stimulation caused modifications of ocular movements.

It was only after Knoll had shown that the reflex movements of the pupils remained after complete excision of the corpora quadrigemina, and the discovery of Hensen and Voelkers that the effects of stimulation of these bodies, as first practised by Adamuck, were not uniform until the *underlying parts* were directly reached, that discrepancies between these observers were explained.

To determine the true relations which these bodies bear to the special sense of sight is perhaps one of the most difficult problems in physiology.

Flourens and many subsequent observers have shown us that unilateral extirpation of the corpora quadrigemina in mammals and birds leads to a blindness of the opposite eye; and even when the cerebral hemispheres are removed without disturbing these bodies, that an apparently crude vision still remains. We have many experiments, however, to show that destruction of certain convolutions of the cerebrum also produced the most profound effects upon vision in spite of the undisturbed action of the quadrigeminal bodies. When we discussed the optic thalamus,² it was also stated that many clinical observations pointed toward the existence of a centre within that body which in some way modified or presided over visual impressions. We know also that lesions within the so-called "internal capsule" of the cerebrum frequently produce most serious impairment of vision, and conjugate deviation of the eyes.

Now, how are we to explain, theoretically, such contradictory phenomena? What views are we apparently justified in holding (from the standpoint of our present knowledge upon the subject) regarding the relations of the cerebral cortex, corpora quadrigemina, corpora geniculata, optic thalami, and internal capsule of the cerebrum, to the fibres of the optic tracts and the external organs of sight?

I think we are justified in attributing to the cells of the *cerebral cortex* or the external gray matter of the hemispheres alone our conceptions of the external world, as portrayed to us by means of the sensory nerves and the special senses. No matter how many collections of gray matter may be interposed along the course of the nerve-fibres which convey these impressions to the cortex (each of which may possibly help to modify them), there is no argument which has yet been advanced which tends to overthrow this general law. Every image cast upon the retina, every sound-wave which enters the external ear, every odoriferous particle which reaches the nose or is placed upon the tongue, every manner of form by which we are brought into direct or indirect relation with surrounding objects during life, becomes a *conscious impression* only by affecting in some unknown way the cells of the cerebral cortex. Here, the image thrown upon the retina becomes to our mind the picture actually seen; the sound-wave becomes the musical note; the contact of the odoriferous particle is transformed by the brain-cells found in its external gray matter into a sense of smell or of taste; objects become recognized as smooth or rough, hard or soft, heavy or light, only when these silent workers become thrown into activity by some sensory impulse carried to the convolutions of the brain by means of nerve-fibres.

We have reason to believe that the fibres of the optic nerve reach the gray matter of the convolutions of the cerebrum by different routes, and that each bundle meets (somewhere in its course) an interrupting mass of gray matter, with the cells of which the nerve-fibres become associated, and from which cells they are subsequently prolonged to those of the cortex. This is the common method of arrangement of all nerve-fibres, after they enter the substance of the brain or spinal cord, to which the optic fibres are no exception. The interrupting cells of the optic fibres are comprised chiefly within the optic thalami, the corpora geniculata, and the corpora quadrigemina. Stilling believes that a bundle of fibres can be traced to the *corpus subthalamicum*, and another to the *medulla oblongata*. The so-called "*basal optic ganglion* of Meynert" is thought by some to be also connected with a slender fasciculus of the nerve.

When speaking of these interpolated masses of gray matter and their controlling action upon all impulses sent to the brain, Michael Foster makes use of the following words, which I quote on account of their applicability to the subject under consideration:

"All day long and every day, multitudinous afferent impulses from eye, and ear, and skin, and muscle, and other tissues and organs, are streaming into our nervous system; and did each afferent impulse issue as its correlative efferent motor impulse, our life would be a prolonged convulsion. As it is, by the checks and counter-checks of cerebral and spinal activities, all these impulses are drilled and marshalled and kept in orderly array till a movement is called for; and thus we are able to execute at will the most complex bodily manœuvres, knowing only *why*, and unconscious or but dimly conscious *how*, we carry them out."

The study of the course of the individual fibres of the optic nerve in the region of the optic chiasm (Fig. 1) is rendered particularly difficult by the curved direction which they take; hence the relative proportion of the longitudinal and decussating bundles is still a subject of dispute among authorities upon that subject. Stilling states that inter-retinal fibres, which have no cerebral connection, can be demonstrated, while other authors

¹ This centre manifested an apparent control over the *ciliary muscle* only, and created alterations in the antero-posterior measurement of the crystalline lens of the eye.

² This lecture was published in the *Journal of Nervous and Mental Diseases*, April, 1883.

deny it. Some assert that all of the fibres, which are prolonged into the optic tract, decussate in man, as they are known to do in the lower vertebrates and some mammals, but pathological observation tends to confute this view. Charcot advances the somewhat attractive theory that those fibres of the optic nerve which do not decussate at the chiasm are continued along the optic tract of the corresponding side and eventually decussate, probably within the substance of the corpora quadrigemina, after which they are continued into the internal capsule of the opposite hemisphere. He sustains this theory on pathological grounds; since many recorded cases, where lesions of the internal capsule have been associated with symptoms referable to the optic nerve, have apparently demonstrated that *hemianopsia*¹ never (?) occurs. This could not be the case without a second decussation, provided the view be considered tenable that a complete decussation does not occur at the chiasm. The following diagram will make this apparent :

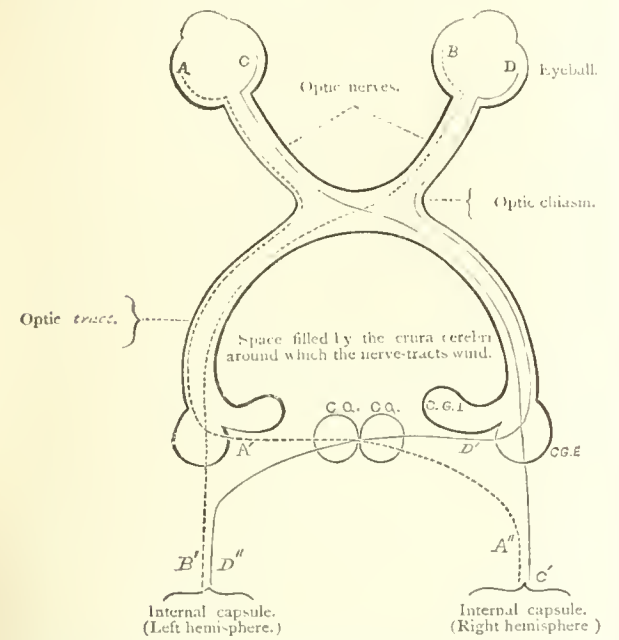


FIG. 1.—A diagram designed to show the course of fibres within the optic nerves, and some of the more important relations of the same. A, A', A'', and D, D', D'', fibres which do not cross at the chiasm, but probably do at the corpora quadrigemina. C, C', and B, B', fibres which do decussate at the chiasm. The relations of these fibres to the "internal capsule" of the cerebrum is also shown. This portion of the cerebral hemisphere is shown to be in relation with the fibres distributed only to the opposite eye; hence, lesions within it tend to produce "crossed amblyopia." The relation of bundles within the chiasm is made apparent. The fibres of the chiasm which connect the two eyes directly (inter-retinal fibres), and those which connect the two cerebral hemispheres directly (inter-cerebral fibres), are not shown, because they have no bearing upon symptoms, even if their existence is to be considered as demonstrated.

It is known that destruction of the retina in the dog gives rise to a degeneration of nerve-strands in both optic tracts. The chiasm of the cat has been divided without destroying vision, thus warranting the inference that the decussation at that point is incomplete. All the experiments which have been made to determine the relation of the cortex cerebri to vision are in favor of an incomplete decussation, because the sight of both eyes has been impaired by unilateral lesions. A large number of cases have been reported where lesions affecting one optic tract have produced hemianopsia of both retinae. Possibly the corpora quadrigemina preside over other functions in addition to the special sense of sight. Flourens was the first to notice that injuries of the corpora quadrigemina of one side produced peculiar phenomena, called "*forced movements*," and that the complete removal of these bodies caused inco-ordination of movement. These experiments have been repeatedly verified. In the frog, the removal of the optic lobes causes an almost entire loss of the power of co-ordina-

tion of movements required to preserve its balance; but it can still perform a variety of movements where co-ordination is demanded, such as swimming, leaping, etc. Schiff has attributed these effects, however, to injury of deeper parts (*crura cerebri*). We have already considered phenomena which are somewhat similar when the cerebellum was under discussion; and we have as yet no positive knowledge of the physiological connections between the optic lobes and the cerebellum.

The sense of sight has a marked effect upon co-ordination of movement, as we all know. Dizziness often follows the close inspection of a water-fall, or the rapid flight of objects before the eyes. The effect of extreme elevation from surrounding objects frequently produces marked disturbances of equilibrium. These facts seem to sustain the belief that the optic fibres must be closely associated with the cerebellum, pons Varolii, or *crura*, and the discovery of Flourens is an additional argument in its favor.

Finally, it is believed by some that a centre which presides over the secretion of sweat is situated somewhere in the region of the optic lobes.

EFFECTS OF LESIONS OF THE OPTIC CENTRES AND OPTIC NERVES.

In connection with the discussion of the corpora quadrigemina and the probable course and distribution of the nerves of sight, it seems to me an appropriate time to mention some interesting phenomena pertaining to vision which have an important bearing upon the localization of intracranial lesions. Before doing so, however, it will be necessary to hastily review a few important facts which are essential to a complete understanding of the subject. The optic apparatus may be said to comprise the following parts :

1. *Certain cortical centres*, which act as the *interpreters* of visual sensations transmitted to the convolutions by means of the nerve-fibres within the white substance of the cerebral hemispheres. These centres probably transform all impulses (which start originally as retinal impressions) into *conscious visual perceptions*.
2. *Nodal masses of gray matter*, with which the optic nerve-fibres are intimately associated before entering the white substance of the cerebral hemisphere. These masses include the corpora quadrigemina, the corpora geniculata, the corpus sub-thalamicum, the optic centre of the thalamus (Luis), the basal optic ganglion (Meynert); and probably some centres situated within the medulla oblongata. It is not possible to speak with positiveness concerning the seat of all the interpolated masses of nerve-cells associated with the optic nerve-fibres. Possibly some important ones may have been omitted, whose existence and function will be clearly demonstrated by future research. These interrupting ganglia probably exercise a *modifying influence* of some kind upon the impulses which are conducted to them from the retina; and subsequently allow them to pass to the cells of the cerebral convolutions so altered or *materialized* as to be readily transformed into conscious perceptions of external objects recognized by the eyes. It is not known what the special function of each of these interrupting masses is, nor can it be determined except through a more complete knowledge of cerebral architecture and pathology than we now possess.
3. *Nerve-fibres within the optic nerves and the optic tracts*, the latter being the prolongation of the former behind the chiasm (see Fig. 1). These fibres convey all impressions made by objects external to the body upon the retinae by means of the organ of sight, to the interrupting masses of gray matter mentioned above. The waves of light, which enter the pupil and fall upon the retina, create in the structural elements of that membrane (probably in the so-called "*rods*" and "*cones of Jacob*") impulses which are conveyed by means of the optic fibres to the interrupting ganglion-cells, and then to the convolutions of the cerebral hemisphere where these impulses

¹ A term used synonymously with *hemiplegia*; but a preferable one, since it signifies a blindness of one-half (lateral) of the retina.

become sight-impressions. It is evident, therefore, that anything which tends to interfere with the perfect conducting power of these fibres will impair the power of accurate conception of external objects revealed to us by means of vision, because the cortical centres are cut off from their retinal connections; hence the study of the course of the nerve-fibres and the relations of the nerve-tracts to surrounding parts becomes of vital importance to the advanced neurologist (the diagnosis of many cerebral and intracranial lesions resting entirely or in part upon optic phenomena which are to be interpreted from an anatomical standpoint alone).

4. *The retina, and its various structural elements.* This membrane constitutes the peripheral portion of the nervous optic apparatus. It is the only place in the body where the nervous system is so exposed as to admit of a direct examination, since we can see it by aid of the ophthalmoscope, and thus study its diseased conditions as well as its appearance in health. Physiologically, it is to be considered as the sensitive plate from which the details of outline and color of external objects, are telegraphed to the convolutions of the cerebrum. Many of the wonders of its construction were given you during the previous winter's course. Time will not now permit me to repeat them.¹

The experiments of Flourens, already quoted, first demonstrated that a *crude sense of vision* remains in animals which have been deprived of their cerebral convolutions above the level of the corpora quadrigemina, and many subsequent observers have attested to the accuracy of his conclusions. These experiments point to some functions within the masses of gray matter that are associated with the optic fibres, which bear a close analogy to those of the cortical cells of the so-called "visual area" of the hemispheres. We are forced to accept the view that these ganglionic masses take cognizance of visual impulses in an imperfect way, although the cerebral convolutions seem to be essential to a complete transformation of visual impulses into sight-perceptions. Section of the optic fibres after they leave the brain invariably destroys sight, thus proving that the retina itself has no inherent power of interpreting visual impressions which are cast upon it.

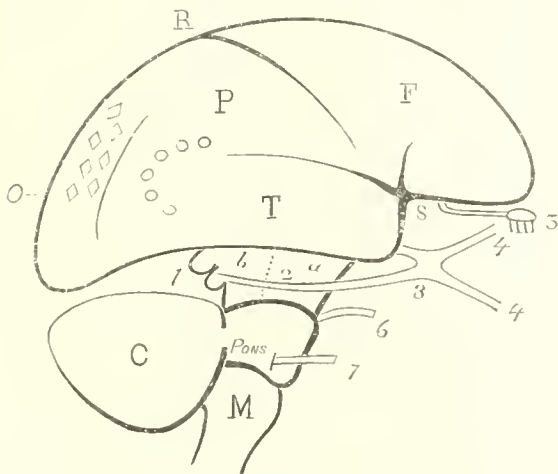


FIG. 2.—A diagram designed to show some of the relations of the optic nerve-fibres to surrounding parts. F, frontal lobes of cerebrum; P, parietal lobe; T, temporo-sphenoidal lobe; S, fissure of Sylvius; R, fissure of Rolando; O, occipital lobe; C, cerebellum; M, medulla oblongata; 1, corpora quadrigemina; 2, optic tracts; 3, optic chiasm; 4, optic nerves; 5, olfactory nerve; 6, motor oculi nerve; 7, trigeminus nerve; a, basis cranii; b, tegmentum cranii. The circles in the parietal lobe represent the cortical visual centres of Ferrier; the diamonds in the occipital lobe, the cortical visual centres of Munk. The cerebellum and pons Varolii are shown as if separated from the cerebrum, in order to make the relations of the crus to the optic tracts apparent.

Now, from what has been stated, we can classify lesions which may affect or destroy the visual function as follows:

1. *Lesions of the retina, or of some of the other struc-*

tures of the eye which prevent the formation of images within it.

2. *Lesions of the optic nerve*, anteriorly to the chiasm, at which point the decussating fibres have crossed each other.

3. *Lesions of the optic tracts and the chiasm*, or of parts so adjacent to them as to create pressure upon the optic fibres.

4. *Lesions of those ganglionic masses* whose connection with the optic fibres has been demonstrated by anatomical or pathological research.

5. *Lesions of certain regions of the cortex cerebri*, which have been shown to be in intimate association with vision.

6. *Lesions of the internal capsule of the cerebrum*; or of such parts of the medullary centre of each hemisphere as contain fibres connected with the "visual area" of the cortex.

The first set of causes of impairment of vision belongs properly to the province of the oculist rather than of the neurologist, although there is one condition which should always be sought for when cerebral disease is suspected, viz., *neuro-iritis*, or the so-called "*choked disc*." The evidences of this condition are afforded by the ophthalmoscope alone, because vision is not impaired in the early stages. Its existence is recognized early by tortuosity of the veins of the fundus of the eye, swelling of the optic nerve, and obscuration of the margin of the disc; later, the outline of the disc becomes unnaturally sharp and distinct, the nerve atrophies, the vessels become very small, the fundus is unnaturally pale, and vision is impaired. This condition is always (?) bilateral, although it is not uncommon to note a marked difference in the severity of the changes in the two eyes. Special attention is called to this disease of the eye, because it is now considered as one of the most reliable signs of conditions of the cerebrum which tend to produce a *gradually increasing pressure*, particularly of tumors; and in the second place, because its existence is liable to be overlooked, since vision is not impaired early. The various phenomena which are due to paresis of ocular muscles,¹ and which have often the most positive value in definitely localizing cerebral disease, cannot be considered under this set of symptoms or in this connection, because they do not govern in any way the sense of sight, although they assist the eye to focus images of objects upon the retina. My friend, Dr. W. C. Ayers, has lately made a valuable contribution to medical literature in the form of a brochure upon the value of the ophthalmoscope as an aid in general diagnosis,² which may well be consulted by all who desire the latest information in regard to the utility of this instrument, and the intimate relationship which exists between the eye and the body, as revealed by clinical study.

The second set of causes of impairment of vision (lesions of the optic nerve anteriorly to the chiasm) includes chiefly those conditions within the orbit which create pressure upon, or destruction of, the optic nerve after it leaves the cavity of the cranium. It is evident from the diagram (Fig. 1) that the impairment of sight in this case will be confined exclusively to one eye. The phenomena produced by disease within the cavity of the orbit upon sight must, of course, depend upon the amount of injury done to the optic nerve. *Blindness of one eye* indicates, as a rule, some exciting cause outside of the cavity of the cranium; if it occurs in connection with hemiplegia, or hemianæsthesia, however, a lesion of the internal capsule may be suspected, as shown in Fig. 1. Remember that either amblyopia or total blindness of one eye never occurs in connection with pressure upon the optic nerve-fibres either at the chiasm or behind it, and that some form of paralysis must coexist with these symptoms if the internal capsule be diseased.

We come now to the third set of causes, viz., lesions

¹ See pages 103 to 146 of the author's work, *The Applied Anatomy of the Nervous System*. New York: D. Appleton & Co. 1881.

² These will be found by consulting the author's work, *The Applied Anatomy of the Nervous System*. New York, 1881.

³ American Journal of the Medical Sciences, October, 1882.

(c.) The *bi-temporal variety* indicates atheromatous degeneration of the circle of Willis. Possibly (?) symmetrical lesions of the outer part of the chiasm might also cause it. I am not aware that the view of Charcot,

that a decussation of the optic fibres takes place within the substance of the corpora quadrigemina, is as yet sustained by a recorded case of bi-temporal hemianopsia produced by a circumscribed lesion within the optic lobes.

(d.) Finally, lesions of the *internal capsule* are often associated with *amblyopia*, or indistinct vision confined to one eye.

The bi-nasal, and also the bi-temporal varieties, are due (as a rule, at least) to lesions confined to the *anterior fossa* of the cranium; hence we sometimes find the *olfactory nerve* of the side corresponding to the seat of the lesion simultaneously affected, and creating anosmia (loss of smell) with or without subjective odors.

If the lesion be situated within the *middle fossa* of the cranium, the *optic tracts* will be affected, thus causing crossed hemianopsia; while the *motor nerves of the eye* may be simultaneously pressed upon, as they pass through that fossa on the way to their foramen of exit from the cranium (the sphenoidal fissure), thus producing more or less impairment of the movements of the eyeball of the same side. The value of these complications cannot be over-estimated, when they exist, because they are of the greatest aid in diagnosis, and often enable the skilled anatomist to positively determine the seat of the lesion.

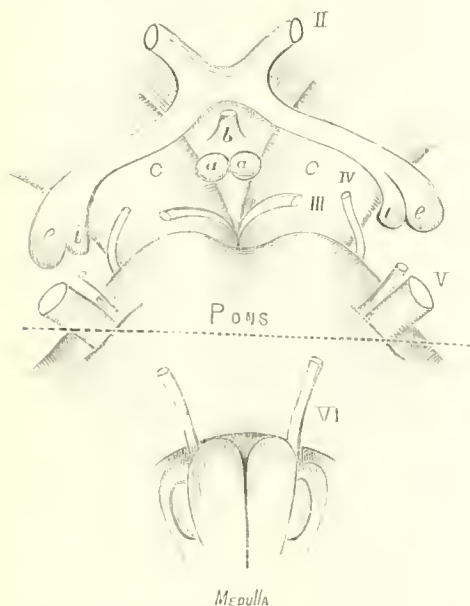


FIG. 4.—A diagram of the base of the brain, designed to show the parts adjacent to the optic nerve tracts and chiasm. The nerves are represented by their respective numbers: II., optic; III., motor oculi; IV., trochlearis; V., trigeminus; VI., abducens; C, crus cerebri of each hemisphere; b, infundibulum, the pituitary body being cut off to show the optic chiasm; a, the corpus albicans (mamillary tubercle); e, external geniculate body; i, internal geniculate body. The dotted line which crosses the pons Varoli, connecting the roots of the fifth nerves, is Gubler's line, an important guide, since lesions of the *pons* in front of it causes "crossed facial paralysis." Lesions in the region of the *crus* may involve the third and second nerves simultaneously. Lesions about the chiasm may press upon the corpus striatum within the mass of the cerebrum. The *crus* comprises both the motor and sensory tracts of the cerebrum (see Fig. 5).

The *fourth set* of causes of impairment of vision (according to the classification which we have previously adopted) comprises all diseased conditions which are limited exclusively to those ganglionic masses through which the optic fibres pass in order to reach their connections with the convolutions of the cerebrum. If we confine ourselves to this strict limitation, we are forced to admit that little can positively be said respecting them which will bear upon intracranial diagnosis, because, to my knowledge, there are no recorded cases where evidences of cerebral disease have been confined exclusively to these regions. There are some symptoms, however, that may coexist with disturbances of vision when lesions exist in the region of the middle fossa of the skull; these may prove of assistance in deciding as to the seat of the lesion. Among them may be enumerated: 1. *Crossed paralysis* of the "third nerve and body" type, a condi-

tion characterized by hemiplegia and paralysis of the motor-oculi nerve of the opposite side. 2. *Crossed paralysis* of the "olfactory nerve and body" type, a condition characterized by hemiplegia and loss of smell in the opposite nostril. 3. *Hemiplegia*, or loss of the power of voluntary motion in one lateral half of the body. 4. *Hemianesthesia*, or a loss of sensation in one lateral half of the body. 5. *Ataxic symptoms*, indicating an impairment of co-ordination of muscular movements.

The first of these points positively to a *lesion of the crus cerebri*, if unattended by other symptoms. But, if evidences of disturbance of the optic tract (crossed hemianopsia) exists simultaneously with this form of crossed paralysis, it indicates that the lesion is large enough to interfere also with the optic nerve as well as the motor-oculi fibres within the *crus* and the motor tract of the *crus*. The symptoms of this variety of crossed paralysis¹ are so well defined as to render it almost impossible to mistake them.

The second condition may occur when the lesion is sufficiently large to create pressure upon the nucleus caudatus or other motor parts of the brain, thus causing hemiplegia of the opposite side; and, at the same time, to injure the olfactory nerve, thus causing anosmia (loss of smell) in the nostril of the corresponding side. Of course the optic tract or chiasm must be involved simultaneously when hemianopsia also exists. The tests for anosmia² have already been given in previous lectures.

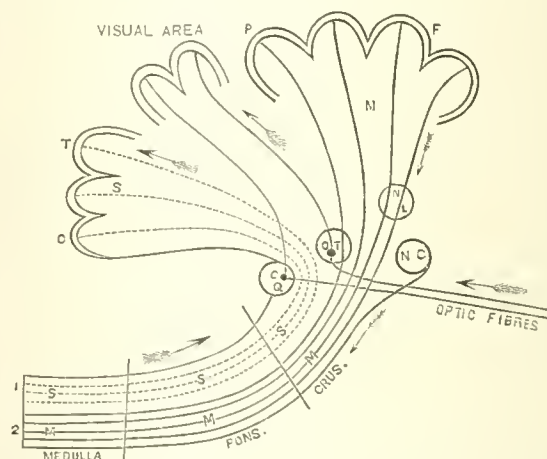


FIG. 5.—A diagram designed to show the general course of fibres in the "sensory" and "motor tracts," and their relation to certain fasciculi of the optic nerve tracts (modified from Seguin). S, sensory tract in posterior region of mesencephalon, extending to O and T, occipital and temporal lobes of hemispheres; M, motor tract in basis cruris, extending to P and F, parietal and (part of) frontal lobes of hemispheres; C.Q., corpus quadrigemini; O.T., optic thalamus; N.L., nucleus lenticularis; N.C., nucleus caudatus; 1, the fibres forming the "tegmentum cruris" (Meynert); 2, the fibres forming the "basis cruris" (Meynert); a, fibres of the optic nerve which become associated with the "optic centre" in the optic thalamus, and are subsequently prolonged to the "visual area" of the convolutions of the cerebrum; b, optic fibres which join the cells of the "corpora quadrigemina," and are then prolonged to the visual area of the cerebral cortex.

Hemiplegia may occur in connection with hemianopsia when the lesion is of sufficient size to affect any part of the so-called "motor tract" simultaneously with the optic nerve-fibres. The motor paralysis is on the side opposite to the lesion, because the fibres of the motor tract decussate at the lower part of the medulla. Flechsig has shown that, in rare cases, *exceptions* to this general rule are to be explained by an abnormality in the decussation of the motor fibres. Hemiplegia is seldom observed in connection with hemianopsia alone, since the olfactory, motor-oculi, trigeminus, and facial nerve-roots are especially liable to be simultaneously involved (see Fig. 2). This explains the mechanism of the four varieties of "crossed paralysis" which are encountered, the hemiplegia being on the side opposite to the lesion, and the symptoms produced by paralysis of the cranial nerve being confined to the side corresponding to the lesion.

¹ See author's work on The Applied Anatomy of the Nervous System.
² Op. cit.

Hemianæsthesia indicates some disturbance of the nerve-fibres of the so-called "*sensory tract*," the loss of sensation being confined to the lateral half of the body opposite to the lesion which causes it, because the sensory fibres decussate in the spinal cord. In cerebral hemianæsthesia there is more or less insensibility to touch, pain, and temperature, and also abolition of muscular sensibility with complete retention of electro motor contractility. The mucous membranes of the eye, nose, and mouth are also anæsthetic. Now the upper portion of the sensory tract lies in the posterior regions of the crus cerebri and the internal capsule and crus, and is in close relation with the posterior basal ganglia. The fibres of the optic tract may be likewise affected simultaneously with lesions of the following parts: the crus, the internal capsule, the optic thalamus, the corpora quadrigemina, the geniculate bodies, and the medulla. It has been already stated that lesions of the internal capsule are often associated with *amblyopia*, but not with hemianopsia. Fig. 1 will make the probable explanation of this fact intelligible. Our ability to definitely locate lesions of the sensory tract, or of the ganglia connected with it, is, as yet, imperfect. It is only by the careful study of associated symptoms that conclusions can be arrived at.

Ataxic manifestations, occurring in connection with evidences of impairment of the sense of sight, open a wide field for speculation. The proximity and intimate structural relations of the cerebellum with the optic lobes, basal ganglia, crus, and medulla, suggest the possibility of cerebellar lesions when these two symptoms are present to a marked degree. The subject is too complex for discussion here. It will be more intelligible after the cerebellum has been considered.

The *fifth set* of causes of impairment of vision previously tabulated, will now be considered. Within the past few years the attention of physiologists has been directed, by some remarkable results of experimentation upon the convolutions of the cerebral cortex, toward the view that certain convolutions of the cerebrum were essential to perfect visual perceptions. To Flourens and some of the older observers, who had remarked that the removal of portions of the hemispheres, or serious injury to them, created blindness, the loss of sight appeared to be temporary. The fact (?) was explained in various ways, until Goltz called attention to the error of supposing that no permanent imperfections of vision remained after extensive injuries to the cerebral hemispheres. This author showed that the permanent results of such injuries might escape notice unless special care was used in the examinations of the animal. The peculiarities of the permanent impairment of vision are manifested only when the animal is subjected to tests which had been invariably potent before the cerebral injury. Thus the dog, from which portions of the cerebral hemispheres had been removed, fails to recognize his food by sight; when he is threatened by a whip he is not cowed; he is no longer affected by objects which caused him to be violently excited before the mutilation; he makes no response to the extension of the hand of his master for the paw; and yet this animal can see to avoid objects and to perform all varieties of movement, as well as in his natural condition. Another striking characteristic of this impairment of sight is, that under educational exercise recovery takes place. The dog may again be taught to fear castigation and to shrink at the sight of the whip; to recognize his food; to obey the motions of his master's hand, etc.

Two interpretations of these phenomena have been suggested. The first is, that the animal has imperfect visual perceptions, so that objects appear misty or as if seen through a gauze. Goltz suggests that they may appear as if all the colors were washed out, thus depriving food, dress, etc., of their characteristic appearances. The second interpretation supposes that the memory of past visual impressions is effaced, so that the animal for-

gets the pain of the lash, the taste of the food, the features of his master, the tricks which have been laboriously taught him. The first view is that of Goltz, who considers that the animal has to learn to use his imperfect visual perceptions before his intellectual faculties (which are presumed to be unimpaired) can respond to them in a proper way. The second view is that of Munk, who speaks of this form of imperfect vision as "psychical blindness," in contrast to "absolute blindness," which is the result of destruction of the optic fibres. The condition of the animal resembles that of the new-born. Retinal impressions have no associations connected with them. During the period of recovery the animal has to acquire a new memory, as it were.

With this distinction clearly in mind, we are prepared to discuss the views of Ferrier, Goltz, Munk, Luciani, Tamburini, Yeo, Dalton, and others respecting the exact seat of the visual centres within the cortex cerebri.

Goltz, in his experiments upon dogs, was unable to recognize any distinct areas which presided exclusively over visual impressions. He insists that disturbances of general sensibility accompanied the impairment of vision produced by destruction of the convolutions, and that the results depended upon the amount of brain-substance removed or destroyed. He found, however, that the locality operated upon influenced the phenomena which followed, and that recovery would take place if the injury was not too extensive. Goltz destroyed the brain by making a hole, or a number of them, through the skull, and using a *forcible stream of water* to wash away the brain-substance. The faults of the method may account for the negative results obtained by it.

Ferrier investigated the subject chiefly upon the monkey tribe (the nearest approach to the human race) and arrived at conclusions of a more positive character. This observer was led to adopt a more certain way of limiting the injury done to the cortex than that of Goltz. His conclusions may be thus summarized: When the "angular gyrus," or a convolution of the parietal lobe, so called from its shape, since it forms a sharp angle (see Fig. 2), was destroyed upon one side only, the vision of the *opposite eye* was destroyed for a time, but it eventually regained its powers. If the angular gyrus of each hemisphere was simultaneously destroyed, the *loss of sight was permanent* and both eyes were equally affected. Hence it would appear that each hemisphere is in some way connected with both eyes, because unilateral destruction of this convolution does not create permanent blindness, as it would do if the opposite hemisphere did not come to its relief. Dalton has lately confirmed the views of Ferrier by experiments made upon dogs, thus tending to confute the view of Goltz that the effects of cortical lesions depend more on their extent than on their position. The animals operated upon by this observer remained permanently blind, although the lesion was unilateral.

Munk has confined his experiments chiefly to the occipital lobes of the cerebrum, and has endeavored to demonstrate the existence of a "visual area," differing in position and of much wider extent than that of Ferrier (Fig. 2). He maintains that certain parts of this region can be shown to preside over *limited portions* of the retina, and that blindness of circumscribed spots in the retina can be artificially produced. He states that the "absolute blindness" thus created is commonly associated with "psychical blindness," from which the animal may recover by proper exercise and training, provided the whole visual area is not destroyed. This author attributes the recovery to a deposition of new visual experiences in the rest of the visual area.

Some observations which have lately been made in support of the view that the occipital lobes of the cerebrum are more directly associated with the mental faculties than the frontal lobes are of special interest to those who agree with Munk regarding the seat of the visual area of the cortex. At present, however, the subject must be regarded as unsettled.

The *fifth set* of causes of impairment of vision, previously tabulated, has been discussed in part in connection with the others. We have a mass of clinical as well as experimental evidence to show that destructive lesions situated within the *posterior one-third* of the internal capsule cause *hemianæsthesia* on the opposite side of the body. As regards vision, the symptoms which sometimes exist are especially noteworthy. There appears to be developed on the anæsthetic side a partial blindness of the eye (*amblyopia*), and the *field of vision for color* is remarkably contracted, as first pointed out by Landolt. In the normal eye the field for blue is the largest; next comes that for yellow; then orange, red, green, and violet have fields of gradually diminishing size, the last being perceived only by the most central parts of the retina. Now, in connection with hemianæsthesia caused by cerebral lesions, the perception of violet first disappears, then for green, and later for orange. In some cases yellow and blue can be perfectly recognized; but in the higher degrees of anæsthesia all colors merge into an uniform sepia tint. Another important fact has been pointed out by Landolt, viz., that the eye on the same side as the lesion participates, though to a less extent, in the loss of color-perception.

Now, if the eyes be examined with the ophthalmoscope, no evidences of organic lesion of the retina or degeneration of the optic nerve can be detected until the disuse of the organ has induced atrophic changes. It is noteworthy that hemianopsia does not occur, a fact which Fig. 3 will help to explain. From statements which have been made in preceding pages, we are forced to conclude that this peculiar type of blindness is never caused except by lesions which are situated or act below the cortex. It is more commonly met with in connection with hemiplegia than hemianopsia. The effects of lesions of the internal capsule upon other nerves of special sense will be considered later.

Clinical deductions drawn from preceding pages.—*Amblyopia* of one eye can result from lesions involving the optic nerve in front of the chiasm, or from lesions of the internal capsule. If from the latter, the field for color-perceptions will be found to be markedly contracted or color-vision will be wanting; both eyes may be affected, the most marked changes being found, however, in the eye opposite to the seat of the lesion. We have not sufficient data for positive clinical deductions respecting lesions of the visual area of the cortex in man. The blindness of the opposite eye appears to be absolute, while it lasts, in all animals upon whom the experiment has been tried.

Hemianopsia only occurs when the *optic tracts* or the *optic chiasm* are pressed upon or destroyed by lesions in the region of the base of the cerebrum. It is evident, therefore, that the trephine cannot afford relief of this symptom. When syphilitic gummata may be suspected, the prognosis is extremely favorable if active treatment be employed. The variety of hemianopsia indicates the seat of the lesion with great exactness.

If *paralysis* (in any of its forms) coexist with hemianopsia, a valuable guide will often be afforded in determining the extent of the lesion.

Crossed paralysis of the "olfactory nerve and body type" indicates a localized pressure which is chiefly exerted upon parts *within the anterior fossa of the skull*. The motor tract is probably involved by upward pressure upon the caudate or lenticular nucleus, or the fibres of the internal capsule; thus accounting for the hemiplegia of the opposite half of the body. The olfactory nerve, which lies near to the optic chiasm, is affected by pressure in the downward direction, and the optic chiasm or tract may be simultaneously involved; hence, a loss of smell in the nostril on the same side as the lesion may coexist with some form of hemianopsia, as well as with a crossed hemiplegia.

Crossed paralysis of the "motor-oculi nerve and body" type indicates a lesion situated *within the crus cerebri*.

If hemianopsia be present in connection with this condition, it proves conclusively that the optic tract, which lies in close relation with the crus, is simultaneously affected by the lesion. We find, therefore, that the eye on the same side as the lesion is blind in its temporal half if the optic tract be involved; that it can no longer be turned toward the nose or made to act in parallelism with the opposite eye; that the pupil is dilated; and that the upper eyelid droops over the eyeball, giving it a sleepy appearance. On the side opposite to the lesion the eye is blind in its nasal half, and the body is hemiplegic. There are few conditions which are of greater clinical importance than this type of crossed paralysis, because the seat of the lesion is positively indicated. ‡

Choked disc is a common symptom of lesions of the base of the cerebrum, and of any intracranial disease which produces a gradually increasing pressure. It is specially diagnostic of tumors. It is not associated with impairment of vision until late, so that it is often unsuspected when present. The ophthalmoscope is necessary for its detection. It may coexist with hemianopsia, and is always bilateral. It is a positive contra-indication to trephining.

Lesions at the base of the skull may *cross the mesial line*, and still involve only one optic tract. If this occurs, the hemianopsia will be accompanied by other symptoms of diagnostic importance, no longer confined to one side. Double anosmia, general paresis or complete paralysis, general anæsthesia, and paralytic symptoms referable to both eyeballs might be thus produced. Lesions of this character are more liable to affect the chiasm of the optic nerves than the optic tracts; in either case, however, hemianopsia would result, and its type would be a reliable guide to the seat of pressure (see Fig. 4).

Crossed paralysis of the "facial nerve and body type" is not as liable to coexist with hemianopsia as the two forms previously mentioned. The reason for this is a purely anatomical one. The symptoms of facial paralysis are too involved to be given here in detail.¹

Uncomplicated hemianopsia indicates that the effect of the lesion are confined to the optic tracts of chiasm, and that no pressure-effects are exerted upon the motor or sensory projection tracts, or adjacent nerves.

Aphasia sometimes coexists with hemianopsia. I have met with two instances of this kind. In one there was slight paresis of the left side, tending to prove that aphasia can occur with lesions involving the right hemisphere. Both were cured with specific treatment. We must attribute the development of this complication to pressure upon parts in the neighborhood of Broca's centre.

Lesions confined to the crus cerebri seldom create impairment of any of the special senses excepting that of the sight. These cases are not associated with impairment of intellect or of speech. It has been claimed that severe lesions cause paralysis of the bladder, but I have never encountered it. Many points of interest pertaining to lesions of the crura will be considered later in the course.

FEEDING SYPHILITIC INFANTS.—At l'Hôpital des Enfants Assistés in Paris, where many of the waifs and foundlings of the city are cared for, a unique feature has been introduced by M. Parrot, consisting of a nursing service for syphilitic infants. The nurslings draw their nourishment directly from the teats of the ass, to which they are presented five times during the day, and three times at night. They thrive under this treatment, and seventy per cent. live, while almost all formerly died when fed from the bottle (*Boston Medical Journal*). After all, why should they not thrive? Would they not have been nursing asses' milk if they had been imbibing from the maternal mamma?

¹ They are fully discussed in the author's work on The Applied Anatomy of the Nervous System.

THE CHANGE OF MEDICAL OPINION IN REGARD TO THE CAUSE AND RECENT EXTENSION OF MALARIA.

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THE most remarkable change in professional opinion, based upon long-accepted doctrine with regard to the cause of any particular disease, is to be found in the modification of their views by medical men, within recent years, upon the production of malarial disorders. Tradition, for centuries, usurped in this direction, as in many more, the domains of fact and of proof, which, in some instances, have now been fully conceded, but in others still present only a dubious claim to our recognition. Such appears to have been the history of those conditions or influences which have been supposed for centuries to be the primal and essential factors in the development of malarial diseases.

Probably the earliest monograph extant upon this subject is the famous one by Lancisi, entitled "*De Noxiis Paludum Effluviis*," published in Rome in the beginning of the eighteenth century. Lancisi's investigations were extensive and searching, and his conclusions seemed so irresistible that they were adopted by scientific men at once, and have since maintained, until within a very brief period, an assured place as truths in professional literature. Those who subsequently published medical works which needed to include diseases of a miasmatic character, accepted without question or farther investigation the opinions inherited, so to speak, from the learned Roman author. Thus they passed from hand to hand as the years rolled on, and finally reached our period, bearing such emblems of authority as to challenge and disarm criticism. During the lapse of time some few additions were gradually made to the supposed knowledge upon this subject, all of which, however, had their foundation in the original assumption, namely: that malaria essentially depends upon circumstances existing in the *simultaneous operation of air, moisture, and a certain high range of temperature, causing vegetable decomposition*.

Of later years, while not denying the necessity of these conditions, a new and attractive theory led many observers to endeavor to go still farther back, and discover the remote or ultimate cause of these, as well as of all zymotic affections, in minute particles called germs, having special shapes and characters peculiar to each individual disease. Hence what is dignified with the title of the "Germ Theory." Now, what are germs? The ordinary mind cannot even conceive of their form or nature. But what is called the scientist (or, in this case more properly, experimentalist) has a large number of them in his "mind's eye," but none in his laboratory, they being, as far as we yet know, so immeasurably small as to elude observation under the most powerful microscope magnifying thousands of diameters.¹ They may be regarded as the minute and evanescent ghosts of defunct vegetable and animal molecules, and yet many of them have received polysyllabic names. They are presumed to represent something akin to atoms of diseased matter.

In this connection I may be permitted to quote the following remarks of W. Mattieu Williams, F.R.A.S., F.C.S., upon the address, in 1871, of Sir William Thomson before the British Association, treating of atoms: "After hearing all these oracular utterances concerning

atoms, the unsophisticated listener will be surprised to learn that no human being has ever seen an atom of any substance whatever; that there exists absolutely no direct evidence of the existence of any such atoms; that all these atoms, of which Sir William Thomson speaks so confidently and familiarly and dogmatically, are pure figments of the imagination. He will be still further surprised to learn that the bare belief in the existence of ultimate atoms as a merely hypothetical probability is rejected by many of the most eminent of scientific men, and that among those who have disputed the idea of the atomic constitution of matter is the great Faraday himself; that the question of the existence or non-existence of atoms has recently been rather keenly discussed; and that even on the question of the permissibility of admitting their *hypothetical* existence, scientific opinion is divided; and that such a confident assumption of their existence as forms the basis of this part of the President's address is limited to only a small section of mutually admiring transcendental mathematicians."

This arraignment of the atomic theory applies with equal force to the germ theory and to its supporters. Assuming vegetable decomposition to be an essential element in the production of malaria, a number of investigators have employed much time in endeavoring to discover specific germs, only a few of which, it has been assumed, introduced into the system, usually by inspiration, would almost certainly multiply a million-fold, and manifest their presence by well-known and characteristic symptoms.

Some twenty years since, Dr. Saulsbury, an American physician of the West, created quite a sensation in the profession by the announcement that he had discovered the veritable germ of malaria. He christened it "*pal-mella*." At first glance he seemed to have actually demonstrated a fact. But it is unnecessary to enumerate his experiments, as they have since been proven to be valueless and absurd. About the same time similar observations in certain malarious districts of Europe, especially in the historical miasmatic regions of Italy, were announced, but with equally negative results. Dr. Ballestra was quite confident that some spores and sporangia of a little algoid plant, which he found in the air overlying the Pontine Marshes were the long-sought for things.

Two French observers, Lemaire and Gratiolet, made a similar discovery after examinations of one of the most unhealthy marshes of Sologne, in the shape of "spherical, ovoid, and fusiform spores, and a large number of pale cells," which were afterward shown to be products of vegetable putrefaction, existing in most swamps, whether innocuous or not. Quite recently two other observers—Krebs of Prague, and Tommasi Crudeli of Rome—were certain that they had finally traced the infinitesimal being into its lair. They conferred upon it the name of *bacillus malarie*. They injected it into rabbits, dogs, etc., and maintained that the result in these animals was undoubted malarial fever. Their investigations were undertaken in the Agro Romano during 1879. They examined minutely the lower strata of the atmosphere in the district mentioned, together with its soil and stagnant waters. In the air and soil they found a microscopic fungus, consisting of numerous movable shining spores, of a longish, oval shape, and nine micromillimetres in diameter. This fungus they generated in various kinds of soil. The fluid matter thus obtained was filtered and repeatedly washed; and the residuum left after filtration was introduced under the skin of healthy dogs and rabbits. The microscopical particles remaining after washing considerable quantities of the surface soil were employed in similar manner. It was affirmed that all the animals experimented upon developed typical malarial fever, showing regular intervals and lasting various lengths of time up to sixty hours. There was likewise observed an increase of animal temperature, during the shivering fits, up to 42° C., the normal temperature being from 38° to 39° C. The animals so af-

¹ Pettenkofer is quite positive as to the manner in which disease-germs operate. According to him, a germ, in order to produce disease, must not only find a susceptible subject, but must also meet with that subject in a favorable locality and at a proper time; and as disease-germs are not generally very long-lived, the vast majority of them are extinguished without encountering such essential conditions. Otherwise the human race would speedily disappear. The Chief of the Micrographical Department of the Paris Observatory has recently announced a more wonderful discovery than any found hitherto with regard to germs. It seems that he has succeeded in enumerating them as follows: Their number in each cubic metre of the atmosphere of Paris amounts in winter to 7,000; in May, to 12,000; in June, to 35,000; in August, to 23,000; in October, to 14,000; and in November, to 8,000!—*St. James' Gazette*. The indefatigable Professor Hallier, of Jena, Germany, has observed in hydrophobic saliva a characteristic germ, upon which he has conferred the name of *Lyssophyton*.

fected were described as exhibiting acute hypertrophy of the spleen, similar to that noticed in human patients suffering from the same trouble—and in the spleens of the diseased animals a large number of the characteristic fungi were present. More lately Drs. Marchiafava and Valenti of Rome have affirmed that they detected the bacillus malarie in human subjects, in a more advanced stage than in the animals experimented upon by Krebs and Tommasi Crudeli.

According to a still more recent assertion of Tommasi Crudeli,¹ results of farther pathological investigations show that the bacilli may always be detected in the blood during the febrile invasion; but that during the crisis they disappear, leaving only spores. According to the researches of Laveran, extended and corrected by Richard, the blood in malarial fever contains, during the accession, spherical organisms developed in connection with the red globules, and furnished with filaments; also certain curved and pointed bodies, *which are only infected and deformed blood-corpuscles*. The pigment granules of malarial blood are produced in the red corpuscles during the growth of the organisms. I have cited these somewhat hyper-scientific and conflicting accounts of assumed discoveries, not to discuss them particularly, but to remark that their fallacies have been detected, and that such examinations, though interesting, bring us no nearer to a solution of the question, *What is the nature of the malarial cause?* All of the different substances and forms, however minute and unknown before, discovered thus far in malarious localities, may be and have been found as well in districts perfectly salubrious.

In the August (1876) number of the *Popular Science Monthly* I published a brief account of the views then entertained almost universally as to the conditions from which malaria was regarded as springing, views in which, at that time, I concurred. Since then, however, I have been forced to materially modify my opinions on this subject. During a conversation some few years since with the late Dr. Hayes, the Arctic explorer, I was surprised to learn that malarial disease was not unknown in certain Arctic regions where the summer temperature almost never rose above 60° F., with an average for the warmest month of only about 45°. Dr. Hayes him-

self had treated several cases of intermittent fever among the natives there. This disposed at once of the tradition that an average summer temperature of at least 59° F. is one of the essential factors in the causation of such disorders.

Investigating the subject more thoroughly, I found many instances of the occurrence of malarial diseases in other places where vegetable decomposition was, to any great extent, impossible; and very many more instances exist, as everybody knows, of spots where all the so-called conditions for the production of the malarial poison have always been present without such poison ever having manifested itself; and others still, in which, under similar circumstances, it has appeared only at rare intervals. The doubts thus excited were subsequently corroborated during a professional connection with several cases of mill-dams alleged to have produced malaria, one of which I will allude to hereafter. Within a few years the assumption of the truth of the convictions upon this subject entertained by most physicians and hygienists has been the basis for a war upon mill-dams in the Middle and Eastern States. Assuming that the exposure periodically, by drawing off water, of lands contiguous to a stream, and, in fact, forming a portion of the river-bed when the mill-dam was full—such drawing off of a certain quantity of water laying bare a considerable area of submerged ground covered with vegetable growth—and that the action of the summer sun upon such vegetation must inevitably create malaria—there could be little question as to the deleterious influence of any mill-dam within certain latitudes upon the health of the neighboring community. But, unfortunately for this theory, there are thousands of mill-ponds, within the specified regions of average summer temperature, presenting every prescribed condition for the creation of malaria, in whose vicinity chills and fever have always been unknown as much as yellow fever or the plague.

In this connection it is proper to recall the fact that since the United States Census of 1870 there has been particularly noticed an evident extension of the subtle miasmatic influence over regions previously exempt from it within the Middle and New England States. The additional effect of this disease-wave upon the naturally malarious site of New York City alone in this period was exhibited in the fact that from 1868 to 1872 the number of annual victims to these fevers increased three hundred and fifty per cent. It is well known that in places previously exempt from them miasmatic fevers occasionally appear and disappear without there having taken place any perceptible changes in the relations of the soil. Sometimes such fevers assume a widely epidemic or pandemic character, appearing to have broken loose from their native haunts in order to invade a great extent of territory. Thus, as Hertz and Proust inform us, the continent of Europe was almost entirely overspread by such pandemics in 1558, 1678, and 1679; from 1718 to 1722; from 1808 to 1811; from 1824 to 1827, and from 1845 to 1848. That the cause of malaria being thus disseminated is equally mysterious with that of most epidemics few will venture to deny.

When inquiring why malarial fevers should prevail for any considerable time in a given region, we must divest our minds of preconceived notions, and examine the matter judicially. We shall thus find that a variety of different circumstances seem to be connected with the prevalence of such diseases in different localities; and these last may be classified as follows:

1. *Essentially Malarious Districts.*—Here, as far as known, malaria has *always existed*, and analogously always will. Manhattan Island, together with its surroundings—Westchester County, Northern Long Island, and Eastern New Jersey—present the most familiar examples. While in some portions of these territories the existence of swamps and overflowed lands does appear to bear a positive relation to malarial affections, and their drainage does seem to be followed by a *diminution*

¹ The latest publication by this gentleman, who is a Deputy to the Italian Parliament, and, so to speak, the present apostle of the theory which ascribes the production of malaria to a ferment consisting of germs, termed by him *schizomycetes bacillaires*, is a report, dated March 18, 1883, to the Italian Minister of Agriculture, Industry, and Commerce, upon proposed legislation, having in view the general suppression of malaria throughout Italy, but more especially in the Roman Campagna. He appears to regard so herculean an undertaking as feasible under administrative pressure. His plan would involve an extensive concerted system of thorough cultivation (*cultures intensives*) and drainage, for the destruction and prevention of said ferment, which, as he avers, can be set free only under three indispensable conditions, viz.: "1, a temperature of about 20° C. (68° F.); 2, a moderate amount of soil humidity; 3, the direct action of the oxygen of the air upon those portions of the soil containing the malarial ferment; and should but one of these conditions be wanting, the development of malaria is suspended." Besides these extensive agricultural measures of relief, he insists also upon the universal administration of arsenic in prescribed doses and solid form to the farm-hands throughout the malarial regions of the country. He does not even suggest any means of enforcing a scheme calling for arbitrary radical changes in the various agricultural systems pursued by an immense number of farmers, fruit-growers, herders, etc. He questions the efficacy of quinine as a prophylactic, although few of our army surgeons who employed it for that purpose during the War of the Rebellion, will, I judge, be found to agree with him. In my capacity at that time as the Medical Inspector of the Fifth (Regular) Corps of the Army of the Potomac, I had occasion to observe the prophylactic effects of quinine, not only in my own person, but in that of very many others. I need scarcely add that most of the numerous and fatiguing campaigns of that army were conducted during the hot season, in regions fully as malarious as almost any of Italy. Tommasi Crudeli likewise differs from the generality of so-called authorities in restricting the rise of the malarial ferment to merely a few feet perpendicularly ("four or five metres").

He gives examples of large numbers among the equine and bovine species having suffered severely from malaria. Strangely enough, his experiments, and those of Marchiafava and Caboni, with the malarial ferment infecting the human system, have been conducted, so far as I am aware, almost exclusively upon dogs and rabbits, animals which are not proven to suffer from malarial invasion in the regions referred to. I have myself seen some fine English hunting-dogs imported into Rome, and constantly used for the chase in the malarious hunting grounds of the Campagna and Pontine Marshes without suffering any ill effects whatever. The hares and rabbits of Italy equally escape such attacks, if their appearance indicates anything. Moreover, those who perform exceedingly timid nature of that beast, it exhibits, when handled, a marked rise in animal temperature. Another singular fact, gravely set forth by Tommasi Crudeli, is the necessity of obtaining blood only from persons suffering with *pernicious fever*, in order to produce intermittent symptoms in the lower animals. Thus he confesses that, although he had made extensive preparations for such experiments during the year 1882, he refrained from trying them, because not a single case of *pernicious fever* was received during that period into the Roman hospitals. He hopes to be more fortunate, however, within the present year.

of such diseases (*never, however, by their entire suppression*), in other instances the drainage of such places has been succeeded by a positive increase, rather than a subsidence of miasmatic troubles. We are, therefore, placed in a dilemma as regards the influence of drainage in exterminating malaria. On the other hand, whether in miasmatic regions or elsewhere, I do not presume to deny that *thorough* drainage has a beneficial effect upon the *general* public health, when we consider the large category of diseases. But this result proves nothing as to the *cause* of malaria.

2. *Non-malarious Districts.*—Here malaria has appeared only occasionally, and at irregular intervals and with a limited period of existence; for, according to its previous history in such territories, its disappearance sooner or later was inevitable. Dr. Oliver Wendell Holmes' admirable description of similar events in various portions of New England during colonial days substantiates this fact. New York State, New Jersey, and Pennsylvania are largely exempt from *endemic* malaria, but have been afflicted from time to time in certain parts with invasions of *pandemic* malaria. We are entirely ignorant of any laws governing these erratic outbreaks.

3. *Elevated lands, even lofty mountains and extensive dry sandy plains, where none of the so-called conditions for malaria can be discovered in simultaneous operation, but where malaria is virtually constant.*—Such instances are very numerous, and stagger even the most ingenious of the swamp and germ theorists. To these gentlemen it may seem almost sacrilege that any intelligent reader and observer should become an iconoclast as to the idols which ages of study have built up for all future worship—nevertheless, so it is; and it is significant that some of the most distinguished scientific men have lately abjured the orthodox opinions in regard to the essential conditions for the production of malaria. In a *cause célèbre* tried at Pittsfield, Mass., in October, 1882, on account of an indictment brought against the owners of a mill-dam for creating malarial fevers, Dr. Paul A. Chadbourne, President of the Massachusetts Agricultural College, and ex-President of Williams College, testified that, as a professor in the Berkshire and Maine medical schools he had formerly lectured upon the nature of malaria. He then believed it to be of gaseous character, due to heat and decomposition of vegetable material, but he had since entirely abandoned that theory, and adhered to no opinion whatever, based upon sufficient facts to make it valuable, as to how malaria arises.

In the same case, Dr. Charles W. Chamberlain, Secretary of the Connecticut State Board of Health, and a gentleman who, from very extensive observations throughout his own State, is familiar with this subject, as far as present knowledge will allow, after admitting that he had formerly held the marsh and germ theories, acknowledged that he had recently given up both.

A similar complete change in opinion was avowed by Dr. Francis Bacon, ex-Professor of Surgery at Yale College; by Dr. N. G. Kierle, of Baltimore, Lecturer on Pathology in the College of Physicians and Surgeons of that city; by several of the principal practitioners of Berkshire County, Mass., and by a dozen well-known physicians from other portions of the country.

The vast importance of a positive or negative expression of opinion by distinguished experts upon the subject in question may be better understood when it is stated that the interests of several thousand manufactories run by water-power, in Massachusetts alone, were involved in the decision of this case, an unanimous one by the jury in favor of the mill-dam.

Although medical men with the reputation of those above mentioned find it proper to abjure long-cherished convictions, which from careful observation and logical inference have become untenable, and are forced to acknowledge themselves as ignorant of the ultimate causes of many affections as were Celsus and his cotem-

poraries eighteen centuries ago, nevertheless, the rapid strides accomplished in other branches of medical inquiry encourage us to anticipate trustfully the time when we shall be gratified with a comprehension of the invisible, mysterious, and ever-active agencies which engender the various zymotic diseases.

BENZOATE OF SODIUM IN THE TREATMENT OF ACUTE GASTRO-INTESTINAL DISEASES.

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DURING the past year I have been very favorably impressed with the rapid, as well as satisfactory action of the benzoate of sodium in the treatment of acute dysentery, cholera morbus, intestinal colic, crampulous and flatulent and other allied morbid conditions of the alimentary canal.

Whether this result is due to its alkaline reaction, or to its disinfecting action on the morbid gases from the decomposing ingesta, or to its stimulating action on the liver, I will not now undertake to demonstrate. That it does give quick and permanent relief in such conditions I have carefully noted in more than twenty instances. The following typical cases are selected from my case-book:

CASE I.—*Acute Dysentery.*—Mrs. G——, aged thirty-one, usually enjoying good health, had colic, looseness of the bowels, vomiting, great thirst, and no desire for food for three or four days, and not being relieved by diarrhoea mixtures, cholera-drops, etc., sent for me. I saw her at nine o'clock in the evening, when she was suffering with severe headache; little abdominal tenderness on palpation; mouth and fauces dry; very thirsty, but retaining liquids swallowed only a few minutes, and during the last twenty-four hours complaining mostly of an unavoidable desire to go to stool, at which, however, there was only mucus and blood accompanied by violent tenesmus. Prescribed the following mixture, the dose to be repeated every half hour until relieved:

R. Sodii benzoatis,..... ʒj.
Elixirii simplicis..... ʒij.

M. S.—Two teaspoonfuls at a dose.

On the following morning she told me that soon after taking the first dose she was greatly relieved, and that she had taken only four doses when the pain and bearing down while at stool were entirely gone.

The stomach did not reject the medicine at any time, and she had not taken it since midnight, after which she rested quite well for several hours. Bowels still loose, but discharges are feculent. No tenesmus. Not much thirst. Left the following prescription:

R. Pulv. opii,..... ij. gr.
Pulv. camphor..... ʒj.

M. et in cap. iv. div.

S.—Take one capsule after each passage. To have only boiled milk and toast, and, if very thirsty, iced carbonic-acid water as the only drink.

On the following morning, I found her sitting up in bed. Said she was all right, except a little weak. No movement from bowels since six o'clock last evening. Ordered her to have half a tablespoonful of Boudault's wine of pepsin, with ten drops of the dilute nitro-muriatic acid, three times a day for one week, at the end of which she came to my office to say that she had had no further trouble.

The use of the benzoate of sodium in the above case, and in three others of a similar nature, was as surprising to me as it was gratifying to the patients. In a very few hours an attack of acute dysentery was changed to a simple diarrhoea, which yielded kindly to a few small doses of opium and camphor.

CASE II.—*Cholera Morbus.*—Mr. A——, a strong,

healthy young man, was taken at midnight, following a very indigestible dinner, with nausea and colic, soon followed by profuse vomiting and purging, which continued until five o'clock in the morning, when I found him with his knees flexed on his abdomen, which was very sensitive to pressure, face pale, pulse small, and a frequent desire to defecate. I immediately gave him fifteen grains of the benzoate of sodium in a tablespoonful of simple elixir. This was retained about fifteen minutes, when he vomited quickly, and without that very disagreeable gagging sensation in his throat which attended previous similar acts. In a few minutes he took half the quantity, when I left instructions to repeat the same every hour if required.

When I visited him again, at five o'clock in the evening, he was sitting up in bed eating poached eggs on toast. Said he was feeling all right, that he had not taken any of the medicine since eight o'clock, and was going to business in the morning. A few days later I saw him, and he told me that he had had no further trouble.

In several cases of this description the benzoate of sodium acted equally well—no other medicine being required.

CASE III.—Intestinal Colic.—In this case, representing a class in which I had usually given inhalations of chloroform or hypodermics of morphine, I was somewhat doubtful about the propriety of using the benzoate of sodium; yet, recognizing colic as due to spasms of the muscular tissue of the intestine caused by flatulency, and having seen such remarkable results from its use in analogous cases, and especially after the statement of the patient that "morphine affects my head so," I determined to use it.

Mrs. W—, aged thirty-five, anæmic, poorly nourished, occasionally has attacks of colic after any indiscretion in her diet.

When I saw her, at four o'clock in the afternoon, she was lying on her side with knees drawn up toward thorax, and frequently crying out with pain, "All over my stomach."

I learned that two or three days ago she was taken with vomiting and diarrhoea, which had been mostly relieved—the former since noon, and the latter since morning—by domestic remedies, and that she had passed no urine for twenty-four hours, during which time the paroxysms of pain had been gradually increasing in frequency and severity. She would not permit me to use the catheter, or even to carefully examine the abdomen, on account of the pain caused by any change in her position. I gave her fifteen grains of the benzoate of sodium in a tablespoonful of simple elixir, and instructions to repeat half the dose every hour if necessary. Visited her again at nine o'clock in the evening, when she told me that in a few minutes after taking the medicine she was greatly relieved; that she passed plenty of water in about one hour afterward, and did not take any more of the medicine until eight o'clock, when, having a little pain over the umbilical region, she repeated half of the first dose and had had none since. On the following morning I found that she had rested well during the night, without any recurrence of the colic. Ordered her to take, for a few days, half a tablespoonful of Boudault's wine of pepsin, with ten drops of dilute nitro-muriatic acid three times a day, and heard nothing more from her.

In the bowel complaints of children, where the passages are greenish, lumpy, mucoid, and frequently streaked with blood, I have repeatedly seen them changed to their natural color within a few hours after commencing the use of benzoate of sodium, in hourly grain doses for each year of age, and that, too, without even dieting the child.

HOW TO CURE SORE THROAT.—Mrs. Disraeli told the Queen, "When Disraeli has a sore throat I cure him by putting my arm round his neck and keeping it there all night."

EMPHYEMA — DOUBLE INCISION WITH THROUGH DRAINAGE—RECOVERY.

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THE methods of treatment of empyema recommended by various authorities differ widely, and the statements made by each are so positive that the practitioner is often in doubt as to which method to follow. A decision can be most readily reached by comparing the results of the various operations as they are reported from time to time. It is now acknowledged that in most cases aspiration alone will fail to relieve the condition permanently, and that a free exit must be afforded to the pus collected in the pleural cavity. It is the object of this article to recommend a double incision with through drainage, and to demonstrate its advantages over the method of a single incision. The case reported illustrates most of the points of interest to be noted:

Hannah S—, aged six, was admitted to Bellevue Hospital December 5, 1881, and assigned to the fourth medical division, Dr. H. F. Walker, attending physician. She had recovered from scarlet fever in October, but during November had suffered with headache, gastric disturbance, and general anasarca, due to a nephritis which had developed during the fever. These symptoms subsided during the latter part of November, at which time the urine increased in amount. But with the subsidence of the symptoms of nephritis a new set of symptoms developed. The child began to complain of pain in the left side, coughed a good deal without expectorating, and had a well-marked fever which was always worse at night. Her mother noticed that she could not lie on the right side, and that the left side became tender and swollen. On admission the child was thin, poorly nourished, fretful, and had a temperature of 102° ; pulse, 140; respiration, 40. The heart was displaced, its apex being in the fourth intercostal space, one-fourth inch to right of the sternum; the left side of the chest bulged outward, measuring one-half inch more than the right side in circumference at the level of the nipple, and all the physical signs of pleuritic effusion were present. Puncture with the hypodermic needle drew greenish pus. The upper level of the effusion corresponded with the space of the scapula.

On the 6th aspiration was performed, eleven ounces of pus being removed, with the result of relieving the dyspnoea, and bringing the heart apex about one inch to the left of its former position. By this procedure the level of the fluid was lowered to the seventh rib posteriorly. The child was put upon cod-liver oil and iron, and an examination of the urine having shown the presence of albumen in small amount, with a few blood-globules and hyaline and granular casts, the white drink (pot. cit. et acet. inf. digital. aq.) was ordered with a view to increasing its amount.

By the 15th the fluid had returned to the level of the spine of the scapula, though the general condition of the child had improved in spite of the hectic fever. The temperature reached 101° or 102° every night, and was not affected materially by the administration of quinine given per rectum, as it could not be retained in the stomach. During this time the daily amount of urine had increased from fifteen to thirty ounces, but it always contained albumen. Aspiration was again performed, the level of the fluid being reduced to the ninth rib by the removal of eight ounces of pus. Same treatment was continued, inf. scoparii being substituted for inf. digital. in the white drink.

On the 29th the pus had again risen to the middle of the scapula, and it was evident that the child was succumbing to the hectic fever. Her general condition was poor, she was very weak, pale, thin, and fretful; her appetite was capricious, milk being the only article of diet which was always digested; her bowels moved irregu-

larly; she passed about twenty-eight ounces of urine daily, and there was no ascites or anasarca. Aspiration having failed to afford permanent relief, Dr. Walker considered an operation necessary, and kindly intrusted it to me.

On the 30th the operation was performed under ether. All antiseptic precautions were observed, and the method of Lister was carried out in every detail. An incision was made in the seventh intercostal space, one-half inch external to the inferior angle of the scapula, with a scalpel, and a director having been introduced, the opening was enlarged with a probe-pointed bistoury until it was three-fourths of an inch in length. Through this opening forty ounces of pus was evacuated. A long probe was then introduced into the opening, and passed downward and forward to the lowest limit of the pleural cavity. Its point being felt in the ninth intercostal space, about one inch external to the mammary line, was cut down upon and brought out. A medium-sized, fenestrated, rubber drainage-tube was then attached to the probe and drawn through from the first to the second incision. Each end of the tube was secured by a safety-pin, and projected an inch from each incision. The length of the tube was about five inches. At the time of the first incision an intercostal artery was cut and considerable blood was lost. The hemorrhage was at first arrested by a serrefine, and later, as all attempts to seize the artery failed, by the introduction between the ribs of a piece of compressed carbolized sponge. Full Lister dressings were then applied.

During the operation air entered the pleural cavity at each inspiration, but as a good spray of carbolic was continuously directed upon the whole chest the possibility of sepsis was prevented. As the operation was being concluded the child's pulse, which had been growing feeble, ceased, and respiration stopped. Artificial respiration was kept up; nitrate of amyl being held to the nostrils, hypodermics of whiskey or digitalis were administered, and a hot rectal injection of whiskey and water was given. She revived slowly under the action of these stimulants, and two hours after the operation was quite comfortable, though very weak. Pulse, 120; respiration, 40; temperature, $98\frac{1}{2}^{\circ}$. Seven hours after the operation it was necessary to renew the dressings, as they were soaked with pus. This was done under the spray. During the following twenty-four hours the child's condition was critical. She slept only a few minutes at a time, vomited frequently when awake, and seemed to be growing weaker. She was nourished by milk and brandy in small amount, frequently given, both by the stomach and by the rectum. The dressings were changed once, and were found to contain considerable pus. Temperature, A.M., 98° ; P.M., 99° ; respiration, 30; pulse, 120.

On January 1st she seemed much more comfortable; did not vomit, retained milk, beef-tea, chicken soup, and brandy, and had a natural movement of the bowels. The amount of pus on the dressings was much less than before. The tube was washed through with a solution of permanganate of potash in both directions, a small amount of pus being washed out. P.M. temperature, 99° . The heart apex is now in its normal position. The child has no pain in the chest, coughs much less, and respiration is regular—30 per minute. The lung has expanded, and vesicular breathing and normal voice are heard down to the level of the seventh rib behind.

Up to January 20th the child's condition improved steadily. Her digestion was good, and she gained much flesh and strength. Her bowels moved regularly, and she passed about thirty ounces of urine daily. The chest was dressed daily with one exception, and the discharge of pus decreased steadily until only about an ounce was found on the dressing, and about a drachm was washed out. A solution of salicylic acid, one per cent., was used in washing out the tube, and the dressing was always done under the spray. The lung expanded well, and at no time was there any sacculation of pus,

the drainage being perfect. When the child sat up the discharge ran out of the anterior and inferior end of the tube, and when she lay down, the superior and posterior end being then lower, it ran in that direction. Only twice during this time did the temperature rise above 100° : once when the dressing was not renewed, and once when a small abscess formed on her left thigh.

Between January 22d and February 3d the child went through measles, having contracted it in the ward from another child. She suffered a good deal from the attendant bronchitis and laryngitis, and at one time had a temperature of 105° . During this period the discharge was very scanty, but the side was dressed daily as usual. After her recovery from measles, and until February 18th, her general condition was improving, but the discharge showed a tendency to increase, about an ounce being found on the dressing every day, and the P.M. temperature rising to $99\frac{1}{2}^{\circ}$ or 100° every night. It was thought that the heavy Lister dressing was acting as a fomentation. In place of it a light pad of oakum, bound on by a few turns of gauze was applied, and a solution of carbolic acid (one part to ninety) was substituted for the solution of salicylic acid to wash out the chest. The result was good. The temperature at once decreased at night to $98\frac{1}{2}^{\circ}$ or 99° ; the discharge became less, and on March 1st it was resolved to remove the drainage-tube. At this time the only remains of the formerly distended pleural cavity, to be found by physical examination, was a small narrow area between the two openings. The lung had expanded, and the side had slightly retracted so as to measure half an inch less than the right side in circumference, the chief deformity noticeable being the sinking of the left shoulder when she stood up. The tube was pulled through the posterior opening into the chest, being first attached to silk ligatures at its posterior extremity, so that it might be replaced if necessary. It was then pulled out of the inferior opening half an inch daily until the 6th, when it was finally removed, the discharge having entirely ceased.

On the 4th both openings had closed completely. On the 20th physical examination showed heart in normal position; slight dulness, with distant vesicular breathing, and slight diminution in voice sounds below the ninth rib behind, and below the seventh rib in the axilla on the left side. Under regular gymnastic exercise the deformity has entirely disappeared, and both shoulders are at the same level. On forcible inspiration the left side expands one-fourth inch less than the right side. The child is in good general condition, is up and plays about all day, has a good appetite, normal stools, and passes thirty ounces of urine daily, which still contains a small amount of albumen and a few hyaline and granular casts. She was discharged from the hospital, but kept under observation for three months, during which time she remained in perfect health.

In connection with this case there are several points to be noticed. It would have been well to operate at the time of the second aspiration, the result of the first aspiration showing that this means was inadequate to cure the empyema. Operation in these cases should be performed early, as the hectic fever, if allowed to go on, weakens the patient constantly.

The existence of nephritis did not seem to affect the result, and hence should not interfere with the operation. The danger of collapse is less if the pus is evacuated slowly. In this case the necessity of stopping hemorrhage prevented me from closing the posterior opening while the anterior one was being made, and allowed a too rapid escape of pus. It would be advisable to apply the dressings as soon as the operation is completed, and let the pus soak into them gradually. The drainage by means of two openings was far better than could have been secured by one alone. In this case it mattered little whether the patient was in an erect or recumbent posture, pus never collected in the cavity. This seems to be the great advantage of this method over all others.

When one has washed out a chest through one opening, and seen how a change of position of the patient will prevent or facilitate a free discharge, as the case may be, he cannot fail to appreciate the advantage of two openings, with the possibility of washing out the cavity in either of two directions. Perfect drainage is the object. It can only be secured by two openings, one of which shall be at the lowest point of the pleural cavity when the patient is standing, and the other at the lowest point when he lies down. Otherwise, during at least ten of the twenty-four hours, the drainage is imperfect, if the patient is not confined to one position in the bed. The Lister dressing is important as long as the surface liable to absorb septic matter is extensive, but when a small sinus alone remains its weight and thickness seem to make it unsuitable, and a lighter dressing favors healing. If the measles had not delayed the result three weeks, and if the light dressing had been applied two weeks earlier, it is reasonable to conclude that the drainage-tube could have been removed five weeks after the operation, instead of ten weeks, as was the case. The result of gymnastic exercise in correcting the deformity which followed the operation was very satisfactory.

It may be concluded from this case, that through drainage is eminently successful in the treatment of empyema in children, and that it has decided advantages over every other method.

Progress of Medical Science.

ARTICULAR GANGLION OF THE KNEE.—Dr. Nicaise reports, in the *Revue de Chirurgie* for June, 1883, the case of a man who presented himself for the removal of a small tumor situated upon the outer side of the knee. The tumor was the size of a small nut, somewhat flat, irregularly lobulated, soft, fluctuating at certain points, and irreducible. It was of slow growth, and slightly adherent to the skin and underlying tissues. The joint was in no way involved, and the movements of the knee were perfectly free. A positive diagnosis was not made, though the author was inclined to regard the new growth as a sebaceous cyst. When removed the tumor was found to contain a gelatinous liquid resembling the vitreous humor of the eye. The walls were irregular, presenting here and there little recesses forming a sort of secondary cysts. The inner surface was lined with flat epithelium, outside of which was a cellular shell, interwoven with elastic fibres and presenting in places a fibrous formation, due probably to irritation produced by movements of the tumor.

ACUTE SCOLIOSIS.—The following case of acute lateral curvature of the spine is related by Professor Desprès in *L'Union Médicale*, No. 54, 1883, as confirmatory of the theory of Duchenne of Boulogne concerning the nature of this affection. A young woman, twenty years of age, was attacked with typhoid fever of mild type, not accompanied by any grave cerebral symptoms, and from which she recovered in about three weeks. During convalescence her husband noticed that she did not stand as straight as before. The deviation increased gradually, without causing any pain, until she was finally led to consult M. Desprès. Examination showed a lateral curvature of the spine in the dorsal region with convexity to the left. The lumbar spine was normal, as the affection was of too recent date to permit of the formation of a compensatory curve in this region. The condition present was declared by the author to be *atrophie des spirales lombaires* on the left side. The atrophy had undoubtedly followed the typhoid fever, as it is known that muscular degeneration occurs in the course of this malady. The results of treatment were most happy, a very great amelioration being observed after only eight days. The treatment consisted in faradization

of the weakened muscles over the convexity of the curvature, repeated every day, in exercises, and in slight mechanical support. The gymnastic treatment consisted simply in trapeze exercises, or raising the body from the ground by the arms. M. Desprès does not regard apparatus as of any therapeutical value in this condition, but uses it merely as a support to be worn in the intervals of active faradic and gymnastic treatment.

**INFLAMMATION OF THE THYROID GLAND IN DIPH-
THERIA.**—Dr. Brieger relates two cases of diphtheria complicated with thyroid inflammation (*Centralblatt für Klinische Medizin*, June 23, 1883). The first case was that of a girl, eighteen years of age, who, when first seen on the seventeenth day had no fever. Two days later, while the diphtheritic membrane was still present, she had tolerably high fever with pain and swelling of the thyroid gland. There was aphonia and dyspnoea. Antiphlogistic measures proved of no avail, but considerable relief was afforded by poulticing. Twenty days later an incision was made at a point of fluctuation, and about an ounce and a half of pus evacuated. Under careful treatment the patient recovered. In the second place, that of a woman aged thirty-two, the inflammation was aborted by energetic antiphlogistic treatment and leeching in the early stage. In both cases the thyroiditis subsided before the local diphtheritic process. The author believes that the glandular inflammation was directly traceable to an invasion by the diphtheritic microbes.

ACUTE ŒDEMA OF THE GLOTTIS.—Dr. Rabère related the following case, seen by himself and Dr. Laylavoix, to the Société de Médecine et de Chirurgie (*Journal de Médecine de Bordeaux*, June 24, 1883). A man, sixty-two years of age, of vigorous health, without history of previous laryngeal trouble or syphilis, was taken with slight chills one evening after working in his garden. The next day he was a little hoarse and felt a slight soreness in swallowing, but was otherwise well. The hoarseness and difficulty in deglutition had increased the following day, and in addition there was a little dyspnoea. That evening he was suddenly awakened in a most threatening attack of suffocation. Examination showed a swelling and induration of the aryteno-epiglottidean folds, but no other trouble in the throat could be made out. Active treatment by counter-irritants, leeches, and emetics produced but slight amelioration, and upon a second attack of urgent dyspnoea it was decided to perform tracheotomy. The operation was postponed when the urgent symptoms subsided, but a third attack of complete suffocation, during the momentary absence of the attendants, resulted fatally. No cause for the œdema could be discovered, except cold, as the man had always enjoyed excellent health. There was no reason to suspect renal trouble, but unfortunately no examination of the urine was made.

FLAX AS A DRESSING FOR WOUNDS.—Dr. Makuschina writes in *Pratch*, No. 12, 1883, concerning flax as a cheap and convenient surgical dressing. She prepares it in the following way: Small bundles of flax are boiled for three hours in ordinary lye-water, and then left to soak in the same for eight or ten hours. After that it is washed five or six times in clean water, dried, and combed out. It loses about twenty-five per cent. in weight, and is a perfectly white, soft material, much more hygroscopic than before being so treated. It is several times cheaper than absorbent cotton, in Russia at least. Dr. Anton Schmidt, of Moscow (*Centralblatt für Chirurgie*, June 30, 1883), also recommends the use of flax. He says that it possesses an advantage over absorbent cotton in that it does not become matted when wet, thus retaining the secretion about the wound. By the addition of corrosive sublimate, iodoform, or carbolic acid an excellent antiseptic dressing may be prepared. In military surgery also it recommends itself by the compactness in which it may be carried, taking up much less room than either cotton or jute.

A REMARKABLE CASE OF ASCITES.—Dr. Antonio Lanini relates in *Lo Sperimentale*, vol. li., No. 1, a case of ascites occurring in a man thirty-four years of age, in which paracentesis was performed ninety-two times from April, 1878, to December, 1882. During this period over three hundred and eighty gallons of fluid were withdrawn from the abdominal cavity without any apparent loss of strength on the part of the patient. The cause of the ascites was not clear, for careful examinations made immediately after the removal of the fluid could detect nothing abnormal in the abdomen. There were no signs of obstruction to the portal circulation, and the normally secreted urine contained no albumen. The author thinks that there was an irritable condition of the peritoneum, resulting from an inflammation of this membrane, from which the patient suffered in 1878. There had never been any fever since the subsidence of the peritonitis. Diuretics, cathartics, counter-irritation, diaphoretics, strong compression of the abdomen, all were tried without success. This patient was related to another man, also under Dr. Lanini's care, on whom in the course of twenty years phlebotomy had been performed five hundred times, and cupping thirty times, besides the application in the intervals of two thousand leeches.

PERITONITIS AND PERITONISM.—In observing a case of acute peritonitis, rapidly fatal, in a young man who had swallowed some orange-pits, Professor Trastour recalled the distinction established by Gubler in 1877 between peritonitis and peritonism. By the latter term is meant the totality of grave reflex phenomena sometimes observed in a patient suffering from peritonitis. These symptoms are produced through the agency of the great sympathetic, and are often overwhelming in their violence. Peritonism is not dependent upon the intensity of the original inflammation. A light peritonitis may be the occasion of the violent symptoms of peritonism, while, on the other hand, an extensive purulent inflammation of the peritoneum may give rise to no general reflex phenomena. The treatment of peritonism consists in the administration of alcohol, chloral, and especially of opium in large doses. The latter may be given in fractional doses, aggregating fifteen grains in the twenty-four hours, its effects, of course, being most carefully watched.—*Revue Médicale*, June 23, 1883.

PERISPLENITIS AND PLEURISY IN TYPHOID FEVER.—Simple pleurisy, without pulmonary lesion, is supposed to be a rare complication of typhoid fever. Guillermet has collected a number of such cases, and seems to agree with another observer who regards simple pleurisy as rather common in typhoid fever, and who attributes it to the marked tendency to serous inflammation which exists in this disease. The observations of Dr. Merklen (*Revue Médicale*, June 23, 1883) lead him to advance a more rational pathogenesis. He states that the spleen in typhoid fever is not only the seat of a passive congestion, but is also a centre of inflammatory irritation which may involve the capsule. This may determine by continuity a localized or general peritonitis, whence the inflammation may spread to the diaphragmatic pleura. In this way he would explain the origin of simple pleurisy, and not by a preference of inflammation to seek the serous membranes.

TYPHOID FEVER AND PREGNANCY.—Dr. Martinet concludes a paper with this title as follows: 1. Typhoid fever is rare in pregnant women. 2. It determines abortion in about one-half of the cases; the more surely, the less advanced is the pregnancy. 3. The lightest forms may produce abortion. 4. This complication arises usually in the course of the third week, and sometimes at the beginning of convalescence; it causes no recrudescence nor return of fever. 5. Puerperal accidents are the exception. 6. The immediate causes of abortion are unknown; elevated temperature, active or passive,

uterine congestion, and changes in the blood, although seemingly the most probable, cannot be regarded as the causes in all cases. 7. The treatment for the fever and the miscarriage is the same as for each condition alone. *L'Union Médicale*, Nos. 52 and 53, 1883.

POISONING FROM DISEASED MEAT.—Dr. Ruysch reports the poisoning of about two hundred persons in the town of Heesch, Holland, who had eaten the flesh of a cow that had died in giving birth to a calf, also the flesh of the still-born calf and of another dead calf. All who had eaten the meat were taken ill and three died. They suffered from severe gastric symptoms, chills, fever, headache, and great depression, so that the physicians supposed at first that they had to do with an epidemic of typhoid fever. Others presented the symptoms merely of gastro-enteritis. The nature of the poison in the flesh could not be clearly determined, as none of the animals had died from an infectious disease.—*Centralbl. für Klin. Med.*, June 9, 1883.

A HITHERTO UNDESCRIBED NEUROSIS.—Dr. Wernicke relates the case of a man, twenty-five years of age, who suffered from tonic spasms of the voluntary muscles (*Centralbl. für Klin. Med.*, June 9, 1883). The affection differed from tetanus in that each convulsion was of shorter duration, the contractions were weaker, and the spasms did not involve the entire body but only single groups of muscles at a time. The convulsions were painless and recurred at frequent intervals, but ceased during sleep. They involved the muscles of respiration, but left free the upper extremities and the territory supplied by the cranial nerves with the exception of the right platysma myoides muscle. The patient had a club-foot from a spastic contraction of the left gastrocnemius muscle of fifteen years' standing, otherwise all the functions of body and mind were normal. No cause for this affection was determinable. The only remedy which had produced even a temporary amelioration was curare. The convulsions, slight in the beginning, had gradually increased in intensity and in the number of muscles involved. The author regarded the tonicity of the convulsions as indicating a spinal origin, since cerebral spasms are of a mixed tonic and clonic character, as in epilepsy. As to the question whether this slowly progressive disease was dependent upon a palpable lesion of the cord (sclerosis), or whether it was a disease in which the changes in the cord were unrecognizable by any means yet at our disposal, he declared for the latter, and designated it as a neurosis. Two brothers of the patient suffered from a similar complaint. The father had had syphilis.

THE TREATMENT OF BASEDOW'S DISEASE.—From an experience in upward of seventy cases, and fortified by the unanimous observations of Von Dusch, Eulenburg, Meyer, Erb, and others, Dr. Chvostek is led to regard the rational employment of galvanism as the most important part of the treatment of Basedow's disease. He recommends the following method to be pursued: 1, the ascending constant current applied to the cervical sympathetic, on each side, for at the most one minute; 2, the same to the spinal cord (the anode at about the fifth dorsal spine, the cathode high up in the cervical region); 3, through the occiput (one pole at each mastoid process), and in certain cases also through the temples, a constant current, for at the longest one minute, and so weak that the patient can feel but the slightest sensation of burning. Sometimes also local galvanization of the thyroid gland with a weak constant current for about four minutes, the current to be reversed at the end of each minute. The applications should be made every day if possible. As a rule very good results were obtained, even in the most severe cases a cure or marked improvement being recorded. In three cases death resulted from excessive anæmia or complications.—*Centralbl. für Klin. Med.*, June 23, 1883.

A LOUD-SOUNDING HEART MURMUR.—Dr. Herman Tittinger describes a peculiar murmur, characterized by the distance at which it is audible (it can be distinctly heard through the bed-coverings), by its stability (it is but slightly influenced by the intensity of the heart's action), and by its character (it is composed of both a primary and an accessory sound). Together with the murmur is perceived a widely propagated tremor. This phenomenon occurs only with rupture of the valves or of the chordæ tendinæ in immediate connection with them. The primary murmur is caused by insufficiency of the valves, the secondary sound by the flapping of the loose valves and chordæ tendinæ in the returning blood-stream. A diastolic murmur indicates a rupture of the semilunar valves, while a systolic sound points to the (much less frequent) lesion of the mitral valve.—*Centralbl. für Klin. Med.*, June 9, 1883.

EPILEPSY CAUSED BY INTESTINAL WORMS.—The following case is reported by Dr. Windelschmidt in the *Allgem. Med. Central-Zeitung* of June 9, 1883. A woman, forty years of age, had suffered for six years from convulsions, epileptic in character, which were steadily increasing in frequency, until finally the attacks appeared every evening as soon as she lay down, lasting several hours and returning again toward morning. Upon questioning it was ascertained that she was troubled with large numbers of ascarides in the rectum and vagina. Vaginal and rectal injections of a bichloride of mercury solution were ordered, and in five days the attacks had wholly ceased. They returned once again upon the re-appearance of the worms, but ceased after a few injections, and have never since troubled her.

CYSTIC TUMORS OF THE TONGUE.—Dr. Gêhe divides lingual cysts into four varieties, viz.: serous, mucous, hydatid, and dermoid cysts. The serous tumors are situated ordinarily on the under surface and at the base of the tongue. They contain a clear, transparent fluid, and are lined upon their inner surface with pavement epithelium. The mucous cysts are found in the situation of the mucous glands, at the tip, sides, and between the tonsils. They contain a stringy fluid with crystals of cholesterin. Hydatid cysts (cysticerci, echinococci) are developed in any part of the tongue. Dermoid cysts are very rare and are always found in the median line of the organ. These are formed by a pushing forward of the blastoderm through the branchial fissure. Serous cysts arise from erectile tumors or from retained secretion. Mucous tumors are of inflammatory origin caused by myxangitis leading to partial obliteration of the ducts. Severe symptoms arise only from inflammation of the sac. Hydatid tumors are the only ones that attain any considerable size, the others remain small and only interfere slightly with speech and mastication. They are always chronic in their course. The treatment of all forms of lingual cysts is the same. It consists either in transfixion by a piece of silk, which is left *in situ* and causes suppuration, in puncture, with or without subsequent injection of an irritating fluid, or in partial or total extirpation. Dr. Gêhe prefers the latter procedure as being the least likely to cause trouble and the most radical.—*Centralbl. für Chirurgie*, June 23, 1883.

THE CLAY-COLORED STOOLS IN JAUNDICE.—Professor Gerhardt states that the clay-colored stools in icterus contain a great number of needle-shaped crystals arranged in bundles. Sometimes the quantity of crystals is so great that the fecal mass seems to be in great part made up of them. Their shape is suggestive of tyrosin, but mixed with the needle-shaped crystals here and there are little spheres resembling leucin. The feces, when stirred up with water, settle in four layers. The upper layer is thin, milk-white, and consists almost wholly of fat drops. The three other layers (flaky, watery, and sedimentitious) contain the crystals in nearly equal pro-

portion. Some of the clinical tests also show the presence of tyrosin. Since only colorless stools contain these crystals, there can be no doubt that their presence is in some way connected with icterus. But whether it is due to the continued action of the gastric juice in the intestines, or to the action or non-action of the pancreatic juice without the addition of bile, or whether it is a result of the decomposition of the ingesta in the intestine, are questions which the author leaves unanswered. He also suggests, without deciding the question, that this quantity of tyrosin in the intestine may be accountable for the appearance of the same substance in the urine. The white or whitish gray color of the stools proceeds from the presence of either fat or these tyrosin crystals.—*Deutsche Medicinal-Zeitung*, July 5, 1883.

TREATMENT OF WOUNDS OF THE BLADDER.—Dr. Juliard had the misfortune to make a rent nearly five inches long in the posterior wall of the bladder, while breaking up adhesions during an ovariectomy. Fifteen sutures were inserted, and the wound healed by first intention. The two serous surfaces were brought into apposition, care being taken not to include the mucous membrane, so as to avoid infiltration of urine alongside the threads into the connective tissue. Cat-gut sutures were employed, and a catheter was left in the bladder, so as to ensure perfect drainage of urine, and thus avoid any stretching asunder of the edges of the wound.—*Centralblatt für Gynäkologie*, July 7, 1883.

TREATMENT OF ERYSIPELAS.—In four cases of erysipelas Dr. Bogusch employed hypodermic injections of resorcin in a five per cent. aqueous solution. The injections were made along the border of the erysipelatous part, at a distance of about three lines from each other, the point of the needle being directed toward the diseased spot. In each case from thirty to seventy injections were made, and no other treatment was resorted to. The temperature fell rapidly and the spread of the disease was arrested. Dr. Tusbin employed hypodermics of bichlorhydrate of quinine in five cases of erysipelas. One or two injections sufficed. The reddened parts were painted with camphorated and carbolized oil. He never observed any ill effects to follow the injections, though others have reported numerous abscesses and indurations. This double salt of quinine, apart from its great solubility, is therapeutically in no way superior to the sulphate.—*Lyon Médical*, June 17, 1883.

DIETETIC TREATMENT OF NUTRITIVE DISORDERS IN INFANTS.—Dr. Biedert has treated a number of cases of infantile digestive disorders without drugs, by means of a strict regulation of the diet. The diseases thus treated were dyspepsia and dyspeptic diarrhoea, chronic catarrh, extreme atrophy (tabes mesenterica), ulcerative enteritis, cholera infantum, and one case of supposed epidemic dysentery. The children were most carefully watched, and the greatest care observed in carrying out the minute details of treatment. From the results obtained the author feels himself justified in recording the following deductions (*Centralblatt für Klinische Medizin*, June 16, 1883): 1. A surprisingly large number of gastro-enteric disorders in infants stand in such close relation with the quality and insufficient quantity of food, that the diseases, even in the most serious cases, may be cured solely by the administration of a suitable diet. 2. The quantity of food given is of the greatest moment. 3. The nourishment must often be given in greatly diluted form. 4. The proportion of albumen to fat plays an important rôle. The digestion of albumen is facilitated by mixing it with a much larger proportion of emulsified fat than is found in cow's milk—that contained in human milk being the proper amount. 5. It should not be forgotten that at times there is a diminished absorption of fat, in which case it should be greatly reduced in amount, or, in order not to interfere with the digestion of albumen, slightly reduced to a proportion midway between that of human milk and cow's milk.

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PROGRESS IN THE REGULATION OF MEDICAL PRACTICE.

THE reports of the quarterly meetings of the Illinois State Board of Health generally furnish some interesting reading. The last report, covering the meeting of June 29, was no exception; and we give here some of the facts which were there presented, since they have much more than a local interest.

It appears that during the last quarter, certificates to practise medicine and surgery have been given to one hundred and ninety-two persons, while twenty-eight applications were refused. These latter applications were chiefly from "cancer-doctors" and from "natural physicians," one of whom wished "to travel through several States in order to cure their diseases, such as tape-worms, diseases of the stomach, skin, etc."

The secretary states that the resolution previously made to recognize the diplomas of the Indiana Eclectic College is likely to be revoked, owing to doubts about that college's honesty.

Measures are being adopted for the securing one common Examining Board on preliminary education for all the medical schools of Chicago. This would be a step forward which is to be greatly desired, and which should be attempted in other States.

An effort was made during the past quarter to secure the passage of a law which would get rid of advertising and lecturing quacks. The following bill was drawn up, and we insert it here:

"1. *Be it enacted:* That it shall be unlawful for any person or persons, professing to heal the sick or to remove deformities, to publish or otherwise set forth in the State of Illinois their powers, promises, or claims by any advertisement, card, circular, hand-bill, pamphlet, book, writing or lecture in the manner usual to the chronic or private disease specialist, or to solicit practice by agents or otherwise, in any but the ordinary methods of reputable physicians.

"2. That it shall be unlawful for any person or persons to furnish or sell, or to advertise for sale, any instrument, appliance, apparatus, drug, nostrum, operation, or other device, for the prevention of conception, for the procuring of abortion, or for any other criminal or immoral purpose.

"3. That each and every violation of this act, in any of its provisions, shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in a county jail for a period of not less

than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment."

The bill passed to its second reading, and would probably have become a law if the Legislature had not adjourned sooner than was expected.

The class of persons whom it was intended to affect is well shown by the specimen letter which the secretary received from a correspondent in Farina, Ill.:

"Sir—Our village was visited a few days ago by a 'specialist' from Indiana calling himself Dr. Pickett. He came here to sell 'marriage guides,' etc., and to give private lectures. He was also a pretended phrenologist and gave charts. His private lectures were given to men and women separately, and in his last lecture he offered for sale a recipe or appliance of some kind which he warranted to 'prevent conception.'"

Dr. Rauch also reports the unearthing of another diploma mill. It is situated in the beautiful city of Milwaukee, Wis., and is called the "Milwaukee College of Medicine and Surgery." It claims to be legally incorporated, but it grants diplomas after attendance upon one course of lectures.

The report concludes with various facts regarding the existence and prevention of contagious diseases in the State.

HOW TO MAKE PHOTOGRAPHS EASILY AND CHEAPLY.

UNTIL recently medical men who wished to have a pictorial record of important cases were to a greater or less degree prevented by personal inability, or incidental inconveniences.¹ Photography by means of the "dry plate" has placed within the reach of the profession the means of securing a picture of any case, and this with but small outlay for apparatus and materials.

An outfit for taking photographs four by five inches can be purchased for ten dollars, and by substituting an imitation Dallmeyer lens for that of the outfit the expense need not much exceed fifteen dollars.

With such an apparatus pictures can be obtained amply sufficient for the record of cases.

Dry plates can be bought by the dozen, kept for any length of time before and after exposure, and developed at leisure.

A dark room for developing the plates can be extemporized by any dark closet, or in default of that, the operation can be performed by night. The light in the dark room must be non-actinic, and is secured by a lantern with red glass.

Photographic dealers supply a small manual giving all of the details. They are, in brief, as follows: The case is properly focussed on the ground glass of the camera, which is then replaced by a slide containing the plate.

The lens is uncapped for a few seconds, and as far as the patient is concerned the process is finished. At this stage the dry plate may be sent to a photographer for development and printing; but if not, and preferably not, it is taken to the dark room, placed in a pan, and a solution of oxalate of iron poured over it. When the picture comes out sufficiently, it is washed with a few changes of water and placed in another pan containing hyposulphite of soda.

¹ How to Make Photographs: a Manual for Amateurs. By T. C. Roche, edited by H. T. Anthony. Illustrated. New York: E. & H. T. Anthony, & Co., 591 Broadway. 1883.

The hyposulphite dissolves off the undecomposed bromide of silver, and "fixes" or renders permanent the image. The negative thus produced will yield an indefinite number of pictures by the printing process.

PRINTING.—Silver : A strip of sensitized silver paper is placed on the negative in a printing frame and exposed to the light. It is then soaked in a solution of chloride of gold, or "toned," and finally "fixed" by placing it for a few minutes in hyposulphite of soda solution. It then appears as the conventional photograph. Cyanotypes, or blue prints, will serve for many purposes as well as silver prints, and can be made much easier. Any paper can be coated with a solution containing one part of ammonia citrate of iron, one part red prussiate of potash, and eight of water, dried and exposed as in the former case. The resulting print need only be soaked in plain water, when it appears as a bright blue.

Glass positives or transparencies are made by exposure in the printing frame and developed in a manner similar to the dry plates. They can then be used in the magic-lantern. It is important in photographing a case to have the subject properly lighted. This can best be done by placing the sitter at a window having a full view of the sky. There will then be too high a light on the window side. But by means of a sheet of white wrapping paper as a reflector, the light can be so proportioned as to make an exceedingly good picture.

Micro-photography.—Some excellent micro-photographs have been made by medical men. The same principles are involved in their production as in the ordinary photograph. The source of light may be a kerosene lamp, so arranged as to illuminate the microscopic slide by means of a bull's-eye condenser. Those who are interested in the subject can find an excellent article by Dr. R. L. Maddox, in *The British Journal of Photography Almanac* for 1883.

There yet remains an interesting point to consider in regard to the subject of photography by medical men, and that is as a recreation.

It can be asserted with confidence that there are few pursuits which may yield more agreeable recreation to the average professional man than the practice of photography. There is a peculiar fascination in placing the white exposed plate in the developing pan and watching the picture resolve itself out of nothing. It is akin to magic and loses nothing of its interest by repetition. By means of instantaneous plates the infant smile can be registered, and thus the personal interest of the operator can be extended to other members of the family. Country practitioners and those spending vacations in the country can bring back with them any pleasing landscape that may come under their observation.

It may be said, finally, that photographic amateurs as a rule never lose their interest, mainly for the reason that there are so many unsolved subjects which offer means of unlimited study.

WATER FOR INFANTS.

With the exception of tuberculosis, no disease is so fatal in infancy as the intestinal catarrh of infancy, occurring especially during the hot summer months, and caused, in the great majority of cases, by improper diet. There are many upon whom the idea does not seem to

have impressed itself that an infant can be thirsty without, at the same time, being hungry. When milk, the chief food of infants, is given in excess, acid fermentation results, causing vomiting, diarrhoea, with passage of green or greenish-yellow stools, elevated temperature, and the subsequent train of symptoms which are too familiar to need repetition. The same thing would occur in an adult if drenched with milk. The infant needs, not food, but drink. The recommendations of some writers, that barley-water or gum-water be given to the little patients in these cases, is sufficient explanation of their want of success in treating this affection. Pure water is perfectly innocuous to infants, and it is difficult to conceive how the seeming prejudice against it ever arose. Any one who has ever noticed the avidity with which a fretful sick infant drinks water, and marks the early abatement of febrile and other symptoms, will be convinced that water, as a beverage, a quencher of thirst, as a physiological necessity, in fact, should not be denied to the helpless members of society. We have often seen an infant which had been dosed *ad nauseum* for gastro-intestinal irritability, assume, almost at once, a more cheerful appearance and rapidly grow better when treated to the much needed draught of water. If any one prescription is valuable enough to be used as routine practice it is—"Give the babies water."

HABITUAL NOSE-BLEEDING AND ITS TREATMENT.

CLINICALLY we may classify attacks of nose-bleeding under three heads: There are, first, the accidental and incidental attacks, which are common to all; second, there are the frequent and severe attacks which are liable to occur in cases of hæmalophilia, leucæmia, scurvy, morbus maculosus, etc., and in local disturbances where there are polypi, vascular hypertrophies, etc. But, besides these, there are cases, and every practitioner sees them, where the patient suffers for years from attacks of nose-bleed, and where no especial constitutional or local cause seems to be present. A number of German observers have been studying this condition, and recently Dr. O. Chiari gives in the *Wiener Medicinische Zeitung* a summary of their opinions, with some conclusions of his own. These latter are founded upon considerable personal study and have a practical bearing, so that we venture to present them here. Dr. Chiari believes that in most cases of what he terms "habitual nose-bleed," not dependent on injuries, catarrhs, polypi, etc., the hemorrhage comes from a circumscribed locality in the nose, which can generally be seen and reached. He has studied the history of twelve cases of nose-bleed, nine of the patients male and three female; most of them were young, the age varying between fifteen and twenty years. All had suffered from epistaxis for a series of years. The attacks occurred sometimes daily for a period, in other cases weekly or monthly. They differed in violence; in some cases being slight, in others alarmingly persistent. All the patients suffered from their trouble, there being such symptoms as headache, weakness, anemia, mental annoyance, etc. The attacks were sometimes brought on by sneezing, blowing the nose, or slight mechanical violence; but oftener they occurred spontaneously, and sometimes even during sleep. In two cases only did the hemorrhage come from both nostrils.

Now Chiari states that in all his cases the source of the bleeding was a circumscribed spot, generally about the size of a millet-seed, which could be seen on the cartilaginous septum near its junction with the bony septum. By pressure upon this point bleeding could be stopped. He directed treatment to this point alone, applying generally the galvano-cautery, but sometimes the lunar caustic. Five cases were cured positively; five more did not return to his clinic; two were improved.

The position of the bleeding-point upon the nasal septum was confirmed by Hartmann's observations, and Chiari states that in twenty-two out of twenty-five observations it was found there. The ease with which the hemorrhage is controlled by properly applied compression, and the possibility of curing the trouble, make the observations of Chiari of especial interest.

DR. RUSSEL'S PAPER ON MALARIA.

WITHIN a few years malaria has become a bugbear, so to speak, in the Middle and Eastern States. Unlike other zymotic troubles in our vicinity, it is always with us on Manhattan Island and its surrounding regions. But its gradual and uninterrupted march into Connecticut and Massachusetts of late years, with entire disregard for those local conditions formerly considered as essential factors in its development, has led to renewed investigations into its causes and peculiarities. Therefore every contribution to such studies must possess a special value.

For this reason we call attention to the article by Dr. Charles P. Russel in the present number of *THE MEDICAL RECORD*. Dr. Russell is well recognized as an authority in matters of vital statistics, hygiene, and public health, and his views upon so interesting a branch of these subjects should command attention, notwithstanding that they seem to be in conflict with the traditional ideas of the profession, and even with the important discoveries, alleged to have been made more lately, of specific disease-germs.

Without in any manner endorsing Dr. Russel's opinions, we must acknowledge that they are supported by those of many other well-known medical men.

THE VICTIM OF IRREGULAR PRACTICE.—An inquest was held, July 26th, in the case of a woman who had died suddenly on July 17th. The jury found that death resulted from septicæmia, and expressed the opinion that it is the duty of the authorities to protect the public against unauthorized practitioners of medicine. Deceased was attended by Edward R. Duffy, who has had considerable practice but who calls himself a student of medicine. Duffy is not registered with the Health Department.

OBSTETRIC PROGRESS.—In a discussion by the Obstetrical Society of Washington on the induction of premature labor, one of the speakers remarked that he had heard a professor of obstetrics tell his class that he "believed the time would come when fashionable women would have their children at any time that suited their convenience during the last four weeks of pregnancy." What will the fossils who used to maintain that there was such a thing as "meddlesome midwifery" say to this?—*Obstetric Gazette*.

News of the Week.

THE CHOLERA AND YELLOW FEVER.—The meagre reports received at Washington during the past week would indicate that neither yellow fever nor cholera has made any progress toward obtaining a footing in the United States since our last issue of *THE RECORD*. The two yellow-fever ships in quarantine at the Capes—"Cape Charles quarantine station"—are reported by Surgeon Henry Smith, of the Marine Hospital Service, as clean and free from disease, the Andean ready to take on a cargo, and the California only waiting for supplies before sailing for Liverpool. There are no infected vessels at the Pensacola or Mississippi quarantine stations, all such vessels having been sent to Ship Island, where they are undergoing the cleansing process necessary for their purification. The reported escape of two men from Ship Island has been officially denied, Passed-Assistant-Surgeon John Godfrey stating that they were from Cat Island and had never been in quarantine at that station. In fact, the crews of all vessels in quarantine, as well as all employees of the various stations, are mustered twice each day, so that escapes are difficult and would be discovered in a few hours. Before ships are permitted to leave quarantine their masters are furnished with a "discharge certificate" as follows:

"This is to certify that.....has been discharged from quarantine with permission to proceed to sea or port of destination. In my professional opinion no danger need be apprehended in allowing said vessel to discharge her cargo or ballast and reload for sea. But in no case will this certificate be held to allow the entry of any vessel until after examination and permission of the local quarantine authorities.

.....
Surgeon U. S. M. H. S., in charge.

A weekly report of vessels remaining, arriving at, and departing from the various quarantine stations is made to the Surgeon-General. This report gives the name of the vessel, date of arrival, where from, destination, cargo, condition of vessel, condition of cargo, number and sanitary condition of crew, number and sanitary condition of passengers, disease, number of cases, number of deaths, treatment of vessel and cargo at quarantine, date of departure of vessel from quarantine, and remarks. This report is signed by the officer in charge and forwarded weekly to the Surgeon-General's office. At foreign ports the sanitary inspectors, in addition to forwarding cable messages upon the departure of infected or suspected vessels, are required to send weekly abstracts of bills of health issued to all vessels bound to United States ports. These abstracts show the number of bill of health, date, name of vessel and rig, destination, sanitary condition of vessel, sanitary condition of cargo, sanitary condition of crew, sanitary condition of passengers, sanitary condition of port, and remarks. Under "remarks" a statement is made whether vessel had been at an infected dock, number of hours or days in port, and such other facts as may be of importance. At the bottom of the blank are spaces for showing the number of deaths from yellow fever, cholera, and small-pox during the week. This blank is

signed by the sanitary inspector of the Marine Hospital Service and forwarded weekly to the Surgeon-General.

Despatches from Vera Cruz of the 3d inst. state that the steamship City of Puebla sailed from that port for New York, and the steamship Statesman for Brazos on that day. Also despatch from Havana the 6th gives notice that the steamer Amethyst left four cases of yellow fever at that port, and sailed for Boston on the 4th. A barque arrived at Washington docks, Sunday last, direct from Trinidad, but had no sickness on board. She was spoken at the mouth of the Chesapeake, down at the Capes, and permitted to come up, as she was healthy and loaded with asphalt.

The Consul-General at Cairo, Egypt, in an official letter to the Secretary of State under date of July 5, 1883, reports that cholera had broken out in a few adjacent towns, the fact being first made public on June 20th, when it prevailed so extensively in the town of Damietta, a place of thirty-five thousand inhabitants, that concealment was no longer possible. The disease was officially pronounced true Asiatic cholera, but its source unknown. The general belief among the more intelligent citizens, including many physicians, was that it originated in Damietta, and resulted from the lack of proper sanitary regulations in that province. It appears that many cattle have been dying of late with a disease resembling epizootic; that their carcasses were thrown into the Nile and adjacent canals leading into it; that the poor people fed upon these diseased animals and unripe fruit, and that cholera broke out among them from this cause. He further states that the towns of Mansura, Serbin, and Samanoud are similarly afflicted, but that the Egyptian Government is actively engaged in staying the epidemic by establishing sanitary cordons about the infected districts by competent officials, with every hope of arresting the disease.

On the other hand, the Consul at Smyrna, under date of July 13th. claims that the disease in Damietta is not Asiatic cholera, but is some other disease and is due to the unsanitary condition of the province. Be this as it may, the fact that it is not confined to Damietta, that it is gradually extending its area, and that the well-fed, well-cared-for British troops are among the sufferers, gives us every reason to regard the disease as a dangerous visitor and one that should be kept out of the country.

A letter from C. E. O'Hara, treasurer of the "Seymour Paper Co.," of New York, was received by Surgeon-General Hamilton recently, saying, "The problem with us is the future of the Alexandria (Egypt) rag business. We shall buy no rags for a long time to come, but what is the limit of time when it will be safe to move the rags to a market. An opinion from you on this point would be valuable, but I presume you are not prepared to give it. I have thought the matter over and can see no light. It may be of interest to you to know that five thousand to six thousand *tons* of rags are exported annually from Egypt, and nearly all come to the United States. . . . Of course all these rags must be put under the ban because a small portion, perhaps a ton, may be infected. If there is no outlet for them, most of them will be saved until the markets are open, and why not the infected with the others? The true remedy would be for the Egyptian Government to have the entire stock burned

(paying for them first); but they won't do this, as it will benefit only the people of other countries, we may say England and the United States only, no other nations using more rags than they produce."

Surgeon-General Hamilton suggested dumping all rags into chlorine vats at Alexandria, before shipment, this of course would necessitate the presence of a trusted officer of this Government to see that the work was properly done. It is obvious no limit of time could be fixed when rags gathered in an infected country could be safely received into the United States.

Obituary.

JACOB S. MOSHER, M.D.,

ALBANY, N. Y. 2

DR. JACOB S. MOSHER, a distinguished physician of Albany, N. Y., was found dead in his bed on Monday morning last. Around him lay books and papers, and the lamp above his head was still burning. Death was evidently sudden, painless, and without a struggle.

He was born in Coeymans, March 19, 1834. He graduated at Rutgers College in 1853, and had the degree of Master of Arts from that Institution. He entered the Albany Medical College, from which he received the degree of Doctor of Medicine in 1863. Early in the ensuing year he entered the corps of volunteer surgeons for New York troops, and was attached to the Army of the Potomac as it lay before Petersburg. He was subsequently made Assistant State Medical Director of the State of New York, and went on duty at Washington. From 1869 to 1873 he was Surgeon-General on the staff of Governor Hoffman. Since graduating, Dr. Mosher settled at Albany, where he practised, except from 1870 to 1876, during which time he was Deputy Health Officer of the port of New York, first under Dr. Carnochan, and afterward under Dr. Vanderpoel. At the expiration of his term of office he spent a short time in England. Then he returned to Albany, and since that time has attended to a large and remunerative practice. He became a valued member of the Albany County Medical Society, and was its President prior to Dr. N. L. Snow, the present incumbent.

In the hospitals of Albany he was a faithful worker. So, too, it was with the Albany Medical College, of which for several years he was the right-hand man. He was Dean of the College of Pharmacy, of which he was one of the originators, and was President of the Alumni of the Albany Medical College.

Since 1866 he has been a member of the Board of Trustees of the State Normal School, and has fulfilled his duties with his usual care and thoroughness. He was also a Trustee of the Albany Female Academy. In 1878 or '79 he was President of the Young Men's Association. At the time of his death he was President of the Local Board of Health.

Dr. Mosher was literary in his tastes and had collected a fine library. His fancy ran toward engravings and etchings, of which he had a great many, and his judgment in regard to them was considered excellent. One of his "hobbies," as he once told the writer, was epics, and of the great religious poems of all ages and all countries he sought to have the best and choicest editions. In every respect he was a man of culture and refinement.

Dr. Mosher was married December 30, 1863, to Emma S., daughter of Jesse Montgomery, of this city. She died in 1879, leaving four sons and one daughter, who survive their parents. The oldest, "Monte," as he is called, is a student in Union College.

Dr. Mosher was a member of St. Paul's Episcopal Church, a member of the Alpha Beta Kappa Society, and also ranked high in the Masonic Order, belonging to Master's Lodge No. 5.

Reviews and Notices.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY, AND ALLIED DISORDERS OF THE MALE SEXUAL ORGANS. By SAMUEL W. GROSS, A.M., M.D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, etc., etc. Second Edition, thoroughly revised. With sixteen Illustrations. 8vo, pp. 176. Philadelphia: Henry C. Lea's Son & Co. 1883.

DR. GROSS has been so long known to the profession that this little work will derive value from the high standing of the author, aside from the fact of its passing so rapidly into its second edition. This is indeed a book that every physician will be glad to place in his library, to be read with profit to himself and, it may be, with incalculable benefit to the patient. Besides the subjects embraced in the title, and which are treated of in their various forms and degrees, spermatorrhœa and prostatorrhœa are also fully considered. In regard to impotence and spermatorrhœa, usually ascribed to functional causes, the author considers these affections as due to reflex disturbances of the genito-spinal centre, and that they are almost invariably dependent upon some lesion of the prostatic urethra. The work is, moreover, thoroughly practical in character, and will be especially useful to the general practitioner.

HANDBOOK FOR HOSPITALS. By the State Charities Aid Association. 12mo, pp. 263. New York: G. P. Putnam's Sons. 1883.

THE present is the second edition of the above work, carefully revised and enlarged, in which all the general and internal minutiae essential to hospital management and discipline, viz., the care of the sick, of the insane, the institution itself, hygiene, disinfection, pauperism, the distribution of public funds, and the establishment of village hospitals and of isolated cottages for infectious cases are presented, not only with completeness but with interesting detail, which will prove of service to all—the public at large as well as to the profession—who are either directly or indirectly interested or engaged in hospital work.

A TREATISE ON THE DISEASES OF THE EYE. By J. SOELBERG WELLS, F.R.C.S., Doctor of Medicine of the University of Edinburgh; Professor of Ophthalmology in King's College, London, etc., etc. Fourth American from the Third English Edition, with copious additions. Edited by Charles Stedman Bull, A.M., M.D., Lecturer on Ophthalmology in the Bellevue Hospital Medical College; Surgeon to the New York Eye and Ear Infirmary, etc. Illustrated with two hundred and fifty-seven engravings and six colored plates. Together with selections from the test types of Professor E. Jaeger and Professor H. Snellen. 8vo, pp. 846. Philadelphia: Henry C. Lea's Son & Co. 1883.

THE work of Dr. Wells is so well known throughout the medical profession, that it scarcely needs especial commendation. The present edition appears in less than three years since the publication of the last American edition, and although the original text is not very materially altered, yet, from the numerous recent investigations that have been made in this branch of medicine, many changes and additions have been required to meet the present scope of knowledge upon this subject. Hence it may be well to mention in what respect this edition differs from its predecessor. The chapter on Diseases of the Lids is augmented by descriptions of Landolt's Method of Blepharoplasty, and by the editor's Method of Treatment of Depressed Scars of the Face. In Diseases of the Conjunctiva, an entirely new section on Purulent Conjunctivitis of New-born Children has been added, together with one on Membranous Conjunctivitis. Diphtheritic Conjunctivitis is also greatly increased by the addition of new matter. Sattler's views on the nature

of Trachoma have also been added to the section on Chronic Granular Conjunctivitis. Under Diseases of the Iris and Ciliary Body, a new section has been inserted on the Comparative Physiological and Therapeutical Value of Mydriatics. The chapter on Sympathetic Ophthalmia has been enlarged, containing the discussion before the London International Medical Congress as to the seat of the lesion being in the optic nerve, together with the views of Mooren on the same topic; also additional notes upon the value of Optico-ciliary Neurotomy. The opinions of Priestley Smith and Brailey upon the Nature and Causes of Glaucoma have been embodied in the chapter on that subject. In the chapter on Diseases of the Vitreous Humor, the value of the magnet in the removal of particles of steel or iron from the eye receives greater consideration. The recent observations of Hughlings-Jackson on Optic Neuritis in Intracranial Disease are embraced in the chapter on Diseases of the Optic Nerve. Valuable additions are also noticed in Diseases of the Ocular Muscles. The editor's own views are furthermore introduced in the various sections throughout the work.

A critical examination at once shows the fidelity and thoroughness with which the editor has accomplished his part of the work, and he is eminently deserving the thanks of the profession. The illustrations throughout are good. On the whole, this edition can be recommended to all as a complete treatise on diseases of the eye, than which probably none better exists.

A TEXT-BOOK OF GENERAL PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNST ZIEGLER, Professor of Pathological Anatomy in the University of Tübingen. Translated and edited for English students by Donald MacAlister, M.A., M.B., Member of the Royal College of Physicians; Medical Lecturer of St. John's College, Cambridge. New York: William Wood & Co., 56 and 58 Lafayette Place. 1883.

THIS volume, containing 355 pages of reading matter, with 117 illustrations, is a part of the work being written by Professor Ziegler, and constitutes the seventh of the series in Wood's Library for 1883. The established reputation of the author places the work at once in the catalogue of valuable contributions to recent medical literature. It exhibits strongly the personality of the writer, a feature worthy of special commendation. Professor Ziegler advocates doctrines which may not be readily accepted, but they are not unreasonable, and it should not be argued, because of the difference of opinion on certain technical points, that his conclusions are necessarily faulty. They are given concisely and independently, and, by reason of their possessing these characteristics, are additional material worthy of careful study and comparison. To facilitate such work the translator and editor has, in an acceptable manner, given in brackets the views entertained by many of the most eminent observers on the points where Ziegler has advanced new theories. The translation seems to have been done well, and the annotations make an important part of the book. As a whole, the volume is another excellent one in the series for 1883. The second part—on Special Pathological Anatomy—is in course of publication in Germany.

THE MEDICAL REGISTER OF NEW YORK, NEW JERSEY, AND CONNECTICUT, for the Year ending June 1, 1883. WILLIAM T. WHITE, M.D., Editor. New York: G. P. Putnam's Sons. 1883.

THIS annual volume presents its usual appearance, and is under its usual able editorial management. It contains the names of 5,969 physicians, distributed in the States of New York, New Jersey, and Connecticut. The New York City list contains 1,661 names, forty more than last year.

For a long period this book has been accepted as an authoritative register of the regular profession of New

York, New Jersey, and Connecticut, and in order to maintain such a reputation the greatest care should be taken on the part of editor and co-laborers to make it accurate and impartial. We notice one or two omissions in this regard, which, it is to be hoped, are simply accidental; otherwise the work is everything it should be.

THE BACTERIA. By T. J. BURRILL, Ph.D., of Springfield, Ill.

THIS is the title of a pamphlet giving a complete but concise account of the nature, kinds, and effects of the different bacteria. It is the best monograph on the subject we have seen, and is highly creditable to American science.

MEDICAL ECONOMY DURING THE MIDDLE AGES: A Contribution to the History of European Morals, from the Time of the Roman Empire to the Close of the Fourteenth Century. By GEORGE F. FORT. New York: J. W. Bouton. London: B. Quaritch. 1883.

UNDER the above somewhat delusive title, the author has written a kind of history of medicine. It is called "Medical Economy," because it deals with medicine more especially in its relation to law and society. As the full title shows, the book covers more than the middle ages. It takes up medicine at the time of the Ptolemies, traces the growth of the Alexandrian and Roman schools, and subsequently the progress of medicine down to the fourteenth century. The book shows a vast deal of erudition and research, if one may judge by the numerous references. It is not written, however, in so coherent and attractive a manner as it might be. In fact Mr. Fort has a bad literary style. There is a great deal in it, however, that physicians will find curious and interesting. Typographically the book is an excellent specimen of English work.

THE SANITARY ENGINEER, Vol. VII. 4to, pp. 620. New York: Henry C. Meyer. 1883.

THE seventh volume of *The Sanitary Engineer* includes the twenty-six weekly issues from December 7, 1882, to May 31, 1883. Among the articles of permanent value may be mentioned "Letters to a Young Architect on Heating and Ventilation," by Dr. J. S. Billings, U.S.A.; "Steam Fitting and Steam Heating," by "Thermus" (a series—illustrated); "The Edison System of Wiring Buildings for the Electric Light" (illustrated); illustrated descriptions of the sanitary arrangements in the residences of Cornelius Vanderbilt, Esq., the Berkshire Apartment House, Home for Aged Females, and the Duncan Office Building; "The Steam Heating Companies in New York" (illustrated description of); full abstract, with illustrations, of the records in the McCloskey Patent Suit for Trap Ventilation; "The New York Water Supply," a series of articles on the suppression of waste of water, giving the experience of European cities in attempting to deal with this problem, the practice now in vogue there, and the situation in American cities—these articles will be found of great value to water works authorities and all who are interested in this question; a discussion of the various projects for increasing the water supply of New York, including the Croton Aqueduct scheme, appears in almost every number in this volume; "Atlantic Coast Resorts," a report by E. W. Bowditch, C.E., to the National Board of Health; "National Board of Health," Congressional Debates on the; "How the Plumbing Law is Enforced in New York," a description of the methods employed by the department; "Germs and Epidemics," by Dr. John S. Billings, U.S.A.; "Malaria" (a series), by George M. Sternberg, Surgeon U.S.A.; "Lead Burning," apparatus and process described; "Gas-Fitting in an Office Building," description of work in Mills Building; "American Practice in Warming Buildings by Steam," by the late Robert Briggs, M. Inst. C.E.; a paper read before the Institution.

There is also the current information of the operation of the food adulteration laws; record of rulings and prosecutions, and copies of laws. The weekly and monthly mortality table of the principal cities of the United States, together with a large amount of home and foreign health notes.

Correspondence.

COPPER AND CHOLERA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The occurrence of a case of cholera in London makes the three thousand miles of Atlantic Ocean between it and New York seem but a slight barrier. The apprehension already felt since its appearance on the shores of the Mediterranean is at once increased. It is a scourge, according to the *Tribune*, which "has defied the medical science of the present century." It is true that the epitaph of many victims might read, "physicians' skill was vain;" nevertheless may it not be said that it has saved many others?

Incidentally the Paris correspondent of *THE RECORD* of July 7th has referred to a part of Dr. Burq's theory in regard to the use of copper in cholera, that of giving it internally. Slight, if any, mention is made of it in the treatment of cholera as set forth in text-books, encyclopædias, and general works of medicine, although it is now more than thirty years since Dr. Burq has advocated it and regarded it as a valuable, if not an unfailing remedy.¹

In his experiments with copper in 1848, at which time he made the discoveries which led to the introduction into medicine of the external and internal use of metals as therapeutical agents, he found that copper was efficacious in allaying spasms; from this, coupled with the fact that workers in that metal almost always experience an immunity from cholera, he obtained the idea of using it in the severe cramps of that disease in the epidemic of 1849. His treatment consisted in placing plaques or disks of copper over the stomach as well as the internal administration of the sulphate.²

Rostan, in his "*Leçons Clinique sur le Choléra*," says that the use of the copper armatures was almost always attended with success.³

The fact that the copper workers escaped cholera is recognized in Paris by *chefs* of that industry: scientists and *savants* of France, Italy, Sweden, and Russia. It was confirmed by the results of the investigations of the prefecture of the police after the epidemic of 1865-66, as well as by the reports of M. Levy in 1867, M. Verneuil, in 1869 and 1874.

Dr. Panchon says that an impregnation of the system with the dust of copper obtained by workers in it has insured an immunity in all the epidemics of cholera, a preservation not less certain than vaccination in small-pox.

It might be added, in passing, that artisans in these metals also escape typhoid fever. A society of bronze-workers, during a period of thirty-six years, lost no member from typhoid fever. In the epidemic of this disease in 1876, only two deaths occurred among thirty thousand workers in copper, and it was a noteworthy fact that these two had to do only with large pieces.

It has not been recorded, so far as I am aware, that insufflation of copper-dust has been practised as a prophylactic measure in cholera epidemics; but Dr. E. Mailhet,⁴ a physician in the East, having read Dr. Burq's articles on the use of copper in cholera, when an epidemic broke out near where he was stationed, caused belts of the metal to be worn over the abdomen as a preventive

¹ Des Origines de la Metallotherapie, *Gaz. des. Hôp.*, 1882, p. 522.

² *Ibid.*, November, 1849.

³ *Ibid.*, Avril, 1880, p. 299. *Compt. Rend. d. Soc. Biol.*, 1879.

⁴ E. Mailhet: Choléra et Emploi du Cuivre: *Gaz. des Hôp.*, 1877.

measure. Six hundred persons were thus fortified. In an adult population of three thousand, one hundred were attacked with cholera and cholérine, but not one of those who wore the copper plaques were among the number, nor was any old woman who wore a small *scapulaire* of copper of the dimensions of half a franc.

These facts and results are certainly very suggestive, and deserve more consideration than they have received, judging from the little that has been said or written about them. Perchance the very simplicity of the measure has caused it to be overlooked or set aside as contrasting too markedly with the gravity of the disease.

GRACE PECKHAM, M.D.

5 LIVINGSTON PLACE, N. Y.

THE ELIZABETHAN DRAMATISTS AND LATER POETS ON THE PRINCIPLES AND PRACTICE OF PHYSIC.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It occurred to the writer that a brief compilation of excerpts bearing (or seeming to bear) on medical practice, from the works of the dramatic contemporaries of the great sovereign poet (those lesser lights around the central sun), also those of some of the poets of the seventeenth and eighteenth centuries, might be worthy the attention of members of our profession. If it show naught else, it will serve to make manifest how important an element and factor physic has ever been both in life and literature; being, as it were, woven and immeshed in the warp and woof of this our mortal life. Hence an *historic* and *literary*, in addition to the intrinsic and scientific, interest attaches to medical practice. Furthermore, unquestionably it is good for us as practitioners occasionally to step outside the exclusive boundaries of the strictly scientific aspects of physic, and to regard our art from other and different stand-points. For medicine (in its largest and most catholic sense) is so interwoven with human weal and woe, that it is as impossible as it would be undesirable to separate it from the great general currents of life and thought.

First comes great MARLOW with his "mighty line:"

1. INSOMNIA.

"So that for want of sleep and sustenance
My mind's distempered."

—MARLOW: *Edward II.*

2. INSANITY.

— "yet they do act
Such antic and such pretty lunacies
That spite of sorrow they will make you smile."

—DEKKER.

3. PYÆMIA.

— "conveys infection
Dangerous to the heart."

—JOHN FLETCHER: *Faithful Shepherdess*.

4. SENILITY AND LUNACY.

"Grows lunatic and childish for his son."

—THOMAS KID.

5. ARTERIAL AND VENAL CIRCULATION.

"My blood flew out and back again as fast . . ."

—BEAUMONT AND FLETCHER: *Philaster*.

6. DISSECTION ROOMS.

"For they are able to putrify it, to infect a whole region."

—MIDDLETON: *The Witch*.

7. HYGIENE.

"I'll walk to get me an appetite; 'tis but a mile."

—MASSINGER.

8. SANGUINEOUS CIRCULATION.

"What an elasticity in her veins and arteries."

—SIR RICHARD STEELE: *The Constant Couple*.

9. ADIPOSITY.

—"Exercise will keep me from being pursy."

—MASSINGER: *A New Way to Pay*.

10. SURGERY.

"Why, sir, there are above five hundred surgeons in town."

—GEORGE FARQUHAR: *The Constant Couple*.

11. PHYSIC.

—"you have broke the *patent medicine* chest, that was to keep them all alive."—MORTON: *Speed the Plough*.

(N.B.—This excerpt is interesting as being an early reference to *patent medicines*!)

12. LACHESIS.

"I eat snakes, my lord, I eat snakes."

—DEKKER: *The Honest W.*

(N.B.—The homœopaths have a remedy they call *lachesis*, supposed to be made from serpent-poison; and in the back towns of Italy *viper-broth* is still occasionally used.)

13. CEPHALOTRIPSY.

—"and offer luke-warm blood of new-born babes."

—MARLOW: *Dr. Faustus*.

14. BOTANIC PHYSIC.

"What herbs hast thou?"—MIDDLETON: *The Witch*.

15. PREGNANCY.

—"her midwives, her nurses, her longings every hour."

—BEN JONSON: *The Alchemist*.

16. AGUE-CAKE AND SPLENOTOMY.

—"your spleen; out with it,
I know you're like to burst."

—GEO. FARQUHAR: *The Constant Couple*.

17. VINUM OPII.

—"and the opiate that brings me sleep."

—TH. MORTON: *Speed the Plough*.

18. CONSTIPATION.

"When will your costiveness have done, good madam?"

—CARTWRIGHT: *The Ordinary*.

19. QUACKERY.

JOHN CASE, a quack of James II.'s time, like Mr. Wegg, occasionally dropped into poetry. He put the following distich over his door, by means of which, it is said, he made more money than ever Dryden did by all his poetry:

"Within this place
Lives Doctor Case."

20. LACTATION vs. "BOTTLE-BABIES."

"When thou shalt breed thy child, nurse it with thine own paps."

—MARLOW.

21. APOPLEXY.

"Flat on the ground and still as any stone,
A very corpse, save yielding forth a breath."

—THOMAS SACKVILLE (A.D. 1559).

22. GINSENG (*panax quinquefolium*).

"Here's *panax* too. My pan akes, I am sure, with kneeling down to cut 'em."—MIDDLETON: *The Witch*.

(N.B.—This drug, on which Dr. Piffard, of New York, lately prepared a valuable paper, is to-day, and has been for centuries, the Chinese panacea. It sells in Peking for its weight in gold.)

23. AMAUROSIS.

"O dark, dark, dark, amid the blaze of noon."

—MILTON: *Samson Agonistes*.

24. PREGNANCY.

"I have heard that great-bellied women do long for things that are rare and dainty."—MARLOW.

25. IODOFORM AND ASAÆTIDA.

—"your stench it is broke forth"—JONSON: *Alchemist*.

26. CINCHONA.

"And yet more medicinal is it than moly."—MILTON: *Comus*.

27. CARDIAC HYPERTROPHY.

—"Into the solid heart"—FLETCHER.

28. AUTOPSY.

(*Cadaver, log.*)

—"Yet send me back my heart and eyes."—JNO. DUNNE.

29. MAMMARY ABSCESS.

"But why that bleeding bosom?"—POPE.

30. LEUCORRHEA.

—"it was a weakness in me,
But incident to all our sex."

—MILTON: *Samson Agonistes*.

31. SYPHILIS.

"He'll feel the weight of 't many a day."—COWLEY.

32. LUXATION OF INFERIOR MAXILLA.

—"with gaping mouth."—SPENSER.

33. LOCOMOTOR ATAXY.

"Obliquely waddling to the mark in view."—POPE: *The Dunciad*.

34. MORPHIA SULPHATE.

—"the virtue of this magic dust."—MILTON: *Comus*.

35. OPHTHALMIA TARSII.

"Have you your ointments?"—MIDDLETON: *The Witch*.

36. ANASARCA.

"I fondly thought he could not live a year,
But now his dropsy's better."

—INCHBALD: *Every One Has His Fault*.

37. ACONITE.

—"among the rest a small unsightly root
But of divine effect."—MILTON.

38. BRONCHITIS.

—"and his cough,
Not the least chance for that to take him off."—INCHBALD.

39. PODAGRA.

"Sir Tristram Testy worn with age and gout.
Within all spleen, and flannel all without."—*Ibid.*

40. BEASTLY REMEDIES.

"Learn from the beasts the physic of the field."—POPE.

F. BRADNACK, M.D.

211 EAST EIGHTY-SIXTH STREET, N. Y.

TAYLOR'S METHOD OF EXTRACTING CATARACT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There has been much said and written of late in reference to a new method of extraction of cataract, in which the incision is made wholly within the cornea, and without excision of the iris; and there seems to be an impression that Galezowski is the originator of this method. As the meed should belong to him who has really earned it, and especially for such a valuable contribution to ophthalmic surgery, I draw your attention to the fact that Dr. Charles Bell Taylor, of Nottingham, England, is the real originator of this operation.

In the *London Medical Times and Gazette* of February 12, 1876, it states that at a meeting of the Clinical Society on January 28th of that year, under the head of "A New Operation for Cataract," "Dr. Charles Bell Taylor, of Nottingham, introduced patients who had undergone extraction of cataract by a method which he had adopted in favorable cases since 1865. The lens, he said, was removed through a small flap, the base of which occupied a position about midway between the horizontal diameter of the cornea and the corneo-sclerotic junction. The wound healed readily. There was no subsequent astigmatism, and as there was no trace of the operation a few weeks after its performance, the lower section, on account of its greater convenience, was selected. The patients introduced were said to be average examples, had central and movable pupils, and all trace of the operation was so completely effaced that it was impossible to say whether the flap had been made upward or downward, or that the patient had undergone an operation.

"Dr. Taylor stated that the highest amount of visual acuity obtainable after extraction was secured in this way, some of the patients declaring that they saw as well as ever in their lives before."

Further on in the proceedings of the society, Dr. Taylor took occasion to specify the kind of cases in which the operation was performed without an iridectomy: "Where the pupil dilated well under the influence of atropia there should be no iridectomy. When the pupil did not dilate well with atropia, and where there were adhesions, or when it (the iris) became wounded during the removal of the lens there should be an iridectomy."

Dr. Macnamara in discussing the cases of Dr. Taylor, said: "the results of the operation were splendid." He thought that excision of the iris was generally uncalled for in the extraction of cataract, certainly in those cases where atropine dilated the pupil.

Dr. Watson congratulated Dr. Taylor upon the results in his cases, and said he "could detect no trace of the operation upon the cornea except by means of a magnifying glass."

Dr. B. Carter had seen so many of Dr. Bell Taylor's beautiful results that he "could quite endorse Mr. Watson's last statement." At the same time he thought that removal of the iris left the eye in a better condition for healing. He discouraged the operation without iridectomy, and claimed "that the optical results were never below the standard obtained in the cases without iridectomy."

In my own practice I have followed the suggestions

of Dr. Taylor since reading the proceedings of the society in 1876, and have been gratified with the results.

One gentleman, seventy-seven years of age, who was operated on three years ago, writes me and says he sees as well as he did twenty years ago. Another gentleman wrote me of his wife, who was sixty-seven years of age when I operated on her eyes four years ago, and says that "she can see to read, and thread a fine needle." I have operated on as many as seventeen successive cases in the manner described by Dr. Bell Taylor without a single failure, and with the most gratifying results in every case.

I own that I owe my success in this line of practice to Dr. Taylor, and hope the honors may rest where they belong.

L. W. WRIGHT.

COLUMBUS, O., August 8, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 4, 1883, to August 11, 1883.

MAGRUDER, DAVID L., Lieutenant-Colonel and Surgeon. Leave of absence extended one month. S. O. 89, Military Division of the Missouri, August 4, 1883.

MCPARLIN, THOMAS A., Lieutenant-Colonel and Assistant Medical Purveyor. Relieved from duty in charge of the purveying depot in San Francisco, Cal., to take effect September 1, 1883, and will then proceed to New York City and relieve Assistant Medical Purveyor, Ebenezer Swift, of the charge of the purveying depot in that city. Assistant Medical Purveyor McParlin will transfer all funds and public property in his possession to Medical Storekeeper Henry Johnson, who, until further orders, will perform the duties of Acting Assistant Medical Purveyor, at the purveying depot in San Francisco. S. O. 183, par. 5, A. G. O., August 9, 1883.

FORWOOD, WILLIAM H., Major and Surgeon. To proceed to Fort Washakie, Wyoming, and Fort Ellis, Montana, on public business and return. S. O. 87, Military Division of the Missouri, August 2, 1883.

WOODWARD, JOSEPH J., Major and Surgeon. Leave of absence granted on account of sickness, by S. O. 34, extended six months. S. O. 179, A. G. O., August 4, 1883.

BANISTER, JOHN M., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

CARTER, WILLIAM F., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

KANE, JOHN J., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

BYRNE, CHARLES B., Captain and Assistant Surgeon. Relieved from duty at Fort Craig, N. M., and assigned to duty at Fort Lewis, Col. S. O. 161, par. 3, Department of the Missouri, August 6, 1883.

LAUDERDALE, JOHN V., Captain and Assistant Surgeon. Granted leave of absence for two months, to take effect on or about the 15th instant. S. O. 90, par. 2, Department of the Missouri, August 6, 1883.

OWEN, W. O., Jr., First Lieutenant and Assistant Surgeon. To proceed from Vancouver Barracks to Fort Walla Walla, W. T., and report to the commanding officer of the latter post for temporary duty. S. O. 101, Department of the Columbia, July 27, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 11, 1883.

GATEWOOD, J. D., Passed Assistant Surgeon. Orders to the Trenton revoked and ordered to the Kearsarge.

SCOTT, HORACE B., Assistant Surgeon. Detached from the Receiving Ship Franklin at Norfolk on the 30th inst., and ordered to the Trenton on September 1st.

AUSTIN, A. A., Passed Assistant Surgeon. Detached from the Richmond and waiting orders.

Medical Items.

CONTAGIOUS DISEASES.—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 14, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
August 7, 1883.....	1	46	32	1	49	34	0	0
August 14, 1883.....	0	53	28	2	36	25	0	0
<i>Deaths.</i>								
August 7, 1883.....	1	10	2	3	12	18	0	0
August 14, 1883.....	0	10	4	2	16	15	0	0

THE QUESTION OF THE LEGAL RIGHTS CONFERRED BY THE POSSESSION OF MEDICAL DIPLOMAS.—Dr. Rauch, Secretary of the Illinois State Board of Health, says, in his last quarterly report: "This occasion may be taken to offer a word or two of comment upon the impression which obtains in certain minds concerning the sacred rights of 'legally-chartered colleges,' and the virtues which inhere in anything called a 'diploma,' no matter whence it emanates. The latest form in which this has found expression is as follows: 'If a physician be such by virtue of the laws of the State of New York has the State of Illinois power to disqualify him for practise? If she should attempt this, there can be but little question that an issue will be taken in some case for final presentation at the bar of the Supreme Court of the United States.' The question in the above is based upon an erroneous impression as to the rights, privileges, and immunities which medical colleges can confer with their diplomas. The assertion which follows, and which seems intended to forestall answer to the question, is based upon want of familiarity with important facts connected with the medical profession in Illinois. To correct this latter, it is only necessary to point out that in the enforcement of the Medical Practice Act in this State, hundreds of physicians, who were such by virtue of the laws of New York or of other States, have been disqualified from practice in this State during the past six years; and that scarcely a day—never a week—passes when one or more such physicians are not so disqualified and leave the State (*vide* the reports and records of the State Board of Health, *passim*). The error as to the rights conferred by the diploma of a college chartered in accordance with the laws of any given State—which is, probably, what is meant by 'a physician by virtue of the laws,' etc.—has been corrected more than once by the courts, and in the publications of this Board. While it is true that every man has a natural right to follow out the bent of his inclination, and to be a clergyman, a lawyer, a doctor, a scavenger, a peddler, an auctioneer, just as he may choose, it is not true that a man can practice any of these professions or occupations except he does it upon such terms as the law imposes; and the law can

impose just such terms upon any one of these professions or employments as the legislators in their discretion deem best for the interest of the community. A legally-chartered medical institution in New York, or in Wisconsin, or in Missouri, or Massachusetts, may graduate its 'students' and endow them with diplomas conferring upon them the rights and privileges of doctors in medicine—subject to the laws, not only of the State but of the community in which they practise. But when such 'physicians' enter Illinois to practise, they must conform to the Illinois law. The right to practise medicine is not a constitutional right, nor a right inherent in the law of nature, nor an absolute right conferred by a college, whether specially chartered or otherwise. It is a statutory right, subject to the control of the Legislature; and the Legislature of this State has prescribed the terms and conditions upon which it may be exercised in this State. Among these terms and conditions is one to the effect that the practitioner, if a graduate, shall present the diploma of a college in 'good standing'; and it devolves upon this Board, by the terms of the law, to determine what colleges are, and what are not, in 'good standing.' Only the graduates of such—with exceptions not pertinent for consideration in this connection—may practise medicine in Illinois, no matter what rights the laws of another State may confer in that State. It has seemed necessary to say this at the present time—without any reference at all to Springer of Hardin, and the President of the St. Louis Eclectic—for the reason, among others, that it is a matter of importance to the student of medicine, intending to practise in this State, that he pursue his studies at colleges which comply with the requirements of this Board."

THAT JUDICIOUS COUNCIL.—In referring to the clause which the Judicial Council of the American Medical Association had inserted on the slip which delegates were obliged to sign at the late meeting, and which was but a covenanting anew with the Code of Ethics, the *Philadelphia Medical Times* says: "We cannot, however, close without a word of praise for the dexterity which was shown in so strangling all ethical rebels that none of them succeeded in crossing the sacred Æsculapian threshold, and the shades of Hippocrates suffered no dishonor or distress over unseemly bickerings and disputings." The *Canada Lancet* ventures to predict that "this attempt at coercion will be followed by a reaction, which will have the directly opposite effect of what was intended."

LEMON-JUICE AND OYSTERS.—Many popular usages in ordinary life have been adopted either by instinct or from empirical notions, and thus it is a common practice to use lemon-juice with raw oysters. It appears, however, from the researches of M. Certes, a distinguished microscopist and biologist, that this practice is not only a matter of taste, but that it has its utility, as lemon-juice has the property of destroying the animalcules which infest the stomach of oysters. The moral to be drawn from this is that oysters must be cooked, or, if eaten raw, should be accompanied by lemon-juice to avoid the possible evil consequences of parasiticism.—*Lancet*.

THE FUNCTIONAL INDEPENDENCE OF EACH CEREBRAL HEMISPHERE has been demonstrated by Dumontpalier in the following experiments: An hysterical epileptic woman was hypnotised by pressure upon the vertex. She was told to take up the knitting which was laying by her side. She took it with both hands and commenced knitting. A pressure upon the left parietal bone arrests the motion of the right hand, while the left continues to work. The like effect is produced on the left hand, when the right parietal is pressed upon. Pressure upon the crown of the head causes her to awake. Consequently central pressure causes equal reflex action upon both hemispheres, while lateral pressure affects only one hemisphere, the opposite of the pressure. He provoked

illusions, hallucinations unilateral or bilateral. Another patient is hypnotized by a look. He places the tips of her finger upon her lips, and stays her arm as if about to throw a kiss. She maintains that position with a smiling expression of the left side of her face. At the same time he brings her right arm into the position, as if wanting to repel some unpleasant object. She retains this attitude, the right side of her face assumes the expression of horror, while the left side smiles. The firm angered features of a commander are seen on the right side, those of gentleness and benevolence on the left side. In this experiment the muscular action of each side has excited in the contralateral hemisphere a sentiment or an image which manifested itself in the same side of the face.

THE CODE OF ETHICS.—Referring to the pledge exacted of members who presented themselves for registration as members of the American Medical Association, the *Peoria Medical Monthly* says: "The whole thing was an insult to the members of the Association, especially to those who had previously attended. It looked very much like applying the gag to keep the mouths of any opponents to the Code closed. It certainly gained no friends for the Code party, and really alienated many who were not previously opposed to it."

PROSTITUTION IN FRANCE.—In a recent work by M. Armand Després, of the Paris Faculty, devoted principally to statistics, and written in opposition to the recognition and licensing of the social evil by the State, the following figures are given (*Medical and Surgical Reporter*): There are in France 15,057 registered prostitutes, 7,859 belonging to maisons de tolérance, which number 1,328; 7,198 prostitutes are what is termed en carte—they live in their own rooms and appear at certain stated times (once monthly) for examination. Besides this prostitution recognized by the law, there is another, the individuals exercising it escaping as best they can the attention of the police. The number of free prostitutes is thought to be about 41,000. M. Després asserts that where prostitution is regulated by the State, and the danger from infection thus obviated, marriage is thought of later in life, and increase of population reduced to a minimum.

STATISTICS OF CONSUMPTION.—Dr. Playter, of Toronto, has gathered facts in regard to consumptives from 250 doctors. Their replies showed that the average age of patients was twenty-seven; 46 per cent. were males, 54 per cent. females, and 28 per cent. were married. The average size of the chest was 31½ inches; the chest of persons of the same average height, 5 feet 5½ inches, would usually average 37 inches. About 55 per cent. had light hair and eyes, two thirds did indoor work, had slept in small rooms, and wore no flannels. Only 46 per cent. had consumptive ancestors, and a majority were of nervous temperament.

THE PREDICTIONS OF GUITEAU.—The following curious paragraph, which is decidedly sensational and but partly true, is being circulated by English papers: "It is well known that Guiteau, the assassin of President Garfield, when upon the point of being condemned, made a prediction of sundry recompenses which would fall upon those who had contributed to his condemnation. Struck by a powerful malediction, its effects would promptly overtake them. That prophecy, says our correspondent, is being accomplished with startling rapidity. The wife of the attorney of the Corkhill district, who displayed so much ardor in the pursuit of Guiteau, died immediately after his condemnation. So died Surgeon-General Barnes, whose deposition was most hostile to Guiteau. Dr. Noble Young is also dead. Porter, the judge, whose 'charge' was so violently pronounced against the criminal, is in shattered health and incapable of duty. The marshal Henry, the bailiff Stahl, the detective McElfresh, Perry Corson, the guard, and James Leonard, the prison coachman, are destitute. The Rev. Mr.

Hicks is pursued by defamation. Dr. Grevy has been killed in an asylum for the insane. Dr. McDonald is troubled on account of his administration of Ward's Island, and is the subject of Government inquiry. The sergeant, Mason, has been for a long time in prison, while his wife and a lawyer are fighting over some thousands of dollars subscribed by the enemies of Guiteau. The wife of one of the jurymen (Hobb) has died, and the jurymen Mike Scheban has been struck by madness. Thus ends for the present this 'tale of woe.'

MEDICINE AT PRAGUE.—Dr. Councilman writes to the *Maryland Medical Journal*: "At present there is a great rivalry and a degree of hatred, difficult to overestimate, between the Germans and the Bohemians. It has finally reached such a pitch that the latter refuse to have anything to do with the Germans, refuse to learn their language, and this fall they will have a new university, in which all the lectures will be given in Bohemian. As the Bohemians have never been very celebrated for their scientific or literary acquirements, and as no one would learn their language, even for the sake of being professor, the number from whom their professors must be chosen is necessarily a limited one. Stricker's assistant in Vienna, Spina, who lately has written an article on the poor, much maligned tubercle bacillus, an article which almost rivals the classic production of Schmidt on the same subject, has been called to the chair of General Pathology, and the other chairs will also soon be filled."

SINGULAR DEATH-RATE IN PENITENTIARIES.—The death-rate in the principal penitentiaries or prisons in the country furnishes a notable feature in the report of Dr. Gill, of the Illinois Prison, the variations in the different institutions being almost incredible. Thus, among New York prisons, while at Sing Sing the yearly deaths from one thousand inmates number, as stated, a trifle less than seven, at Auburn it is given as twelve, and at Clinton over twenty. The lowest rate named is three in Wisconsin, and the highest, seventy-seven, in Mississippi. The practice of "letting" convicts for work on mines and railroads is declared to cause fearful death-rates in several Southern States, but, on the other hand, the New Hampshire figure is forty-eight. The rate in Massachusetts is given as fifteen, in Maine the same, in Vermont twenty-five, and in Connecticut fifteen. Pennsylvania has six in the western and fourteen in the eastern district.

THE HUMBUG OF CONSULTATIONS.—A certain well-known physician, who enjoys the distinction conferred by a titled name, was recently called into the country for consultation with the personal attendant on a noble lord. After a stay proportioned to the gravity of the case and the social importance of the illustrious patient, the eminent physician departed for the station, mutual satisfaction having resulted from the visit. While pacing the platform, however, the centre, we may be sure, of concentrated village admiration and awe, the great light of modern medicine was suddenly confronted by a breathless but much belivered minion of the sick nobleman, who, with many apologies uttered in his master's behalf, begged the M.D. Bart. to supplement the directions he had already given with information respecting the merits of grapes as an article of diet for the invalid. The request was received with a gracious bow given in approving recognition of the thoughtful nature of the application, and then ensued a spectacle of sublime significance. For about a minute the eminent one slowly paced in pondering thoughtfulness, and then gave forth, as a result of full consideration of an important, nay, vital, problem: "Tell his lordship that he may eat grapes, but *white ones only*; be sure and impress this upon him—that he must on no account touch any others; white ones, and no more than six per day." The fast-coming express just then approached the station, and while the great one sped away to the London anxiously awaiting him, the awe-struck servant returned to tell the tale, how the vast

intellect of the mighty consultant could even discriminate between the harmless influence of white grapes and the poisonous properties of colored ones. This little narrative was communicated to me by "one who knows" on Sunday last; and it has seemed to be worth repeating as an example of the refinement to which the humbug of consultation may extend. It is palpably clear that any such exhibition as that described above could ever be indulged in with one intent only, and that the magnification of the exhibitor's claims to knowledge.—*London Medical News*.

ANOTHER CASE OF THOMSEN'S DISEASE.—Dr. Schönfeld, assistant-surgeon in the German army, has reported a case of this disease, concerning which we wrote a short time ago. Hitherto the number of cases reported has been very few, and most of them were confined to one family. Schönfeld's case was that of a young recruit who was bitten in the leg by a dog, very severely, six years before. The fright and injury were thought to have been the active cause of the disease.

CONCERNING PARASITES IN THE LUNGS.—Dr. R. Van Santvoord, of New York, writes: "Your correspondent, Dr. Mann, of Portland, Oregon, will find in the *London Lancet*, of March 31, 1883, page 532, an article by Dr. Maurer, of Amoy, China, on "Endemic Hæmoptisis," which may be of service to him in connection with his reported cases of "Parasites in the Lungs." The "Endemic Hæmoptisis" of Dr. Maurer is also of parasitic origin, but the parasites in his cases were represented in the sputum by ova only, the adults being found post-mortem in the air-passages, and differing apparently from those coughed up by Dr. Mann's patient."

MOIST HANDS.—Mr. H. A. Smith writes, in the *British Medical Journal*: Moisture of the hands (local hyperidrosis) is a purely functional disorder of the skin, due to disturbances of the nervous system. Stout women, generally servant girls, suffer from it, although the fair votaries of the ball-room and members of good society, together with those of lithe and nervous habit, occasionally come under notice. It may or may not be attended with pain and inflammation, dysidrosis or fetor-smidrosis, or, more rarely, pigment-chromidrosis. As a rule, the axilla and feet sympathize more or less. As the condition appears to be due partly to abnormal vascular conditions, but mostly to irritability or undue stimulation of the vaso-motor nerves, probably of central origin, the following lotion will be found exceedingly useful:

R. Liq. plumbi subacetatis. ʒ iij.
Sp. vini methylati. ʒ j.
Aqua rosæ. ad ʒ x.
Fiat lotio.

The lotion to dry on, and the hands subsequently to be dusted three times daily with powder composed of equal parts of calamine and starch-powders. The patient should wash the hands always in cold water, and well dry them, and should avoid malt and all fermented liquors, pickles, spices, tea, and coffee (taking cocoa), and be sparing in the use of sugar. The lotion failing, she should wash the hands thrice daily with carbolie acid soap in soft water, in which half a dram of extract of belladonna has been previously dissolved, and take a pill containing valerianate of zinc, two grains; quinine, one and one-half grain; and extract of belladonna, one-fourth grain, with conf. rose q. s., t. d. s. A mixture (if any tingling or burning in the fingers) containing bromide of potassium, digitalis, and a vegetable tonic, will complete the treatment. The belladonna, besides causing vaso-motor paralysis, contracts the unstripped muscular fibres surrounding the arterioles going to supply the sweat-gland, and carbolie acid has a benumbing effect on the nervous filaments supplying these and the papillæ of the skin proper.

A NEW HOSPITAL AT CHICAGO is to be built by the Rush Medical College.

THE POSITION OF THE AMERICAN MEDICAL ASSOCIATION.—We cannot refrain from penning our dissent to the decision of the American Medical Association refusing to take any steps looking toward a revision of the existing Code of Ethics of that body. The petition of the St. Louis Medical Society was eminently proper, and we believe should have been adopted; but instead of being allowed discussion, it was promptly tabled, although by not a very heavy majority. We believe we voice the sentiments of a full majority of the reputable, regular profession in this country to-day, in saying that the Code of Ethics can and ought to be so revised as to be made a living law instead of the dead letter it now is. Many who talk the loudest in its favor are the most flagrant offenders against its spirit; such will always vote against a revision, for in its stilted language and antiquated and sometimes ambiguous construction they can always be able to escape the penalty of its violation, and to themselves, at least, excuse their wrong doing.—*Peoria Medical Monthly*.

THE RECENT MEETING OF THE AMERICAN MEDICAL ASSOCIATION at Cleveland, while generally profitable to those in attendance, was not without its disagreeable features, and it is with the hope that they may be avoided in the future that we call attention to some of them now. It certainly is not expecting too much of the Committee of Arrangements that they should see to it that delegates are at least provided with suitable lodgings. This was not done at Cleveland, so we are informed, but many, left to shift for themselves, experienced great difficulty in finding accommodations, and then, in the matter of registration, delegates were kept waiting, closely packed, for hours for an opportunity to sign their names, when provision should have been made by which it could have been done in much less time. There was difficulty also in obtaining information as to the departure of trains and in securing tickets, and the situation was truthfully described by one agent, who said, "I have had experience with a good many conventions, but I have never yet seen one where there has been such poor management as at this." Now the fault lies entirely with the Committee of Arrangements. This committee, we are told, was not at all harmonious in its workings, but was divided by differences of opinion which, in one instance, led to a personal encounter between two of its members, and so, from lack of harmony among themselves, the association was made to suffer. It seems that the committee, either willingly or unwillingly, surrendered to the *ipse dixit* of one of their number, and that he, swelled out of all proportion with a false estimate of his own wisdom and importance, undertook the management of everything, and, as might be expected, many things were left undone which would have added to the comfort and pleasure of the delegates.—*Weekly Medical Review*.

PLASTER-OF-PARIS PESSARIES.—Dr. B. F. Dawson states that he has made use of plaster-of-Paris, moulded within the vagina, with the most decided success, in two cases of displacement of the uterus (*New York Medical Journal*). The first case was that of a woman suffering from anteversion and a very aggravated prolapse of the left ovary. She was placed in the knee-chest posture, and pledgets of absorbent cotton, each with a string attached, soaked in a mixture of plaster-of-Paris and water of about the consistence of gum, and partially squeezed out, were placed in the posterior fornix of the vagina and around the vaginal portion of the cervix, and held in position. The vagina was then cleaned out, in a few moments the cast had hardened, and the patient went away with instructions to withdraw the instrument should it cause pain. When she came back at the end of three days she said she had experienced great relief. On removing the plaster pessary, the mucous membrane with which it had come in contact, instead of being irritated, as one might have expected, was found to have been benefited by its presence; it was firmer and less irritable

than before, and the prolapsed ovary had evidently been sustained. The second case was one of retroflexion, in which the pessary acted not only as a harmless agent, but seemed to give all the uterine support desired. The instruments were removed, placed in fire to burn out the cotton, and dipped into wax or paraffin for the purpose of making them impervious to the secretions and to render them more durable. This method of supporting the uterus commended itself for the facility with which it could be applied, for cheapness and accuracy of adaptation.

ST. LOUIS MEDICAL SOCIETY AND THE CODE.—On June 23, 1883, Dr. Atwood introduced the following, which was adopted by the St. Louis Medical Society, after some considerable discussion:

"Whereas, At the recent session of the American Medical Association, a preamble and resolution were offered for the consideration of said Association, purporting to represent the sense of the St. Louis Medical Society upon the propriety of preparing a new code of ethics, or altering and changing the existing code in accordance with the present relations of the profession, and

"Whereas, In said preamble the assertion is made that 'the Code has accomplished all it was designed it should, but at present many of its features are obsolete and not adapted to our wants. The necessity of an early revision is very apparent, is loudly called for in all parts of our land, and cannot be repressed much longer. . . . The time has come when the loud and very soon universal call will have to be heeded;' and

"Whereas, The St. Louis Medical Society did not instruct, 'That the Committee be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884;' therefore,

"Resolved, That the St. Louis Medical Society distinctly repudiates the statements contained in said preamble, and again expresses its fealty to the existing code of ethics as a time-honored and most suitable fundamental law of the profession, and specially deprecates any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without.—A. H. OHMANN-DUMESNIL, M.D., Rec. Sec."

CONCERNING THE TWO BUSHELS OF TONSILS AND OTHER MATTERS.—Dr. J. S. Thompson, of Indianapolis, Ind., writes: "In your journal, dated July 28th, Dr. W. N. Williams of this city indulges in some facetious and would-be learned remarks at my expense, and quotes 'Ray's Practical Arithmetic' to show how many tonsils it takes to make a bushel. It will be remembered that in the discussion of Dr. Jarvis's paper on 'Tonsillotomy without Hemorrhage,' I remarked that I believed that I had removed two bushels of tonsils and no hemorrhage followed, and that I considered the instrument of no use whatever except in cases of purpura hemorrhagica, or similar rare ones. Did any one present suppose for one moment that I had measured them? Had I been the essayist, of course I should have been more exact; but it was an off-hand remark, intended simply to show that in a great number of cases, in a twenty-three years' practice, no case called for any other instrument than a chisel-shaped guillotine, the inventor and maker of which have long since been in their graves. Now, let me say a few words concerning new instruments and modifications of old ones. Is it not natural that when one invents one of these, he very soon finds more cases on which to use it than do others? Look, for instance, at the multiplication of ophthalmoscopes during the last twelve years! Why, one cannot go to London or other cities without finding inventors' names given to them that one never even heard of before. And so it is in modifications of operations, some one's name must constantly be associated with this or that incision or mode of procedure, when its importance is insignificant beyond measure. For my part, I expect to go on excising 'scirrhus' and other forms of tonsils to

the end of my days without the slightest hesitation whatever; and I have not the least doubt that when the reports are all in it will be found that as many deaths from hemorrhage follow the extraction of a tooth as the excision of a tonsil."

HOW TO SLEEP ON A TRAIN.—Dr. Henry R. Stout of Jacksonville, Fla., writes: "In THE MEDICAL RECORD for August 4th, in the article, 'How to Sleep on a Railroad Train,' is it not a mistake to place the person with the feet toward the engine? I have tried both ways, and have found, and have advised others with equal success, that to sleep with the head toward the engine would insure sleep. The rapid forward movement of the train forces the blood to the extremity furthest from the engine. It is possible that this position causes a more rapid return of blood to the heart, but it is hardly reasonable, I think, that it would cause a hyperæmic condition of the brain."

A USEFUL SUGGESTION REGARDING CATHETERS.—Dr. Hüpeden calls attention to the danger of infection attending the use of catheters as at present constructed. The defective and dangerous portion of the instrument is the blind end beyond the eyes. The most careful cleansing may fail to destroy or remove all infectious matter from this part, and thus some disease may be communicated to the next patient upon whom the instrument is passed. To obviate any such risk it is only necessary to fill up with some solid material this blind extremity.—*Centralblatt für Chirurgie*, July 7, 1883.

THE PREVENTION OF BED-SORES IN NERVOUS DISEASES.—Dr. Thomas Browne, of the Royal Navy Hospital, Great Yarmouth, asserts that bed-sores can be prevented even in the worst forms of general paralysis. Dr. Browne offers no specific, but states that very careful nursing, frequent washing, change of clothes, the use of pads, water-beds, and special attention to diet are the measures to be employed. Bed-sores, he says, no longer occur in the Naval Hospital at Yarmouth.—*Nashville Med. Journ.*, June, 1883.

CONCERNING THE INOCULATION OF LYMPHATICS AND BLOOD CAPILLARIES.—Dr. Theobald Smith, of the Anatomical Laboratory of Cornell University of New York, writes: "In THE MEDICAL RECORD of June 16, 1883, an abstract is given of a communication to the Académie des Sciences of Paris, in which Dr. Guérin, supported by experimental evidence, maintains the inoculation of lymphatic and blood capillaries. The abstract is prefaced by the remark that Mascagni and Sappey also hold this view. Lately my attention was called to the *Comptes Rendus* of June 11, 1883, which includes a memoir by Sappey on this same subject, in which he, however, gives up his former position. A unique method of demonstrating and studying both the lymph and the blood channels in the same microscopic field—the latter fading away as the former come into view—led him to abandon the theory of inoculation. He says: 'Sustained by these new and precise facts, and no longer by simple induction, I conclude that there is no room for admitting this communication; the lymphatic vessels at their origin are everywhere hermetically closed.' Curiously enough, the prominent English journal of science, *Nature*, for June 28th, p. 215, incorrectly reports Sappey as having demonstrated by actual observation 'the intimate union of the radicles with the blood-vessels which had long been assumed on general grounds.'"

CARRYING THE CLINICAL THERMOMETER IN THE PANTALOONS POCKET.—Dr. D. S. Clark, of Rockford, Ill., writes: "The most convenient way to guard a clinical thermometer against accident that I have ever tried or heard of is simply to carry it in the pantaloons pocket, just as a knife is carried. I usually devote the left-hand pocket to this sole purpose. Let any physician try this plan and he will prefer it to every other. Now will physicians inform us as to the best method of keeping hypodermic syringes in working order?"

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Original Articles.

ROUND SHOULDERS, OR ANTERO-POSTERIOR CURVATURE OF THE SPINE.

BY CHAS. F. STILLMAN, M.S., M.D.,
NEW YORK.

"ROUND shoulders" is one of the most prevalent deformities, and yet very little attention is paid by surgeons to its treatment, although it is amenable to curative measures with as little discomfort as any other prominent deformity.

An inquiry into its anatomical and physiological characteristics affords a clue to the treatment, that being the portion of the subject which more directly concerns us in this paper.

The spine, viewing it from the side, is a column composed of twenty-four segments, upon which rests the head, and to this column in its dorsal region is also attached the thorax, and secondarily the upper extremities. The normal line of the spine is a compound curve, and it is retained in this shape by muscles disposed along its course, acting as do the stays to a mast, and opposing the effect of the weight of the head as a constant gravital force to increase the curves. When the normal degree of tonicity does not exist in these muscles, this increase in the curves is found and is further exaggerated in the region of the neck and shoulders by the tendency of the upper extremities and thorax forward, and by this forward tendency we obtain the contracted chest, the separated and protruded shoulder-blades, and the bent and stooping shoulders, all characteristic of the deformity in this region.

But as the line of direction must be maintained, when the head drops forward the lower part of the trunk also projects itself, giving rise to the appearance of flat nates, and causing it to appear as if the dorsal region projected very much backward beyond the normal line, as in Fig. 1.

The most common cause to which this deformity can be ascribed is muscular weakness, the inability of the back to recover the erect position after it has been relaxed. Relaxation of the back is the position of rest assumed by the trunk when the superincumbent weight is to be more fully borne upon the bodies of the vertebræ, and we then rely upon the ligamentous bands and attachments rather than muscular force to keep the body in this less fatiguing position; thus relieving the muscles from all necessity of the contraction which is required if the trunk be maintained erectly. In this position of rest the spine curves backward in the shape of a bow, from the sacrum to the head, the centre of the bow being in the middle dorsal region, the bodies of the vertebræ being crowded together throughout the whole extent of the spine (see Fig. 3), and the muscles not exerting their contractile force.

When the erect position is again assumed, the muscles should restore the normal spinal curves so that the head and upper portion of the trunk, with their appendages, become supported in the proper line of direction (Fig. 2).

But if the muscles lack tone or are fatigued, or the patient is indolent, the position of rest becomes habitual and we have the production of round shoulders as the result.

There are various degrees and forms of the deformity, dependent upon the age of the patient, the length of the spine, the regional muscular development, the sitting

habits, etc.; but these are sufficiently known to every practitioner not to require description here. The projection forward of the head and nates is not found to the same extent in every case, but seems to be compensatory—to permit the line of direction to be passed somewhat anteriorly to its normal position, in order that the body may be properly balanced while in the vertical position.

The *treatment* which concerns us most directly in this paper, may be considered under two heads—*mechanical* and *physical*.

The *mechanical treatment* consists in the use of properly devised apparatus for the restoration and retention of the normal curvature, and the mechanical problem this involves resolves itself into the reduction of the dorsal curve, since the cervical and lumbar are merely compensatory and will tend to regulate themselves.

We have already noted the fact that the exaggeration

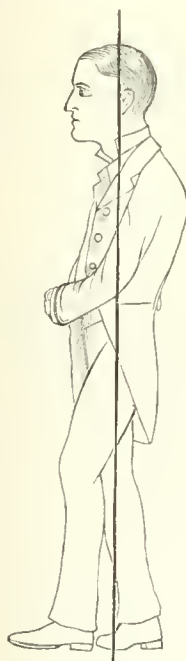


Fig. 1.

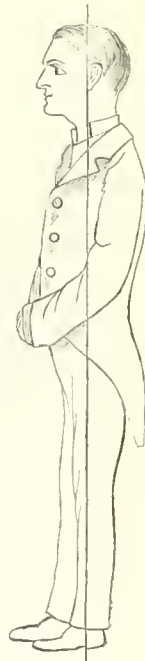


Fig. 2.

of the curves of the spine produces undue pressure upon the bodies of the vertebræ in the dorsal region, and we must, therefore, turn our attention first to placing the spine in such position as will tend to separate the bodies and transfer pressure to the other surfaces of contact in the normal degree. To effect this we utilize the principle of gravity as an extending force. When the patient assumes the horizontal position upon a table so arranged as to have its padded edge under the shoulder-blades, as in Fig. 3, and then allows the head and upper extremity to gradually fall backward and downward, we have produced a series of curvatures exactly opposed to those exhibited by the round shoulders. You will observe, as the patient's head and shoulders descend, a gradual obliteration of the condition of round shoulders and a reproduction of the normal curves of the spine. The bodies of the vertebræ become freed from the crowding to which they have been subjected, and a physiological and true extension of the parts is effected—

the traction-force being the superincumbent weight, the cervical spine being placed in a state of extension by the weight of the head, and the dorsal spine in extension by the weight of the head, the neck, and the upper extremities. This combined weight, augmented by gravity, is simply tremendous as a traction or tractive force, and produces a true backward physiological *extension*. Do not confuse the words traction and extension, or substitute one for the other. Traction is the force which produces extension. The former is a cause, the latter an effect; the former is an active agent, the latter is a condition; or in other words, extension is a result of traction, and is the effect produced upon a joint by traction. The words are not synonymous, and should not be so employed. This principle of backward traction, by the weight of the upper extremities, is one which we have been utilizing lately, as a most satisfactory factor for the production of extension in Pott's disease, as we not only obtain as

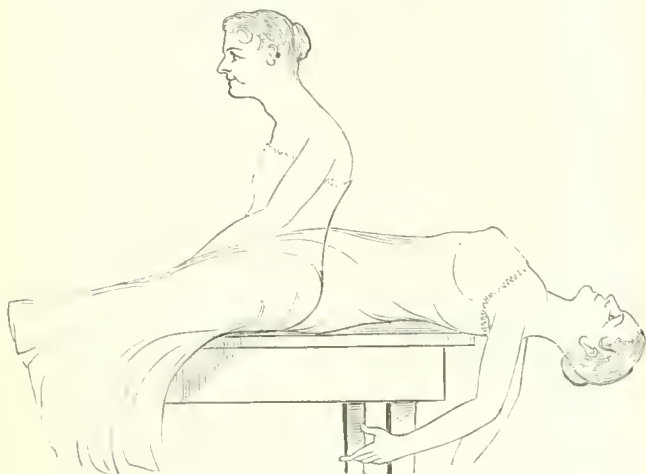


Fig. 3.

much extension of the spine as we can by suspension (or traction by the lower extremity), but we obtain this in a backward direction, which enables us to apply leverage to obliterate the deformity to a more satisfactory extent than ever before, and with less discomfort to our patients.

We have now, by the use of the table, obtained great improvement in the condition of the deformity, and the question arises, how are we to retain this improvement when the vertical position is again assumed, as the posterior spinal muscles are impaired and have not sufficient power to hold the spine in its restored curves.

Although in slight or recent cases this can be accomplished by simple methods, yet a brace will often be a necessity in severe cases, and it is easy for us to construct one upon the principles which govern the reduction of the deformity.

We must strive to keep the patient in a state of hyper-erectness until the muscles have contracted and been exercised and invigorated sufficiently to render the use of a brace unnecessary, and if we glance at Fig. 3, and turn it in such manner that the supine figure will appear vertical, it will be seen that the figure is more erect than normal, *i.e.*, hyper-erect, and this position (of the dorsal, not the cervical spine) is necessary to the development of the impaired muscles as well as for its effects upon the spine itself.

Now, how to keep this position with a brace. It may be, to some extent, done with a strong back-frame, fashioned to the hyper-erect shape and put in position and secured while the patient lies upon the table in the extension position. This frame may be made of some metal which can be bent by the hands of the surgeon, but it must necessarily be made of such heavy material as to be too cumbersome for general use, for it must be sufficiently firm to withstand the tendencies of the deformity, as it matches strength of material against the tendency of the superincumbent weight to fall forward.

I must impress upon you the importance of having this frame fashioned to the hyper-erect shape, for if so made, and well secured to the body, the forward tendency of the body and the exaggeration of the dorsal curve are to some extent prevented by the strength of material and shape of the splint.

A second and much more satisfactory method of utilizing the backward traction in the formation of a brace is one constructed on my adjustable lever plan—the *fulcrum*, *F*, to be over the sacrum—the *resistance*, *R*, to be greatest just below the central region of the dorsal curve, and distributed all along the spine below this region, and the *power*, *P*, to be the forward tendencies of the upper extremities and head (Fig. 4), so that while the body is maintained erectly no force is exerted upon the spine at any point; but the least tendency to rounding the shoulders brings a power to bear exactly opposed to the power of the deformity, which increases automatically in proportion to the extent of the deformative force.

To construct a brace so as to bring the force to bear under these conditions we place a girth, provided with a sacral projection, about the hips (Fig. 5). From the upper edge of this hip-girth springs a pair of padded strips, one on each side of the median line, so as to avoid the spinous processes, and these strips extend upward to the middle dorsal region (Fig. 5). So far the brace is a substitute for the table, but to give it efficacy we must supply a frame for backward traction as a substitute for the backward force exerted by the weight of the upper extremities when the body is in the traction position (see

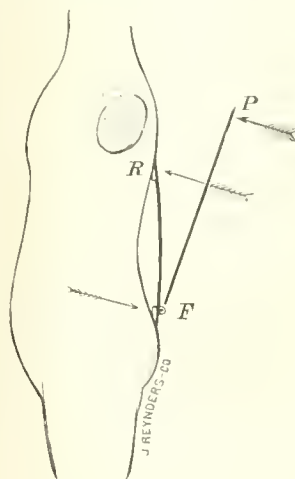


Fig. 4.

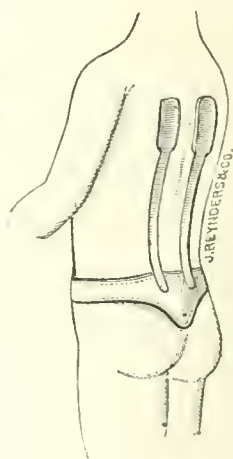


Fig. 5.

Fig. 3). To effect this, a light steel frame moulded to the shape of the back and extending from the sacrum to the cervical vertebrae is attached at its lower extremity to the hip-girth (as in Fig. 6) and there provided with a ratchet which admits of its being secured at any angle. The upper extremity of this frame is secured to the body by means of chest and shoulder-bands (Fig. 7), which buckle in front to a firm leather chest-plate, the use of which permits us to avoid the constriction and discomfort attending the use of bands passing around the chest without such intervention.

The action of the brace (Fig. 7) is, as you see, that of a lever, exerting its force in such a manner as to distribute its pressure along the spine and not at any one point; the dorsal centre being the point of greatest pressure, and the sacrum the least, the intermediate pressure being so graduated as to decrease from the dorsal centre to the sacrum. We thus see that direct pressure is provided to the greatest degree where it is needed most, *i.e.*, at the dorsal centre, and in the least degree where it is needed the least, over the sacrum; and there is thus no portion of the spine below the dorsal centre without direct support. This support and forward pressure is just in proportion to the backward angle

of the brace-frame and the forward tendencies of the deformity. In the beginning of the treatment this brace-frame may be secured at a considerable angle (Fig. 6), but as improvement ensues this may be lessened, until it lies flat upon the padded strips (Fig. 7) and becomes in its action a mere spinal support instead of a lever.

This brace makes an extremely effective and comfortable instrument, and can be made to exercise any desired degree of power on the deformity. But there are many cases which do not require so pronounced an instrument as this—cases in which the youth and inma-

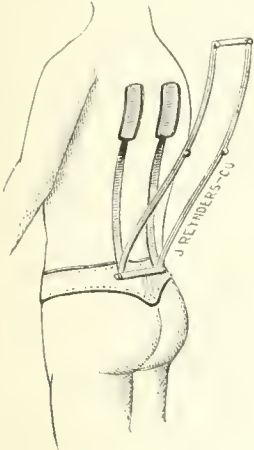


Fig. 6.

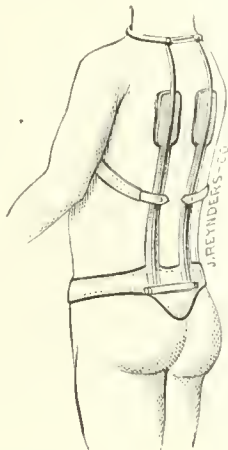


Fig. 7.

turity of the patient have not as yet allowed the parts to become perpetuated in the abnormal curves to such an extent as to demand its use.

Such cases require merely a light, strong, compound spring, or pair of springs, which will act supplementary to the impaired muscles of the back, and if we can adapt this spring power to the form so that it will not be apparent to an observer that the patient is wearing an aid of this kind, so much more successful will we be in our practice. We must remember that this class of deformities is unattended by pain, and it is therefore desire for symmetry which brings them to you; so that if an unwieldy spring makes a protrusion along the course of the spine it would be an objection to treatment in the eyes of the patient. But it is possible, by incorporating into an ordinary well-fitting corset, a pair of compound springs, one on either side of the median line, to provide against the objection which attends the use of a single spring. The under springs are somewhat longer than the corset and are provided with pads at their extremities so as to allow sufficient grasp of surface to prevent the edges of the pads from digging into the flesh when the body is laced down to the springs (see Fig. 8). The upper springs extend to the neck and are connected to the chest-plate in front as in the lever brace. The only springs which we have used heretofore in the profession to combat round shoulders have been fashioned in an exaggeration of the normal curves of the spine—a shape which would tend to increase and intensify the abnormal curves which are symptomatic of the deformity.

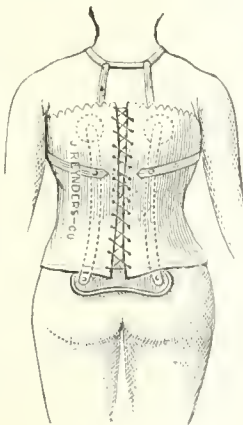


Fig. 8.

To make round-shoulder springs effective, however, the curves of the under spring should be the reverse of the curves of the deformity—opposing apex to apex. Thus the curve of the deformity and the curve of the combating spring should be so placed in contact with each other that when the centres are together and the curves drawn tightly toward each other there will be

reduction in exaggerated curves of the spine as well as the curves of the spring.

The curve of the back springs are opposed to the curves of the back (see Fig. 9) before the stays are brought together, but when the corset is tightened and secured to the figure (Fig. 10), its action is to flatten the dorsal curve in direct proportion to the strength of the springs.

For males, corsets are not so applicable for obvious reasons, and we therefore provide the springs with girths in such a manner as to be as effective for the purpose intended. So much for the mechanical treatment.

The physical treatment next engages our attention, and by this we mean the employment of such exercises and movements during the mechanical treatment as will conduce to the permanent cure of the deformity after the braces and corsets are thrown aside.

It is necessary in the first place to have a table, although a lounge or couch could be made to answer, the surface of which is padded or so covered as to be comfortable to the patient. This table should be a low one, so as to divest the patient of all fears of falling while undergoing treatment, and on such a table when the patient places himself there in the extension position—the edge of the table coming to the central dorsal region and the head and upper extremities hanging over—you will see that the chest has partially resumed its normal shape, that it has lost its contracted look, and that the shoulder-blades tend to approach each other. To

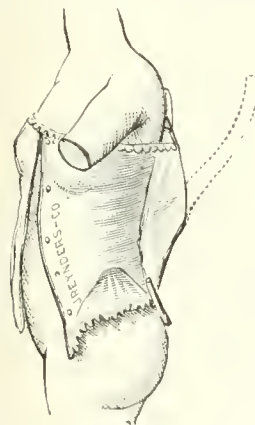


Fig. 9.

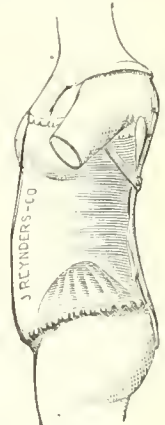


Fig. 10.

approximate these it is necessary to clasp the hands together behind and under him—and at first this is almost an impossibility. When undergoing this process it would appear as if the skin and tissues of the anterior of the thorax were stretched as much as their structure would allow, and that posteriorly the soft parts were redundant.

Dumb-bells of various weights are now taken in the hands and a series of rapid lateral movements practised which still further expand the chest. There are also quite a number of calisthenic exercises which are of advantage if practised in the backward traction position, but they must be employed with care and moderation, as their expanding effects are so powerfully augmented by gravity that they may strain the tissues painfully and thus delay treatment. A most useful agent is also found in the rubber-cord. Of these there should be two, fastened by detached hooks and staples to the floor in such a manner as to draw the hands beyond each other, the resistance of the muscles to the contractility of the rubber constituting a most valuable agent for developing the chest if formulated into a series of exercises.

This backward traction position may seem harsh exercise to be daily indulged in by your patients, but it is the most efficacious plan of physical treatment, and will do the most good in the shortest time. There are, however, many lighter forms of exercise which may be utilized.

One which can be specially recommended for other than the backward traction position is one in which the

chest is expanded by the body falling forward as much as the rubber cords grasped by the hands will allow, the feet not being moved and the head prevented from falling forward with the rest of the body (and thus the hyper-erect position maintained) by means of a wooden bar placed between the teeth and connected to a gymnastic frame by cord or wire. This is very serviceable also, in strengthening the muscles of the neck.

There are also certain postures which are of themselves beneficial, and should be recommended to your patients for their adoption.

The *first* is in regard to sleeping. Have both bolster and pillow removed from their usual place under the head, and have one or both placed under the shoulder-blades. This brings the head a little below the level of the dorsal region and curves the spine in direct reversal to the curves of the round shoulders; and as, during sleep, relaxation of the spine ensues, the posterior spinal muscles are permitted to recover some of the contractility they lose during the day if proper supports be not worn.

The *second* is that of reclining (not upon the back but upon the front of the body) during the day for reading or resting, the patient lying at full length and resting on the elbows. This is a favorite position with children and should be encouraged, as, if steadily practised, it is a sure preventive of the deformity. But many parents, instead of encouraging this trait, rebuke their children for it, and sharply order them to get up from the floor. If they could only be made to understand that it is one of the greatest helps to symmetrical development they would be more inclined to encourage its practice.

THE UNITED STATES MEDICAL SERVICE.

By CAPTAIN R. W. SHUFELDT,

MEDICAL CORPS, U. S. ARMY.

WHEN I speak of the United States Medical Service it is to be understood that the Medical Corps of the Army and Navy alone are referred to, the writer having little personal knowledge of the organization and government of the United States Hospital Marine, so that it would be through chance only that if anything we have to say here is found in the sequel to apply with equal force and pertinency to them.

With the Army and Navy of course it is different; the medical staff of the former being known to me as one of its members, and one who has performed the majority of such duties as are met with during the first seven years' service, and the schedule which forms the complete list is by no means as brief and simple in character as one might imagine. Connections of another nature have allowed me the opportunity to meet, and in many instances form lasting friendships with members of the medical staff of the Navy, and from the first impressions made on my youthful mind, while serving in the capacity of a young warrant officer aboard a man-of-war, during the year of 1864, by the surgeons of the fleet, memorably by Dr. Cassin, nephew of Cassin the naturalist, till such days of later years as those passed under Dr. Wales' personal tuition and guidance, to my present commission, have been of the happiest nature. So that, through this and other means, some opportunity has been afforded me of learning something of this service likewise.

Some of the questions I wish to call to the attention of the profession, and touch upon as best I may in an article that must necessarily be as brief as this one, were presented to my mind by an editorial that appeared in the *Philadelphia Medical Times* of May 7, 1881, entitled, "The United States Naval Medical Service," and several kindred articles that have appeared here, there, and elsewhere since. As the subjects to be discussed will be taken up in the order as they appeared in this editorial, it will be necessary for a clear understanding of the questions presented to quote here the entire first two

paragraphs of the remarks made by the editor of the *Medical Times*, leaving his two remaining columns to be handled in another way. He says: "It is probable that there is no medical government service in the world, the requirements for admission to which are more severe than is the ordeal through which the medical candidate for naval honors must pass in this country. We are credibly informed that twelve aspirants have been before the examining board now in session without one having succeeded. So far as a good deal of experience teaches us, we should say that the standard is even higher for the Navy than it is for the Army. Most of our readers will no doubt agree with us, however, that when once in the Navy a physician almost always disappears entirely from public sight, whereas in the Army not rarely he rises to a first rank among scientists. The doings of the medical staff of the Navy, what *are* they? A few reports lying upon book-shelves—pitiful pamphlets alongside the invaluable tomes that have come from the Surgeon-General's office at Washington. Not only is this true of medical works proper, but also of scientific publications other than medical. Where is the Dr. Coues of the Navy? Yet the abundant leisure, the months of floating in the tropics, the wide travel, afford both stimulant and opportunity for natural history research."

The fact that the editor of the *Medical Times* holds the opinion that the standard for entrance in the medical corps of the Navy is higher than it is in the Army, does not surprise me in the least. Nor is he to blame, for it is a very general, and I may say, an entirely erroneous one. It no doubt has arisen from the fact that the examination in the Navy is so arranged that it extends by custom or law through a full week, whereas in the Army a candidate may complete his examination successfully in from three to five days, depending altogether on how long it takes the board to satisfy themselves as to his fitness. The not unusual circumstance, the *Times* brings forward, of twelve young men failing before the Navy board, and still no successful candidate, is by no means a criterion, for instances have occurred in the Army where the sequence ran in between the thirties and forties before a successful candidate was found, and it stands to reason that if three medical gentlemen composing an examining board cannot ascertain the calibre of a man in from three to five days, they certainly will not do it in seven, or a month either as for that matter. Opportunity was afforded me, when I first entered the corps, for comparing the questions asked in examination for entrance to both services, and the impression was made upon me then that there was little or really no difference in their general character. In the Army the board is guided somewhat by the contents of the autobiographical letter that the candidate is obliged to write the first day of his examination, wherein he states what his general course of study has been up to the time of his appearance before the board. As an instance, in my own case, on my entrance examination I was requested by the board to submit to them for inspection specimens of skins of birds and mammals that formed a part of a collection I had made as a young man: they asked to see, likewise, colored drawings I had made of the same, as well as a set of marine charts that I had drawn to obtain an appointment as draughtsman in the United States Naval Hydrographic Office a year or two before. As the charts had passed me, and the specimens of birds had also been pronounced favorably upon by Professor Albert S. Bickmore, who was then in charge of the Museum at Central Park, New York, and had given me the appointment as naturalist to one of the Arctic expeditions then forming, I complied with the request of the board with more confidence than I might have under other circumstances. It would have been difficult, too, to have found expression for my delight in finding upon the very threshold of my new career such positive evidence that such pursuits were encouraged in the medical service of the Army.

Once in the corps of either service, after a certain length of time an officer is expected to pass a second examination before the examining board, the object ostensibly being to ascertain whether the officer is qualified for promotion or not. In former times in the Navy this examination was competitive and an officer could gain rank by it, but I believe such a pernicious feature as that must have been has now been done away with, though exactly how it is managed in these days I am not informed, but not long ago a surgeon of the Navy told me that under no circumstances did it threaten an officer's commission in any way.

In the Army this second examination is arranged on a widely different plan. Substantially the law says that after the first five years of an army medical officer's service, or what amounts to the same thing, after he has passed into the grade of captain, which he does by act of Congress at this time, he is liable to be called upon at any time to appear before the regular examining board to be examined as to his fitness for promotion. Should he be found in any way deficient a second trial is given him, after the expiration of a year; failing again, his resignation is requested.

When one comes to think of the effect that such a specification as this would have upon the mind of one engaged in the study of medicine, and the vast field of research that that means in our day, he will be struck at once by the fact that it affords drawbacks far more harmful in its ultimate effects than even the old competitive examination of the Navy. Speaking from my own personal experience with this second examination, I can say that during my first five years the impression had been made upon me, through conversation with many older medical officers, all of whom, as far as known to me, had been successful at this trial, that it was a matter of not much consequence, did not last long, and really was sort of a form to examine more into the question as to whether or no an officer had proved himself *generally fitted* for the service; an examination of his record. Many others held another view—showing that minds were divided on the question of its utility—that may be summed up in the expression given to it by one of the number, that “it was a sieve to catch the bad rats,” just as if medical officers were not amenable to trial by courts martial as any other staff officer for violations of the regulations of the service; or that a thing should exist that in its workings was harmful to the many while it acted with doubtful certainty in eliminating the few objectionable ones. Moreover, it is not believed that the Government ever intended to place such a power as this in the hands of a board composed of members of the same corps; still one's mind is harassed with the doubt if its object be to take a second look at an officer's attainments, when he sees medical gentlemen holding contract as acting-assistant surgeons at military posts appear before the board for examination for commission, be unfortunate in the attempt, yet return to their duties at military stations with the same responsibilities. This is not said as bearing at all upon the efficiency or non-efficiency of the gentlemen as a whole, for the writer holds many of them among his best tried friends, and in not a few instances members could be chosen from among their number that would be of the highest honor for any medical corps in the world to claim them as its own.

My mind had been lulled to a certain degree of security by what has already been cited above, in fact I was upon scientific duty in the Army Medical Museum at Washington, when the summons to this second ordeal reached me. I had made no *special* preparation whatever, so after a brief but exciting struggle of three hours failed. Comfort was dealt out to me that far abler men than myself had met the same fate and that it formed one of the episodes in the early life of Dr. Flint, of New York. It hardly seemed that this latter fact was anything to boast of, or proved the efficiency of the scheme to fulfil its purpose, if it had any. Before leaving New York, where

the board held its sessions, I met eight or ten medical officers of about my own date of entry into the service, who were there on the same mission as myself. Some of these gentlemen had passed, others had not been quite so fortunate, and still others had not yet been before the board and had been “cramming” there for three or four months. Naturally when we met the subject of the conversation turned upon the examination, and to make the matter brief, the unanimous verdict was that its effect was a *bad one*; that these effects may be prolonged over a period of from ten to fifteen years, as the law does not specify that one shall make his appearance positively at the end of the first five. A number of such instances are on record. The writer was doubly impressed with all the discussions that took place at these meetings, because he had just failed himself and now stood with the additional responsibility of a young family about him, with the fact staring him in the face that at the end of another year, should the same result follow, he would be asked to resign. Let us devote just a few words, however, to the chief drawback caused by this examination, and in fact the only one that interests the Government, whose aim it is to keep an efficient medical staff of the Army.

A young man is found qualified and enters the medical corps. As the preparation for his entrance examination has no doubt been trying, the first impulse after becoming accustomed to the novelty of freedom he at first experiences is to rest for a month or so; then follows a reading of the journals so generously furnished by the Surgeon-General's office; then a taking up again of his old text-books as cases commence to present themselves. Six or eight months glide by, when a never-out-of-the-mind fact, his second examination, commences to operate. In the mean time, no doubt, he has, as all professional men do, made a choice in the favor of some special subject or branch of his profession or undertaken some original line of research—perhaps because a uniform can never change the bent of a man's mind or human nature, however tightly it may be buttoned around him, as the history of numberless cases will vouch for. He may be in the very act of cutting a section for microscopical work, when it suddenly dawns upon his mind that very soon he is to be examined and the board may not touch upon this subject at all. This thought is followed by another, that he perhaps, if then called upon, could not give a very lucid explanation of the “cause of pitch of musical sounds.” He rushes to his works on physics; this subject barely opened when the first one comes up again, and the board may not care about the “pitch of musical sounds,” but about the “date and incidents of the battle of Crecy,” then the long vista of history is almost hopelessly scanned; but the board may not question him in history, although it is their prerogative to do so. At the end of an hour or so we find him leaning back in his chair, almost helplessly gazing at the four or five long rows of books before him, in a condition of mind totally unfitted for study, his tissue dried up on the slide, and the scalpel on the floor, or else he wanders out, and unless of cast-iron nerve, seeks other means, not professional, to drive this bugbear away, even for only a brief space of time, and yet this education of his mind may be kept up for years—receiving a *sudden* shock every now and then when he learns that some officer of undoubted ability has failed. Can any one devise a more perfect break to professional progress and excellence than this? anything more vicious in its operations, more certain to produce an irritability of mind and temper, a ranker poison to the hopes of a well-balanced education? Let any one—I care not who he is, or what position he holds—know positively and without reserve that at the end of some indefinite time he is to be examined, and perhaps his livelihood placed at stake, upon all branches of his many-faced profession and numerous not exactly specified collateral subjects, and he may be able to have some faint taste of the effect, but hardly appreciate it.

About a year ago, Surgeon J. H. Bill, U. S. Army, an earnest and able chemist, who for a long time was a member of the Army Medical Examining Board, published an article in *THE RECORD*,¹ which shows better the utter hopelessness of the situation, far better than anything that could ever come from my pen, or that I would ever hope to attempt. Dr. Bill presents his readers in this article with between twenty or twenty-five of the easiest questions his mind could suggest, and such as were propounded to candidates before the board, and as they are to illustrate a certain subject, they are all either physical or chemical. Now, easy though they be, and that depends much upon how the reader takes them, I will guarantee to make out *five thousand* such lists, containing an equal number of questions, and equally easy upon these subjects alone; not only that, but an equal number for anatomy, physiology, toxicology, hygiene, surgery, practice of medicine, obstetrics, materia medica, science, history, literature, medical jurisprudence, the eye and ear, and some half a dozen or more others. It is thus that doubts and complications arise in the mind of the student exactly where to begin. The beautiful vistas so aptly opened in the remainder of Dr. Bill's admirable article, and the advantages it points out accruing from a course of study in chemistry and physics, are equally applicable to like pursuits in several of the branches I have enumerated above.

Now that the writer has run safely through this hit-or-miss gauntlet, having passed at his second trial, he is free to confess that this second examination is the greatest drawback that the medical officer has to contend with, and it constantly risks injuring many a mind. On general principles, I do not believe in examinations, to any great extent, any way. Of my six years' college course those studies that were not followed by an examination at the end of the term have always been better remembered and of the greatest service to me, and I doubt not but that this has been the experience of others.

Professor Huxley has so much to say upon this subject² that is wholesome, pertinent to the question, and bears upon what we will have to say in a moment, that I will take the liberty of quoting quite extensively from him. He remarks that: "Examination, thorough, searching examination, is an indispensable accompaniment of teaching; but I am almost inclined to commit myself to the very heterodox proposition that it is a necessary evil. I am a very old examiner, having, for some twenty years past been occupied with examinations on a considerable scale of all sorts and conditions of men, and women too; from the boys and girls of elementary schools to the candidates for honors and fellowships in the Universities. I will not say that in this case, as in so many others, the adage, that familiarity breeds contempt, holds good; but my admiration for the existing system of examination and its products does not wax warmer as I see more of it. Examination, like fire, is a good servant, but a bad master. I by no means stand alone in this opinion. Experienced friends of mine do not hesitate to say that students whose career they watch, appear to them to become deteriorated by the constant effort to pass this or that examination, just as we hear of men's brains becoming affected by the daily necessity of catching a train. They work to pass, not to know; and outraged science takes her revenge. They do pass, and they don't know. I have passed sundry examinations in my time, not without credit, and I confess I am ashamed to think how very little real knowledge underlay the torrent of stuff which I was able to pour out on paper. In fact, that which examination, as ordinarily conducted, tests, is simply a man's power of work under stimulus, and his capacity for rapidly and clearly producing that which, for the time, he has got into his mind."

Then after setting forth much more that is true of the question, he concludes with this paragraph:

"No doubt a great deal is to be done by careful selection of examiners, and by the copious introduction of practical work, to remove the evils inseparable from examination; but, under the circumstances, I believe that examination will remain but an imperfect test of knowledge, and a still more imperfect test of capacity, while it tells next to nothing about a man's power as an investigator."

So much for the standards of the examination of the two services, and so much for the examinations themselves.

Turning again to the editorial of the *Medical Times*, we find that at the remainder of the article, both such parts of it as we have quoted above and the unquoted portion, essentially calls attention to two things. The first of these is—Why is it that naval medical officers so seldom arrive at any degree of prominence, and of a consequence the naval medical corps is not a celebrated one, and rarely produces large standard works upon scientific and professional subjects; whereas the medical corps of the Army, not rarely has an officer of distinguished scientific or professional ability appear in its ranks, and as of a natural consequence the medical corps of the Army has become famous throughout the world, and the immense number of its publications are ranked as standard and classical works, both in medicine and science? The second question, to which the reader's attention is called, is the cause or especial reason for these things.

The *Times* confines its discussion of the causes for this, in a desultory sort of a way, to the naval side of the question, suggesting two reasons—the first, "that salt air is a veritable lotus-flower, soothing into an irresistible indolence him who breathes its miasm;" the second, the short length of time that the Surgeon-General of the Navy holds his position. Both of these reasons bear with them a great deal that is true.

In the first case it is not so much the soothing influence of the salt air, as it is that "a rolling stone gathers no moss;" the exceedingly cramped space that one has to work in aboard ship, the limited appliances and books, the action of salt water and air in destroying these, more or less motion of the ship at nearly all times, the noise and excitement in port, and all such matters are eminently antagonistic to long and painstaking research, from which alone flow such volumes as the editor of the *Medical Times* so complimentarily alludes to as having been produced by medical officers of the Army. It might be asked, How is it, then, that such explorers as Darwin ("Five Years at Sea in the Beagle"), Wallace and Bickmore ("In the Malay Archipelago"), and numberless others, have produced such beautiful works as the result of their explorations? It must be remembered that these gentlemen start out thoroughly equipped for the work, that the ship is practically given up to their collections, and the books are written at home during the many years of quiet life that follows.

With reference to the short term of office of the Surgeon-General of the Navy, as being one of the causes militating against the production of extensive scientific work in the corps, the editor has evidently hit one of the principal nails on the head, and his question—"How long would any business enterprise thrive whose management was changed every year or two?"—is easily answered. We may say here, too, that little risk was attached to his prediction, and it has since proved true, as to what the history of the medical corps of the Navy would do under the wise regime of Dr. Wales. This able thinker and author, at once gathered those about him of his corps, who had shown special aptitude for either medicine or science, upon some occasion or another, and the effect was immediately apparent in the birth of the Naval Medical and Surgical Society of Washington, with its museum and the scientific and professional papers of numerous medical officers, all of which will pass Dr. Wales' detail down into the history of the medical corps of the Navy, as one of the most advanced and highest

¹ A Plea for a More Thorough Study of Chemistry in Medicine and the Arts, by J. H. Bill, M.D., Surgeon U. S. Army. *MEDICAL RECORD*, vol. 22, No. 7, August 12, 1882, p. 175.

² Science and Culture and other Essays, by T. H. Huxley, p. 67. 1882.

of its epochs, and one to which his name will be forever linked.

When the editor of the *Medical Times* asks the question, as he does in the paragraph we have quoted, "Where is the Dr. Coues of the Navy?" it seems to carry with it that such geniuses are the creation of the Army or the Navy, *per se*, whereas such by no means is the case. The Navy has been, so far, unfortunate, notwithstanding the fact that they employ the same means that the Army does, in not having captured such a mind to add lustre and fame to their corps, for it is through the scientific works of such men that any organization becomes famous; or, indeed, known at all. Is it surprising that when we have a board composed of three or four cultured men, sitting almost continuously throughout the year, and in that time examining from one hundred to two hundred young men, graduates of medicine, and often of the highest classical universities in our land; in short, having the pick of the best material of such a vast country as ours, that they should occasionally find a genius in their net? Never lose sight of the fact that Dr. Coues would have been Dr. Coues anyway; that Dr. Billings would have been Dr. Billings anyway, and so on for such lights as our Drs. Woodward, and Otis, and Beaumont; and, undoubtedly, I could have added Dr. Flint, but he slipped through the meshes, though he *has* been Dr. Flint anyway. Such minds are the outcome of our civilization, and they are no more the property of the Army than they are of our noble country at large. All the Army can do—or, perhaps, I had better say the Government—is to see well to it, for the credit of our country, that the soil on which she places such men is adapted to their growth and not to their death; or, what is almost as bad, if not actually worse, where they become distorted and stunted shrubs, of no credit to anybody. That the Government does not always do this Dr. Coues himself will tell you.¹

It is the bristling front of our entrance examination that guards the portals to our corps, like Leonidas did the Thermopylean pass, that makes it possible to add such men to our number, and it is a matter in the hands of the Government afterward whether the country gets the greatest amount of good out of them. Remove this safeguard and the countless horde of Persians would in a twinkling annihilate our fame, and our little body of three hundred and a few odd would sink out of sight and be no more heard of than an equal number chosen at large over our vast frontier.

Emerson has shown us, as only he could, how such geniuses are produced;² and Huxley clearly defines their rarity when he tells us "but a small percentage of the population is born with that most excellent quality, a desire for excellence, or with special aptitudes of some sort or another. Mr. Galton tells us that not more than one in four thousand may be expected to attain distinction, and not more than one in a million some share of that intensity of instinctive aptitude, that burning thirst for excellence, which is called genius. Now, the most important object of all educational schemes is to catch these exceptional people and turn them to account for the good of society. No man can say where they will crop up; like their opposites, the fools and knaves, they appear sometimes in the palace and sometimes in the hovel; but the great thing to be aimed at—I was almost going to say the most important end of all social arrangements—is to keep these glorious sports of nature from being either corrupted by luxury or starved by poverty, and to put them into the position in which they can do the work for which they are specially fitted. Thus, if a lad in an elementary school showed signs of special capacity I would try to provide him with the

means of continuing his education after his daily working life had begun; if, in the evening classes, he developed special capabilities in the direction of science or of drawing, I would try to secure him an apprenticeship to some trade in which those powers would have applicability. Or, if he chose to become a teacher, he should have the chance of so doing. Finally, to the lad of genius, the one in a million, I would make accessible the highest and most complete training the country could afford. Whatever that might cost, depend upon it the investment would be a good one. I weigh my words when I say that if the nation could purchase a potential Watt, or Davy, or Faraday, at the cost of a hundred thousand pounds down, he would be dirt-cheap at the money. It is a mere commonplace and everyday piece of knowledge that what these three men did has produced untold millions of wealth, in the narrowest economical sense of the word."³

Quite recently an officer expressed his surprise to me that Dr. Billings ever made the renowned bibliographer that he is. "Why," he said, "when I first knew him he was doing scarcely anything except looking at fungi through a microscope!" "Sir," I could only reply, "your surprise is no greater, probably, than that of many other officers of every branch of the service, who have said of Dr. Coues, in the early days of his scientific work, that 'he was working to the detriment of his profession,' and many other such sentiments, when Dr. Coues to-day fills with the highest credit the chair of anatomy, the study which is the foundation of all medicine, in a university that nearly every year supplies one or two young officers to the medical corps of the Army and Navy."

For the growth of medicine and science let us do all we can to prevent the rendering axiomatic of Dean Swift's famous phrase, "When a great genius appears in the world the dunces are all in confederacy against him."

It is impossible to tell, from such biological studies as a young man may take up in the early part of his career, where they will land him; and it is more than likely that a great deal of his work will come to be of practical utility—some day. To support this one has to think but for an instant, and the intelligent physician and scientist not at all, what the knowledge of the anatomy of mammals, birds, reptiles, or, in fact, any of the lower orders of vertebrates has done for our science of medicine.

It will be granted that a knowledge of the anatomy of the form operated on is essential before many of those facts could be demonstrated that require such delicate manipulation, and upon which nearly all of our great truths in physiology depend. Let any one take either of those magnificent volumes of Dr. Flint or Dr. Dalton and clip out, with a pair of scissors, all such parts as where a knowledge of the anatomy of the vertebrates is required in some way or another, or where our knowledge of some physiological truth has been obtained through such media, and note the shrinkage. We all know that our *science* of medicine hangs upon the four fundamental branches of anatomy, physiology, chemistry, and physics. Now what would become of this science if the experiment I have just mentioned could be applied to all such literature back to the days of Aristotle? Simply that the science of medicine would travel backward half that distance itself, to put the mildest construction on it.

In conclusion let us wish that during these long days of peace the many changes required in the medical service of the Navy may be brought about, such as the establishment of their actual rank by act of Congress, as it is in the Army, so that a medical officer may command in his own sphere of action, and that the term of surgeon-generalship be made for a longer term of years—for reasons we have already set forth.

It is to be hoped, that with us in the Army, the requirements of the first examination be, if anything, made still more rigid, more searching into the moral, mental,

¹ A Criticism, by Dr. Elliott Coues, in the *Nuttall Ornithological Bulletin*, Cambridge, Mass., vol. viii., July, 1883, page 166, on Contributions to the Anatomy of Birds, by R. W. Shufeldt, M.D. [etc.], author's edition, extracted (in advance) from the Twelfth Annual Report of the late United States Geological and Geographical Survey of the Territories (Hayden's). 8vo, title and pp. 593-806, plates i.-xxiv., many woodcuts in text. Washington: Government Printing Office, October 14, 1882.

² *Conduct of Life*, p. 113 *et seq.*

³ *Science and Culture*, p. 90.

and physical attainments and conditions of the candidates presenting themselves; in short, of so severe a nature as to annihilate the second examination, and render the necessity for its very existence useless; that the present retirement bill, or any other act of Congress, will ever operate so as to prevent the Surgeon-General from holding his office for a less period than twelve or fifteen years, and that he will be chosen, as heretofore, for his executive ability or professional and scientific attainments; that encouragement will always be extended to those who have shown special excellence and progress in professional or scientific work. And one other matter which my space has not allowed me to refer to, is that the day is not far distant when we will see a separate, beautiful in point of design, and substantial edifice shielding our many thousand volumes of valuable professional books, our chemical laboratory, and a museum of surgery, medicine, and comparative anatomy, of which Eric Erichsen has said, after he had reviewed it in its present tumble-down building: "Ah! gentlemen, we have nothing like this in England!"

TREATMENT OF TYPHOID FEVER.¹

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THE object of this paper is not to enter into the history, pathology, and etiology of the disease in question, but to bring before the Society a method of managing typhoid fever as employed in my practice during the past two years, and which has yielded most satisfactory results in the cases in which it has been carried out. In order to economize time and bring the subject more fully before you at once, I will proceed to sketch the plan of treatment briefly:

When I find the patient to have typhoid fever, or when his symptoms indicate that the disease is about to develop, I order him to bed and put him on a liquid diet consisting of milk, beef-tea, or animal broths. I then order the following mixture, as recommended by Bartholow:

R. Tr. iodinii 3 ij.
Acidi carbolici 3 j.

M.

Of this mixture I direct three drops to be given in a wineglassful of iced or cold water, three times daily, after meals, and which is continued until convalescence is well established. As a rule this medicine is well borne by the stomach, and occasions no disgust on the part of the patient. Partly for its favorable influence upon the skin, for the sake of cleanliness, and also the slight influence upon the temperature, the patient is sponged twice daily with equal parts of alcohol and water, or in some cases, where more grateful to him, with tepid water.

When I find the evening temperature to reach 103° F. quinine in large doses is administered, upon a falling temperature. I usually direct at least thirty grains to be given, one-half the quantity at 5 A.M., and remainder if deemed necessary at 5.30 or 6 A.M.

This quantity, as a rule, will lower the temperature from 2.5° to 3.5° for the next forty-eight hours, after which it may be found necessary to repeat the medicine. In a few cases where the temperature has reached 106° F. I have given quinine amounting to fifty and even sixty grains, succeeding most happily in reducing the temperature without any sustenance of injury to the patient.

For the relief of the headache in the early stage of the disease I find the following to answer the indications:

R. Quiniæ sulph gr. ij.
Ex. belladon gr. ¼

M. et ft. in pilula. Sig.—One pill every three or four hours.

Alcohol is not often indicated until after the close of the third week, unless by reason of the habits of certain patients it may be necessary throughout the attack. In the event of heart-failure it must be administered according to the exigencies of the particular case. A majority of patients do well without taking it at all. Should the diarrhœa become excessive I direct a pill as follows:

R. Argenti nitratis gr. ⅓.
Pulv. opii gr. j.

M.

To be given every four hours until brought under proper control. On the other hand, should obstinate constipation intervene, I never hesitate to give a dose of calomel, unless there are reasons to suspect serious intestinal lesions, in which event the bowels may be emptied by enemata.

To prevent hypostatic congestion of the lungs, the patient is turned upon his side from time to time. As an invariable rule from the recognition of the disease the patient must maintain the horizontal position until convalescence is well established.

During the sickness the patient should have a competent nurse, whose duty it is to attend to the punctual administration of the medicines and diet. A liquid diet, consisting of milk, beef-tea, or other animal broths, must be given every two or three hours. Perfect quiet must be maintained in the sick room, all visitors being positively excluded. The room should be kept darkened, all pictures and paintings removed from the walls, and the medicines kept out of sight of the patient. Perfect ventilation must be secured. To avoid establishing a focus of contagion, the dejections must be systematically disinfected immediately after being voided.

The total number of cases treated by this plan is fifty-two, with a recovery of all. Of the cases, twenty-eight were severe, the temperature in three reaching 106° F., and in the other twenty-five 103.5° to 104°. In three of the cases a mild attack of rheumatism set in during convalescence. In two cases a severe relapse from indiscretion in diet prolonged the disease. The average duration of the severe cases was about thirty days, and of the milder about twenty-six days.

You will observe that the remedy employed is iodine in combination with carbolic acid, which no doubt prevents the multiplication of germs in the intestines, checks fermentation, and maintains an antiseptic action in the blood. Also the judicious administration of quinine in doses sufficient to control the temperature.

The success attending this plan of treatment in my hands encourages me to continue it further; and, in conclusion, I will say in its behalf that any who may give it a fair trial will be favorably impressed, and feel that they have put a different complexion on the statistics of mortality.

THE SALE OF IMPURE CREAM OF TARTAR.—A conviction was recently had in the Court of Special Sessions of this city for a violation of the Food and Drug Adulteration Law of 1881, in the sale of an impure article of cream of tartar. Only a small fine was imposed; but as the cream of tartar had not been sold as a drug but by a grocer in the course of his trade, it was thought of sufficient importance to appeal. This was done, and not long since the conviction was reversed, the Court holding that where the defendant proved that he had bought the cream of tartar sold by him from a dealer in the open market; that before buying it he had inquired for the best article, and had been told by the dealer that what he purchased was the best; that he paid the highest market price for it, and believed that he was purchasing a pure article and the best, and that he sold it believing it was a pure article. Under these circumstances no criminal intent or criminal negligence had been made out and no offence proved.

¹ Read before the Westmoreland County (Pa.) Medical Society, May 1, 1883.

PEROXIDE OF HYDROGEN IN PURULENT INFLAMMATIONS OF THE EYE.

By LE ROY POPE WALKER, M.D.,

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FOR the introduction of peroxide of hydrogen in ophthalmic practice, we are indebted to Landolt, who, after an extended and careful trial proves it to be of undoubtedly great value.

In a very able paper on the subject (*Archives d'Ophthalmologie*, September and October, 1882) he gives a large amount of highly interesting information concerning the properties of hydrogen peroxide which it would be well for those wishing to try its effects to read.

"Peroxide of hydrogen (H_2O_2) is ordinarily prepared by the action of dilute acids on the peroxides of the alkaline earths. The hydrated peroxide of barium is decomposed by dilute sulphuric acid, so as to form sulphate of barium and peroxide of hydrogen. The solution obtained in this way contains three per cent. of its weight of pure peroxide of hydrogen, and is sufficiently strong for medical purposes. The dilute solution is a clear, colorless, inodorous liquid, with a taste something like that of cress" (*Ophthalmic Review*).

It is said to retain its properties unaltered for years, if kept at a temperature below $70^\circ F.$ and well protected from light. It should also be well stoppered, as it rapidly deteriorates if exposed to the air. One of the peculiarities of hydrogen peroxide is the readiness with which it yields free oxygen.

Pus is one of the many substances remarkable for the energy with which it causes the liberation of oxygen. Hydrogen peroxide is also a powerful agent in preventing and arresting fermentation. "It is probable that the peroxide of hydrogen when subjected to the catalytic action of bacteria, reacts upon them and renders them inert. Excellent results have been obtained in the treatment of wounds by this substance."

For the eye it has special advantages as an antiseptic; for, unlike many other so-called antiseptics—notably carbolic acid, bichloride of mercury, alcohol, salicylic acid, etc.—it can be used without danger, and of sufficient strength to be effective.

"When the solution is applied to a conjunctiva affected with purulent inflammation, a froth, resulting from its catalysis by the secretion is instantly produced. The inflammatory products are not destroyed by it, but their physical condition is so altered that they are readily removed from the inflamed surface and all septic action arrested, the micro-organisms in the pus being killed by the nascent oxygen. The conjunctiva, examined ten minutes after the application, is found covered with a layer of fibrin which will again catalyse the solution. After two or three applications the exudation is much diminished, and with each repetition the froth becomes less and less until it is hardly formed at all; pathological secretion is then at an end."

The application produces a sensation of pricking and burning, amounting often to severe pain, which, however, soon passes off. It has been found speedily effective in purulent conjunctivitis, in which boracic acid and iodoform had been tried without result.

In cases of corneal ulcer, with purulent infiltration, its action has been surprisingly good. In fact, it has been my experience that it is much more potent in corneal processes than affections of the conjunctiva. Landolt's method of using it is to instil a few drops of the solution into the conjunctival sac two or three times in an hour, at intervals of ten or fifteen minutes, bringing the solution thoroughly into contact with the affected surface.

I have found it fully as effective when used once in two hours, instilling a dozen to fifteen drops at a time, and much less irritating than when used after the manner of Landolt, for it is to a certain extent an irritant, and its too frequent application may prevent the beneficial results which it is desired to obtain. I also take the pre-

caution to thoroughly cleanse the parts with a saturated solution of boracic acid, before again using it, and if this is not sufficient I remove the layer of fibrin with a delicate pair of forceps.

In purulent ophthalmia, after an abatement of the secretion, I have found it best to discontinue the use of the hydrogen peroxide, as its action is now nil, and a return to its use should not be made unless there be a return of the purulent secretion.

Landolt has met with very great success with this remedy in the treatment of suppuration of the lachrymal passages, and considers it vastly superior to bichloride of mercury, boracic acid, etc.

The subjoined cases, will, I think, go far to prove the efficacy of peroxide of hydrogen in ulcerative and purulent processes in the eye. A solution was obtained in April, 1883, by Professor H. D. Noyes, and at his suggestion I first tried it in a number of cases in his service. Since then I have had the opportunity of observing its good effects in cases occurring in the practice of other members of the staff, and by their courtesy I am enabled to present the following notes:

CASE I. (Hospital No. 7,026).—J. R.—, male, aged thirty-five; admitted June 1, 1883 (service Dr. Callan). General health good. Examination showed a large serpiginous ulcer in the centre of the cornea. Pain and great photophobia. Ordered hot applications constantly and a solution of atropia (grs. ij. to $\frac{5}{8}$ j.) t. i. d.

Second day.—Corneal process extending, and threatening to perforate. A Saemisch section was done, carrying the knife entirely across the cornea, and through the centre of ulcer.

Seventh day.—Eye showing no signs of improvement, a solution of hydrogen peroxide (one per cent.) was instilled every two hours, and atropia t. i. d.; heat continued.

Ninth day (second of hydrogen peroxide).—Process arrested, and edges of ulcer clear cut and surface clean. Patient entirely free from pain.

Thirteenth day (third of hydrogen peroxide).—Ulcer healing rapidly. Injection disappearing.

Fourteenth day (fourth of hydrogen peroxide).—Patient left hospital, with directions to occasionally use solution of peroxide of hydrogen at home. Came back three weeks later to report. Ulcer entirely healed, and only a small macula remaining, as evidence of previous trouble.

CASE II. (Hospital No. 7,757).—A. C.—, male, aged twenty; admitted June 22, 1883 (service Dr. Moore), with a gonorrhœal ophthalmia of left eye, of forty-eight hours' standing. General health fair. Both lids much swollen and bathed in pus; chemosis marked, and cornea slightly hazy. Right eye immediately sealed with a watch-glass, for protection. Lids of affected eye were touched with a ten-grain solution of silver, and a one per cent. solution of peroxide of hydrogen was instilled every half hour. Atropia (grs. ij. to $\frac{5}{8}$ j.) t. i. d., and ice compresses constantly.

Second day.—Secretion much diminished, swelling, and tension of lids less, and corneal process arrested. Solution of hydrogen peroxide now instilled every hour.

Third day.—Swelling of lids steadily decreasing; chemosis much less and secretion reduced fully one-half; cornea clear. Patient free from pain. A saturated solution of boracic acid has been injected between lids every half hour. Solution of silver continued once daily.

Fifth day.—Patient is now able to open eye to a limited extent, and swelling of lids, chemosis, and secretion rapidly disappearing.

Ninth day.—Solution of hydrogen peroxide discontinued, as secretion had entirely ceased, and cornea remained clear. Is now able to open eye fully one-half. Cold, silver, and atropia continued.

Thirteenth day.—The solution of silver, grs. x. to $\frac{5}{8}$ j., changed to a solution of grs. v. to $\frac{5}{8}$ j. Ice applied four

times daily, for half an hour at a time, instead of constantly, as heretofore. Atropia twice a day, and solution of boracic acid injected between lids once every three hours. Injection of conjunctiva nearly all gone.

Eighteenth day.—Ice discontinued and a cold solution of boracic acid substituted, to be used t. i. d. Solution of silver (grs. v.) continued, to prevent granulations.

Twenty-second day.—Patient discharged entirely cured. Cornea without a blemish.

CASE III. (Hospital No. 8,086).—D. G——, male, aged fifty; admitted June 30, 1883 (service Dr. Callan), with a central ulcer of cornea. Patient run down and suffering from chronic malarial poisoning. Was put on use of hydrogen peroxide (one per cent.) immediately, instillations every three hours, atropia (grs. ij. $\frac{3}{4}$ j.) t. i. d., and quinia sulph. (grs. v.) twice a day.

Third day.—Ulcerative process arrested and evidences of repair beginning. Patient free from pain.

Fifth day.—Patient left hospital, well on way to complete recovery.

CASE IV. (Hospital No. 8,168).—A. W——, female, aged twenty-nine; admitted July 5, 1883 (service Dr. Moore), with a gonorrheal ophthalmia of both eyes. In right eye ophthalmia of three, and in left of two days' duration. General health good. Lids of both eyes tense and much swollen; abundant secretion; chemosis marked, especially in right eye; cornea of right eye hazy; cornea of left eye clear. Finding great difficulty in evertng lids, and owing to pressure on cornea, a double cantholysis was done immediately, followed by free hemorrhage, which was encouraged. The lids of both eyes were touched with a ten-grain solution of silver, and ice compresses ordered constantly. Atropia (grs. ij. $\frac{3}{4}$ j.) t. i. d., and solution of hydrogen peroxide (one per cent.) instilled in both eyes every hour. Every half hour a saturated solution of boracic acid was injected between the lids.

Second day.—Secretion much less and swelling of lids reduced; no pain; cornea of right eye slightly more hazy; cornea of left eye clear; chemosis in both eyes much the same.

Fourth day.—A small ulcer developed in right eye, but haziness, which two days previous had been rather diffuse, now limited and of superficial character; cornea of left eye clear and chemosis nearly all gone; very little secretion, and swelling of lids much reduced. Solution of silver discontinued in left eye.

Sixth day.—Ulcerative process confined, but the haziness again extending over upper portion of cornea of right eye. Ice changed to hot applications, and hydrogen peroxide (three per cent.) instilled hourly. Left eye steadily improving; no secretion; lids of normal thickness, and patient is able to open her eye.

Seventh day.—In right eye secretion much increased by heat, but ulcer looks better and is not extending. The slight haziness observed day before gone. Left eye doing as well as possible; ice continued occasionally.

Twelfth day.—Ulcer in right eye much improved and secretion rapidly disappearing; swelling of lids and chemosis less; silver discontinued. Left eye practically well, only a slight injection remaining.

Seventeenth day.—No secretion from right eye. No chemosis, and swelling of lids all gone. Ulcer shows signs of healing. Able to open eye one-half. Heat, atropia, and hydrogen peroxide continued.

Eighteenth day.—Conditions much the same. Solution hydrogen peroxide discontinued. Boracic acid solution (saturated) injected between lids every hour.

Twentieth day.—Ulcer nearly well; very little injection; able to open one eye fully. Heat applied twice a day; atropia, t. i. d. and solution boracic acid four times daily. Left eye entirely well.

Twenty-first day.—Ulcer healed, and only evidence of disease remaining is a slight conjunctival injection. All treatment stopped.

CASE V. (Hospital No. 8,418).—M. J——, female,

aged twenty-five; admitted July 13, 1883 (service of Dr. Minor), with a suppurative keratitis of left eye, involving entire cornea, result of burn from chloride of lime. General health good. A Saemisch section was made, carrying cut entirely across cornea, thereby liberating a large quantity of pus, which entirely filled lower two-thirds of anterior chamber. A solution of hydrogen peroxide (one per cent.) was ordered instilled every two hours; hot applications constantly and atropia (grs. ij. to $\frac{3}{4}$ j.) t. i. d.

Second day.—Cornea, which yesterday it was feared would slough away as a whole, now shows signs of clearing and the patient is free from pain.

Third day.—Corneal suppuration is arrested and is gradually clearing, especially in upper and outer margin.

Ninth day.—The cornea has steadily cleared and the iris is distinctly visible through upper half. Instillations of hydrogen peroxide continued every two hours and atropia and hot applications as before.

Tenth day.—Lower portion of cornea is now clear and there only remains a small central spot that is cloudy. Injection rapidly disappearing and the patient is able to open her eye fully.

Twelfth day.—Very slight injection remaining and eye well.

FOREIGN BODY IN THE TRACHEA OF AN INFANT EIGHT MONTHS OLD—TRACHEOTOMY—RECOVERY.

By A. SCHAPRINGER, M.D.,

NEW YORK.

JAMES M——, eight months old, of 345 East Sixtieth Street, was brought to my office on June 6, 1883, on account of alarming dyspnoea which had supervened suddenly the same morning while he was eating a slice of an orange. The child had first been taken to a neighboring drug store, where a dose of syrup of ipecac was administered. This brought about vomiting, without, however, relieving the dyspnoea. When first seen by me, the child was cyanosed. Both inspiration and expiration were labored. Auscultation over the trachea revealed a rattling sound both on inspiration and expiration. The latter was brought to a sudden stop, a peculiar click. The rattling was perceptible to the touch also. These signs left no doubt as to the presence of a movable obstruction in the windpipe. After a few ineffectual attempts to remove it by inversion, the child's condition in the meanwhile becoming more and more alarming, I performed tracheotomy, assisted by Dr. A. Fridenberg and Messrs. Tynberg and Schulmann, students of medicine. The child was given a few whiffs of chloroform. The hemorrhage was slight, but one vessel requiring to be secured. The trachea was scarcely opened when the foreign body was expelled through the perforation by a fit of coughing. It proved to be an orange-pit. Regularity of respiration not becoming re-established after the lapse of a few minutes, a flexible catheter was introduced and a small quantity of blood and mucus removed by aspiration. In about twenty minutes the child had so far recovered that I could proceed to close the wound. I first united the lips of the tracheal incision by a few silk sutures, and carried the ends of the threads through both the upper and lower angle of the integumentary incision, which I closed by a separate row of sutures. I avoided including the mucous membrane in the tracheal sutures. Catgut, which would have been preferable to silk, was not accessible. The wound healed by first intention, with the exception of the angles where the threads of the deep sutures had been led out. These could be removed after the lapse of a few days. The little one has been well ever since.

The interest of this case centres in the fact that there is no record, in this country at least, of so young a child having survived tracheotomy for the removal of a foreign body.

226 EAST SIXTIETH STREET.

ON THE TREATMENT OF EPILEPSY.¹

BY PROFESSOR DUJARDIN-BEAUMETZ,

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GENTLEMEN: I devote this lecture to the treatment of that most formidable of the neuroses—epilepsy. When we survey the numerous remedies which have been proposed for this disease—remedies often uncertain and inefficacious—we easily comprehend the discouragement and despair of many physicians who have pronounced epilepsy incurable; moreover we see why the ancients attributed a divine origin to this affection, for to them the words *morbus sacer*, *morbus divinus*, testified sufficiently that the disease was generally above the resources of their art. But this feeling of discouragement ought no longer to exist. We have already found in the bromides a remedial agent which enables us to cure one half our epileptic patients, and we may be permitted to indulge the hope that some day we shall find a remedy still more powerful, which shall give us complete mastery of the disease. For this end we shall labor, and with all zeal.

It may almost be said that every medicine under heaven has at one time or another been prescribed for epilepsy. Do not then expect from me an enumeration of this long list of medicaments; I shall merely touch upon a few of them to lay particular stress on such as experience has proved efficacious. To give some system to my exposition, I shall divide the treatment of epilepsy into two parts: first, general treatment; second, treatment of the attack. In order to grasp the principles of the general treatment it is necessary to enter somewhat into details respecting the pathogeny of this affection. Sometimes epilepsy is manifestly dependent on a lesion of the nervous system, it is then symptomatic; sometimes no lesion is apparent, and we call the epilepsy essential.

As for symptomatic epilepsy, experimental physiology and clinical observation have given us certain proofs of the influence of lesions of the nervous system on the development of this neurosis. Brown-Séquard by his curious experiments on guinea-pigs has shown us that epilepsy may be produced by section or ablation of the sciatic nerves, and what is stranger and still more inexplicable, that this experimental epilepsy affects not only the animal so mutilated, but also its offspring, so that epileptic guinea-pigs, in consequence of lesions of the sciatic nerves, ever afterward have epileptic progeny.

The same symptoms are produced in certain lesions of the spinal marrow or cerebrum. Westphal rendered guinea-pigs epileptic by blows on their heads. Hitzig, Eulenbarg, and Landois by irritating the motor cortical centres of animals by mechanical and chemical agents, and by electricity, brought on attacks of epilepsy. Points have been localized in the cerebro-spinal axis whose excitation produces epilepsy, and Albertoni and Koloman-Balogh have given precise directions in this regard. Roberts Bartholow has gone even farther, and in a patient the surface of whose brain was denuded to some extent, he has produced epileptiform convulsions by applying electricity to the exposed cortical substance.² Clinical observation strikingly confirms these experimental facts, and the annals of medicine contain a vast number of cases where wounds and irritations of nerves have determined epilepsy, and where it has sufficed to remove the vicious cicatrix, or the foreign body embedded in the tissues, in order to obtain a permanent cure. In other instances the epilepsy has resulted from injuries or compressions of the cerebral substance, by spiculae of

bone, by abscess, by tumors; the removal of the bony splinters or the disappearance of the tumors has brought about complete cure.

It is in cases of this kind that the application of the trepan in the treatment of symptomatic epilepsy gives good results. Extolled by the ancients in an empirical fashion, the trepan has of late years found its legitimate place, a place, in fact, of such importance that we have seen in America an eminent surgeon perform this operation for the cure of epilepsy twenty-three times in five years, and obtain seven complete recoveries. Echeverria, in his interesting statistics, gives the results of one hundred and forty-five cases, ninety-three of which were permanently cured by the trepan.¹

In the same group we place anti-syphilitic medication, for oftentimes the relation which exists between this neurosis and syphilis is explained by the presence of gummata, or bony tumors compressing the brain and spine, and it is quite clear, as Fournier and Dreschfeld have shown, that in cases of this sort the specific is the proper treatment for the neurosis. In this same category we must place epileptiform convulsions due to the presence of worms in the intestines, and which disappear with the expulsion of the offending cause. In this group, too, we must place those cases of epilepsy connected with troubles of the genital functions, for the relief of which Marshall Hall proposed castration.

It was formerly maintained that epilepsy results from a chronic inflammation of the brain and spinal cord; a variety of epilepsy even was described under the name of plethoric epilepsy. Morgagni, Fothergill, and others defended this doctrine of the constant inflammatory origin of epilepsy, hence their antiphlogistic treatment, which consisted in blood-letting and the most powerful derivatives, such as cauteries, blisters, and setons. This kind of treatment is now a thing of the past; it gave no certain results of any value, and was based on a hypothesis which the recent anatomo-pathological researches on essential epilepsy have not confirmed.

We know that since the labors of Schroeder-Van der Kolk and Echeverria, the post-mortem disclosures in deaths from epilepsy have generally been alterations of the medulla oblongata, characterized by an intercellular albuminous exudation and capillary ectases. It may, however, be reasonably affirmed that these lesions are the consequence rather than the cause of attacks of epilepsy. Nevertheless, the rachidian bulb has a predominant part in epilepsy, and it is by modifications of its functions that we best explain the convulsive paroxysms.

The first phase of the attack, that which corresponds to the initial outcry, to the loss of consciousness, and to the tetanic contraction of all the muscles of the economy, would seem to result from an excitation of the medulla oblongata, sufficient to cause sudden anæmia of the cerebrum and of the bulb itself. Next comes the asphyxia, consequence of this tetanic state, and the passive congestion of the cerebro-spinal axis which it produces. Next in order is a period of reaction, in which the accumulation of venous blood in the encephalon and spinal cord determines clonic convulsions everywhere, the respiration is stertorous, the face is blue, the attack terminates with exhaustion of the nervous centres implicated. In these phenomena the medulla oblongata is principally concerned, and the therapeutic indication is plain; every medicament which tends to diminish the excitability of the medulla oblongata, and the cerebral anæmia which results from it, is applicable to the treatment of epilepsy. But before beginning the consideration of the physiological treatment of epilepsy, I will say a few words about the empirical treatment.

Certain simple herbs have enjoyed a great repute in the treatment of epilepsy, and the common people have accorded heroic curative virtues to a number of indigen-

¹ Translated (by permission) from advance sheets for THE MEDICAL RECORD by E. P. Hurd, M.D., Newburyport, Mass.

² Brown-Séquard: Researches on Epilepsy, its Artificial Production in Animals, and its Etiology, Nature, and Treatment in Man, Boston, 1857; Pietro Albertoni: Influence of the Cerebrum in the Production of Epilepsy, Milan, 1876; Roberts Bartholow: Experimental Investigation into the Functions of the Human Brain, Am. Jour. Med. Soc., April, 1874; Westphal: Berliner klinische Wochenschrift, Nos. 24 and 29, 1871; Vulpian: Epilepsy in the Guinea-pig after Section of the Sciatic Nerve.

¹ Trepanning in Epilepsy, Boston Medical and Surgical Journal, 1872; Echeverria: Arch. de Med. de Paris, 1873, t. ii., p. 529; J. Mason Warren: Boston Medical and Surgical Journal, 1867.

ous plants which deserve a brief mention here, as their anti-epileptic properties have been endorsed by certain physicians.

Galium verum and *galium mollugo* ("white cheese rennet," "yellow ladies' bedstraw," are the familiar names) are reputed as having quite special virtues in the treatment of epilepsy, and we are frequently referred to the observations of Jourdan and Miergues, fils. I believe that even now certain religious communities in France treat this disease with the expressed juice or an infusion of this plant.

Valerian is also an ingredient of a great many anti-epileptic preparations, and its employment in this disease is supported by a respectable number of eminent names. I will pass rapidly by hyoscyamus, vaunted by Storck and Hufeland; daffodil, employed with success by Dufrenoy, Vieillechère, Delonchamps; bitter orange leaves, counselled by Larcher; peony, extolled by Portal, to devote a moment's consideration to belladonna, which, before the introduction into therapeutics of the bromides, was one of the medicaments the most depended on in the treatment of epilepsy, supported, as it was, by the authority and experience of Trousseau. Belladonna is given in the form of pills, each containing one-sixth of a grain of the powder and one-sixth of a grain of the extract; dose, one pill morning and evening the first month, and every succeeding month you increase the dose by one pill a day till you arrive at the enormous dose of twenty pills night and morning.

All these medicaments, belladonna included, are to-day completely abandoned; they have had to yield their place to more active and more certain medicines, and I have only mentioned them here because they belong to the history of the therapeutics of epilepsy. By the side of these vegetable substances we must place the mineral remedies which have been prescribed for the falling sickness; these are especially certain metals, such as silver, copper, and zinc.

What physiological action can these metallic substances have in the treatment of epilepsy? We cannot say; possibly we must invoke, in explanation, the strange phenomena of metallotherapy observed in accordance with Burq's method. However this may be, silver is administered in the form of pills of the nitrate, and in doses sufficiently large and sufficiently prolonged to produce discoloration of all the tissues. They tell a story of an aide-de-camp of King Louis Philippe, who had been cured of his epilepsy by this treatment, but whose skin was changed to a deep blue. I myself saw, twenty years ago, a man transformed into a negro (blue man they called him) by the internal usage of nitrate of silver, but who, notwithstanding this kind of poisoning, was not cured of his disease.

Copper is administered in the form of ammonio-sulphate of copper, and is given in the dose of ten centigrammes a day in capsules. Zinc is given in the form of oxide; Herpin is the most zealous advocate of treatment by this remedy. Out of thirty-six patients treated by oxide of zinc he obtained twenty-eight cures; the dose given was ten centigrammes three times a day, gradually increased till six grammes were taken in the twenty-four hours. Like the vegetable treatment above described, the metallic treatment of epilepsy has gone out of vogue, and to-day it is to the bromides that everyone has recourse.

When Balard, in 1826, discovered bromine, and the striking resemblances between this substance and iodine were pointed out, it was proposed to substitute the first medicament for the second, and it was in the treatment of syphilitic affections more especially that the substitution was made. From 1840 to 1850, in the Hôpital du Midi, the physicians attached to this hospital, and in particular Ricord, employed bromide of potassium in the place of iodide of potassium. The first labors recording the results of this treatment, and showing the physiological and therapeutical properties of the bromide were made

by two internes of the hospital, Rames of Aurillac and Huette, of Montargis. The thesis of Rames appeared April 25, 1850, and that of Huette several weeks after. Five years ago (in 1878) George Huette, in an excellent monograph on bromide of potassium, showed us the progress made in the usage of bromide of potassium since the first experimental and clinical studies of his father in 1850. Those early investigations, while clearly setting forth the physiological, therapeutical, and even toxic effects of the bromide, made no mention of any application of the drug to the treatment of the neuroses, and in particular to epilepsy.

The year following Locock, taking up a discovery, made several years before by a German, Otto Graf, who had noted in himself a marked depressant action following the use of large doses of bromide of potassium, and in particular, sedation of the genital functions, for the first time applied these data to the treatment of hystero-epilepsy and of epilepsy, and out of fifteen cases treated by the bromide recorded fourteen cures. The name of Locock ought to be immortalized in the history of medicine; he deserves the gratitude of the whole human race, because in consequence of his happy discovery of the use of bromide of potassium in epilepsy, he has enabled us to cure one-half our cases.

After the labors of Locock came those of Radcliffe, Brown-Séquard, and especially of Williams, showing that one could in five months diminish in a marked manner the number of attacks in a given number of epileptics. From this moment, bromide of potassium has been almost exclusively employed in the treatment of epilepsy, and the memoirs of Voisin, Legrand du Saulle, Falret of Lasigue, etc., in our country, show the beneficial results which may be expected.

Consult these documents, examine the statistics furnished by these physicians, and you will see that in more than half the cases we may favorably modify the condition of epileptic patients. I say modify, and not cure, for I range myself on the side of those who contend that a complete and permanent cure of real epilepsy by the bromide treatment is rare, without being, nevertheless exceptional. But it is possible, in one case out of every two, to cause the attacks to disappear, on condition always, of prolonging indefinitely the medication; and this is no small blessing. The bromide is, then (in the words of Legrand du Saulle), the muzzle of epilepsy, rather than a definite curative medicament.

How ought you to institute the bromide treatment? Which bromide ought you to choose? What are the inconveniences of this medicament? How long ought you to continue the treatment? These are questions which I must now answer.

But I must first of all say something about the physiological action of the bromides. Already, *apropos* of diseases of the heart, I referred to the action of bromide of potassium on the economy, and I need not repeat what I then said. All physiologists are to-day agreed in conceding to the bromide a sedative action on the cerebro-spinal axis, and in particular on the medulla oblongata. If any point is under dispute, it is not whether this substance has an elective action on the rachidian bulb, but whether this action is primitive or secondary. Some, as Germain Sée and Binz, maintain that the bromide acts first on the heart, and consecutively, by producing anemia, on the bulb; others, on the contrary, affirm that the heart is affected secondarily; that it is only influenced because the medulla oblongata has been first depressed. This depressant action on the excito-motor power of the mesocephalon is of marvellous applicability to epilepsy, since we have just seen that in this neurosis it is excitation of the rachidian bulb which determines the congeries of symptoms which characterize epilepsy, and this physiological action explains why suspension of the convulsive attacks follows the use of the bromide.

In the bromides what is the active principle? Is it

the bromide, or is it the base? This is a question which has been much studied, and which seems to us to-day to be solved. The bromide plays a considerable part in this depression of the bulbar functions, but the base does not by any means remain inactive or inert. And this it is which explains the difference of action of the different bromides. We know, especially since the labors of Laborde, that the salts of potash have a much more marked depressant action than the salts of soda, and that they have a toxic effect on the heart in particular. Already, when treating of purgatives, I showed you the difference which exists between the salts of potash and of soda; there is the same difference between chlorate of potash and chlorate of soda, as Laborde has shown; also between bromide of potassium and bromide of sodium, the first being more active than the second, while on the other hand the sodium salt is better tolerated than the potassium salt.

I have made many trials of bromide of sodium in epilepsy, and notwithstanding the considerable doses exhibited, 10 to 12 grammes (150 to 180 grains) a day, I have never succeeded in arresting attacks either of petit-mal or grand-mal by this salt. I have, therefore, been astonished to see in Hammond's remarkable work on "Nervous Diseases," that this eminent neuropathologist gives the preference to bromide of sodium in epilepsy.¹

By the side of bromide of potassium we must place bromide of ammonium, which has a still more powerful action than the first; then bromide of calcium, with which I have never experimented, but which is much employed in America, and especially by Hammond. The latter, while giving the preference to bromide of sodium, considers bromide of calcium superior to the potassium salt; one gramme producing a sleep which is calm and refreshing. His vehicle of administration of the calcium preparation is syrup of the lactophosphate of lime.

I have enumerated the alkaline bromides, of which the most employed is assuredly bromide of potassium. These bromides are often associated in prescription, a mode of administration called the *mixed bromides*.

There are other bromide compounds which are sometimes given, as the bromide of zinc and bromide of camphor. Theoretically, the zinc bromide should be a good preparation, since zinc oxide possesses anti-epileptic properties, as we have before seen. Bromide of zinc is used in England and America in the form of a syrup. Hammond speaks highly of this salt in epilepsy.²

Introduced into therapeutics by Deneffe, of Brussels, and investigated chemically by Clin, therapeutically by Bourneville, bromide of camphor has been employed in the treatment of hysteria and epilepsy, and although favorable results have been obtained at the Salpêtrière, yet this preparation has not come into general use. Thus far the bromide of potassium remains the medicament the most active and most employed in the treatment of epilepsy.

How shall bromide of potassium be administered? Although it has been attempted to introduce this salt by the hypodermic method and by enema, these tentatives have been promptly abandoned, and for the reason, as I told you when treating of diphtheria, that bromide of potassium has an irritant and even caustic action. We are then restricted to the alimentary canal as the only practical way of introduction, and when given it should be diluted with a considerable quantity of water; the dra-gees, granules, and compressed pills containing bromide should be discarded. I should add that when you are

forced to increase the dose of this salt, as in epilepsy generally, you should require the patient to partake freely of milk, in order to avoid the gastro-intestinal irritation which results from the prolonged use of the bromide in large doses.

The quantity of bromide which ought to be administered daily is very variable. From twelve to fifteen grammes a day have been given; the medium dose, in the majority of cases, is eight grammes. This dose cannot be given from the first; you must begin with smaller doses, as one gramme morning and evening, and gradually increase the dose till you have obtained complete control of the disease. Voisin thinks that we should regard as the maximum dose that which determines abolition of the reflex sensibility of the pharynx. I believe that this is an excellent rule in the case of hysteria, but not in epilepsy, and that in this disease we must not only attain abolition of pharyngeal reflex irritability, but we must, if occasion demand, push the administration of the remedy even farther, till we have stopped the attacks. But it is absolutely necessary to have a bromide preparation which is chemically pure, for Voisin has shown that the impurities of this salt considerably modify the therapeutical effects which it produces.³

These large doses of bromide, given for therapeutic effect, are not without danger. They determine in certain patients a train of symptoms which in some instances have been grave enough to cause death, and to which the name *bromism* has been given. Besides the inconveniences mentioned in my lecture on hysteria, and which are the acne eruption, the disagreeable odor of the breath, the peculiar unpleasant taste of the saliva, there are certain nervous manifestations of a grave kind, such as I lately observed in one of my patients who had taken in one day thirty grammes (a troyounce) of bromide of potassium. These symptoms consisted in a remarkable depression of the vital forces. The patient could not stand, could not make the least movement without difficulty. Intelligence was impaired, and there was aphasia and amnesia.

This state, in which the patient is plunged into a physical and moral brutishness the most deplorable, persists till elimination of the bromide by the various excretories has taken place.

These inconveniences of the bromide treatment are again and again experienced by the epileptic patient, who finds himself often in a sad dilemma; either he must desist from the use of the remedy and see his fits come back, or persevere in the treatment, notwithstanding the depression of all his faculties and forces. Believe me, he will generally choose the latter as the lesser evil, rather than suffer those terrible attacks which are to the epileptic a menace always suspended over his head.

But it is especially in the delirium of action, which makes the epileptic a criminal without his knowing it, that it is necessary to employ the bromide in massive doses in order to overcome the mania which impels him, unconsciously, to deeds of violence. Nothing, in fact, is more curious than to see in the wards of our lunatic asylums men enjoying their intelligence and their reason who have committed, and would still commit, the most astounding murders, if their maniacal propensities were not kept in check day by day by immense doses of bromide.

How long should you continue the bromide treatment of epilepsy? Often a very long time, and even during the

¹ Hammond on Nervous Diseases, p. 806. Paris, 1879.

² W. A. Hammond: The Therapeutic Usage of Calcium Bromide, New York Med. Jour., 1872, and Bull. gen. de Therapeutique, 1872; also, Hammond on Diseases of the Nervous System, p. 886. Hammond's formula for bromide of zinc is as follows:

R. Bromide zinc, ... grammes iij. (or gr. xlv)
Syrup simplicis, ... grammes xxx. (1 fl. oz.)

M. Dose.—Ten drops three times a day. The quantity to be gradually increased till thirty drops or more are given at a time. Each dose should be well diluted with water before taking, as it is apt to offend the stomach.

³ The purity of the bromide salt is a point of capital importance. It ought especially to be free from the iodide. To determine the presence of iodide of potassium, dissolve the suspected salt in starch water, add a few drops of nitric acid, and if there be any iodide of potassium present you will obtain a blue color from the formation of iodide of amyl. Lambert's method is even more delicate. Dissolve the bromide in a solution of potassium permanganate; if the bromide is pure the solution keeps its violet color, while it takes a yellowish tint if there are any traces of iodine present. According to Lambert a chemically pure solution of potassium bromide when treated by HCl, should evolve a few bubbles of CO₂. Treated by one gramme of benzene, and a few drops of bromine water, it ought not to give a rose color. Treated by HNO₃ and nitrate of baryta, it ought not to turn yellow (Adrien: Researches on the Chemical Composition of Preparations of Bromide of Potassium, Bull. gen. de Ther., t. lxviii., 1870; Lambert: How to Detect the Presence of KI in Bromide of Potassium, Bull. gen. de Ther., t. lxii., p. 593, 1867).

entire life of the patient. When, moreover, you have obtained the full benefit of the drug, and have witnessed complete cessation of the attacks, you must not leave off abruptly the medicine, but must keep on with it for several years, gradually diminishing the dose, as Legrand du Saulle has advised.¹

Under the influence of bromide medication, thus carried out, we witness mitigation, diminution in frequency, then disappearance—first of nocturnal then of diurnal attacks; then the vertiginous paroxysms and the aura cease, symptoms which most resist the bromide treatment. These favorable results you will, as I said, obtain in one-half your cases. But you can often anticipate what will be the result of the bromide treatment by determining the cause of the epilepsy. Here Voisin has given us valuable hints. The epilepsy which results from malformations of the cranium or cerebral tumors is rebellious to the bromide, while the functional and hereditary neurosis is amenable to this treatment. Sex has no influence one way or the other.

Such, gentlemen, are the leading indications and methods of the bromide medication in epilepsy. If not absolutely and certainly curative, this medication, nevertheless, represents a real therapeutic progress when we consider the unsatisfactory nature of the treatment of olden times. I ought to add, as an item of interest in this connection, that experimental physiology has confirmed ordinary clinical results; I allude to the recent curious experiments of Albertoni, who, after prolonged administration of the bromide to animals was not able to induce in them experimental epilepsy by irritating the cerebral cortex, although after giving atropine under like circumstances such convulsive attacks could easily be provoked.²

Other remedies which act on the medulla oblongata, or on the muscular system, have been prescribed in epilepsy, such as picrotoxine, bromide of gold, curare, and nitrite of sodium.

Curare or wourari has been tried hypodermically in epilepsy by Voisin and Liouville; the effects are not sufficiently encouraging to warrant continued use of this medicament, notwithstanding the more recent trials of Edlefsen and Kunze. Picrotoxine, the active principle of *cocculus indicus*, has been made the subject of study by Brown-Séquard, Glover, Bonnefin, Vulpian, and others. These researches show that picrotoxine has an elective action on the medulla oblongata, and may even determine a veritable experimental epilepsy. Planat has utilized this special selective action of picrotoxine in the treatment of epilepsy; I have myself experimented with it, but have not obtained favorable results except in alcoholic epilepsy—which will get well of itself if the patient will practise abstinence from alcohol. Vulpian has also tried it without any success. Add that picrotoxine is very poisonous, even in small doses, and we ought to conclude that this medicament should have a very humble place in the treatment of epilepsy.

Finally, Huchard has recently advised the association of digitalis with bromide in the treatment of epilepsy, and claims good results from the combination.

Thus far we have been occupied only with the general, or pharmaceutical treatment of epilepsy; it remains to speak of the hygienic treatment, and of that of the attacks.

If hygiene has not a preponderant part in the treatment of epilepsy, nevertheless it is not without influence

on the production of the attacks. Here, as in hysteria, the question of marriage comes up for consideration. Ought an epileptic to marry? It is well to bear in mind, and to urge upon your clients, when they consult you in reference to the marriage of an epileptic, that epilepsy, with all its gravity, is not necessarily and fatally hereditary, and in giving this opinion you can fortify yourself by the authority of professor Laségue, than whom no one is more qualified to judge on questions of this kind. In fact, Laségue denies the hereditary nature of epilepsy. This is a matter of considerable importance, and holding this view we are enabled to tone down somewhat the sombre colors in which such a union would otherwise be invested.

If continence does not play an important part, it is not the same with venereal excesses, which have a most decided influence in the production of attacks. Masturbation is most pernicious to epileptics, and destroys, in a certain measure, the effect of the treatment by bromides.

Epileptics should live in the country and avoid crowded assemblies, political gatherings, concerts, shows, and the like. You must often have remarked that theatrical exhibitions are frequently interrupted by attacks of epilepsy, and this for the reason, principally, that the bad air and the heat of the apartments are deleterious to epileptics.

The alimentary regimen has a certain influence on the falling sickness. First of all, the alcohols are themselves a cause of epilepsy, and you are not ignorant of the studies of Magnan as to alcoholic epilepsy, and in particular that form of epilepsy which is produced by absinthe; it is proved that these nerve-excitants produce epilepsy in men and animals; you ought then to interdict the use of alcoholic beverages to your patients.

You ought also to advise a diet which shall contain nitrogenous substances in very sparing quantity. It seems, in fact, proven that a vegetable diet diminishes in a marked manner the number of attacks, while an azotized diet considerably increases them; the epileptic, then, should be strictly vegetarian. To sum up the rules of hygiene, the epileptic patient should live much in the open air, be very moderate in sexual indulgences, take a great deal of exercise, abstain from spirituous liquors, and live almost exclusively on vegetable food.

As for the treatment of the attack, it consists in placing the patient in a horizontal position, and loosening any part of his apparel which may cause constriction of the neck or thorax. It is generally customary to place some hard substance (as a clothes-pin) in the mouth of the patient to prevent biting of the tongue, a means which has not been very successful; the foreign body, if too resisting, breaks the teeth of the patient, and if too little resisting, is liable to be bitten off in the struggle, and to find its way to the throat or windpipe of the patient, causing suffocation.

Certain measures have been advised to prevent the convulsive seizures, such as the energetic flexion of the great toe, compression of the temporal regions, of the infra-occipital hollow, etc. Others have counselled by various compressions to prevent the aura from spreading; Rozier has even devised a special instrument for this purpose. All these means are only of use in certain exceptional cases where the epileptic has premonition of his attack by sensations of aura which precede the convulsive seizure by a brief interval. It has also been proposed to employ during the paroxysm, hypodermic injections of apomorphia, inhalations of bromide of ethyl, and nitrite of amyl. Bourneville has given us some interesting facts relating to the two last medicaments, but these inhalations have not come into general use.³

¹ His rules are as follows: We will suppose a case apparently cured. During the first year—fifteen days of each month with the bromide every day in the usual dose, and fifteen days with the bromide every other day. In the second year—fifteen days of every month with the bromide every third day, and fifteen days with the bromide every day. In the third year—fifteen days of every month with the bromide every day, and fifteen days with the bromide every fourth day. In other cases (and this is now his habitual method), after the patient has gone one year without an attack, bromide treatment six days in the week. After fifteen months of freedom from attacks, bromide five days in the week. After eighteen months, bromide four days in the week. At the end of two years from the last attack bromide only three days in the week (*Traitement et Curabilité de l'Epilepsie*, by Legrand du Saulle).

² Albertoni, *Action de quelques Médicaments sur l'Ecorce cérébrale à propos du Traitement de l'Epilepsie*.

³ Magnan: *Epilepsie Alcoolique, Action spéciale de l'Absinthe*, *Compt. Rend. de la Soc. Biol.*, t. xiii., Paris, 1869; Rodet: *Troubles Caused by the Abuse of Alcohol and of Absinthe*, *Gaz. Méd. de Lyon*, t. xvi., pp. 500-502, 1864; Du-jardin-Beaumez: *Art. Absinthe*, in *Diet. de Ther.*, 1882; John Mersin: *Influence of Food and Hygiene in Epilepsy*, *West Riding Lunatic Asylum Med. Reports*, 1875; Bourneville et Ollier: *Recherches sur l'Action physiologique du Bromure d'Ethyle dans l'Hystérie et l'Epilepsie*, *Gazette Méd. de Paris*, No. 35, 1880; Bourneville: *Du Nitrite d'Amyle dans l'Epilepsie*, *Soc. de Biol.*, *Janv.*, 1875.

This finishes what I deemed important to say relative to the treatment of epilepsy, and the beneficial influence of therapeutics in this terrible disease. In the next lecture I shall consider chorea and its treatment.

Progress of Medical Science.

IRREGULAR WORK WORSE THAN OVERWORK.—At the present time, when we hear so much of the evil consequences of what is rather loosely termed "overwork," the following remarks of the *British Medical Journal*, July 14, 1883, seem quite *apropos*: "'Overwork,' properly so called, is not so likely to occur, or if it occur to do mischief, as irregular or disorderly activity. If there be not sufficient time for recuperation in the course of work, exhaustion must take place. If the work done be of such a nature as to put an undue strain on any one faculty, harm may be done, although the brain as a whole may not be severely taxed. If the supply of brain-food be insufficient to enable the recuperative faculty to compensate by food for consumption in use, there must be exhaustion. If work be exacted when any indication of exhaustion is present, it is impossible that injury shall not be inflicted. It follows that educators have especial need of care to avoid engaging the brains of their pupils in work for more than very short periods, and to provide intervals during which there may be rest of the centres specially taxed. Much may be done by changing the kind of work frequently. We are of opinion that no growing child should be kept longer than half or at most three-quarters of an hour at one task, or even the same description of work. Again, the great centres of relation should not be overtaxed. Vision, hearing, the speech centre, and the centre specially concerned with written language, whether in writing or reading, should not be wearied. Brain weariness is the first indication of exhaustion. The faculty of 'attention' is perhaps one of the most easily vulnerable of all the parts or properties of brain-function. It is the faculty which most readily becomes permanently enfeebled, and when weakened entails most trouble in adult life. In children it is difficult to catch and fix the attention. No effort should be spared to secure this fixity of thought; but in order to avoid weakening the power of 'thinking'—as distinguished from 'thought-drifting'—the teacher should not strive, or desire, to hold the attention by any effort on *his* part longer than it is voluntarily given by the child. The slightest indication of exhaustion should at once be met by a change of task. If these hints, general as they are, can be reduced to practice, we think there is little fear of 'overwork' or harm from brain activity. Desultory and insufficient work is more to be feared by far than 'overwork,' because the brain, like every other part of the organism, grows as it feeds, and it can only feed as it works."

A RENAL FORM OF TYPHOID FEVER.—Dr. Didion has chosen this subject for an inaugural dissertation, and comes to the following conclusions. Typhoid fever produces a renal congestion, which plays an important part in the course of the disease. Albuminuria is almost constant, but generally slight and temporary; when abundant, it is a sign of true nephritis. The real inflammation is both parenchymatous and interstitial, and produces certain characteristic symptoms, such as asthenia, stupor, dryness of tongue, cedema of the face and legs, lumbar pains, cutaneous eruptions (pemphigus, ecthyma, boils), and an alteration in the urine, which has a reddish color and the odor of boiled bread; in the deposit, red and white blood-corpuscles are found, as well as casts; the urine contains a large quantity of albumen. The diagnosis can easily be arrived at by the above-mentioned symptoms. The termination is often fatal, either from asthenia or uræmia.

As to the treatment, Bouchard recommends carbolic acid and the salicylates, Polli the sulphites, Klebs the benzoate of potash. Leeches, mustard poultices, and cupping in the lumbar region are useful; but blisters, even with the addition of camphor, must be avoided. In certain cases, the disappearance of the symptoms is accompanied by abundant diuresis, which ought, therefore, to be favored if possible; but all diuretics are not equally good, those which possess irritating properties must be avoided. The best in these cases is milk, pure or mixed with water. Whatever may be the way in which it acts on the kidneys, it is always well borne, and its action is double; it increases the secretion of urine, and hastens the elimination of toxic principles, without producing any irritation, even in the most acutely inflamed kidney. Subcutaneous injection of pilocarpine might perhaps be useful; in one case, when the skin was dry and burning hot. Dr. Didion injected twice daily one-sixth of a grain of pilocarpine, and under its influence the skin became moist and abundant sweat was produced; the tongue also was less dry than before; the temperature fell in two days from 105.8° to 98.6° F.; but three days later the patient died, after the temperature had once again reached 104° F. New investigations are necessary before we can arrive at definite conclusions. As for the cold baths, Gubler thinks that they are contra-indicated in case of nephritis, but Libermann considers their use as surely beneficial in spite of it. Several patients who had been subjected to that treatment did not complain of any inconvenience, and cold lotions rapidly applied to the trunk and limbs with a sponge seem to relieve the patient, lower the temperature, and re-establish the functions of the skin. All these advantages must be weighed against the danger of a renal congestion; but further experience alone can show which treatment is most advantageous.—*British Medical Journal*, July 14, 1883.

ALBUMINURIA FOLLOWING CUTANEOUS IRRITATION.—Dr. Mihran has investigated this subject, and formulates the following propositions: 1. Cutaneous excitement, by whatever means produced, may give rise to albuminuria. 2. The amount of albumen, which, in such a case, can be almost at once detected, will vary according to the degree of excitement, the energy of the exciting agent, the extent of surface acted on, and the duration of the excitement. 3. The duration of the albuminuria will also be determined by the same conditions; in most cases it is transient, but, under the influence of extreme peripheral irritation, it may persist, along with an alteration in the organic structure involved. 4. Albuminuria proceeding from cutaneous excitement depends proximately on a disturbance of vaso-motor innervation.—*Journ. Cut. and Vener. Dis.*, July, 1883.

A NEW METHOD OF APPLYING PRESSURE TO ENLARGED TESTICLES.—In the *Lancet* for July 7, 1883, Dr. Corbett describes a simple method of applying pressure to enlarged testicles, which is calculated to do away with many of the objections against the ordinary plaster strapping. He prefaces the explanation of his plan by saying that he derived the idea from a homely source, nothing more or less than seeing the means employed for encasing a football; barring that, instead of having the encasing material made of leather, he had it made of india-rubber—such as one sees in the construction of the balls in spray producers, etc. The cases he recommends should be made of different sizes and thicknesses, and oval in shape. The means of tightening the cases and applying the pressure would be identically the same as in the football cover—*i.e.*, by lacing. There should be an opening at the neck of the case to allow the passage of the cord. This opening would be surrounded by a ring (interrupted) of leaden wire, to ensure its patency and to prevent pressure on the structures of the cord. The leaden wire ring being interrupted, its softness would offer no obstacle to its easy adjustment round the neck of

the enlarged gland. With a supply of such cases, the treatment of an enlarged testicle would offer but little difficulty. It would simply mean the selection of a rubber case of the right size and thickness, and capable when laced up of exercising a steady equable pressure on the enlarged organs, and applying the case to the testicle and lacing it up. If considered necessary, the testicle could first be enveloped in a thin layer of cotton-wool. This would prevent any possibility of the skin being nipped or chafed by the lacing. As the gland reduces in size a smaller case would be applied, and thus a steady pressure kept up until a cure was effected. The above plan has the advantages of simplicity, neatness, and quickness in its application to recommend it. It involves no elaborate apparatus, and does away with many, if not all, of the objections connected with the operation of strapping with plaster.

A CASE OF TRACHEOCELE.—A merchant, twenty-nine years of age, of previous good health except for an attack of rheumatism, acquired a bronchitis with severe cough. After a severe attack of coughing he suddenly noticed a small tumor, the size of a hazel nut, just above the sternum. In three days this had increased to the size of a pigeon's egg, and incommoded respiration and deglutition. The tumor remained stationary for three weeks, when it suddenly opened and discharged blood and pus, and became much reduced in size. It grew again slowly for a time, but remained smaller and softer than before. It was larger during expiration and diminished again in size during inspiration. Upon compression a fine crepitation could be felt, and the tumor disappeared. The treatment consisted in permanent compression of the hernia by a sort of truss, and resulted in a cure after the expiration of six weeks. The patient, however, became the victim of chronic asthma, from which relief could only be obtained by constantly increasing doses of morphine. From a study of this case, and twelve others, reported by different observers, Dr. Déti's arrives at the following conclusions: 1, the causes of the affection are bodily exertions of any sort; 2, the principal symptoms are enlargement of the tumor during expiration, disappearance of the same under compression, and a muffled, squeaking voice; 3, the prognosis is favorable; 4, treatment is purely local and consists in steadily maintained compression.—*Centralbl. für Chirurgie*, July 7, 1883.

BATHERS' CRAMP.—Some recent bathing fatalities have again drawn attention to the important subject of bathers' cramp. If the nature and causes of this dangerous affection were more generally known, it is probable that many deaths from drowning in the bathing season might be prevented. Cramp is a painful and tonic muscular spasm. It may occur in any part of the body, but it is especially apt to occur in the lower extremities, and, in its milder forms, it is limited to a single muscle. Pain is severe, and the contracted muscles are hard and exquisitely tender. In a few minutes the spasm and pain cease, leaving a local sensation of fatigue and soreness. When cramp affects only one extremity, no swimmer or bather, endowed with average presence of mind, need drown; but when cramp seizes the whole of the voluntary muscular system, as it probably does in the worst cases, nothing, in the absence of prompt and efficient extraneous assistance, can save the individual from drowning. Although the intimate nature of muscular cramps, and the precise mode in which they are established, are still unknown, experience has furnished us with sufficient data on the subject to enable us to recognize the chief conditions of their causation. These conditions are: a peculiar individual susceptibility or idiosyncrasy; the shock of cold applied to the general surface of the body; prolonged muscular exertion; and forcible and sudden muscular exertion, especially in the direction of the extension of the extremities. There can be no doubt about a liability to muscular cramp being

an individual peculiarity. The disorder is especially apt to arise in persons of irritable temperament. While cramp has been met with in all ages, sexes, temperaments, and climates, it has been observed that it occurs far more frequently in warm climates than in cold, and chiefly in the hottest of warm climates, and that persons of middle age suffer most from the affection, and men more so than women, and the robust and vigorous more so than the weakly. Neither can there be any doubt that the shock of cold applied to the surface of the body, especially when the body is unduly heated, is the commonest determining cause of the worst and most extensive forms of bathers' cramp. On this fact is founded the common prejudice against bathing when the body is much heated. Many fatal cases have illustrated this point. Only a short time ago, a robust soldier, who was an expert swimmer, rowed in a boat, upon a sultry evening, to a deep pool; here, with his body glowing from muscular exertion, he plunged into the water with the intention of taking a refreshing bath, when he was immediately seized with general muscular cramp, so that the poor fellow was at once drowned. That mere prolongation of muscular exertion, as in continued swimming, and forcible and sudden muscular exertion, particularly in the extension of the extremities, as in swimming with very vigorous and rapid strokes, are, respectively, efficient and frequent determining causes of cramp, familiar experiences to every swimmer. These muscular conditions, however, usually give rise only to the slighter and more localized forms of cramp. Serious cramp is a peril which menaces most persons with highly developed muscles. Its most powerful and most avoidable cause is the sudden immersion of the body, when its surface is highly heated, in water of a relatively low temperature.—*British Medical Journal*, July 14, 1883.

THE ABSORPTION OF WATERY SOLUTIONS BY THE SKIN.—From an examination of this subject (*Ann. de Dermatol. et de Syph.*), Dr. Aubert concludes the following: 1. Substances dissolved in water may make their way through the epidermis without producing any visible external lesion. 2. Nevertheless, the essential condition of such penetration appears to be a break in the epidermis where it is prolonged into hair-sheaths, and along the included portions of the hairs themselves. 3. In fact, according to our observations, this penetration takes place exclusively in hairy parts. 4. It is promoted by whatever causes the hair to be pulled about, as, for instance, friction with the moist or dry hand, or unusual size, stiffness, and length of the hairs. 5. A delicate integument and thin cuticle afford unfavorable conditions, on account of the less vigorous growth of hair on parts thus endowed. Total absence of hair is likewise a condition eminently unfavorable to absorption. 6. Hence we may infer the possibility of introducing soluble substances into the circulation by causing them to penetrate the epidermis in small quantities, either with or without the aid of baths. To effect this, friction with the palm of the hand would have to be applied forcibly over a large surface, and especially where the skin is hairy. The only possible unpleasant effects would be a moderate degree of inflammation, manifested in a little redness and smarting about the roots of the hairs. 7. Simple immersion in a bath, however prolonged, could not be relied on to effect the entrance of even the smallest quantity of a solution through the skin.

RECTAL EXAMINATION FOR VESICAL CALCULUS.—Professor Volkmann states that after the patient is completely anesthetized one hand should be placed over the pubis, introducing the forefinger of the unoccupied hand into the rectum. In this manner it is easy to grasp a stone with the upper hand, especially in lean subjects. Sometimes it is possible to pass a ligature around the abdominal walls inclosing the stone. In vesical papillomata and myxomata with long pedicles, this ligation might be of use.—*Archiv für Chirurgie*.

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THE HYGIENE OF DOG DAYS.

THE oppressive heat of this season is alluded to by Virgil, who ascribes to the baneful influence of Sirius corporal languishment and disease.¹

How to keep strong and well when the thermometer is 90° in the shade and there is not a breeze, and the atmosphere is full of moisture; when the appetite flags and digestion languishes, and toil is irksome, is the perplexing question.

By common consent for the inhabitants of cities, for all men of business and all professional men, this is the holiday season, and nothing in the economy of nature is more appropriate than that citizens should fly to mountainous regions of the country, or the seaside for coolness, invigorating air, rest, and recreation during this trying period, when the air of our crowded cities is rank with decomposition and corruption.

Not to dwell on the peril to the cerebro-spinal system of excessive heat; and it is a matter of frequent observation that exhaustion of nervous energy, phlegmasias and even death are thereby produced—not to dwell on the relaxation of the muscular system, of the perspiratory system, and the venous congestions which all experience to a greater or less degree, the digestive organs are undoubtedly the most exposed to danger. Over-eating, and the eating of improper food are sins of dog days as of all other periods. A considerable portion of the human race have not self-control when impelled by appetite, and never learn self-control by the dearest bought experience. Green fruits and green vegetables are in the market. There is little desire for ordinary food, but these new products of the soil, though generally immature, are palatable and appetizing. The weakened stomach is oppressed by a burden which it cannot digest, and *embarras gastrique*, enteritis, or cholera morbus results. Happy the summer gourmand if, warned by a diarrhoea, he practises abstinence in time to escape worse evils.

So patent is it to every physician that a large part of the physical ailments of dog days are due to indulgence in green fruit and vegetables, that all citizens—those that stay at home to swelter during the hot weather, and those

that frequent the watering-places—cannot be too much cautioned as to the danger of much indulgence in the good things with which their tables, at this season of the year, are loaded. If, as at a medical banquet we once attended, the green corn could be labelled *cholera* the green peas *colic*, and the lobster salad, *despair of a jaded stomach*, only the simple truth would be told, however much it might seem like a stupendous joke. If the appetite be poor, the powers of the stomach are enfeebled, and should not be taxed. Food of an easily digestible character should be eaten, such as stale bread, oatmeal, pure milk (if obtainable), rice, a little fresh fish or *tenderloin*, broiled, not fried, chicken-, veal-, or mutton-tea, with a little soda biscuit, cooked ripe fruits in moderation. Heavy boiled dinners (fit only for the “tough stomachs of reapers”); rich puddings and pastries, salads, green legumes, fried meats, and animal food generally, should be either not indulged in at all, or eaten very sparingly.

Frequent ablutions form an important part of the hygiene of warm weather. The whole body should be bathed with lukewarm water twice daily, and if there be sufficient constitutional vigor to stand a cold bath, this will prove very invigorating.

Will it do to take a cold plunge while perspiring? This question has been answered both negatively and affirmatively. The common impression has been that a bath taken during active perspiration is likely to be injurious; therefore a hygienic rule has been established forbidding cold bathing at such times. This is a rule, however, which is transgressed by laboring men and farmers with impunity, and it is well known that in the European hydrotherapie establishments it is advised as preparative for the cold douche that the patient should take vigorous muscular exercise before the douche, in order to induce sweating; and it is at the period of greatest muscular activity that the cold plunge or douche is taken. It is maintained that the greater the difference between the temperature of the body before the douche and that of the water the more active the reaction will be. It is perhaps safer to follow the traditional opinion; at all events, the cold douche should be short. There is no question that the free external use of cold water is a powerful promoter of tone, and that many a vigorous literary man and accountant owes his robustness during the summer months to regular habits of cold bathing. Sea bathing is especially recommended to those who are in a situation to enjoy this incomparable hygienic luxury.

The air in dwelling-houses should be made as wholesome as possible, and all ill-smelling nuisances in the vicinity should be speedily abolished. Foul smells may not contain disease-germs, but they certainly offend the respiratory and digestive organs. The windows of sleeping apartments should be kept constantly open.

The daily tasks should be lightened in correspondence with the diminished capacity for hard work; opportunities for recreation should be improved, and sleep should be abundant. An hour of sleep after dinner is invaluable to most hard working men.

Such are some of the hygienic rules applicable to dog days; they will perhaps be less heeded by busy physicians at watering places, to whom, as to farmers, this is a harvest season, than by intelligent citizens generally.

¹ Æneid iii., 141:

Sinquebat, dulcis animas, aut ægra trahebant
Corpora: tunc sterilis exurere Sirius ægros.

Also x., 274:

Ille Siti morbos que fereos mortalibus ægris.

CONCERNING THE VALUE OF EXAMINATIONS.

THOSE who read the very interesting paper by Surgeon Shufeldt in the present issue will be impressed with the truth of much that he says regarding the real value of examinations as tests of knowledge actually possessed. These examinations are, as Huxley very truly remarks, the necessary evils of our existing system of education. But that they utterly fail in very many instances of accomplishing their real purpose goes without the saying. The failure to pass is often due to absolute ignorance on the part of the candidate. When there is no question on this point the examination serves its real purpose. Too often, however, the trouble is with an examining board which adopts too arbitrary a standard, or imposes too exacting conditions. There is great need of drawing the dividing line somewhere between these extremes.

It has often been said with much truth that the prize men in college do not, as a rule, make much of a show in after-life. They belong to a class now becoming quite numerous, who study to pass an examination rather than to gain knowledge. "They do pass, and they don't know." On the other hand, the scholar at the foot of his class, who scrapes through by so-called blind luck, often surprises every one by his ultimate successes. But ordinary examiners never appear to dream of such possibilities, nor are any practical efforts made to ascertain the real extent of that groundwork of knowledge upon which future success in any calling must depend. An approach is made in that direction in the searching character of the Army and Navy examinations, but that is all. It may, and doubtless does, serve to keep out incompetent men, but it cannot always bring to the front and develop those whose best work is ahead of them. That examining board would certainly be a wise one which could, under all circumstances, be able to separate the chaff from the wheat. But while this may be considered impossible it must nevertheless be acknowledged that there is great room for reform regarding the accepted method of examination even in the Army and Navy. There should certainly be an attempt to approach a more practical standard, an endeavor to bring out the qualifications which shall best meet the real requirements of everyday life in camp, on the field, or in hospital. At present there appears to be more danger of shutting out many good men who would be destined to ornament the corps than of admitting ignoramuses who would be liable to be dropped at their second examination.

The second examination is right enough in its place, but its real aim should be to measure the qualification of the candidate according to the bent of his future usefulness to the service. Proficiency in one line of study should offset a lack of it in another. Thus each one could be placed properly to bring out his best talents and be encouraged to pursue a line of study before and after his second examination best suited to his taste and capabilities.

Even Surgeon Bill himself, if subjected to an examination to-day, might pass better in chemistry than either in anatomy or surgery. And yet it would have been quite a mistake to have rejected him on that account. On the other hand, we have not heard that the late Geo. A. Otis, whose masterly "Surgical History of the War of the Rebellion" is a monument of talent and industry, was much of a chemist.

News of the Week.

THE PROGRESS OF YELLOW FEVER.—The appearance of yellow fever among the marines at the Navy Yard, near Pensacola, has given rise to much speculation as to the manner in which the disease found entrance. Nothing definite has yet been ascertained, as those in authority are not disposed to stop to inquire *how it got there* until they have perfected their sanitary arrangements for preventing its spread. At the present writing seven cases are reported to have occurred among them by Dr. Owen, the medical officer in charge. Outside the reservation great activity has been manifested by the health authorities of Pensacola, supplemented by the Marine Hospital Service; immediate steps were taken to quarantine the reservation by land and water by placing a sanitary cordon around the infected camp, thus cutting off all personal communication between the reservation and the outside world. With an efficient quarantine and other sanitary measures it is believed the disease will be confined within its narrow limits. Last week two cases of fever of a suspicious nature, with one death, were reported from Ocean Springs, Miss., a point nearly opposite the Ship Island Quarantine Station. The house in which they occurred was at once disinfected and isolated by a sanitary cordon, and up to the present writing no further appearance of the disease has been reported. Dr. Austin, of New Orleans, regards the cases as very suspicious, but will decide against their being yellow fever if the disease does not spread—a thing not likely to occur if properly guarded by those in charge of the sanitary cordon, etc.

Considerable opposition to the location of the Cape Charles quarantine station, at Fisherman's Island, is still manifested by the Baltimore pilots, notwithstanding the fact that it is more convenient for them than for the Virginia pilots, who have offered no objection whatever, but on the contrary have aided the quarantine officers from the first in bringing foreign ships to anchor opposite the station. A few days since the Governor of Maryland issued an order instructing the Baltimore pilots in this matter, so that their opposition is confined to newspaper attacks instead of overt acts of insubordination as formerly. The station is now in good running order, and all foreign vessels are inspected before being allowed to proceed up the bay. Everything is satisfactory at the other United States quarantine stations: the one at Sapelo, on the coast of Georgia, designed as a place of refuge for infected vessels bound for any port between Charleston, S. C., and St. Augustine, Fla., has as yet had nothing to do.

Consular reports continue to indicate no increase in the fever at foreign ports. At Cardenas, Cuba, but four or five cases, and no deaths, are reported in the town for the week ending August 11th, and "no yellow fever among the shipping." At Matanzas there were four cases and two deaths in the city; none reported in the shipping. Previous reports of yellow fever at Colon (Aspinwall) have been contradicted by the Consul at that place. At Vera Cruz the disease continues in great violence. A cable despatch of the 13th instant states that the steamer Alexandria cleared for New York on

the 11th, and a second despatch, dated the 14th, that the steamer *Bernard Hill* cleared on that day for Baltimore. A third despatch, dated the 20th, announces the departure, on the 17th, from Vera Cruz of the steamer *City of Washington* for New York. These steamers will of course be carefully inspected, and quarantined if necessary.

Immediately upon the appearance of yellow fever at Pensacola Navy Yard a large supply of disinfectants and a half-dozen hospital tents were ordered by Surgeon-General Hamilton from the supply on hand at New Orleans. An additional number of tents were asked for by the Pensacola Board of Health, and twenty more sent them on the 21st instant. In order to insure safety a house-to-house inspection of Pensacola was ordered and commenced on the 21st instant. The following despatches from Pensacola and Fortress Monroe to Surgeon-General John B. Hamilton give the latest yellow fever news up to the hour of going to press :

PENSACOLA, FLA., August 20th.—No new cases at the Yard to-day. Pensacola perfectly healthy. Will commence inspection to-morrow. Will give you progress every day. Cordon perfect and under my personal supervision. Has performed good service already ; arrested thirteen persons. Cordon seventeen miles long, well protected by swamp and water, and all possible landings guarded. JOHN B. GUTTMAN, President Board of Health.

PENSACOLA, August 20th.—Board of Health request that I ask you to send twenty hospital tents. Reported eight cases and three deaths. J. M. TARBLE, Collector.

PENSACOLA, August 20th.—No new cases at Navy Yard for last forty-eight hours. Eight cases and three deaths reported to date. Villages of Warrenton and Woolsey perfectly healthy. Fever confined to Yard hospital. Surgeon Owen in critical condition. WHITE, Attending Assistant-Surgeon.

FORTRESS MONROE, August 20th.—Spanish steamer *Navarra*, from Havana and Cienfuegos to Baltimore, in ballast, etc., ordered in quarantine to-day. One suspicious case of fever, rest well. Will detain her several days for developments. HENRY SMITH, Surgeon.

The following brief history of the Norwegian bark *Salome*, is furnished by Surgeon Henry Smith, of the Marine Hospital Service, in charge of Cape Charles quarantine station : "Norwegian bark *Salome*, spoken by the Revenue steamer *Ewing*, off the Capes, August 15th, directed to remain at her anchorage in Lyme Haven Roads until boarded and inspected by United States quarantine surgeon. Was inspected at 6.30 A.M., the 16th, and ordered to quarantine station for observation, disinfection, and fumigation, and to allow no communication whatever until further orders. This vessel left Cardiff, Wales, February 6, 1883, for Vera Cruz, Mexico, with a cargo of patent fuel, arriving there April 25th, with a crew consisting of eleven persons, all on board well. The health of the men remained good until the cargo was discharged, when, on June 10th, ordinary seaman Soren Aslagnsen was taken down with yellow fever and died in three days of black vomit. The captain had the fever June 16th, but recovered, and the *entire ship's crew* were taken down in rapid succession. After ob-

taining ballast, the *Salome* sailed from Vera Cruz, June 26th, for Galveston, Texas, intending to take on a cargo of cotton-seed cake and oil ; was not allowed by the authorities to go beyond the inner quarantine, and ordered to the outer quarantine the next day. She arrived at the Galveston quarantine, July 1st, and the day following M. E. Nielsen, first mate, and brother of the captain, was taken with the fever and died July 4th. A passenger named Guerre, a Frenchman, and of New York, who took passage at Vera Cruz, was attacked July 2d (the same day as the mate), and died July 4th. The last death was that of Ole Tobiasen, a seaman, who was taken sick July 8th, and died July 14th, the day after sailing from Galveston, of black vomit, and was buried in the Gulf of Mexico—making a total of four deaths.

. . . An additional unacclimated seaman was shipped at Galveston two days before putting to sea ; all were found comparatively well upon arrival of the vessel at the Capes—thirty-one days having elapsed since the last death or case of any kind, the last man shipped having thus far escaped. She was disinfected and fumigated at Galveston. The *Salome*, which has caused so much anxiety because of her disastrous experience, I believe enjoys the distinction of being the first infected vessel to arrive with yellow fever at our shores in the present year."

THE PROGRESS OF CHOLERA.—But little if any progress has been made in the march of cholera during the past week, and the precautionary measures adopted by various countries, give hope that it may be kept at bay for another year.

A letter to the State Department from the Consul-General of the United States at Lisbon, Portugal, dated July 20, 1883, says : "Certain sanitary measures of a precautionary character have been taken by the Portuguese Government against the introduction of the Asiatic cholera, at this time a fearful epidemic in Egypt. From the 5th of the present month, by a ministerial decree—of which I have the honor to enclose a printed copy—the Egyptian ports of the Mediterranean were declared infected by cholera and all the Red Sea ports were declared suspected. The danger of infection at this port is not great, as Portuguese intercourse with the ports mentioned may be said to be confined to the monthly arrival at Lisbon of a steamer of the British India Company. The Spanish Government has imposed similar vigorous measures upon vessels arriving from the English ports, and a portion of the Madrid press has advised that until similar restrictions are imposed in Portuguese ports upon such vessels, an embargo be laid on all persons entering Spain by land from Portugal. Beyond the measure referred to above, no others have been taken by His Majesty's Government, as far as I am informed by the competent authorities. It is said that concert of action is contemplated by certain of the European powers as regards the continental ports of Central Europe, and that stringent measures are under consideration as regards intercourse with the ports now so painfully affected. The quarantine here is not rigorous, being of seven days only, while vessels from South American ports are subjected to eight days' detention and seclusion."

The following is a translated copy of the "Ministerial Decree" referred to in the foregoing letter :

"In consequence of information received, and in conformity with advice of board of health, all ports of Egypt on the Mediterranean are declared infected with cholera morbus from June 20th last; and also ports of the Red Sea, both Egyptian and Ottoman, are declared suspected. Lisbon, July 5, 1883."

The United States Consul at Copenhagen, Denmark, under date of July 20th, transmits to the State Department the following notice relative to the measures taken against the introduction of contagious diseases in that kingdom:

[Translation.]

"Notice is hereby given that the regulations in Second Section I. of the Law relating to measures against the introduction of contagious diseases in the kingdom, of July 2, 1880, will be enforced with regard to ships coming from all parts of Egypt until further notice is given.

"In consequence of information received that the cholera is now prevailing in Egyptian ports, and as this disease seems to have a very considerable circulation, the Regulations in Second Section No. I. of the law relating to measures against the introduction of contagious diseases in the kingdom, of June 2, 1880, will, until further notice, be enforced with regard to ships coming from, or which have been in communication with any of the ports of Egypt, or which may have received persons from, or have had persons on board from such a ship.

"This regulation will be enforced at once, and is hereby brought to the notice of all whom it may concern.

"The Ministry of Justice, July 4, 1883.

"(Signed) J. NELLEMAN."

The United States Consul at Odessa, Russia, in a letter to the State Department—July 10th—says:

"I have the honor to report that from the 13th inst. all vessels arriving at this port are to be subjected to seven days' quarantine, on account of the cholera epidemic now existing in Egypt."

The following is a list of the United States Sanitary Inspectors on duty at foreign ports, with a copy of their instructions:

At Liverpool, England.—William Kelly, M.D., Robert Jones, M.D., J. Oliver, M.D.

At London, England.—Joseph Higham Hill, M.D.

At Vera Cruz, Mexico.—Robert Mainegra, M.D.

At Havana, Cuba.—Daniel M. Burgess, M.D.

Instructions.

The Sanitary Inspector is required to visit and inspect all vessels bound for any port of the United States, and in case of the departure of infected vessels, notification of the same should be transmitted by telegraph in case the vessel is a steamer, and by mail if a sailing vessel; he will be governed in sending cable despatches by the rules for the same herewith enclosed (being an abbreviated or cipher message); he will make an abstract, weekly, of all bills of health issued at his port of all vessels bound to the United States. This report shall show the name, rig, and nationality of vessel, date of sailing, number of the crew, number of passengers, condition of crew, condition of passengers, present sanitary condition of the vessel, previous sanitary condition of vessel, and sanitary condition of the port.

All infected ships should be instructed to put in at

Ship Island or Sapelo Refuge Station before proceeding to their port of destination in the United States, thereby saving detention, as they will be sent there by the health officer of any Southern port they may attempt to enter.

The object of the inspection is to keep the Surgeon-General of the Marine Hospital Service informed of the departure of infected vessels for the United States, in order that he may notify the port of destination of the probable time of arrival of such vessel, so that precautionary measures may be taken to prevent the introduction of contagious or infectious diseases.

Every effort should be made to keep thoroughly informed of the sanitary condition of the port, and notify the Surgeon-General, without delay, of any danger that may be apparent.

SANITARY CONDITION OF WASHINGTON, D. C.—The health officer of Washington, Dr. Smith Townshend, has made a request of the District Commissioners to expend \$500 in placing the city in a good sanitary condition. Although Washington looks clean with its wide streets and beautiful parks, there are not a few by-ways and vacant lots which are teeming with filth, and need the attention of a sanitary inspector.

THE POST-MORTEM EXAMINATION OF THE LATE JACOB S. MOSHER, OF ALBANY.—The autopsy on the late Professor Mosher was held by Drs. Samuel B. Ward, Albert Vanderveer, N. L. Snow, John B. Stonehouse, William Hailes, Jr., Willis G. Tucker, and Maurice J. Lewi, coroner's physician. The result was announced as follows: "We, the physicians who were present at the autopsy on the body of the late Dr. Jacob S. Mosher, are unanimously of the opinion that death resulted from heart failure, the consequence of degeneration of the coronary arteries, and of acute endocarditis." The further opinion of the physicians is that the disease was of probably not more than ten days' duration, and was probably caused by overwork. Death was instantaneous and painless. The brain weighed a little over fifty-nine ounces, a very unusual weight. The gray matter, the residence, so to say, of the mental powers, was extraordinarily abundant. All the other organs were in an excellent state of preservation.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The seventh annual meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29th, 30th, and 31st. Papers will be read by the following gentlemen: Dr. Piffard, "Treatment of Acne;" Dr. Hyde, "A Study of the Coincidence of Syphilitic and Non-Syphilitic Affections of the Skin;" Dr. Graham, "General Exfoliative Dermatitis;" Dr. Stelwagon, "Impetigo Contagiosa;" Dr. Robinson, "Alopecia Areata;" Dr. Duhring, (1) "On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus," (2) "Report of a Case of Ainhum with Microscopic Examination;" Dr. Atkinson, "A Case of Multiple Cachectic Ulceration;" Dr. Sherwell, (1) "Pseudo-Psoriasis of the Palm," (2) "Malignant Papillary Dermatitis;" Dr. Bulkley, (1) "A Hitherto Undescribed Vegetable Parasite Found on the Human Skin," (2) "A Clinical and Experimental Study on Pruritus;" Dr. Van Harlingen, "Experiments in the Use of Naphthol."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 13, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIENEY presented, in behalf of a candidate, a specimen of

BILATERAL CONGENITAL DISLOCATION OF THE HIP ASSOCIATED WITH SPINA BIFIDA.

DR. B. A. WATSON presented a specimen of

PRIMARY SCIRRHOUS CARCINOMA INVOLVING THE RIBS, ADJACENT CONNECTIVE AND MUSCULAR TISSUES, THE PERICARDIUM, AND THE HEART-WALL.

He was enabled to present this specimen by the courtesy of Dr. Walter Rae, of Jersey City, who attended the patient during the latter part of his illness, and supplied the following history: Michael E. S—, thirty-six years of age; born in Ireland; laborer; healthy man of erratic and somewhat dissipated habits. The patient informed Dr. Rae that during the epidemic of yellow fever which prevailed in Memphis in 1873 he was living in and unable to escape from the pest-afflicted district. He further adds, "I did not expect to survive this epidemic, and consequently during its continuance I was constantly drunk and frequently imbued with other vices." He gives a vague and unsatisfactory history of a supposed chancre, followed by some inflammation of the inguinal glands, from which he thinks he suffered during this period; and although no treatment was employed there has been a complete absence of any cutaneous complications or other tertiary symptoms. With the disappearance of the epidemic we are informed that Mr. S— abandoned his protracted spree, although he continued the daily use of alcoholic stimulants, but in such a quantity as to rarely produce intoxication. He began to complain in the early spring of 1882 of a sharp intermittent pain, which he located in the heart. This pain gradually increased in severity and frequency, and was soon supplemented by a slight dyspnoea. Both the pain and dyspnoea were frequently excited and always intensified by physical exertion. The disease had progressed with so much rapidity, that he found himself compelled, in the early part of the ensuing August, to abandon the performance of all labor. The pain, at the commencement of the illness was principally felt in the cardiac region, but it gradually ascended, until just previous to the death of the patient it was located in the left shoulder and upper portion of the humerus. The pain, which had been previously intermittent, became about December 1st continuous, and was described by the patient as being of a "pulling or dragging character." There was observed about the same time some unusual prominence of the upper portion of the sternum, which continued to increase until the fatal termination of the disease. The cough, which heretofore had been slight, became at this time so troublesome that the patient sought relief in the use of medicine. There was no important change noted in our patient's symptoms, although he was gradually becoming weaker, until about February 1, 1883, when it was observed that anasarca had made its appearance in the feet and ankles, which soon extended to the legs, thighs, scrotum, abdomen, etc. The lower extremities soon became so much distended that it was thought proper to freely incise the integument, which operation was followed by a profuse flow of serum. The patient had been unable to sleep in the recumbent position for two weeks prior to the making of these incisions, but subsequently he was able to resume the ordinary postures and secure the much-required rest. There appeared soon after this a severe pain in the left popliteal space, which continued some time, and seemed to be neuralgic

in character and reflex in its origin. The left upper extremity is now cedematous, although the right is normal. The relative conditions of these parts remained the same during the life of the patient. During the last three weeks of life the patient suffered from a profuse prune-juice or bloody expectoration. The autopsy was made thirty-six hours after death. The rigor mortis marked; considerable general emaciation; left upper extremity cedematous; right side of the chest is flattened laterally; bulging anteriorly of the upper portion of the sternum and thorax; this tumor is trapezoidal in shape; involves the upper portion of the sternum; extends slightly above its superior border, downward from this point three and one-half inches; its breadth is also three and one-half inches in the upper part and two inches at the lower border; it covers one inch of the sternal portion of the left clavicle and extends above the same half an inch; the right sterno-clavicular articulation is barely covered with this morbid growth; bones within the tumor are diseased and the integument covering it is perfectly healthy. The right lung contains a large abscess and is much broken down, with pleuritic adhesions over its entire surface. The liver, kidneys, stomach, and spleen are healthy.

The morbid growths were referred to Dr. William H. Welch, of Bellevue Hospital Medical College, for examination, who reports as follows: "The specimen consists of a lung [left], the heart, and a portion of the thoracic wall with the ribs. The lung shows a few spots of bronchopneumonia, a small hemorrhagic infarction in its anterior border, emphysema of moderate extent along its borders, old pleuritic adhesions, and moderate hypostatic oedema and congestion. There are a few small nodules in the periphery of the lung, which may possibly be small, secondary, cancerous nodules, although they appear more like pneumonic foci. The specimen is not sufficiently hardened to obtain satisfactory sections to determine this. The external surface of the heart presents in various places diffuse and nodular yellowish-white growths, which, in places, have invaded the muscular substances of the heart nearly to the endocardium. The most extensive of these growths surrounds the large vessels at the base of the heart, particularly anteriorly and to the right. This growth extends down so as to have invaded deeply the right border of the heart and the posterior wall of the left ventricle. At the apex of the heart is a nodule about an inch and a half in diameter. There are other nodules over the surface and in the muscular substance of the heart. The valves are not abnormal, except a little atheroma of the aortic and mitral valves. The microscopical examination of the new growths of the heart reveals a stroma of fibrous tissue enclosing alveolar spaces filled with epithelial-like cells. The structure is that of carcinoma. The adjacent muscular tissue is fatty. The portion of the chest-wall, including the bone, is infiltrated with the same kind of new growth as that involving the heart."

The diagnosis, made by Dr. Welch, constitutes the title of this paper, while the chief interest of this specimen is found in the infrequency of the occurrence of primary cancer in these organs, and the extreme difficulty with which the nature of the disease is determined before an autopsy is made. It would unquestionably be very interesting to determine (if it were possible) the point at which this disease originated before we alluded to the literature of this subject; but I fear it cannot be done in this case with either satisfaction or certainty. It is nevertheless thought that the history in this instance justifies the exclusion of the question of the origin of the disease within the bones or soft tissues of the thoracic wall. In the first stage of the disease the patient complained of a pain which he located below and to the inner side of the left nipple. The first physicians to whom he applied, and some of this number are justly regarded as eminent men in their profession, observed functional disturbances of the heart and various

morbid sounds, which caused them, without an exception, to diagnose aneurism. The swelling and pain which finally appeared in the upper part of the sternum belongs to a later stage of the disease. The origin of this disease may therefore have been in the mediastinum, pericardium, or heart-wall; but neither the specimen nor history enables us to fix it more definitely, notwithstanding the chief morbid deposits are found in the heart. The relative infrequency with which this disease occurs in the heart may be inferred from the following: "Thus in Kohler, in 9,118 autopsies, and in Tanchon, in 8,289 autopsies, cancer of the heart was observed six times by each; in Willigk, in 4,547 autopsies (of these 477 cases of carcinoma), cancer of the heart was observed nine times, and of the pericardium seven times. Most frequently carcinoma of the heart is secondary, either developed by extension from neighboring organs (mediastinum, œsophagus, etc.) or occurring as a metastatic deposit, and here frequently following the course of the vein; thus we may see it extending from the lung along the pulmonary veins into the left auricle, or along the venæ cavæ into the right auricle." Neimeyer² says: "Cancer of the heart is very rare, occurring only in general cancerous infection, or by extension from the mediastinum or pericardium. It forms circumscribed tumors, usually of the medullary, or else of the melanotic kind, which project either inward or outward, and may sprout into the cavity of the organ." Dr. Thomas B. Peacock says:³ "Cancerous deposits in the heart are of more common occurrence than tubercle. Dr. Walshe, writing in 1846, says that he had readily found twenty-five cases recorded; and more recently, in a paper in the 'Pathological Transactions,' I collected the particulars of forty-five, including in this number two which had fallen under my own notice. The earliest published examples of the disease were, I believe, those of Andral and Bayle, in 1824." Delafield says:⁴ "Carcinoma of the heart as a primary tumor is very rare. Nodules secondary to growths in the mediastinum or other regions are more common."

DR. W. M. CARPENTER remarked, with reference to Peacock's statement that "cancerous deposits in the heart are of more common occurrence than tubercle," that so far as tubercle was concerned, he had seen at the autopsy room at Bellevue Hospital, several cases of general miliary tuberculosis in adults, during the last winter, and almost without exception miliary tubercles existed in either the pericardium or the endocardium or both, and in nearly as large proportion of the cases in the cardiac muscle. He had not observed secondary cancerous growth with anything like the same frequency in the heart.

DR. C. A. LEALE presented specimens of

CHRONIC DYSENTERY CAUSED BY THE IRRITATION FROM AN ACCUMULATION OF BONES AND NUTSHELLS LODGED IN AN ABNORMAL DIVERTICULUM AT THE LOWER END OF THE SIGMOID FLEXURE OF THE COLON, WITH ULCERATIONS AT THE SEAT OF IRRITATION, WHICH CAUSED THE LADY TO BE AN INVALID FOR OVER THIRTEEN YEARS—RECOVERY AFTER THE REMOVAL OF THE SOURCES OF THE IRRITATION AND HEALING OF THE ULCERATIONS,

with the following history: Mrs. M——, aged twenty-six years, was in perfect health until thirteen years ago, when her father purchased a house in one of the most expensive parts of New York City, and lived there before the neighborhood had been built. It was subsequently found that the previous occupants had left in consequence of frequent outbreaks of malarial fevers, the endemic character of which soon became manifest in the family of Mrs. M——, causing hepatic and other chronic troubles never to be fully recovered from. At that time Mrs.

M—— had a low form of fever for nearly a year, and only partially convalesced after a change of residence. The structural change in the liver had left an obstructive circulation of the veins emptying into the portal, and whenever constipation occurred she suffered from local venous congestions and peripheral nervous irritations of the uterus, vagina, and rectum, and pains along the courses of the crural and sciatic nerves. A year after marriage she was delivered of a feeble child, with open foramen ovale, which died in three days. After a tedious convalescence she again conceived, passed nine months of great discomfort and exhaustion in consequence of her stomach and liver trouble, but at term gave birth to a large, perfect child. Last summer while at the sea-side she had a return of her dysentery, causing great depression, and although occasionally checked temporarily, it would reappear without any known provoking cause. The dysentery lasted until April 5, 1883, when, after having had twenty-eight movements in the previous twenty-four hours, she sank in a collapse so nearly fatal that restoration only followed after the most vigorous efforts, by lowering the head below the pelvis to send all the blood possible to the brain, by thoroughly washing out the bowels with warm water to free the ulcerations of the colon from all irritating mucus, then following by rectal alimentations of beef-extract, brandy, chicken-broth, and hot water, while nothing was given by the stomach. These procedures soon caused the patient to be out of immediate danger, the passages from the bowels to be checked, the vomiting to cease, and a rapid gain in strength. The rectal alimentation and hot water soon supplied the necessary nutriment, while the irritable stomach was prepared for digestion by copious draughts of warm water, to be vomited until it was well freed from the accumulated tenacious mucus contained in the stomach. To relieve the probable ulcerations finely powdered willow charcoal was given in teaspoonful doses to a gill of water thrice daily. The rapid increase of strength in a week enabled the patient to digest light diet when given by the mouth, and the improvement continued until feces accumulated in the rectum and caused a return of the old neuralgic pains along the course of the nerves leading from the sacral plexus. These pains were particularly increased in severity just before a movement, as the feces passed the posterior rectal walls; after each movement from the bowels or passage of rectal douche, the tenesmus and pain were so severe that for an hour it was almost unendurable. There was also a pain situated at the upper part of the rectum which Mrs. M—— described as her old pain in the back, of years' duration, and which had been so annoying as to prevent walking with ease, or even riding in the most comfortable carriage. This pain in the back, Mrs. M—— stated, for years had been exceedingly severe after any jolting, so much so that, although in apparent health otherwise, she was forced to renounce all such pleasures.

The general symptoms with the painful fissures of the anus caused him to suspect chronic ulceration of the alimentary canal, probably of a tuberculous character, and that several of the ulcerations at the colon were below the sigmoid flexure, where under an anæsthetic they might easily be brought into view. He therefore proposed that so soon as strength would permit a thorough examination be made, which was done on the 11th of May, when the painful fissure of the anus and ulcerated rectal lacuna, with a large varicose ulceration four inches up, were thoroughly cleansed of tenacious mucus and gently touched with pure nitric acid. The serrated ulcerated edges of the remnants of the hymen were dissected off, and dilatation of the meatus urinarius effected to remove the exposed peripheral nerves. He dilated the os uteri and cleansed out the tenacious mucus, then gently applied nitric acid to the cavity. After neutralizing all excess of acid with the bicarbonate of soda, and washing off the external parts with warm water, and emptying the bladder, she easily came from

¹ Ziemssen's Cyclopædia of the Practice of Medicine, vol. vi., p. 287 et seq.

² Neimeyer's Text-book of Practical Medicine. Translated from the English Edition by Drs. Humphrey and Hackley.

³ Reynolds' System of Medicine, vol. iv., p. 169, 1877.

⁴ Post-Mortem Læs. and Morbid Anatomy, p. 113.

under the influence of ether. Half a grain of morphine was given, and to the external parts warm water dressings were applied.

On the following and several successive days we were very much disappointed to find that the old pain in the rectum and left iliac region had rather increased than otherwise; the urine was drawn off for a few days by catheter. All pain except that in the rectum and back had entirely disappeared on the fifth day, when dysentery again reappeared, accompanied with pain exceedingly severe and running from the cæcum down the thigh along the course of the sciatic nerve. On the 18th he visited her, prepared to give the anæsthetic to further examine and see the result of former treatment, but her great depression and weakness from the continued dysentery caused a postponement until the following day, May 19th, when ether was again given, and all the ulcerated parts previously treated were found to be in a good condition, enabling him to make a more extended examination up the colon. The largest size duck-bill and cylindrical speculums were each used and all parts exposed to view. Above the varicose ulcerations were found in a healthy condition. Thinking that he had not reached the point of pain continuing after the first operation, he thoroughly dilated the anus, drew down the rectum, and after digital dilatation of its walls, passed up to the lower part of the sigmoid flexure, when he entered a cul-de-sac about two inches in depth, *into which he passed his forefinger*, and came in contact with several sharp, hard foreign masses lodged in the cavity. This cavity proved to be an artificially formed diverticulum at the lower end of the sigmoid flexure, and contained one bone an inch in length and five other irregular-shaped bones, one being triangular, having exceedingly sharp cutting edges. There were also other small foreign masses. All these were easily removed after dilating the mouth of the diverticulum, and are presented to the Society this evening.

The three larger bones he found, thanks to Professor W. K. Parker, F.R.C.S., London, to be the radius and bones of the manus, and the sharp triangular bone of the digit of a bird of the size of a quail ("Encyclop. Brit.," ninth ed.). As Mrs. M—— stated that she had not eaten birds for months, and as the pain in the back had been of years' duration, and entirely ceased after their removal, he surmised that these bones had been arrested at a weak ulcerated part of the bowels when she had her original fever and diarrhoea, thirteen years before; that from the frequent straining this diverticulum had formed at the inferior end of the sigmoid flexure, where a normal pouching exists, and by the tension had increased; that these bones had been the sources of irritation, and were prevented from being extruded by a subsequent and partial invagination of the bowel above, and were the cause of the dysentery. These conclusions are strongly fortified when we consider that the original pain in the back and colon neuralgia and the tenesmus entirely disappeared after the removal of the sources of irritation.

Dr. Leale also presented three

AXILLARY GLANDS,

which he had removed from a patient from whom he removed a cancerous breast one year ago, and the wound healed entirely. This woman nursed a patient from whom he removed a cancerous breast three years ago. At the time she nursed the lady she had no trouble whatever with her breasts, but about two years afterward the scirrhus developed and was removed.

DR. F. N. OTIS presented a specimen of phosphatic calculus removed by lithotripsy, and used Bigelow's evacuating apparatus with a great deal of satisfaction so far as results were concerned. It had occurred to him, however, that if a less expensive instrument could be devised, which was efficient, it might and would be acceptable. He did not think that Bigelow's instrument could be improved. But after spending considerable

time with a view to improving Clover's instrument, the idea occurred to him that an instrument acting on the same principle as Bigelow's might be constructed somewhat differently, be of much smaller size and less expensive. The result of his labor had been

AN EVACUATING INSTRUMENT WITH AN INDEPENDENT AIR-CHAMBER,

which he had used experimentally with great satisfaction. [It was exhibited to the Society.]

Dr. Otis also presented one entire skull and a part of another, sent to him from the Army Medical Museum at Washington for an opinion concerning the nature of the disease that could have produced the manifest localized loss of bony tissue. There was evidence of loss of the diploë *without* any loss of the external table, a simple sinking in of the external table, leaving apparent elevations with alternating depressions, which is not found with any disease other than syphilis.

DR. LEALE remarked that it would be interesting to know from whence the bones came, as they might aid in solving the question of Dr. Jones concerning the existence of syphilis in this country before the advent of the white man.

DR. OTIS was of the opinion that most, if not all of the prehistoric syphilis would turn out rather fanciful.

DR. L. EMMETT HOLT presented a specimen of

INTUSSUSCEPTION,

with the following history:

A plump well-nourished child, aged two and a half months, was brought to his dispensary clinic on Monday, June 11, 1883. The child, the mother stated, had been quite well until Sunday evening. The bowels had been regular, and she had given it nothing but the breast. She had partaken herself quite freely of cabbage at noon, and to this in part she attributed the child's indisposition. It was taken at first with vomiting, which had continued ever since; first the contents of the stomach and afterward a thin greenish fluid was ejected. The child was restless during the night, nursed but a few moments at a time, and slept very little. She had during the day, Monday, four quite large stools, which consisted principally of blood mixed with a little mucus. Straining and pain seemed to accompany the movements. On examination he found the child rather drowsy and listless; the clothing was stained with the greenish fluid she had been vomiting all day. The prostration was not specially marked. The rectal temperature was 103½° F. Unfortunately the examination of the abdomen was not recorded, if indeed one was made. The case was regarded as one of dysentery with a considerable amount of gastritis, and simple remedies were prescribed. He directed the mother, however, to report to him the following morning. She did not do so, and the case had quite passed out of his mind, when she came in on Thursday for a death-certificate, saying that the child had died early Wednesday afternoon.

She gave the following account of the case after her visit to the dispensary: The vomiting persisted up to the morning of the day of her death. For nearly twenty-four hours before, the vomited matters were of a brownish color and had a very bad, but not a fecal odor. After Tuesday morning absolutely nothing passed the bowels. The abdomen became very rapidly distended with gas; and the extremities cold. The child was restless, tossing from side to side much of the time. On Tuesday evening it was taken with a convulsion, which was repeated during the night. The following day the child died in convulsions after an illness of a little more than sixty hours. No other medical advice was sought.

From the history given he made a diagnosis of undoubted intussusception and refused to grant a certificate without an autopsy, which was finally permitted. As nothing bearing upon the case was found in the other organs

he confined himself to the examination of the abdomen. Before opening this, careful exploration was made by palpation to discover, if possible, any tumor. From the great tympanites it was out of the question. On opening the cavity the small intestines, distended with gas to a size equal to that in a healthy adult, filled the wound. A small amount of reddish serum was found in the peritoneal cavity without odor, perhaps a couple of ounces in all. The lower part of the large intestine was empty and following this up he found, a little to the right of the spine and lying quite closely against it, in about the region of the hepatic flexure of the colon a tumor about two inches long and one inch in width. The tumor was tightly held down by the mesentery. The intestine was healthy in its external appearance, not even showing much congestion. No evidence of peritonitis was discovered. The tumor after removal was found to be perfectly solid to the touch. An unsuccessful attempt was made to force water through the obstruction from both directions. The distal extremity of the tumor was rounded, and showed a slit-like opening a little to one side of the middle. This was believed to be the ileo-cæcal valve, as was afterward demonstrated. A probe was passed without much difficulty through the whole tumor, entering this opening. No orifice corresponding to the vermiform appendix could be found. The intussusception was exceedingly tight. A traction force of several pounds was required for its reduction, and some of the longitudinal muscular bands gave way before complete reduction was accomplished. The invagination began at the ileo-cæcal valve, about two inches of the ileum passed through this into the cæcum, which itself then was invaginated into the colon and then the colon into itself. The invaginated part then was composed of two inches of ileum, the cæcum, and six inches of the colon.

One point of interest attaching to the case is the age of the child. Of somewhat over ninety cases of intussusception reported by Smith and West only three occurred in the first three months of life. From three to twelve months is the most frequent period. Nearly one-half their cases occurred between those ages.

The small size and the somewhat unusual position would have made the diagnosis of the tumor somewhat difficult, even before the great tympanites developed. The general symptoms, however, were so characteristic as to leave no room for doubt as to the nature of the lesion. From the difficulty experienced in the reduction post mortem it would appear that injections during life would not have been likely to succeed.

DR. LEALE referred to an autopsy which he made on the body of a child less than *one month* old, in which a similar condition was present, induced apparently by a dose of castor oil.

The Society then went into executive session.

ANTIHELIOIS. — Dr. MacCormac, of Belfast, has recently written a short article with the above title. Having called attention to the unexplained immunity from sunstroke enjoyed by Hindoos and Africans the writer proceeds to make what he apparently believes to be an original suggestion. Although the cooling of heated air supplied to chambers is no new thing, yet we cannot but re-echo the suggestion made by the writer mentioned. By mechanical power the hot air of tropical climates might be drawn through ice chambers or other cooling apparatus, and then sent into the dwelling apartments, workshops, barracks, tents, hospitals, factories, churches, assembly-rooms, and sick-rooms. Wind, water, steam, hand, or Mouchot's sun-engine might each find its appropriate application under different circumstances. Dr. MacCormac regards such an arrangement as more thorough and enjoyable than the tatties and punkahs of India. The importance of temperance in food and drink is wisely insisted upon; without this, coolness would not suffice to prevent the effects of intense heat.—*Lancet*.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 1, 1883.

BEVERLEY ROBINSON, M.D., PRESIDENT PRO TEM. IN THE CHAIR.

DR. V. P. GIBNEY read the history of a

CASE OF COSTO-VERTEBRAL PERIOSTITIS, DORSAL REGION, TRAUMATIC.

The speaker said: The case I am about to present furnishes some interesting points from a diagnostic point of view. Such cases I believe to be rare, and hence my excuse for placing it on record. Often a vertebral osteitis (called by one or two authorities in orthopedic surgery with remarkable persistency a *spondylitis*) develops in a child and a fall or sprain is reported as arising from trauma—it doesn't make any difference how long the interval. To find, I think, one of these chronic bone-lesions, central in its incipency, following *closely* upon an injury, is certainly, in my own experience, very rare. Acute peripheral lesions I do find, and the connection between cause and effect is quite close.

The little girl whose case forms the text for these remarks is nine years of age, and she came under my observation on January 24, 1883. She was decidedly nervous, and from the general bearing of her mother I concluded that she was entitled to this diathesis.

Her complaining for the past four weeks had had the spine as the objective point. On examination I found a small cyst-like body, not any larger than a split peanut, lying over the transverse process of the eleventh dorsal vertebra, left side, and to all appearances overlapping the articular end of the tubercle of the rib. This small tumor was sessile, was subtegumentary, and was connected, I believe, to the periosteum. The soft tissues immediately adjoining were infiltrated to a moderate extent, and the localized tenderness was quite marked.

The patient stooped very awkwardly and I began to suspect some disease in the body of the vertebra. There was no tenderness on concussion, and the spinous process did not participate in the deformity.

The history enabled me, apart from the signs, to eliminate any chronic bone disease in the diagnosis. While in perfect health she experienced one day, four weeks before this visit, a pain in her back while lifting her elder sister. She remained in bed next day, so much soreness did she feel, and kept her bed for one week. The pain was very acute at times, especially on movement.

One of my assistants, in whose opinion I always place much confidence, leaned to ostiitis of rather an acute nature, and I determined to apply an apparatus as a matter of precaution. Pending the making of the same I ordered a counter-irritant and put on a roller with cotton-wool beneath.

On February 20th I find that it feels and looks more cyst-like and a hypodermic needle is introduced for exploration. This little operation is unsatisfactory, on account of the fright of the girl, and I get only a little blood and lose the patient's confidence.

When I saw her again it was March 31st. An abscess had formed in the meanwhile, had opened, and there was now a small sero-purulent discharge therefrom. The brace was removed and a poultice was ordered.

On April 11th the opening was larger, and through it protruded a mass of granulation tissue which required a caustic.

On the 17th I found projecting through the opening, a small shell of bone, evidently exfoliated from the tubercular process or the rib.

The subsequent history is briefly told. The ulcer healed in a few days. I kept her under observation a couple of weeks longer, and finding a complete cessation of all signs and symptoms, discharged the case.

DR. HENRY F. WALKER read a paper entitled

A CASE OF IMPERFECT DEVELOPMENT OF THE PARIETAL BONES OF AN INFANT.

The speaker said: In January, 1883, I attended a primipara in confinement. She was the wife of a man of good physique, but was herself frail and of a very nervous temperament. Neither parent gave history of previous illness or marked diathesis. The labor was prolonged but perfectly natural, and completed without assistance. The caput succedaneum was quite prominent on the vertex to the child's right. It was rather larger than usual, but not larger than one sees without anxiety. I assured the mother that in a few days the child's head would assume a normal form.

On my subsequent daily visits the child was usually sleeping, lying on the back, and was not disturbed. Ten days after its birth the nurse said that the mother was worried because the child's head still showed marked deformity. I then examined it carefully and found that the parietal bones were imperfectly developed. The sagittal suture and the sutures between each parietal and the occipital bone were as perfect as usual, and the fontanel was not of unusual size. But parallel to the sagittal suture in each parietal bone, about three-fourths of an inch from the median line, was a space where the only covering of the brain seemed to be fleshy tissues. This allowed a protuberance of the cranial contents. The tumor on each side was three inches long vertically, the left was three-fourths of an inch and the right one inch wide, while the projection above the general surface was nearly half an inch. The bordering edges of bone could be easily determined, while the firm bone uniting in the sagittal suture and which divided the spaces could be clearly felt. The child was born at full term and no occasion for arrest of development could be found.

I gave a guarded prognosis. While I continued in daily attendance on the mother no change was perceptible. Two months afterward I was asked to inspect and pronounce upon the child's condition. I found that the bony formation on the right side was nearly perfect. The head was a little protuberant there, but the bony case was quite firm and resistant, though evidently thinner toward its centre. The smaller space, that on the left, was completely filled. The bone, however, had here united at an acute angle, making a sharply defined ridge three-eighths of an inch in height above the general surface. Had it not been for this ridge, the absolute proof of the correctness of the original diagnosis, I might have been inclined to think that I had mistaken double hæmatoma for the tumor from non-developed bones. But the bony ridge seemed to me proof positive of the correctness of my first opinion.

At three months the child was well, though with a head of slightly peculiar form.

In response to the query whether the condition might not have been a hæmatoma, Dr. Walker said that he had had that possibility in mind all the time, and the evidence seemed to him conclusive that it was not one.

DR. F. P. KINNICUTT reported a

CASE OF DIABETIC COMA.

[This will appear later in THE RECORD.]

DR. H. F. WALKER said that a few years ago he had a case in which albuminuria and glycosuria seemed to alternate. The patient finally died of Bright's disease.

DR. KINNICUTT said that he had recently observed another case of diabetes in which the

NERVOUS SYMPTOMS

were very marked. The patient was a lady who had had the disease for seven or eight years. During that time she had frequently had attacks of paresis involving different portions of the body. She had first three successive attacks of facial paralysis. The first attack developed

very suddenly with no other symptoms and the paralysis seemed to be peripheral, since the muscles in the upper part of the face were affected as much as those in the lower. The symptoms lasted for only about a week when they disappeared almost entirely. A few weeks later a facial paralysis on the other side of the face appeared. This also rapidly improved, and was followed by a third attack. A short time ago, without any warning, she suddenly developed a left hemiplegia affecting both the upper and lower extremities and face in a very marked degree. This did not improve; it lasted about ten days, when the patient suddenly had an attack of syncope and died. She was a very large person with, probably, a fatty heart. Referring to the subject of diabetic coma, he said that as to

PREVENTION

it is well known that the attacks are more apt to occur after great physical exertion. Patients sometimes develop them after being brought to a hospital from a long distance. They also occur when the sugar has fallen in amount.

DR. MCBRIDE said that he had not seen any case of diabetic coma, but he should be very much inclined to make use of

VENESECTION WITH ARTERIAL TRANSFUSION.

He had seen such brilliant success with this method occurring in coma from poisoning by illuminating gas that he felt great confidence in its efficacy in diabetic coma. With the perfection now obtained in the technique of transfusion, especially arterial transfusion, the operation is almost entirely devoid of danger, and is one which every physician should be able to perform.

DR. KINNICUTT said that he had tried transfusion, although it had not been preceded by venesection.

DR. MCBRIDE thought venesection should first be practised. Arterial transfusion was preferable because it was less dangerous. The radial artery is usually selected and the blood transfused *toward the heart*. In cases where the blood has been transfused toward the periphery thrombi have resulted.

DR. C. L. DANA reported his experience with

PARALDEHYDE AS A HYPNOTIC AND ANODYNE.

The introduction of paraldehyde by Cerville, of Palermo, and its use by Morselli, of Turin, and others was referred to. A specimen of the drug was shown. It is a transparent colorless liquid, with a penetrating odor and taste, suggesting Hoffman's anodyne. Its formula is $C_6H_{12}O_3$. It dissolves slightly in water, but mixes with it very readily. Dr. Dana had been unable to procure any in the city, and it was made for him out of Merck's aldehyde, by Dr. Chevaillier, Lecturer on Chemistry at the Woman's Medical College of the New York Infirmary.

He first tried it on a pup six months old, giving it a gramme by the mouth. The animal was at first much excited, running around and stumbling as if intoxicated. It showed no signs of pain or gastric disturbance. Its intelligence was not greatly disturbed; it would come when called. Pulse ran up from 130 to 200; respiration was 20 to 24 and labored. In about twenty minutes it lay down and went to sleep. Pulse, 140; respiration, slower (18), and with labored inspiration. The animal was easily roused, walked around, then went to sleep again. Slept about two hours.

Having demonstrated its innocuousness, the drug was prescribed in a number of cases. Notes were given of thirteen; nine times it was given for insomnia, twice for its general sedative effects, twice as an anodyne in neuralgia. In six cases it acted very well as a hypnotic, in two it was helpful, in one it failed. Large doses (*i.e.*, above three grammes) were not prescribed. Given in sciatica and supraorbital neuralgia it caused relief of pain temporarily. As a general sedative in "nervousness" it acted remarkably well in one case, and gave

some relief in the other. The dose was $\bar{c}$ ss. to $\bar{c}$ j. well diluted; there were no bad after-effects.

Dr. Dana thought that it was a somewhat less sure and powerful hypnotic than chloral. It was also more disagreeable to the taste. It had the advantage of being safe, of having no bad after-effects. It would probably prove useful in those cases where chloral fails, or is for any reason contra-indicated. At present it is rather expensive.

Dr. McBRIDE asked what were the objections to chloral.

Dr. DANA said that chloral was not without danger; that it was disagreeable, and that some persons could not take it. In fact, he had investigated the value of paraldehyde largely because he had a patient who had attacks of insomnia. Chloral produced sleep, but made him sick all the next day. Bromide of potassium kept him awake unless used in large, long-continued doses.

Dr. McBRIDE thought that chloral could be used with greater freedom than had been supposed. He had given it in pneumonia with dilatation of the heart in doses of one hundred and sixty grains in twenty-four hours (with digitalis), and he had lost in a great measure the dread which he had had of its evil effects. He usually gave it, if indicated, in typhoid cases. In some obstinate cases of insomnia, chloral in doses of five grains with $\bar{c}$ ss. of bicarbonate of soda (as suggested by Mitchell), was often successful.

Dr. KINNICUTT had given one hundred and twenty to one hundred and forty grains of chloral a day to a boy of fourteen, suffering from a very violent chorea.

Dr. McBRIDE had used chloral hypodermically several times in convulsions, and it seemed to him to be the remedy for convulsions. He used a solution of one part chloral to four parts water, injecting a syringeful. It had never produced any abscess. The speaker had also found

SMALL DOSES OF CHLORAL IN URÆMIC DYSPNEA

very efficient. Three to five doses generally secured relief. He had found it even better than morphine.

Correspondence.

OUR CANADA LETTER.

(From our Special Correspondent.)

MEDICAL SCHOOLS FOR WOMEN—PROVINCIAL BOARD OF HEALTH FOR ONTARIO—SUMMER SESSIONS—QUACKERY IN MEDICINE.

TORONTO, CANADA.

For some time there has been a good deal of agitation in favor of medical colleges for women. This has grown out of what is called the Kingston trouble. During the session of last winter several ladies were attending the medical school in Kingston. Exception was taken by those ladies to some remarks made by the lecturer on physiology. The men in the class became noisy and made statements that greatly offended the ladies. For some time the work of the school was at a standstill. The students threatened to leave the school. After some negotiations between the students and professors the matter was adjusted by the latter agreeing to give separate instructions to the men and women. This difficulty made it apparent that co-education would not work, and so both Kingston and Toronto are on the eve of organizing a college for the fair sex. Dr. Lavell has been chosen as Dean of the former, and Dr. M. Barrett of the latter. It is expected that both schools will be opened for lectures this coming winter. There has been a good deal of talk about the usefulness of having women educated in medicine for the purpose of sending them out as missionaries to foreign lands. This may seem very fine, but after all it is the question of dollars and cents that is at the bottom of the whole move, both on the

part of the medical men agitating the schools and the ladies who wish to secure medical qualifications. There cannot be any doubt in the minds of all who think calmly on the matter, but that these young female doctors will locate on our streets and in our villages and towns, whereas those who go abroad, as medical missionaries, will be about as numerous as the Howards and Peabodys. The move is certainly very unpopular with the medical profession at large in this country.

The Provincial Board of Health for Ontario was established a little more than a year ago by an Act of the local Legislature. In the short time that it has been in existence it has done much good work. One of the leading objects it has had in view is the establishing of local boards to take charge of matters of public health over small areas. One point, however, must be regretted, that the salaries of the gentlemen on the board are not sufficiently large to enable them to give their whole time to sanitary matters, instead of dividing it between the duties of public office and private practice. The smallness of the salaries at present granted should be protested against.

Several of the Canadian medical schools have organized a summer session. So far these have been very successful, and in future they will form a prominent part of the education of medical students. The class of lectures given are distinctly practical, and on parts of the work that could not receive sufficiently full attention during the winter months. This form of summer work will have a great influence in raising the standard of medical education.

At the recent meeting of the College of Physicians and Surgeons, a good deal of discussion took place on the question of quackery. Various remedies were suggested, among which might be mentioned the plans of asking Government to grant no patents for proprietary remedies, or imposing a heavy tax upon such preparations; or, again, of having an inspector appointed, who would condemn all worthless compounds. Perhaps the best plan was that of compelling the manufacturer, under heavy fine, to print distinctly on the wrappers the exact composition of the mixture. This would certainly kill most of the nostrums for sale in this country. Another burning question was, what to do with a nondescript and apostate class of practitioners, who advertise special cures, and fill the columns of our dailies with cases successfully treated. No doubt some action similar to that taken in Britain, would prove wholesome—of removing the name from the register of any person who advertises a remedy of special virtues, the secret of which he keeps to himself. It is to be hoped that fearless action will be taken soon with this class.

"COPPER AND CHOLERA."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There appears to me another explanation of the immunity enjoyed by workers in copper and brass than that suggested by Dr. Peckham in your issue of August 18th, namely, the fact that in most cases mineral acids especially *sulphuric acid* is more or less used by them, and that they come into contact with acid salts in much of their work. Anyone who has had occasion to visit a brass foundry has seen the pickling-vats in which, with the aid of this acid, castings are deprived of the "skin" of oxidized metal and fused sand, after coming from the moulds. He may also have noticed that in many of the processes of brazing or soldering joints, mineral acids are used to give a bright and clean surface. This is especially the case when electro-plating or hand-plating is carried on.

It is not difficult to understand that in one way or another these acid substances gain an entrance to the alimentary canal, and that they there prevent the development or destroy the vitality of cholera-germs.

As an opinion of the power of mineral acids to prevent the development of cholera, allow me to quote

Surgeon Eli McClellan, of the U. S. Army, one of the authors of the Government Report on "The Cholera Epidemic of 1873 in the United States," p. 32: "The experience of the writer is strongly corroborative of the beneficial results which may be obtained from the use of sulphate of iron and dilute sulphuric acid as prophylactics during an epidemic of cholera." In another work, intended for popular use¹ Dr. McClellan writes as follows: "When the specific poison of cholera has been swallowed and comes in contact with healthy gastric juice, the latter, by virtue of its acidity, utterly destroys the poison. If, however, the gastric juice has not its normal acid reaction, then the specific poison, meeting only alkaline fluids, is able to reproduce itself," etc. He subsequently² advises the use of a mixture of one ounce of sulphuric acid to a gallon of water as a disinfecting solution for "cholera stuff" and soiled clothing; and also says (p. 94), "A mixture of aromatic sulphuric acid and laudanum is about the most efficacious [prophylactic] which can be employed."

If we accept the opinion of so able an authority respecting the value of sulphuric acid as a preventive of this disease, is it not easier to account for the immunity of copper-workers, who use it almost constantly in their art, than to presume that the metal itself affords the protection.

F. A. CASTLE, M.D.

102 EAST FIFTY-SEVENTH STREET, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 11, 1883, to August 18, 1883.

BAXTER, JEDEDIAH H., Chief Medical Purveyor, United States Army. To proceed to San Francisco, Cal., via St. Louis, Mo., on public business connected with the Medical Department, and on completion thereof will return to his station. S. O. 185, par. 1, A. G. O., August 11, 1883.

BARNETT, RICHARDS, Captain and Assistant Surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 149, par. 2, Department of the East, August 10, 1883.

BURTON, HENRY G., Captain and Assistant Surgeon. Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assiniboine, M. T. S. O. 141, par. 1, Department of Dakota, August 11, 1883.

BENHAM, R. B., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Assiniboine, M. T., and assigned to duty at Fort A. Lincoln, D. T. S. O. 141, par. 2, Department of Dakota, August 11, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 18, 1883.

BRIGHT, GEORGE A., Surgeon. Temporary duty at Naval Rendezvous, Philadelphia, Penn.

NEILSON, JOHN L., Surgeon. Temporary duty on Receiving-Ship Franklin, Norfolk, Va.

MARTIN, WILLIAM, Assistant Surgeon. Navy Yard, Pensacola, Fla.

DIARRHOEA IN INFANTS.—Dr. Lewin has found great success in the treatment of diarrhoea in young infants by giving them soluble albuminate of tannin, made by adding white of egg to a solution of tannin; the white of egg must be previously beaten up with some water.—*Ther. Gazette*.

¹ Wood's Household Practice of Medicine, vol. iii., p. 81. New York: W. Wood & Co. 1880.

² Loc. cit., p. 90.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 21, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
August 14, 1883.....	0	53	28	2	36	25	0	0
August 21, 1883.....	0	45	32	3	20	24	0	0
<i>Deaths.</i>								
August 14, 1883.....	0	10	4	2	16	15	0	0
August 21, 1883.....	0	11	14	3	10	15	0	0

PASTEUR'S PENSION.—On the 12th inst. the bill increasing M. Pasteur's pension from 12,000 to 25,000 francs, with reversion to his wife and children, passed the French Chamber without a division. In reply to certain dissentients, M. Paul Bert cited the English grant to Jenner, and scouted with warmth the charge of sordid motives brought against Pasteur.

THE TREATMENT OF TREMOR.—According to M. Feris, of Brest, veratrin has the property of causing various kinds of tremor to disappear, and that in the space of ten days or a fortnight. It has been employed in disseminated sclerosis, alcoholism, and adynamic states. The dose is four pills per diem, each containing half a milligramme of the alkaloid.

FRENCH TREATMENT OF CROUP.—Dr. Jules Simon treats croup as follows: As soon as the malady is diagnosed he touches the throat with lemon-juice, or a solution of muriate of iron every two hours. Every three hours he washes the part affected with a solution of borax (two drachms to the ten ounces). At the same time the atmosphere of the room is charged with atomized phenic solution, a stimulant nourishment is given, and three to five drops of tincture of iron administered every three hours. When dyspnoea becomes apparent an emetic is to be given, but if the symptoms are not relieved tracheotomy must be performed without delay. The results of the operation are not, however, very satisfactory, as when the child is under two years a fatal termination is the rule, whereas above that age one out of five recovers. The after-treatment consists in placing a piece of tarlatan over the canula, warming the room, and administering beef-tea and tincture of iron. The removing and cleaning of the canula should be done by an experienced person, it might be definitely removed after the eighth or tenth day. M. Simon considers that chlorate of potash is of little use in croup.

THE EXTENT OF CROSS-EXAMINATION OF MEDICAL WITNESSES.—The courts of Pennsylvania are more strict in regard to the proper extent of cross-examination of witnesses than those of this State. It was held not long since in a Pennsylvania suit that a physician called as an ordinary witness in a case involving the question of professional negligence, could not be cross-examined as to his knowledge as an expert. In this State considerable freedom of cross-examination is allowed, and questions of this character would, no doubt, be admissible.

THE RIGHT OF PREVENTING PERSONS FROM ATTENDING FUNERALS.—A curious case involving the right to prevent persons from attending a funeral was recently decided in Rhode Island. The facts were that the plaintiff's wife had been enticed away from him by the defendants, and while absent from him she had died; the

defendants conducted the funeral services, and refused to allow the plaintiff to see her body or attend the funeral. Suit was then brought for damages against the defendants. The Court refused to sustain the action in the following opinion: "We find no ground, either in reason or authority, for holding that any person has a right to enter the possessions of another without his consent for attending a funeral. It is suggested that the public nature of funeral ceremonies implies a license; but such license, if one arose in this case, was revocable, and was clearly revoked by the subsequent conduct of the defendant as set out in the court. It is also suggested that the wrongdoing of the defendants in enticing away the wife raises a license of which the plaintiff may avail himself under this court; but we think that the right of the husband in this regard was at most a right to have the custody of the body of his wife, and to order the funeral ceremonies himself in his own possessions, and that the license, if any was implied, was to enter the premises of the defendants for the purpose of assuming such custody and removing the body for that purpose. But in this case there is no allegation of demand for the body or refusal to deliver the same; the only allegation being that the plaintiff was prevented from attending the ceremonies which were proceeding under the charge of the defendants."

IODOFORM IN THE TREATMENT OF LEUCORRHOEA IN CHILDREN.—Dr. Weissenberg claims excellent results in the treatment of vulvo-vaginitis in girls by iodoform (*Memorabilien*, June 9, 1883). His method is the following: The child is bathed for the first few days in lukewarm water, and the vagina is syringed out two or three times a day with lukewarm infusion of chamomile. When the inflammation is somewhat reduced by this treatment, usually after three days, the vagina is dried with salicylated cotton on a uterine sound, and then an iodoform pencil is passed up above the hymen. In two days, after a bath, this procedure is repeated, after which the cure is in most cases complete. Instead of the pencil, iodoform in powder may be strewn in the vagina, with sometimes better results.

INFANTICIDE AND ABORTION IN THE HAWAIIAN ISLANDS.—When the Boston missionaries first settled among the natives they found infanticide practised to an alarming extent, mothers deliberately smothering, strangling, or burying alive their newly born. Mrs. Judd, the wife of that Dr. Judd to whom the Hawaiians owe their present form of government, mentions the frightful extent to which infanticide was carried in 1828, and records a case under her own observation, where a mother was known to have buried alive eight out of ten children born to her. Civilization, however, has somewhat refined the native taste, so that abortion has superseded the more barbarous method, and the manner in which they induce it is well worth relating. The unfortunate woman is placed upon her back on the floor, and the officiating *Kahuna*, or medicine woman, taking a stone in either hand, proceeds to knead and squeeze the abdomen, endeavoring to get the uterus between the stones. Next she gets upon her victim's abdomen with her knees, and walks all over it, so to speak. This violence generally brings on flooding, and in a short time abortion, but alas! frequently at the expense of the patient's life, though in one case which was cited to me dumb-bells replaced the stones in the operation, great violence being done, and yet the woman went on to term and gave birth to a healthy child.—DR. HEFFINGER in *Boston Medical and Surgical Journal*.

THE LONDON "TIMES" ON THE MODERN MEDICAL STUDENT.—Commenting on the fact that one of the members of the Royal Family presided at the graduating exercises of St. Thomas' Hospital, the *Times* says: "The medical students of to-day will be the practitioners of a few years hence; the men on whose care and skill the preservation of precious lives must frequently de-

pend, and who will become, in an infinite number of matters, the most confidential and most trusted advisers of all classes of the community. Everything which elevates them in their own eyes, which renders them more conscious of the importance of the duties they will be called upon to discharge, and more zealous in preparing to discharge their duties thoroughly, is so much direct gain to the community. And it may be that such consequences will in some degree flow from the countenance and the favor of Royalty. Thirty years ago the medical student was a familiar character in fiction, and both Charles Dickens and Albert Smith, according to their several lights, described the aspects under which they were accustomed to regard him. Bob Sawyer will remain as a type of a class as long as English literature endures; but he is a type of a class which has long ceased to exist. The medical students of to-day can hardly be said to present any salient characteristics, or to differ in any appreciable degree from the student of any other profession, unless it be that there are few others in which the examinations are of equal severity or of equal range, or in which such laborious preparation is necessary for the attainment of success. The mere riotousness of youth, the natural exuberance of the years from seventeen to twenty-one, has found outlets of which Bob Sawyer had no knowledge; and athleticism, volunteering, and bicycles have superseded tavern orgies and nocturnal mischief."

AN ACTIVE PRINCIPLE OF ERGOT has been obtained by Gehe & Co., Paris. It is called ergotin, and it is said to have very powerful hæmostatic properties. It is very expensive, however, one gramme costing about forty dollars.

A BON-MOT OF LUDWIG.—Professor Ludwig, the well-known physiologist, of Leipzig, is one of the few German professors who can say a bright thing occasionally. Some time ago, Professor Marey, of the College of France, was paying a visit to the German universities, and called upon Ludwig, who paid him the honors of the institution. Marey showed himself particularly surprised at the great size of the frogs which were submitted to experiment. "That ought not to surprise you," said Ludwig. "In France you have the big Marey (swamp), but the little frogs; we have the little marais, but the big frogs."

A NOVEL LARYNGOSCOPE.—Dr. Thomas Dimock writes as follows to the *Therapeutic Gazette*: "One of the best methods for examining the throat without the aid of the ordinary laryngoscope is the following: Bring the patient near a good light of any kind, and after the mouth has been opened place on the tongue a depressor, then request the patient to yawn. The larynx will immediately rise up and every part necessary to be seen will be brought fully into view. The nose should be held, as this compels breathing through the mouth. Thus the velum pendulum palati is raised, the anterior and posterior pillars become widened, exposing the back of the tonsils and pharynx. The tongue must be pressed downward very gently, as it always resists harsh treatment." The question naturally occurs, Suppose the patient will not yawn?

SMALL-POX, PETROLEUM AS AN ECTROTIC.—Dr. Kanski states that he has obtained excellent results, even in the confluent form of small-pox, by painting the skin with a solution of petroleum in olive oil, one to three or four.—*Przegląd Lekarski. Ther. Gazette.*

A NEW USE FOR CHLORAL HYDRATE.—B. Bonatti recommends chloral hydrate in combination with senna as a rapid and safe drastic cathartic. He prescribes:

R. Infus. sennæ fl ℥ x.
Chloralis hydratis gr. xxiv.-l.
Syrupi fl ℥ j.

With this he obtained an action where cotoin and jalap had failed.—*D. Med. Zeitung. Pharmaceutische Centralkalle. Ther. Gazette.*

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ATONIC DYSPEPSIA.

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DYSPEPSIA is a malady which presents itself under various aspects. In one case there is great irritability of the digestive organs, they are easily upset by any unsuitable food, by exposure to cold, or by any great emotion; in another the digestive organs are enfeebled by venous engorgement, as in the gastric catarrh of valvular disease, or a failing heart; in another case there is simply want of tone in the digestive organs with a defective or capricious appetite. These are three well-marked varieties; there are others equally marked which need not be alluded to at present.

When the dyspeptic patient presents himself or herself before the physician, the first thing to be done is to know something about the family history, the history of the individual, the occupation, the opportunities for taking food, the condition of the teeth, and the state of the bowels. One is just as important as another. An elaborate plan of treatment may be rendered entirely futile by omitting to ascertain the condition of the teeth, which, perhaps, is such that efficient mastication is simply a physical impossibility. Without some rectification of this defect all the rest is useless, no matter how elaborate. On the other hand, it is well to investigate the family history, and learn how far the family is one in which diseases are developed which are linked with failure of the nutrition. If such family maladies exist, then the case will probably be comparatively intractable, as contrasted with a case where the family history has other associations. Then the history of the individual is important. If he be one who has lived long, where inappropriate food has been taken for a lengthened period, such as a stock-rider in Australia, or out West, who lives on damper with salt pork, relieved by tinned provisions, until the digestive organs have been thoroughly upset; then the case will require time for the organs to recover themselves. In another case the individual will have endured great mental tension for a considerable time without any failure of the nervous system; but the digestive organs have given in. Thus in one case, well known to me, the patient underwent two years of the most intense strain in Wall Street, his nervous system did not suffer in the slightest, but his liver had almost lost its power of dealing with albuminoids. Another for seven years worked hard building up a business in Russia, with the result that he is a confirmed dyspeptic, with a colon very readily offended. A third carried all before him as a civil servant in India, but has now for some years been laid upon the shelf an incurable dyspeptic—or, at least, no one has been able to endow him with the capacity to digest enough to enable him once more to work. It is eminently desirable, then, in all cases, to ascertain distinctly what kind of a case you have to deal with. The occupation is scarcely less important, for if a city man, the ranges of food, through the middle of the day at least, is restricted to the viands of restaurants, most of which are unsuitable to a dyspeptic. Or the patient is connected with a large house of business and must take

"what is going," that is, what is provided for the inmates generally. In these last two cases the dietary becomes the difficulty.

Having cleared the case of all such elements, and formed a fair conception of what its surroundings are, the indigestion may be approached directly. The first matter is to ascertain what amount of pain is produced by the digestive act, its time in the digestive process, and whether or not much flatulence is coexistent. When an ulcer is present the pain is set up almost synchronously with the introduction of food into the stomach, as soon as the contents become acid from the flow of the acid gastric juice. Here the line to be taken is clearly that of trying to put gastric action in abeyance and trust to the pancreas. Milk sheathed with an alkali, with or without some biscuit powder, will probably pass readily through the stomach without producing much suffering, and be digested successfully in the intestine, and in order to save the stomach the patient may be fed per rectum to a considerable extent for a time. Physiological rest so being afforded to the stomach the healing of the ulcer is favored and, in many cases, is readily accomplished.

In other cases the pain is not experienced until we believe the food is passing through the pyloric ring, and intestinal digestion is being inaugurated. What do we do in such a case? There are two lines open to us which may be combined in practice: (1) we may try what can be done by suitable food and some pepsin, to secure complete disintegration of the contents of the stomach so that they shall not irritate the duodenum; (2) we may stimulate the action of the liver and give liquor pancreaticus. And by such measures we can probably do the patient a great deal of good. At the same time, a sufficient time must be given to the taking of food; while the patient should be relieved from worry, as by leaving his or her business or occupation for a time, thus giving the medicinal treatment a fair chance.

And now a few words may be said about the resort to artificial digestive agents. Of the extreme value of these agents in strengthening our hands when dealing with indigestion there can be no two opinions, and Dr. William Roberts, F.R.S., ought to be held in affectionate remembrance by every dyspeptic, both those who require these agents actually and those who might come to require them.

But it seems to me, from a recent experience, the tendency is to resort to these agents at once, instead of encouraging the natural efforts and holding the artificial agents in reserve. For instance, a few days ago a youth came up from the midlands, who had been put upon artificially digested milk and milk porridge, but with whom no attempt had been made to foster the digestive act. To such artificially digested food had been added phosphorus and strychnine, while nothing had been done to secure proper action of the bowels. On explaining that the line which suggested itself to me was that of encouraging the natural processes, instead of doing the work for them, the father of the patient, a farmer familiar with the varied outcomes of pauperism, showed his comprehension of what I was driving at by remarking, "Not to make a pauper of his stomach, Doctor, eh?" which meant that the stomach was weakened by having its work done for it. Now this was precisely my own view in familiar phrase. In such cases, the proper practice, in my opinion, is to encourage the natural powers, giving such food as shall least tax them. This is a good line to take; and

then if the case does not move forward, to give some artificially digested food, once, or perhaps twice a day (in order to nourish the body); pursuing the old line at the same time. But if this resort to artificially digested food were forced upon me, I should regard it as indicating a reduction of the body expenditure to the minimum. The patient ought to be sent to bed. Warm in bed, the need for hydrocarbons is small; at rest the tissues require little repair. In bed the amount of food required for the body needs is much less than when up and about. A patient remarked to me some time ago, "I can't eat enough to feed me properly, and if I did I could not digest it!" What was to be done? He was sent to bed, and then "the body expenditure" fell below "the body income" and the surplus went to add to the body weight.

What are our means of encouraging the natural powers? First the digestive act in the gastro-intestinal canal, and secondly in the liver. And this involves the question, What is it which needs improving, the assimilation of hydro-carbons or the assimilation of albuminoids, or both? This is a matter too little insisted upon. Too commonly, action is taken rather blindly, and malt-extract (diastase), or pepsin, or pancreatic preparations prescribed without that discrimination which is so desirable. My own rule, so far as it is formulated, and it needs some corroboration (possibly some correction), is taking the following direction: When the patient is spare and too thin, then starch and sugar are indicated; and diastase should be added to farinaceous matters. Surplus sugar is laid down in the body as fat—i.e., within the storing capacity of the organism. Then when there is any tendency to glandular degeneration, and that growth of lowly connective tissue spoken of commonly as tubercle, the indication is some fat which can be assimilated, of which cream, butter, and cod-liver oil are the most digestible forms. When it is desirable to increase the power of assimilating fat, there are several measures which may be adopted, singly or together. There are agents which stimulate the flow of bile, which emulsionizes fat so that the pancreatic secretion may further act upon it, and the most useful of these is ipecacuanha. Ether has been found to stimulate the flow from the pancreas and so aid materially in the assimilation of fat. It might be given with liquor pancreaticus and cod-liver oil. Sometimes when cod-liver oil is not assimilated, it is well to resort to the following plan. The oil is observed unchanged in the stools, *en masse*, never having been divided into an emulsion. Here it is well to remember that a fatty acid helps in the emulsionizing of fat. So give some castile soap, say two grains, with two grains of dried ox-gall, in a pill, about two hours after a meal, when the contents of the stomach are passing into the duodenum. The fatty acid and the bile assist the natural efforts, and then the assimilation of fat is often materially aided.

At other times the liquor pancreaticus, guarded with an alkali (which may be potash or magnesia, and not necessarily the nauseous bicarbonates of soda), given as Dr. Roberts directs, is of great service. Probably all the constituents of our food—starch, albuminoids, and fats—are digested by this agent. Or some of the compounds containing several, or, indeed, all of the digestive agents may be used with success. If the medium is acid then pepsin is efficient; if the medium is alkaline, then the diastase and the pancreatic ferments are effective.

In very acute conditions it may become necessary to give milk and milk-gruel, already largely digested by the addition of liquor-pancreaticus; or these may be given at times, with ordinary milk and seltzer-water, or lime-water at other times in the day. Such are conditions where there is much gastric irritability with vomiting, and a tongue denuded of epithelium, or seen to be covered by a growth of young epithelium. This condition is not uncommon in the course of phthisis, and when it shows itself it requires its own peculiar treatment, all others being abandoned, for the time at least. Here the

line to be taken is that of alkalies and bismuth, with or without some hydrocyanic acid. Whenever the tongue is raw or bare, then alkalies are to be given, and acids carefully eschewed. If the reader has doubts about the last, let him just try the experiment with his eyes open, and watch it. It will not be long before the results will be apparent to him. Bismuth with soda in calumba is the old and well-known combination for such state; and with it the milk dietary just described may be combined. More commonly, however, a less grave and acute condition is found, where the state of the tongue is just the opposite, viz., covered with a layer of dead epithelium. Here acids are not only unobjectionable but are very useful. Indeed, soda sulphate with some acid is the combination which gives the most satisfactory results. Under this the tongue soon cleans, the appetite returns, and the stools are of a normal color. When the primæ viæ are once more acting normally and in a healthy state, then, and not till then, may some chalybeate be given. But as long as the liver is in any way disturbed, chalybeates are useless, and usually disagree. When the appropriate time comes, then iron is useful; but however impatiently the time is awaited, it is well to be patient. To resort to iron prematurely is a very common mistake. Sometimes when the tongue is placed in a side light, a yellow shade can be detected, and so long as that remains so long must chalybeates be withheld.

It is necessary in all cases to keep the bowels open. There is no treating indigestion satisfactorily so long as the bowels are loaded with fæces. The bowels must be swept out freely, and then kept open; and, if necessary, a sharp purgative must be given from time to time. Especially is this necessary with female patients, who dislike being purged (as it pulls them down), and who are very liable to allow themselves to become constipated. The reader, perhaps, thinks it quite unnecessary for me to insist on the bowels being kept properly open. But it so happens that to find patients, who have been under very judicious treatment in every other respect, but whose bowels have not been attended to, is far from an infrequent occurrence. Either the medical man has paid too slight attention to the matter, or the patient has failed to carry out the orders, or, may be, both. Anyhow, the fact remains, and so does the indigestion for that matter, and the case is truly incurable until this is rectified. It is easily done, as a rule, by adding the requisite dose of laxative to the pill I am about to describe. It is well, however, to keep short of purgation, else the pill is abandoned, and its other effects lost. So keep on the short side a little, and let the patient take some laxative water the first thing in the morning, if indicated. But a good many patients dislike this water in the morning, and then it is well to prescribe two pill forms, one more sharply laxative than the other, and let the patients take one of each daily, or otherwise vary them according to their requirements. This does not give much trouble, and that is a matter agreeable and acceptable to the patient. Pills can be kept out of sight, and people, as a rule, object to be regarded as invalids. Besides, no little matter, pills are tasteless, and when the medicine has to be continued for weeks or months, if that medicine be nauseous the patient conceives a mortal repugnance to it.

When the symptoms of acute discomfort show themselves during and after a meal, then a dose of pepsin often makes matters comfortable (McKesson & Robbins' pepsin pill is most convenient), or a second may be indicated if the meal contain much meat. Such immediate measure is excellent, while the following pill is taken before meals, steadily and continuously. There are many hepatic stimulants, as mercury, arsenic, eunymmin, baptisin, iridin, leptandrin, etc. But it may be questioned if any of them is so efficacious as ipecacuanha. A century of experience tells of the utility of ipecacuan in indigestion. It was a constituent of the dinner-pill of the last century. Not only does it stimulate the liver, and so be useful in cases of indigestion

where there is either bile acids formed in excess or lithates present (that is, the peptones which find their way into the portal vein from the intestinal canal and which, converted into proteids, are elaborated into the albumen of the liquor sanguinis by the liver normally, are transformed instead into bile acids or urates; the patient loses flesh, and on a flesh dietary only makes more bile or more lithates, without gaining weight), but ipecacuan is a "pepsin-persuader" from its action on the gastric lining membrane with its multitudinous glands and follicles. Ipecacuan combines properties, indeed, as does no other agent, in my opinion. Then there is often atony, either general or in the bowel, and for this strychnia is an admirable remedy. Perhaps, too, flatulence, for which a carminative is indicated. Then there is the vehicle, which may or may not be a laxative, according to the case. The pill would stand then somewhat as follows:

R. Strychniæ..... gr. $\frac{1}{30}$
 Pulv. ipecacuan..... gr. $\frac{2}{3}$
 Pulv. piper. nig..... gr. jss.
 Ext. gentian..... gr. j.

Yes, there it is! How familiar it does look; and what a lot of my patients are taking that pill with Pil. al. et myrrh., or Pil. coloc. co., according to their necessities! Once or twice a day before meals steadily followed out for weeks, with a pepsin pill, or maybe two, at dinner or other substantial meal, and a regulated dietary of farinaceous matter with milk. Steam-cooked cereals with milk, and a little fish or fat bacon to follow for breakfast. Lunch, a biscuit and milk, or a milk-pudding (made *without* an egg), with some stewed fruit, with a glass of wine. Then a walk before lunch and a rest on the sofa after. For dinner, some white meat with the milk-pudding and a glass of wine, with pleasant cheerful society. Perhaps, if the patient be hungry in the night, some milk and malt extract, gently warmed and kept under a cosy (which both keeps it warm and untainted by the air of the bedroom), to be taken in the small hours of the morning. A bracing locality and freedom from toil and worry.

This is about what I generally advise, and it seems to suit the patients, or else they tell me falsehoods and pay their fees in vain. Such, indeed, is the broad plan with dyspeptics suffering from inability to digest their food. Only the measures are to be fitted together in each case, as Opie mixed his colors—with brains!

A SERIES OF TWELVE OVARIOTOMIES.

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OVARIOTOMY has become so common that one is almost forced to make excuses for publishing a case or even a series of cases unless they mount up into the hundreds. Although the various steps of this operation are now nearly settled, there are some points still in dispute. These can only be decided by experience, not only of each operator for himself, but by the careful study of the results obtained by others, and it is to this end that I make this report.

The twelve cases were, with the exception of the first, operated upon within the space of fifteen months. Of these nine recovered and three died; of those which died, the first (No. 5) was almost moribund when the operation was begun. Her pulse was 140 and temperature 103°. She had had suppuration of the cyst for a number of months and the cyst contents were very fetid and contained gas. She had been tapped three times, the pus, however, antedating the first tapping, and there was a small fistula opening into the abdominal cavity which emitted a clear fluid and at times gas and pus. The sac was attached over nearly the whole abdominal parietes and was so decomposed that in separating the adhesions it tore and let some of the contents into the abdominal

cavity. This was carefully washed and sponged out and a glass drainage-tube introduced. She rallied for the first twenty-four hours, but soon the temperature rose and she passed into a condition of violent mania and died forty-eight hours after the operation. She was operated upon at her home in the country and I saw her but once afterward.

The second fatal case (No. 6) was a cyst of the broad ligament, I diagnosed the probable nature of the tumor by tapping before operating, but decided to operate as the cyst seemed thick and very tense, and the patient was eager for relief and the diagnosis at best uncertain. The contents were like spring water and contained only a slight trace of albumen. The operation was very simple, there were no adhesions and no blood lost. The incision was very short and the pedicle long and the tumor was removed without disturbing either ovary. Everything was so favorable that there seemed to be no possible way in which a bad result could occur. She did splendidly for the first week and then developed symptoms of septic peritonitis and died on the twelfth day.

The cause of death in this case I cannot but attribute to hospitalism. She was operated on in the Buffalo General Hospital; she had a private room and nurse, but in the same building, about the same time, there had been several cases of septic disease (puerperal fever, etc.). I can see no other reasonable explanation of the cause of death. No blame can be attached to the hospital or its management, for no general hospital is, or ever can be, a proper place for abdominal surgery. I find it recorded that out of one hundred and forty-two cases operated on in four of the leading London hospitals, there was an average mortality of sixty per cent., while in two hundred and ninety-six cases the same year at the Samaritan Hospital, a small special hospital, under Mr. Spencer Wells, the mortality was only twenty-two per cent. A certain allowance must be made for the special skill of the one operator, but this alone could hardly account for the great disparity in results.

In justification of this operation as against tapping, I will say that the cyst when emptied weighed over three pounds and would undoubtedly have refilled; moreover, the diagnosis of cysts of the ligament by the peculiar character of the fluid has been shown to be unreliable.

The lesson taught by this case was still further enforced by the next (No. 7). This was in every way promising, no adhesions of any moment and the patient's general condition was good. The earlier period of convalescence was very favorable; the temperature remained nearly normal and the pulse generally below ninety, until the eighth day; she then had a slight chill; vomited several times, and felt very weak and uncomfortable, the temperature fell to 97 and the pulse went to 118; from this time on she steadily failed. The temperature kept near the normal line, sometimes below, but the pulse went to 110-120 and diarrhoea set in. Transfusion was tried, Dr. Long of this city generously furnishing the blood, and Dr. Charles Cary, who has had considerable experience in this procedure, kindly lent me his aid and superintended the operation. The operation was by the mediate method. The blood was withdrawn from the arm of the donor by an aspirator and forced into the arm of the patient without allowing it to come in contact with the air. In this way it was only a few seconds out of the veins. The canule of an Aveling's apparatus were introduced into the veins of both parties before the aspirator was attached. The effect of the transfusion was but transitory and she died exhausted on the fourteenth day after the ovariectomy. There was no pain but the vomiting kept up and the large dejections were persistent. The mental faculties were unaffected.

The autopsy did not throw much light on the cause or nature of the disease. There were a few ounces of blood, serum in the abdominal cavity, and several feet of the small intestine were as black as ink. There were also spots of discoloration on the stomach and large intestine. Nothing else wrong. Union of the wound complete; no

clots and no evidence of peritonitis. I cannot but think that the trouble was septic in its origin, and attribute it to the same cause as the other, but the symptoms were not those we generally associate with septicæmia. However this may be, it served to impress most forcibly on my mind the fact that a general hospital, no matter how well cared for, is no place for ovariectomy.

The point has been made that double ovariectomy is more dangerous than where only one ovary is removed. In three of these cases (Nos. 2, 3, and 8) I removed both ovaries and all recovered. In No. 8 the supravaginal portion of the uterus was also removed. An interesting point in this latter case is that this patient, although she survived the removal first of a fibrous polypus from the cervix and then of double ovarian tumors with the uterus, is now about to succumb to cancer in the vagina.

It will be noticed that Case 9 had reached the great age of seventy-seven years. It is generally thought that such an age is a contra-indication to an operation, but statistics do not support this idea. In the last edition of his work on ovarian tumors (1882), Sir Spencer Wells, in speaking of the results in this operation as modified by the age of the patient, says: "The small mortality shown in patients below the age of twenty-five and above the age of sixty, and the comparatively high mortality between those ages, except from forty to forty-five, are remarkable." The number of cases on which he bases his percentage of mortality between sixty and seventy years of age is forty-five, with thirty-seven recoveries (eighty-two per cent.), while above seventy he has had but two cases, one of which recovered at seventy-seven. In 1853 Atlee reported a case aged seventy-eight, in which the operation was successful. Thus we have four cases with three recoveries. My patient seemed to be in perfect health, aside from the tumor, and was very anxious for relief. The tumor had been growing only eighteen months and had reached a great size. I could see no good reason for not operating and the result justified this view. Although the operation was rather severe and long (an hour and a half), owing to the difficulty of securing all bleeding points, she stood it well and made a rapid recovery.

In the earlier cases I used the drainage-tube for a slight indication, but I found so much annoyance from its use and so much difficulty in closing the sinus left by it, that I discarded it after the fifth case. Still I can readily imagine a case where its use might be unavoidable. In Case 4 there was considerable ascitic fluid outside the tumor, and I should be inclined to consider this a good reason for the employment of a tube. A large oozing surface after an enucleation, as in Case 2, would also be an indication, and its use in this case, I have no doubt, had a large influence in promoting the recovery. I have used the simple glass-tube, slightly curved, and carried to the bottom of the cul-de-sac.

The method of treating the pedicle is now so nearly settled that but little need be said about it. I have always tied and then severed the tissues, either with scissors or latterly with the thermo-cautery. For ligatures I have used the raw silk well carbolized. That the silk is absorbed I do not believe, as I have once or twice seen silk which had remained in the abdomen for a long time unaltered. For adhesions, I either divide with the cautery alone or tie first; if the tissues are very vascular, with catgut, or if they are very large, with silk.

The length of the incision I have never considered as having much influence on the result. Operations in which the incisions are long will always make a worse showing than those with short incisions, but the reason is not in the length of the incision but in the conditions which make the long incision necessary. My rule has been to begin with a short incision and to enlarge it as much as necessary as I proceed.

An article of this kind at this time would not be complete without some words about antiseptics. I began with antiseptics, spray and all, and my first case was done under the carbolic spray. But soon after this I lost a case of oöphorectomy (*American Journal of Obstetrics*, October, 1880) from what I believe to have been carbolic poisoning. This made me afraid of carbolic acid, and I dropped the spray for a time. After I had lost three cases in succession, I began to inquire very carefully for the cause, and thinking that perhaps the use of the spray would better my results I began it again, using, however, boroglyceride (1-20) rather than carbolic acid. The last five cases were done under this spray, and as all recovered I am inclined to attribute something of the result to its use. There is one symptom which sometimes follows it and which I have seen noted elsewhere, which is very alarming unless its cause is understood. In Case 11 the pulse and temperature remained normal, but there was a very unaccountable and marked dryness of the tongue and mouth. This continued, not-

No.	Date of operation.	Age.	Condition.	No. of Children.	No. of Tappings.	Time since first noticed.	Adhesions.	Size and nature of tumor.	Damage.	Place of operation.	Treatment of pedicle.	Result.	Previous attend-ant.	Remarks.
1	Nov., '79.	30	M.	0	1	1 year.	Pelvic and uterine; extensive.	Dermoid. 15 lbs.	2 tubes.	Home.	No pedicle; portion left in.	Recovery.	Dr. Booth.	See Am. Jt. Obstet., 1880.
2	Jan. 4, '82.	27	S.	0	..	1½ year.	Intestinal and pelvic; extensive.	30 lbs.	1 tube.	Buff. Gen. Hosp.	Enucleation.	Recovery.	Dr. Rochester.	See Buffalo Med. Jt.
3	Feb. 1, '82.	35	M.	1	..	1 year.	Slight.	35 lbs.	None.	Buff. Gen. Hosp.	Tied and cut.	Recovery.	Dr. Freeman.	See Buffalo Med. Jt.
4	May 7, '82.	28	M.	3	..	2½ years.	Omental; slight.	40 lbs.	1 tube.	Buff. Gen. Hosp.	Tied and burnt.	Recovery.	.....	Great deal of ascites; abscess formed in pelvis below tube; Pt. almost moribund; suppuration of sac.
5	May 8, '82.	39	S.	0	3	1½ year.	Abdominal; extensive.	30 lbs.	1 tube.	Home.	Tied and cut.	Death.	Dr. Kittinger.	Died of septic peritonitis on 12th day.
6	June 13, '82.	28	M.	0	..	2 years.	None.	28 lbs.	None.	Buff. Gen. Hosp.	Tied and burnt.	Death.	.....	.....
7	Sept. 4, '82.	49	M.	5	..	1 year.	None.	25 lbs.	None.	Buff. Gen. Hosp.	Tied and burnt.	Death.	Dr. Tapp.	.....
8	Nov. 7, '82.	50	M.	2	..	1 year.	Very extensive and firm; pelvic.	Nearly solid; 14, 15 lbs.	None.	Home.	Tied and burnt.	Recovery.	Dr. Crawford.	Uterus was removed with tumors. See N. Y. Med. Jt., July 7, 1883.
9	Nov. 8, '82.	77	M.	2	3	1½ year.	Abdominal; moderate.	60 lbs.	None.	Home.	Tied and burnt.	Recovery.	Dr. Burwell.	Rapid convalescence.
10	Mar. 6, '83.	30	M.	2	..	8 years.	Slight.	40 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	Dr. Feely.	Rapid convalescence.
11	Mar. 10, '83.	44	M.	4	..	2½ years.	Few; long.	Half solid; 20 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	.....	Rapid convalescence.
12	April 1, '83.	60	M.	4	2	1 year.	Slight.	25 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	.....	Rapid convalescence.

withstanding brandy, potas. chlorat., etc., and ceased suddenly on the third day. That it was due to the boroglyceride I am sure, as others have noticed the same thing after its use. For hands, instruments, ligatures, and sponges, I have used carbolic acid, and as a dressing boroglyceride cotton held in place by a flannel bandage, rather than adhesive straps.

The preparatory treatment has been the simplest possible, a thorough cleansing of the bowels and a bath, nothing more. To dose a patient with quinine and opium, and thus upset the stomach and disturb the nervous system just when a great call is about to be made on them, always seemed to me to be unphysiological and irrational. The after-treatment has likewise been simple, opium in some form enough to quiet all pain and restlessness, but no more than is absolutely required. Brandy and ice, *if indicated*, not as a routine practice, milk and food as soon as the patient wants it, generally on the second day, at first in small quantities every two or three hours. The bowels are moved on the seventh or eighth day, as soon as the stitches are out, by a simple laxative and enema.

The results have not been as good as some operators, notably in England, have obtained; but the reasons for the failure in the fatal cases have, I think, been clearly given.

MASTOID DISEASE—ARTIFICIAL PERFORATION OF THE BONE—TEMPORARY RELIEF—DEATH FROM PYÆMIA.

By CHARLES H. BURNETT, M.D.,

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THIS paper contains an account of a case of chronic purulent inflammation of the middle ear, inducing general increased vascularity of the pyramidal part of the temporal bone, hyperostosis of the outer wall of the mastoid portion, and a thinning of the sigmoid groove, without necrosis. The mastoid cavity became filled with cheesy debris, and this furnishing a pyæmic source, embolism of a chronic form ensued, as shown first by the abscess in the lung and then by the pyæmic infiltration of the liver resulting in a vast number of abscesses. The operation, it will be seen, gave temporary relief to the acute aural and mastoid symptoms, but, of course, had no effect upon the pyæmic element in the case, because of the great chronicity in this latter respect. An early operation, perhaps years before, might have prevented the accumulation of cheesy masses in the mastoid antrum and the consequent occurrence of pyæmia.

History.—James B.—; thirty years old; born in Ireland; a weaver, was admitted to the Presbyterian Hospital, Philadelphia, April 11, 1877. His aspect was phthisical but he stated that his health had always been good until within ten weeks, when he was admitted to a hospital for "pleurisy." He remained there seven weeks, when he was dismissed cured, as he was told. Immediately following his sojourn in the aforesaid hospital his right ear became painful and sore to the touch, the auricle stood out from the head and the pain in and about the ear was so great as to deprive him of sleep. After enduring this suffering for two weeks he was admitted to the Presbyterian Hospital, where I examined him, and obtained the above history, on April 13, 1877. At this time his right auricle was standing far out from the head, the mastoid region was red, boggy, and tender on hard and deep pressure. His pain was chiefly and constantly in the mastoid; but at times there was a dart of pain into the right temple. An offensive, thin, transparent yellowish matter flowed copiously from the painful ear, and examination revealed a largely perforated membrana tympani and a macerated and tender auditory canal with granulations on the posterior wall. The watch could be heard only in contact. The patient stated that this ear had been affected for many years with discharge and that at times he had attacks of pain and soreness similar to this, but that no attack had been as severe as

this last one. His pulse was 88; appetite good; secretions normal, no cerebral symptoms. Four leeches were now applied to the mastoid region and four or five ounces of blood were drawn. This gave but slight relief, and at bedtime, a few hours later, he was obliged to have one-eighth grain morphia sulph. to get rest. He awoke from time to time with pain, and obtained some ease with two-eighths grain more of morphia.

April 14th.—The next morning his face was flushed; pain in mastoid very severe; pulse, 86; temperature, 98 $\frac{3}{4}$; tongue coated; headache and malaise great. Afternoon: pain increasing in the mastoid; latter very tender, especially at its tip; appetite fair; bowels open; no cerebral symptoms. At four P.M. the patient was etherized, and after making an incision in the soft parts one-fourth inch behind the auricle, I perforated the outer mastoid wall with S. H. Buck's conical drill, three-fourths of an inch above the tip of the process. The severed branch of the posterior auricular artery was ligated. No pus issued from the opening thus made in the bone, but the cellular structure of the mastoid was easily reached through this opening and the cells toward the antrum were broken by a probe, thus affording an exit for retained pus. The periosteum was dissected freely from the mastoid but no disease of the outer table of the bone was found. A simple greased tent was now put into the wound thus made and the patient put to bed to await recovery from the ether narcosis. Beef-tea and milk ordered, and morphia if pain continues.

April 15th.—Appetite good; pain generally less, though the neck was sore and stiff, probably from bruising at operation. Mastoid incision suppurating and mastoid tip tender. Some frontal headache, but the great pain in the temple and the mastoid had gone.

April 16th.—I ordered six grains quinine daily; tent removed and poultices placed over the mastoid opening. Pus issues from the artificial opening in the bone. Patient sits up in bed and looks and feels much better. Has had no cerebral symptoms.

April 17th.—Ligature from artery comes away; patient comfortable.

April 18th.—Some fever this morning, with photophobia and intolerance of all sounds. One-eighth grain morphia at night.

April 19th.—Patient appearing weak and sleepless, gets a milk-punch every three hours, and quin. sulph., gr. ijss., every four hours, with morph. sulph., gr. $\frac{1}{8}$, two or three times in the night.

April 20th.—This morning has less fever and less pain; discharge free and purulent, from mastoid opening and from the meatus. Urine contains no albumen.

April 21st.—Less fever and no pain; discharge from wound diminishing.

April 22d-23d.—Appears to be getting well; wound in mastoid healing.

April 24th.—Ten days after operation is able to get up and dress himself and walk about the ward; stimulants stopped. In the evening began to complain of general malaise; his temperature rose and his pulse became more frequent; tongue dry.

April 25th.—Remains in bed; whiskey and quinine resumed, pulse full and bounding; temperature, 104.6°; bowels confined; whiskey stopped and a fever mixture given; wakeful and nauseated all night.

April 26th.—Tongue dry and brownish; constant nausea and vomiting; *complains of pain in region of the liver.* Violent chill in afternoon. Is taking brandy and soda, and two and a half grains quinine every three hours.

April 27th.—Tongue is better, but still complains of nausea and pain in stomach and over the liver; fever continues. Discharge from the wound and ear less, very little pain and soreness in mastoid, wound nearly healed.

April 28th.—Bowels inclined to be relaxed through the night. Temperature, 104°; delirious during night.

April 29th.—Tongue dry and brown; pain and tenderness in hepatic region great. Hiccough, vomiting, and delirium. Pulse more rapid and weaker; respirations very rapid; coma. Death at 1.30 A.M. on April 30th.

Post-mortem examination, fifteen hours after death.—The omentum in proper position, but darkened by venous congestion and at its upper and right hand side thickly studded with flakes of recent lymph. The stomach was marked externally by patches of lymph over the fundus and at its pyloric end was adherent to the under surface of the liver. The duodenum firmly adherent to contiguous viscera and so softened as to be torn in attempting to remove it. The liver was covered externally with peripheral abscesses, like yellow spots, varying from one-fourth of an inch to one inch in diameter. The spleen contained no abscesses. The liver was found filled with disseminated abscesses throughout its parenchyma. The left lung was normal excepting the presence of small abscess on outer side of lower lobe, one-half inch in diameter, surrounded by hardened zone, the whole one to one and one-half inch in diameter. Brain: The cerebral surface of the temporal bone of the diseased side was slightly darker than its fellow, and the dura mater not so adherent as on the normal side. The tympanic cavity and mastoid cells were filled with a cheesy mass; the ossicles were present; membrana tympani largely destroyed. There was great hyperostosis of the outer table of the mastoid portion; it was half an inch thick at a point three-fourths of an inch behind the external auditory meatus. There was no necrosis of any part of the temporal bone; no sign of phlebitis, nor of thrombosis in the sinuses of the brain, nor in any of the veins leading from the tympanum. The cheesy mass in the mastoid cells was lying against the mastoid surface of the bony gutter in which runs the lateral sinus, but there was no necrotic spot in this bony channel. Numerous evidences of extensive chronic disease in the temporal bone were found, consisting in the great thickening of the outer wall of the mastoid, as stated already, and in a thinning of its inner wall where in contact with the sigmoid sinus. The nutrient vessels and the canals conveying them in this region of the temporal bone were much wider and larger than on the healthy side. It seems highly probable that the embolism occurred by the way of the lateral sinus, in consequence of the morbid changes in that region, just narrated.

Conclusions.—1. This man died of pyæmia induced by long continued purulent disease in the middle ear and mastoid cavity. The embolic elements passed by the brain to lodge in the lung and liver, an unusual course in pyæmia from ear disease. 2. The operation of trephining or perforation of the outer mastoid table is strongly indicated in such cases. It has no effect whatever in hastening a fatal issue, even if it had no effect in preventing it, as shown in this case, as the man recovered from the operation to die of pyæmia. 3. When fistulous openings exist in the upper back part of the bony auditory canal, as in this case, it becomes worthy of our consideration whether we should not follow the indication of nature and make a larger opening at such a point, especially as we may in such cases suspect hyperostosis of the outer wall of the mastoid. 4. The safety of the operation on one side, and the great dangers of a concealed pyæmic nidus in the mastoid, in chronic purulent otitis media, on the other hand, should incline us to regard, in many cases, a prompt opening of the mastoid wall as the one great chance of saving the patient's life.

HOW TO GET BACK?—A correspondent from the dispensary department of the New York Infirmary for Women and Children reports an individual of the *Cimex lectularius*, or common bed-bug, found perched upon the external os of the cervix uteri in an abundant vaginal catarrh. The insect was removed and was unmistakably identified.

A FATAL CASE OF TYPHLITIS WITHOUT RECOGNIZABLE SYMPTOMS.

By JOSÉ M. FERRER, M.D.,

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THE desire to contribute, however slightly, to the general fund of information on the subject, together with certain features of practical interest, must form my apology for putting the following case on record.

S. J. M.—was a stout, healthy girl, nineteen years of age. Despite a history of phthisis on both sides of the family, no constitutional taint of weakness marred her perfect physiological life. Aside from rubeola and a few trifling ailments in her earlier life, she had never been sick.

I was called to see the patient about midnight on Saturday, June 2, 1883. She had been visiting her friends all day, and on her return home nothing unusual was noticed, except that she complained of slight headache and of being tired out. At 6 P.M. she ate no dinner and seemed exceptionally quiet. After dinner she laid down on the lounge, and, as I learned after her death, called for a blanket, saying she felt cool, as the windows were open, the evening being warm. About 8.30 P.M. she commenced to vomit, at first but sparingly, and almost simultaneously she was taken with a *severe pain in the epigastric region*, which she localized by placing her hand on the "pit of her stomach." The vomited matters were almost entirely bilious. There seemed to be reflex irritation of the rectum, for she tried to go to stool twice, passing very little. Palpation and percussion of the abdomen revealed nothing special. The pain seemed to abate somewhat after one drachm of the U. S. solution of morphia, and there was no vomiting for about an hour. Later, another drachm was administered, but was vomited almost immediately. Despite counter-irritation of the abdomen, emesis continued at intervals. When I left her she seemed more quiet, the symptoms abating. A warm poultice was applied and she fell into a doze.

Sunday, June 3d.—I called about 9 A.M. and found the patient more comfortable. She complained of *soreness about the epigastrium*, but said she did not have the pain like the previous evening. The sore and tired feeling were attributed to her continued efforts at vomiting. I asked about the menses and she said they were "all right." I asked if she had any pain down the bottom of the abdomen, and she said no. I again palpated the abdomen all over but discovered nothing, and caused some discomfort. No tympanites; no signs of a hernia. Pulse, 90. Temperature not taken, as there was no thermometer at hand, but there was evidently no fever. Auscultation of the chest with negative results. She did not give indication of being very sick. She insisted on sitting in a chair by her bed for a while, and walked across the room two or three times to the *pôt de chambre*. Through the day she vomited considerable quantities of bile, and some teaspoonfuls of beef-tea which she had taken. In the evening her temperature was 38½° C., and pulse 90 to 100. She looked pretty well, and, ordering a sponge-bath and a large poultice, which she kept on all night, I left her.

Monday, June 4th.—I saw the patient about 9.30 A.M. She seemed in good condition. Had slept part of the night. Temperature, 100° F.; pulse, 90. She still complained of some soreness of the abdomen but no pain, and more like a sense of weight; she said, "It feels so heavy." All vomiting had ceased. She sat in a chair for a while, and did not seem to desire absolute rest. She received some friends in her room that afternoon and spoke cheerfully with them. When in bed she lay covered with a blanket and coverlet. Her cheeks now became flushed and she had much thirst. In the evening when I called her temperature was 103° F., and pulse, 120. This was the highest record at any time and occurred only on this one evening. Vomiting not present;

pain not spoken of. *No tympanites.* Lips parched and face flushed; urine high colored. She seemed somewhat apprehensive, and wanted me near her, but appeared at the same time good-natured, and even smiled. Fearing to induce vomiting anew, no quinine was ordered. Only sponge-baths and cold lemonade when she should want it.

Tuesday, June 5th.—At 9.30 A.M. temperature had gone down to $100\frac{1}{2}^{\circ}$ F. and pulse to 100. The flush had faded from the face. Emesis had not recurred. The sense of weight was only referred to on repeated questioning. The respirations began now to be quickened, thoracic, and not deep. No morbid signs in the chest. Condition remained about the same through the day, with same range of temperature, and pulse varying from 100 to 110. The lips were parched and glossy. In the afternoon she commenced to have a clammy perspiration, and the extremities were cool. In the afternoon, also, tympanites developed, but moderate only, and flatus was voided, later there was some hiccough and the respirations continued quick. With all this, her condition did not manifest the imminent peril in which she was. She walked from her bed to another room. In this room she walked from the bed to a chair across and sat down, after a while she moved again to a lounge; and, though not talkative, followed the conversation and answered opportunely. She no longer mentioned the pain or soreness. There had been no vomiting that day or the day before. That evening the temperature was, as in the morning, $100\frac{1}{2}^{\circ}$ F., and pulse 110 and weak, respirations about 30. The room was close and warm. She tossed about in bed a great deal. I left her at 10 P.M., as she said she was going to sleep, and asked me to call early in the morning, she was then bathed in a cool sweat, but seemed in fair condition. During the night she had three movements, passing a very small amount of feces highly colored with bile. She had refused all nourishment.

I was summoned hastily at about 3 A.M. on Wednesday, June 6th, and found the patient going rapidly into collapse. Once previous to my coming, and twice subsequently, she vomited large quantities of dark-brownish pseudo-stercoraceous matter. She had hiccough, cold extremities, small pulse, and other signs of collapse. Dr. Satterlee was called in consultation, but there was little to be done at such an hour. It was evident she was *in articulo mortis*. She complained of vertigo, the bed's turning around, etc.; she began to wander and soon became unconscious. Despite active stimulation, she died in collapse at 4.30 A.M.

Post-mortem examination, by Professor Delafield, eight hours after death, Dr. Satterlee and myself being present. The body was well nourished and external inspection revealed nothing special. Rigor mortis present. Only the abdominal cavity was examined. The evidences of a general acute peritonitis were discovered at once. The stage was an early one, the bright arborescent condition of the vessels being still preserved. There were some delicate fibrinous adhesions forming. At the bottom of the abdominal cavity there were probably two ounces of purulent serum. The intestines were full of gas.

On pulling up the cæcum into view, the vermiform appendix was discovered free in the abdominal cavity, and acutely inflamed. It was increased in size to probably four times its original diameter, and was about four inches long. It felt hard to the touch, and remained erect. Its posterior and interior aspect presented a yellowish, sloughy appearance. Here, then, was the original cause of the trouble. Further inspection revealed a small mass of hardened feces, about the size of a small bean, as the foreign body. There was no perforation proper, but the walls of the appendix were softened and infiltrated with pus.

Remarks.—There are several aspects of the case that merit consideration and study.

To commence with the *etiology*. Here was "a small mass of hardened feces about the size of a small bean" impacted in the vermiform appendix. Examination failed to discover any foreign nucleus to this mass. Its own consistent hardness was sufficient to strangulate the appendix, or at least to cause a most marked inflammation thereof.

Now, in the healthy subject fecal matters find their way in and out of the appendix without inconvenience. And for a purely fecal mass of sufficient hardness to cause an acute inflammation, we would predicate marked constipation, particularly if we excluded the possibility of the little mass hardening *in situ* without causing previous symptoms. Such, indeed, is the view held by all writers on the subject. To quote one: "Most frequently," says Bauer ("Ziemss. Cyclop.," art., "Infl. Proc. in the Right Il. Possa."), "we meet with irregularities of the bowels; either constipation has existed for a long time, or this has alternated with diarrhoea, until finally obstinate constipation has become established." "It is true," Bristowe says ("Reynolds' Syst. of Med.," art., "Dis. of Cæc. and App. Verm."), that "the concretions . . . consist obviously of the admixture, in unequal proportions, of ordinary fecal matters, and of the secretions from the mucous membrane of the appendix, and have obviously formed in the situation in which they are found, either round a nucleus of solid matter which has been first precipitated and concreted there, or round some comparatively small body of extraneous origin." Here we find no direct allusion to constipation as a primary cause, but it is fair to conclude that the inference flows from the well-known fact that "one of the physiological phenomena of this portion of intestine is that its contents become more solid and remain a long time in it," and that "there are a number of circumstances which may induce the contents to remain for a much longer period than usual, and in connection with this to become very hard" (Bauer, loc. cit.). Else, how explain the "nucleus of solid matter which has been first precipitated and concreted there?" Constipation, then, is presupposed when we do not deal with the impaction of extraneous bodies.

But, according to her own statement and that of her family, this girl did not suffer from constipation; and the slight amounts she passed during her short illness were of the ordinary pasty consistency, while the necropsy revealed the cæcum and colon remarkably free from feces. Was this particular bit of such hardness that the appendix could not get rid of it, as it does of other matters, it possessing normal tonicity, the girl being in perfect health? And if so, why should it have differed from the rest, which was voided naturally and seemed of ordinary consistency?

I can offer no explanation, and merely state the fact that, without a previous history of constipation, a little mass of hardened feces without a foreign nucleus was found impacted in the cæcal appendage, having caused it to become acutely inflamed, that an acute general peritonitis resulted therefrom, and the patient died.

The general process in the peritoneum was by extension, no perforation proper having occurred. After reciting several cases, Dr. Copland ("Dict. of Prac. Med.") says: "From the history of these and other cases, which have occurred to me and several of my medical friends, it may be inferred that inflammation, affecting primarily the cæcal appendage, is most frequently brought on by hard substances having escaped into it; and that the inflammation rapidly extends to the peritoneum, giving rise to the exudation of albuminous lymph, to adhesion of its opposite surfaces, and of the appendix to adjoining parts, and to gangrene of this process."

Finally, all authorities are agreed that typhlitis occurs much more frequently in males than in females. The foregoing case is offered to add to the statistical record of typhlitis in the female.

Clinical history.—It is in the history that we find peculiarities. And it bears out the experience which is

daily increasing and becoming more recognized, that a patient may appear to be but slightly ill while suffering from a fatal peritonitis.

Speaking of diseases of the cæcum and its appendage, Dr. John Burne says ("Royal Med. and Chir. Trans.," vol. xx.): "The diseases in question are, nevertheless, of frequent occurrence, are always dangerous, often fatal, and characterized by a train of symptoms so peculiar and marked as to render the recognition of them certain and not difficult." In view of the foregoing case, I would take issue with the last broad statement. For this girl gave absolutely no manifestations of typhlitis during life. Contrast the vivid picture given by Copland (loc. cit.)—who, according to Bartholow (*Amer. Jour. Med. Scienc.*, October, 1866, art., "Typhl. and Perityphl."), has written the best article on the subject, and which account is an exponent of the typical history, accepted as such by all practitioners—with the blank presented in this history. "Very acute pain," he says, "tumefaction, and tenderness are complained of upon the invasion of this form of the disease, first in the right iliac region, and subsequently more or less over the abdomen, with excruciating tormina, obstinate constipation of the bowels, a very frequent, small, or contracted pulse, heat of skin, dry tongue, great thirst, sometimes with numbness of the right leg, or pain shooting down the thigh, and retraction of the testicle. Vomiting comes on sooner or later, and is often, at one period or another, attended by the discharge of matters from the small intestines—at least in the cases I have seen. The patient at last becomes restless, his countenance sunk, and a fatal termination takes place, generally from the third to the sixth day, preceded by the symptoms ushering in dissolution from intestinal peritonitis."

Baner says (loc. cit.): "The diagnosis rests most prominently on the painful tumor in the region of the cæcum, and further, on the previously existing symptoms, and the symptoms of circumscribed peritonitis which are subsequently developed in connection with the tumor." Burne (loc. cit.) says practically the same thing.

In the present case there was no apparent constipation. Discomfort, pain, or tenderness were *never once* localized in the right iliac region. Even upon direct questioning, pain anywhere in the lower portion of the abdomen was denied. On the contrary, whenever she complained at all, even in the beginning, it was about the epigastric region, and never anywhere else. Palpation, often performed during her illness, revealed no local tenderness, but rather a generalized discomfort. Neither was a tumor of any description discovered. No such "painful tumor near the cæcum," as dwelt on by Flint ("Prac. of Med.") and described in Jackson's "Letters to a Young Physician," was present. And, moreover, the autopsy proved that none such could have been felt, there being no typhlitis stercoralis (accumulation of feces), the appendix being behind the cæcum, it being the only organ markedly enlarged, and there existing no salient perityphlitic deposit.

Now, in this case, again, there was no distinct positive history of peritonitis itself. With regard to the pain, we are taught to expect it as a rule, violent, continuous, increased by the slightest pressure, and relieved only by opium. Exquisite tenderness we count on. And our mind pictures the patient lying motionless on his back, with his knees drawn up, an anxious expression on the face; the slightest interference with the abdomen causing agony, even the weight of the bed-clothes being resented. Fever, with a temperature of 105° F., or more; pulse, 120 to 130. We look for tympanites early, and usually get vomiting. Great general prostration is the rule. Now, what did we have? Pain there was, but only in the beginning, and apparently localized about the stomach. It was not complained of for the last two days. "Sometimes," says Dr. Wardell ("Reynolds' Sys. of Med.," art. "Perit."), "that

cardinal symptom, pain, upon which such emphasis has been laid, only obtains at the outset; and notwithstanding its subsidence the malady goes on."

Tenderness and increased pain on pressure were not present to any great extent. Witness the number of times palpation and percussion were permitted, for the last time, on the eve of her death, and this with slight discomfort only. The abdominal muscles were not relaxed, and never did she lie with knees drawn up. She had a large poultice on all night and part of the next day, and was always covered with a blanket and coverlet which rested on the abdomen.

The pulse was 90 and thereabouts, except on the second evening and at the last, regular and of good quality. Wardell (loc. cit.) says: "The pulse is not always, however, a sure guide, as most serious attacks may be progressing under all conditions of the arterial circulation; and even pain on pressure—the most trustworthy of all individual symptoms—is not invariably to be relied upon, because it is not uniformly commensurate with the amount of lesion which really obtains."

The highest temperature occurred on the second evening, the thermometer marking 103° F., certainly not a high record for the intense and sthenic peritonitis discovered post-mortem.

Tympanites occurred only on the afternoon of the last day, and then not prominently.

For the last two days all vomiting had ceased.

But it is in the *tout-ensemble* of the disease-picture—the deportment, expression, prostration, etc.—which serves as an index to the laity, and which is of wondrous aid to the physician himself, that marked lines failed to convey the actual condition of the patient.

There was no Hippocratic countenance, only a relative degree of seriousness compatible with simple malaise. The patient did not seem to desire absolute rest. On the contrary, she moved about from the bed to the chamber, from bed to chair, from chair to lounge, from room to room, and this even until a few hours before death. She did not seem much prostrated, except at the last, and altogether her general condition did not indicate her impending dissolution. She was sick but three days and eight hours.

We may conclude with the words of Prof. Thomas ("Dis. of Wom.," fifth edition, p. 494): "With reference to general peritonitis, it may be stated that, on the one hand, it, of all diseases, may declare itself by the most numerous and characteristic symptoms, or, on the other, run its fearful course with the greatest obscurity, so as to mislead the most careful diagnostician, even up to its latest stages."

Prognosis.—Under the circumstances an uncertain prognosis only could be given, and there were not the elements for a fatal one till very late in the disease.

Treatment was entirely symptomatic. But it is more than doubtful that any treatment would have availed, the cause being not removable.

43 EAST THIRTIETH STREET.

THE TONGUE AT THE VAULT OF THE PHARYNX.—Dr. J. J. Buchanan, of Pittsburg, Pa., writes: "Three cases have been recently reported in THE RECORD of persons, who are able to explore the vault of the pharynx with the tip of the tongue. From the absence of any known record of similar cases the inference was drawn that such instances are rare. The following additional case has since come under the observation of the writer: W. M.—, male, student, about twenty-three years of age, in the course of a laryngeal examination developed the fact that he could easily pass his tongue behind the *velum palati*. He was able to outline the vault of the pharynx and the posterior nares and to move forward a probe passed along the floor of the nasal cavity. The frenum was poorly developed, but he could give no history of its section."

ON THE MANAGEMENT OF CASES OF IRITIS.¹

BY CHARLES J. KIPP, M.D.,

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IN the treatment of all of the different forms of iritis, from whatever cause, the chief indication is to secure complete dilatation of the pupil, and to maintain the same for some time after all inflammatory symptoms have disappeared. If the case is seen within a few days after the first symptoms have manifested themselves, a few drops of a one per cent. solution of the sulphate of atropine instilled four or five times in intervals of five minutes, will generally break up any adhesions which may have formed between the pupillary margin and the anterior capsule of the lens, and produce a widely dilated, round pupil. After this result has been obtained, the instillation need be repeated only sufficiently often to maintain the dilatation, which is usually accomplished by four to six instillations daily.

If, as is very rarely the case, the instillation of the sulphate of atropine produces symptoms of poisoning, such as redness of skin, dryness of mouth and fauces, great thirst, a quick and weak pulse, palpitation, headache, ischuria, etc., the passage of the atropine into the pharynx should, if possible, be prevented by pressing firmly on the lachrymal sac each time the drug is instilled, and if this is not successful in preventing the poisoning, some other mydriatic must be substituted. The sulphate of duboisine, the sulphate of hyoscyamine, daturine, or the hydro-bromate of homatropine may be used for this purpose. Of these the duboisine is probably most extensively used, as it is more certain in its action on the pupils than the others; but unfortunately it is apt to produce constitutional disturbance in the very cases which have an idiosyncrasy against atropine. Duboisine and hyoscyamine should be used in solution containing not more than two grains to the ounce. Homatropine I have used somewhat extensively in children, and have never seen symptoms of poisoning follow its use. Its effect on the pupil is, however, much more transient than either of the other mydriatics mentioned, and it is therefore necessary to repeat the instillation very often. I have generally employed it in one or two per cent. solutions.

The prolonged use of any one of the mydriatics here mentioned occasionally produces considerable irritation of the conjunctiva and inflammation of the integument of the lids. In some cases I have seen a well-marked follicular conjunctivitis and an inflammation of the skin of lids and cheek closely resembling erysipelas follow their use. In such cases it is best, if it can be safely done, to suspend the use of mydriatics altogether for a while, and to apply a one per cent. solution of nitrate of silver, or sulphate of zinc to the conjunctiva, and an ointment of the oxide of zinc, or the acetate of lead to the skin until the irritation has subsided, and then to resume the same or some other mydriatic. If all of the alkaloids mentioned cause irritation, a strong, well-filtered watery solution of the extract of belladonna may be substituted. Notwithstanding the disadvantages here mentioned of atropine, I think that on the whole it is to be preferred to all other mydriatics.

In cases of iritis of long standing, in which the tissue of the iris is swollen and infiltrated, and the pupil much contracted, the one per cent. solution of the sulphate of atropine, instilled in the manner described, will, however, not only occasionally fail to make much of an impression on the pupil, but will in some very rare cases even increase the irritability of the eye. Under such circumstances it is advisable to instil the atropine solution not more than five or six times daily, and to employ at the same time other measures to diminish the congestion and swelling of the iris. Of the various measures used for this purpose, none has, in my own hands, given

more satisfactory results than local abstraction of blood by means of four to eight leeches applied to the temple. In many of my cases in which, before the application of the leeches, atropine failed to act, complete or at least partial dilatation followed the leeching, and this took place often before the instillations were resumed. In localities where leeches are scarce, or in cases where it seems desirable to avoid the disfigurement resulting from the little scars, Fischer's plan of making a single leech do the work of many may be tried. It consists in making a long incision in the side of the leech after it has well filled itself. It is said that a leech thus treated will take from one to two ounces of blood if the wound in its side is kept free from clots. After the application of the leeches the patient should be kept in bed, or should at least remain quietly in a darkened room for twenty-four hours, or longer. If only slight improvement follows the leeching, it can, if necessary, be repeated several times, at intervals of several days. In cases in which the leeching is contra-indicated by marked anæmia, a considerable reduction in the congestion and the swelling of the iris is sometimes brought about by the action of a brisk cathartic, and the continued application of hot-water compresses to the eye. In some cases in which leeching had had but little effect, I have seen dilatation of the pupil follow shortly after the patient had taken a Turkish bath. The measures here mentioned will in the great majority of cases of iritis, if the case is not of more than a week's standing, suffice to break up all or at least most of the posterior synechiæ; and when this has been accomplished the back bone of the disease is broken, and nothing remains to be done but to keep the pupil dilated for some weeks after all circumcorneal injection has disappeared, and to prevent the patient from using his eyes during this time.

But, if after a fair trial of these remedies no marked improvement in the condition of the eye is apparent, or if at any time gummy tumors begin to grow out of the iris, some form of mercury should be administered. Inunction with blue ointment or the oleate of mercury is to be preferred in most cases; but, if there are objections to its use, the bi-chloride, the proto-iodide, calomel, or blue pill may be prescribed. In whatever form the mercury is given, great care should be taken to avoid salivation. As a rule, the use of this remedy should be continued only till the swelling of the iris has subsided and the exudation in the anterior chamber has been absorbed. After that, the iodide of potassium may be given. In former years I used mercury much more frequently in iritis than I do now, having gradually learned from experience that atropine, leeches, and warm fomentations will in most cases break up the synechiæ, if they can be broken up at all by any means outside of surgical procedure. I have even treated without mercury quite a number of cases occurring in persons who had previously had constitutional symptoms of syphilis, and all recovered with the pupil intact and the sight unimpaired. I have also seen a very large gumma of the iris disappear under the iodide of potassium; but it is only fair to add that it did not prevent the development of other gummata in the same eye some months later. I mention this merely to show you that mercury is by no means imperatively called for in iritis occurring in syphilitic patients. Unless other manifestations of syphilis are present at the time, the iritis will require no other treatment than the non-syphilitic variety; but, if constitutional symptoms are present, they should of course be treated in the usual way. I never withhold mercury if I think that the condition of the eye demands it, but I do not give it in any case simply because the patient tells me that he had a chancre. In such a case I at once search for symptoms of syphilis, and if any are found I treat them either with mercury or iodide of potassium; but, if no other manifestations are present, I treat the iritis in the same way as I would in a patient who has never had syphilis.

For the relief of the pain which is so frequently pres-

¹ Read before the Medical Society of New Jersey.

ent during the early stages of an iritis, the repeated application of leeches to the temple is sometimes advisable, even if the pupil is widely dilated; and this plan is to be especially recommended in cases in which morphine does not act pleasantly. Morphine, with or without the sulphate of atropine, should always be given in sufficient doses—either hypodermically or by mouth—to allay pain and produce sleep at night. The hydrate of chloral will answer for the milder cases. During the last few years I have often given the salicylic acid in medium doses with gratifying results in cases of iritis accompanied by much pain in and around the eye, and especially when symptoms of rheumatism were either present or had preceded the eye trouble. Should this remedy fail, quinine may be tried, either alone or in combination with morphia. In my own hands, quinine has been especially useful in cases of iritis associated with gonorrhœa. If the pain is due to an increase in the tension of the eyeball (a symptom not unfrequently seen in severe cases of so-called serous iritis), and none of the remedies mentioned give relief, paracentesis of the anterior chamber should be resorted to. The opening is best made with a lance-shaped knife or a broad needle, at the outer margin of the cornea, great care being taken that the instrument is not pushed far enough in the chamber to wound the iris or the capsule of the lens. If necessary, this little operation may be repeated daily for several days. In nearly all cases of iritis, considerable relief from pain is also obtained from the application to the lids of cloths wrung out of warm water or a warm solution of morphine and atropine. In a few cases the application of iced cloths will be found more soothing to the eye, and the choice between the two may therefore be left to the patient.

Rest in bed in a darkened room, although perhaps not essential to complete and speedy recovery in the milder forms of iritis, should be insisted upon in all cases in which there is much pain, œdema of the lids and ocular conjunctiva, much exudation in the anterior chamber, or a marked increase of tension. In cases of great severity, some relief is also occasionally obtained from gentle diaphoresis; and, as no harm can possibly be done by stimulating the cutaneous secretion, remedies producing this effect may be given in combination with any of those otherwise indicated. Jaborandi, or its alkaloid pilocarpinum, I have occasionally used with apparent benefit in cases in which there was much œdema of the ocular conjunctiva and much exudation in the anterior chamber; and also in cases with marked increase of tension—cases, in fact, in which the inflammation was not confined to the iris, but extended, in all probability, to the ciliary body and the choroid. Of late I have given the pilocarpin exclusively by hypodermic injection. The iodide of potassium, in five to twenty grain doses, is also very efficacious in the same class of cases. An iritis occurring in the course of other diseases—such as syphilis, gonorrhœa, rheumatism, gout, diabetes, small-pox, and so forth—requires no other treatment than that outlined here, care being taken, however, to select for internal use only such remedies as are known not to have an injurious effect on the general disease. That the general disease is to be treated in the usual way is self-evident.

As long as the eye is at all irritable, all close work should be strictly prohibited, even if but one eye is affected; and in order to guard against relapse as much as possible, only a very cautious use of the eye should be permitted for some months afterward.

With regard to the treatment of the results of an iritis, my advice is not to interfere unless the pupil is excluded—that is, the entire pupillary margin is fastened to the lens capsule. In this condition the iris is soon bulged forward by the fluid effusion between it and the lens capsule, and secondary glaucoma follows. As soon as the bulging of the iris is noticed, a large piece of iris should be excised. No other treatment will be of any avail.

An iridectomy may also be made in cases in which numerous and broad posterior synechiæ appear to be the cause of relapses of iritis, although this operation is by no means a sure prevention. Of the several operations devised for the purpose of breaking up posterior synechiæ, without excising iris tissue, I will only say that none but the most skilful operators should undertake them; of their value I am in doubt. Various modes of treatment have been suggested for preventing relapses, and I have tried them all, only to be disappointed in them all. Relapses will occasionally occur in spite of all the remedies recommended.

ULCER AND FISSURE OF THE RECTUM.

By F. W. SMITH, M.D.,

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SOME recent experience in treating diseases of the rectum leads me to think that few diseases of equal importance are so apt to be wholly overlooked by the general practitioner.

I believe that in the female many cases of supposed uterine or bladder trouble, or obstinate constipation, or perhaps chronic diarrhœa, have been unsuccessfully treated, when, if a proper examination of the rectum had been made at the first, the patients could have been saved months, and perhaps years of painful suffering. In the male it is not impossible to mistake rectal disease for beginning cystitis, vesical calculus, enlarged prostate, or urethral stricture. And these mistakes are made not infrequently and by good physicians, not because they are incompetent to make a diagnosis, but rather because of carelessness, or perhaps because their attention is not often attracted by patients afflicted with rectal disease. For some reason a physical exploration of the rectum is rarely thought of unless symptoms point almost positively and exclusively to its disease, while the uterus and urethra are frequently subjected to the most rigid examinations when no symptoms point to local trouble, either functional or organic, with a view of determining if there is not some local derangement which may, through reflex irritation, be the cause, perhaps, of an irritable cough or some other complicated disorder the origin of which is difficult to understand.

The most common disorders met with in the rectum are ulcer and fissure, and although trifling in point of size and pathological relations, they are of great practical importance both on account of the excessive amount of local pain and the constitutional disturbance and irritation to the nervous system which the patient may suffer. As illustrating some of the striking phenomena which are presented by the above-named disorders, I will report three cases such as are liable to fall into the hands of any practitioner, and which are only a fair sample of others which have come under my notice.

CASE I.—November, 1881, there appeared at my office for treatment a Mr. O—, a young man twenty years of age, apparently of strong and vigorous constitution, who said that until his present trouble began he had never been sick for a day.

About two years before he came to me he commenced to have pain of a severe lancinating character, which he located principally about the neck of the bladder, but sometimes darting backward to the sacrum or radiating down the thighs. At first the pain was only occasional, occurring once or twice during the day or night, the paroxysms gradually becoming more frequent until his pain was almost constant.

Defecation became very painful and difficult, notwithstanding that during much of the time the bowels moved frequently and the stools were soft.

Perhaps his most distressing trouble was his almost constant desire to urinate, which act also excited no little pain. For more than a year he had been obliged to pass his water as often as every hour, night as well as

day. About six months before he came to me he underwent an operation for stricture of the urethra, and although his urethra was made proper size, none of his unpleasant symptoms were relieved, but continued to grow worse, and when he came to me he was indeed in a pitiful condition. The countenance was pale, anxious, and careworn, and his expression indicative of constant suffering.

The constitutional disturbance and irritation to the nervous system had been very great, and his condition was such that his father and brother expressed to me fears that his mind was even becoming affected. I examined the rectum and found two large ulcers situated about two inches above the margin of the anus, one anteriorly, oblong in shape, and occupying a space a little smaller than a silver quarter. The other, about half the size of the first, situated posteriorly. Both presented much the same appearance. They were deep, with edges sharply defined.

After stretching the sphincter moderately, I touched the ulcers lightly with the nitrate of silver and prescribed suppositories of iodoform and belladonna to be used at night. The young man returned the next day, saying he had not spent so comfortable a twenty-four hours in more than two years.

I continued the above treatment, moderately stretching the sphincter two or three times a week, and at the end of two months he was relieved of all his unpleasant symptoms and the ulcers healed.

CASE II.—Mrs. R——, twenty-eight years of age, has the appearance of being strong and healthy, and is a woman of good habits. Has had three miscarriages, one at the fourth month and two at the sixth month of utero-gestation.

I first saw her on the morning of September 10, 1882, when she was threatened with another miscarriage at about the sixth month. She was extremely restless and had been having periodical pains for the past ten hours, with now and then a little hemorrhage.

I began to think abortion inevitable and to think of the safest and best means of hastening along the work which had evidently already begun, but being naturally of a conservative disposition, I made haste slowly. I inquired carefully into her previous history, to see if I could find any possible cause for this as well as her former miscarriages; but in my efforts to this end I failed completely, except that I obtained a history of obstinate constipation, with painful defecation and the occasional passage of a little blood, which trouble extended back over a period of more than three years. I began to suspect that my patient had disease of the rectum, the examination of which might reveal the cause of her present trouble. Introducing into the rectum my index finger, I found the sphincter muscle in rigid contraction, also three fissures about equally distant from each other, and extending upward from the margin of the anus for about two inches. I stretched the sphincter moderately and touched the fissures lightly with the nitrate of silver and gave no opiate or sedative of any kind. Returning the next day, I found her very comfortable; her pains had ceased almost immediately after my operation of the day previous, and with no treatment other than attention to the rectum she went on to full term, and on December 20th she gave birth to a strong, healthy male child, weighing ten pounds.

Now, I firmly believe that the fissure and spasm of the anus, from which this woman suffered, were the cause of her three previous miscarriages, and I have not the slightest doubt that she would have aborted this time had not she been relieved of the old irritation and exciting cause.

CASE III.—Miss B——, aged twenty-two years, came under my treatment in September, 1882. She gave a history extending back over a period of more than two years. Her most distressing trouble was painful and prolonged menstruation. She was troubled much with chronic constipation, frequent micturition, and almost

constant pelvic pain. She was also very anæmic and suffered from headache and extreme nervousness.

About a year before she had undergone an operation for stenosis of the cervix uteri, but had obtained no relief.

I instituted a careful examination, and aside from a general hyperæmia and hyperæsthesia, the uterus and its appendages were in a normal condition.

Exploration of the rectum revealed an irregularly shaped ulcer, a little larger than a dime, situated anteriorly about two inches above the anal orifice. With no treatment other than attention to the rectum, and the use of a ferruginous tonic, she was in a few weeks restored to good health.

In the treatment of the above named rectal troubles, I have had much the best success by moderately stretching the sphincter from time to time at intervals of three or four days, in connection with some local application, than by either the operation of forcible dilatation or incision, and the former method has the advantage of being less formidable to the patient.

EARLY ENGLISH MEDICAL AND SURGICAL LEGISLATION.

By MYRON T. BLY, Esq.,

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A DRAFT of a proposed act, introduced in the early part of the present session of the Legislature, "authorizing" people to employ whomsoever they think fit as medical attendants, smells strongly of "A Bill that Persons being no Common Surgeons may administer medicines notwithstanding the Statute," enacted by Parliament in the thirty-fourth year of the reign of "our most-dread sovereign lord, Henry VIII.," just about three and a half centuries ago. Thus doth history repeat itself, for what is legislation but history compacted and crystallized? The old English statutes mark epochs of progress in the trades and manufactures, in political economy and science, in the learned professions, and what shall we say of their preambles? Between the "whereas" and "wherefore" of those sturdy acts is frequently found the only insight obtainable into contemporary history. The facts are not always reliable to be sure, but they are generally as reliable as any facts which can be obtained from other sources.

It may have been from a lack of inclination, or from a feeling that interest would not warrant it, or from a lack of space in their crowded works, that writers on medical jurisprudence have failed to treat, as it deserves, the subject of medical police. It can scarcely be said that the subject is not included in medical jurisprudence, for it is. It is perhaps a branch; if so, it has arrived at a stage of development which entitles it to a treatment of its own. There is enough material for a work on medical police—a work which might be made valuable to the legal and medical profession and invaluable to the legislator and political scientist. If such a work is ever written, an account of the early English legislation will not only be the natural beginning (unless the writer chooses to delve into the older material of the continental countries) but will also be one of the most instructive chapters. It furnishes the key to all the legislation enacted since, both in England and America, commencing with the "act for the appointing of physicians and surgeons," passed in the year 1511, the third year of King Henry VIII. The first era of legislation looking toward the regulation of the practice of physic and surgery, extends to the thirty-fifth year of Henry VIII., and during this period no less than seven statutes at large were enacted.

Dr. Ordronaux, in his "Jurisprudence of Medicine," speaks of "the earliest statute" as "a draft of an act of Parliament of 9 Henry V., A.D. 1422." Nowhere else have I found any allusion to such an act. None of the authorities on English statutes refer to it, and it is not given in Ruffhead's "Statutes at Large"—an acknowl-

edged authority. Moreover its terms are suspicious, it provided that no one should practise physic unless he had studied in a university and was at least a "bachelor in that science." If such a statute ever existed, how is it that its provision was afterward so completely undone, and why has it taken centuries of legislation to get back again? Paris and Fonblanque have given just a little discussion to police laws in their medical jurisprudence, although finally dismissing it as "but little matter of professional interest." They refer to a petition presented to Henry V., in which was set forth the advancement made on the continent in regulating the practice of medicine, and perhaps what Dr. Ordonaux calls a statute was a portion of this petition.

As to the Act of 1511, there is no doubt of its authenticity. It is constantly referred to by later acts and it seems to have been made the basis of all future legislation. It is an epoch-marking statute. When the Governor and Council of the colony of New York, in 1760, came to frame the first medical police regulation enacted in America, they evidently had this first English statute in mind.

The preamble set forth a truly outrageous state of affairs, alleging that "the science and cunning of physick and surgery is daily within this realm exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same; some also can read no letters on the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomedly take upon them great cures and things of great difficulty, in which they partly use sorcery and witchcraft, partly apply such medicines as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people." Consequently the ban of the law was laid upon "smiths, weavers, and women," and all persons were forbidden to practise physic or surgery in London or seven miles around, unless examined and admitted by the Bishop of London or Dean of St. Paul's, assisted by four chosen physicians or surgeons. In other parts of the realm practitioners were to be examined by the bishop of the diocese, assisted, if he chose to call such, by experienced professionals.

This Act was subject to great abuse in the bishoprics, by reason of the supreme discretionary authority invested in the bishops. It remained unchanged until 1522, when the Act was passed incorporating the physicians of London. The king had already issued letters patent to that body in 1518, for the "due exercising and practising of the Faculty of Physick and the good ministration of medicines." This patent was ratified and enlarged by the statute, which recited a necessity for practitioners to be "profound, sad and discreet, groundly learned, and deeply studied," and therefore the work of examining and admitting them was turned over to the corporation—a proceeding which undoubtedly made candidates "sad" enough. The governing body consisted of eight "elects" vested, among other things, with the power of examining in London persons wishing to practise in any part of the realm.

Very early in its history the "Faculty of Physick" in London began to assume a powerful legal status. In 1540 its authority was made more autocratic by the Act "For Physicians and their privileges," which was procured through a petition which the corporation transmitted to Parliament. The petitioners knew how to excite a lively interest in their prayer, reciting that "divers of them many times having in care some of the lords of your most honorable council." The argument was so irresistible that henceforth physicians were exempted from keeping "watch and ward and to be chosen to the office of constable." The corporation was authorized to appoint four of their number to have "full authority and power, as often as they shall think meet and convenient, to enter into the house or houses of all and every apothecary to search, view, and see such apothecary's wares,

and all such drugs and stuffs as the said four persons shall there find defective, corrupted, and not meet nor convenient to be ministered in any medicine for the health of man's body, the same four, calling to them the warden of the said mystery of apothecaries, shall cause to be burnt or otherwise destroy the same."

Having made this simple disposition of the adulterated drugs question, this Act of 1540 closed by prescribing that, "forasmuch as the science of Physick doth comprehend, include and contain the knowledge of surgery," duly admitted physicians "might practice and exercise the said science of Physick in all and every his members and parts." This latter clause fairly illustrates the position which surgery occupied, as a profession, at this time. It was more of a vulgar than a learned profession. In 1513 a statute at large exempted the "wardens and fellowship of the craft and mystery of surgeons enfranchised in the city of London, not passing in number twelve persons," from jury and constable service and all matter of office. In 1530 it was found necessary for Parliament to enact that surgery was not a "handicraft," thus exempting surgeons from certain restrictions pertaining to handicraft men. The first statute, however, strictly pertaining to surgeons was passed in 1540, the thirty-second year of Henry VIII. If we may believe the preamble of this Act, there were abiding in London "men of great experience as well in speculation as in practice of the science and faculty of surgery," but unfortunately there were two distinct companies exercising the science, one called the barbers of London and the other the surgeons of London. The barbers' company was incorporated by letters patent of Edward IV. The surgeons' company was unincorporated, and therefore the two companies were made one under the title of "Masters or governors of the mystery and commonalty of barbers and surgeons in London." The new corporation was invested with the autocratic powers which had previously been bestowed on the physicians' company, such as the summary "punishment and correction as well of freemen as of foreigners, for such offences as they or any of them shall commit or do against the good order of Barbary or Surgery." Under such a power as this, offenders against good practice were summarily thrown into the common jail, and at a later date Parliament was obliged to restrict the power of these corporations and correct the abuses which had arisen.

One of the clauses of this statute of 1540 allowed the surgeons to take yearly the bodies of four executed malefactors, "for anatomies," which number was increased to six in the time of Charles II., "provided they be afterward buried." Another clause recited that as persons exercising surgery at the same time exercised "barbery, as washing or shaving and other feats," whereby infection resulted, therefore no one "using barbery or shaving" should "occupy any surgery, letting of blood, or any other thing belonging to surgery, drawing of teeth only except."

It was not until the eighteenth year of George II. that a statute was passed giving a modern recognition of surgery. It repealed the Act of 1540 and disconnected the surgeons and barbers. Henceforth surgery was free from the incubus of "barbery." It is thus seen that legislation relating to physicians was far in advance of that concerning surgeons. An illustration of the enlightened view with which the judges regarded the profession of the physician is found in the decision of one of the first cases arising under the statute of 1541: A man was prosecuted for practising contrary to the provisions of that Act, and the Court decided that "practising physick" involved three things: "First, In judging of the disease and its nature, the constitution of the patient, and many other things. Second, in judging of the fittest and properest remedy for the disease. Third, in directing and ordering the application of the remedy to the disease."

We have presented a brief view of the early English medical and surgical legislation. All of its important features are found to have been the work of the first thirty-five years of the reign of Henry VIII. Henry himself was the last person whose mind was calculated to originate and develop such legislation. It must be ascribed to the activity of a far greater mind—that of Cardinal Wolsey—"one, that by suggestion, ty'd all the kingdom."

Progress of Medical Science.

AN EASY METHOD OF POSTERIOR RHINOSCOPY.—The importance of visual inspection of the naso-pharynx and posterior nares in all local diseases cannot be questioned. Ordinarily such examinations are attended with various difficulties. Dr. Walsham (*Lancet*, July 28, 1883), describes a simple method of overcoming these difficulties, admitting, however, that a somewhat similar procedure has for years been practised by some American specialists: A piece of soft red rubber tubing, about one-eighth of an inch in diameter, is introduced into one nostril, and pushed very gently along the floor of the nose till it presents just below the soft palate. It is then gently seized with a forceps, drawn out through the mouth, and loosely tied across the upper lip to the end protruding from the nose, the elastic tube being stretched just sufficiently to loop upward and forward the soft palate, and draw it well away from the posterior wall of the pharynx. The looping of the palate on one side is often sufficient; but a better view is obtained by passing a tube through the other nostril and looping up the soft palate of that side in the same way. The posterior nares and naso-pharynx can now be examined with the ordinary laryngoscopic mirror with the greatest facility. One hand only is required to hold and direct the mirror (the stem answering the purpose of a tongue-depressor), the other hand is consequently free to perform any manipulation or operation that may be required. The tubes serve as a good guide, as they can be followed in the mirror winding round the upper surface of the palate, and so into the respective choanæ. The introduction of the tube causes hardly any discomfort or annoyance to the patient. Care, however, should be taken in passing the tube to let it only just present below the soft palate, as otherwise, if it is pushed further, it may impinge upon the lower pharynx, and is then apt to produce a tickling sensation and desire to vomit. When the examination is finished, it is better to withdraw the tube through the mouth rather than through the nose, and when the nasal end is just about to drop into the pharynx to give it a sharp whisk forward. If it is withdrawn through the nose, the mouth end trails along the tongue, causing a tickling of its posterior part. In place of the red rubber tubes, the American surgeons referred to use flat tapes or narrow bandages for tying up the palate. These have necessitated the use of various instruments for passing them, such as the Eustachian catheter, Bellocq's sound, etc. The advantages of the red rubber tubing are that it is soft, non-irritating, and possesses just sufficient resistance to enable it to be passed through the nose by itself, thus dispensing altogether with the use of an instrument, the passage of which, as for instance in plugging the nares, is, as is well known, a source of much discomfort and annoyance to the patient.

GOOD REMEDIES OUT OF FASHION.—In an address on this subject, recently delivered by Dr. C. J. Hare, the lecturer made some interesting observations on emetics and bleeding (*British Medical Journal*, July 28, 1883). In former times it was not unusual to commence the treatment of many diseases with the administration of a dose to procure vomiting. And although the remedy might then be given sometimes indiscriminately and according

to routine, only those who had seen the effects of emetics, properly and judiciously given, could conceive the beneficial effects they sometimes produced. In the early stage of an attack of croup, it was by no means unusual to give an emetic of tartarized antimony or of ipecacuanha. And it was in accordance with the recorded experience of some of the best authorities and most practical men, and quite consonant with his own experience too, that symptoms which presented the most certain augury of a severe attack were by these means cut short, the hoarse voice resumed its natural character, and the feverish symptoms were in a few hours relieved. He knew quite well that a great fear was entertained by some as to the depressing effects of emetics. But the fear was theoretical, and not practical, and those who had had most experience in the administration of them best knew how groundless the fear was. In diphtheria, too, he had seen the false membranes which were out of the reach of local remedies, and which the patients coughed and coughed in vain, and utterly exhausted themselves to get quit of, readily brought up by the action of vomiting, to the immense relief of the sufferer. "In suffocative bronchitis," the lecturer continued, "the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I am certain that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnoea; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find abundance of rhonchi; moist, sonorous, and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous râles toward the bases. Ammonia and stimulants, right and good in their way perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able, for the first time for the past twenty-four hours, to lie moderately low in bed, and to get some sweet refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one too, that, quite contrary to what those who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy. There is a class of cases in which the right heart is engorged with blood, and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering-place instead of remaining in his room and in a uniform temperature. Becoming worse, he determines to return home, and travels on a cold spring day; his dyspnoea is so much worse on the journey, that his friend and the fellow-passengers doubt whether he

will arrive home alive; and when his carriage meets him, it is with the greatest difficulty he is conveyed to his house, and got into his drawing-room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring, his heavy gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short gasping inspiration followed by a long wheezing and moaning expiration; his lungs are full of moist, sonorous, and mucous and submucous rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is 'to pour in stimulants' (though the patient can scarcely swallow). Brandy and water are given, and ammonia, and perhaps ether; then, if the patient live long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology—and, indeed, common sense, unshackled by prejudice, custom, and fashion—would dictate, has been left undone. Appearances have been saved, but not the patient's life. The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forward the thick and blackened blood. Relieve that poor oppressed, distended heart, and all may be well. Open one of those veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this blood-letting, in extreme cases, is no easy matter; it may be necessary, before you can effectually open the vein, to place the patient's arm in warm water, so as sufficiently to distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upward the arm before a drop of the thick and tarry blood will flow. But, when it *does* flow at length freely, what a marvellous change may you see take place!—the breathing becomes quieter, deeper, and less noisy, the haggard face resumes the appearance of tranquillity, the blueness of the skin is replaced by a more natural tint, the pulse becomes more and more distinct, and, in a word, the choked-up heart is set free."

SPLENECTOMY.—Dr. A. Blum has recently written an article upon the subject of excision of the spleen (*Archives Générales de Médecine*). His conclusions, based upon a study of the recorded cases, are that while the operation of splenectomy is practicable and is compatible with complete recovery, it is so often fatal from hemorrhage or shock that it is but rarely indicated. He considers that it is not justifiable in cases of splenic cysts, because they can be cured by other and milder measures; or in cases of hypertrophy, whatever its cause, or in cancer of the organ, on account of the very high mortality. But he points out that in cases of movable spleen, with marked and severe symptoms, the operation is comparatively easy and successful; while in cases of hernia of the spleen following an injury the removal of the herniated portion is so successful that the surgeon is fully warranted in undertaking it.

THE ACTION OF PIPERIDIN.—This substance has been experimented with by Fliess. The results of his researches are given as follows by the *Lancet*, July 28, 1883: If a dose of piperidin be subcutaneously injected into a frog, after a short period of unrest the animal remains remarkably quiet and no longer moves when the foot is pinched, and that this is not due to lesion of the muscles or to paralysis of the motor nerves is shown by

the vigorous movements that are made if the sciatic nerve be stimulated by an induced current. Paralysis of the sensory nerves must therefore be the cause of the lack of response of the animal to sensory stimuli, and the question arises whether it is the nerve or the centre that is paralyzed. The loss of reflex excitability takes place about ten or twelve minutes after the injection of one milligramme of piperidin, and is so complete that even its contact with the eye fails to elicit any response. Recovery of the sensibility occurs at the expiration of twenty-four hours. It has been rendered probable by Kronecker's and Stirling's experiments that a single shock is insufficient to excite a reflex action, and that at least two are required, which must be separated by a short interval only. In his experiments with piperidin, however, Fliess found that the time which elapsed between two shocks in order that a reflex movement should be induced was not altered, but only that the shocks must be much stronger. Hence he arrives at the conclusion that it is not the centre which is acted on by the piperidin, but the conducting agent—the nerve. The paralysis of the sensory nerves only occurred in those parts of the body to which the blood impregnated with piperidin was distributed; in any part of it protected from the action of such blood the sensory fibres retained their function. Further experiments demonstrated that the part of the sensory nerves on which piperidin acts is their peripheric termination. All the experiments proved that neither the muscles nor the motor nerves were in any way affected. Other results observed after the subcutaneous injection of one milligramme of piperidin were that the frequency of respiration fell to one-half the normal amount—that is, from 60 to 36 and 30 per minute. Large doses led to the Stokes' phenomenon, respiration being interrupted for two to four minutes, after which the frog made from three to four deep respirations. In regard to the cardiac beats, their number similarly fell to about two-thirds of the normal, from 54 to 34 per minute. Fliess further made some observations on the action of piperidin on warm-blooded animals, but did not find that its effects, in the rabbit at least, were nearly so well marked, even though fatal doses were administered, and this he attributes in part to the circumstance that piperidin oxidizes with extraordinary rapidity in the body. The frequency of respiration was considerably reduced, the number falling from 200 to 48 per minute, while the cardiac beats rose from 220 to 340 per minute, so that it would appear that the vagal centre was paralyzed. The pupil became widely dilated, and the heart, when death occurred, was arrested in systole.

ANTERIOR LUXATION OF THE PHALANGES.—In a paper presented to the Société de Médecine of Paris, Dr. Thorens takes issue with Boyer, who has denied the possibility of forward dislocation of the phalanges (*L'Union Médicale*, July 22, 1883). He cites several cases recorded by others and one seen by himself. He concludes therefore: 1. That forward luxation of the phalanges is possible. 2. It can occur only after rupture of the anterior and of one lateral ligament. This partial dislocation is accompanied by a certain degree of torsion. 3. Complete anterior dislocation can occur only after the rupture of the anterior and both lateral ligaments.

PREVENTION OF OPHTHALMIA IN THE NEW-BORN.—Dr. Credé returns again to the subject of ophthalmia neonatorum, treated by him in former publications, and urges his colleagues for the third time to adopt his method for the prevention of this disease and the blindness so often resulting therefrom. He proves the value of his treatment in a few words. It is shown by statistics that, whereas formerly a large proportion (fifteen per cent.) of new-born children suffered from this affection, often so serious in its consequences, the number speedily diminished after the introduction of his method, until

finally, for a number of years, no cases at all were seen. Regarding the etiology of the affection he states: 1. That ophthalmia neonatorum is a disease caused by a specific virus identical with that of gonorrhoea. 2. The poison, contained chiefly in the secretion of granular vaginitis, finds access to the conjunctiva during the period of expulsion of the child. 3. Normal vaginal secretion never causes the specific conjunctivitis. 4. Protracted delivery, early rupture of the membranes, and the large size of the child, increase the danger of infection. The author reviews the methods of prophylaxis formerly practised. These may be classed under two heads, the one seeking to obtain the desired result by disinfectant injections into the vagina, the other applying remedies to the conjunctiva of the infant. The first way was barren of results, and the best effects of the second are only obtained, the author says, by his procedure. This consists in wiping the eyes with a clean, wet rag, and then introducing, by means of a glass rod, one drop of a two per cent. solution of nitrate of silver into each eye. He has never seen any unfavorable reaction follow this little operation. This method has been practised in all the lying-in institutions and foundling asylums of Austria since the beginning of the year, and Cr  d   hopes to see it become general everywhere, both in hospital and private practice.—*Centralblatt f  r Gyn  kologie*, July 28, 1883.

THE ACTION OF ALKALIES ON BILE.—Some researches have been made recently by Lewaschew and Klikowitsch on the subject of the influence of alkaline agencies on the composition of the bile. The experiments were made on dogs with permanent fistulae leading to the gall-bladder. No canula was used, however. For twenty-four hours previous to the beginning of the experiment neither food nor drink was administered. It was found that artificial and natural mineral waters had a similar action on the secretion of bile. For some time after the administration of the alkaline waters the quantity of bile flowing from the fistula was diminished. This effect was probably due to the increased flow of bile into the intestines. After this initial period the flow from the gall-bladder became more than the normal. The normal amount had been previously measured. Artificial waters exercised the same influence on the quality of the bile as the natural waters; but different results were obtained with waters of different degrees of concentration. Thus, carbonate of sodium had a more rapid, powerful, and lasting influence on the composition of the bile than sulphate of sodium. Solutions of weak strength were more powerful than those of higher concentration. Hence, those mineral waters whose principal constituent was carbonate of sodium had the greatest influence on the composition of the bile, especially when the carbonate was not present in a high degree of concentration. The higher the temperature of the fluids ingested, the earlier and more marked were the effects.—*Centralblatt f  r Klin. Med.*

THE HYPODERMIC INJECTION OF BLOOD.—In the *Archivio per le Scienze Mediche*, vol. vii., 1883, Dr. Carlo Bareggi presents a *r  sum  * of a prize essay written by him and published in Milan in 1882, upon the subject of the hypodermic injection of blood. His conclusions were derived from physiological experiments upon animals and clinical investigations in disease. Various methods were practised, and blood from different sources was used, but the best results were obtained with defibrinated blood taken from the same species as that of the receiver. In the human subject a donor was selected who was perfectly healthy and free from any hereditary diathesis and, if possible, younger and of the same sex as the receiver. If more than six ounces of blood was desired it was obtained by venesection, but when a smaller amount than three ounces was wanted it was taken by means of a wet cup in the palm of the hand. In the earliest experiments he employed an ordinary

Pravaz syringe, but later, in order to avoid the great number of punctures and the increased danger therefrom, he made use of an instrument similar to that employed by anatomists for injecting the minute blood-vessels and lymphatics.

The author sums up the results obtained, as follows: 1. Hypodermic injections of blood in amounts of one gram are absolutely innocuous. When greater quantities are used, the injections are relatively harmless according to the regions of the body in which they are practised and the method employed. The parts of the body which best tolerate the injections are indicated in the original memoir, where also the best method of operating is described in detail. 2. In man, hypodermic injections of blood are always followed by a slight febrile movement, varying in duration from a few hours to, at the most, two days. 3. The red globules of homogeneous blood, defibrinated or not, injected into the subcutaneous connective tissue, are absorbed, in part at least, unaltered, and pass into the general circulation. Their course is from the lymphatic spaces in the connective tissue into the lymphatic vessels leading from the part, through the glands met with on the way (unless these are in an advanced stage of fibro-adipose degeneration or in some other way profoundly altered), and thence into the receptaculum chyli and thoracic duct. They were found in the principal lymphatic trunks of the part twenty minutes after the injection was practised, and even after three days, numbers of them in a good state of preservation were encountered in the thoracic duct. The greatest number was met with twelve hours after the injection, but even after fifteen days, quantities of red globules, but little changed, were seen passing from the cellular tissue into the circulation. Absorption of the mass of injected blood proceeded rather slowly in individuals in whom the circulation was sluggish, especially in those in whom there was considerable subcutaneous adipose tissue, but more rapidly under normal conditions of the heart's action and in persons in good general condition. The red globules were unchanged after remaining many days in the cellular tissue, except in cases in which there was considerable febrile reaction. 4. Hypodermic injections of blood are capable not only of arresting the progressive deterioration in the quality of the circulating fluid, caused by insufficient nourishment or repeated losses, but also of increasing, in spite of such persistent influences, the corpuscular richness of the blood. 5. This increase in the relative proportion of red globules is equal, or very little inferior, to that obtained by the administration of ferruginous tonics in cases in which these remedies are tolerated. The improvement shows itself very soon after the first injection, and persists long after the treatment has been discontinued. Together with increased richness of blood comes a marked improvement in the general nutrition and neuromuscular force. 6. To obtain such effects, it is necessary to repeat the injections several times at intervals of five to fifteen days, and to inject each time a considerable quantity of blood. In one case Dr. Bareggi made four injections of 100, 100, 120, and 130 grams (3 to 4 ounces) respectively in twenty-nine days. The relative proportion of h  moglobine was more than doubled. In a second case four injections of 200, 300, 150, and 240 grams (4½ to 9½ ounces) respectively were practised in the course of twenty-two days, and the proportion of h  moglobine was nearly doubled. 7. If these results are compared with those obtained by intraperitoneal transfusion, it will be seen that they not only equal but surpass them, and that without any danger to the patient, and by a method at once easy and inexpensive. "In the hypodermic injection of blood, therefore, we have a new and most valuable therapeutic resource. It is especially adapted to the treatment of those cases of slowly progressive an  mia in which the digestive canal is extremely irritable and unfit for the reception, retention, digestion, and transmission to the blood of nutritive materials and medicaments."

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THE PILGRIMAGE TO MECCA AND THE CHOLERA IN THE EAST.

At the present time, when the danger of cholera is so imminent, a little *brochure* with the above title by Dr. Stékonlis, reprinted in Constantinople from the *Gazette Médicale de l'Orient*, is of peculiar interest. The work is divided into six chapters, treating respectively of the holy city of Islam, the pilgrimage, the health of the pilgrims and of the city of Mecca, cholera epidemics in Mecca, the origin of these epidemics and the prophylactic measures taken against their spread. Mecca possesses a very changeable climate, and is swept with high winds and deluged with frequent storms of rain. The city is dirty and scantily supplied with water—from cisterns and from brackish springs. The water of the holy well in the temple of El Haram is especially foul, muddy in appearance and saltish to the taste, and contains, according to an analysis of Frankland, a large amount of organic matter. The number of pilgrims is variously estimated at from fifty thousand to one hundred thousand annually. The number is, however, gradually falling off, in spite of the command of the Koran that every one of the faithful must visit the holy city at least once during his lifetime. This is due in a measure to the interpretation put upon the injunction by the sect of the Chafie (the Turks), who say that it is binding only upon those who have the means and the health necessary to the journey. The Dutch Government allows none of its Mohammedan subjects to start on the pilgrimage unless he can prove that he possesses means sufficient to defray all the expenses of travel and food. The most wretched and destitute of all the pilgrims, says Dr. Stékonlis, are those coming from British India. The cost of food and even of water in Mecca is very great, and those who come unprovided with money to buy these necessities suffer severely, and fall ready victims to disease. Since 1865 the condition of the pilgrims has been greatly ameliorated by the exertions of the international sanitary commission at Constantinople. It is now forbidden to slaughter animals for food except in certain designated localities outside of the city; inspectors are appointed whose duty it is to see that the pilgrims observe some of the ordinary rules of cleanliness in their lodging-places, and numbers of deep privy vaults have been dug throughout the city. There is a pilgrims' hospital with sixty beds.

From 1813 to 1881 there were sixteen epidemics of cholera in the holy city, all of which, with but one ex-

ception (that of 1846), occurred at the time of the annual pilgrimage. One of the greatest outbreaks of the disease was in 1881, when it lasted from the middle of September to the end of the year. Some 5,000 of the 100,000 pilgrims of that year perished. The disease was carried from Mecca in all directions by those returning to their homes, but was kept out of Egypt and Turkey by the exertions of the health commission. A double quarantine was established for the returning pilgrims. The first, of fifteen days' duration, was at El Medji, on the Egyptian boundary, 375 miles from Suez; and the second, for forty-eight hours, at Jebel-el-Tor, 125 miles from Suez. Another quarantine, of ten days' length, was established at Beyrouth, and all the returning pilgrims were subjected to a second medical inspection before passing the Dardanelles. That the cholera in Mecca is carried thither by the Indian pilgrims there can be no reasonable doubt. The author states that each of the great epidemics in that city was directly dependent upon exacerbations of the cholera in India. In 1882 a quarantine was established on the Island of Camaran, at the mouth of the Red Sea, for all pilgrims coming from India. This island lies 150 miles north from Cape Babel-Mandeb, is eleven miles in length and three and a half miles wide, and is plentifully supplied with pure water. All ships passing through the Straits of Babel-Mandeb were compelled to go to the island of Camaran. There the passengers were landed and examined by the medical officers. If all were healthy, they were allowed to proceed after five days; but ships from a place where cholera existed, or those having cholera aboard, were detained from ten to fifteen days. The southern part of the island was reserved for the healthy, the northern part for the sick. From July 27th to October 20th, 5,518 pilgrims passed through this quarantine to Mecca. In spite of these precautions, however, the disease appeared in the latter city. The explanation of this failure the author finds in the fact that the English protested against the quarantine, and that English ships bearing pilgrims would not submit to the detention at Camaran. The English authorities kept the existence of cholera at Aden secret for thirty-five days, so that Mecca became infected from ships carrying clean bills of health. Dr. Stékonlis states that in 1882 the Egyptian pilgrims, for the first time, returned by water, having always before gone home by caravan through the desert. To this fact possibly is due the present epidemic of cholera in that country. The partial success already achieved by imperfect quarantine of pilgrims going to and returning from Mecca, gives occasion to the hope that greater perfection in the methods now inaugurated, may succeed in removing this source of peril to Europe and the rest of the civilized world. The author seems to think that the only hindrance to a perfect quarantine and the prevention of cholera in Mecca is the refusal of the English to submit to the vexatious, but necessary, delays thereby caused.

THE TIME AND MANNER OF WEANING.

THE Commission permanente de l'Hygiène de l'Enfance of the Paris Academy of Medicine offered a prize in 1880 for the best essay on the subject of weaning. None of the productions offered at that time was deemed worthy

of a prize, so the committee determined to invite further competition on the same subject for 1882. Ten memoirs were sent in in answer to this second appeal, six of which were regarded as worthy of note, and of these, two were especially commended. The report of the committee was made to the Academy at its meeting on June 26, 1883. (This learned Society, it will be remembered, devotes its entire energies to the advancement of science, and eschews politics. Hence its regular meetings are not interrupted from early spring to autumn.) After a short analysis of each of the essays submitted, the report closed with a concise summary of the most practical suggestions contained in the approved memoirs. These conclusions were briefly as follows: Generally speaking, the child should be fed at the breast during at least the first year of life. The term weaning should be understood as indicating the time at which the child ceases to be suckled and begins to be fed with other food than breast-milk. The weaning of an infant fed at the breast should be a progressive process, for too rapid weaning is often attended with fatal consequences. Gradual weaning is best accomplished by supplementing the mother's milk with cow's milk. This should be given in a bottle, as the effort of sucking excites glandular secretion, and, if possible, it should be withheld until the third or fourth month. After the sixth or seventh month a little farina, oatmeal, starch, or bread may be added to the animal milk to make a thin pap. At the end of a year eggs and butter may be used and bouillon may be substituted for milk in preparing the gruel. At the end of eighteen months or two years vegetables and fruits may be allowed, but meat and wine only after this time. The meals should be given at regular hours, twice a day to begin with, and the intervals between the times of nursing should be increased at first during the night. When about to complete the process of weaning, it is important to choose: 1, a time at which the infant is in perfect health; 2, the interval of calm which separates two dental crises, as after the cutting of the third group or the first molar teeth, or after that of the fourth group or the canines; 3, a season of medium temperature, as spring or fall, so as to avoid equally the great heats of summer and severe cold of winter. All the writers commented upon the lamentable ignorance of this subject displayed by the mothers of France (and they might have added, of the world at large), and suggested that mothers and nurses should be instructed in the elementary duties of their station by means either of printed tracts or public lectures. A valuable suggestion, no doubt, but one which it is to be feared will prove very difficult of practical application.

THE QUESTION OF ABUSE.

DR. SQUIBB, in the *Ephemeris*, refers to the "abusive comments" made by some medical journals upon the action of the American Medical Association at its last meeting. It is strange that those gentlemen who have been so active in circulating scandalous charges against New York physicians, should now complain themselves of being "abused." No one can deny that a very large proportion of the profession throughout the country, including men of the highest character, and even the President of the Association himself, think that a change is

needed in the Code. When a few men at Cleveland, therefore, endeavor to strangle all attempts at securing reform and harmony, they lay themselves open to severe criticism. The Cleveland meeting was indeed harmonious, but its effect has been to increase the discord and bad feeling in the profession. For this reason we, in common with many other medical journals, have criticised its action as most unwise and short-sighted.

The charge which most journals have now fallen back upon and content themselves with reiterating, is that the New York Society is in rebellion. It seems impossible for some of our contemporaries to understand, in this connection, one of the simplest principles in law and right, namely: that a chartered and legally constituted body cannot in any sense "rebel" against the regulations of an unchartered body without legal status, with which also the former is only in voluntary relation.

THE MICROCOCCI OF DYSENTERY.

WE admire the courageous diligence of Dr. Prior, of Bonn, who has been studying the micro-organisms in dysenteric passages. Dr. Prior, by special arrangements with a docile patient, caught the dysenteric stools in disinfected bowls, and within five minutes had preparations under the microscope. In that time, he very truly says, few bacteria could get in from outside or could develop from within. He used for his examinations only the purely dysenteric passage, without admixture of fecal matter.

He found in fresh unstained specimens vast numbers of the round cocci. They were in active movement, and were arranged in chains or in pairs, and singly.

They were strikingly like, in size and shape, to the cocci of pneumonia as described by Finkler; of cerebro-spinal meningitis as described by Leyden, and of erysipelas. They were, however, a little smaller and more delicate than those of pneumonia. They possessed active movement.

He also found a few very fine bacilli. The shreds of mucous membrane which were found in the stools were thoroughly washed and examined. Here there were also countless micrococci, but no rods.

In order to compare these appearances with those of health or of other diseases, Prior examined a number of the stools from healthy men and from patients suffering with tuberculous diarrhoea, typhoid fever, and simple intestinal catarrh. He found micrococci and bacilli here also, but the former in extremely small numbers compared with those in dysenteric stools. On the other hand, the bacilli were very much more numerous.

Experiments with staining fluids were made in order to see whether the cocci could be differentiated in this way. They colored beautifully with gentian violet and Bismarck brown, but had no special stain and could not be doubly stained.

Examinations were made of the diseased intestine, fresh specimens, and those preserved in alcohol, and Müller's fluid being used. The micrococci were found not only in the tissue-juice, but in the tissue itself.

The blood was examined a number of times, but nothing abnormal discovered.

The similarity between the micrococci of pneumonia.

cerebro-spinal meningitis, erysipelas, and dysentery is, to Dr. Prior, a very suggestive fact. To us it appears that the attempt to find a pathological unity or consanguinity between these diseases is rather strained.

Prior does not pretend to say that the organisms he describes are the cause of dysentery. He intends, however, to make some gelatin-cultivations of them, and then inoculate the younger generations. He expects to be able to show that dysentery will be produced.

NOT ENOUGH MEDICAL COLLEGES.

OUR brilliant, but infrequent (being quarterly), contemporary, the *Fort Wayne Journal of the Medical Sciences*, reasserts its view that there are not too many medical colleges in the country. It does not now, however, go quite so far as to say that we need more. Following its able editorial upon the present beatific state of medical education, especially in small western cities, is this notice:

"The medical college of Fort Wayne was closed out, a few days ago, by the constable selling all of the furniture and illustrations in the entire concern to satisfy a judgment against the institution."

We are pained to observe that our contemporary seems rather pleased than otherwise at the collapse of this institution, although it leaves the country one precious college the less.

The history of medical institutions at Fort Wayne is only a repetition of what has occurred over and over again in other places. Medical men, not content with achieving success by the quiet method of ordinary practice, desire to be professors; and thereupon they organize a school. The institution cannot take in all the ambitious doctors in the town; therefore, discontent and jealousy ensue. A rival college is organized, good feeling is disturbed, bitterness and quarrelling arise, and the harmony of the profession broken.

Now, is all this necessary for the sake of crudely educating a few medical students? We think not, although it grieves us, in saying so, to controvert our excellent and too infrequent contemporary of Fort Wayne.

THE PRESBYTERIAN HOSPITAL, NEW YORK.—Arrangements are now being made for increasing the capacity of this hospital and thereby extending its usefulness. The governors are contemplating the erection of a new pavilion, and also the appropriation of some of the spare room in the executive building for extra beds. A new passenger elevator has been erected in the main building, and a new ambulance, which is claimed to be the best made and most complete one in the city, has been recently presented to the institution. Since the establishment of the ambulance service in this hospital the number of acute surgical cases has increased to such an extent that the wards are constantly crowded to their utmost capacity. The attending staff proposes to utilize this material for free clinical instruction to students and practitioners during the coming fall and winter.

TYPHOID FEVER IN COUNTRY RESORTS.—It is reported that typhoid fever has shown itself in several country resorts.

News of the Week.

THE VACATION OF PHYSICIANS AND THE HEALTH OF NEW YORK.—The health of New York is very good, considering the season. This may be probably due to the fact that a large number of invalids have been sent to the country to recruit. At least the larger majority of fashionable physicians do not consider it worth while to remain in town for purely business purposes. Those only who are sick need the physician, and the physician needs only the sick. Both being temporarily separated are now enjoying a rest. With the coming fall, both will doubtless return to work with renewed vigor. The latter is often needed more by the doctor than the patient in these days of active competition in practice.

THE NEW PRESIDENT OF THE HEALTH BOARD OF THIS CITY is giving great satisfaction by close attention to business and energetic endeavors to initiate practical reforms in his department. He is constantly in his office and gives personal attention to details.

THE TRI-STATE MEDICAL SOCIETY will meet in English's Hall, at Indianapolis, on September 18, 19, and 20, 1883, commencing at 9 A.M. Excursion rates have been secured on the following railroads: C., C., C. & I.; Cin., Indianapolis, St. Louis & Chicago; Cin., Wabash & Mich., Indianapolis & St. Louis; I., B. & W.; Wabash, St. Louis & Pacific; Indianapolis & Vincennes; J. M. & I.; Pitts., Cin. & St. Louis; Vandalia, Evansville & Terre Haute; Ft. Wayne, Cin. & Louisville. The New Denison, Grand, Bates, and Brunswick have reduced their rates for the occasion, and everything promises a very large attendance. Many papers of great interest will be presented. For further particulars address Thos. B. Harvey, M.D., Indianapolis, Chairman of Committee of Arrangements. Dr. Wm. Porter, of St. Louis, is President, and Dr. G. W. Burton, of Mitchell, Ind., Secretary.

GETTING THE BEST OF A QUACK.—A quack with many aliases but generally known as the Indian Medicine Man, was recently prosecuted by the Illinois State Board for violating the Medical Practice Act of that State. The quack was accustomed to give public exhibitions of his quackery at different towns in the State. On one such occasion at Decatur complaint was made against him, a license which he had fraudulently obtained was revoked, and he was placed under bonds of \$500 for each violation of the law in the shape of an exhibition. He gave but two of the latter and then decamped.

THE UNITED STATES MEDICAL COLLEGE—DECISION BY THE SUPREME COURT.—We are in receipt of the decision handed down by Judge John R. Brady of the Supreme Court, in relation to the case of the so-called United States Medical College, represented by Dr. Robert A. Gunn and others. The charge against this institution, it will be remembered, was that the defendants were, under the act of June, 1882, illegally acting as a corporation without authority, and were exercising privileges and franchises not granted to them by law. It had previously been determined that the act of 1848, for the formation of charitable, literary, scientific, and benevolent societies, under which the defendants set up their cor-

poration, did not provide for or authorize the incorporation of medical colleges to give instruction, issue diplomas, etc.; and that the law of 1882 did not legalize the incorporation. In this view Judge Brady also concurred. In rendering this decision it was held that the law of 1882 related to scientific and literary colleges and universities, and not to medical colleges, since such language was not employed in the wording of the Legislative act, it being presumed that that body was advised of medical colleges, etc., in the premises. Judge Brady's concluding remarks are worthy of note, viz.: "The courts of this State cannot be too scrupulous in examining the asserted right of any college to graduate matriculates with the degree of doctor of medicine, and to grant them diplomas conferring such degree. The high and responsible duties of a doctor of medicine, relating as they do to suffering humanity, and life itself, and requiring for their proper discharge a high order of culture, experience, and capacity, there should not be the slightest doubt about the due and legal incorporation of every college or society assuming the power to confer upon him the necessary degree, and thus enable him to practise as a physician and surgeon."

PREPARING FOR CHOLERA IN PARIS.—At a meeting of the Municipal Council of Paris, on July 27th, a grant of four hundred and eighty thousand francs was voted to provide for the construction of a temporary hospital for cholera patients in the event of an outbreak of that disease. The buildings are to be erected on one of the bastions of the line of fortifications, and will provide accommodations for two hundred patients. Should the cholera not put in an appearance the hospital may be used for the reception of small-pox patients, or of those suffering from other contagious diseases.

PROFESSOR WILLIAM OSLER, of McGill Medical College, Montreal, has been elected a Fellow of the Royal College of Physicians of London, England. Dr. Osler has held the chair of physiology in the above college for many years, and has done much good work in original investigation. He is at present general secretary of the Canada Medical Association. He is a young man yet, and is to be congratulated on the honor of attaining to the F.R.C.P. solely as the result of his scientific labors.

CHANGES IN MEDICAL COLLEGE PROFESSORSHIPS.—The following are some of the new appointments to professorial chairs, which we find mentioned in our exchanges: Professor Parvin has been tendered the Chair of Obstetrics in the Jefferson Medical College, recently made vacant by the resignation of Professor Wallace. The vacancy in the Faculty of the University of Louisville, made by Dr. Parvin's resignation, has been filled by the appointment of Dr. John A. Ochterlony. Dr. Roswell Park, of Chicago, editor of the *Medical Review*, and connected with the Chicago Medical College, has recently been called to the Chair of Surgery in the Medical Department of the University of Buffalo, N. Y.

THE CODE IN ST. LOUIS, AND HOW A RECENT OFFICIAL STATEMENT IS CONTRADICTED.—At the meeting of the American Medical Association, in Cleveland, Dr. S. Pollak, member of the St. Louis Medical Society, offered a resolution to the effect that a committee be appointed for the purpose of revising the code of ethics, and that

this committee "be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884." At a subsequent meeting of the St. Louis Medical Society a resolution was adopted repudiating the action of Dr. Pollak, and expressing the fealty of the Society "to the existing code of ethics as a time-honored and most suitable fundamental law of the profession," and deprecating "any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity to the machinations of schismatics within or enemies without." Thereupon Dr. Pollak published, in the *St. Louis Medical and Surgical Journal*, a certified copy of an extract from the minutes of the meeting of the St. Louis Medical Society of June 2, 1883. At this meeting it was resolved unanimously that the delegates of the Society to the meeting of the American Medical Association "be requested to move for the appointment of a committee of one member from each State, for the purpose of taking into consideration the propriety and advisability of a revision of the code." The delegates were further instructed to invite the delegates from the State of Missouri to join with them in presenting this resolution to the American Medical Association. Dr. Pollak appears to have had the best of the argument thus far.

MEETING OF THE VIRGINIA STATE MEDICAL SOCIETY.—The fourteenth annual meeting of the Medical Society of Virginia will be held at the Rockbridge Alum Springs, Va., commencing on Tuesday, September 4, 1883. It will be an important meeting, as the Constitution and By-Laws of the Society, and resolutions for the government of the organization generally, will be considered. The Springs Company offers free hotel accommodations to the delegates, and the railroads are selling tickets at greatly reduced rates to those desiring to attend the meeting. Several papers of presumable scientific value are promised by gentlemen in and out of the State.

GAILLARD'S MEDICAL MONTHLY.—Our esteemed contemporary, *Gaillard's Medical Journal*, has returned to its old form as a monthly, after appearing weekly for eighteen months. The reasons for this change are stated to be the wishes of its subscribers, as well as the fact that there is now no monthly medical journal published in this city, while of weeklies there are several.

THE PROGRESS OF THE YELLOW FEVER.—During the past week there has been but little increase of the scourge at the Pensacola Navy Yard, and hopes are entertained that the disease has been arrested by the sanitary precautions which have been inaugurated by those in charge, only four new cases (the wife and daughter of Dr. Owen, Paymaster Brown, and Lieutenant Whipple) having developed since our last report, and two deaths, that of Assistant Surgeon Owen, U. S. N. and his wife. The villages of Woolsey and Warrenton, located upon the reservation, and populated by the lower classes, have had several cases of yellow fever and one death. At the request of Lieutenant Commander Welch, of the Navy Yard, who feared an epidemic in these villages, Surgeon General Hamilton authorized the employment of five sanitary policemen to make a house-to-house inspection, for the purpose of placing them in a good sanitary condition, and discovering any cases of yellow

fever that might be secreted by the inhabitants. He also authorized the employment of an expert physician to take care of such sick poor who might be afflicted with the disease, in case an epidemic occurred, and were too sick to be transferred to the quarantine hospital, the intentions being to remove all sick as soon as possible from among the well. On August 22d, quite an excitement was created in the city of Pensacola, by the officially reported occurrence of two cases of yellow fever on Palafox Wharf, and many of the citizens took flight. Acting Assistant Surgeon White telegraphed the fact to the Surgeon General Marine Hospital Service, who directed that the cases be immediately removed to the hospital on Santa Rosa Island, and to disinfect the premises, destroy the bedding and clothing of the men. On the following day one of the men who were removed to the quarantine hospital died; an autopsy was held by Surgeon Murray and Assistant Surgeon Leonard, who pronounced the disease from which he died to have been "pernicious swamp fever," and that the other one, who was still living, was suffering from the same disease and not from yellow fever. This diagnosis would seem to be borne out by the facts subsequently learned regarding these cases; it appears upon investigation that the two cases of supposed yellow fever were deserting sailors from the bark Dagmar, from Limerick, who arrived at Reed's sailors' boarding-house, on Palafox Wharf, on August 17th, after three weeks spent in the country, hiding in the swamps and awaiting the departure of their vessel. The Dagmar sailed from a healthy port, brought a clean bill of health, made a long voyage, and was not detained at quarantine, as she was in a good sanitary condition, and there was no occasion for detention. The vessel cleared for Dordrecht, on August 17th, the day these deserting sailors put in an appearance at Pensacola. The house-to-house inspection at Pensacola has been completed, and the city is now considered to be perfectly healthy and free from yellow fever. Hospital tents, disinfectants, experienced medical men, are on the ground, in case yellow fever should appear. Reports from Vera Cruz, Mexico, continue to come in, showing that the disease is still very fatal among the shipping. Sanitary Inspector Mainegra telegraphed on August 24th, that the steamers City of Merida and Discoverer cleared from that port on August 23d, bound for New York. Sanitary Inspector Burgess, in his abstract of bills of health ending August 18th, reports the steamers Alabama for Key West, Saratoga for New York, Cristobal Colon for New York, Ellie Knight for Key West, City of Alexandria for New York, schooner Damietta for Key West, and bark Maria for New York, having sailed during that week. He also reports forty fatal cases in Havana during that period.

THE JOHNS HOPKINS HOSPITAL.—It is said that the medical department of the Johns Hopkins University, of Baltimore, will probably be opened about October 1st. Two of the university professors, Dr. Remsen and Dr. Martin, have been assigned, respectively, to the chairs of chemistry and physiology.

THE ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH, for 1881, has been delayed unavoidably, but made its appearance this week. †

SURGEON BURGESS telegraphs that the mate of the Spanish bark Suiciro, which sailed for New York on the 23d inst., was put ashore at Havana, suffering from yellow fever. Forty deaths from yellow fever occurred at Havana last week.

A DESPATCH from Colon (Aspinwall) states that there is no yellow fever at that place this year, and that the port is in a good sanitary condition.

ASSISTANT SURGEON GUITERAS, U. S. N., has reported for duty at the Pensacola Navy Yard, and has just submitted his report of inspection of the port of Vera Cruz, Mexico, to the Surgeon-General. We hope to give some items of interest from it next week.

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE NAVY, for 1881, has just come from the hands of the Government printer. A notice of its contents will appear soon.

SPECIAL SURGICAL APPLIANCES TO THOSE DISABLED IN THE MILITARY AND NAVAL SERVICE.—Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, Surgeon-General C. H. Crane, U. S. A., is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances. Artificial limbs and apparatus for disabled limbs being otherwise provided for, by law, the injuries here in view are almost exclusively those affecting the head, face, or trunk. As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropriation for *special* appliances. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

THE STATE MEDICAL SOCIETY OF WISCONSIN will hold an adjourned session at the Court House in the city of Milwaukee, commencing on Tuesday, September 4, 1883, at 8 P.M.

DEATH FROM CHLOROFORM IN OLEAN, N. Y.—A colored man, aged thirty-two years, died suddenly in Olean, N. Y., while under chloroform, which was being administered to him for amputation of the toes. From the evidence at the coroner's jury it appears that every care was used to guard against a fatal result. But a very small quantity of the drug was used. Death was evidently caused by heart failure.

ADVERTISING SURGICAL OPERATIONS.—We are receiving from day to day slips from newspapers sent us by subscribers detailing the wonderful exploits of surgeons in different parts of the country. They form very amusing reading, and show that the ignorance of the lay press regarding the importance and rarity of such operations is only equalled by the shameless audacity of the advertisers.

Reviews and Notices.

INQUIRIES INTO THE HUMAN FACULTY AND ITS DEVELOPMENT. By FRANCIS GALTON, F.R.S., Author of "Hereditary Genius." 8vo, pp. 380. New York: Macmillan & Co. 1883.

SUCH as have read the author's work on "Hereditary Genius" will be prepared to appreciate in some degree the scope of the present one. The title itself is suggestive of a wide range of study, and considering the painstaking endeavors of the author, it is a very appropriate one. The inquiries are much beyond the range of similar ones on the nature and conditions of man's mental relations, and show a tendency to dive far below the ordinary level of scientific investigation or metaphysical study. It opens to the student of man a field many parts of which have heretofore been but little explored. Curious and instructive facts are brought out, which may serve as valuable data for future theories of mind-working, and for the proper appreciation of the influences of the development of the higher faculties upon the advancement of the race.

The work is made up of a number of papers scattered in various publications, and although by condensation and interpolation the subject-matter has been worked into a consistent whole, traces of its fragmentary origin still remain. This gives it more of a suggestive than encyclopædic character, and excuses the omission of much of that statistical detail of facts which would otherwise appear to be necessary. Although the reader is oftentimes made to feel that in many instances only the corner of the curtain is lifted between what is known and what is possible to be known, he is constantly surprised to find how broad the border-line is, and how conscientiously and thoughtfully it has been explored by the writer.

In all his studies the author has taken a wide grasp. He deals with the manifestations of human intellect and character on a large scale and in their relations to the universe. Consequently he is given to grouping his facts from many and different sources, and basing his conclusions upon ample statistical demonstrations. Take, for instance, the subject of composite portraiture, so intensely interesting to every student of human constitution and human character. Here he proves that there are general characters belonging to the same type of face which can be consistently combined in a single portrait. Members of families show this correspondence in a striking degree, and while particular features may differ there is generally present what is called a family resemblance—a something which places the individual in his family group. The principle of composite portraiture eliminates slight difference by bringing out the stronger features, and hence a consistent picture of the family type. The manner in which this is done is interesting and suggestive, especially to a medical man given to the study of the faces of disease, the evidences of constitutional power, and the appreciation of racial peculiarities in their broadest sense. Photographs of each individual are taken exactly the same size and exactly full-face. These photographs are superimposed in book-form so that the different features exactly correspond with each other. The book of portraits is then fixed and focussed, and by turning the leaves with regularity and rapidity a combination of these portraits is made upon one plate, each component portrait helping to make a single well-defined composite picture. The author's remarkable success in this line is evinced not only in the composite portraiture of family groups, but of other types in individuals with no consanguineous ties. For instance, there are composite portraits of six and nine cases of tubercular disease, respectively, composite portraits of one hundred and fifty cases, respectively, of the so-called healthy type, and numerous other instances. According to our author there appears to be no actual limit to the combinations which can be made under the

circumstances. This certainly opens up a wide field for the study of disease, not only in its bearings upon the face, but upon other parts of the body. What might not be gained by accurate photographic representations of deformities and their composite portraiture in settling upon some absolute standard for comparison. Indeed, the wide application of this method would necessarily suggest itself to the medical man intent upon studying disease and its various manifestations on a comprehensive scale.

Carrying out the same idea the author attempts to apply it to the study of man in all those leading mental and bodily faculties which make him a factor in the great scheme of human evolution. Hence we find our author discussing the propriety of anthropometric inquiries in order to determine their eugenic relations to the human family; in fact, advocating all such measures as may tend by methods more or less mathematical to measure the amount of energy, force, and vitality in large numbers of men, and thereby establish standard types. As preliminary to these ends he studies the various faculties of energy, sensitivity, character, and mental imagery. Some very curious and suggestive facts are brought out in these studies which it would hardly be necessary to detail here. It is sufficient to say, however, that they are capable of being summarized into general principles of great value and extended application. The number of exceedingly interesting data which the author presents regarding mental imagery in reference to number, forms, color, perceptions, and word associations deserve a passing reference. By large correspondence and extended inquiry he proves that a certain class of individuals possess the power of recalling persons and scenes before their mind's eye which is truly remarkable. Not a few can bring up an image in imagination in all its perfections of size, shape, and solidity. This is a faculty possessed by inventors, artists, and others, and, like many similar mental peculiarities, is strongly hereditary. Again, many persons have the same visionary associations as regards numbers. The latter to some appear before the mind's eye in tabulated arrangement, to others in wavy lines, each wave occupied by a particular number. With colors the same curious arrangement oftentimes obtains, and to the visualizing sense in some persons they are associated with particular letters, particular sounds, or even particular ideas. Beyond a certain point it can be easily imagined that positive hallucinations must result.

The development of mental faculties, in all their relations, individual and cosmic, has been, as quite well shown by our author, the combined results of natural selection and natural evolution. Man is, after all, nothing but an insignificant factor in the universe, and simply and irresistibly does his part in carrying out the scheme of advancing civilization, of perfect organization, and higher development. As a part of the whole he is forced to be a consistent worker. It is quite surprising, in view of our author's facts and deductions, to see how little man, as an atom, an individual, can control what, for the want of a better name, we may call his destiny. Admitting modifying influences upon character or organization they are only operative to a limited extent. This is certainly an encouragement to do our best under all circumstances. Still it can hardly be expected that a man with the character of a fox can be made into one with the guileless disposition of a lamb. The difficulty of constructing a silk purse from a pig's ear is well enough appreciated by every one who has tried the experiment. Nature is one thing and nurture is another thing. Our author contributes some very interesting corroborative proof in regard to these points in his histories of twins. Notwithstanding some twins have been widely separated, have had different surroundings, and been subjected to different educational training, they have been known not only to have the same bodily ailments at the same time, but to experience simultaneously novel sensations, mental and bodily, and even to think upon the same subject at the same

time, using almost the same words to express their ideas. These, with other facts, help our author to the conclusion that illness and death are necessary incidents in a regular sequence of constitutional changes beginning at birth, and upon which external circumstances have little or no effect, or, as our author still more strongly puts it: "In cases where the maladies of twins are continually alike the clocks of their two lives move regularly on at the same rate, governed by their internal mechanism. When the hands approach the hour there are sudden clicks, followed by a whirring of wheels; the moment that they touch it the strokes fall. Necessitarians may derive new arguments from the life histories of twins."

These deductions very naturally prepare the way for a discussion of theocratic influences upon man's destiny, as may be manifested in the objective efficacy of prayer. Some very curiously suggestive statistics are presented on this point, proving that man's will is not God's will, and that faith without works is dead. In other words, no proofs are presented to show the purely objective efficacy of prayer in preventing sickness, in hastening recovery, in staying a pestilence, in changing the seasons, stopping a drought, or checking a flood. Whatever may be said of his view of the question the facts upon which his deductions lay are very interesting.

Enough has possibly been said of this truly interesting and instructive book to give the reader an idea of its purpose and scope. If not so systematically arranged as regards its subjects as might have been expected, there is this excuse to be offered, that each component part is complete in itself, each subject has been carefully worked over before as a separate article, and, as previously remarked, the author has done his best to make a proper connection between them. The reader is left free to make his own deductions, and arrange his arguments as may best suit his purpose in view of the facts presented. In a general way we may assume that the work will be valued mostly for the interesting facts it contains rather than the positive strength of many of the arguments used. In fact, not a few of the latter are loosely presented and illogical. Aside from the idea that the development of man is a part of the grand scheme of evolution, all else appears as mere conjecture. We confess that we cannot understand the subject further, and no arguments of the author have increased our light. But his facts will remain, the labor in their arrangement will be appreciated by scientist and philosopher, and his views will be suggestive if some of his arguments are wanting in conclusiveness.

POISONING FROM BLUE STOCKINGS.—Dr. C. C. Stockard, of Columbus, Miss., sends us the following: "In your issue of November 25, 1882, is the report of a case of 'Poisoning from red Stockings.' I have just seen a case of poison from stockings of a different color. Willie M—, aged eight years, had been going barefoot during the summer up to the latter part of July, when he accompanied his father on a trip to Tennessee. He was absent two or three weeks and during this time wore navy blue stockings. A few days before returning home there appeared on his legs, from just above the knee down, a number of red elevations which developed pustules in three or four days and presented the appearance of ecthyma. The pustules were much thicker on the left than on the right leg, and there were several also on the back and chest. These were further advanced than those of the legs, and I regarded them as of similar nature to a crop of small furuncles which he had been having before leaving home, and on account of which he had taken the trip. He returned improved in general health and suffered only from the legs; so that I think there can be no doubt about the stockings being the cause of the ecthymatous eruption. In the case reported in *THE RECORD* the poison was found to be a salt of tin used in setting the dye, but in my case I am unable to say what the poisonous principle was."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 27, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

PUERPERAL THROMBUS—ENDARTERITIS—DRY GANGRENE.

DR. R. E. VAN GIESON presented portions of the right femoral, the right popliteal, and the left femoral artery, with a portion of the left femoral vein, with the following history, by the attending physician, Dr. J. A. Jenkins, of Brooklyn: Mrs. H. H—, thirty-two years of age, of delicate frame and health, free from all specific taint, was first treated in 1876 for subinvolution of the uterus and cardiac disturbance from mitral insufficiency. In 1878 she passed through a normal confinement and made a good recovery, without increase of cardiac difficulty.

In 1880 she had an attack of rheumatism with severe præcordial pains, dyspnoea, and pulmonary congestion, from which she slowly recovered after several weeks' illness. Since that time she has been more or less under medical care, and at various intervals has taken preparations of digitalis for the relief of difficulty caused by the heart lesions. During the last pregnancy preceding her death she enjoyed unusually good health and was quite free from circulatory disturbance, and altogether free from the renal complications not unfrequently observed during the latter stages of gestation.

On April 25, 1883, she had an easy normal delivery, the child weighing about seven pounds, and fairly well nourished. Some three hours after the birth she had several attacks of syncope, apparently hysterical, relieved by stimulants and anodynes. The following morning she was comfortable and free from all pain; there was no rise of temperature during the attack. With the exception of debility and want of appetite, she did well until May 8th, when her temperature rose to 101°, reaching 102° on May 10th, accompanied with slight tenderness over the uterus. This disappeared after the administration of quinine and opiates, and turpentine stupes.

May 15th.—Had a severe attack of palpitation and dyspnoea, continuing with intermissions some three or four hours. The following five days she had again improved, and on May 20th declared herself strong enough to go down to her meals. During the night she was taken with a severe burning pain in the right foot and leg.

May 21st.—The pain continues. Temperature in the mouth, normal. The right foot and toes are extremely cold to the touch and ecchymosed. The right leg and thigh is colder than upon the opposite side, and the seat of burning, stinging pain. Fair pulsation in the femoral, but faint in the popliteal space.

May 22d.—Discoloration of the skin has extended to the ankle, and complete blackening of the skin over the lesser toes.

May 23d.—Was examined in consultation with Dr. R. E. Van Gieson. Right leg: lesser toes sloughing; skin on dorsal and plantar aspect of the foot of a dark mahogany color; external aspect of the leg discolored in spots; the skin tense, but not œdematous; the whole leg is exquisitely tender to the touch. The left leg is tender, but nowhere discolored, and extremely painful to the touch. Both extremities are cold. The right femoral has moderate pulsation, but is not compressible; the left femoral pulsates very feebly; it is difficult to determine whether, indeed, it pulsates at all. There is no pulsation in either limb at the internal malleolus. The patient lingered in great pain, but little relieved by large doses of opiates, until May 29th, when death was welcomed as a release from her intense suffering.

Permission was granted to examine the limbs only.

Necropsy. May 29th, 5 p.m.—Both crural canals and right popliteal space examined. On the right side the

tissues in Scarpa's triangle are more adherent than in health, the sheath of the femoral vessels is thickened, the cellular tissue is abundantly infiltrated with serum. The vein and artery adhere firmly, requiring careful dissection to separate them. The right femoral vein contains a clot completely filling the vessel and partially organized. The right femoral artery from a slight distance above the origin of the profunda to some four inches below this point is filled with a firm laminated thrombus, adherent and organized, the adventitia and media are very much thickened, the intima is of a dull color, corrugated and reddened. The left femoral space showed the same condition of things in a less degree. There was less evidence of inflammatory action in the immediate vicinity of the blood-vessels, the vein and artery were adherent. The left femoral contained a clot, not adherent, apparently not organized, and not completely filling the vessel. The artery is smaller, less thickened than the right, and contains a small central fibrinous thread, not obstructing entirely the lumen of the vessel. The coats of the right popliteal are thickened, the intima lustreless, the lumen not obstructed.

The question which arises in connection with this case is whether or not the gangrene has any relation to the puerperal state. Endarteritis to this extent, completely occluding the lumen of a large vessel, is uncommon. He had seen but one similar case, which occurred in a male, and was not associated with any disease of the heart whatever. In that case gangrene began in the hand and extended up to the elbow-joint without forming a line of demarcation. The patient was seen by Dr. Markoe, who pronounced it a case of idiopathic endarteritis. Dr. Van Gieson had him under observation for some time after that, but finally he escaped from his observation and he never learned what the ultimate result was. Phlegmasia dolens is a common enough condition after parturition, but it is not limited to the puerperal woman. The question is whether the condition of things that gives rise to puerperal phlebitis might not also give rise to inflammation of the artery by extension of the inflammatory action; or whether some condition of the ovarian veins might not produce the same result. It was the opinion of the attending physician in this case that the cause of the gangrene was an embolus arising from detachment of a vegetation from the valves of the heart. Emboli, however, rarely obstruct vessels of this size, and although that may have been a factor in the etiology, Dr. Van Gieson was not inclined to give it the weight which the attending physician had attached to it. Thus far he had been unable to find a similar case. He was not inclined to attach the condition of the vessels to the puerperal state in the relation of cause and effect.

DR. GERSTER said the specimens seemed to show evidence that the assumption of the physician with whom Dr. Van Gieson saw the patient was probably the correct one. He thought that in the presence of a cardiac lesion, such a possibility of embolic obstruction was very probable. The size of the vessel thus occluded is small in the majority of cases, but there were cases on record in which the embolus was quite large, sufficiently so to completely obstruct vessels of considerable size. The view that inflammation beginning in the veins and extending into the artery did not seem to be borne out by the ordinary experience of surgeons. It is well known that not only simple adhesive inflammation, but a much more violent process, even of a septic character, involving the vein, is not usually transmitted to the arteries, and if transmission does finally occur, the arteries are involved at a very late period in the disease, and in most cases only after extensive destruction of tissues has taken place.

Another argument which seemed to support the embolic theory was the fact that the gangrene came on so rapidly. True arteritis obliterans is a chronic process, the walls of the vessel presenting an uneven appearance,

with hard nodules scattered throughout the coats, so that the lumen of the artery does not retain its cylindrical shape, but presents different diameters at different portions of the vessel. In this instance, however, there was, so far as the cylindrical shape of the channel in the artery was concerned, a normal appearance, and there was arteritis, such as is usually seen after embolism has occurred. The characteristic changes of true arteritis obliterans Dr. Gerster thought were absent.

DR. BEVERLY LIVINGSTON referred to a case in which the patient died sixty-two days after delivery, at the Nursery and Child's Hospital. The woman had swelling of both legs, and he was able to trace the femoral artery and veins to the spot where the clot was arrested. On the left side the obstruction began at Poupart's ligament and extended downward in both vessels until it reached the posterior part of the thigh, and also extended into the profunda. On the right side the thrombus extended downward about five inches. His impression was that there was no cardiac disease. The case was one of complicated labor, the patient being delivered of twins, and the second child was delivered with instruments about six hours after the birth of the first child.

DR. FERGUSON referred to two cases in which thrombi were found in the aorta. One case had already been reported to the Society. The second was that of a female patient who had been in the hospital for about five months, and presented all the ordinary symptoms of chronic diffuse nephritis. The heart was enormously enlarged, but there was no other evidence of valvular lesion. The arteries were atheromatous, especially the aorta, and attached to the posterior wall of the abdominal aorta was a clot. The entire clot was about five inches long, tapering at each extremity, and was attached to the wall of the vessel to the extent of from half an inch to an inch. Its central portion was completely broken down, but the external portion of the thrombus was quite completely organized. In neither of these two cases was there any evidence of valvular lesion of the heart.

DR. VAN GIESON said he wished to bring forward two points in connection with his specimen. First, was the obstruction consequent upon the puerperal state? Second was it a mere accident of the puerperal state? With the remarks made by Dr. Gerster he agreed in the main, and was ready to concede that a very extensive inflammatory action might remain constantly in the vicinity of an artery without affecting the vessel itself. That is well recognized. But the question arises whether an embolus is necessary to the production of this condition of things within an artery; whether or not the death of the intima which always precedes the formation of a thrombus, is necessarily caused by an embolus. He said no, there are other causes. There are conditions of the blood, the nature of which we do not know, which do produce death of the intima, followed by the formation of a thrombus. The question therefore is, whether this death of the intima is caused by the inflammatory lesion *per se*, through lack of nutrition in the artery itself, or whether it is caused by irritation produced by an embolus. In this case a large artery was completely obstructed. If the embolus produced the obstruction it must have been arrested somewhere in the vicinity where the inflammation was produced, or there must have been transmitted from the place where the inflammation was produced an inflammatory action which extended upward to the point where the vessel was occluded, because at that point the coats of the vessel were permanently thickened. He did not believe that it was necessary to assume that because a person has valvular disease of the heart, an embolus is necessary to cause this condition of affairs; for he had seen the same condition produced in the brachial artery where repeated and careful examinations of the heart failed to elicit the slightest evidence of cardiac disease. He did not deny that embolism was a common cause of the condition developed in his case, but that it was the

universal cause he did not believe. He thought there was in the blood of anæmic, chlorotic women, who had long suffered from disease of the heart, to which was superadded the exhaustion of child-bearing, a condition of things which might produce obstruction of the artery without necessarily supposing that an embolus is carried into the circulation. So far as the pathology of phlegmasia dolens is concerned, it is very obscure. That such a condition of things as would produce phlegmasia dolens might also produce arteritis of this kind he thought was scarcely probable. That was merely conjectural on his part. The view that inflammation had extended from the vein to the artery was also conjectural, and the theory merely occurred to him for a moment while he was reading the history of the case.

DR. BEVERLY LIVINGSTON presented

TWO HEARTS FROM CASES OF CYANOSIS IN NEW-BORN CHILDREN.

CASE I.—A male child, two days old, that I had under my care while interne in Bellevue Hospital. The labor had been normal; child breathed and nursed well at first, but on the morning of the third day, he was suddenly attacked with arrest of respiration, and irregular action of the heart; the face became very blue, and in a few seconds the whole body was intensely cyanosed; now the child as rapidly lost the blue color and turned red, and as the breathing and pulse became normal the skin assumed its natural color. The attack lasted about one and one-half minute. During the day the child had six similar ones, about one hour between them, the last attacks were more severe than the first, and lasted about two minutes, artificial respiration had to be employed to bring the child out of them, but after the sixth nothing would cause the heart and respiration to start again; between the attacks the child seemed perfectly well. These attacks of cyanosis came on without cause or warning, there was no muscular spasm accompanying them. Physical examination gave the lungs as normal; the heart a murmur at the base and another at the apex, both systolic. The diagnosis was an open foramen ovale and some disease of the tricuspid valve.

Autopsy.—The right heart was found very much distended with blood, the left heart nearly empty. The foramen ovale was not open, but the ductus arteriosus was. The mitral and tricuspid valves were fringed with the usual reddish, semi-transparent nodules, over which there is so much dispute. The lungs showed numerous small regions of collapse. The other organs were normal.

CASE II.—A male child, born normally, of a healthy mother, at the Nursery and Child's Hospital on May 25, 1883. For the first four days the child was perfectly well; then suddenly he was found to be cyanosed, with shallow, irregular breathing, and irregular pulse; under treatment the child revived, but soon relapsed, this occurred several times the first day (May 29th), during the ensuing three days the child had similar attacks, but did not recover at any time sufficiently to nurse, and remained cyanosed; it gradually lost strength, and died on June 1, 1883. Auscultation during life had given a systolic murmur, heard loudest at the apex. No diagnosis was made. It was supposed the mother had overlain the child during her sleep.

Autopsy.—The body was of a dusky red color all over. On removing the sternum the heart seemed enlarged, but this enlargement was found to be due to the distention of the right side by dark clotted blood. The left side was empty. The foramen of Botall was widely open, as was also the ductus arteriosus. The mitral and tricuspid valves presented the usual fringe of reddish, semi-transparent nodules. The lungs were entirely collapsed except the right apex, which was partially expanded.

These two cases of cyanosis do not show any malformation, or change in the heart due to disease, that would cause the cyanosis. It is true that in the second case

the foramen ovale was found very widely open, and the blood-clot passed from the right to the left auricle; still it seems to me the cause of the cyanosis lay in the disturbance of the circulation due to the collapsed lungs, and not to the open foramen ovale or ductus arteriosus. In the first case the attacks of cyanosis seemed to depend much more on the irregularity of the respiration than on the action of the heart. Hænoch¹ particularly refers to diseases of the lungs as a cause of cyanosis, and open foramen ovale and ductus arteriosus, and similar remarks are made by Cadet de Gassicourt,² Meigs and Pepper, and others.

As to the meaning of the little nodules on the edges of the mitral and tricuspid valves, I must say I do not believe they are of an inflammatory origin, for out of 136 autopsies on children between still-births or a few hours up to three and a half years, I have never failed to find them when I looked for them, and generally the younger the child so much the more pronounced are they. It may be objected that most of these children died of disease, having had more or less fever, but that could not account for the cases dying from the effects of operative midwifery, etc., unless one insists that in these cases they had been foetal endocarditis, which I cannot admit, neither can I accept the idea of Parrot,³ first announced by Luschka,⁴ and lately brought forward again by Hænoch,⁵ viz., that these nodules are the result of rupture of the intravalvular blood-vessels, causing a hæmatoma, which in the course of time underwent absorption and gave, as a result, these semi-transparent nodules; but I rather incline to the idea of Richard Pott⁶ that they are remains of the foetal valve, and are not due to any pathological process. They are composed of a collection of the normal elements of the valve, and do not appear microscopically like the deposits of an endocarditis.

The explanation of the systolic murmurs is difficult, for the only point of resemblance is the open ductus arteriosus, while the open foramen ovale in the second case might explain matters. It would not do so in the first, and I am loth to believe the fringes of nodules could have interfered with the closing of the valves. Some authors (Cadet de Gassicourt) think the passage of blood through the ductus arteriosus can cause a bruit, so this may have been the cause of what was heard. That there were bruits I am sure, but I am unable to give a good explanation of what caused them.

DR. LIVINGSTON also presented a specimen illustrating

CONGENITAL PULMONARY STENOSIS.

The patient was a female child, aged one year eight months, admitted in April, 1882, to the Nursery and Child's Hospital for heart disease. On admission she was a fairly nourished, pale child, with good appetite, regular bowels, normal urine, and parents gave a history of congenital heart disease. She was not cyanotic, she was short of breath, preferred to remain quiet in a chair, her fingers were not club-shaped at the ends, nor was her abdomen enlarged.

Physical examination gave the lungs healthy. Heart, a murmur, systolic in character, very loud, heard with greatest intensity about the junction of the fourth left rib with the sternum, could be heard nearly with the same distinctness at apex, was heard to left of apex-beat, which was in the sixth interspace, and could be heard in the back between the scapulae. There was a distinct fremitus when one placed the hand over the præcordial region. The abdominal organs were normal. The diagnoses were: 1, trouble with the aortic, most likely regurgitation; 2, mitral, a double murmur. I am responsible for the last.

On June 20, 1882, the child developed ulcero-mem-

¹ Kinderkrank., p. 383. ² Traité Clinique d. Maladies de l'Enfance, t. ii., p. 48.
³ Arch. de Physiol., No. 4, a. 5, 1874. ⁴ Virchow Archiv., bd. xi., heft 2.
⁵ Loc. cit. ⁶ Jahrbuch Kinderheilk., b. xiii., s. 29.

branous stomatitis, and six days later died of septæmia, the stomatitis having been of a mild nature.

Autopsy.—The lungs were normal. Heart was hypertrophied, and the left side dilated. The three semilunar valves of the pulmonary artery are grown together so as to leave a round hole two millimetres in diameter to allow the blood to pass to the lungs, and on one side there is a small vegetation which must also have been an obstacle to the current of blood. The foramen of Botal was enlarged and open, the inter-auricular septum was very much thinned and there were some small holes through it, so it had a cribriform appearance. The mitral and tricuspid valves were normal. The ductus arteriosus was not examined. The liver presented the abnormality of having no gall-bladder, there being only one duct, and that led directly into the duodenum; the transverse fissure divided the liver in two nearly equal halves. The other organs were normal.

This is one of those cases in which there is sufficient obstruction to the blood leaving the right heart to cause the foramen ovale to remain open, and still there was not sufficient cyanosis to have called attention to it. The blood must have mixed freely enough through the foramen ovale, and still cyanosis was not produced, for the lungs were in good condition and the blood was well oxidized. This case supports the theory I put forward in the cases of cyanosis, that the cyanosis was due to obstruction to the circulation in the lungs, not to the mixing of the dark with the red blood. The autopsy explains the bruit that was heard.

Dr. Livingston further presented a specimen illustrating

CONGENITAL COMMUNICATION BETWEEN THE RIGHT SIDE OF THE HEART AND THE BEGINNING OF THE AORTA.

This heart was removed from the body of a male child, three months and twenty-seven days old, he was born in the Nursery and Child's Hospital, March 25, 1882, of healthy mother, was a strong, healthy child, and never gave any symptoms of heart disease. Being put on artificial food he got entero-colitis in July, and died on the 28th of that month.

Autopsy.—Lungs healthy, thymus gland large. Heart enlarged. On opening the aorta, just at its commencement and on the right side, a communication was found leading into the right heart; above and below the tricuspid valve it was closed by a part of this valve, and most likely no blood passed through it. The valves of the aorta are only two in number, but were sufficient to close the opening. The mitral and tricuspid valves were normal, on the mitral are plenty of those semi-transparent nodules referred to in the other cases.

Dr. Livingston also presented specimens derived from a case of

HEREDITARY SYPHILIS.

Male child, born in the Nursery and Child's Hospital May 8, 1883, appeared healthy at birth, but poorly nourished. On May 28th he developed an eruption consisting of blebs on an inflamed base, they appeared first on the soles of the feet, palms of the hands, and between the fingers, in a few days similar blebs appeared upon the limbs, body, face, etc.; after the contents of the blebs became purulent they dried up and left thick yellow scabs. There were successive crops of this eruption. Soon the anus became fissured and presented mucous patches, fissures appeared at the angles of the mouth and an ulcer on the median line of the hard palate. Sprue developed, snuffles appeared, and the child died of asthenia, June 12th, just five weeks old. The child was bottle-fed. The mother gave no specific history, but spoke of having had sore eyes. The glands were not enlarged. Child was treated by inunctions of mercurial ointment.

Autopsy, June 13th, 3.30 P.M.—Child poorly nourished, length nineteen and one-half inches. Hair well developed all over head. The remains of the pemphigoid eruption on the feet, legs, thigh, back, hands, arms,

and on the face around the mouth. Lungs commencing catarrhal pneumonia in the posterior and lower portion, numerous ecchymotic spots in the anterior portions. Heart: foramen ovale open, mitral and tricuspid valves show the small semi-transparent nodules. Spleen firm, Malpighian bodies prominent, $2\frac{3}{4}$ inches long, $1\frac{1}{2}$ wide, $\frac{1}{4}$ thick. Liver congested and was resistant, but could not see any change. Bones: the femur presents at the apex and lower line of ossification a marked yellow line, which is described by O. Haab¹ as due to syphilis, and he claims it to be a change in the basement substance of the cartilage due to infiltration with small cells, so causing a degenerative change but no true pus; the epiphysis can in this way be separated completely from the diaphysis. In the specimen I present, under the microscope no infiltration of round cells can be seen but rather a molecular change.

(To be continued.)

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE VALUE OF BLOOD-LETTING IN PNEUMONIA—CREMATION IN FRANCE—SANITARY REFORMS IN FEAR OF CHOLERA—THE EFFORT TO PREVENT THE ABUSE OF TOBACCO—HONOR TO PASTEUR AND BRÉAL—DEATH OF PROFESSOR PARROT.

PARIS, August 10, 1883.

PROFESSOR HARDY lately delivered a clinical lecture at the "Charité" Hospital, on the advantages of bleeding in some cases, a remedy, he said, that was too much neglected now-a-days, and stigmatized as absurd and dangerous the practice of blindly following fashion and routine in medicine. For his part he has found it an invaluable remedy in certain forms of pneumonia, the very cases in which in his student days he was taught to employ it, and after a practice of nearly forty years, he saw no reason why he should give it up. At the same time he would not have it understood that he would employ venesection in every case, any more than he would any other remedy unless clearly indicated as in the following example: A man thirty-seven years of age, and a gardener by profession, was admitted to his ward with lobular pneumonia of right lung, and pleuro-pneumonia of the left side, of four days' standing. The constitution of the patient was apparently good, though he had had two attacks of pneumonia previously, the first in 1869 and the second in 1879. On the day of his admission the patient was bled to four hundred grammes in the morning, and the same repeated in the evening, and no medicine was prescribed beyond a little gum julep and tisane. On the third day a slight improvement had taken place in all the symptoms, but the patient was nevertheless bled to two hundred and fifty grammes, which afforded further relief, and the improvement continued steadily. On the fifth day the respiration and the other physical signs were normal, the patient began to eat and drink as usual, and he left the hospital a few days after, completely cured and without any other medication.

There exists in France a society for the propagation of cremation; but this manner of disposing of the dead meets with so little favor amongst our neighbors that it is questionable whether it will be adopted in this country. The society, however, is using its best endeavors to point out the advantages that would accrue to the public health by the adoption of cremation, instead of interments, particularly during epidemics of infectious diseases. A petition to that effect, and signed by eminent men, has been submitted to Parliament by the Société de Crémation, of which M. Kœchlin-Schwartz is president; and one member of the society, M. Cadet,

¹ Virchow's Archiv, b. 65, s. 366, f.

who is also a deputy, has proposed that, were cholera to break out, cremation should be made compulsory. This is evidently impossible; but there would be no valid reason why cremation ovens should not be built in two or three cemeteries as an experiment, and a means of testing public feeling in the matter. The substitution of incineration, or any other mode of disposing of the dead, for burying will be a work of time, as deeply rooted prejudices are not so easily overcome.

If cholera has not yet made its way in this country, the fear of its doing so has aroused the French from their wonted apathy, and sanitary reforms are being introduced on all sides, while others are in contemplation, so that Paris, at least, will at no distant period compare with any other city in the civilized world. Among the reforms proposed are the enlargement of the hospitals now in existence and the erection of others for infectious diseases, as well as an asylum for the aged, and another for incurable children, which are to be built outside the walls of the city, and for which the Municipal Council has granted a sum of 3,000,000 francs.

The French society against the use of tobacco has petitioned the Chambers to increase the duty upon tobacco, with the view of limiting its use as much as possible. But however advantageous this measure may be to the revenues of the State, I hardly think it would be of much service in improving the moral and physical condition of the population, which the society has in view, as it is a well-known fact that the more a thing is forbidden and the greater the restrictions put on it the more it will be sought and indulged in. Experience has shown this in regard to spirits, which, notwithstanding the heavy duty levied on it, is more than ever consumed in various forms. The practice of smoking among youths, which is growing to an alarming extent, seems to be the great care of the society, and although heavily taxing tobacco may limit its use to a certain extent yet it is evident that this measure is insufficient to prevent its abuse, and in order to produce some effect in that direction the sale of tobacco to children must be strictly forbidden; parents themselves should set a better example, and every possible means should be taken to instruct the people concerning the deleterious influence on the system of tobacco and alcohol, the two greatest curses of civilized life.

On the occasion of the jubilee of the University of Zurich the diploma of honorary doctor was conferred on MM. Pasteur and Bréal, the well-known French savants.

Dr. Alfred Naquet, the distinguished chemist, but better known for his political position in the French Parliament as Deputy, has been elevated to the Upper House as Senator.

Professor Parrot died on the 5th instant, at his residence in Paris, at the comparatively early age of fifty-three, and after an illness of only two months. Dr. Parrot began his studies in medicine in 1840, and passed successively through the grades of Interne, Doctor of Medicine, and Agrégé, which latter he attained in 1860. In 1876 he was promoted to Professor of the History of Medicine; and in 1877 was appointed Physician to the Asylum of the "Enfants Assistés."

ONE EXCUSE FOR QUICK TREATMENT.—One of the Vienna surgeons was one day called in hottest haste to see the little son of a well-known Austrian count. On reaching his patient he found a trifling scratch on the child's hand. Sitting down and writing a prescription he gave it to one of the servants with instructions not to lose an instant, but to bring the medicine as soon as possible. "And is the danger so imminent, then?" asked the countess. "No, not that," replied the Professor; "I only feared lest the wound should be entirely healed before the servant returned."

THE BEST METHOD OF KEEPING A HYPODERMIC SYRINGE in working order is to try it every day.

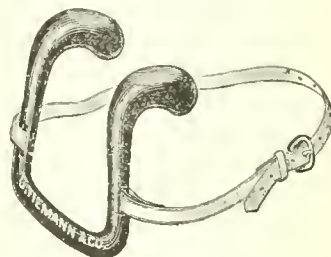
New Instruments.

A NEW MOUTH GAG.

By W. THORNTON PARKER, M.D.

ACTING ASSISTANT SURGEON, UNITED STATES ARMY.

IN a recent case of strychnine poisoning, it was with the greatest difficulty that I was able to introduce a stomach tube, owing to the patient's violently grinding his teeth. The tube was finally bitten in two soon after reaching the stomach, and thereby rendered perfectly useless. There being but this one tube in the hospital, the operation of the stomach pump was brought to a speedy termination. It occurred to me at that time that some sort of mouth-gag for making the operation of emptying the stomach more certain should accompany each stomach pump. I have, therefore, devised a simple mouth-gag, made for



me by Messrs. Geo. Tiemann & Co., New York, which I believe will be found very desirable for use with the stomach pump. It is made of hard polished rubber and separates the teeth sufficiently to permit the safe passage of the largest stomach tubes. A strap confines it securely and the patient cannot expel it from the mouth. It is to be hoped that it will prove to be of service.

FORT ELLIOT, TEXAS, May, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 18, 1883, to August 25, 1883.

CLEMENTS, BENNETT A., Major and Surgeon. Relieved from duty with the Army Medical Examining Board, New York City, N. Y. S. O. 193, par. 11, A. G. O., August 22, 1883.

MIDDLETON, J. V. S., Major and Surgeon. Relieved from duty at Fort Hays, Kan., and assigned to duty at Fort Leavenworth, Kan. S. O. 169, par. 2, Department of the Missouri, August 18, 1883.

WILLIAMS, JOHN W., Major and Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability. S. O. 109, par. 1, Department of the Columbia, August 8, 1883.

BARTHOLF, JOHN H., Captain and Assistant-Surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. S. O. 109, par. 2, Department of the Columbia, August 8, 1883.

KIMBALL, JAMES P., Captain and Assistant-Surgeon. Relieved from duty in Department of the Platte, and to proceed to New York City and report in person to the President of the Army Medical Examining Board for duty as a member of that board, *vice* Surgeon Clements, relieved. S. O. 193, par. 2, A. G. O., August 22, 1883.

FINLEY, J. A., Captain and Assistant Surgeon. Relieved from duty at Fort Concho, Tex., and assigned to duty at Fort Stockton, Tex., as Post Surgeon. S. O. 101, par. 1, Department of Texas, August 16, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 25, 1883.

AUSTIN, A. A., Assistant Surgeon. Ordered to Naval Hospital, New York.

CRAIG, T. C., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the U. S. S. Minnesota.

CRAWFORD, M. H., Passed Assistant Surgeon. Detached from the U. S. S. Pinta and placed on sick leave.

WILLSON, W. G. G., Passed Assistant Surgeon. Detached from the Minnesota and ordered to the Pinta.

WHITE, CHARLES H., Surgeon. Ordered to the Museum of Hygiene, Washington, D. C.

BRYAN, J. H., Passed Assistant Surgeon. Detached from the Museum of Hygiene and ordered to the Miantonomoh.

GUIERAS, D. M., Passed Assistant Surgeon. Ordered to the Navy Yard, Pensacola, Fla.

Medical Items.

CENTRAL SEPARATION IN PLACENTA PRÆVIA.—Dr. J. M. Ward, of Cornelia, Mo., has, during thirty years' practice, met with three cases of central implantation of the placenta, which were attended successfully, as well as an equal number of partial cases. In his experience, he mentions that examination will show the placenta separated for a short distance around the internal os, but that hemorrhage occurs only with the pains; hence he advises that the finger be introduced and the placenta peeled off as far as the finger can reach from around the os, after which he tampons until the pains become expulsive. In this view the doctor states that central separation and the tampon gives a good chance for the child, and does not materially impair the chances for the mother. In the second stage the tampon is removed and the following advised: either (a) to peel off the remaining placenta on one side, to rupture the membranes, turn the child, and deliver by the feet; or (b) after having peeled off the placenta on one side, to rupture the membranes and bring the fore edge of the placenta through the os, and hold it against the side of the vagina until the head engages. By this procedure about four inches of the central portion of the placenta is reached, leaving two inches of the circumference to maintain foetal life and circulation. This, he advises, should be done early, by which means full dilatation is permitted, with no more laceration of the curling arteries.

HOW TO KEEP THE HYPODERMIC SYRINGE IN ORDER.—One of our subscribers, G. E. A., writes: "Your correspondent of last week desired to know how to keep his hypodermic syringe in working order. The following has been my experience. Of course the best way with any and all instruments is to use them. Next to that, *inspect them regularly* once a month—not only look at them, but look at them with an oiled rag and piece of chamois skin, more carefully in summer than in winter. In considering hypodermic syringes, aspirators, etc., the instrument should be regarded in two parts—the barrels and pistons, which require the *wet treatment*, and the needles and wire, trocar and canula, which require the *dry treatment*. If the piston-leather is old and worn out it should be renewed; but if only dried and loose from non-use, draw a little warm water into the syringe, then, placing the finger over its end, slowly press the piston downward through the water, which will be seen to pass between the piston and sides of the syringe. The water will now be both above and below the piston, and will cause its leather to swell quickly and make a tight joint. In order to keep it so discharge the water from both ends of the syringe, and treat in the same manner with

glycerine, which, being hygroscopic, keeps the piston-leather in good condition. Moreover, pure glycerine will not become rancid, as will oil, etc., nor will it interfere with any chemicals used hypodermically. In the larger syringes a harder fat like mutton tallow will often cause the piston to work better than oil or glycerine. If the piston should have become so tight that it is impossible to make the glycerine pass above it, invert the syringe in glycerine or put a few drops around the piston-rod, and then slowly press it downward. The glycerine will follow into the upper chamber and will ply back and forth with the piston and keep it in order. The test for a tight piston is to put the finger over the end of the syringe, and quickly pull up the piston-rod, when, if tight, a vacuum will be formed and the piston return to fill it. The 'dry treatment' for the needle consists in blowing out all liquid from them by several quick strokes of the piston, while the needle points upward, so that no fluid from the syringe enters it; if used but seldom, let this be done in the hot, dry air just above the lamp or gas. After removing the needle from the syringe replace the wire. Should the morphia gradually form a crust upon the inside of the needles, hot water may be drawn through them, or a quicker and more thorough way is to secure from Tiemann & Co., or other instrument maker, a yard of hypodermic wire (uncut), fasten one end, thread the needle upon the other, and then with a few long strokes it is quickly cleared. When one allows his patient to suffer ten or fifteen minutes' extreme pain while fixing his hypodermic syringe, or, as I have seen, a patient almost lose his life because his physician's stomach-pump would not work, it seems duty and but little trouble to *inspect* for a few moments, the first day of each month, those instruments which ought to be kept in order."

Dr. W. N. Williams, of Indianapolis, Ind., says: "Place a piece of soft rubber between the needle end of the syringe and end of the case, thick enough with a corresponding piece at opposite end of case to make it fit the case snugly, then fill the syringe with water both *in front* and *behind* the packing, place in case and the syringe will be kept water-tight and ready for use even if it is not filled oftener than once in ten days. I should be glad to hear of a better way if there is one."

ANOTHER THREE-BARRELLED PENIS.—Dr. E. B. Ward, of Greensboro, Ala., writes: "Seeing the article headed 'A Three-Barrelled Penis' in THE RECORD of August 11, 1883, brought to mind a similar case of mine. A young gentleman called at my office for treatment, and on examination I found that the same anomaly occurred in this case as the one mentioned by you, *i.e.*, the meatus presented three distinct openings. Not only was this anomaly of the penis confined to him, but his two other brothers presented the same rare specimens of malformation."

THE SO-CALLED ABORTION OF TYPHOID FEVER AND THE INVESTIGATION OF PRETENTIOUS CLAIMS.—Dr. E. Ruthven Young, of this city, writes: "Having long been an eager and instructed reader of THE RECORD, in perusing its number of May 26th, I came across, to me, a rather unsatisfactory article, headed, 'A Confident Correspondent.' In it you will readily see, by reference to your file, that a Dr. Davy, of Ohio, takes a decided exception to an article published in a February number of the *Medical Age*. The writer of this latter seems to have made in it the assertion that 'Typhoid fever is a disease which is uncontrolled and uncontrollable, and *any one* who says he can abate an attack or cut short the disease after it has passed the forming stage is either a *knave* or a *fool*.' Dr. Davy, in his short comment on this, says, after a reference to poor Galileo as being badly used for his great discovery, that 'within the next five years typhoid fever will be controlled almost as easily as remittent or marsh fever.' God grant he may be right in this, for if so, surely we will have a weapon second only to Jenner's vaccination. Further, he says 'a patient can

be gotten into a convalescent condition in from four to six days after the following symptoms are fully developed : temperature, 105° ; pulse, 100 to 120; nervous symptoms with delirium well marked; tongue dry and cracked; articulation indistinct; bowels tympanitic, tender, and gurgling; diarrhoea of ochre-colored stools, etc. Ninety per cent. of such cases can be gotten up and about in 12 to 18 days by *proper medication*. Now, Mr. Editor, such an assertion attracted me at once. Having read widely concerning typhoid, and never having heard of anything so nearly approaching a specific as this seemed to promise, I determined to avail myself of the professional courtesy of Dr. Davy and obtain this valuable knowledge. Yet even then it struck me as peculiar that the doctor should stop so suddenly and give the world of physicians no clue as to what this 'proper medication' was. What a pity such knowledge existed and the profession not have it and their suffering patients its benefit! In answer to my anxious letter of inquiry, I received a letter from which I give sufficient extracts for my brothers in ignorance to learn as much as I did: 'Dear Doctor, etc.—We have never given the chemical working formula to any one. We have spent much time, hard study, and money in obtaining our knowledge, and as some chemist has to prepare the compound, we thought it but right to retain the formula. Any one desiring the therapeutical knowledge and sufficient of its chemistry, so that they may handle cases of typhoid fever just as intelligently and successfully as we have done or can do, such information will be cheerfully given. The medicine will be manufactured by — & Co., and sold at two dollars a pint.' Now, Mr. Editor, where are our much-talked-of ethics? To which class does this compound belong, patent or proprietary? Perhaps it may be valuable, but as a 'secret nostrum' it will never be respected or used by our noble brotherhood of *true* physicians."

MEDICAL MEN IN PARIS.—The Paris correspondent of *The Lancet* states that a list of the members of the medical profession, practising in its various branches in Paris and its environs, has been drawn up under the orders of the prefect of police, and consists of 1,915 doctors of medicine, 12 doctors of surgery, 83 *officiers de santé*, 43 foreign medical men, 1,500 *sages-femmes*, 845 *pharmaciens*, and 95 veterinary surgeons. The list is to be posted up at each police station for the benefit of the public, and at the same time to act as a check upon those who have no right to practise. Among the foreign medical men authorized to practise in France, ten obtained their diplomas or degrees at the Faculty of Jena, the others in various universities of England and Germany. Among the doctors of medicine there are two ladies, one French and the other Russian. This list would give an average of one medical man to about 1,100 inhabitants, the population of Paris being estimated at 2,239,928. The following interesting information has also been obtained by the prefecture *à propos* the above list. The senior medical man, according to age, is M. Ségalas, who was born in 1792, and took his degree in 1817. Next in seniority comes Dr. Ricord, the celebrated syphilographer, who was born in 1800, and took his degree in 1826. The oldest *sage-femme* is established at Bourg-la-Reine, in the Department of the Seine. She obtained her diploma in 1815, since which she has continued to practise without any interruption. She declared at the prefecture of police that during the sixty-eight years she has been in practice, she had, on an average, 100 *accouchements* a year, so that she has during that period brought 6,800 children into the world.

TREATMENT OF GENU VALGUM BY THE FRENCH SURGEONS.—Dr. A. J. Steele writes concerning the above subject (*St. Louis Courier of Medicine*) as follows: "At Lyons I was warmly received by MM. Mollière, Robin, and Delore. All had done original work in the matter of genu valgum or knock-knee, and I was anxious to learn more of their investigations and treatment.

Delore is more especially interested in and is teaching obstetrics and gynecology, but several years since he investigated the subject of in-knee, and proposed as a method of treatment fracture through the epiphyseal junction both of the femur and tibia. This is done by manual force over the edge of the table. The limb being thus straightened, is put up in starch or plaster-of-Paris dressing, and the patient allowed to be up and about; union occurs in an improved position. He reports cases thus treated and cured. But I do not find that his professional brethren are very generally adopting this method, many preferring in the young subject to employ mechanical appliances worn for a long period, and thus gradually straightening the limb. In the youth and young adult, M. Robin breaks the femur above the epiphyseal junction with an osteoclast of his own devising. M. Mollière, surgeon-in-chief of the *Hôtel-Dieu*, has in many cases adopted this method very satisfactorily. He showed me in his wards several cases that had undergone the operation, some still in the starch dressing, and others with it removed, all doing well and with no untoward results. At his kindly suggestion M. Robin applied his instrument to the limb of a cadaver in order to illustrate its action to me. It was an adult subject, and the femur was broken very readily with his osteoclast just above the condyles. On cutting down upon the part the periosteum was not, at least on the anterior part of the femur, broken, though the bone was fractured entirely through. In badly united fractures, and in ankylosis of the knee and hip-joints, the same instrument has been used by them to break up the part and allow of improved reposition."

SMALL DOSES.—Dr. Thorowgood says regarding the use of small doses:—"I have come to the conviction that the doses of many medicines, as set forth in books, are often needlessly large, when we seek, not an eliminant or evacuant effect, but a gradual alternative or specific action from the remedy. There is probably no medicine regarding the definite action of which physicians agree better than iron; but is it necessary for the cure of facial neuralgia to give an insoluble powder like the hydrated oxide of iron in a dose ranging from thirty grains up to three or four drachms? The subnitrate of bismuth, another insoluble powder, has been given for the relief of gastric pain in such large doses that, after death, large, hard, black masses of concrete subnitrate and sulphide of bismuth have been found blocking the intestinal canal. The gentleman who made the post-mortem said the masses he removed looked like lumps of metal." As to calomel, he has seen marked beneficial results from the administration of doses of one-third of a grain, and he has found patients do much better with doses of two minims of tincture of aconite than with doses of five to fifteen minims as prescribed in the *British Pharmacopœia*. He also advises small doses of liquor arsenicalis for the relief of spasmodic asthma, and he has seen excellent results from the persevering use of small doses (one-fiftieth) of a grain of strychnia in promoting the restoration of exhausted nerve-function, "while larger doses do but add to irritation and eventually increase the exhaustion." Tincture of nux vomica taken in doses of one to two minims, fasting every morning, he has found useful in the cure of chronic constipation.

A CURIOUS INSTANCE OF FEAR OF BEING "BURIED ALIVE" has just been brought to notice by the proving of the will of Major Andrew Gammell. This gentleman deposed that a sum of one hundred guineas, free of legacy duty, should be paid to Mr. Barnard Holt, F.R.C.S., or failing him, some equally eminent surgeon, as a fee for surgical examination of his body after death.

BARTHOLOW'S "PRACTICE."—It has been stated that Bartholow's "Practice of Medicine" is being translated into Chinese for the benefit of the physicians of the Celestial empire.

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INTESTINAL INDIGESTION.

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A PRACTICAL distinction may be drawn between gastric and intestinal dyspepsia; indeed, has been drawn between the two. In order to make this discrimination we follow the time of each part of the digestive act. When discomfort commences immediately after the introduction of food into the stomach, we regard the stomach as being the seat of the malady, as when there is a gastric ulcer present, for instance, or great irritability. When feelings of discomfort are quickly experienced, and after some time the food is vomited, little affected by the digestive act, and mixed with much mucus, then we suspect that there is gastric catarrh present, and that the food, rolled over and over by the muscular action of the walls of the stomach, becomes covered with a layer of mucus, through which the gastric juice cannot penetrate. The offending mass is at last rejected by vomiting, or is passed into the bowels and got rid of by purgation.

But at other times the symptoms complained of carry with them other interpretations. When there is little discomfort, either pain or flatulence, experienced until some considerable time after a meal, then we suspect the malady to lie rather in the duodenum and its relations, than in the stomach itself. For instance, a little time ago a gentleman from Ireland presented himself with this association of symptoms. He was over fifty years of age, strongly and broadly built, had lived well, even freely, and never knew anything of indigestion until within the last year or so. Since then he has had evidences of gouty indigestion with acid eructations, and considerable lithates in his urine. There is also some enlargement of his liver. But the significant symptom of all, to my mind, is this—his discomfort comes on from one to three hours after meals. Now we know as yet very little of the prodromata of cancer of the stomach before the familiar, well-recognized condition is established of pretty constant pain, little relieved by vomiting, acidity of the stomach, constipation, emaciation, with the development of the cancerous cachexia, and in time, especially when pyloric, the development of a tumor. There is, however, a stage anterior to this. Any one who has been able to keep a patient under observation for considerable periods knows how far from rare it is for chronic dyspeptics to die with unquestionable cancer of the stomach. Nor is it difficult to conceive that such should be the case—disturbances of function preceding organic changes; just as failure of functional power in the brain may pass away under appropriate measures; or, under other circumstances, pass on into that condition commonly spoken of as “softening of the brain,” that is, of organic change. Probably no one can always be sure what the resultant outcome of a distinct failure of brain-power may be. So with the stomach. A long history of functional disturbance culminates in organic disease. But when a well-nourished man, who has never known what it was “to have a stomach,” begins to suffer from acid dyspepsia, and has pain from one to three hours after a meal, then the suggestion of cancer of the pylorus forces itself upon one. Little relief had been afforded by the ordi-

nary bismuth mixture, and this was not without its significance. The case will be watched carefully to see what its further development may be.

The pylorus is in firm contraction for some time after a meal, so as not to allow the contents of the stomach to escape until fairly acted upon by the digestive fluid, and then it relaxes and allows the contents to escape into the duodenum. Why pain should be experienced until the ring relaxes is not quite clear; but the pain of pyloric cancer certainly is not particularly linked with the introduction of food into the stomach, as is that of gastric ulcer, and is not specially experienced when the ring is closed. As the case progresses the pain is more continuous; that is, when the ring is relaxed and contracted alike. Then there was the freedom from all gastric trouble till that time of life was reached when cancerous growths become common. There was, also, the negative results from appropriate treatment. The *tout ensemble* of the case was, to my mind, that of commencing cancer of the pylorus. The case was one of much interest; the more that a curious case of indigestion and vomiting, sometimes of blood, came indirectly under my notice some time ago, where opinions had varied, within narrow limits, and which turned out ultimately to be an ulcer situated within the pyloric ring itself.

More commonly pain with fulness is complained of from one to one-half hour or more after meals, *i.e.*, at the time when the food is passing out of the stomach into the duodenum, when we may fairly believe the following to be the case. Normally the acid contents of the bowel, when passing into the duodenum, are mixed with the alkaline bile to the extent not only of neutralizing their acidity, but of positively rendering them alkaline, so that the pancreatic fluid may be operative. But in those cases of duodenal dyspepsia it would seem that the alkaline tide from the liver is insufficient to perform this neutralization, and the pain and discomfort follow, the duodenum resenting the presence of an acid fluid. Whether this pain is due to this acid irritation solely, or there is muscular spasm set up thereby, may not yet be affirmed, the observations made so far being scarcely sufficiently minute. (The difficulty of making minute observations, when they have to be made through the medium of the patient's sensations, are self-apparent to any one.) When, however, the pain and discomfort come on at the time the food is passing into the duodenum, and are referred by the patient regionally to the duodenal area, and at the same time the stools are defective in bile, then duodenal dyspepsia is the probable cause of the symptoms. If, beyond this, a pill of ox-gall with castile soap, some two hours after a meal, is beneficial, and the addition of liquor pancreaticus sheathed by an alkali gives decided relief, then the diagnosis of duodenal dyspepsia is fairly established.

It would also be well to put the patient upon a dietary of farinaceous material and milk, so as to do away, to a great extent, with acid gastro-pepsin digestion, and develop alkaline intestinal trypsin digestion. The farinaceous material, with milk, might be guarded by some prepared chalk or calcined magnesia, to neutralize gastric acid digestion. By such means the acid condition of the duodenum is removed, and with it the discomfort. Milk sheathed with an alkali is just as much indicated in a case of duodenal dyspepsia as it is in the condition of gastric ulcer, where it is desirable to get the food through

the stomach with as little disturbance of that viscus as possible.

By the light of recent physiology such cases are beginning to be apparent, and it is possible to discriminate them, partly by their semeia, but still more by the effects of treatment. Duodenal dyspepsia is linked with those cases where fats are not assimilated, and where cod-liver oil passes the anus *en masse*. In such cases the ox-gall and castile soap, taken an hour or so after a meal, gives relief in time, and enables the oil to be emulsified, and after that to be taken up by the lacteals. This kind of case comes but comparatively little under the notice of the consultant, and it is to the observant family practitioner we must look for the record of these cases, and the effects of treatment. A sufficiency of cases only to furnish a strong surmise have come under the notice of the writer. If his readers will help by the publication of a few well-marked cases the diagnosis, and with it the rational treatment, duodenal dyspepsia will probably soon become a recognized matter.

Intestinal indigestion is also seen under other circumstances, viz., *lientery*. This word is old-fashioned, but is not obsolete. Here the food, but little changed by the digestive act, is voided per anus a brief while after being taken. The stomach passes the food into the intestines, and they sweep it along to the place of exit too speedily for any real digestion and absorption to take place. Lientery is found with children who may have had measles, with the low muco-enteritis which is apt to follow that exanthem, or in cases of mesenteric disease. Frequently large quantities of acid mucus are voided with the undigested food. Here alkalies with catechu or hematoxylin are indicated, with the inevitable milk dietary.

In tiny children an hyperæsthetic condition of the intestines is often seen, where the ordinary vermicular movements cause pain, the child crying the peculiar long abdominal wail, corresponding with the vermicular twist acting on the bowel, the seat of the muco-enteritis. The movements of the intestines may be felt through the thin abdominal walls, with or without flatulent distention. The stools smell sour. Here again alkalies are indicated, as prepared chalk with tincture of cardamom, or the bicarbonate of potash with cajeput oil; both useful combinations. Here the indications for treatment point to the neutralization of the acid formed in the intestine, together with the administration of a carminative of some kind (carminatives allay the energy of the intestinal peristalsis, and relieve painful vermicular action).

Such conditions are as much intestinal dyspepsia as they are anything else, as the digestive act is both painful and inefficient. It must be remembered that the different ferments of the pancreas are all alike only operative in an alkaline medium, and that in the presence of an acid they are inert. Consequently when the alimentary tract is acid, whether by acid formed in the stomach or formed below the stomach, or from the chyme being acid because the natural alkali in the bile is deficient, then the digestive ferments of the pancreas are killed and wasted. In the child, indeed, digestion is far more pancreatic than gastric; and such acidity of the bowel is very pernicious. When the acidity is greatest low down in the bowel it is well, as Prout pointed out, to use the fixed alkalies (chalk and calcined magnesia), which are not converted into soluble salts in the stomach, but which pass along the intestines and neutralize acid all along the alimentary tract. But such acidity is not confined to infants, and is seen in adults. The question of how far a little mercurial, especially as gray-powder, is useful in such conditions of acidity may be raised. Some authorities are in favor of such medication, and certainly in those cases where the acidity appears due to deficiency of the alkaline salts of the bile, it would recommend itself. Of course, with very delicate children, not being congenitally syphilitic, caution is requisite in prescribing mercurials; but at the present day the caution is so excessive that mercury is avoided altogether by some practitioners.

To eschew mercurials altogether is fanaticism, therapeutic fanaticism, nothing more.

There are other conditions of intestinal dyspepsia less commonly encountered, which may just be alluded to. In a case of confirmed indigestion, due to long sustained overwork in establishing a commercial enterprise in Russia, which came under notice lately, the discomfort was referred to the transverse colon, and was mainly experienced about three hours after a meal. Sweet things and sour things, all seasoning whatever, were an offence; while, as the patient said, "I don't eat enough to nourish me, and if I did, I should not digest it!" His complaint was a just one. However, he did improve sufficiently to revisit Russia; but at Kief he caught dysentery, and just managed to get back to England before being completely prostrated. The attack was not a severe one, for a healthy person at least, and there was no thickening of the colon, that either Sir Joseph Fayrer or myself could detect; but the uncomfortable sensations referred to the transverse colon were very troublesome, and being about persistently. Gradually they declined, and now the patient is again making headway, still having to be very particular about his dietary. If such cases scarcely fall under the heading "indigestion," they do, however, come under the heading "dyspepsia," and they require a most careful dietary. In this particular case small quantities of liver-stimulants only were required, as much bile in the fæces irritated the bowel not a little.

Cases like this may easily be mistaken for gastric indigestion, if the observation as to the time after a meal when the discomfort is experienced be not properly made. In my former article on "Atonic Dyspepsia," the methods of treating primary gastric indigestion were laid down. Here it may be said that the liver requires to be roused, and bile supplied to the chyme, either by increasing the flow from the liver, or by giving ox-gall in pill, either with or without castile soap, until a sufficient natural flow is secured. By such means, and by the exhibition of liquor pancreaticus and fixed alkalies much may be done for those cases of dyspepsia which lie below the pyloric ring; in other words, for dyspepsia in the alkaline area of the alimentary canal. How far the pancreas can be stimulated by either, as first suggested by Balthazar Foster, and approved by a Medical Commission in the United States Army, in cases where the assimilation of fat is deficient, is a matter of practice which calls for more attention. But by the use of hepatic stimulants, which includes the rational resort to mercury, alkalies, and artificial pancreatic secretion, and an appropriate dietary, much may be done where intestinal digestion is painful or is imperfect. The main thing to be done is to discriminate what is amiss, and then how may it be remedied. For both, perfect familiarity with the digestive act, its divisions, and the time after taking food when each occurs, is absolutely requisite. When it is found out where the difficulty occurs then the appropriate measures can be adopted. And it may be the symptoms are not experienced in the abdomen at all when the malady lies below the pylorus. When imperfectly digested products are poured into the portal circulation the main complaint may be psychical, as lowness of spirits, oppression, or panphobia, occurring two or three hours after a meal. Or may be lithates are freely formed, and, in some cases, irritability and discomfort in the urinary passages are set up as soon as these mal-products reach the bladder. In such cases alkalies with some pancreatic preparation will often give much relief, especially if at the same time the dietary be strictly regulated; and hepatic stimulants are certainly of service.

DR. CHARLES FREMONT DIGHT, assistant to the Chair of Pathology and Practice of Medicine in the University of Michigan, has been elected Professor of Anatomy and Physiology in the Medical College at Beirut, Syria, Asia.

ON THE PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS AT THE EARLIEST PERIOD OF ITS DEVELOPMENT.¹

BY R. W. TAYLOR, M.D.,

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THE importance of the early recognition of the initial lesion of syphilis is so great that any facts tending to enlighten us in this direction are of more than ordinary value. In the *American Journal of Syphilography and Dermatology* for July, 1871, I published the description of the appearance of an initial lesion of syphilis, as observed on the first day of its evolution. These appearances were such that scarcely any one would have suspected that the seemingly insignificant spot was really the starting-point of syphilitic infection.

From that date until May, of this year, I had not met with a similar case, but at that time a second one came to my notice. I shall, therefore, give the details of these two cases, which present clearly marked features of the hard chancre, which had also been observed years ago by my friend the late Professor William Boeck, of Christiania, as he informed me in an oral communication, but which have not, I believe, until now, been described by any one but myself. In connection with the description of this peculiar appearance of the hard chancre at its earliest period of evolution I will try to present the other appearances which it usually presents, since by this course more completeness to the general picture is gained. In addition, I shall speak briefly of the appearance of the initial lesion of syphilis in children in its very earliest days. The first case is transcribed nearly verbatim from the journal before mentioned.

M. M—, a native of Poland, came to the New York Dispensary, January 17, 1870, and presented a peculiar lesion on the penis. Upon the inner aspect of the right lip of the meatus urinarius was a spot about the size of the heads of two pins, which presented a silvery appearance. The spot was not at all elevated, but directly continuous, without any elevation or fissure with the surrounding membrane, and there was no fissure, however slight, to be seen through the spot itself, even with the aid of a magnifying-glass. I thought that perhaps the man had cauterized it with nitrate of silver, but he declared that he had not interfered with it at all. He stated that he had for the first time observed the spot that morning. It was evident that the lesion consisted in some change produced in the superficial epithelial cells of the part. Professor W. Boeck, of Christiania, being present at the examination, remarked that he had seen the initial lesion of syphilis once or twice before begin in this manner upon the penis, and that he had often observed it to commence in this way in the mouths of children. In two succeeding days the area of the silvery patch increased very little, and in four days a small amount of induration could be distinctly felt, since the parts were so accessible to careful manipulation. In a week a distinctly marked indurated nodule was formed, which very much everted the lips of the meatus. The inguinal ganglia had by this time become perceptibly hard and swollen. When the nodule, which though no larger than a small pea, but which was very firm in consistence, had existed about a week, the epithelial scales which covered it were cast off, and a very slightly grayish exulcerated surface was observed, the granulations of which were very small, and it was covered with a very scant viscid secretion. This indurated ulcer remained in a sluggish condition for six weeks, when a roseola erythema of fauces and general malaise supervened, which were treated by mercury and disappeared quite rapidly. For two years the man had various lesions, but owing to persistence in treatment he was cured, and has since been well.

On May 20, 1883, a gentleman, who shall be nameless,

came to me in great anxiety and fear regarding a suspicious connection he had had the night before. He was a man forty-four years of age, who since his marriage, twenty years previously, had had no intercourse with strange women, and had been true to his wife. His recollection of the night previous was a hearty dinner and much champagne; and in the morning he awoke in a brothel in the arms of an aged siren. Though assured most solemnly by this woman that she had no disease, he became greatly worried and sought me to determine whether he had contracted any venereal trouble. I frankly stated his probable dangers in gonorrhœa, chancre, and syphilis. So great was his anxiety that he came to me for examination every day, and suffice it to say he did not contract the two local forms of contagion. On the twelfth day, absolutely nothing abnormal having been observed on his penis up to that time, I saw a small oval spot of a glistening silvery appearance on the dorsum of the glans penis midway between the meatus and the balano-preputial furrow. This small spot was of about the size of three small pin-heads, and was distinctly visible at all times, since the prepuce was very small and barely covered the base of the glans. Recalling my experience with the afore-described case, I informed the gentleman that he had very probably contracted syphilis, and that his domestic quarantine must still be rigidly followed for fear of infecting his wife. The patient's fears were such that I had almost daily opportunity to observe the development of this lesion. Its course was briefly as follows: The silvery spot increased in area slowly. Its surface was perfectly unbroken, and during its early days it could be distinctly seen that the morbid process was superficial and confined to the epithelial layer; moreover, there was no circumferential hyperæmia. Thus increasing, at the end of ten days the spot occupied an area of a line in diameter, and was round. From this time on deeper changes were observed, thickening of the uppermost layers of the mucous membrane was distinguishable in about fifteen days, and sharply marked parchment induration was clearly felt on the twentieth day. Swelling of the inguinal ganglia was discovered on the eleventh day. The silvery appearance of the nodule was well marked until about the fifteenth day, at which time it might have been mistaken for a papule of lichen planus. From this date onward the silvery gloss grew less, redness appeared over the surface, and in twenty days from its appearance the chancre was typical in its appearance—a smooth exulcerated surface, sharply defined margin, and an abrupt elevation. On July 13th, an erythematous syphilide came out over the epigastrium and abdomen, and in a week it covered the whole body.

The point of interest of these cases consists in the peculiar, localized, silvery appearance of the mucous membrane of the glans penis, which were soon to be the site of the true Hunterian chancre. The importance of the early recognition of the nature of this lesion is well shown in this case, since it is very probable that a person who had never before seen it, would have regarded it as insignificant, and would not have prevented the gentleman having intercourse with his wife. The practical conclusion is this, that at its evolution the initial lesion of syphilis may appear simply as a small, unelevated, silvery spot, seated in the mucous membrane, without any inflammatory areola. This spot may thus remain superficial and free from ulceration and induration for nearly two weeks, after which time, and even before, it may increase in development and assume the appearances of a typical indurated chancre. In this connection I may add that there are two other appearances presented by the initial lesion of syphilis at its earliest period. The first appears simply as a minute, sharply rounded, excoriated spot, the surface of which is neither elevated nor depressed, and appears like a most superficial erosion of the epithelial cells of the mucous membrane. Generally these spots are of a sombre red color, which later on may become

¹ Read before the American Dermatological Association, at Lake George, August 30, 1883.]

coppery red, and usually are not the seat of hyperæmia. Their future course is one of extension on the surface and in depth. In somewhat rare instances numbers of these spots, from three to as many as a dozen, may appear, and then we have the multiple herpetic form of chancre of Dubuc. The third and last of the earliest appearances of the initial lesion of syphilis is in the form of a small, slightly elevated papule, having a dry unbroken surface. This form of chancre, the *papule sèche* of Lancereaux, is mostly seen in persons having short prepuces, and in those who have none, or but the rudiment of one. It begins in this subacute, indolent, and insidious manner, and may run its whole course without any ulceration or excoriation, or it may follow the course of the indurated nodule, or become transformed into the parchment-like chancre.

It is needless to add that it is important to bear these peculiar appearances in mind, as by so doing and by acting on the warning given by them, much misery may be spared.

In this connection I may add that I have several times in my life confirmed the statement of Professor Boeck, to the effect that in children the initial lesion often begins as a very minute, shining, and silvery spot, similar to those just now described. I well remember an instance of a child, infected by its wet nurse, at the tip of whose tongue, a little to the right side, was a minute linear spot, which appeared as if cauterized by the pencil of nitrate of silver, and which went on to form a large indurate nodule, which was followed by syphilis. Also I can now picture in my mind a small spot, such as I have now fully described, on the lower lip of an infant, which later on became an enormous Hunterian chancre. The practical indications of these facts are obvious.

OBSERVATIONS ON THE ACTION OF NEW REMEDIES.

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IN December, 1882, at the suggestion of my visiting physician, Dr. J. J. Reid, I began a series of observations on the therapeutic results obtainable from certain drugs, to which professional attention has more recently been drawn. As House Physician of the second medical division at Charity Hospital, a large field for study was open to me, and considerably over one hundred cases were recorded. These experiments lasted from December 1, 1882, to April 1, 1883, and were made with the following drugs:

1. Convallaria maialis, fluid extract.
2. Manaca, fluid extract.
3. Eucalyptol.
4. Yerba santa, fluid extract.
5. Chekan, fluid extract.
6. Ol. gaultheriæ (in rheumatism).
7. Lippia Mexicana, fluid extract.
8. Quebracho, fluid extract.

The first one of the list, the lily of the valley, is the most important, and at the present moment far the most interesting one of the series. I shall therefore give, in somewhat fuller detail, the account of the results obtained with it.

1. *Convallaria*.—The cases treated with this drug numbered fifteen in all, there being nine cases of organic heart disease, five cases of cardiac failure from various causes, and one case of Bright's disease. The preparation used was the fluid extract.

CASE I.—Hannah B.—, aged forty-three; mitral regurgitation, marked hypertrophy, and probably dilatation, dizziness, pain and palpitation very marked; pulse, 84, very irregular, both in force and frequency; respiration, 48; temperature, 98½°. January 20th: Convallaria, fluid extract, gtt. x. t. i. d. January 24th: Pulse about 90, but so irregular as to be almost uncountable; pains

same; occasional attacks of cardiac asthma; convallaria, gtt. xx. t. i. d. January 27th: Pulse, 105; no improvement; convallaria stopped; ordered tr. dig. gtt. v. t. i. d. January 31st: Pulse, 84; unimproved; tr. dig. gtt. x. t. i. d. February 10th: Somewhat easier; pulse, 96; same. February 21st: Pulse, 90, still as irregular; tr. dig. gtt. xv. t. i. d. February 25th: Slight improvement in palpitation and pain; pulse 84, same; digitalis stopped; ordered convallaria, gtt. xx. t. i. d. February 28th: Pulse, 90, less irregular; convallaria, gtt. xxx. t. i. d. March 2d: Pulse, 75. March 4th: Heart rhythm no better; palpitation and pain much relieved; convallaria, gtt. xl. t. i. d. March 5th: Pulse, 96, irregular; convallaria, 3 i. t. i. d. March 7th: Pulse, 90, same. March 10th: Pulse, 90, unimproved; convallaria stopped.

CASE II.—Justin McC.—, aged fifty-two; mitral regurgitation; pulse, 84, irregular in force, feeble, occasionally intense; dilatation. February 28th: Attacks of dizziness; convallaria, gtt. v. t. i. d. March 2d: Pulse, 66, stronger, still irregular. March 5th: Pulse, 60; dizziness better; convallaria, gtt. x. t. i. d. March 6th: Pulse, 60, as irregular as ever; general condition—pain, dizziness, etc.—much improved. March 8th: Discharged at request.

CASE III.—John J. D.—, aged thirty-one; mitral obstruction, cardiac hypertrophy; cardiac beat irregular in force and frequency; palpitation, dyspnoea, etc.; pulse, 120. January 25th: Convallaria, gtt. x. t. i. d. January 29th: Pulse less irregular, but just as frequent; convallaria, gtt. xv. t. i. d. February 1st: Pulse, 120, irregular; feels better; palpitation somewhat less; convallaria, gtt. xxx. t. i. d. February 5th: Pulse, 78, irregular in force and frequency. February 8th: Pulse, 96; much more comfortable; palpitation much improved; no dyspnoea; can go up and down stairs easily. February 22d: Discharged, in fair condition.

CASE IV.—Alexander McM.—, aged twenty-three; mitral regurgitation and aortic obstruction; considerable hypertrophy, dyspnoea, palpitation, pain, cough, and blood-streaked sputum; pulse, 80, regular, fairly strong. January 15th: Convallaria, gtt. v. t. i. d. January 19th: Considerable dyspnoea and pain; phlegm blood-streaked; pulse, 72; convallaria, gtt. x. t. i. d. January 23d: Same; convallaria, gtt. xx. t. i. d. January 26th: Pain considerably better; palpitation and dyspnoea as before; convallaria, gtt. xxx. t. i. d. January 30th: Pulse, 72; condition same. February 2d: Pulse, 72; symptoms no better. February 6th: Pulse, 84; convallaria, 3 i. t. i. d. February 8th: Pulse, 72; precordial pain undoubtedly better, but otherwise no change. Treatment stopped.

CASE V.—Patrick H.—, aged twenty-four; mitral regurgitation and aortic obstruction; hypertrophy; much precordial pain; pulse, 90, and rather feeble; dyspnoea, but especially palpitation and pain. February 27th: Convallaria, gtt. x. t. i. d. February 28th: Pulse, 84; somewhat better; dyspnoea and palpitation as before; convallaria, gtt. xx. t. i. d. March 2d: Breathing better, and steadily improving; less palpitation; pulse, 96, fairly strong; convallaria, gtt. xxx. t. i. d. March 3d: Pains in side began again; pulse, 90; convallaria, gtt. xl. t. i. d. March 5th: Much precordial pain; palpitation undoubtedly less; pulse, 90, small and hard; convallaria, 3 i. t. i. d. March 6th: Pulse, 80, much improved, full and strong; little pain. March 7th: Pulse, 90, good; general condition fair; no pain. Discharged at request.

CASE VI.—Patrick E.—, aged fifty-six; mitral regurgitation and aortic obstruction; but little hypertrophy; headache; feet slightly swollen; urine negative; pulse, 120, feeble. January 22d: Convallaria, gtt. v. t. i. d. January 29th: Pulse, 120, fuller; headache; swelling gone down; much cough; convallaria, gtt. x. t. i. d. February 1st: Pulse, 132; headache bad; convallaria, gtt. xx. t. i. d. February 6th: Pulse, 96, much improved in tone; headache and tightness in head; convallaria stopped.

CASE VII.—Rose McG—, aged thirty-six; mitral stenosis and insufficiency, aortic stenosis, dilatation, great dyspnoea, and palpitation; feet slightly swollen; urine negative; pulse, 108, irregular and intermittent; fluttering and oppression around heart. Treated with digitalis, caffeine, etc., with slight result. January 18th: Pulse, 100, irregular; convallaria, gtt. x. t. i. d. January 20: pulse, 66, fuller, but irregular; fluttering somewhat better; convallaria, gtt. xx. t. i. d. January 24th: Pulse, 86, fair; feels better; fluttering less; can rest better at night; convallaria, gtt. xxv. t. i. d. January 27th: Pulse, same, still irregular. February 10th: Pulse, 84, fairly good, irregularity of beat quite unaffected; little dyspnoea or palpitation; convallaria stopped.

CASE VIII.—Theresa K—; mitral regurgitation; mitral stenosis; aortic stenosis; dilatation; palpitation; dyspnoea; cardiac pain; severe dyspnoea in spells; cough; phthisis, second stage, etc.; pulse, 108, moderately strong. January 20, 1883; Convallaria, gtt. xv. t. i. d. January 22d: Feels very bad; breathing labored; violent palpitation; much dyspnoea and pain inside; pulse, 120, small; convallaria, gtt. xxx. t. i. d. January 23d: Pulse, 113, small. January 24th: Pulse, 108, slightly stronger; slightly nauseated by drops; convallaria, gtt. l. t. i. d. in milk and lime-water. January 27th: Pulse, 108, improving; cardiac distress unaffected; vomited several times last night. Convallaria stopped; ordered cerii oxalas, gr. xx. t. i. d. January 29th: Vomiting better; pulse, 104, small; dyspnoea, palpitation, pain, as before; convallaria, 3i. t. i. d. January 31st: Negative result; dyspnoea very bad; convallaria, 3ij. t. i. d. February 1st: Nauseated again, the palpitation, dyspnoea, and precordial pain entirely unaffected; convallaria stopped.

CASE IX.—Charles S—, aged forty-two; mitral regurgitation, aortic stenosis, and aortic regurgitation; hypertrophy; dyspnoea marked. January 26th: Pulse, 84, small and jerking; convallaria, gtt. xx. t. i. d. January 30th: Pulse, 78, regular; dyspnoea and pain unimproved; convallaria, gtt. xl. t. i. d. February 2d: Pulse, 84; but little improvement; convallaria, 3i. t. i. d. February 6th: Pulse, 108, fuller and stronger than before; precordial pain somewhat less; no change in dyspnoea and palpitation. February 8th: Little result from convallaria, ordered stopped; tinct. dig. gtt. x. t. i. d. February 9th: Less pain; pulse, 84; tinct. dig. gtt. xx. t. i. d. February 16th: Pulse, 72; dyspnoea marked; tinct. dig. gtt. xxx. t. i. d. February 23d: Statu quo; dig. reduced to gtt. xx. t. i. d. February 27th: Pulse, 78, much feebler; is a good deal better, but still complains of dyspnoea; dig. stopped; convallaria, gtt. xv. t. i. d. March 2d: Same; convallaria, gtt. xxv. t. i. d. March 5th: Less dyspnoea and palpitation than at any time since entrance; convallaria, gtt. xxxv. t. i. d. March 7th: Improvement marked; his heart gives the man but little trouble. Transferred to convalescent help.

CASE X.—Charles N—, aged sixty-five; Bright's disease; oedema of feet and legs; nausea, vomiting; moderate dyspnoea; considerable cough; cardiac signs negative; lungs, emphysema and chronic bronchitis; urine, average daily amount twelve to twenty-five ounces; moderate amount of albumen, hyaline and granular casts. January 18th: Urine, twenty-one ounces; elimination by skin and bowels with slight result. January 22d: Getting steadily worse; urine, twelve ounces. January 23d: Pulse, very rapid and irregular; convallaria, gtt. xv. t. i. d. January 24th: Pulse is uncountable at wrist; urine, fourteen ounces; oedema very painful, punctured and bandaged; convallaria, gtt. xxx. t. i. d.; heart-beat, 108. January 26th: Urine, seventeen ounces; somewhat easier; pulse, 100. Patient died January 27th.

CASE XI.—Lizzie H—, aged twenty-eight; phthisis, second stage; much enfeebled by successive hæmoptyses. February 23d: Pulse, 96, very small indeed; convallaria, gtt. x. t. i. d. February 25th: Pulse, 118, somewhat

stronger; convallaria, gtt. xv. t. i. d. February 28th: Rapidly improving; pulse, 96, still feeble; convallaria, gtt. xxx. t. i. d. March 3d: General condition satisfactory; pulse considerably stronger, 102. March 10th: No further results. Patient discharged at request.

CASE XII.—Constantine Z—, aged thirty-two; acute articular rheumatism; no pericardiac or cardiac lesion; convalescence; pulse almost imperceptible, and varying for days between 114 and 160; temperature normal. Digitalis and ordinary cardiac tonics tried—no result. January 15th: Pulse, 130; temperature and respiration normal; convallaria, gtt. v. t. i. d. January 16th: Pulse, 140. January 17th: Pulse, 156; convallaria, gtt. x. t. i. d. January 18th: Pulse, 140, very feeble; convallaria, gtt. xv. t. i. d. January 19th: Pulse, 120, somewhat stronger; convallaria, gtt. xxv. t. i. d. January 20th: Pulse, 102; undoubtedly better and stronger. January 22d: Pulse, 90, regular and full; convallaria, gtt. xxx. t. i. d. January 23d: Pulse, 78, good. January 25th: Pulse, 80. January 26: Pulse, 108, and slightly weaker; convallaria, gtt. xl. t. i. d. January 27th: Pulse, 80, fair; convallaria, 3i. t. i. d. January 30th: Pulse, 102, regular and good. February 1st: Pulse, 80. Discharged.

CASE XIII.—Henry H—, aged thirty-eight; melancholia; excessive feebleness of heart-beat; no physical lesion or symptom; pulse, 96–108. January 23d: Convallaria, gtt. xv. t. i. d. January 25th: Pulse, 80, much fuller and stronger; convallaria, gtt. xx. t. i. d. January 30th: Pulse, 90, excellent; convallaria, gtt. xxx. t. i. d. February 2d: Pulse, 84, full and strong; no other effect.

CASE XIV.—John R—, aged fifty; acute alcoholism; very shaky; pulse, 77, exceedingly feeble, almost imperceptible at the wrist; first sound of heart hardly audible with a stethoscope. January 23d: Convallaria, gtt. xx. t. i. d. January 25th: Pulse, 72, same; convallaria, gtt. xxx. t. i. d. January 26th: Pulse, 80, slightly better; convallaria, gtt. xl. t. i. d. January 27th: Pulse, 60, not improved at all to day; convallaria, 3i. t. i. d. January 30th: Pulse, 60, very feeble indeed; convallaria stopped.

CASE XV.—James S—, aged forty-eight; phthisis, third stage; very serious hæmoptysis; pulse, 66, very feeble, hardly perceptible at the wrist. January 15th: Temperature, 98½°; respiration, 30; convallaria, gtt. x. t. i. d. January 17th: Pulse, 80, improving; feels stronger; no more blood in sputum. January 19th: Pulse, 96, much stronger. January 22d: Patient had another severe hemorrhage; pulse, 66, very feeble. January 23d: Pulse, 72, almost imperceptible; convallaria, gtt. xx. t. i. d. January 24th: Pulse, 70; respiration, 24; temperature, 99°; pulse still very feeble; convallaria, gtt. xxxv. t. i. d. January 26th: Some improvement; convallaria stopped and other treatment resorted to.

And now a brief résumé of results: There were nine cases of organic heart disease, in most of which considerable hypertrophy had already occurred, or dilatation had even taken place. In six of these cases a moderate effect was obtained from the remedy; in three there was no result. In none of the cases in which irregularity or intermittency of the pulse was marked did convallaria affect the heart-rhythm. It has been claimed that convallaria is more adapted for cases of functional than for cases of organic heart disease; but the amount of relief which some of the above cases obtained was very considerable, and I cannot but look upon the drug as an occasionally valuable agent even in the most advanced forms of cardiac disease. The results obtained in the remaining six cases were not much better than those from the first nine. Five of these cases were cases of cardiac failure from acute disease, from hemorrhage, or from depraved general conditions. Of these five, one only was not benefited at all; and in several cases the results were very satisfactory.

I found it necessary, however, in most cases, to give

doses considerably in excess of the ordinary ones. Several cases took $\mathfrak{z}$ i. of the fluid extract t. i. d. without bad effect; one case, No. VIII., took $\mathfrak{z}$ ij. t. i. d., and was nauseated by it; but the patient had been suffering from chronic gastro-catarrh before, and it is possibly unfair to attribute her vomiting to the drug alone.

One word as regards the diuretic effects of convallaria. I am sorry that I did not have the urine measured in all the cases from day to day. In the only case in which that was done, No. X.—one of advanced disease of the kidneys—the amount of urine was not increased, and the dropsy was not affected. But there was certainly no very marked diuresis caused by the drug in any case, for it would surely have been brought to my notice.

2. *Manaca*.—Twelve cases were treated with this drug—all cases of chronic rheumatism. In the cases which were benefited the heat and swelling rapidly disappeared from the joints; the pain on motion of the limb and consequent disability soon became better. In almost all cases I began with the usually prescribed dose—five, ten, fifteen drops—but was obliged to increase it to two drachms, or half an ounce, before any decided effect was observed. The preparation used was the fluid extract prepared by Parke, Davis & Co.

CASE I.—Chronic rheumatism. Dose, $\mathfrak{z}$ i. to $\mathfrak{z}$ ij. t. i. d. Began to improve on fourth day; under treatment one month; recovered completely.

CASE II.—Chronic rheumatism. Dose, $\mathfrak{z}$ ss. t. i. d. Began to improve on sixth day; under treatment thirteen days.

CASE III.—Chronic rheumatism. Dose, $\mathfrak{z}$ i. t. i. d. No result; under treatment nine days.

CASE IV.—Chronic rheumatism. Dose, $\mathfrak{z}$ i. t. i. d. No result; under treatment sixteen days.

CASE V.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. t. i. d. Began to improve in three days; good result; whole time of treatment eleven days.

CASE VI.—Chronic rheumatism. Dose, $\mathfrak{z}$ ss. t. i. d. No result; under treatment ten days.

CASE VII.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. every four hours. No improvement at all; under treatment five days.

CASE VIII.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. t. i. d. Improvement began in five days; good results; time of treatment fourteen days.

CASE IX.—Chronic rheumatism. Dose, $\mathfrak{z}$ ss. t. i. d. Began to improve in three days; good result; time of treatment eight days.

CASE X.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. t. i. d. Joints began to get better in five days; time of treatment twenty-four days; very good result.

CASE XI.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. t. i. d. Improvement began in two days; excellent result; time of treatment eighteen days.

CASE XII.—Chronic rheumatism. Dose, $\mathfrak{z}$ ij. to $\mathfrak{z}$ ss. t. i. d. Improvement began on third day and continued to a certain extent, and then stopped.

Of the twelve cases of chronic rheumatism, seven received very marked benefit from the drug; one was moderately relieved, and in four cases no effect at all was perceived. I regard the drug as certainly worth a trial, at least in these very common and often very troublesome cases.

3. *Eucalyptol*.—My attention was drawn to the use of eucalyptol in cases of phthisis, chronic bronchitis, etc., by a writer in the *Berl. Klin. Wochenschr.* of last year, who recommended it both internally and by inhalation in these cases. Fifteen cases in all were observed; Merck's preparation of the drug was used. It was claimed that it lessened the cough and expectoration, diminished fetor, etc.

CASE I.—Phthisis, third stage. Dose, gtt. x. t. i. d., and inhaled. Relief began on second day, and continued sixteen days, as long as drug was continued.

CASE II.—Phthisis, second stage. Dose, gtt. v. t. i. d. No effect at all; took eucalyptol seven days.

CASE III.—Phthisis, second stage. Dose, gtt. v. t. i. d. Improvement began on second day, and continued until her discharge—six weeks.

CASE IV.—Phthisis, third stage. Dose, gtt. v.—xv. t. i. d. Relief began in five days, and continued to a moderate degree during the two weeks of treatment.

CASE V.—Phthisis, second stage. Dose, gtt. v. t. i. d. Relief began on third day, and continued till she was transferred, three weeks later.

CASE VI.—Phthisis, third stage. Dose, gtt. v.—x. t. i. d. No result at all. Took eucalyptol seventeen days.

CASE VII.—Asthma and chronic bronchitis. Dose, gtt. v.—x. t. i. d. Relief began in two days, and continued during time of treatment—one week.

CASE VIII.—Phthisis, second stage. Dose, gtt. x. t. i. d. Relief in two days; continued for two weeks.

CASE IX.—Phthisis, third stage. Dose, gtt. x.—xxx. t. i. d. No result. Took eucalyptol for ten days.

CASE X.—Phthisis, third stage. Dose, gtt. x.—xxx. t. i. d. No improvement at all. Took eucalyptol two weeks.

CASE XI.—Phthisis, third stage. Dose, gtt. v.—xx. t. i. d. No effect till he had taken drug a week; then began to improve, and continued doing so during remaining time—two weeks.

CASE XII.—Phthisis, third stage. Dose, gtt. v.—xx. t. i. d. Began to improve in three days, but drug soon lost all effect.

CASE XIII.—Phthisis, second stage. Dose, gtt. v.—xx. t. i. d. Began to be relieved by second day; continued so for two weeks, and then drug lost its effect.

CASE XIV.—Phthisis, second stage. Dose, gtt. x. t. i. d. No result. Took drug for ten days.

CASE XV.—Phthisis, third stage. Dose, gtt. v.—xxx. t. i. d. No result from encalyptol. Treated two weeks.

Fifteen cases, then, in only four of which the patient was distinctly benefited. Four cases were relieved to a small extent, and seven cases were not affected at all. Still the cases that did well under it obtained marked relief. It seems to be of most use in cases with very abundant muco-purulent expectoration.

The inhalation of the vapor from a respirator containing a sponge upon which a few drops of eucalyptol can be poured is undoubtedly a valuable method of administration of the drug.

4. *Yerba Santa*.—A large number of cases were treated with this drug, which has been much vaunted as a stimulating expectorant. There were 41 cases observed in all, 30 of them cases of phthisis, second and third stages, and the rest bronchitis with asthma and emphysema, Bright's disease, etc. I cannot say that the results have been in any way encouraging. In only 9 cases was any real benefit observed; in 11 a moderate amount of relief was obtained; 21 cases were not affected at all. Nay, more than that, in a very large number of cases—17 in all—gastric derangement, nausea, and vomiting were caused by the drug. I cannot, therefore, look upon yerba santa as a very important addition to our list of expectorants.

5. *Chekau*.—This drug belongs to about the same class as the one last considered, and can hardly be looked upon as of much more value. Twenty-one cases were treated with it, most of them cases of chronic cough from phthisis, bronchitis, etc. In only 8 cases was marked relief in the cough and expectoration afforded by the drug; in 2 or 3 a slight effect was noted; in the remaining 11 cases there was no result at all. In 3 cases the medicine disagreed, caused nausea and vomiting, and had to be stopped. The fluid extract was the preparation used, and the dose one drachm to half an ounce t. i. d. Here, then, is a result which is hardly more encouraging than that obtained with yerba santa.

6. *Oleum Gaultherie*.—This drug was carefully tried in four cases of severe subacute rheumatism with moderate success. The doses used varied from five to ten drops three or four times a day, and no other treatment what-

soever was employed. In all four cases much relief was obtained from the drug; in all of them the swelling, the pain, and the local heat soon diminished, and the patients were shortly convalescent; but in every case, also, a certain amount of disability was left which the drug did not relieve, and for which recourse had to be had to frictions, massage, etc.

7. *Lippia Mexicana*.—Twelve cases were treated with this expectorant, of which the fluid extract was given in half-drachm to half-ounce doses t. i. d. A somewhat better result was obtained than was done with the other two expectorants tried. In seven cases out of the twelve the harassing cough was markedly relieved, enabling patients to obtain a comfortable night's rest who had previously been able to get it only by a free use of narcotics. Five cases were not affected at all; but in no case was there seen the disagreeable gastric disturbances caused both by yerba santa and chekau. I look upon it, therefore, as a remedy of some value for the relief of an often very distressing symptom.

8. *Quebracho*.—Excellent results were obtained with the fluid extract of this drug. Nine cases were observed, and in all of them save one great relief was obtained from the dyspnoea. The cases comprised ones of asthma, valvular cardiac disease, Bright's disease, chronic bronchitis, and phthisis, and in all but one case of phthisis respiration became easier, the blueness disappeared from the finger-ends and the prolabia, and the patient's general condition became very much better. The doses used were half a drachm to two drachms t. i. d.

A CONTRIBUTION IN FAVOR OF COTTAGE HOSPITALS—REPORT OF TWO INTERESTING SURGICAL CASES.

By W. L. ESTES, M.D.,

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THE essay on "Cottage Hospitals," published by Dr. Burdett, excited so much interest in this country, and these enterprises or charities were so highly advocated generally by our medical press, that the following short statistical report of the one of which the writer has charge may prove of interest to the profession, and is given for what it may be worth.

St. Luke's Hospital, situated in South Bethlehem, was opened in 1873. The first year 69 patients were treated. Last year, 1881-82, 692 patients received treatment. Beginning in an ordinary two-story brick cottage, it is now grown to the dimensions of a brick pavilion (opened only last year), built upon the most approved modern pavilion hospital plan, and possessing every convenience of a metropolitan hospital, also two wooden buildings after the ordinary country style of architecture, having an aggregate capacity of forty beds. The pavilion has two wards, of twelve beds each, and is used for acute surgical cases; one wooden building, having a capacity of eight beds, for women's diseases; and the other wooden building, with eight beds, for isolation. Since the opening of the pavilion, from November 21, 1881, to November 21, 1882, there have been 43¹ major operations performed, with 2 deaths, or 4.8 per cent. The operations were, 20 major operations, with 2 deaths; 9 major excisions, with no death. The remaining 14 were miscellaneous, and no fatal result.

The amputations were as follows: 1 at wrist-joint, recovered; 2 of forearm, both recovered; 3 of arm, all recovered; 8 of leg, 1 death; 2 at knee-joint, both recovered; 3 of thigh, 1 death; 1 at hip-joint, recovered. Total, 20 cases, 2 deaths.

The death after amputation of the leg was from delirium

tremens on the tenth day; that after amputation of the thigh, from septicæmia. The amputation was done for compound comminuted fracture of the leg after a prolonged attempt had been made to save the limb. The patient was already suffering from septicæmia when operated upon. He never rallied from the condition, and died about twelve days after the amputation.

The resections were: 2 of tarsus, 2 of tibia, 1 of knee-joint, 2 of femur, 1 of hip-joint,¹ 1 of ribs (for empyæma); all recovered. Total, 9 cases, 9 recoveries.

Of the amputations 2 were done for diseased conditions. The hip-joint amputations; 18 were after injuries. Of these, 15 were primary or immediate, and 3 were secondary or intermediate (done during active inflammation and suppuration). With scarcely a single exception, in every case of amputation from injury, there had been excessive hemorrhage before the patient arrived at the hospital.

Except the resection of the knee-joint all of the excisions were for diseased joints and bones. In all these cases the modified Lister dressing was employed, that is to say, thorough cleansing of the limb at the seat of operation, disinfection of the skin and wound—if there was one—with five per cent. solution of carbolic acid; hands of operators and assistants disinfected with the same solution, as were the sponges, instruments, etc., used during the operation. Afterward a full Lister dressing was applied, and removed only when soiled or the temperature of the patient rose. In the whole series of cases there was not a single case of gangrene, nor of osteomyelitis, nor phlebitis, nor erysipelas. Not a single case of secondary hemorrhage. The average time in the hospital was 28.3 days.

Among the operations there are two which appear to be of sufficient interest to publish.

CASE I.—George R—, nine years of age, admitted February 6th. Five months before admission the patient was struck by a locomotive, and besides severe internal injuries, sustained a fracture of the left femur in the upper one-third of the shaft. In a written statement of his treatment after the fracture, his physician said he had tried first extension and counter-extension, and then a plaster-splint, without being able in either case to retain the fragments in proper apposition. He sent him to the hospital to be treated for *united (?) fracture of the femur*. On admission the patient was a bright, sturdy little fellow, well grown for his age, well nourished, and best family history. He used crutches, and carried the lower extremity in a limp, helpless manner. Toes inverted, pointing toward the dorsum of the right foot. He could, by leaning far over, bring the sole of the foot to the ground, but could not bear any weight on the foot without pain. Examination of the affected limb showed an enormous projection in the upper femoral region, on its external aspect—hard, resisting, not movable, not separable, and no crepitus; acetabular motion perfect, extremity moved as a whole; two and a half inches shortening. Nélaton's line showed the trochanter major slightly higher than normal, and it also projected externally more than normal. It was evident the fracture had united, but in a very bad position.

The parents of the child readily consented to an operation. A short time after his admission this was accordingly undertaken. A curved incision was made over the projection, beginning just below the greater trochanter and extending about three and a half inches downward in the longitudinal axis of the limb. Convexity of incision downward. The incision was carried through the periosteum, which was carefully stripped off, and the bone cleared, when the exact state of the deformity was manifest. The fracture had been about one and a half inch below the trochanter minor; the upper fragment

¹ There were actually 53 major operations, but as 10 of these (*amputations*) were done on cases in absolutely hopeless conditions, merely to render the few hours the patient might possibly live as bearable as possible, they are not counted in the above enumeration. Reckoning these, there would be 53 major operations, with 8 deaths (3 of the hopeless cases had each two limbs torn off, requiring simultaneous amputations), making 15.12 per cent.

¹ This case afterward required amputation of the thigh. The operation (excision) was done several days after the injury, which was crushing of the condyles of the femur and disintegration of the knee-joint; performed because the patient refused amputation. The soft tissues of the lower third of thigh had been so badly injured that he was obliged to have the amputation afterward.

was rotated inward and drawn slightly upward by the iliacus and psoas muscles; the lower fragment was drawn upward and outward by the muscles of the thigh, and they were allowed to unite in this position, the apposition being the lower outer side of the upper and the inner edge of the lower fragment. The union was so firm that it was necessary to use a saw to separate the fragments. A wedge-shaped piece was removed from the knuckle-like projection of bone, firm manual extension was employed to draw the lower fragment into place, which was readily effected. It was with the greatest difficulty that the upper fragment could be reduced, and almost impossible to retain it in place. Good apposition was finally obtained, however, and by means of two double bands of thick silver wire passed through two holes drilled obliquely through the end of either fragment they were retained in apposition. The incision was brought together, large drainage-tube introduced, and Lister dressing applied, after the usual five per cent. ac. carbol. solution syringing. While the patient was still under the anæsthetic, a plaster-of-Paris splint was applied to the whole extremity, with iron brackets over the wound. For a number of days the little patient suffered agonies from spasm of the femoral muscles. This gradually ceased, however, and he made a slow but complete recovery. He was discharged from the hospital with no deformity, one inch shortening, and walking well with assistance of a slightly elevated shoe. I have recently received a letter from his father saying he walks about three miles a day to and from school, has discarded his raised shoe, and knows no difference between his two limbs.

CASE II.—Albert B—, aged thirteen. Phthisical mother. "Hip-joint disease" for five years. Was seen first about one year before the last admission, at which time he entered the hospital, and exsection of head of femur was performed. He improved very much after this, but after three months the upper end of the shaft of the femur had to be exsected. The sinuses still persisting after the operation, he was re-admitted into the hospital October 13, 1882. After a consultation it was decided to amputate at the hip-joint. The boy was quite anæmic, and the urine had already a small amount of albumen in it. The liver and spleen were enlarged; heart and lungs normal. It was particularly desirable in this case to avoid much loss of blood, and knowing that one of the principal bugbears of amputation at the hip-joint is hemorrhage, I was at a loss at first how to prevent it. I finally hit upon an expedient which acted admirably. I have noticed that in applying Esmarch's bandage and retentive band for operations high up on the thigh, the reason why the band did not prevent the blood from flowing back into the limb was that the point of resistance opposite to it, when it should constrict, was a resilient one, and the pull of the band was in a measure counteracted by the elasticity of the tissues of the opposite side. So I reasoned if a firm non-resilient substance be interposed between the band and the opposite side, the whole force of the elastic constriction will be exerted on the limb to be operated upon.

On October 17th the operation was performed. As soon as the patient was anæsthetized I applied a *long Lister splint to the sound limb and side*, put on Esmarch's bandage as usual, the retentive band being applied tightly in a figure of 8 around the groin, just below the anterior superior spine of ilium, over the opposite side, and so return; in short, just as ordinarily done for high operations. I then had the patient drawn down until his buttocks were on the edge of the foot of the table, laid the end of the splint attached to the good limb and side on a high stool, and the patient was firmly and evenly supported, *while not a drop of arterial blood was lost during the operation.* The flaps were formed after the Guthrie manner. Though it was necessary to cut almost under the retentive band, it held on firmly, and did its work faithfully to the last. Besides the removal

of the entire limb, the whole acetabular rim and part of the ramus of the pubis had to be removed. So tedious was this part of the operation that the patient's strength began to flag, and I was obliged to stop the operation before all the dead bone was removed from the pelvis. The lower and inner parts of the flaps were nicely apposed, a large-sized drainage-tube introduced, and, except a space left open on the external aspect, flaps brought together throughout whole extent.

Boy's highest temperature was on the fifth day, and was only 101° F., produced, perhaps, by eating too much solid food. Notwithstanding a large amount of cicatricial tissue, the flaps united rapidly and well; in two weeks, except where the drainage-tube had been, and two or three openings of old sinuses, the wound was healed. He was out of bed in two weeks. Three days later he was walking about the wards. His general condition was much improved at once. Except two or three sinuses, through which the dead bone left near the acetabulum is making its way in bits to the outer world, he has a well-healed stump, and feels perfectly well.

Progress of Medical Science.

A METHOD OF HASTENING THE ANÆSTHETIC ACTION OF THE ETHER SPRAY.—The ether spray is employed frequently at the Hôpital St. Louis in Paris for the production of local anæsthesia. A little procedure, first indicated by Dr. Letamendi, of Barcelona, but not hitherto utilized in practice, is employed by Dr. Vidal to shorten the duration of the process of congelation. It consists in making a slight prick with a needle at the point upon which the spray is directed, at the moment when the skin assumes a purplish hue, and when the ether commencing to solidify assumes an oily consistency. The little puncture made at this time excites a reflex constrictive action of the vaso-motor nerves, the blood is driven from the part, and the skin becomes white. Another method of hastening the process consists in placing little wads of lint about the part, thus increasing the surface of evaporation.—*Revue Médicale*, June 30, 1883.

TUBERCULOSIS FROM CONTAGION.—Dr. J. Lindmann relates, in the *Deutsche Medicinische Wochenschrift* of July 25, 1883, two cases of tubercular ulceration following circumcision. In the first case, in which there was a family history of phthisis, the ulceration healed only after a long time, and was followed by caseous adenitis. Then Pott's disease of the spine was developed, accompanied with symptoms of myelitis, and finally the child died from acute pulmonary phthisis. In the second case, there was no hereditary history of disease. This child, after suffering from enlarged glands and an osteitis of the wrist-joint, finally recovered and remains in good health at the present time. The ulcerations in both cases presented all the characteristics of tubercular ulcers. The children were circumcised according to the orthodox ritual of the Hebrews, in which the circumciser, after cutting off the prepuce and tearing the mucous layer with his nail, takes a swallow of wine and sucks the bleeding parts. The operator in these cases belonged to a family almost all of whose members suffered from phthisis. He himself had been ill for some years, and died from tuberculosis shortly after performing circumcision in these two cases. Dr. Lindmann regards the disease in the related instances as undoubtedly arising by contagion from the phthisical operator.

THE THERAPEUTICAL VALUE OF ARBUTIN.—Although arbutin is no recently discovered substance, it is only of late that it has been proposed to the medical profession as a remedy of value in the treatment of diseases of the genito-urinary organs. This is probably due to the fact that the earliest experiments were made upon the healthy organism, and were not unnaturally negative in their re-

sults. More recent investigations into the action of this glucoside in disease would seem to indicate that we have here a remedy of no inconsiderable importance, and one which may be advantageously substituted for the bulky infusion of *uva ursi*. In a notice of this substance in the *Centralblatt für Klinische Medizin* of July 7, 1883, Dr. H. Menche states that he has found it in many cases to be a most efficient diuretic. It is given for this purpose in doses of about twelve grains per diem, but may be administered in much larger quantities without producing any unpleasant effects. In catarrh of the urethra or bladder, larger doses are advised (forty-five to sixty grains a day). It is excreted in part as hydrochinon, and since injections of a one or two per cent. solution of this latter substance are said by Brieger to be most efficacious in the cure of gonorrhoea, the author suggests that we might in this way avoid the use of the syringe, the topical remedy being contained in the urine. Arbutin exists in the form of fine white, needle-shaped crystals, unchanged by exposure to the air. It is readily soluble in water, has a slightly bitter taste, and no odor. The easiest mode of administration is in the form of powder, which may be dissolved in a tablespoonful of water. It is somewhat expensive, the present price in Germany being in the neighborhood of three dollars per ounce.

THE CHANGES OCCASIONED IN THE ADIPOSE TISSUES BY INFLAMMATION.—From a number of experiments made upon dogs, Dr. Sklifosowsky formulates the following conclusions: 1. In acute inflammation of the subcutaneous adipose tissue the changes in the fat-cells consist in a shrinking and subsequent disappearance of the investing membrane; the fat drops are absorbed and their place supplied by serous cavities. 2. Similar changes also take place in acute inflammation of other parts, as the pericardium, omentum, etc. 3. In chronic inflammatory processes, the retrograde changes of the fat-cells are expressed by hypertrophy and division of the nuclei, and through swelling and subsequent segmentation of the protoplasm. 4. The fat is absorbed through the lymphatic vessels, but whether absorption occurs also through the walls of the blood-vessels is doubtful. 5. In limited inflammation of the subcutaneous connective tissue, no functional disturbance on the part of the heart or lungs was caused by fatty embolism of the blood or lymphatic vessels.—*Centralblatt für Chirurgie*, July 14, 1883.

PNEUMONIA WITHOUT FEVER.—Although in aged or cachectic individuals it is not very uncommon to see a pneumonia run its course without any noteworthy elevation of temperature, such an occurrence under other conditions is rare. Dr. Mazzotti reports a case of this kind in a robust and well-nourished porter, sixty-three years of age. The patient was suddenly seized with sharp pain in the side, cough, and bloody expectoration. Physical examination revealed the presence of a croupous pneumonia involving the left lower lobe. During the entire course of the disease, which terminated favorably, the temperature never exceeded 99.5°, and reached this height but once, being normal the rest of the time. A similar case has been recorded by Korányi.—*Centralbl. für Klin. Medizin.*, July 14, 1883.

PRIMARY TUBERCULAR ARTHRITIS.—Dr. Arnaud concludes an article of some length in the July number of the *Revue de Chirurgie*, as follows: 1. Tuberculosis of the synovial membranes may be primary and independent of any osseous lesion, or secondary to the development of tubercles in the epiphyses. 2. Primary tuberculosis manifests itself in the synovium under the two anatomical forms of ordinary gray granulation and of elementary microscopic tubercle. The latter always accompanies the granular form, but may exist independently of any tubercular lesion visible to the naked eye. 3. Synovial tuberculosis has been chiefly studied in fungoid growths, but it can be detected also where no fungoid changes are present, as in

fibulous tracts, or wherever the neoplasm may be developed by inoculation. 4. The tuberculous nature of a chronic arthritis may easily escape detection unless the naked eye examination be controlled by the aid of the microscope. It would be well always to make a thorough anatomical and histological examination in every case of arthritis, in order to determine the comparative frequency of the tubercular affection. 5. Finally, the author expresses his conviction that a certain number of cases of white swelling and chronic arthritis, fungoid or otherwise, hitherto attributed to scrofula, rheumatism, or unknown causes, will be found upon more careful examination to be tuberculous in their nature.

TREPHINING FOR THE RELIEF OF TRAUMATIC EPILEPSY.—The following case was related to the Surgical Society of Paris by M. Demons, of Bordeaux (*Revue de Chirurgie*, July 10, 1883). A man had fallen two years before, striking his head. He was unconscious for three days, there was an ecchymosis of the scalp, he stated, on the right side, and a paralysis of the left arm and right leg was present for some four or five months. From that time until shortly before coming under observation, he was perfectly well, except for occasional headaches. He was then suddenly seized with repeated attacks of epilepsy, recurring every fifteen minutes, with left facial paralysis, and subsequently with hemiplegia of the same side. The epileptic attacks becoming more frequent and of greater violence, and the intellect becoming clouded, M. Demons decided to trephine. After some hesitation regarding the seat of injury, the trephine was applied to the right side over the fissure of Rolando. As the operation proceeded a crack was seen in the skull, and in the arachnoid was found a little cyst the size of a pea. This was removed, and the surface of the brain was scraped where it seemed to have undergone some alterations. A Lister dressing was applied, and the wound healed readily. The epilepsy and hemiplegia disappeared at once, and had not returned at the time of the report, a month after the operation.

ABSCCESS OF THE POSTERIOR SPINAL REGION IN THE NEW-BORN.—Dr. Guéniot relates two cases of abscess in the vertebral region (one in the neck and one in the back) in children of two and four weeks of age respectively (*Centralblatt für Chirurgie*, July 21, 1883). A diagnosis was made by himself and several other surgeons of spina bifida. The location of the abscess exactly in the median line, its slight change in size upon crying, and the absence of redness or oedema of the skin gave occasion to the error. The mistake was discovered only after an exploratory puncture. The author states in this connection that abscesses may form in young children in any situation. The slight increase of volume in crying is owing to a fulness of the veins caused thereby. The absence of the ordinary oedematous swelling of the skin covering deep abscesses is not uncommon in infants. This fact he explains by the late development of the superficial venous plexus.

TREATMENT OF MALIGNANT PUSTULE BY INJECTIONS OF IODINE.—Dr. Richet relates two cases of malignant pustule treated by injections of tincture of iodine. One died in forty-eight hours, while the other recovered after eight injections of the tincture diluted with two parts of water. In both cases inoculations of animals with pus from the pustules were followed by fatal results. Inoculations with the blood of the first patient were also fatal, while the blood of the second caused no infection. The author concludes from these cases that when the infection is general, when the blood contains the specific bacilli, local treatment is useless. But, on the other hand, if injections at the periphery of the pustule are made before the disease has spread from its point of origin, a cure may be obtained.—*Centralblatt für Chirurgie*, July 21, 1883.

SURGICAL TREATMENT OF DUPUYTREN'S CONTRACTION.—In a brochure on Dupuytren's contraction of the palmar fascia and its treatment, Dr. Chevrot describes a method pursued by Busch in the correction of this deformity. A triangular tongue of skin is dissected up from the palm, the base of the triangle resting in the crease which separates the contracted finger from the hollow of the hand, and the apex terminating at the point of greatest prominence when the finger is forcibly extended. The base of the triangle is left attached while the rest of the flap is dissected up, as much of the connective tissue as possible being raised with the skin. All the contracted bands of the aponeurosis are divided, until complete extension of the finger is obtained. The flap of skin retracts, leaving a triangular space in the palm uncovered. The edges are approximated as far as possible, and a compress applied. A retentive splint should be applied and maintained until the cure is completed. If this method is pursued the danger of wounding the sheaths of the tendons is reduced to a minimum.—*Bulletin Général de Thérapeutique*, July 15, 1883.

THE PERMANENT BATH IN THE TREATMENT OF SURGICAL DISEASES.—In cases after operation in which the ordinary antiseptic dressings cannot be conveniently applied, owing to the location or other conditions of the wound, Dr. Sonnenburg advises a return to the permanent bath. He has met with considerable success by this treatment after operations upon the urethra, rectum, or uterus, or in lithotomy. In the after-treatment of amputations or resections he has found it also useful. The addition of antiseptic substances to the water of the bath, he considers to be unnecessary.—*Centralblatt für Gynäkologie*, July 21, 1883.

ETHER IN THE TREATMENT OF SORE THROAT.—Professor Contalo employs an ether spray in the treatment of pharyngitis. The applications are made several times a day, according to the gravity of the case. Under their influence, it is claimed, the temperature falls, the vessels contract, and the local condition is speedily improved. In two cases a fibrinous exudation was detached and not reproduced. Ether, according to the author, deserves a trial in pharyngeal diphtheria, not only as an antiseptic agent, but also because the pain is thereby greatly diminished, and the taking of nourishment facilitated. Two cases of pseudo-membranous pharyngitis were successfully treated by this method. He insists especially upon the rapid lowering of temperature following the applications of ether spray.—*Journal de Médecine de Paris*, June 16, 1883.

ADENOID GROWTHS IN THE PHARYNX.—The following are the conclusions arrived at by Dr. Pesson in a thesis presented to the Faculté de Médecine of Paris (*Journal de Médecine de Paris*, June 16, 1883). 1. In the upper part of the pharynx, at the junction of the vault and the posterior wall, and between the orifices of the Eustachian tubes, there is an agglomeration of closed follicles which constitute (adopting the expression of Kölliker and Luschka) a true tonsil. 2. This gland is liable to hypertrophy like the tonsils, and then presents the appearance of a cluster of vegetations. These vegetations, already described by a number of writers, are seen usually during the first twenty years of life. Like the lymphatic tissue in general, their natural tendency is to atrophy. 3. These adenoid growths give rise to various troubles of respiration, phonation, and hearing. Children who suffer from their presence, breathe through the mouth and acquire thereby a stupid expression; they complain of frequent headaches, snore during sleep, and are sometimes awakened in the night by asthmatic attacks. The tone of the voice is muffled and faint, and the articulation of nasal words (in French) is difficult. Hearing is often impaired through middle ear disease. These troubles, which often discourage the physician by their obstinacy, disappear spontaneously upon the removal of

the third tonsil. At the same time the deformity of the thorax, described by Lambon and Robert, and attributed by them to hypertrophy of the tonsils, is observed. A careful study of the facts leads to the belief that this symptom is really due to the adenoid vegetations in the pharynx. 4. These growths often determine a chronic catarrh in this region, which is too often referred to a diathesis, but which, like all the other symptoms, can only be cured by treatment directed to the vegetations. 5. Observation leads also to the opinion that deaf-mutism depends in certain cases upon the presence of these adenoid vegetations. Consequently, an opportune diagnosis may lead to the prevention or even cure of deaf-mutism from such cause. 6. Hypertrophy of the third tonsil may be diagnosed by posterior rhinoscopy or by digital examination. 7. The treatment of these vegetations and of the symptoms dependent upon them consists essentially in the extirpation of the enlarged gland.

MYXŒDEMA AND BERIBERI.—Dr. Basil Férís regards beriberi and myxœdema as identical, each being characterized by a more or less general anasarca, together with disturbed function of the nervous system. The exciting causes are the same in each disease, namely, humidity and rapid changes of temperature. He proposes as a common designation the term neuro-vascular hydroparesis, or more simply hydroparesis.—*Revue Médicale*, July 21, 1883.

TREATMENT OF SUPPURATIVE PHLEBITIS.—Dr. Demons related the following case to the Bordeaux Medical Society, as showing the curability of suppurative phlebitis if energetically treated (*Revue Médicale*, July 21, 1883). A man cut the veins of his neck with a razor. A suppurative phlebitis followed, and symptoms of pyæmia declared themselves. In the presence of such an otherwise hopeless condition, Dr. Demons determined to slit up the veins, which he found full of pus. He scraped them and cauterized the lining membrane with a ten per cent. solution of chloride of zinc. An antiseptic dressing was then applied, and the patient recovered. Since then the author has learned that veterinary surgeons sometimes excise the jugular vein in similar conditions, and he thinks that such an operation might be preferable to the one performed by him in the case reported.

EPISTAXIS ARRESTED BY HOT-WATER DOUCHE.—Dr. J. H. Stuart, of Minneapolis, sends us a report of the following case: "On July 14th last I was called to see a laboring man, about thirty years of age, who had been bleeding at the nose for nearly twenty-four hours. The epistaxis seemed to have been caused by sitting in a draught of air, in the evening, with a portion of his clothing left off, which produced a stuffiness in the nares. Various remedies had been used, but with no relief, and the loss of blood was sufficient to produce a very perceptible impression on his pulse, accompanied by a feeling of faintness. Having determined to try the value of hot water I took with me apparatus for douching the nose, and having procured a pitcher of warm water (not as hot as I desired) I passed it in a continuous stream through the nares. The hemorrhage seemed to be checked for a while at least, but soon the bleeding side was filled by a clot, and again it showed itself both posteriorly and anteriorly. I procured another pitcher of water as hot as I thought could be borne and douched the nose as before. I continued the douche until the water escaping was almost free from any stain of blood—using perhaps a gallon. After this there was no bleeding, not even the formation of a clot in the nostril; but the patient, breathing freely through both sides, went to bed about 10 P.M. and slept till morning without any return of hemorrhage whatever. It is true I endeavored after each douching to throw a solution of tannin into the posterior nares, but I attributed little or no benefit to this procedure."

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THE PATHOLOGY AND TREATMENT OF METRIA, OR SO-CALLED PUERPERAL FEVER.

METRIA, the gynecological, and, in this instance, proper name for the so-called puerperal fever, has recently been the subject of three very instructive, as well as interesting papers, read before the British Medical Association.

There is scarcely a question but that the term metria should be substituted for "puerperal fever." Dr. Thorburn justly remarks that "puerperal fever" does not cover the ground, for it is almost impossible to include epidemic puerperal fever under the same classification as the more sporadic forms; and again, the use of the term precludes the inclusion of cases of metria caused by zymotic diseases. Regarding this he says, as is well known, that the poisons of scarlatina, erysipelas, or typhoid fever may sometimes cause in puerpera symptoms scarcely distinguishable from those of puerperal fever; yet Mathews Duncan and his followers, who wish to make puerperal fever a disease *sui generis*, do not include zymosis with septicæmia or in their list of etiological factors. Again, a puerpera who has scarlatina which can be distinctly diagnosed, has scarlatina; but a woman who has sudden rigors, intense tympanites, high temperature, and rapid death, with subsequent clear proof of scarlatinal infection—with perhaps the occurrence of the typical rash in the hour of death—has puerperal fever or metria caused by scarlatina. Zymotic diseases may occur in puerperal women without causing puerperal symptoms, and should be then designated by their proper names; but when, with that zymotic affection, puerperal symptoms manifest themselves, shall we confine our nomenclature to one or to a combination of the two? Clearly the latter, and metria is then the proper designation.

Precisely the same causes are at work whether scarlatina or erysipelas be sporadic or epidemic, and may in the latter case produce a severe and fatal epidemic analogous to what occasionally occurs in hospital, more rarely in private, obstetric practice. Arguing from this point of view, Dr. Thorburn thinks that there would be no difficulty in conceiving how a tolerably definite train of symptoms ensuing from the action of septic or zymotic germs in the hyperfibrinated blood of a puerperal woman may, in some cases, take on a uniform character and epidemic virulence. Clearly another name than puerperal fever is needed, and if we need another what is better than metria?

As regards the pathology of metria, the two points ar

stated by Dr. Lombe Atthill as admitted by all. First, under certain circumstances puerperal women are liable to be inoculated with septic material conveyed to and deposited in the vagina by the hands of attendants and other agencies, when proper precautions against this infection have not been adopted; the disease produced by this inoculation being frequently a source of one of the forms of metria; and second, puerperal women may be the victims of auto-inoculation, the poisonous material originating within their own bodies from the decomposition of blood-clots and placental remains after parturition. The disease thus produced Dr. Mathews Duncan prefers to call "sapraemia"—or a result of the absorption of putrid material—distinguishing it from "septicæmia, a disease produced by organisms which, when conveyed to the blood, multiply indefinitely in it;" Dr. Duncan holding that organisms resulting from putrefaction do not survive, far less grow, in the blood. The merits of the last proposition we will not now discuss; indeed, we rather doubt if it has any.

In addition to these two forms of metria Dr. Atthill asks if there are not two other forms which it may not be possible to guard against. First, a form of auto-infection occurring under special conditions and not preventable by antiseptic precautions, but happily preventable in many cases by other therapeutic measures. This form occurs in cases of continued uterine relaxation, thus leading to the second of the varieties already mentioned. The uterus does not properly contract, blood-clots are retained in its cavity which decompose and thus produce the disease. This condition of the uterus also favors the formation of other clots than those directly resulting from parturition, and the sinuses being kept open, favor the absorption of septic material. Though antiseptic measures are powerless here, the enemy can be combated by the administration of ergot, continued after labor until the desired effect is produced. As is well known, this condition of relaxation occurs most frequently after rapid deliveries. A consideration of these, we may say, facts, has led Dr. Atthill to believe that a relaxed condition of the uterus—doubtless caused in a great measure by the great mental distress—is one of the causes of the frequent occurrence of metria in unmarried women. Clearly in these cases the prime cause, viz., relaxation of the uterus must be combated by oxytocics. The mortality among this class of patients is very great, and in the absence of hitherto successful means of staying it, it is advisable that this remedy have a thorough trial. It is important to remember, however, that many cases of uterine relaxation will yield to persistent kneading, one hand being placed on the abdomen, and the other introduced into the uterus.

A late paper by von Swiecicki (*Centralbl. f. Gynäk.*, No. 16, 1883), in which he expresses the opinion that persons engaged in obstetric practice should not perform *post-mortem* examinations, or dissect, or if they do should quarantine themselves from the lying-in chamber for a certain length of time, has been followed by a free expression of opinion. Löhlein takes exception to v. Swiecicki's arguments, believing that proper antiseptic measures are all that is necessary, and Fritsch, in commenting upon Löhlein's paper, practically agrees with him (*Centralbl. f. Gynäk.*, No. 23, 1883). It would

seem, however, that antiseptic precautions alone are not a sufficient safeguard. Löhlein and Fritsch have had, it is true, exceptional good fortune, but recent experiments have shown that micro-organisms are not so easily destroyed by antiseptic agents, and we doubt much if simply washing the hands in antiseptic solutions will obviate the risks of inoculation after handling septic material; and the adoption of Dr. Atthill's rules is by far the safest method. Students attending the patients of the Rotunda Hospital in Dublin, are not allowed to dissect or make post-mortem examinations, or attend a hospital containing patients suffering from infectious diseases; and before examining any patients they are required to wash their hands in a solution of carbolic acid. During the first six and a half years of his mastership in the Rotunda, these precautions sufficed to prevent anything like an epidemic of puerperal septicaemia.

The treatment of puerperal sepsis is but little, if any, more satisfactory than its pathology. When several cases, coming with shorter intervals, occur in a hospital, there is but one method to be pursued. The patients must be removed, the wards disinfected, the floors and walls washed with strong disinfecting solutions, and everything else thoroughly disinfected. As to the choice of a disinfecting material, it would seem that corrosive sublimate is the most certain in its effects. In private practice prophylactic cleanliness, thorough emptying of the uterus after delivery, and the insurance of uterine contraction, are the best and only safeguards so far as the woman is concerned. It is scarcely necessary to reiterate the cautions as to the cleanliness of instruments and the hands of the accoucheur. When, however, by any mishap, the puerperal woman is seized with the disease, our main reliance must be placed in quinine, intra-uterine injections, opium, and stimulants. At present, cases of puerperal sepsis are extremely liable to take on a remittent form, and quinine must be given in full doses. In America and other countries where the malarial element is predominant, the dose of three to four grains every three or four hours, recommended by Mr. Thomas More Madden, is scarcely less than child's play. It is important to remember that a given amount of any drug is not a dose unless it has the required effect. It may also be stated quite positively that the day for depletion in these cases has passed. As a rule, they assume an asthenic type and need stimulation. Intra-uterine injections are of the utmost importance, but caution is required in their use, and to employ a syringe which is not perfectly clean is worse than useless. Lastly, the bowels should not be neglected, and it is important that they should act, and thoroughly, before the patient is fully under the influence of the opium, in case that drug be employed; for in these cases it is extremely difficult to re-establish peristaltic action after it has once been paralyzed.

THE PROPER CARE OF THE EYES OF THE COMING GENERATION.

IN connection with the late address of Mr. Charles Francis Adams on "A College Fetish," and our recent editorial, "Greek or German—Which?" it may not be entirely foreign to make a few remarks on the subject of the German Alphabet from a hygienic point of view. The systematic examination of the eyes of school-children

might lead one to suppose that the youthful Teutonic eye is presbyopic, hypermetropic, ametropic—anything except normal. Dürr found the average myopia among the scholars of a Hanoverian school to be 31.7 per cent. Reich found an average of 33 per cent. in another school. Nor is the solution at all difficult to one who has turned from an English to a German book printed in the abominable text of the latter language. German authors are inclined to attribute this to the position during writing, bad light, etc. These may be factors, but they do not seem to have thought of their outrageous letters, and still more outrageous script. Every one acknowledges the importance of the German language, especially in scientific studies. But why should American children, and adults, for that matter, be compelled to gain their first knowledge of that beautiful and expressive language by poring over its crooked, "sich ähnlichen" letters? The grammars, dictionaries, and general literature are printed in this text, and nothing else, so far as we are concerned. All, or almost all of the German books used for instruction in this country are printed here, and is there any reason why they should not present a respectable appearance in English type? Surely there is every reason that they should. The myopic eye turns from the neat and inviting page of the *Berliner Klinische Wochenschrift*—or any other German journal—to the bewildering fog of the dictionary printed in America, and figuratively groans. Here is room for a needed reform. The proper care of the eyes of the coming generation is of vital moment. School boards and teachers have it in their power to banish this evil from our schools. Let them do it, and our bookmakers will take the hint.

ENGLAND AND THE CHOLERA.

THE English are beginning to show signs of displeasure at the comments of the Continental press upon the cholera in Egypt and the responsibility of Great Britain for its outbreak in that country. Lord Granville has recently addressed a communication on this subject to the Minister of Foreign Affairs of France. In this note the principal accusations of the foreign press against England are summed up as follows: 1. The origin and mode of propagation of cholera are well known and well understood. 2. Quarantine is the recognized and successful means of preventing the spread of the epidemic. 3. Cholera is always brought by ships coming from India. 4. Her Majesty's government has profited by its situation in Egypt to compel the Egyptian government to relax the only precautions known to prevent the spread of the disease, in order that British commerce may not be impeded. 5. Her Majesty's government has consequently deliberately introduced the cholera into Egypt. To all this Lord Granville answers by a general denial: The origin and mode of propagation of cholera is as yet undetermined; quarantine is valueless as a preventive measure; cholera is not brought to Europe by vessels from India; and lastly, although not believing in quarantine, England has done nothing to interfere with the regulations of the Egyptian government in this regard. The British Foreign Office request that its communication be given publicity in order that its misapprehensions regarding England's conduct in this matter may be re-

moved from the mind of Europe. We doubt, however, whether Europe will accept the views of the British ministry on the nature of cholera. But the symptoms of irritation are not confined to official quarters. The *Medical Press and Circular* grows angry at its brother of the *Wiener Medizinische Zeitung* for speaking in a disrespectful manner of England's remissness. It quotes at some length from the offending article in question, and concludes in a somewhat excited strain, as follows:

"The article contains more, much more, of this hysterical nonsense. The writer, if he ever had any wits, has plainly been *erschreckt* out of them by the *schwarzem Gast vom Ganges und Bramaputra*. It is not necessary to make further comments on such a ridiculous production, in which imagination and spleen have performed the duties that ought to have devolved upon reason, and which would have been unworthy of notice on our part had it not received an official stamp as an editorial."

In spite of dignified official utterances and somewhat less dignified journalistic protests, the world will probably persist in the belief that England has not done her whole duty in respect to the cholera in Egypt.

THE CURE OF CHOLERA BY COLLODION.

DURING the recent epidemic of typhoid fever in Paris, the number of remedies proposed for the cure of this disease was legion. Volumes were written to prove that this or that method was certainly infallible, and that all that was needed to stamp out the epidemic was a general conformity by the profession to the views of the writer. In spite of these valuable discoveries, however, the epidemic went on. The time is now ripe for the publication of sure cures for cholera, and we shall soon be so abundantly provided with never-failing remedies that the fame of the "*Sun* mixture" will pale by comparison. Among the first to enter the field is Dr. Arsène Drouet in *Le Courrier Médical* of July 28, 1883. The method is very simple, and consists merely in the application of collodion to the abdomen. He says that nature, when she essays to cure cholera, does so by determining a perspiratory crisis, and collodion acts in a similar fashion. After its application it irritates, by reason of its constructive action, the nerves of sensibility whose terminal filaments lie in the skin of the abdomen. Thence a reflex inhibitory action is exerted in the motor, vaso-motor, and secretory nerves, and there follows an immediate arrest of vomiting and alvine discharges. Then, little by little the blood returns to the subcutaneous capillaries of the abdomen, the surface becomes warm, and finally a profuse perspiration breaks out, carrying with it the *materies morbi*. As a beverage, the patient is allowed cold water or seltzer. By this method Dr. Drouet claims to have cured two hundred cases of cholérine and thirty cases of true cholera. The favorable reaction commences within ten minutes and proceeds with a rapidity so extraordinary that it must be seen to be believed. Cholérine is always cured by a single application of collodion within five hours. Severe cases of undoubted cholera require two or three applications, at intervals of one hour, and are only cured in from six to seven and a half hours. The first coating is made with ordinary contractile collodion. A piece of coarse

cheese cloth or mosquito-netting is stretched tightly across the abdomen, and over this the application is made. When the contraction becomes painful the film of collodion is removed by pulling off the cloth, and then a second application is made of flexible collodion which has still contractility enough to produce the desired effect. This method is not new, and has singularly enough been discovered by four observers in different countries and at different times. In conclusion, the author suggests that the inhabitants of countries ravaged by cholera be instructed to carry about little phials containing collodion, and to paint their own abdomens upon the earliest symptoms of the dread disease declaring themselves. Further, if this treatment be practised on board ship, every case of cholera could be cured at once, and there would be no more need of quarantine.

We can only express our surprise that Dr. Drouet did not hasten to Egypt upon the earliest tidings of the outbreak of cholera in that unhappy land, and there demonstrate the value of his method. Aside from the sweet consciousness of having saved the lives of untold thousands of Egyptians, and of having in all probability averted the scourge from Europe and America, he would have achieved a fame beside which that of all others of the world's heroes would have paled. A grateful world would have loaded him with riches and honors, and his name would have been cherished by all coming generations to the end of time. Perhaps, however, he was unwilling to rob Pasteur of the glory of discovering the microbe of cholera.

HÆMATEMESIS FROM WASHING OUT THE STOMACH.

IN 1881 Bouici pointed out the advantages of washing out the stomach in cases of simple ulcer, reporting at the time a patient, very cachectic, with constant rejection of food, both liquid and solid, who had had several hæmatemeses, and who rapidly gained flesh and strength and digestive ability after the commencement of the washings. Bucquoy had already reported, in 1880, a case of simple ulcer, in which washing out the stomach arrested the vomiting. Küssmaul had also reported similar good results, and, as is well known, Débone has treated a large number of cases in this manner.

In spite of these favorable cases, in which no mention is made of hæmatemesis, Germain Sée, in his work on dyspepsia, looks upon this procedure unfavorably, as he believes that there is a risk of destroying a vascular wall and thereby producing hemorrhage, or of re-opening an imperfectly formed cicatrix, and provoking a new hemorrhage.

Cornillon has recently reported a case which seems to bear out these views of Sée (*Le Progrès Méd.*, No. 17, 1883). An alcoholic person, who for ten years had suffered more or less from epigastric pain and vomiting, consulted Cornillon about two years after vomiting a quantity of clotted blood. Cornillon introduced about a quart and a half of water into his stomach, and found, on siphoning, that it contained a substance similar to black coffee. On repeating the washing, there was less of the black substance, but when water was introduced a third time, it returned distinctly reddened, and containing a number of clots. When the washing was repeated two days later, there was quite marked hæma-

temesis. Cornillon attributes the hemorrhage to the quantity of water, and the force with which it was introduced, and he doubts the propriety of this measure in cases of recent ulcer, for fear of dislodging a clot and thus provoking hemorrhage.

READING OF MEDICAL BOOKS IN COURT.

REFERENCE was made in these columns a short time since to the rule in vogue in the courts of a large number of the States, forbidding the reading of medical books to the jury, in criminal cases.

This rule had an illustration in a Michigan court a short time since, where a verdict was reversed because the counsel on one side had succeeded in a device to get the book before the jury. The facts were these: On the cross examination of a physician who was testifying for the defence, he was asked if he was acquainted with a certain book. He replied that he had heard of it, but had not read it. He was then asked whether it was considered good authority, and he said it was. He was then requested to read a certain paragraph during the recess of the court. When the court convened again he was recalled, and counsel reading from the book the paragraph to which his attention had been called, asked him whether there was a case reported of taking sulphate of zinc, followed by vomiting, purging, and death? As this was what the paragraph stated, the evident purpose of the question was to put the passage from the book in this indirect manner before the jury instead of reading from it directly. The question having been allowed by the judge and answered by the witness, the Appellate Court held the error to be sufficient for a reversal.

THE DEGENERACY OF THE FRENCH INDIVIDUALLY AND AS A NATION, AND WHAT TOBACCO IS ACCOUNTABLE FOR.

A SUCCESSOR of the late lamented Trask has appeared across the water in the person of Dr. Decroix, who raises his warning voice against tobacco, and threatens his fellow-mortals with ruin—physical, moral, and mental—if they do not rise in their might and stamp out the weed. In a communication recently presented to the Academy of Medicine of Paris, he takes a most gloomy view of the future of the French race, and incidentally of the rest of mankind. He says that the death-rate in France greatly exceeds the birth-rate, and that the population of the country is steadily decreasing. It is becoming difficult to find recruits for the army who are physically fit for military service, and the average stature of the individual is constantly becoming lower. Morals are becoming lax, and crime is growing more prevalent. Physical beauty is rare, and mental alienation and idiocy are increasing at such a rate that the asylums are unable to contain all the unfortunate victims. The cause of all this moral and physical decay he finds in the use of alcohol and tobacco. The picture he draws of the baneful influence of these poisons, the latter especially, upon the social body, is one fearful to contemplate. This it is that effaces the lines of beauty in the countenance and in the form; this it is that degrades the intellect and corrupts the moral nature. Here is to be found the active cause of sterility, or if by chance a baby is born, this is the demon that robs it of its mother's milk, the fiend that chokes with its damnable

nicotine the lacteal springs that lie deep down within the maternal breast. It kills one-half of all who see the light of day before their little lives have spanned a semicircle of the year.

Spain was once the mistress of the sea, the proud ruler among nations, the queen of poetry and song, the home of chivalry and valor, rich, proud, beautiful, wise, virtuous, and renowned. It sent its fleets to the far West to explore the new land, and to bring back its treasures of gold and silver and precious stones. The stately ships returned, laden not only with all the riches of Eldorado, but also, alas! with the "panacea of the Indies," the noxious weed—tobacco. From that period dates the decadence of that once glorious nation. The habit of smoking the poison spread with fearful rapidity over the devoted country. It seized upon the king and the peasant, the holy bishop and the humble donado. Lords and ladies all smoked and smoked until the once fair land was enveloped in nicotine-charged mist, and the glory of Spain was but a thing that is gone. And this is the fate in store for luckless France. Tobacco was the cause of the disasters of the Franco-German war, and tobacco will be the occasion of far greater evils still to come.

Undoubtedly, tobacco has much to answer for. Its injurious effects upon growing boys are quite evident, and it is truly a saddening sight to see children hardly six years old pulling away on the cheap and nasty cigarettes which have recently descended upon us like one of the plagues of Egypt. But to claim that Spain's decay resulted from the use of tobacco, and that France will owe its inevitable fall to the same cause is, to say the least, an extravagant assertion. It is a pity that apparently earnest men, advocates of temperance in material things, should so often themselves be intemperate in words. Nothing good or lasting was ever accomplished by falsehood, and nothing good or lasting can result from its twin brothers, exaggeration and distortion of facts.

News of the Week.

PROGRESS OF THE YELLOW FEVER.—During the past week no cases of yellow fever have been reported in the United States outside of the Pensacola Naval Reservation and the Government quarantines. Only five new cases and three deaths at the navy yard have been reported, and the house-to-house inspection of the adjacent villages of Woolsey and Warrington, as well as the inspection at Pensacola, have discovered no hidden cases, so that hopes are entertained that the disease has spent its force and will soon disappear. There is much suffering among the people of the villages (squatters), who are unable to provide themselves with the necessities of life, and many appeals have been made in their behalf for aid out of the Epidemic Fund, but the Department has decided that only those in hospital or under treatment are proper beneficiaries of the fund. Governor Bloxham also states that he is unable to help them, as there is no appropriation for the purpose, and thinks as they are on the Government reservation and quarantined by the Government, that it ought to take care of them.

The report of Acting Assistant-Surgeon Fitzhugh Finney for the past week shows twelve vessels in quarantine

at Ship Island and nineteen cases of yellow fever and five of ague, with three deaths from the former disease. Reports from Sapelo quarantine show no transactions, no infected ship having put in at that station. At Cape Charles quarantine a vigorous inspection is kept up by Surgeon Smith who boards all foreign vessels, whether from infected ports or not.

Sanitary Inspector Burgess telegraphs from Havana the departure of the following named infected vessels for the ports stated: Bark Doce de Juno, for Brunswick, Ga.; Spanish bark Christiana, for New York.

Thirty-two deaths from yellow fever occurred at Havana during the week ending August 24th, and there is still considerable yellow fever in the city, but very little among the shipping. It has been officially reported that the Captain-General recently issued an order forbidding the Consul to issue bills of health and directing the local board (sanitary) only to give them. No attention will be paid to this order by the United States Consul, as no faith can be placed in the sanitary report of the local board, particularly as their "fumigation" of vessels consists in giving to the master a four-ounce vial of mild fumigant for which he is charged ten dollars, and which the master throws overboard!

To form some idea of the sanitary condition of Cuba the following translation of an article which appeared in the *Matanzas Correo de la Tarde (Evening Mail)*, of August 18th, is herewith presented. The first paragraph was difficult to translate, because in the editor's effort to be ironical he forgot his logic—however, it will pass:

"It is often said, and generally believed, that Cuba is not healthy, and yet the facts are that this description cannot be more unjust or untrue, because if there exists in every other town the same noxious elements which are apparent here (Matanzas), and if all could show the same proportion of mortality, a proportion which, without exaggeration, is much below the average,—it deserves the name of being very healthy; and yet it is strange, all things considered, that a single soul lives.

"Picture to yourself a city which is bounded on one side by the marshes of the Yumury, whose deadly miasma is daily swept over it by the breezes which generally blow from that direction, and on the other side by a bay into which a great deal of organic matter is deposited by the currents of the two rivers. Picture to yourself other marshes which exist behind the suburbs of the town. Picture again to yourself a provision market always dirty, and surrounded by a sewer which continually gives forth bad odors. Go on picturing to yourself that in the centre of the town there exist many streets full of cesspools and filthy ditches, and on every two or three corners piles of offal. Picture to yourself, again, that on the banks of one of its rivers, which is the city's chief source of commerce, one sees immense sheets of stagnant water, covered by a greenish scum, and which renders a communication with the above houses almost impossible. Picture, lastly, to yourself that from the milkman at one corner of the street to the fisherman at the other, whose strident yells distract and annoy us—that from the butcher behind his counter, awaiting his victims, to the fruit and vegetable dealers wandering through the streets—that from the most elegant café to the humblest grocery store, they can in spite of all law sell us a 'cat for a hare,' as the vulgar

say—and in face of all this, dispute the statement we have expressed above.

"The vigor with which the question is treated in the capitals of Europe is unknown to us—as our condition is inconceivable to them. They cannot understand that possessing laws, as we do, exacting as their own, we should permit them to become dead letters from the indifference with which they are treated. But for that would they sell us the adulterated milk, which does not kill because, like Mithridates, we are used to poison? Would our streets otherwise be filled with numberless pedlers, free from the danger of molestation, offering us for sound, rotten fish? And others offering as harmless fruit ripened by fire? And still others offering for sale tainted flesh which they bring in their filthy trays? But for this marked indifference would so many vagabond dogs wander through our streets, and so many horses be attacked by suspicious coughs? It is necessary, therefore, that this lamentable state of affairs should be remedied for the good of all and the satisfaction of our own conscience. And would that our humble words, which have no tendency except the common weal, might carry this conviction to certain minds."

Sanitary Inspector Mainegra reports by letter that the sanitary condition of Vera Cruz is much improved, owing to copious rains with thunder and lightning refreshing and purifying the atmosphere. He states that the type of the fever has been very fatal, the mortality even among private cases being about thirty per cent. As there is no reports made by the authorities, he was unable to get at the whole truth, but thinks it would show a still greater mortality. He gives the following figures: Deaths in 1882, 72; in 1883—January, 1; February, 1; March, 7; April, 16; May, 90; June, 261; July, 200; August, up to 16th, 38. He regards all vessels sailing from Vera Cruz infected, and if bound to any Southern port, advises them to put in at Ship Island or Sapelo Sound quarantine station for inspection.

The U. S. Consul at Tampico, in a despatch to the Secretary of State says: "I have the honor to report that the authorities of this port have, since the 1st of this month (August), established a quarantine of eight days against all vessels arriving from Vera Cruz and from other infected ports—that term to be reckoned for vessels arriving from Vera Cruz, from the date of departure therefrom. This port and vicinity enjoy good health to this date, and there is no suspicion of plague, cholera, vomito, or contagious distemper whatever in this district."

The United States Consul at Matanzas, Cuba, in transmitting his weekly consular report of the sanitary condition of that place says: "The sanitary authorities all combine to withhold information from me; however, sufficient cases of yellow fever exist to seriously infect the port and make watchfulness a necessity, and strict quarantine a matter of wisdom. The Captain-General has issued orders forbidding Consuls giving Bills of Health, transferring that duty to local sanitary boards, and I would suggest that if any foreign vessel enters without my Bill of Health, that the penalty prescribed by law be enforced."

In answer to a despatch of inquiry sent the Consul at Saint Thomas, W. I., he states that there has not been a case of yellow fever at that place for the past two years.

There were twenty-nine deaths from yellow fever at Havana last week.

PROGRESS OF CHOLERA.—The department of State has received and transmitted to the Treasury department despatches from the U. S. consul-general at Constantinople, dated July 19–21, in regard to the cholera in Egypt and the sanitary condition of Constantinople. He says that when the cholera was reported in Damietta it created the greatest alarm in Constantinople, and stringent orders were immediately issued to exclude it from the country, as well as to combat its ravages if it succeeded in getting a foothold. All arrivals from Egypt were required to undergo quarantine at the entrance of the bay of Smyrna. The limited accommodations at Beirout and Bouria were enlarged, but the panic-stricken refugees from Alexandria came in such numbers, that the quarters soon became insufficient to accommodate them; and as each day brought fresh arrivals, the sufferings of the people from exposure to the burning sun and the chilly night dews became very great, and threatened to create the very evil it was intended to guard against. The arrivals at Beirout were the greatest sufferers, and the authorities were finally compelled to telegraph to Alexandria to give warning that no more refugees could be received, or would be allowed to land. But while the sanitary administration were employing the best means their resources admitted of to prevent the introduction of cholera, the orders from the palace for the cleansing and disinfection of Constantinople were totally neglected, as was also the case in the provincial towns. The most elementary measures of precaution had not even been commenced, after the cholera existed at Damietta for over a month. The ditch draining into the Golden Horn, which drains about two square miles of land thickly built up and densely populated, receives, through a thousand tributaries, all the sewerage of that large district. It is an open stream of filth, and its noxious gases spread with every breeze to distant quarters. This pestilential ditch still yawns and befouls the atmosphere of Pera, and other quarters facing the Golden Horn. While the authorities are discussing measures to improve the sanitary condition of the city, the streets remain unswept, the sewers choked and overflowing, or open, and indescribable filth and garbage go on increasing in open spaces the accumulation of years. The consul-general says that, as under these circumstances it can scarcely be expected that Constantinople will escape a visitation of cholera, it is his duty to call the attention of our sanitary authorities to the necessity for taking prompt precaution against its importation into the United States. There are several classes of goods that originate in the East, that have been active agents in the introduction of infectious diseases—hides and skins, rags, rugs, and carpets, and woollen, cotton, silken, linen tissues and embroideries, mostly old and worn. It will be no safeguard that these goods reach the United States through European ports, unless there is evidence that the packages have been opened and disinfected before reshipment. Danger is especially to be apprehended from rugs, which come from remote parts of Asia. It is well known that when the plague has prevailed in Constantinople, the bazars where these goods are sold were centres of infection.

Russia has virtually put the whole world in quarantine as regards her southern ports, as an order has been issued that all vessels passing the Dardanelles, under whatever flag, shall be subjected to quarantine on arrival at any of the Black Sea ports.

The consul-general encloses tables giving the number of deaths from cholera in Egypt, to July 15th, as 2,932, of which Damietta had 1,740, and Mansourah 825, and says, considering the density of the population of the delta of Egypt and the habits of the inhabitants, the rates are not extraordinary. The outbreak of the cholera is sufficiently accounted for by the condition of the towns infected. Before the epidemic appeared a cattle plague of extreme virulence had been raging for some time, and such of the infected animals as were not slaughtered for food were allowed to die of the disease, and after being skinned, their carcasses were thrown into the river and canals, whence all the drinking water is drawn. The hides, after drying, were stored in the villages to be sold. In some places carcasses were tied to the banks of the river to attract fish and render their capture easier, and these fish, feeding on putrefied flesh, were sold for food. The water in many of the canals is almost stagnant, and has become putrid from the number of carcasses thrown into them. Everything seems to have been done to create and propagate cholera, and it is quite useless to seek its origin in India, when such abundant causes for its generation exist in every part of the Delta. Since the military cordons have been established around infected places—either through ignorance or from malevolence—they not only do not allow any one to pass out, but they allow nothing to pass in, not even provisions or medicines. Meanwhile the dwellers in these plague-stricken places are without food and medicines, and it is not to be wondered at that they should eat the carcasses of animals that have died of disease, preferring to risk the chance of cholera rather than incur the certainty of death from starvation. The wonder is, not that there is cholera in Egypt, but that the mortality is not much greater than reported.

The consul reports the population of some of the principal towns of Lower Egypt, according to the recent census, as follows: Cairo, 368,108; Alexandria, 208,778; Port Said, 16,560; Suez, 10,913; Tintah, 33,725; Damietta (where the cholera made its first appearance), 34,068; Rosetta, 16,671; Mansourah (second place attacked), 26,784; Zagazig, 19,046; the whole of Egypt, 6,798,200.

Sanitary Inspector Hill, stationed at London, England, in his abstract of "Bills of Health," states that the British steamer Newcastle City "left port in a dirty state, with 335 tons of rags and paper-stock (200 tons British, 35 Parisian, 80 Russian, and 20 Dutch) for Boston; and that the British steamer Canada carried 120 tons of rags obtained from Northern Prussia." He also states that deaths in London from choleraic diarrhoea number six to eight each week.

At a meeting of the Board of Health, held at Gibraltar on August 10th, it was decided that all arrivals from Syria and from the Ottoman ports be subjected to a quarantine of twenty-one days.

PROCLAMATION.—By His Excellency Sir John Miller Adye, Royal Artillery, Knight Grand Cross of the Most

Honorable Order of the Bath, Knight Commander of the Legion of Honor, and of the First Class of the Military Order of the Medjidie, Lieutenant-General of Her Majesty's Forces, Governor, Vice-Admiral, and Commander-in-Chief of the City and Garrison of Gibraltar, etc., etc., etc.:

Whereas in and by a certain Order, bearing date at the Court at St. James's on July 13, 1830, and made by His late Majesty, by and with the advice of His Privy Council, to regulate and provide for the performance of Quarantine at the Garrison and Territory of Gibraltar, it is among other things ordered that the Order or Orders from time to time made by the Board of Health of Gibraltar, in pursuance of the said Order of His late Majesty, for carrying into effect the Regulations and Provisions thereof, shall be duly published at Gibraltar by Proclamation.

And whereas the said Board of Health having made the Order hereinafter following, the same is hereby published and proclaimed in pursuance of the said Order of His late Majesty in manner following, viz: That all arrivals from Syria and Ottoman Ports be subjected to a quarantine of twenty-one days.

Given at Gibraltar, August 10, 1883.

By Command, GIFFORD, *Colonial Secretary*.

Official reports up to August 31st, show that there have been 27,318 deaths from cholera in Egypt since the outbreak, this includes 140 among the British troops stationed there.

Official reports from Shanghai, of July 23d, received by the State Department, announce the fact that "the cholera had assumed an epidemic form at the Port of Swatow, but while many deaths had occurred in consequence, they were confined entirely to the shipping and native population. Hong Kong has declared Swatow an infected port, and strictly enforced quarantine regulations against vessels arriving from there." The Consul-General called a meeting of the Consular body to take action for the protection of Shanghai by the enforcement of quarantine regulations, and he was requested to communicate with the Chinese officials, asking their co-operation in the enforcement of the regulations of 1874. Nearly all the cases occurring at Shanghai have also been among the shipping and natives—those dying among the foreigners were mostly sailors.

DR. HENRY MAUDSLEY is visiting this country. He stays but a short time and is travelling very quietly, being desirous of obtaining rest and health.

SANITARY REFORMS IN TORONTO.—The people of Toronto are becoming awakened to the real value of preventive medicine. Dr. Oldright, Chairman of the Provincial Board of Health for Ontario, and Dr. Canniff, health officer for Toronto, have been busy lately looking into matters of public health and reporting upon unhealthy localities and nuisances. Policemen have been detailed in pairs to make a thorough inspection of Toronto. They are authorized to go into houses, stables, yards, cellars, factories, schools, etc., and are provided with blanks to make reports on in the event of any unhealthy condition being found. Although Toronto has taken the lead in this matter, other cities are moving in the same direction. Much good must follow so systematic a

course of investigation. The Committee on Public Health of the Ontario Medical Association urge strongly that hygiene be taught in all the public schools in lieu of less important subjects.

CONVALESCENT HOMES IN CANADA.—Considerable attention is being directed to convalescent homes, both in connection with the general hospital and for sick children. In the case of the latter a neat summer resort has been erected on the island about a mile from Toronto. Here the little invalids are removed from all noise and disturbance and get the benefit of the cool Lake Ontario breeze. More of such places are required throughout the country in healthy, open localities, instead of large, dreary hospitals in busy, crowded cities. There is ample room for them, and abundance of means to sustain them. It requires but the stimulus to be given in this direction and we shall soon have many of these suitably located convalescent homes.

AN EPIDEMIC OF DYSENTERY.—The *Mississippi Valley Medical Monthly* states that an epidemic of dysentery is now prevailing at Byhalia, Miss., about twenty-five miles from Memphis. Sixty or seventy deaths have recently occurred in that vicinity, and considerable alarm prevails. It is rumored that some neighboring towns have instituted quarantine for protection.

MEETING OF GERMAN NATURALISTS.—The fifty-sixth annual meeting of the Society of German Naturalists and Physicians will be held at Freiburg, on September 18th, 19th, 20th, and 21st.

NEW HOSPITALS IN PARIS.—The Municipal Council of Paris has recently voted a credit of \$600,000 for increasing the hospital accommodations of that city. The sum of \$400,000 is to be devoted to repairs and additions to already existing hospitals, while the balance of \$200,000 will go toward the erection of a hospital for the treatment of chronic diseases, a small-pox hospital, and a children's asylum for incurables. The entire cost of these three new hospitals, when completed, will aggregate about \$2,250,000.

THE EIGHTH ANNUAL MEETING OF THE AMERICAN GYNECOLOGICAL SOCIETY will be held in Philadelphia, at the Hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th. Papers are expected to be read as follows: "Superinvolution of the Uterus," by Dr. Joseph Taber Johnson, of Washington; "The Importance of Cleanliness in Surgical Operations," by Dr. R. Stansbury Sutton, of Pittsburg, Pa.; "Some Points Connected with the Subject of Dysmenorrhœa," by Dr. C. D. Palmer, Cincinnati; "An Unusual Form of Abdominal Tumor," three cases, by Dr. Thaddeus A. Reamy, of Cincinnati; "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" by Dr. A. Reeves Jackson, of Chicago; "A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College" (being the President's address), by Dr. Gilman Kimball, of Lowell, Mass.; "The Management of Accidental Puncture and other Injuries of the Gravid Uterus as a Complication of Laparotomy," by Dr. Charles Carroll Lee, of New York; "A New Method of Operating for Fistula in Ano," by Dr. Edward W. Jenks, of Chicago; "Ergot: The Use and Abuse of this Dangerous Remedy,"

by Dr. George J. Engelmann, of St. Louis; "Congenital Fissure of the Female Urethra with Extrophy of the Bladder," and "Menstruation after Extirpation of the Ovaries," by Dr. Henry F. Campbell, of Augusta, Ga.; "Remarks on Chronic Abscess of the Pelvis," by Dr. William H. Byford, of Chicago. A discussion on "Death after Labor" will be opened by Dr. Campbell.

Correspondence.

FEMALE MEDICAL EDUCATION FROM A WOMAN'S STANDPOINT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In response to your Canada correspondent, in your issue of August 25th, allow me to say that

"He either fears his fate too much,
Or his deserts are small,"

who feels it necessary to his own safety as a practitioner to decry the medical education of women.

In your correspondent's statement that "exception was taken by those ladies to some remarks made by the lecturer on physiology," I can see nothing to indicate that those same ladies, or ladies in general, are, therefore, unfit subjects for the study or practice of medicine; nor can I see in the fact that "the men" (your correspondent makes a nice distinction in not calling them *gentlemen*) "in the class became noisy and made statements that greatly offended the ladies," any special or superior fitness on their part.

It is not worth while to argue the point whether co-education will or will not work, when we see conspicuous instances of its success increasing around us; but we pass on to his gravely expressed foreboding that "there cannot be any doubt in the minds of all who think calmly on the matter, but that these young female doctors will locate on our streets, and in our villages and towns." And pray what if they do? Will the public morals be wrecked in consequence? The social scientist, if *he* "think calmly on the matter," will doubtless tell us society is better for a young woman "locating on our streets" to practise legitimate medicine, than if forced by the closure of all avenues of respectable work she "walk" that same street for bread. Our friend shows lack of knowledge of the number of women who have gone out as medical missionaries, of the constantly increasing call from the mission fields for more workers, and of their great usefulness there. A letter written me in 1880 by a former pastor, a prominent Presbyterian divine, contains this statement: "I have a friend in India, a medical missionary, who has had much success, having had five thousand cases among the Indian women in ten years." Surely that woman has found her work, and is doing God and humanity better service than by devoting her immortal energies to making rick-rack trimming for her dresses.

In answer to the scathing remark that "it is all a question of dollars and cents with the ladies who wish to secure medical qualifications," I can only say that whenever society reaches that happy stage of gallantry to our sex that the tradesman and artisan refuse to accept from us an equivalent of "dollars and cents" for their work and their wares, doubtless the percentage of women who practise medicine from philanthropy, pure and simple, will more nearly approximate that of the men in the profession who decline all fees.

"The move is very unpopular with the profession at large in this country." I would suggest that our progressive physicians are not opposed to it, but willing to see it stand or fall on its own merits. Its unpopularity is mainly among those whom Charles Reade so aptly describes as "pig-headed beyond belief."

That it is not unpopular with the laity, who, after all, are the true arbiters in the matter, is shown in the amount of work women are doing throughout the land.

From the nature of things the practice of women must be more limited than that of men has been. We seek only the privilege of treating the ills of our own sex, and in the field of gynaecology and obstetrics who shall deny that we have fit place.

In accordance with that sure law of supply and demand, just so long as sensitive women prefer to consult competent physicians of their own sex for the ills peculiar to their sex, just so long will the demand be met by competent ladies, educated, if not in Kingston or Toronto, then in New York, Philadelphia, Ann Arbor, Syracuse, Paris, Vienna, etc. The world moves.

CAROLINE S. PEASE, M.D.

TROY, N. Y.

Reviews and Notices.

TREATMENT OF DISEASES OF INFANCY AND CHILDHOOD, with over four hundred Formulæ and Prescriptions, as exemplified in the services of Drs. A. Jacobi, J. Lewis Smith, Alonzo Clark, Austin Flint, W. A. Hammond, A. L. Loomis, W. H. Thomson, J. H. Ripley, T. Gailard Thomas, J. R. Leaming, F. Delafield, L. A. Sayre, C. R. Agnew, L. Duncan Bulkley, Beverley Robinson, R. W. Taylor, G. H. Fox, F. N. Otis, A. A. Smith, E. C. Seguin, F. A. Burrall, E. G. Janeway, F. H. Bosworth, A. H. Smith, C. E. Billington, G. M. Leferts, etc., etc., and in the Hospitals of New York City. By CHARLES H. GOODWIN, M.D. New York: C. H. Goodwin, M.D., 245 West Fifty-third Street. 1883.

The success which we predicted for the author's previous manual on treatment of heart and lung diseases has been realized, and has led to the preparation of this companion volume. This excellent little book is not a mere jumble of formulæ thrown together hap-hazard, but is a systematized and well-ordered collection of the favorite prescriptions of some of the best-known physicians in this city. Each subject is prefaced by a short explanation of the rationale of the treatment followed. While heartily disapproving of the use of ready-made prescriptions, we still think that the publication of formulæ such as this book contains is of value as giving in brief the matured views of men of wide experience in the treatment of disease. Such a book as this is naturally used for the most part as a ready reference manual, and we think its value in this respect would have been greatly enhanced by an index arranged alphabetically instead of by groups.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA at its Thirty-fourth Annual Session, held at Norristown, May 9, 10, and 11, 1883. Vol. XV. Philadelphia: Published by the Society. 1883.

This volume is excellently printed in clear type and neatly bound in cloth. It contains a number of good papers on a great variety of topics. One hundred pages of the Transactions are taken up with reports of very little interest from the County Societies. The volume also contains the circular of the Society for Instruction in First Aid to the Injured, of New York City, which was ordered by the Society to be printed after the report on Surgery.

PHYSIOLOGICAL CRUELTY; OR, FACT VS. FANCY. An Inquiry into the Vivisection Question. By PHILANTHROPOS. 8vo, pp. 156. New York: John Wiley & Sons. 1883.

In this work the author has presented the chief established facts and the principal arguments on the subject of vivisection. The text is, in general, quite accurate in

detail, without evidence of partizanship, and is well worth the attention of the profession. Certain of the more obvious statements which have appeared in print are touched upon; but, as a rule, the numerous popular questions raised upon this matter, and the various results arrived at are avoided. An appendix is also added containing further information on special points.

Reports of Societies.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE Fourteenth Annual Meeting of the Medical Society of Virginia convened in the ball-room of the Grand Hotel, Rockbridge Alum Springs, Rockbridge County, Va., at half-past eight Tuesday evening, September 4th, the President, DR. WM. D. COOPER, of Morrisville, in the chair.

REV. DR. J. J. LAFFERTY, of Richmond, Va., opened the meeting with prayer.

The Naval Academy band from Annapolis, attached to the hotel for the summer, played at intervals during the evening.

The address to the public and profession was delivered by DR. K. EDGAR CHANCELLOR, of Charlottesville, and was devoted to consideration of

THE DIFFERENT MINERAL WATERS OF THE WORLD.

He stated that out of the 876 natural mineral waters of the United States, only 300 had been properly analyzed and classified, and in the course of his address showed plainly the points of difference between natural and artificial mineral waters. He pointed out the manner in which the pure water is changed to mineral waters in the ground, and closed with the reasons for the natural production of hot or thermal waters.

Besides the Society members, a large number of ladies and gentlemen, guests at the hotel, were in attendance.

The Committee on Nominations reported 39 names of physicians for election to fellowship, all being afterward duly elected by the Society.

On Wednesday, September 5th, the Society met in the ballroom of the Rockbridge Springs Hotel, at 10 A.M., and, after opening the session, DR. WM. D. COOPER read the Annual Address of the President, his subject being

THE INDIVIDUAL RIGHTS OF PHYSICIANS,

in the course of which he pointed out the very limited protection afforded the profession by the State of Virginia, and gave some exceedingly valuable suggestions concerning the proper mode of action for redress.

DR. JOHN R. WHEAT, of Richmond, then read the report on Advances in Anatomy and Physiology, and confined himself mainly to a consideration of

THE ANATOMY AND PHYSIOLOGY OF THE MALE URETHRA.

He stated his belief that the surgery of the urinary passages will have made marked progress when it has the boldness to give the

PREFERENCE TO THE USE OF STRAIGHT INSTRUMENTS OVER CURVED SOUNDS, CATHETERS, ETC.

DR. A. M. FAUNTLEROY, of Staunton, made an exhaustive report on Advances in Chemistry and Pharmacy, considering fully the possibilities of the

ARTIFICIAL MANUFACTURE OF A NUMBER OF VALUABLE DRUGS

which now are only obtained in nature. He believed that the day was not far distant when quinine would be manufactured by the chemist without the necessity of

handling cinchona bark. He recommended the use of the tonka or vanilla bean as being by far the best method of subduing or

COVERING THE ODOR OF IODOFORM.

The report was concluded with a detailed description of the properties and employment of convallaria maialis.

DR. M. G. ELLZEY, of Washington, read the report on Advances in Obstetrics and Diseases of Women. He advised against

THE TOO COMMON USE OF STYPTICS IN THE UTERUS, and made an eloquent appeal for

LESS FREQUENT EMPLOYMENT OF FORCEPS.

He spoke against the growing institution of private hospitals for women, and believed that they were often no better and sometimes not as good for lying-in purposes as a room in a comfortable home. He laid down certain rules as regards

PERSONAL DISINFECTION ON THE PART OF THE OBSTETRICIAN,

strongly urging greater care in this respect. He believed that pessaries are often unnecessarily employed, and related a recent case of death following

BLOOD-POISONING PRODUCED BY ULCERATION FROM A PESSARY

introduced in 1860.

DR. WM. H. COGGESHALL, of Richmond, Va., made a report on Advances in Diseases of Children, making special mention of

THE SUCCESSFUL TREATMENT OF CANCRUM ORIS WITH SUBNITRATE OF BISMUTH,

by Dr. McGuire, of New York. He described the mode of reducing congenital phimosis, when stenosis does not exist, by manipulation, as practised by Dr. Willard, of Philadelphia, and after an extended account of the present treatment of children's diseases, closed with a brief recitation of the points of relationship between membranous croup and diphtheria. The paper will appear in a future number of THE MEDICAL RECORD.

DR. McDONALD, of West Virginia, desired that the subject of each paper should be discussed, and after an informal debate, it was decided that any member who wished could speak upon any part of the papers read.

Drs. McDonald, Parker, Hume, Field, and others discussed some of the points presented in Dr. Ellzey's paper.

In the evening DR. THOMAS H. HOWARD presented for the inspection of the Society

A LARGE NUMBER OF BONE SEQUESTRA,

weighing from half a grain to half a drachm each, which had exfoliated from the external table of the skull after fracture during a period extending over four years. The female patient from whom they were taken is now living and in good health, over fifty years of age. The doctor gave a full history of the case, which was peculiar, every piece of bone being

EXTRACTED THROUGH THE EAR.

There was no history of traumatism except that the patient received a lightning-stroke a year before the first piece of bone was discovered.

DR. ELLZEY read a volunteer paper on

THE THERAPEUTIC QUALITIES OF THE RAWLEY SPRINGS WATER,

stating that the peculiar chalybeate water of this spring was not duplicated anywhere else in America, the only localities where a like combination can be found are at Schwalbach and Tunbridge Wells in the Old World. He gave a clinical report of a number of cases of depraved and impoverished blood conditions relieved and cured by the use of this water.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 27, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 249.)

DR. FERGUSON presented a specimen of

ANEURISM OF THE HEART.

The patient was a male, fifty-four years of age, a native of Ireland, married, and a clerk by occupation. Both his parents lived to old age, although his mother was troubled with asthma for many years. He was quite well until April, 1882, when he began to suffer from shortness of breath, and at times cardiac palpitation. These symptoms, however, were not severe until one month previous to his admission into the New York Hospital on the 31st of March, 1883. Then he became quite weak, his feet began to swell, and he passed but a small amount of urine. He suffered from severe dyspnea, cardiac palpitation, irritability of the stomach, and ocular disturbance, together with a cough accompanied by a frothy mucous expectoration. He gave an alcoholic history. On admission he was fairly nourished, feet and legs oedematous, cardiac action and respiration labored. The heart-sounds were roughened, but there was no bruit. He was passing twelve to sixteen ounces of urine a day.

Under treatment the first few days in the hospital his condition improved. Later on in the month of April he complained of great weakness, his respiration being much embarrassed and his legs, scrotum, and penis very oedematous, his abdomen was also distended with fluid. Stimulants and diuretics gave him only temporary relief.

The first week in May he was aspirated, sixty-three ounces of fluid being removed from the peritoneal cavity. After respiration his breathing was much relieved and he was passing at the time twenty-five to thirty ounces of urine a day. His dyspnea continued at times slight but occasionally very severe. On the 17th May he was again aspirated and 108 ounces of clear serum drawn from his peritoneal cavity, without any relief to his respiration or heart action. He was delirious at times and suffered greatly from dyspnea. His heart action was weak and irregular, ranging from eighty to ninety beats in a minute, his respiration forty to fifty, and his temperature 99°, or normal. The urine contained considerable albumen and tube-casts of the granular and epithelial variety.

At the post-mortem examination there were 3,400 c.c. of clear serum in the pleural cavity. There was no evidence of peritonitis. In the right pleural cavity there were 1,350 c.c. and in the left pleural cavity 1,300 c.c. of clear serum. The kidneys are not much reduced in size; their capsules are not adherent; their surfaces are smooth except the presence of a few small cysts. The organs in the recent state were much congested. The markings were obscure and the epithelium lining the convoluted tubules throughout, and the straight tubules in places, had undergone fatty metamorphosis. There were many atrophied glomerules, and thickened vascular walls, as well as tube-casts both in the cortical and medullary portions of the organ. The heart is large; all its cavities, especially its left ventricle, are dilated. The left ventricular wall is hypertrophied, except anteriorly near the apex, where it is very thin and made up almost entirely of fibrous tissue.

In this location the ventricular wall is about one-fourth of an inch in thickness, and is lined by a clot of fibrin firmly adherent to the wall of the heart and is similar to the clots found in aneurisms. The endocardium of both ventricles is thickened, and the left ventricular wall throughout contains a great deal of fibrous tissue. The interventricular septum is normal.

The muscular fibre of the heart on microscopic examination did not contain fat.

DR. GERSTER presented the uterus and appendages removed from a woman thirty-seven years of age, who had suffered for about one year from profuse menorrhagia and continuous metrorrhagia. The patient had never been pregnant, but had been married four years. She had not reached the menopause. The menorrhagia and metrorrhagia were believed to be due to uterine fibroids. Her general condition became seriously reduced, and at times she was so weak that upon slight exertion she would faint. All the ordinary means had been resorted to for producing involution of the fibroma without avail. Finally Dr. Tauszky, under whose care the patient had been, kindly referred her to Dr. Gerster, and on examination he found in the median portion of the abdominal cavity a hard, solid tumor, about the size of the uterus in the seventh month of pregnancy, freely movable in all directions, and smooth over its entire surface. There was evidence of a slight amount of ascites. From abdominal palpation and the fact that the vaginal portion freely followed movements imparted to the tumor, it was thought probable that the swelling occupied the uterus itself. The ovaries were not detected by palpation. It was evident that the woman would soon die unless relieved in some way, and it was determined to give her a chance by attempting to remove the tumor entirely by the abdominal section. Accordingly, after preparatory treatment, the operation was performed on June 7th. The preparatory treatment consisted in the use of laxatives with rectal and the methodical use of vaginal injections of an antiseptic fluid. The patient was etherized and a small incision made in the abdominal wall somewhat below the umbilicus and in the median line. The tumor at once presented itself, and on introducing the fingers into the abdominal cavity the ovaries were readily felt attached to it. The neck of the uterus was found rather slender, and Dr. Gerster thought it would not be difficult to secure it as a pedicle; the tentative incision was therefore extended upward to two and one-half inches above the umbilicus, with a view to everting the tumor as rapidly as possible, and then close at once temporarily the upper part of the incision by silver-wire sutures, leaving an opening in the abdominal wall only sufficiently large to enable him to treat the neck of the tumor, thus guarding against the protrusion of the intestines. An elastic ligature was thrown about the broad and round ligaments and the tube. Another elastic ligature was applied centrally toward the uterus, and the intervening tissues were divided by the actual cautery. This was done on both sides. Having thus secured the vessels leading to the tumor he placed an elastic ligature about the neck of the growth itself and clamped it with lead. The tumor was now cut away at some distance above the ligature with a small amputating knife. His first idea was to strip up the peritoneum and to place an elastic ligature beneath it, but the pedicle was so small that he decided to treat it like the pedicle of an ovarian tumor. The cut surfaces were seared with the thermo-cautery, iodoform was dusted over the stump, and the pedicle was dropped into the abdominal cavity. Except the blood which was lost from the tumor itself, not a drop of hemorrhage occurred save that from the external incisions which was exceedingly slight as it was promptly controlled. No blood whatever entered the peritoneal cavity. The tumor having been removed, and the pedicle treated, the temporary sutures in the abdominal walls were removed, the edges of the peritoneum stitched together by a continuous catgut suture, the edges of the abdominal incision brought together by deep silver sutures, and the ordinary antiseptic dressing applied. The patient's pulse, which before the operation was rather weak, varying from 90 to 96, rose to 108 during the operation, and, after the anæsthesia ceased, to 116 to 118, and remained at this high rate. She complained from the very first, after coming from under the influence

of the anæsthetic, of extreme thirst, which Dr. Gerster regarded as a very ominous symptom. The temperature was normal up to a few hours before death. The patient did not at any time complain of pain, and there was no tympanites; up to twelve hours after the operation there was no nausea or vomiting, but subsequently nausea was present until death occurred. The patient died in collapse with a thready pulse, but no pain whatever, the respirations remaining normal nearly to the end. At the autopsy the abdominal incision was found nearly in a normal condition, union by first intention had occurred throughout except at the lower angle, where about three drachms of purulent fluid had collected. The incision through the peritoneum had completely healed by first intention. The bowels were found in the same collapsed condition that they were in at the close of the operation. The peritoneum itself was normal. The pedicle was absolutely unchanged. The ligature which had been applied to it was in the position in which it was left. There was no evidence whatever of inflammatory process within the abdominal cavity. The uterus, containing a large fibroid tumor, together with the pedicle, altogether weighing seven pounds, the cervix, and a portion of the vagina were presented. Dr. Gerster believed that death was due to the anæmic condition of the patient, and the shock of the operation probably hastened by the otherwise not high fever due to suppuration of the external wound. He believed that the formation of the purulent fluid which was found at the lower angle of the abdominal incision was due to septic infection; for complete antiseptic precautions had been taken, all instruments and utensils used had been disinfected, also the hands of all the assistants and of the nurses; but he was convinced that while he was closing the external incision some fault in the management of the sponges must have been committed. It was in the external incision that the suppuration occurred, as shown by the autopsy, either the sponges or the hands of the nurses who assisted at this stage of the operation, or both, had not been rendered antiseptic.

The Society then went into executive session.

AMERICAN DERMATOLOGICAL SOCIETY.

Seventh Annual Meeting, held at Lake George, August 29, 30, and 31, 1883.

WEDNESDAY AUGUST 29TH—FIRST DAY—MORNING SESSION.

The Association met at the Sagamore House, and was called to order at 10.30 o'clock by the President, DR. R. W. TAYLOR, of New York, who welcomed the members with a few appropriate remarks and then proceeded immediately to the scientific business.

The first paper was read by DR. H. G. PIFFARD, of New York, on

THE TREATMENT OF ACNE.

The term acne was restricted to inflammatory affections of the sebaceous glands. This affection never begins, and relapses never occur, without sufficient cause, and the first indication is to seek for and, if possible, remove the etiological factor, whether gastric, intestinal, uterine, etc. It is only partly true that it is an incurable disease. It is subject to repeated relapses. It can be cured temporarily quite easily; its course may be aborted and often shortened. Dr. Piffard then related the history of a case occurring in a patient who suffered from ovarian trouble, the removal of which was followed by a cure of the acne. He also referred to a case of chronic incurable organic uterine disease in which a severe acne existed that persisted despite treatment, and stated that in such instances all that could be reasonably expected was temporary alleviation.

Acute acne vulgaris.—The drug which he had administered internally with the most satisfactory results was the calx sulphurata, in small doses to be discon-

tinued as soon as good effects are manifested. Next in efficacy was the bromide of arsenic in doses of from $\frac{1}{100}$ to $\frac{1}{50}$ of a grain—a one per cent. alcoholic solution administered in doses of from one to two minims (not drops) in a wineglass of water upon an empty stomach. As the acne improves lessen the doses. He had found the former drug most serviceable in the lymphatic variety and the latter in acne of the florid type. External treatment: depletion by incision and bathing with warm (not hot) water; in simple cases puncture the papules, and puncture each fresh papule as it appears. The next external application recommended was frequent bathing with *very hot water*. In the pustular variety the pustules should be punctured, the contents squeezed out, and the parts bathed with *hot water* to reduce the congestion. Other external applications mentioned were soothing agents, such as belladonna and stramonium—belladonna liniment mixed with benzoated lard, sometimes ammoniate of mercury; fluid extract of stramonium, made from fresh leaves gathered in the autumn, incorporated in benzoated lard in the proportion of 3j. to 5j.

Subacute acne vulgaris.—Internal treatment by the use of calx sulphurata, but in much larger doses than in the acute form, and continued until the physiological action of the drug is manifested by increased activity of the eruption, perhaps by increased number of the lesions, and perhaps by a tendency to suppuration. In occasional cases he used mercury (corrosive sublimate), iodide of potassium, and ergot. In external treatment the principal indication is the employment of applications which produce an irritant or substitutive inflammation, such as green soap, sulphur, biniodide of mercury, corrosive sublimate, which act as irritants and are followed by hyperæmia with swelling, etc. When the action has reached a proper limit, discontinue the remedy and permit the parts to return toward the healthy state. The strength of these applications must be varied according to the effects produced; it is well to begin with applications of moderate strength.

The author of the paper then referred to the views of the Vienna and French schools, and to the practice of English and American dermatologists.

With regard to ergot, as recommended by Dr. Denslow, of New York, given in doses of twenty to thirty grains twice or three times a day and continued for several weeks he had seen some cases in which benefit followed its use.

Comedones.—These yield only to mechanical treatment. Remove them by pressing upon the surrounding skin, and if the sebaceous plug does not readily come out, enlarge the mouth of the duct with a fine needle.

Acne indurata, whether acute or subacute, may be regarded as an aggravated acne vulgaris, and the principles of treatment are substantially the same as in acne vulgaris. The most striking results he had seen follow the use of ergot had been in this form of the disease.

DR. ATKINSON, of Baltimore, had used the sulphide of calcium faithfully, but had failed to obtain the favorable results, which from time to time had been reported. He had used ergot, but also without noteworthy benefit. Whatever of benefit he had obtained had been by the use of local applications, together with such remedies and measures as were indicated to correct or remove those disorders, gastric, intestinal, uterine, etc., which were generally supposed to be causes of this local inflammation.

DR. VAN HARLINGEN, of Philadelphia, had used with considerable benefit, in eight or ten cases of *comedones*, the following smeared over the elevations: Official acetic acid, two parts; glycerine, three parts; and kaolin, four parts.

DR. W. T. ALEXANDER, of New York, had used calx sulphurata with considerable benefit, but usually only in the pustular variety. On the other hand, he referred to a case in which the remedy, administered in small doses four times a day, exhibited lack of power to arrest sup-

puration. The only good effect he had seen follow the use of ergot, was a seeming diminution of the redness, but only so long as the drug was being taken.

DR. SHERWELL, of Brooklyn, did not employ the sulphide of calcium. He had obtained sufficiently good results by the use of external applications with the use of internal remedies, especially ergot. He had found cannabis indica of great benefit in acute forms of the disease tending to the pustular state. He associated acute pustular acne with menstrual disturbances very decidedly, and always employed ergot—moderately during the period, more pronounced between the periods, especially just before and just after the occurrence of one. He could speak with certainty of the beneficial effects produced by this drug in this form of acne occurring in females, and had thought benefit followed its use in males. In the rosaceous form of acne he had found ergot especially beneficial. He regarded its use as empirical, in all probability; at least, did not accept Dr. Denslow's views that it acts upon the muscular tissue of the skin.

DR. GRAHAM, of Toronto, had found calx sulphurata useful in suppurative diseases, whether acne or the formation of abscess.

THE PRESIDENT said that the interest in the paper centred upon the more or less importance of local and constitutional treatment. He wished to again put on record his belief that *curative* influence is exerted only by local measures, and that internal treatment is merely subsidiary. As regards the reciprocal relations between acne and uterine affections, he had not yet reached any definite conclusions. That they existed at the same time in the same patient was well recognized, but he had not yet become satisfied as to whether the acne actually was caused by the uterine disorder.

In the treatment of acute acne he had placed great reliance upon alkalies and diuretics; one or two drachms of Rochelle salt with thirty grains of the acetate of potash in a wineglass of water three times a day. In the hyperæmic form he always obtained benefit by this medication, and also in the indurated variety. Besides puncture, recommended by Dr. Piffard, he had been accustomed to apply liquor hydrarg. pernitratiss—one to eight of water—once or twice a day. He had also used with marked benefit, in that form, also accompanied with rosacea, one-half ounce of chrysarobin to one ounce of flexible collodion; pencil patches. The use of this remedy necessitates sequestration of the patient for some time. He had also obtained benefit in the treatment of acne indurata by the use of Donovan's solution, pushed until ten or twelve drops are taken at a dose, three times a day.

In his hands ergot had not cured a single case. It relieves the hyperæmia but has no effect upon the induration. In the various forms of acne he had obtained the most gratifying results from the use of mercurial ointment—one to eight of vaseline—or ointment of biniodide of mercury.

DR. STELWAGON, of Philadelphia, had obtained good results from the use of a lotion composed of sulphate of zinc, ʒj.; sulphuret of potash, ʒj.; water, ʒiv.

THE PRESIDENT and DR. SHERWELL had used this lotion with good results. The President had used an ointment of iodide of zinc, five to thirty grains to one ounce of vaseline or lard, with excellent results.

DR. GRAHAM, of Toronto, then read a paper on

GENERAL EXFOLIATIVE DERMATITIS.

The author of the paper first directed attention to the significance of the term, and then made brief allusion to the literature of the subject. He had collected thirty-four cases, of which eleven terminated fatally, ten recovered entirely, and in seven the recovery was partial or the result was not known. In eight cases the disease ran an acute course, not lasting longer than a few weeks, and in twenty-five it was chronic, lasting for months or

years. He had had under observation four cases, two of which were of a chronic character, and two were acute and recurrent. In the third case the seizures occurred at various seasons of the year, and in the fourth case the first three took place in summer and the fourth in March. In both the disease ran a very similar course, except that in the latter there was at the beginning a vesicular eruption, whereas in the fourth no such lesion occurred.

It is probable that many cases of general exfoliative dermatitis have been mistaken for scarlet fever. The principal features of the disease may be considered under three heads: (1) general hyperæmia; (2) general exfoliation of the epidermis; and, (3) severe constitutional symptoms appearing at various times throughout the attack, and in many instances a tendency to a fatal result. In some cases preceding the hyperæmia and exfoliation there is a serous exudation. From his observations, the author of the paper agreed with Dr. Baxter and Dr. Jamieson in the opinion that the term general exfoliative dermatitis may be applied to all the cases which are generally described under the names pityriasis rubra and pemphigus foliaceus, as well as to other cases which cannot be classed with either. There are two principal sub-divisions of the affection: 1, acute; 2, chronic. Of the latter there are two varieties: (1) in which hyperæmia and exfoliation exist, and it might be called dermatitis exfoliatum rubrum; (2) in which a serous exudation, in the form of bullæ, precedes the exfoliation, and this might be called dermatitis bullosa et exfoliatum. The former variety would include pityriasis rubra and the latter pemphigus foliaceus. The acute form, although often single, has a strong tendency to recur, influenced by season or outward circumstances. The recurrences may be accounted for from individual peculiarities.

DR. HARDAWAY, of St. Louis, had under observation one case of five years' standing, which manifested some improvement under the internal use of the tincture of iron; all other methods of treatment having failed. He had seen one quite acute case; another occurring in an infant; another occurring in a young lady, of neurotic family, and since the attack she had suffered during the last seven years from frequent occurrences of bright hyperæmic spots, varying in size from that of a silver dollar to that of the hand, exceedingly hot and throbbing to the touch, and *without* exfoliation.

DR. ATKINSON, of Baltimore, thought it impossible to describe a distinct disease that could be called pityriasis rubra. Again, it was desirable to find some name to apply to certain cases, and he thought general exfoliative dermatitis was as good as any, perhaps. He believed that there is a very wide range in these cases, but that the disease always depends upon trophic neuroses, the nature of which we do not understand. Some cases answer to pityriasis rubra; others give patches which are undoubtedly eczematous; and then there are chronic cases of exfoliative dermatitis. He regarded it as important to remember that the skin of certain individuals manifests a marked tendency to become inflamed as the result of the internal use of certain drugs; for example there is a well-marked eruption produced by quinine.

DR. G. H. FOX, of New York, approved of what Dr. Atkinson had said concerning the advisability of including all forms of dermatitis under the general name, and thought it was fallacious to endeavor to make a differential diagnosis clinically. As to pityriasis rubra and eczema, however, he believed there were reasons for making a distinction, and, in many of the cases of general desquamation which are spoken of as exfoliative dermatitis, there is an eczematous process which involves the mucous layer of the skin, and is not a disease of the vascular supply or a primary disturbance of the nervous system, as is pityriasis rubra. He thought Dr. Graham had done well in associating the acute and chronic cases.

DR. P. A. MORROW, of New York, believed the disease to be neurotic in character, and in two cases had seen decided benefit produced by arsenic.

DR. SHERWELL thought an exception should be made with reference to pemphigus foliaceus, as it was sufficiently distinct in character still to be entitled to retain its original name. He accepted Dr. Graham's first division, but not the second.

DR. PIFFARD thought there were three quite distinct affections: (1) pemphigus foliaceus; (2) pityriasis rubra; (3) dermatitis exfoliativa. He admitted that it was sometimes difficult to make a differential diagnosis, but that fact could not be used as an argument in favor of a general name.

DR. GRAHAM said he had doubted the propriety of placing pemphigus foliaceus under the head of general exfoliative dermatitis, but at the same time the two conditions had so many features in common that he had ventured to do so.

THE PRESIDENT regarded the further study of the three affections mentioned by Dr. Piffard as very important. He then called attention to two cases. The first occurred in a woman thirty years of age, a widow, the mother of one child, and a sufferer from chronic malaria, who had fifteen attacks, produced by taking either quinine, cinchonine, or elixir of calisaya. The second case occurred in a boy nineteen years of age, who had been under observation five months. The patient had been exhibited to the New York Dermatological Society, and a history, so far as then given, had been published in the July number of the present year of the *Journal of Cutaneous and Venereal Diseases*. The interest in the case centred in the question whether or not the condition of the skin depended upon syphilis. It was the most remarkable case of exfoliative dermatitis he had ever seen, and was surrounded with grave doubt concerning its etiology. Dr. Taylor's description of the case was accompanied by several photographic illustrations.

DR. STELWAGON, of Philadelphia, then read a paper on

IMPETIGO CONTAGIOSA.

The author of the paper first referred to the individual nature of this affection, and the correctness of the views advanced by Tilbury Fox. He believed there was no evidence that the disease is in any way related to ring-worm; also that it does not follow contagious pustular affections as claimed by Dr. Hyde, of Chicago; further that a pustular disease cannot be modified by a contagious disease; nor, in case that such a modification might be produced that the modification could propagate itself. If the disease is not a modification of some other affection the conclusion must be reached that the process is an independent one, and the individuality of the disease must be admitted. The eruption has contagious properties. He doubted the truth of the idea that it is of fungous nature. In five hundred microscopic examinations he had been unable to find the fungus described by Dr. Piffard except in three instances, and regarded the fungi when found as in all probability adventitious. The view that the affection is a general systemic disease with cutaneous manifestations seemed to him to be the most tenable that could be offered. This view is sustained in a measure by the writings of Tilbury Fox, and there are several reasons which support the theory. Aggregated experience proves the existence of prodromic symptoms, and ordinarily it runs a short but definite course. The eruption is auto-inoculable, which explains the existence of new patches. There are several facts which are against the supposition that the disease follows vaccination. The author's conclusions were: 1, that it is a separate and distinct disease; 2, that it is not parasitic; 3, that it is not related to vaccination; and 4, that it is an acute systemic disease with cutaneous manifestations and probably due to a specific poison.

DR. HARDAWAY regarded the fact that the disease occurs epidemically as a strong argument in favor of its being an independent affection.

DR. ATKINSON felt very uncertain concerning the individual nature of the disease.

DR. ROHE, of Baltimore, did not recollect that he had seen a case during the last two years. That the pus of impetigo contagiosa is inoculable he was quite sure; that it is inoculable upon healthy individuals; and that successive inoculations become weaker. He had been unable to find a fungus. That it is an independent disease he was moderately certain; but that it is found only after contagious diseases and in individuals who are not in good health, as suggested by Dr. Hyde, he did not believe, yet what the exact nature of the disease is he did not know.

DR. G. H. FOX thought all would agree that the pus is inoculable, that it does not depend so much on the character of the soil as on the character of the pus; and that the peculiar pustules which result are not to be classed as pustular eczema. He thought Tilbury Fox was unwise in giving the affection a new name. He had generally studied it as a disease of the skin; but regarded the suggestion that it is constitutional as worthy of attention. Dr. Fox was also inclined to doubt the proposition that it has no connection whatever with vaccination; but exactly what the relation is he was unable to say. With regard to pediculosis, it might not produce an eruption, but certainly it would cause the spread of one.

DR. GRAHAM had always regarded impetigo contagiosa as a distinct disease, and was inclined to agree with Dr. Stelwagon concerning its nature.

DR. PIFFARD preferred to go back to the old name. He had a series of cases in different families, and in every instance the first in each series appeared shortly after vaccination, and the other cases followed. As to its parasitic nature he was still inclined to hold to that view, although no one had found a definite parasite in the vesicle; fungi had been found in the crusts only, and several who had found fungi had found different ones. He found, at the time he made his observations, a permanent fungus, the same as he found in vaccine, and similar ones have not been described in connection with any other form of disease. If it was a common crust fungus he should be forced to give up the connection of the disease with vaccination. A point in favor of its parasitic nature is the fact that it is cured so readily with parasitocides. He had not regarded it as a self-limited disease, but thought the explanation given by Dr. Stelwagon was a very ingenious one.

THE PRESIDENT was a firm believer in the individuality of the disease. He could not regard it as a systemic affection. The existence of a prodromal fever was exceedingly doubtful. In sixty cases he had observed, the disease began locally about the face or nails in every instance, and afterward different parts of the body were inoculated. He thought the systemic reaction could be easily explained by the existence of an eruption. He believed it spreads by immediate contagion. He believed the disease originated in some form of pus which lodges upon the skin, then develops a pustule, and from this it is communicated to others, or to other parts of the body.

DR. FOX had had cases which did not yield readily to treatment, and had remained obstinate for two or more weeks.

DR. STELWAGON said that sometimes several weeks were required to get rid of the disease.

DR. ROHE said he did not wish to endorse the view that the disease is systemic, the same as scarlet fever, etc., but simply wished to say that he regarded it as inoculable locally.

DR. HARDAWAY had not seen the disease associated with vaccination.

The Association then adjourned to meet at 8 P.M.

WEDNESDAY—FIRST DAY—EVENING SESSION.

The Association was called to order at 8 P.M. by the President.

DR. ATKINSON, of Baltimore, then read a paper entitled

A CASE OF MULTIPLE CACHECTIC ULCERATION.

The case occurred in a female child, mixed white and black, without any evidence of syphilis, and the effect of mercury, ergot, and scurvy, as well as diabetes, could be excluded. The symptoms summarized were, papillation, vesiculation, followed by superficial destruction of tissue and progressive ulceration which destroyed all the tissues, even the bones. At no point did gangrene in mass occur. It was not entirely symmetrical. Motion and sensation were impaired, but there was not complete paralysis of either. There was no evidence of itching or pain. Distinct symptoms of vaso-motor disturbance were not observed. Dr. Atkinson thought there could be no doubt that his case belonged to the group named by Oscar Simon multiple cachectic gangrene, and that it was one of the trophic neuroses.

DR. VAN HARLINGEN reported a case of trophic neurotic gangrene occurring after amputation of the thigh.

THE PRESIDENT reported two cases seen with Dr. W. H. Draper, at the clinic at the College of Physicians and Surgeons. The first was a puny child, six months old, that had an ulcer upon the back which began as a water-blister. Despite treatment it extended and became very large, destroying the skin down to the muscles. Under generous diet and tonics it ultimately recovered.

The other case occurred in a woman thirty years of age, married, who had never had children, and never had taken ergot. She came with each finger on both hands in a bluish congested condition, but no bullæ existed. There was swelling of the tip of the nose and upon it was a bulla, which broke down into an ulcer, involving all the tissues down to the cartilages. The patient lost fully one-half of every finger, the thumbs escaping. She finally recovered. The only etiological factor that could be reached was excessive indulgence in buckwheat cakes.

EXPERIMENTS IN THE USE OF NAPHTHOL.

DR. VAN HARLINGEN read a paper with the above title, in which he gave the conclusions reached by Kaposi, who introduced the use of the remedy, together with a commentary containing his personal experience in its use. He had found it of great service in scabies, also of some value in the treatment of psoriasis. In parasitic skin diseases naphthol is of but little use, while in eczema and hyperidrosis it is entirely without value.

DR. FOX had used the remedy externally in almost every case where he could possibly employ it, and had become convinced that it falls far short of taking the place of tar. In a few cases of eczema of the scrotum and anus he had obtained very satisfactory results from the application of a five per cent. ointment. For psoriasis of the scalp and face the ordinary white precipitate ointment had served most satisfactorily.

DR. WIGGLESWORTH, of Boston, thought Kaposi did not use naphthol as much as formerly. His own experience corroborated that of Dr. Fox.

DR. HARDAWAY had found it very much inferior to chrysophanic acid in psoriasis and eczema. In the fissured and squamous eczema of the palms of the hands and fingers he had used a fifteen per cent. ointment with good success.

DR. STELWAGON thought it inferior to white precipitate ointment for psoriasis of the scalp; regarded it as very efficient for scabies, and was of the impression that it is now scarcely used in Vienna except in the treatment of this affection.

DR. PIFFARD regarded naphthol as a dangerous remedy.

THE PRESIDENT had used it with good results in scabies, but in psoriasis it had proved inefficient.

DR. G. H. FOX, of New York, then read a communication, entitled

A TRIP TO TRACADIE (LEPROSY),

together with propositions submitted jointly by himself and Dr. Graham, of Toronto. Tracadie is in New Brunswick and has a lazaretto where lepers reside. During this summer he had visited the place, and so also had Dr. Graham, of Toronto, under the direction of the Dominion Government. The lazaretto has at present 24 inmates, 11 males and 13 females, and is under the charge of Sisters of Charity. The disease as seen was partly of the tubercular and partly of the macular variety, and there were three cases which were not leprosy. Some of the cases showed a peculiar skin disease that appeared to be syphilitic in character, although there were no marked lesions of syphilis. As to the white scales, so often referred to, he was struck with one fact, namely—that both forms showed shining silvery scales, very much as found in psoriasis, except not having the peculiar circumscribed form. Many of these patients had papular eczema, which gave them much annoyance. Most of the patients, with the tubercular form especially, presented marked ulceration of the hard palate; in one case there was perforation. Many of the cases presented a well-marked form of dactylitis, without the suspicion of syphilis, but with enlargement of the bones of the toes in one case. Those who had ulceration of the hard palate had also laryngeal trouble, either the peculiar wheezing or complete aphonia. The following were the propositions submitted as a joint communication by Drs. Fox and Graham:

First.—Leprosy is a constitutional disease, and in certain cases appears to be hereditary.

Second.—It is undoubtedly contagious by inoculation.

Third.—There is no reason for believing that it is transmitted in any other way.

Fourth.—Under certain conditions a person may have leprosy and run no risk of transmitting the disease.

Fifth.—It is not so liable to be transmitted to others as is syphilis in its early stages. There is no relation between the two diseases.

Sixth.—Leprosy is usually a fatal disease, its average duration being from ten to fifteen years.

Seventh.—In rare instances there is a tendency to recovery after the disease has existed many years.

Eighth.—There is no valid reason for pronouncing the disease incurable.

Ninth.—Judicious treatment improves the condition of the patient, and often causes a temporary disappearance of the symptoms.

Tenth.—There is a ground for the hope that an improved method of treatment will in time effect the cure of leprosy, or at least that it will arrest and control the disease.

DR. FOX admitted that he had yet to cure his first case, but he did not believe that leprosy is an incurable disease. The treatment adopted in the New York Hospital, consisting in the use of chaulmoogra oil, and large doses of nuxvomica, had afforded a degree of success, and he read a letter received from a patient which showed that the disease in his case had at least been non-progressive for some time.

There is no evidence that either physicians or nurses have acquired the disease by attendance upon those affected with it.

DR. D. B. SIMMONS, who had had a large experience in the treatment of this disease in Japan, was invited to open the discussion. He thought it exceedingly difficult to study leprosy in lazarettos. According to his observation, and the view is fully recognized by the Japanese, the disease manifests itself *first* in the face, and by a peculiar blushing or lividity of the features, especially after taking wine, etc. The development of this peculiar

appearance is at once sufficient to drive the person immediately into exile. Next the anæsthetic symptoms usually are most prominent, anæsthetic spots, without any other manifest change in the condition of the skin or existence of other symptoms of the disease. Then the disease shows itself sometimes upon the ears, sometimes elsewhere, with exacerbations at times, sometimes with fever, bleeding from the nose, etc. His own opinion was that it is decidedly hereditary, but it is exceedingly difficult to reach facts bearing upon this question, because of the prompt exiling of any member of the family who develops the first peculiar symptoms, and subsequent denial that the disease ever existed in the family. He did not regard it as either contagious or infectious, and it is not regarded by the Japanese as contagious. The duration of the disease is exceedingly variable. He had never succeeded in curing a case, nor had he seen a case that had been cured, but almost without exception every patient might be benefited by treatment. Strict attention to hygiene, diet, and cleanliness, aided by the internal and external use of copaiba had yielded the most favorable results he had obtained.

DR. ROHE said that, if the disease is spread by contagion, there is a marked difference in the susceptibility of different persons to its influence; a much more marked difference than exists with reference to any other contagious disease.

DR. WIGGLESWORTH had studied the disease in Norway and Spain as well as in the East, and could corroborate Dr. Fox's views concerning the non-communication of the affection to physicians and nurses. His view was, that while it is inoculable, it is but faintly, if at all, contagious, and not at all infectious. Nor did he see anything in the direction of *white patches* to suggest the existence of the disease.

DR. GRAHAM regarded the disease as inoculable and infectious. He was also inclined to believe that the disease is hereditary, although no case in Tracadie confirmed that belief. He had noted a decidedly marked difference in susceptibility of different persons, as illustrated by one family especially in Tracadie.

DR. PIFFARD accepted the ten propositions. He also referred to one instance in which a physician took the disease and died of it. He thought it was utterly impossible to determine in any given case whether the disease is due to heredity or to infection.

DR. SHERWELL, of Brooklyn, then read a paper on

PAGET'S DISEASE, OR MALIGNANT PAPILLARY DERMATITIS.

He had had two cases, and these with those recorded by Paget, Butlin, Morris, Thin, and Duhring made 27. He had recorded his first case, the first published in the United States, in the January number of the *Journal of Cutaneous and Venereal Diseases*. The author of the paper gave the following conclusions:

First.—The subjective symptoms, itching, burning, are those of an eczema, and not those of an ordinary carcinomatous affection, but they are more marked than in an ordinary case of eczema.

Second.—The objective symptoms are like those of eczema; the discharge is absolutely similar to that of catarrhal affection of the skin, stiffens linen, and forms crusts entirely indistinguishable from those of an impetiginous eczema. The color of the surface is perhaps occasionally more livid, but the border is, in his opinion, not more sharply defined than is common in that trouble. The somewhat elevated appearance of the patch simulates exactly the acutely macerated and swollen conditions of the lower epithelial layers we so frequently find in eczema. Sir James Paget compares the appearance to that of a balanitis, an apt illustration.

Third.—The disappearance of the nipple is spoken of by Henry Morris as a "melting away," a very acceptable term.

Fourth.—The "malignant papillary" feature, as de-

scribed by Thin, was a marked element in his first case; much less in the second. It is a very diagnostic point, and would of itself, he thought, instantly resolve any doubts as between it and true eczema.

Fifth.—The extreme length of time may be noted in his cases, before the appearance of anything like positive evidence of carcinoma. It will be noticed that Sir James Paget gives the limit, as to this, as two years. In Dr. Sherwell's first case twelve years elapsed from attack to death, the latter event not seeming in any way connected with the skin lesion; in the second case considerable over the time mentioned by Paget had already passed.

The Association then adjourned to meet at 10 A.M., Thursday, August 30th.

THURSDAY, AUGUST 30TH—SECOND DAY—MORNING SESSION.

The Association was called to order at ten o'clock, DR. I. E. ATKINSON, of Baltimore, Vice-President, in the Chair.

DR. WIGGLESWORTH, in behalf of Dr. White, presented the statistical report, which was accepted. On motion by Dr. Taylor, a vote of thanks was extended to Dr. Wigglesworth for his most valuable services in performing the work which Dr. White, Chairman of the Committee, had been prevented from doing by reason of absence in Europe.

DR. P. A. MORROW, of New York, then read a paper on

THE PATHOGENESIS OF DRUG ERUPTIONS.

Under this head are included all eruptions caused by either the internal or external use of drugs. There is a difference of opinion as to whether these eruptions should be classed among physiological or among toxicological effects. A large proportion of drug eruptions are the expression of the physiological action of the article used. The term pathogenesis is employed with reference to the close relationship which exists between physiological and pathological effects. Dr. Morrow discussed at considerable length the difficulties encountered in attempting to distinguish between the two effects, and especially when influenced by individual susceptibilities and other modifying circumstances. He then passed to a review of the theories which had been advanced in explanation of the phenomena, such as that a large proportion of these eruptions are produced by the elimination of the drug through the skin, special affinity for cutaneous structures, dynamic action of drugs, all of which had been proved to be fallacious. This was followed by a discussion of the theory of the neurotic origin of drug eruptions, which he believed best explained the phenomena in each case. The paper closed with a reference to the broad meaning of the term idiosyncrasy, as, after all, anomalous eruptions are determined by the individual rather than by the drug. The nervous element predominates in persons who have an idiosyncrasy.

DR. R. W. TAYLOR then read a paper entitled,

POLYMORPHOUS CHANGES OBSERVED IN THE TUBERCULAR SYPHILIDE.

The paper was based upon a case of syphilis presenting rather early tubercular eruption, described in the books as non-ulcerative tubercular syphilide. The eruption was general, symmetrical, copious, and had the characteristics of the secondary eruption, but besides, all the deep-seated peculiarities of the tertiary eruption, so that, in order to place it in its chronological relation, it would be called what the French denominate the intermediate eruption.

The patient was a male, forty-seven years of age. Dr. Taylor gave a detailed description of the changes which took place in the eruption, and illustrated them by plates, colored upon photographs. At one period in the case, the eruption appeared strikingly like psoriasis, and subsequently the appearances of psoriasis rupioides, as illus-

trated by McCall Anderson, and maintained by Fox, a condition which might give rise to the suspicion that, what those authors had called psoriasis rupioides, is only a late form of a papular or tubercular syphilide.

The points of interest in the case were the following :

First.—Its resemblance to psoriasis.

Second.—The colloid degeneration of some of the tubercles concomitantly with the increase of the granulation tissue in others.

Third.—The degeneration of the colloid tissue into pus, and the formation of bullæ.

Fourth.—The evidence offered that true bullæ may appear in a syphilitic subject, though they result from degeneration of tissue, rather than from effusion of serum and pus, as occurs, as a rule, in simple pemphigus.

Fifth.—The development of tubercles having thick, imbricated, conical, epidermal crusts appearing like rupia.

Sixth.—In the suggestion offered by these lesions, that perhaps the psoriasis rupioides of authors is more or less dependent upon syphilis.

Seventh.—The formation of true rupia crusts from the bullæ above spoken of.

Eighth.—The fact that the non-ulcerated tubercular syphilide may be the starting-point of severe and extensive gummatous infiltration.

DR. HARDAWAY related the history of a case of psoriasis rupioides, as described by McCall Anderson, occurring in a non-syphilitic patient. The only departure from the appearance of ordinary simple psoriasis was the heaped-up condition of the scales. The mother of the patient had ordinary psoriasis vulgaris.

DR. ATKINSON remarked that Dr. Taylor's paper was also interesting as showing the power of syphilis to assume nearly all phases and simulate almost all diseases.

PSEUDO-PSORIASIS OF THE PALM.

DR. SHERWELL read a paper on the above subject, in which he said that in using this title he inferentially and necessarily included those lesions invading the structures anatomically analogous, the plantar surfaces. As to whether a psoriasis, pure and simple, ever occurs in the regions named, he had steadfastly maintained the negative.

In conclusion, he would say that he believed a squamous eruption upon the palms (excluding eczema, etc.), resembling psoriasis, always to have a syphilitic diathesis for its base, or one of its bases, and to be *prima facie* evidence thereof. He did not think, however, that if it could be decided, any great change in the general treatment would be effected, but he did believe that an eruption of this nature, in this location, would always in the physician lead him intuitively to the employment of Donovan's rather than Fowler's solution. But even here again the result of treatment would evidently not be diagnostic proof. Dr. Sherwell had seen one case, presented to the New York Dermatological Society by Dr. Bulkley, which almost convicted him that his belief was erroneous, but several of the members expressed grave doubt concerning the absence of syphilis. Dr. Sherwell then gave the history of a case.

DR. W. T. ALEXANDER, of New York, then read a paper on

PSORIASIS AFFECTING THE PALMS,

in which he gave the histories of three cases of the disease occurring in non-syphilitic patients. The paper was illustrated by photographs. Discussion on these two papers was opened by Dr. GRAHAM, who reported two cases of psoriasis of the palms, the only ones he had ever seen, occurring in non-syphilitic patients.

DR. MORROW stated that while psoriasis is extremely rare upon the palms, and while it probably never occurs independent of its development upon other parts of the body, yet clinical facts prove that it may develop upon the palms. He had seen a number of cases of psoriasis of the palms in non-syphilitic patients.

DR. TAYLOR saw the three cases reported by Dr. Alexander, examined the patients, but was unable to find any evidence of syphilis. He had not seen psoriasis of the palms or the body that did not exhibit psoriasis of the nails first. That simple psoriasis can affect the palms he thought there was no doubt. He thought, however, that it had never been seen confined to the palm.

DR. MORROW had seen a case in which the disease was confined to the palm.

DR. ALEXANDER said he had been struck with the evanescence of psoriasis of the palm, and perhaps that was the reason why it was seen so rarely upon the palms. He cited a case in which it appeared and disappeared within a few days without treatment.

DR. SHERWELL said that to prove negative was far more difficult than to prove positive syphilis, and congenital syphilis also formed a part of his theory concerning psoriasis. He had seen simple psoriasis, and then the patient contracted syphilis, and soon afterward psoriasis of the palms developed so repeatedly that he must still believe palmar psoriasis has a syphilitic basis. It might be that the syphilis gives the psoriasis a change, so that it appears in the palms; that view he was prepared to accept.

A paper entitled

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN,

and sent by DR. HYDE, of Chicago, was read by DR. Wigglesworth.

The more precise and exact the study of the symptoms in syphilis, the more clearly will be recognized two facts which are strictly related: 1. Syphilis much more resembles other diseases in its career and its subjection to accidental influences than has been commonly supposed and taught. 2. When syphilis precedes, coexists, or follows other pathological conditions, its unity is preserved, and it rarely undergoes itself, or induces in other diseases, such a modification as distinctly changes the type of the resulting symptoms. The first statement was supported by the following propositions; the second required clinical demonstration:

(a) Allowance being made for a wide field of distribution of its lesions, the study of one hundred consecutive cases of syphilis will convince an unprejudiced observer that such cases resemble each other as closely as do a similar number of consecutive cases of pneumonia, typhoid fever, or chronic interstitial nephritis.

(b) Syphilis is no exception to the general rule that the patient of greatest vigor best endures its penalties.

(c) Syphilis acknowledges subjection to the great accidents which commonly and evidently work changes in all disease-processes in man.

(d) Syphilis, like other diseases, may lurk obscurely in the system, but everything said and done, it must be betrayed by syphilitic symptoms, or we cannot admit its existence.

(e) Vulgar belief to the contrary notwithstanding, cases of syphilis, like those of other diseases, are readily separable into three well-known groups: (1) mild, benignant or self-limited, requiring no treatment; (2) the grave, malignant, when treatment can have little or no effect; and (3) those falling between these two extremes, where judicious treatment is capable of turning the scale in one direction and injudicious treatment in the other.

(f) There is no specific treatment applicable to every case of syphilis, which can be safely employed to the exclusion of all others.

In what followed the author of the paper proceeded to show how far clinical evidence supported the second of the two general propositions, that which recognizes the unity of syphilis displayed in fairly typical symptoms in the subject, who are affected with other diseases more particularly involving the skin. Varieties of suborhœa and comedo are probably found in more frequent co-

existence with syphilis than the other disorders of secretion. Erythema, urticaria, eczema, herpes, the several forms of acne, impetigo, ecthyma, furunculus, anthrax, and the varieties of dermatitis frequently occur in subjects of an active syphilis. Herpes zoster he had not seen in a syphilitic subject. To the subject of the co-incidence of psoriasis and syphilis the author of the paper directed special attention, and gave, with very great detail, the histories of two cases.

The Association then adjourned to meet at 8 P.M.

THURSDAY--SECOND DAY--EVENING SESSION.

The Association was called to order at 8 o'clock by DR. ATKINSON, Vice-President.

The PRESIDENT, DR. TAYLOR, read a paper entitled THE PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS AT THE EARLIEST PERIOD OF ITS DEVELOPMENT. [See p. 255.]

A paper by DR. DUHRING, of Philadelphia, on THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN THE TREATMENT OF LUPUS ERYTHEMATOSUS,

was read by Dr. Stelwagon. Dr. Duhring had used this lotion with marked benefit in the inflammatory superficial forms of the disease, either discreet or confluent patches, whether recent or of longer duration. He did not claim for the remedy any specific power over the disease, but in several cases it was the only remedy tolerated by the skin. The following formula for the lotion was given:

R. Sulphate of zinc,
Sulphuret of potash.....āā grs. xxx.
Rose water..... ʒijss.
Alcohol..... ʒ iij.

M.

If this strength agrees with the skin, the quantity of the two active ingredients may be increased. The application may be repeated twice or more times in twenty-four hours, the skin being cleansed each time with soap.

DR. PIFFARD was astonished to hear that so many remedies had been employed in the treatment of a case of lupus, because it seemed so well settled that, in order to get rid of lupus, it must be destroyed. The methods of destroying it, which, in the majority of cases, act most successfully, are first, the use of the curette followed by cauterization, frequently the actual; and second, scarification. Doubtless the lotion would benefit certain cases, but he was unable to understand how it could effect a cure.

DR. ALEXANDER had, at present, a case under treatment in which he had practised scarification three or four times, and the first operation was followed by the disappearance of one patch of the disease; but since then the only effect produced was to make the patches worse.

DR. VAN HARLINGEN said that he saw one of Dr. Duhring's cases, and certainly very marked improvement followed the use of the lotion.

Several of the members failed to see how the lotion could produce much effect on such a disease as lupus.

DR. FOX, of New York, had secured his best results in the treatment of this disease by the local application of pure carbolic acid. Paint it over the part at intervals of a week or ten days, perhaps more frequently. In three cases he had succeeded in effecting a complete cure of the disease. The frequency of the application will depend on the rapidity with which the skin peels off and leaves a smooth surface ready for another application. He had not found that it aggravates the disease at all. He had also obtained beneficial results by the internal use of phosphorus, and thought that, perhaps, a judicious use of both remedies might secure still better results than had yet been obtained by either alone.

DR. STELWAGON said that scarification aggravated the disease in Dr. Duhring's cases; that pure carbolic acid was applied without effect; and that they were benefited

by this lotion only, which was applicable chiefly to the superficial variety of the disease.

DR. PIFFARD said that the dermatitis referred to by Dr. Stelwagon and Dr. Alexander after scarification, occurred as a matter of necessity, but that it did no harm. Scarification should be performed with great thoroughness, and the dermatitis which follows is of great advantage. It is substantially the treatment recommended by Hardee, namely, to excite a sufficient amount of new inflammation to strangle new lupus cells.

DR. HARDAWAY believed strongly in scarification and multiple puncture. He had treated one case successfully, however, by electrolysis.

A paper by DR. DUHRING, of Philadelphia, entitled, REPORT OF A CASE OF AINUM WITH MICROSCOPIC EXAMINATION,

was read by Dr. Stelwagon. The case was one which came under the observation of Dr. George B. Weston, of West Virginia, and to him Dr. Duhring was indebted for the specimen with the notes. Only a few cases of this disease had been reported in this country, and with reference to them the conclusion had been reached that it was caused by the application of a ligature. The patient was a negro, and the specimen consisted of one of the toes. The microscopic examination was made by Dr. Henry Wile, of Philadelphia, who examined it with great care, and reached the conclusion that the principal changes which existed were those that indicated general inflammatory condition.

DR. SHERWELL had treated many patients coming from Jamaica, San Domingo, but especially from Turk's Island, and had made inquiry concerning this affection, and had been led to the conclusion that it is due to traumatism from the application of a ligature around the toe; lazy negroes apply a ligature, and become subject to what is known as "ring-toe."

DR. HARDAWAY, of St. Louis, read a paper in which he described

A PECULIAR PAPILLARY ERUPTION.

It occurred in an otherwise healthy developed brunette upon the left cheek and both hands, and had existed at least a year, but gave no special inconvenience. The size of the papules varied from that of a grain of wheat to that of a split pea, and they were non-pedunculated. The eruption was discreet, of a dull lemon color, and of pellucid appearance. The papules were solid to the touch, gave the appearance of having liquid contents, but nothing could be obtained by puncture, and nothing could be squeezed from the papules. The eruption disappeared under treatment, without leaving any trace whatever. He had had five cases. The treatment for the most part had consisted in the use of a tar and mercurial ointment. All the cases were chronic. There was no evidence whatever that it was contagious.

Such an eruption as described by Dr. Hardaway had not been seen by any of the members of the Association.

LYMPHANGIOMA CUTIS WITH DERMATOLYSIS.

DR. J. E. GRAHAM, of Toronto, reported a case illustrated with photographs. Mrs. L—, twenty-one years of age. When five years old a tumor appeared in front of the elbow, which gradually extended upward and downward. The history from that time had been one of constant increase, and the growth had increased very rapidly during the past year. Its presence had not produced inconvenience. On the anterior surface of the arm the integument hangs down in bag-like pouches, which changes in color as the arm hangs or is raised. The papillary layer of the corium is hypertrophied, and the skin presents deep furrows. There is brown pigmentation near the elbow, and a few black hairs exist on the surface. The entire growth has a peculiar velvety feel. There is thickening of the skin, but no induration whatever. At the middle of the forearm there is a small tumor, which feels like a mass of blood-vessels beneath the

skin. The arm can be made smaller by pressure, and especially the small tumors, of which there are two or three. The tumors are not painful. The affected arm is almost as strong as the other. It is possible that the small tumor first seen existed at birth, but had been unrecognized. Dilatation of the lymph-channels was the probable pathological lesion.

Dr. Fox had seen one case which would bear comparison with Dr. Graham's.

Dr. ATKINSON had seen one case which was almost identical with that reported by Dr. Graham, except that the growth was situated higher up upon the arm. He thought there was dilatation with new growth of the channels, and regarded such a case as affording striking proof of the inaccuracy of the view put forward by Dr. Formad concerning the nature of tubercle, as we do not get tubercular inflammation in these cases, where it is well known that the lymph-channels are obstructed.

Dr. PIFFARD thought it practicable to remove the growth in sections by the use of the galvano-caustic ligature.

Dr. ATKINSON thought the probable cause of the disease would remain, and that removal of the growth would be followed by a return of the affection.

Dr. SHERWELL referred to a case of general lymphangioma.

The Association then adjourned, to meet at 9.30 A.M. on Friday.

FRIDAY, AUGUST 31ST—THIRD DAY.

The Association was called to order at 9.30 A.M. by the President.

The first order of business was the induction of newly elected officers. Dr. R. W. TAYLOR, of New York, who had been re-elected President, thanked the Association for the continued honor in electing him as the presiding officer for the ensuing year, spoke of the prosperity of the Society, and the amount of good work which it had performed.

The newly-elected Vice-Presidents were Dr. Arthur Van Harlingen, of Philadelphia, and Dr. J. E. Graham, of Toronto; Secretary, Dr. W. T. Alexander, of New York; Treasurer (re-elected), Dr. George H. Rohe, of Baltimore.

The remainder of the session was devoted to the examination of microscopic sections, prepared by Dr. Henry Wile, of Philadelphia, which accompanied Dr. Duhring's paper on "Ainhum," and also illustrated Paget's disease or malignant papillary dermatitis.

The Association then adjourned to meet at West Point on the last Wednesday in August, 1884.

Navy News.

Official List of Changes in the Medical Corps of the Navy for the week ending September 1, 1883.

WALTON, T. C., Surgeon. Detached from the Powhatan, and ordered to the Naval Academy, Annapolis, Md.

SIMON, W. J., Surgeon. Detached from the U. S. S. Constellation, and placed on waiting orders after completing temporary duty as member of a Board at Annapolis, Md.

McCLURG, W. A., Passed Assistant Surgeon. Detached from the U. S. S. Dale, and ordered to the Naval Academy.

DIEHL, OLIVER, Assistant Surgeon. Detached from the U. S. S. Constellation, and ordered to the Naval Academy.

JONES, M. D., Passed Assistant Surgeon. Ordered to temporary duty at the Naval Hospital, Washington, D. C.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 4, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
August 28, 1883.....	1	63	45	2	22	28	0	0
September 4, 1883.....	0	67	32	8	19	27	0	0
<i>Deaths.</i>								
August 28, 1883.....	0	17	8	1	8	14	0	0
September 4, 1883.....	1	24	2	8	1	21	0	0

CHLOROFORM NARCOSIS DURING SLEEP.—The evidence regarding this point is still accumulating. Dr. W. E. Ground, of Toledo, O., sends us a report of two cases in which he produced anæsthesia during sleep. One was in a child eighteen months old, the operation being that of the removal of a pebble from the ear; the other was in a child at the breast. The latter was apparently experimental in character.

THE BRITISH CHOLERA DOCTORS.—The twelve medical men who have been selected for service in Egypt in the cholera districts by the Foreign Office, with the advice and assistance of Sir Joseph Fayrer, will, on arrival, report themselves to Surgeon-General Hunter, M.D., and place themselves under his orders. They will be paid at the rate of £100 per month, with travelling expenses.

FLY-PAPERS.—In Prussia the sale of poisonous and arsenical fly-papers is only permitted to chemists and those who are authorized to deal in poisons. Such persons even are only permitted to sell them under the same regulations as must be observed in the sale of all poisons. These regulations require that a poison certificate be given with them, and also that the word "poisonous" be stamped on them.

A DRUGGIST SENTENCED.—Lacombe, the French wholesale druggist who was accused of fraudulently substituting sulphate of cinchonidine for sulphate of quinine, which he supplied to the Paris hospitals last autumn, has been sentenced to a year's imprisonment and fifty francs penalty, and is also called upon to pay for the advertisement of the judgment in a dozen French journals.

GRINDELIA ROBUSTA FOR ASTHMA.—Dr. Bombelon (Bergen on Rügen) recommends the smoking of cigarettes, the tobacco of which has been saturated with the resin of grindelia robusta, to asthma patients, whether they are smokers or not. The tobacco must also be well impregnated with saltpetre, which will facilitate its combustion and the development of smoke. If the patient is unable to smoke himself, the fumes are blown toward him.—*Zeitschr. d. Allg. öster. Apotheker Vereins. Ther. Gazette.*

ANOTHER MEDICAL COLLEGE.—The University of Niagara is about to start a medical department. The course of study is to be four years, and each course of lectures will continue for six months. The studies will be graded, and satisfactory examinations must be passed by the student before proceeding to a higher class. The examinations are to be conducted by a board of five medical men unconnected with the faculty of the department, to be appointed yearly by the trustees. The new college will be located at Buffalo, and the lectures will be delivered temporarily at the Hospital of the Sisters of Charity until a suitable building can be erected. The first session will begin on October 10th.

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Original Articles.

NERVOUS INDIGESTION.

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LONDON, ENGLAND,

ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, PA.

SOME relations of indigestion connected with the nervous system may now be discussed. First, it may be well to consider reflex indigestion.

Reflex indigestion is a malady of women, for it is in women we see reflex disturbances best exemplified. We know that nausea and vomiting are the outcomes of a vesical calculus, or a pregnant uterus in the early months, or of a blow upon the testes. So ovarian irritation will often set up gastric symptoms, usually taken for primary indigestion. The ovary may be swollen and tender, or it may be fixed near the pubic brim by adhesions. When in front there is pain on emptying the bladder; when on the side, especially the left side, there is pain on emptying the bowels. From this centre may radiate disturbances of many parts. The extreme frequency of reflex dyspepsia from a tender ovary on the one hand, and the great neglect of the condition in medical literature on the other, must be my explanation for going into this subject somewhat fully.

The patient is usually a comparatively young woman with pallor in her features and general anæmia; but by no means necessarily so. Her complaint is of indigestion coming on soon after taking food, often with nausea and loss of appetite, less frequently with actual vomiting. Yet the tongue is clean; sometimes it has a slight coating; rarely is there any rawness or approach to the bare tongue of gastric irritability. The tongue puts the experienced observer on his guard. Pressure is made over the region of the ovaries, and when it is made over the tender ovary pain is produced—a sickening pain, giving a feeling of faintness, and reflected in the patient's features. Usually she asks to sit down. In a well-marked case the following symptoms, sometimes a few only but often all, are manifested, much depending upon the patient's intelligence and readiness to answer: First, then, if there be pain produced on defecation, there will be reflex constipation, the pain inhibiting the vermicular action of the bowel. Then there will be found "pain under the heart" as women term it. This is intercostal neuralgia with the three tender spots of Valleix, one at the left apex, a second at the outer edge of the left scapula, about the middle, and a third at the foramen of the posterior rootlet of the nerve, usually the sixth.

I have written elsewhere "waves of nerve-perturbation may arise in an ovary and traverse a series of nerve-fibrils until they reach the peripheral endings of an intercostal nerve, where they are felt as gusts of neuralgic pain." Further experience merely strengthens this view. There will usually, too, be that pain and weight at the vertex with depression or lowness of spirits, and tendency to cry, the outward indications of cerebral anæmia of the posterior lobes, found with irritation in the lower bowel and the generative organs. Then there is anorexia, indigestion, and in some cases vomiting. Such is the real pathology of those cases of so-called subacute gastritis in young females, where obstinate vomiting goes on for weeks, resisting all treatment of the stomach, scoffing at bismuth, hydrocyanic acid, oxalate of cerium, and

all remedies of value in morbid conditions of the stomach; where the patient is greatly reduced, the friends almost distracted, and the physician worried out of his life. Yet a year or two afterward, on asking after the object of all this anxiety, it is found she is well and probably married. This vomiting may have gone on for a considerable time and been interpreted as gastric catarrh, or gastric ulcer, and treated as such—without satisfactory results. Then there is also some pelvic matters which clinch the diagnosis. The uterus is reflexly filled with blood, is turgid and vascular, and consequently there is menorrhagia with leucorrhœa. Orgasm is readily produced by slight friction, or occurs spontaneously in sleep; and this irritability communicates itself to the adjacent bladder-centres in the cord, and there is inability to retain the contents of the bladder. Further, there are commonly times of great itching with heat or dryness in the fundament, and often in the vagina also.

Such are the features of a well-marked malady, which, however, has not yet found its way into our text-books. Word by word, indeed letter by letter, I learned to spell it out among my hospital out-patients; but the trouble brought with it its reward in the power to detect, and consequently to treat correctly, a very common malady, little influenced by measures directed at one or other of the outcomes of the condition, yet often tractable to appropriate measures. Those who have taken the pains to master the malady in all its details testify to the advantage they gained in practice therefrom. It is a condition commonly unsuspected. It frequently lies at the bottom of the ill-health which, when coexistent with an old apex consolidation, is taken for commencing phthisis; and when profuse night-sweats are added to the effects of the indigestion, the weakened lung-apex may and often does break down. How often this misinterpretation has wrecked the peace of a family, it becomes not me to say. I am concerned more with the matter of my own familiarity with morbid conditions than other men's shortcomings. But since the malady has been clear to me I at least have been able to avoid mistakes which, previous to that date, occurred with myself in common with others; and it is in consequence of my experience, past and recent, that I urge so strongly upon my readers the desirability of grasping this well-marked, if often unrecognized malady.

The sex, and often, too, the age of the patient, should put the physician on his guard. If the tongue also be normal or only slightly coated, and free from the appearances associated with gastric irritation; then the examination of the patient ought to be conducted on the lines just laid down. It travels over some very delicate ground for both physician and patient; and therefore must be conducted with every consideration for the patient's feelings. Yet enough can be gleaned from the most difficult patient to cross-examine, usually at least to determine the nature of the case. Sometimes it is possible to state her case to her, including her most inward feelings in a manner which makes the patient feel as if in the presence of a magician.

Having made the diagnosis, the treatment suggests itself. A blister over the tender, or otherwise offending ovary. Bromide of potassium, the drug *par excellence* in all reflex affections, and sulphate of soda or magnesia for the constipation. If there be also night-sweats then some atropine, say from a seventy-fifth to a twenty-fifth grain at bedtime. Then if there be much sickness it may be well to

give some bismuth, with or without hydrocyanic acid and soda, but this is only ancillary to the other treatment. Usually some injections of alum water are required for the leucorrhœa. A rational treatment indeed, founded on the nature of the malady, and, presto, the intractable patient gets well, to the unfeigned delight of all. Sometimes the result is not so satisfactory as to time, while in those cases where the morbid ovary is bound down by adhesions, relief is all that is practically attainable. But the bulk of cases readily do well, with gratitude on the part of the patient, and with credit to the physician.

Now some other matters may be mentioned. First comes the effects of mental strain and worry upon the digestive organs; second, the effects of mal-products of digestion upon the brain; and lastly the combination of the two.

On this wide subject general remarks are all that are possible, as the individual necessities of each case have to be and must be studied, for successful treatment, and what these are only becomes visible when the case presents itself before the physician. Those seeking further information will find it in my work on "Indigestion and Bilioinsness."

First as to the effects of carking care upon the assimilative organs, they have been recognized by writers, medical and other, since the dawn of literature. "Lean, hungry men" have been regarded as the type of the brain-worker, including the conspirator. While the rubicund visage of the well-fed man has ever been looked upon as indicative of an easy mind. Such generalizations are broad and true; but the subject admits of closer handling in the light of the present day.

In "this madly striving age" the pressure of business absorbs so much of the daily store of energy that the digestive organs are robbed of much of the *vis nervosa* that belongs to them, and, therefore, are only capable of digesting light food. Of old when anything uncommon had to be done, a good foundation was laid, as matrifamilias expressed it, by a substantial breakfast; something in excess of the wonted fare. Whether such practice is successful in the present day is a matter for question. Probably the experiment is rarely tried among others than Yakoots or Indians. Then when the work was over an extra bountiful fare was provided, the huntsman's supper. This was all very well for men who were out in the open air, in the chase or war; but it is not a safe practice at the present time, except with those whose digestive organs are unimpaired, and retain much of their primitive Anglo-Saxon capacities.

The rule of the present day is rather in the opposite direction, viz., to have a very light meal after any special demand upon the system, possibly with some alcohol, though on this last the right of private judgment is brought to bear more than on any other matter connected with health. A few illustrations will demonstrate what it is desired to convey. One of our leaders of scientific medicine, one of the least fanciful of men, commonly lunched on a beefsteak, eating and enjoying the fat. But experience taught him that whenever more wearied than usual it was prudent to leave the steak-fat and take butter instead. When tired he could not digest the beef-fat, which he enjoyed as a rule. A lady well known to the writer has always to be very careful about what she takes when tired, else a severe attack of indigestion will be experienced. After a long walk, or its equivalent, a light meal alone is permissible, or compatible with comfort, and one of McKesson & Robbins' pepsin pills is in request. Some fried fish after a long walk set up severe dyspepsia with delirium, and left behind great susceptibility in the digestive organs for months after, requiring the greatest care in diet, and a medicinal course for its removal.

An American lady presented herself one day with confirmed dyspepsia, dating definitely from a certain long, tiresome drive, followed by a table d'hôte dinner at Genoa, which, being hungry, she enjoyed. She was quite of my way of thinking when my views were laid before

her. Frequently cases come under notice where tiring evening work, as a Sunday evening service, is met by an unusually good supper—the house-wife's treatment. This may have been all very well in the days of yore, but it certainly is not well at the present time. A light meal and a little wine, as Timothy has wisely counselled, are the proper method of meeting the emergency in our day. What can be digested without drawback under ordinary circumstances will not be satisfactorily digested when the system is exhausted either by bodily or mental toil.

The effects of acute emotion in upsetting the digestion are thoroughly recognized; in fact, anorexia is so set up, and the food which would not be digested is not taken. But we are still far from comprehending fully the more chronic effects of wearing care or anxiety. Yet the fact must be recognized that where the mind is greatly exercised, while the body is insufficiently exercised, the dietary must be regulated accordingly. A plate of porridge, oatmeal, cerealine, or hominy, with a pint of cream, and some stewed fruit to finish off with for breakfast. For lunch, some well-buttered mashed potatoes, with biscuit and butter and a glass or two of milk. For dinner some boiled fish, followed by some chicken or game, and a milk-pudding made without an egg, and digestive biscuits and butter (with just a nip of cheese as a flavoring agent for those who can eat cheese), with a glass or two of good French wine or its equivalent. Such is the dietary, or ought to be, of the man who has much brain-work to do. And further, he should allow himself plenty of time over his meals. It is bad economy to save time by cutting it off the meal-time. And such is the dietary that must be enforced when the brain-worker has made himself a patient. The use of pepsin to aid the natural digestion was given in the first article and need not be referred to again (see THE MEDICAL RECORD, September 1, p. 225). Then there should be a sufficiency of sleep to rest the wearied organism. A day of work followed by another day of play in every twenty-four hours, is the order of the present day, and to secure this the time for meals is cut down to a minimum, and the hours of sleep curtailed to an injurious extent. But the experiment will be found a failure; it is not among the potentialities. The busy brain-worker must learn to see that he cannot tax his system at will; if he will not be told he will be made to comprehend the subject. And he may depend upon it—whether these remarks are acceptable or not—it is much better to take care in time than to do the mischief and have to take the care when partly disabled. My counsel to such patients is as follows: "You had better adopt the habits of an invalid in order that you may not become one. You had better take care before you break down than wait till you break down and are compelled to take care of yourself with your working-power crippled!"

The preventive treatment of neurosal indigestion is quite as important as its palliative treatment when once established. The lines are the same in both, viz., to give easily assimilable food, rich in fat, and containing albuminoids, but in sparing quantities; to allow a proper time for meals, and a sufficiency of sleep. Beyond this there is the matter of phosphorus. Phosphorus and fat in combination are the food of the brain par excellence; and to this dietary, rich in fat, it may be well to add phosphorus in pill, or better still in the syrup of the hypophosphites. Yet when all this has been done, and the latest revelations of physiology worked out by the chemist are placed at the patient's service by his physician, there comes that indispensable factor which the patient alone can do, viz., take proper care of himself. When I look round on the men I know, whether in the profession or out of it, which are those who are steadily holding their own, accomplishing huge quantities of work, yet with their energies unimpaired and their working power as good as ever? They are those who do not add a day's play to a hard day's work! Men who, after a hard day of work, take their dinner quietly and

slowly—not bolting it to rush off to the theatre or other place of amusement, as a billiard-table, perhaps. Who spend a quiet evening in intellectual pleasure, unbending the bow, while adding to their stores of knowledge: and going to bed early, to sleep in a cool bedroom, instead of breathing a hot, vitiated atmosphere till nearly midnight, gulping down some indigestible mass like a lobster salad, and then, quite late, lying down to sleep—to leave a wearied system to digest the late supper.

This is an aspect of nervous indigestion which is worth pondering over. The physician can first digest the matter himself and then expound it to his patients. There is another matter, too, which needs more general recognition.

Of old, as said before, the more work the more meat. "Work goes in at the mouth." The fact that an underfed animal, man or beast, could not accomplish much work was vividly realized: and the hard-headed northern farmer had his farm laborers eat at his own table. But the converse is not so absolutely certain. Meat will not necessarily give strength, *i.e.*, if it be not digested. Constantly patients—not with primary indigestion, for that pretty well regulates matters itself—suffering from malassimilation come under notice, who have been eating all the animal food they can get down, under the impression that this is the plan to adopt. Probably, if a married man, his wife has been aiding and abetting him in his pernicious efforts to acquire strength. They have studied the advertising columns of the newspapers, and read of "Iron and Quinine Wine" (an admirable tonic in mere asthenia or debility), and have added that to the meat dietary; and yet the patient grows visibly weaker and feebler under the regimen. When the liver is not working well nothing will further derange it more certainly than a chalybeate.

In these cases the albuminoids which reach the liver by the portal vein are not elaborated and passed forward as the serum albumen of the liquor sanguinis, but are thrust downward as bile acids or lithates. "To feed the patient is to feed the disease," as the old phrase ran. To crowd the liver with albuminoids by a meat-dietary, the natural digestive powers being helped by artificial digestive agents, is still further to embarrass it. The attempt defeats itself. The mal-products of assimilation find their way into the blood and act as toxic agents, enfeebling the mental processes, involving the mind in gloom, and depriving the unhappy individual of all pleasure in life, till death becomes positively attractive. Such are the untoward outcomes of the delusive attempt to gain or rather to regain strength of mind and body by a highly nitrogenized dietary. Yet the proper treatment of such a case is met by prejudice, by preconceived opinions. Your wisely regulated dietary is described as "starving the patient!" You strive to sweep out the nitrogenized waste by a mercurial followed by some sulphate of soda; this is "too reducing!" You are liable to be scoffed at as an antiquated quack-salver, who has no right to exist outside of a museum for antiquities. How many women do I know now wearing widow's weeds, who might still have had husbands and bread-winners had not the present murderous age of stuffing overmastered prudence, and the lessons of physiology and clinical medicine been set at naught!

Whether such regimen is old-fashioned or in advance of the times, matters little. It will have to be adopted. The capacities of the liver will have to be appraised; and if Dame Nature, knowing better than we perhaps do, attempts to balance matters by cutting down the appetite, it is not well to thwart her by bitters. If a man feels unequal to his work, it may be wise at times to cut his coat according to his cloth. It may not always be prudent for a man to whip himself up to an ideal of energy and working-power, as if he was a steam-engine. The increase of Bright's disease in our day may not be entirely accounted for by our increased acquaintance with it and the means of its detection. Over-work, if

Clifford Allbutt is to be believed, and overcramping with meat, if some others of equal authority are to be credited, have much to do in upsetting the liver first and damaging the kidneys afterward, to say nothing of the lithiasis, cholæmia and toxic oxalates which belong to this condition of secondary indigestion, while the relations of glycosuria to over-taxation of the nervous system are now well recognized. This may be an unacceptable doctrine, but it is to be feared it is true and well-founded.

AN OPERATION FOR THE REMOVAL OF THE THYROID GLAND IN PARTS.

By WILLIAM FULLER, M.D.,

GRAND RAPIDS, MICH.

THE attention of the physician is frequently called to thyroid enlargements, not only on account of the deformity occasioned by them, but by the troublesome and even dangerous inconveniences which are developed in some cases. Simple hypertrophy involving the entire gland and of moderate dimensions commonly subsides by regulating the general system, the administration of iodine in some form together with local counter-irritation over the swelling by means of tr. iodine co. or ung. hydrarg. biniodidi.

In other cases, presenting partial enlargements which project as tumors on the side or in the middle of the neck, and in some cases in which the entire gland is enlarged, the above remedies are inadequate. The tumors are either large cysts or composed of a collection of a great number of minute sacs from the size of a flaxseed to a pea and containing fluids of various color and consistency. Internal medication and counter-irritation has no appreciable effect upon them. Puncture of the sacs and drawing off the fluid is only temporary and may be done for information as to the nature of the case. Galvanism applied to the skin is of no benefit, but by means of needles introduced into the tumor I have succeeded in diminishing and softening it up somewhat. I generally use a small trocar canula in order to allow of the escape of gases formed by electrolysis, and from four to twelve cells of the Galvano-Faradic Company's battery. A small abscess formed in a few instances, which was of no moment, as the pus found exit through the puncture or was evacuated by the knife. I have practised the injection, by the hypodermic syringe, of tr. iodine co. in a number of cases, and by its persistent use attained some success, but not what I had hoped for from favorable reports that I have read. In one case, in which the enlargement was great, I injected from fifteen to thirty drops of tr. iodine every week for three months at a time, desisting for a short time only when symptoms of iodism were developed. I continued this treatment with few intervals for about two years, when it was interrupted by the woman becoming pregnant. I also tied the superior thyroid arteries in this case, which immediately softened and reduced the swelling to some extent. The size increased during the pregnant state, as it had done on previous occasions. It is now about one-half its former size and remains stationary. I have seen injections of tr. iodine, practised a number of times upon thyroid enlargements in horses, effect a cure in every instance. The method was to puncture the gland deeply with a penknife and to force into it, with a metallic syringe, from one to two ounces of the simple tincture at once. The result was swelling, sloughing of the gland substance, suppuration, and recovery in about two weeks with little or no scar. I should be afraid to try this in the human subject on account of the situation and important relations of the tumor.

I injected ergotine on one occasion, the effect was immediate, the patient turned very pale, fell down, became cyanosed, respiration gasping, and he regained consciousness slowly and with difficulty. I think that I used a solution of three grains and injected slowly.

Cysts evacuated by the trocar soon refill, and in my experience injections into them are of little use, but I have succeeded in removing them by free incision into the sac and the use of means to excite suppuration. I have found this process to be tedious and troublesome and will relate two cases in illustration of the results obtained.

A young man, aged eighteen years, much debilitated, and having a pale cachectic appearance, had a swelling just above the upper end of the sternum, which seriously interfered with respiration and obstructed the passage of food. I punctured it with a trocar and drew off about half a pint of pale reddish fluid, made an incision into the sac at once, and though not aware of dividing a vein, I was surprised by a rather profuse flow of venous blood, which I think came from the rupture of small vessels lining the sac. However, the hemorrhage was immediately checked by the introduction of a sponge saturated with strong liq. ferri perchlor. The sac was quite large and the finger could be passed freely behind the upper end of the sternum and the clavicular articulations, and laterally under the sterno-mastoid muscles. Its relations could be easily distinguished, viz., the innominate and carotid arteries, trachea, and œsophagus. Some swelling and fever were present on the following day; the sponge was removed and the sac washed out, twenty grains of quinine were administered, and the neck was enveloped with cloths wet in a solution of ammonia chlor. The swelling and fever subsided, and suppuration was established in a few days. A large-sized drainage-tube was inserted and the sac was frequently cleansed with the solution of ammonia chlor. The sac contracted and discharged a sero-pus for about two months. Smaller drainage-tubes were substituted and, lastly, the opening was allowed to heal up, as the discharge became reduced to a very small quantity. After a lapse of a few weeks the swelling and tenderness returned, a yellow and fetid pus was discharged, and drainage was again resorted to, with injections of tr. iodine, saturated solution of iodoform in ether, a saturated solution of zinc chlor., and many other remedies at various times, with the view of establishing a healthy action or destroying the secreting surface, but without avail. Finally, when I had almost despaired of closing the troublesome tract, it became infested with maggots. I let them alone for a few days, since their presence did not appear to trouble him and then cleared them out with a strong solution of plumbi acet. The tract healed up at once, has remained so for over two years, and the young man enjoys robust health. Just what function maggots may be designed to serve in the economy of nature, I will leave it to the reader to form his own opinion, but I would suggest that by devouring sloughs and flesh endowed with little vitality, they serve to cleanse the wounds of animals, and by crawling into deeper parts they form channels for the discharge of fluids and thus become an important factor in Nature's system of providing for the healing of wounds by drainage and cleanliness, the principles upon which the success of the surgical art depends. I once saw a case in a horse turned to pasture on account of two large callous tumors on his shoulders. They were eaten out clean by maggots and scarcely a scar was left to mark their situation.

The second case was a girl aged twelve years, pale, sallow, and debilitated. Breathing was difficult upon the slightest extra exertion in walking or in going up stairs, and she was affected with occasional attacks of spasmodic croup. There was a swelling at the root of the neck since she was a year old, having the appearance of a large goitre. Upon puncture it proved to be an abscess, and was drained; but, contrary to my advice, a small drainage-tube was inserted. During two weeks she suffered from a high fever, which partially subsided when the discharge became more free. She was highly nervous and afraid of surgical instruments, and the case coming under my immediate care, I introduced a seatangle

into the small opening, and after distending it inserted a large tube. All febrile action presently subsided, the appetite improved, and she gained rapidly in her general health. Her breathing improved and she was allowed to play in the open air with other children, which her former condition prohibited. I applied many things to the cavity of the sac with the view of irritating and destroying the secreting surface, such as tr. iodine co., cantharides, ung. hydrarg. biniodidi, argenti nit., pure nitric acid, iodoform, saturated solution of zinc chlor. in alcohol, solid zinc chlor., actual cautery, and other things too numerous to mention. The sac was rebellious to all treatment, recovering its former condition after each application. Finally I introduced a gold drainage-tube five-eighths of an inch in diameter, so as to expose the whole surface freely to the air and for cleanliness. The secretion was very much diminished in a short time, and in the course of a few months the sac became healed to the integument around the tube, which was then removed. The present condition is an opening about half an inch in diameter leading into the sac, which is contracted into an irregular cavity about the size of a walnut and lined with a membrane resembling the mucous membrane of the larynx, with which, however, it does not communicate. She has, since the sac was freely discharged, developed from a stunted and puny girl into a robust young woman. It is about two years since the sac was opened, and from the experience that I have had of these cases I conclude that the treatment of them is very tedious and dangerous, unless very free drainage is maintained.

I have removed solid tumors of the thyroid gland four times. In the first case I removed the tumor with its sheath, successively tying all its attachments before dividing them as the dissection proceeded. The operation was comparatively bloodless, but tedious, so that the patient was a long time under chloroform. The wound was not approximated until suppuration was established, and an uninterrupted recovery took place, leaving only a linear scar. This case has been reported in the *Detroit Lancet*, December, 1878.

Upon a study of the blood-supply to the thyroid gland it will be observed that the larger vessels rest upon the sheath of the gland and run within the processes which separate its lobes. The superior thyroids are distributed upon the surface and the inferior arteries enter the processes near the trachea, along which they are distributed, and also to the posterior surface. The gland substance is supplied by numerous small vessels which pierce the sheath in the course of the larger vessels; consequently, if an incision is made through the sheath and the gland is separated from the inner surface of its capsule, no large vessel is divided and very little hemorrhage is encountered. If the finger is passed around a lobe which is left *in situ* there is little or no bleeding, since the hemorrhage is restrained by the pressure of the surrounding tissues. After a time a ligature can be tied around the base of the lobe and it may be removed by the knife, or without a ligature the lobe may be broken off and a piece of sponge saturated with strong ferri perchlor. can be pressed against the stump, which will effectually restrain the blood. There is no advantage gained by injecting iron into the substance of a lobe before removal. A portion of the gland, or the whole of it, may be removed at a time in this manner with comparatively little loss of blood, and the operation is attended by little pain and shock.

One assistant only is required, which, however, is not necessary, and the operation is robbed of its formidable aspect. I have operated in this way upon three patients, two of them died from other causes than any incident to the method employed for the removal of the tumor. A ship carpenter, aged thirty-five years, had an enormous goitre, the circumference of the neck measuring 27½ inches. The tumor projected beyond the chin, which rested upon its upper surface, it covered the upper part

of the sternum and the clavicles as far as the shoulders, large veins coursed over its whole surface, and especially in front. There were two large perpendicular trunks about the size of the thumb running parallel about two inches apart and united in the centre by a transverse trunk of the same size so as to form a letter H. There was a strong bruit heard all over the tumor, the neck and head were much congested and bluish, the eyeballs prominent, and he wore an expression of great anxiety. His voice was crowing and he had frequent attacks of spasm of the glottis. Expiration and inspiration both were prolonged and difficult as well as deglutition. There were bronchial râles over both lungs. This growth had steadily increased, notwithstanding that he had used many remedies, external and internal, by the advice of many physicians. His case was indeed desperate, and apparently beyond hope. He implored assistance at any risk, desirous of submitting to an operation, though informed that he would more than likely die before it was completed. Under these circumstances his urgent request could not be refused and I determined to operate, which I did with the assistance of several medical gentlemen of this city. Chloroform was not administered, nor were the tissues very sensitive on account of the stretching of the nerves. A curved needle was passed under the large transverse vein crossing the neck, and ligatures were applied on each side of the median line. An incision was made under the chin about two inches long in the middle line and another below near the sternum, their depth extending through the capsule of the gland. These were quickly made as the bleeding was profuse, and the fingers were thrust from above and below until they met along the trachea behind the mass. Two buckskin ligatures of large size were passed through the channel made by the fingers and were tied over the mass on either side as far apart as possible, and stitched to the integument to prevent them from slipping. Buckskin was used because I thought that it would be less liable than hard cords to cut into the friable tissue of the tumor, besides it possesses a certain amount of elasticity. The incisions above and below were now connected and the trachea exposed. The hemorrhage at this stage was small in amount, partly due to the faintness of the patient. The gland substance protruded through the wound, a large portion was removed and I was surprised to find that as the pressure was relieved in front of the trachea the respiration became more difficult. This tube was flattened by lateral pressure and not crushed back against the spinal column as I supposed. The patient was much exhausted, consequently I opened the trachea and introduced a rubber tube of half an inch calibre and six inches long, of sufficient length to reach between the trachea and the integument, and through which he breathed easily. He sat in a chair leaning back during the operation, and sustained himself with great fortitude. He was put into bed and a sponge wet in warm water was placed over the end of the tube. He passed a very comfortable night, breathing and sleeping quietly, his countenance looked pleasant in the morning, there was no fever, and his appetite was good for tea, toast, and an egg for breakfast. The ligatures were loosened, and as there was no bleeding they were removed. I found that the gland was easily separated from its sheath with very little hemorrhage and pain. I loosened a lobe in this manner, broke off its attachment near the trachea, and a piece of sponge saturated with liq. ferri perchlor. was applied to the stump. In two days the whole or nearly all of the tumor was removed, a lobe or two at a time, as the patient's feelings would permit. The cavity was kept clean by frequent washing with a weak solution of ammonia chlor. Subsequently his spirits and appetite continued good, he partook freely of beef-tea, eggs, whiskey sling, etc. His temperature ranged from 101° to 103°, tongue was clean and moist, and the bowels moved occasionally without medicine. This happy state of affairs continued up to the tenth day after the operation, when

the neck had contracted nearly to its natural size, the sterno-mastoid muscles showing plainly, and the wound was granulating and secreting a healthy pus. At this juncture the night nurse unfortunately got drunk, and at 8 A.M. next morning I found my patient out on the floor in a cold room, with the tube displaced. He was almost strangulated and in a violent chill. He never recovered from this chill and the shock of fear. The wound immediately took on a dry appearance with no activity, and he gradually sank and died upon the sixteenth day after the operation. There was difficulty of swallowing two or three days before his death, food and drink coming out at the tracheal wound.

My next case was a lady of sixty-two years. She had a hard, immovable tumor, situated in the region of the thyroid gland, and was suffering from extreme dyspnoea, which had been steadily increasing upon her for some months. The tumor appeared to be of a cancerous nature, was firmly adherent to the larynx, and was about the size of a goose's egg. I made an incision into it about three inches long in the middle line of the neck. There was considerable hemorrhage, which was staunched by pressure and perchloride of iron, after which I removed a portion of the gland as in the above case. This was at 3 P.M., and the respiration was somewhat relieved, but at 1 A.M. it was so difficult that I was forced to perform tracheotomy, which was a very difficult operation under the circumstances, the trachea being flattened laterally and pushed out under the left sterno-mastoid muscle. It was found with difficulty by thrusting a small trocar in different directions through the tumor. I introduced a piece of rubber tubing, which was changed frequently and kept clean as in the previous case. She also died on the sixteenth day after the operation from exhaustion and congestion of the lungs, the course of her case being about the same as in the previous one.

One great difficulty encountered in these cases was the impossibility of preventing fetid gases and fluids from entering the trachea, although the greatest care was taken to obviate it. This was the reason that I refrained from opening the windpipe immediately in the last case. I think that this cause contributed largely to produce the unfavorable results.

The following case had a more successful termination: A horseshoer, aged about thirty-eight years, had an enlargement at the root of the neck, which had been increasing in size for three years, and for six months it interfered with his breathing, especially in stooping, so that he was obliged to relinquish his business. In July last, while walking on the street, he had an attack of vertigo, a sudden increase in the difficulty of respiration, and a sensible enlargement of the tumor. He came into my office in a state of great alarm; there was a strong pulsation of the carotid and apparently of the tumor, which simulated aneurism. It was about the size of the closed fist and situated on the left side extending from the clavicle to the upper border of the thyroid cartilage. I concluded that it was an effusion of blood within the thyroid sheath, and punctured it with a small trocar, drawing off about an ounce and a half of dark-colored blood, which relieved the tension and the difficulty of breathing. A cold compress and bandage were applied and he was given eleven drops fluid extract digitalis every two or three hours until the heart's action was quieted. He sent for me in about two weeks and stated that he had suffered from fever and chills for a week, and that his neck felt sore to the touch, with a throbbing in the tumor. There was a tympanitic note over the seat of puncture, and upon introducing the trocar again there escaped a fetid gas and bloody pus, which was evacuated freely by the knife. Introducing the finger, the lobes of the enlarged thyroid gland could be felt. These were separated from the capsule, broken off near the trachea and into small pieces, so that by squeezing the sac the débris was ejected through the opening. Small pieces of sponge with a string attached to each and saturated

with liq. ferri perchlor. were immediately introduced and checked the hemorrhage. The sponges were removed next morning, the cavity washed out with a solution of ammonia chlor., and a large drainage-tube introduced. The operation required no assistant and was done at once when the opportunity presented, without exciting the patient's mind by making him aware that any important operation was in progress. Cleanliness and free drainage constituted the treatment, with the exception of one twenty-grain dose of quinine. His fever subsided after the operation, and as he felt well no note was taken of his temperature. The cavity slowly contracted by granulation, and recovery was complete in about six weeks. There is a small nodule on the right side of the neck and a little thickening in front of the trachea, but the breathing is free and the tumor on the left side has entirely disappeared.

ON THE TREATMENT OF PALPITATIONS OF THE HEART.¹

By PROFESSOR GERMAIN SÉE,

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PALPITATIONS consist in an increase of the activity, though not of the energy of the heart.² From an etiological point of view they may be ranged under four heads: 1, Nervous palpitations; 2, Physico-dynamic palpitations; 3, Anæmic palpitations; 4, Toxic palpitations.

I shall treat of all these species of palpitations, but not exactly in the order given, and for convenience will begin with the last, which I have called

TOXIC PALPITATIONS.

The first care of the physician when he finds himself in presence of a patient who has, or fancies he has, real palpitations, should be to examine into the daily hygienic and dietetic habits of the patient. The abuse of tobacco, the immoderate use of tea, coffee, alcohol, may produce palpitations with or without arrhythmia, as well as intermissions. If, in order to obtain prompt abandonment of the abuse, it is generally sufficient to warn patients of the danger which menaces them, it is no less true that sometimes one meets stubborn resistance in the case of inveterate smokers and drinkers, to whom the vicious habit has become a passion and almost a necessity.

In these cases it is necessary to proceed by a gradual process of withdrawal, and especially where the prolonged use of tobacco has created a sort of habituation—a veritable accommodation in the organs and functions, which it would be dangerous suddenly to suppress. There are a great many smokers whose easy and healthful digestion depends on the cigar or pipe which they smoke after meals; others find the best remedy against constipation to be a pipe smoked on an empty stomach; others maintain that their brains will not work to advantage without the customary smoke. It is precisely these individuals who become subjects of palpitations, and if you would treat them successfully you must not too suddenly and completely wean them from tobacco. Better by far limit the quantity of tobacco than to impose on them absolute deprivation, which, moreover, it is very difficult to enforce. All that you need do, in order to obtain a

cessation of the palpitations, is to transform abuse into moderate use.

It is much easier to arrive at the suppression of the use of tea and coffee. It is more difficult to procure an abatement of alcoholic excesses, which, by the way, seldom and only for a brief period, manifest themselves by palpitations; they soon terminate in degeneration of the heart.

PHYSICO-DYNAMIC PALPITATIONS.

When, after an earnest inquiry, you have succeeded in eliminating from the group of probable causes the influence of poisons and of substances which trouble the action of the heart, the duty of the physician will be to investigate the state of the heart, its orifices, its valves, its proper texture, its lining membrane.

It is deserving of remark that it is precisely the larval affections, that is to say, those which do not produce any abnormal murmurs, as is the case with simple dilatation of the heart, which oftenest give rise to palpitations. In these cases digitalis finds its proper place; it tones up the debilitated heart and gives regularity to its beats.

DIGITALIS IN THE PALPITATIONS OF ORGANIC DISEASE.

When we are concerned with hypertrophies consecutive to valvular insufficiency or constriction of the orifices, there is a first question to answer before we can decide on the treatment. Is this hypertrophy sufficient or not to compensate for the obstacle to the outflow of blood in the case of constriction of the orifice? is it sufficient to enable the ventricle to clear itself, in the event of regurgitation from leakage of the valves? If so, that is to say, if the hypersarcosis is sufficient to enable the heart to fill the arteries, digitalis is useless, without being positively dangerous, unless by long continuance in its use.

Let us take an example: In Corrigan's disease (aortic insufficiency) the left ventricle constantly grows thicker and stronger by reason of the extra work imposed on it in propelling into the aorta the regurgitant blood, as well as that coming into its cavity from the auricle. As long as there is no venous stasis in the lungs, or œdema of the lower extremities, one may take it for granted that the hypernutrition of the ventricle is sufficient to overcome the disastrous effects of the reflux. Why then prescribe digitalis? Wait a while, the time will come, with almost absolute certainty, when, unhappily for the patient, the action of the heart will be troubled. There will be palpitations which will necessitate the use of digitalis, and in this case you are not to fear the effect of the drug, even if the heart's impulse suggests exaggerated energy; it is but the semblance of increase of energy. On the other hand, digitalis does not do harm when given for the hypertrophy itself. Heretofore it has been generally believed that hypertrophy may be excessive, and render one liable to danger from active congestion of the brain or lungs. This is a mistake, and it is as much as ever if the hypersarcosis is sufficiently pronounced to effectually overcome the obstacles to the outflow or regular progression of the blood. No one has ever seen active cerebral congestion result from exaggerated afflux of blood to the brain by reason of a hypertrophied heart. In the mechanical diseases of the heart you have not active but passive congestions, the heart having no longer sufficient contractile force to enable the blood to pass through the capillaries and veins. Therefore there is no absolute contra-indication in this disease to the administration of digitalis.

The indication for digitalis, however, becomes very plain if dyspnea or œdema comes on, showing that the heart is flagging in its work of blood-distribution. The same may be said of palpitations arising from hypertrophy in general. Suppose, for example, that you have a case of compensatory hypertrophy, accompanied with palpitations, in a nephritic patient (this would be a rare event, for arrhythmia would be the rule); you may without

¹ Translated, by permission of the Professor, for THE MEDICAL RECORD, by E. P. Hurd, M.D., Newburyport, Mass.

² [Professor Sée makes a distinction between the ataxic and the arrhythmic forms of heart disease, which he still further distinguishes from intermissions. Palpitations are ataxic manifestations, and are characterized by accelerated pulsations. Arrhythmia is disorder of rhythm, and the disturbance may pertain to the order, number, and duration of the pulsations. In the case of intermissions the normal and for the most part regular series of beating is from time to time and more or less periodically interrupted by a momentary arrest of the heart's action. If the pulsations are irregular, it is arrhythmia. If they appear to be more intense and rapid, we call them palpitations. In true intermission the heart's action may be more intense, we can hardly say, however, that there is deviation of rhythm; we notice only the pauses at the end of every 4, 5, and 6 pulsations. Bouilland calls these arrests or hesitations of the heart *false stops* faux pas. In practice these different kinds of abnormal functional working of the heart are often confounded, and it is true, as Professor Sée admits, that palpitations often coexist in the same patient with arrhythmia and intermission.]

hesitation prescribe digitalis. In spite of affirmations which have recently been made respecting the danger of these hypertrophies and the part which has been attributed to them in the production of uræmic cerebral accidents, digitalis does not augment the hypertrophy; the function of the hypertrophy is that of a moderator, and digitalis can in no way render harm.

There are certain palpitations due to hypertrophy where digitalis is of less utility. I refer to hypertrophies attending adolescence; sometimes these result from displacements of the heart by faulty chest-conformation. These hypertrophies are attended with palpitations; but it is also noteworthy that young men may suffer from palpitations from other causes, and that these palpitations may be about as troublesome and persistent as those which result from hypertrophy. Onanism is a fruitful source of such functional palpitations. As to the diagnosis, the hypertrophies I am speaking of may be known by augmentation of the volume of the heart, as shown by increased dullness, and displacement downward of the apex of the heart. These signs coexisting with palpitations would suggest that we have to deal with the hypersarcosis of adolescence; in other words, with a sort of exaggerated and precocious development of the heart muscle, and this is about the only kind of cardiac hypertrophy which frequently gives rise to palpitations without necessary degeneration or atrophy of the myocardium.

Now in these cases digitalis is not needed, if there be faulty conformation of the thorax; a well-directed course of gymnastics is far preferable. If there be no thoracic mal-conformation, digitalis may be tried, and if the palpitations be not quieted in the course of a few days you must find some other remedy: bromide of potassium and chloral often render real service in these cases. I have not seen any good from hydrotherapy.

I have now an important remark to make respecting the usage of this medicament. During these late years some authorities have been very precise in their statement of the indications and contra-indications of this eminently useful remedy. They have recognized in its therapeutic applications certain inconveniences, dangerous and even mortal effects. What has troubled them the most has been both the prolonged action, and the slow, tardy action of the drug. This only goes to show their ignorance of the slow, and at the same time cumulative, effect of therapeutical doses of this medicament. More than twelve years ago I divided medicaments, from the point of view of their promptitude and duration of action, into two classes; the one slow and cumulative, of which digitalis is the type; the other of medicines, like the salts of soda and potash, whose action is immediate, but which are as rapidly eliminated. In this last category may be ranged salicylic acid and the salicylates, which act with astonishing promptness, and undergo elimination almost as soon as they are absorbed. Is it a fault of these remedies—of some that they stay too long in the economy, of others that they leave it too quickly? It suffices to know these important peculiarities, that we may avoid inconveniences by not allowing digitalis to accumulate too much in the organism, and by not suppressing too soon the salicylates.

Apart from these peculiarities of action digitalis has no grave inconveniences except the difficulty of tolerance by the stomach. The immediate effects are more to be feared than the consecutive effects, which are less often seen. I have observed the latter, and I will tell you under what circumstances. In a great number of patients affected with cardiac lesions, whether of the valves and orifices or of the myocardium, chronic endarteritis and atheroma of the arteries exist. This degeneration of the blood-vessels occurs in advanced age in spirit-drinkers and in persons affected with Bright's disease. Gall and Sutton even regard arterial sclerosis as the rule in chronic interstitial nephritis. In all these cases the effects of digitalis may be nil, or even harmful. I will show you how: The action of digitalis is

manifested in an augmentation of the energy of the heart and of the tension of the blood-vessels, in a word, in a more active circulation. Now if the blood-vessels are degenerated, if the elasticity of the middle coat of the large and medium-sized arteries is compromised, if the muscular tunic of the small arterioles is invaded, the latter have lost their power of contraction, and the former their elastic retraction, and the peripheral circulation is impeded. Here digitalis is ineffectual; it may be injurious in compelling the blood to accumulate in parts the farthest removed from the heart, as in the lower extremities, where it remains stagnant in the veins, and infiltrates the tissues. This, then, is the most plausible explanation of the dangers of digitalis. Apart from these conditions, it does not occasion any inconvenience, unless in the event of mal-administration. It may, for instance, be given in too large doses, and in too small doses, just as other active medicines—chloral, bromide, salicylic acid, etc., of which one is so apt to err in the dose. Too much timidity or too much rashness; no sure and rigorous convictions; no confidence in established experience—here you have the personal bias of not a few who are clamorous for new methods of treatment, or carpers of the old.

CONVALLARIA MAIALIS.

I have been talking of digitalis and the indications for and against, according to my usual custom the last few years, of treating this medicament in my lectures, and so far have overlooked the fact that we have in *convallaria maialis* (called muguet in French, lily of the valley in English) a remedy far superior, and in every case perfectly harmless. In palpitations of the physico-dynamic order, the extract of *convallaria* succeeds marvellously. I make only one reservation. In the hypertrophies of adolescence (*hypertrophies de croissance*) I add the medicament most suitable to modify the tissue of the cardiac muscle; I refer to

IODIDE OF POTASSIUM.

One of the most useful remedies for palpitations due to hypertrophy is iodine. According to Magendie and other distinguished physicians it constitutes the most certain means for reducing the volume of a hypertrophied heart, and for removing the dangers resulting from this hypernutrition. According to this theory the iodide would be a bad remedy, doing more harm than good, for the hypertrophy is salutary and corrective, and the only means whereby an obstacle can be overcome. Happily it has no power to effect the denutrition of the heart muscle. I have employed iodide of potassium in a considerable number of diseases of the heart, with hypertrophy perfectly defined and strictly compensatory, and in all these cases the heart lost neither force nor volume. Far from that, the action of the iodide, which is so useful in cardiac dyspnoea, seems equally to aid the central peripheral circulation; the heart, far from losing energy, seems to gain in contractile force, which is always a desirable condition. So, then, the idea that iodide of potassium causes, in any sense, atrophy of the cardiac muscle, is erroneous. It benefits the hypertrophies of the period of growth as well as compensatory hypersarcosis. It is no less true that it may prove remedial in other cardio-pathies with palpitations, but without dyspnoea.

ANÆMIC AND DIATHETIC PALPITATIONS.

I come now to a question in therapeutics which seems easy of solution. I refer to the treatment of palpitations of anæmic or diathetic origin. It is so easy to cure anæmia with iron, or the arthritic diathesis with alkalies, that the remedial indications of these palpitations of blood origin seem hardly to merit serious discussion. Nevertheless, if the problem be closely scanned, its complexity will be recognized.

In the class of diathetic anæmias, as for instance, in tuberculous or cancerous anæmia, palpitations are fre-

quent. They have, however, neither signification nor duration, and do not furnish any special indication of treatment; nay, more, iron is bad for the tuberculous, as well as for the cancerous; digitalis is worse than useless, for it takes away the appetite and adds the evils of inanition to the constitutional anæmia. I do not speak of palpitations of gouty origin; they are far from being proved, at least if by the term gout we understand lithæmia.

How is it with the true anæmias? We will suppose the case of a young woman who has become anæmic in consequence of severe flooding. We will suppose a man, previously vigorous, who has lost too much blood from hemorrhoids. Both complain of palpitations, and of being easily put out of breath. Iron will infallibly increase the hemorrhages, the anæmia, and the palpitations. Hæmstatic remedies are first demanded; when you have stopped the blood losses the palpitations will disappear.

What good, on the other hand, will iron do in the case of an individual whose dietary is insufficient, whose meagre rations bespeak misery and poverty; who breathes, it may be, confined, vitiated air? Iron can do nothing for the anæmia of inanition, or even for the anæmia of professions which are attended with insufficient aëration. The cause must be removed before a cure can be realized.¹

Another kind of anæmia with grave palpitations, necessitating special care, and seeming to call for iron, is that which is consequent on seminal losses. Much, however, as iron seems to be indicated in these cases, it is seldom that it is of any marked efficacy. Every day, almost, we see patients emaciated, with sunken eyes, pale earthy countenance, complaining of inability to do mental work, of great muscular debility, generally, too, of pains in the back, and of palpitations coming on without any obvious reason, and which are not aggravated by walking, even on rising ground. These individuals are melancholy, constantly brooding over their seminal losses, which may or may not be accompanied with sexual impotence. They have been formerly masturbators, and are suffering the consequences of their folly. They suffer from palpitations (the result of sperm-waste) and can hardly be persuaded that they have not serious disease of the heart. If, confounding this sort of debility with the globular anæmias² we give iron, with—it may be—hydrotherapy, we shall very soon find our mistake. In fact, we are not concerned here with simple modification of the number, form, or composition of the red globules (in which case iron would have magical efficacy), we are concerned with a condition of general enervation and failure of nutrition. Without recommending the local treatment by urethral injections, astringent or sedative, which are of no use, and tend injuriously to fix the attention of the patient on his over-sensitive genital organs; without recommending cauterizations of the membranous or prostatic urethra, in accordance with the superannuated and dangerous practice of some surgeons, we may formulate in this manner the results of an experience which dates back a great many years, during which we have been engaged in earnest professional work.

Iron, unless we except the potassic tartrate, is without effect. Hydrotherapy is generally ill-borne; warm douches and warm baths do harm; bromide of potassium debilitates the patient too much; antispasmodics are disappointing. This is the treatment which has succeeded best in my hands: 1. One gramme (15 grains) of iodide of potassium, to be taken in two doses daily after meals. 2. With each dose of the iodide, three pills, containing each 15 centigrammes (nearly 3 grains) of aqueous extract of ergot, and 2 centigrammes ($\frac{1}{8}$ grain) of alcoholic extract digitalis. These two medicaments have a marked depres-

sant action on the reflex excitability of the spinal cord. 3. A regimen consisting principally of meat, fish, and vegetables, to give strength and repair waste. 4. Red astringent wines in moderation. 5. Abstinence from mineral waters, effervescent waters, spirituous liquors generally—especially beer—tea and coffee, and tobacco. 6. Ablutions in tepid water in the morning. 7. Moderate physical and mental labor. 8. Strict avoidance of sexual excesses; avoidance of absolute continence.

I have dwelt thus lengthily on the treatment of seminal emissions on account of the practical difficulties which are encountered in these cases, and on account of the frequency of these complaints.

I finish the consideration of anæmias with palpitations by some hints as to the treatment of chlorosis.

In this disease we witness the almost certain triumph of iron. Under the influence of this remedy—even though the case may be an inveterate one—we see rapid diminution of the weakness, sensory troubles, and breathlessness. The palpitations also abate, though slowly. There is, however, an inherent difficulty in this mode of treatment; the ferruginous medication must be continued a long time, under penalty of losing all the benefits derived. It must, moreover, be re-enforced by a substantial dietary regimen, and by the practice of hydrotherapy, which succeeds marvellously in these cases. But if the physician relax the rigor of the treatment all is lost; and yet he is sometimes obliged to compromise with his patient, who dislikes the medicine, who does not react well after the douche, or who does not tolerate the prolonged use of chalybeates. It is especially when the true palpitations predominate (I refer to the true in contradistinction to *pseudo*-palpitations, and *pseudo*-cardiodynias) that the means indicated end in failure. In these cases digitalis is contra-indicated; it troubles the digestive functions and destroys the appetite. Bromide of potassium causes a real enfeeblement after long continuance in its use. Arsenic sustains better the forces, but has no action on the palpitations. Iodide of potassium promotes menstruation and facilitates respiration, but does not correct rhythmical trouble of the heart when this trouble is due to poverty of the blood in globules or hæmoglobin.

This is the way I treat such cases. I cite the instance of a young girl, extremely chlorotic, who was referred to me for treatment by a distinguished London physician. My prescription was as follows: 1, Four times a day take 100 grammes of raw beef or mutton (preferably the latter), divested of fat, scraped and mixed with broth or pea-soup; 2, besides the raw meat, fish (fresh or salted) may be indulged in, and farinaceous vegetables; 3, for drink, water may be taken with a little brandy or wine; 4, daily ablutions of the whole body with fresh water; 5, sojourn in the country, and in a hilly region. I insisted on these details, which I consider very important. I recommended the raw meat because it is easy of digestion, and because the azotized principles of the muscular substance support the vital forces very much better than a milk and vegetable diet, and because the flesh and blood of beef and mutton contain iron combined with other principles.

Nervous palpitations.—We arrive at the diagnosis of these palpitations by way of exclusion, having eliminated the possibility of valvular or other cardiac lesions, and toxic and other alterations of the blood.

Having decided respecting the nature of the palpitations, new difficulties arise. Are they of the order of reflex nervous palpitations? Are they the expression of a general neuropathy, of a psychical trouble, or of a simple functional perturbation of the moderator or motor nerves of the heart? These questions must be answered before a rational system of treatment can be devised. It will not do to content one's self with vague theories of spasm (how high soever the authorities by whom those theories are supported), nor in practice will it do simply to ring the changes on antispasmodic remedies.

¹ The physician is often called upon to give medicine when it would be better to give food. One of the hardships which he is constantly obliged to encounter, is to treat diseases arising from mal-nutrition, when he cannot control the dietary of the patient.—T.P.A.S.

² Les anémies hypoglobulaires ou heteroglobulaires.

(a) *Reflex palpitations.*—Palpitations of reflex origin are neither so frequent nor so well demonstrated as one might imagine. Does the affection seem to be one of the digestive organs? About the only dyspeptic troubles that cause palpitations are the neuro-vascular dyspepsias and the verminous affections; the flatulent dyspepsias and the intestinal meteorisms act mechanically by displacing the heart and disturbing its functions, and are hardly to be taken into account. The true nervous dyspepsias are more difficult of cure, and the resulting palpitations are as obstinate as their cause.

The nervous disorders and the palpitations which are due to the presence of tænia in the intestines are perplexing, and the treatment is disappointing till the existence of the parasite is diagnosed; the neuro-cardiac phenomena all disappear with the expulsion of the worm.

Palpitations of reflex origin may result from perturbations of the genital organs, or lesions of the womb.

Palpitations often affect pregnant women, women suffering from amenorrhœa or uterine fibrous polypi; they may depend on a reflex irritation from the spinal cord, causing constriction of the vessels, and changes in the intravascular pressure, troubling, possibly, in this manner the rhythm, or normal frequency of the pulsations. (The above is more a matter of theory than of demonstration.)

True nervous palpitations affect the hysteric, the hypochondriac, the neuropathic, or their source is of a psychical nature (emotions, etc.); or else they constitute a trouble of innervation without determined cause. To this last category belong palpitations called essential palpitations.

(b) *Hysteric palpitations.*—Is it a case of hysteria or hypochondriasis? If the palpitations are not really subjective, *i.e.*, are real and audible to auscultation, it is necessary before all to remove the mechanical causes, such as tympanites, flatulent dyspepsia, which press the diaphragm upward and displace the heart, or trouble its functions. If it be impossible to explain the palpitations by reflex action or mechanical causes, if they are strictly nervous, they come very near to being of the psychical kind (or even of the kind called essential), and the physiological mechanism and treatment would be the same. In fact, all palpitations belong exclusively to the domain of physiology, and cannot be treated seriously and scientifically till their intimate nature is understood. Are they of the nature of spasms? Antispasmodics are indicated; but what antispasmodics? Valerian, musk, asafœtida, camphor, orange-flowers, amber, the succinates? But who, I ask, has ever known any of these drugs to cure those continued grave palpitations which begin and are perpetuated without known cause? Is the heart ever susceptible of spasm—that is to say, of a contraction—either exaggerated in force or exaggerated in duration? In the first case exhaustion would soon take place; in the second, death. Suppose, however, that those precipitate beatings, which are not spasmodic, are the expression of excitation of the nerve-centres by a physical or moral cause. In this case the excitation can only act through the intermediary of the spinal cord; but the spinal cord causes the blood-vessels to contract, it also determines an increase of vascular tension, but not palpitations. All these palpitations are, on the contrary, veritable paralysis of the par vagum or moderator intra-cardiac ganglia. When these are fatigued or exhausted, a considerable disorder results; in fact, an enormous acceleration of the heart's pulsations. The treatment ought to be based on these data; indeed, empiricism did so base it before any explanation was sought.

These palpitations have been treated: 1. By digitalis, which augments the heart's energy and the vascular tension, and slows the pulsations. It is a powerful excitant of the moderator system of nerves. 2. By bromide of potassium, which moderates the peripheral circulation, and in this way, or perhaps directly, diminishes the exaggerated activity of the heart. If the palpitations are kept up by external sensory impressions acting reflexly on

the heart, bromide diminishes the intensity of those sensory excitations by moderating the reflex spinal irritability. 3. Another remedy is veratrine, of which I shall speak when I come to treat of those grave palpitations which constitute the basis of Basedow's disease, and which seem to exhaust the heart and the patient. 4. Hydrotherapy, which in these cases is a method which is useful or dangerous according to the way in which it is applied, and according to the susceptibility of the patient.

Iron, despite its tonic power, is not of utility when administered for these palpitations, for the reason that they are not of hæmic origin. Iodide of potassium exasperates their intensity. This salt, indeed, improves the working power of the heart, but does not give tone to the paralyzed ganglia. Arsenic is preferable, but is not always sufficient.

We have never obtained any benefit from warm or cold baths or other hydrotherapeutic methods, nor even from mineral waters.

The sedatives—opium, belladonna, aconite, hydrocyanic acid—have always seemed to me to increase rather than diminish these parietic palpitations. This is easily understood. Belladonna, among others, paralyzes the moderator nerves and ganglia. The difference of action in these cases between the paralyzers and excitants of the moderator system of the heart—between belladonna on the one hand and digitalis on the other—suffices to justify our views of the paralytic nature of nervous palpitations, whether psychic or essential.

(c) *Palpitations called essential (chronic palpitations).*—There are some patients, females especially, who have palpitations for years, and after being long tormented by them, finish by living quite in harmony with the permanent disorder of their heart. I saw a short time ago a woman thirty-two years of age who had these functional perturbations for fifteen years, and to such an extent that on counting her pulse I reckoned 140 to 150 pulsations a minute, with occasional intermissions. Every kind of treatment having failed, the patient had given up all medication. She was in good health; the heart had not undergone either hypertrophy or dilatation. This fact adds to the proof—already ample—that palpitations do not exhaust the heart, and that even under the most discouraging circumstances we are warranted in giving a favorable prognosis.

A CASE OF TEARSTONE IN THE CANALICULUS OF THE LOWER EYELID.

By CHARLES J. KIPP, M.D.,

NEWARK, N. J.

CONCRETIONS, both fungoid and calcareous, are so very rarely found in the lachrymal passages, that the publication of the following case seems desirable.

Alfred B—, eight years of age, was brought to me for advice as to a painful swelling of the lower lid of his left eye. His parents stated that this eye had been "weak" for some years, but that the swelling had developed only within the last eight months.

This swelling was found to extend from the inner canthus to the punctum lachrymalis, and to involve the free edge of the lid. It was about the size and the shape of a French bean, and quite hard to the touch. The skin over it was red and œdematous, and the caruncle, the semi-lunar fold, and the conjunctiva of the whole lower lid were swollen and injected. The lower punctum was transformed into a nipple-shaped projection, about a millimetre in height, on the summit of which was a large crater-form opening, and was situated much farther from the inner canthus than normally, the canaliculus having nearly double its usual length. Pressure on the tumor caused a few drops of a whitish puriform liquid to escape from the punctum, which did not, however, materially diminish the size of the swelling. Exploration of the

canaliculus by means of No. 1 of Bowman's probes showed it to contain a stony concretion.

All doubts as to the nature of the affection having been removed by this exploration, I advised an operation for the removal of the obstruction, and consent having been given, I introduced a small Weber's knife into the canaliculus and split it in its entire length. An oval concretion of about the size of a pea was found lying loosely in the distended canaliculus and was lifted out without any difficulty. The mucous membrane lining the canaliculus was red and much thickened, and coated with thick pus. A probe could readily be introduced into and through the lachrymal sac from the canaliculus, and pressure over the region of the lachrymal sac failed to cause mucus or pus to escape from the sac into the canaliculus, thus showing that it was in a healthy condition. The distended canaliculus was thoroughly cleansed, the wound kept open for several days, and the patient directed to apply cold compresses to the lid. Under this simple treatment the tumefaction speedily disappeared, the wound closed, and two weeks after the little operation the eyelid was no larger than that of the opposite side. Since then there has been no return of the disease and the eye has ceased to be "weak."

The concretion was found to be of a grayish color in its outer layers, which were of a softer consistence than the nucleus, and were readily removed from it by a stream of water. The microscope showed this layer to be composed of pus-cells. The nucleus itself was of a whitish-yellow color, and was so hard that it required a pretty strong knife to divide it. It measured six millimetres in length and was about four millimetres thick. One half of the concretion was given to a chemist for analysis, who reported that it was composed of lime and magnesia, and carbonic and phosphoric acids, and some fatty substance. Examined microscopically, after decalcification the concretion was found to consist of a close network of very fine fibres, resembling in appearance very closely those of leptothrix buccalis. They could not, however, be stained blue by iodine.

From this description of the concretion it will be seen that it differed from those heretofore described by various authors in this, that in addition to the leptothrix elements it contained an unusually large quantity of earthy salts.

Masses of leptothrix have been found in the lower canaliculus by v. Graefe,¹ Förster,² and Narkiewicz-Iodko³; and in the upper canaliculus by Schirmer,⁴ Del Monte,⁵ and Gruening.⁶ In several of the cases a number of concretions were found together, and in all were the concretions of a cheesy consistence. Although the fungoid nature of these concretions was pointed out by v. Graefe as early as 1854, it was not till 1869 that Waldeyer,⁷ Cohnheim,⁷ and Leber,⁷ demonstrated that this fungus was a leptothrix. The identity of the plant found in the canaliculus with that of leptothrix buccalis is, however, not yet fully settled, I think, as in none of the cases except Gruening's could the fungus be stained blue by iodine. The only attempt to cultivate the fungus was, as far as I know, made by Gruening, who found, forty-eight hours after placing fragments of the concretion in glycerine, that they were surrounded by filaments of penicilium which extended to a layer of penicilium spores floating on the surface of the glycerine.

Fungoid concretions are, however, not the only ones found in the canaliculi, as is shown by Pagenstecker's⁸ case, in which a stone containing no leptothrix was removed. Whether in the tearstone removed by Desmarres,⁹ leptothrix formed the basis of the concretion is

not known; otherwise it very closely resembled the one here described.

How the leptothrix gets into the canaliculi is not known, but it seems not improbable that it is accidentally introduced into the puncta, the same as other foreign bodies, such as cilia, bits of straw, and the like, which are occasionally found here. To persons who are in the habit of wetting the edges of the lids with saliva for the removal of crusts, etc., such an accident might happen readily enough.

As regards the diagnosis of concretions in the canaliculi but little need be said. The introduction of a fine blunt-pointed probe into the canaliculus, after the punctum has been somewhat dilated by a conical probe, will in all cases and in all stages settle the diagnosis at once. The only affection for which it could possibly be mistaken, after it has given rise to inflammatory swelling of the tissue surrounding the canaliculus, would be a furuncle—a very rare affection in this part of the lid—and thus it will be readily distinguished by the history, by the elongation of the canaliculus, and the enlargement of the punctum.

The treatment pursued in the case above reported is the one to be recommended for all cases.

REPORT OF TWO CASES OF STRANGULATED FEMORAL HERNIA WITH OPERATIONS—RECOVERY.

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CASE I.—Mrs. John H—, of Waterbury, aged forty-two; has borne six children; health always good. A tumor about the size of an almond appeared in the right femoral region about two years ago, with no marked symptoms at the time of its appearance. Patient supposed it to be an enlarged gland. One year ago the patient was suddenly seized with severe colicky pains on retiring to bed. The pains were chiefly in the right inguinal region, lasted two to three hours, then disappeared. Slept soundly after this, and woke next morning well. During the last year the tumor has caused no inconvenience. Noticed that on standing much or lifting, it grew longer, but after a night's rest returned to its former size. It has never been reduced since its first appearance. It has recently acquired about the size of an English walnut.

I was called to see the patient first on Sunday morning, June 24th. She had been suffering since 2 A.M. with severe nausea and vomiting. The matter vomited was rather greenish in color, but free from fecal odor. Bowels had not moved for several days. Features somewhat pinched.

On examination I found a tumor of the size of an English walnut in the right femoral region, and traced its neck up under Poupart's ligament. It yielded no impulse on coughing and no resonance on percussion. Slight reduction effected by prolonged taxis, but nothing further could be accomplished. Ordered opium and camphor, āā gr. j. q. 4 h. , and ice-bag over tumor. Pulse, 120; temperature, 100° . P.M.: Morning symptoms aggravated. Bowels have not acted. Matter vomited has fecal odor and appearance and (to patient) a fecal taste. Temperature, $100\frac{1}{2}^{\circ}$; pulse, 120. Pills continued. Soap-suds enemata ordered.

Monday, June 25th.—Symptoms increased in severity. Vomiting persistent, but not stercoraceous to-day. Pain more severe. Bowels have not moved. Tympanites of abdomen. Ordered enema of ol. olive.

Tuesday, June 26th.—Patient seen by Dr. Axtelle in consultation. Temperature, $101\frac{1}{2}^{\circ}$; pulse, 120. Face more pinched; eyes sunken and dull; cheeks hollow and flushed. Bowels have not acted. Vomiting of bile-stained fluid with slightly fecal odor is persistent.

It was decided to give ten grains of calomel with sodæ

¹ Archiv. f. Ophthalmologie, bd. i., p. 284; also bd. xv., p. 324.

² Ibid., bd. xv., p. 318.

³ Klinische Monatsb. f. Augenheilkunde, bd. viii., p. 78.

⁴ Ibid., bd. ix., p. 248.

⁵ Nagel's Jahresbericht, 1872, p. 434.

⁶ Archives of Ophthalmology and Otolaryngology, vol. iii., p. 17.

⁷ Arch. f. Ophthalmologie, bd. xv., p. 318-342.

⁸ Archives of Ophthalmology and Otolaryngology, vol. ii., p. 219.

⁹ Annal. d'Oculistique, viii., p. 85.

bicarb., to be followed in four hours with two ounces of ol. olivæ and one pint of soapsuds per rectum and to be governed by the result as to the question of operative procedure. 10 P.M.: Temperature, 102° ; pulse, 125. Bowels have not moved. Patient worse and sinking. Gave full turpentine enema in knee-chest position. This escaped in ten minutes without a trace of fecal matter. Decided to operate at once. At 12 P.M. the patient was etherized and I proceeded to operate with the assistance of Dr. Axtelle. Seized the tumor firmly and cut obliquely from the external abdominal ring, downward and inward about two and one-half inches, the point of strangulation being at the junction of the upper and middle thirds of the incision. The skin having been separated, all tissues beneath were carefully cut upon a director until the hernial sac was reached. This was about the size of an English walnut; its body was perfectly non-adherent, but the neck was adherent entirely around.¹ These adhesions were carefully broken and cut upon the director. At this stage the neck of the sac, which had been drawn out, was accidentally torn through on the proximal side of the constricting band. The entire sac was then carefully opened by the fingers and a knuckle of intestine about the size of a walnut was found strangulated, of a blackish-red color and adherent to the sac. This was carefully separated by the fingers.

The strangulated knuckle had the appearance of initial gangrene, but on close examination the results were seen to extend across the line of constriction. Sponges saturated with warm water were applied to this and soon its vessels became more injected and its color redder. Everything was thoroughly cleansed, the intestine returned, and the index finger swept around the opening, but no adhesions were found. The hernial sac was then seized and put on slight tension. The neck of the sac was stitched across with cobbler's stitch and the ends firmly tied, then brought back and tied on the opposite side, so as to include the entire neck by the latter loop. The sac was then excised beyond ligature.

The external wound was closed in the ordinary manner with silk sutures, a drainage-tube extending through, and dressed with a compress and bandage. It was necessary to inject half an ounce of brandy hypodermically during the operation to reinforce the heart's action, which became very weak.

The operation occupied two hours, and the patient was removed to bed at 2 A.M. with pulse 100 and temperature $99\frac{1}{2}^{\circ}$. Hot bottles of water were applied to feet and sides; ordered small pieces of ice in the mouth if she complained of thirst. Gave twelve minims of Magendie's solution of morphia hypodermically.

Wednesday.—7 A.M.: Temperature, 104° ; pulse, 116; respiration, 14. Slight tympanites; no pain; features less pinched; feels better. No vomiting on coming out of ether. Decided to treat as after ovariectomy. Ordered the following enema every six hours:

R. Quin. sulph. gr. v.
 Acid. sulph. aromat. gtt. v.
 Liq. opii comp. gtt. xl.
 Spts. vini Gallici $\frac{3}{4}$ ss.
 Beef-juice $\frac{3}{4}$ ss.
 M. Sig.—Enema every six hours.

Abdominal ice-water coil applied. No nourishment to be given by mouth. 2 P.M.: Temperature, $103\frac{1}{2}^{\circ}$ in vagina; pulse, 116. No nausea. Looks and feels better. 8 P.M.: Temperature, $103\frac{1}{2}^{\circ}$ per vaginam; pulse, 116. Condition and treatment same.

Thursday, 28th.—5 A.M.: Did not sleep during night. Temperature, 104° by vaginam; pulse, 120. Gave ten minims of Magendie hypodermically. After this she slept four hours. Ordered two drachms of iced milk by mouth every two hours. 6 P.M.: Temperature, 103° per vagina. Flatus escapes freely by bowel and mouth. No nausea,

no pain. Pinched look disappearing from face. Retains milk and beef-tea.

Friday, June 29th.—9 A.M.: Temperature, $101\frac{1}{2}^{\circ}$ by vagina; pulse, 90. Begins to call for food. No nausea. Nutritive enemata continued every six hours. Abdominal coil still on. Slept five to six hours during night. Eyes brighter and face less pinched. Bowels passed a thin, aqueous, yellow, fecal fluid at 9.10 A.M. To take half an ounce of milk or beef-tea by mouth every half hour. 6 P.M.: Bowels moved again. Slept during day. Temperature, $101\frac{1}{2}^{\circ}$ by vagina. Good appetite.

Saturday 30th.—11 A.M.: Temperature, $100\frac{1}{2}^{\circ}$ by vagina. Quinia and sulphuric acid omitted from enemata. One ounce of nourishment to be taken by mouth every half hour. Slept well. 6 P.M.: Temperature, 101° . Doing well.

Sunday, July 1st.—10 A.M.: Temperature, $99\frac{1}{2}^{\circ}$ per vagina. Slept well; appetite good. 6 P.M.: Temperature, $99\frac{1}{2}^{\circ}$ by vagina; $98\frac{1}{2}^{\circ}$ by mouth. Bowels moved at 11 A.M. Coil taken off for the first time; appetite good. Doing well.

Monday, July 2d.—8.30 A.M.: Temperature, $100\frac{1}{2}^{\circ}$ by vagina; $99\frac{1}{2}^{\circ}$ by mouth. Coil off all night; slept well. Nourishment by rectum stopped; appetite good.

Tuesday, July 3d.—9 A.M.: Temperature, 100° by vagina. The wound has been washed out four times daily with solution of carbolic acid. To-day the tube was taken out and wound dressed with balsam Peru. Suppurating moderately. Slept well. Appetite not so good; tongue coated and bowels flatulent. Ordered mist. rhei et sodæ, $\frac{3}{4}$ ss. every six hours.

Wednesday, July 4th.—Temperature, $98\frac{1}{2}^{\circ}$ by mouth. Bowels have not acted. Doing well. Nourished entirely by mouth.

Thursday, July 5th.—Pulse and temperature normal. Appetite good. Sleeps well. Two actions of bowels since last call; as bowels are constipated ordered a dose of rhubarb.

Friday, July 6th.—Temperature, $98\frac{1}{2}^{\circ}$; pulse, 84. Bowels acted three times after taking rhubarb. Doing well. Wound suppurating, but healing fairly well.

July 12th.—Wound almost healed. Bowels normal. Appetite good. Sleeps well. Looks and feels well. Sits up to-day for first time.

July 18th.—Wound healed and patient up and walking around.

July 21st.—Patient perfectly well, and to-day went to Peekskill, N. Y., to visit friends.

The two points to which I desire to call attention in this case are: first, the returning to the abdominal cavity of intestine at such an advanced stage on the way to gangrene; and second, the manner of obliterating the hernial sac.

CASE II.—G. F.—, German, aged fifty-two; always healthy until ten years ago; has been a caster in a metal foundry for past twenty-five years.

Patient states that about once a year for the last ten years he has been suddenly attacked with severe pains in bowels of a crampy character—with severe vomiting, lasting twenty-four to forty-eight hours or longer (patient attributed these attacks to the fumes from molten spelter, which is a kind of impure zinc containing copper, iron, arsenic, etc., he being constantly exposed to these fumes). Aside from this has always been well. Has never had hernia or any tumor of any kind.

Patient was taken in the manner described above about noon of Saturday, January 21, 1882. Attack was so severe that he had to leave work. During—or before—this attack a tumor appeared for the first time in the left femoral region. He stoutly affirms that the tumor had not existed previous to attack. I was first called to see patient early Sunday morning, January 22d. He then stated that he was suddenly attacked about noon of the previous day with severe cramps in bowels and vomiting, which was very severe and persistent, affording relief for but few minutes. These paroxysms had continued all

¹ The constriction was found to be the neck of the sac.

night without sleep. Had not sent for a physician because he supposed the attack to be like the previous ones and due to the same cause. Thought he had been in same condition many times before. When asked if he had ever had hernia or a tumor of any kind in groin, he positively stated that he had not. Not finding a satisfactory explanation otherwise for the symptoms, I made a thorough physical examination and found in the left groin, apparently at junction of inner and middle thirds of Poupart's ligament, a tumor about two-thirds the size of an English walnut, which yielded no impulse on coughing, no resonance on percussion, apparently solid and having the feeling of glandular tissue. I should certainly have regarded it as an enlarged gland in the absence of the existing symptoms. As it was, I regarded it as a hernial protrusion, and ordered an ice-bag to be applied to it, and one grain of opium to be taken every four hours. Taxis failed.

Called again at 6 P.M. and found the symptoms all much increased in severity. Features markedly pinched; vomiting stercoraceous; bowels had not been moved, although repeated large enemata had been administered since previous call. I urged an operation, as I had found all efforts at reduction to be fruitless, but patient replied that he did not want "to be cut up alive." Enemata, ice-bag, and opium continued.

At 3 A.M. on Monday morning was summoned to patient in haste, and found that stercoraceous vomiting had continued all night, pain and prostration were very great. He was begging for an operation or anything that would relieve him. Assisted only by my student and the feeble light of two kerosene lamps, I proceeded to the operation. Patient being etherized, a final effort at reduction was made, but failed. Then proceeded to operate in the usual manner. The skin being cut through, the deeper tissues were carefully and slowly separated upon a director. Hernial sac having been reached, the peritoneum was found to be perfectly normal, absolutely free from thickening or inflammation, and the hernia to be recent.

On careful search, the point of constriction was found to be at Gimbernat's ligament. This was carefully cut upward and inward as far as deemed necessary, but failing still to reduce, it was cut a second time. A second attempt at reduction failing, I introduced the point of the index finger and stretched the opening until reduction was readily accomplished. The index finger was then introduced into abdominal cavity and swept entirely around, but no adhesions found. The hernia was reduced *en masse*, the sac not being opened.

The wound was closed with silk sutures, the sutures being deep, and an attempt being made to pass them through the margins of the ring and thus effect a radical cure. This latter point probably failed. No drainage-tube was used. A compress and bandage as usual.

For the first four days the wound seemed to be healing by first intention. At this time it was found that a deep abscess had formed. This was freely opened and a drainage-tube inserted. Treated subsequently after the ordinary manner of open wounds. Treatment as to food and anodynes was such as is ordinarily adopted after abdominal surgery. Improvement was gradual after recovery from shock of operation. Flatus escaped from bowels immediately after operation. Appetite gradually returned and nausea soon disappeared. Bowels did not act till fifth day and then with no cathartic.

Discharged patient as cured on February 7th.

Ordered a truss for him on February 20th, which he has been wearing since.

July 27, 1883.—Patient has been wearing the Otto elastic truss from time of recovery until July 4, 1883, when being on vacation from work and supposing the truss to be only necessary during labor, he removed it and left it off three or four days. During this time the hernia reappeared again for the first time. The truss was replaced and has kept the hernia in place since, but it still returns on removing the truss, especially when he coughs.

Progress of Medical Science.

STENOSIS OF THE PYLORUS RELIEVED BY DIGITAL DILATATION.—The following case was reported by Professor Loreta to the Academy of Sciences of Bologna: The patient, a man forty-seven years of age, had suffered for the greater part of twenty years from imperfect digestion, distention of the stomach, sense of weight, and occasional vomiting. In 1878 he was admitted into the Bologna Medical Clinic, and treated for ulcer of the stomach. Relief ensued, but only for a short time. Eructation, a burning feeling in the throat, vomiting of undigested food, sometimes mixed with blood, increasing emaciation, and pallor of the skin and mucous membranes were noted. The man subsisted on a little milk. The distended stomach gave a clear note on percussion from the fifth rib to the umbilicus. Microscopic examination of the fluid drawn by pump from the stomach yielded no evidence of organic lesion. On palpating the emptied stomach, a tumor could be felt in the pyloric region, with smooth and elastic surface, but not very well defined limits. As the patient was steadily sinking, it was determined to resort to operation. The stomach was first washed out with an alkaline solution. The incision into the abdominal wall was commenced a little to the right of the linea alba, and extended outward and downward for six inches; the lower angle was an inch and a quarter from the ninth right costal cartilage. The omentum was extensively adherent by old inflammatory exudations. These were separated very slowly and carefully from the abdominal wall and from the surface of the stomach. This viscus was then drawn out through the wound, and the operator felt the pylorus much enlarged and of fibrous hardness. In the space between the two curves of the stomach, and at a distance of an inch and a quarter from the pylorus, an opening was made into the viscus with a stout pair of scissors through a transverse fold previously raised. The opening into the stomach was extended two inches and a half, and T-shaped forceps were used to arrest bleeding from the edges. The right index-finger was then passed into the stomach toward the pylorus, which was completely closed. The finger failed to pass into the duodenum, in spite of considerable pressure and combined lateral and rotatory movements. The left index-finger was then introduced into the stomach and used to fix the pylorus, while strong and renewed pressure was exerted to push the first phalanx of the right index into the narrow and contracted pylorus, which was then drawn forward to the external wound. Along the right index-finger the left one was also introduced into the pylorus, but these attempts failed to pull one finger from the other in spite of much force, sustained as long as possible. After resting, the operator resumed his efforts and dilated the pylorus, though he only succeeded in doing so very slowly, and by employing very great force. The dilatation was continued to about three inches. The stomach wound was then sutured with carbolized silk, the viscus replaced in the abdominal cavity, and the external wound closed with seven silver sutures. The patient was returned to bed thirty-three minutes after the commencement of the operation. On regaining consciousness he complained only of thirst and of a slight burning sensation at the wound. Small pieces of ice were given from time to time. In the afternoon the patient complained of weakness and hunger, and relished the yolk of an egg beaten up with Marsala wine, given in teaspoonfuls every half hour. The temperature throughout the day was 98°, pulse 72, respiration 26. The same kind of diet was continued. The third day after the operation the bowels acted after an enema, the fourth day some broth and light paste were allowed, the fifth day some chicken, the sixth day bread was added to the diet. On that day the bowels acted spontaneously. The wound was first

dressed on the eighth day, and five sutures removed. The incision had healed by the first intention. The two remaining sutures were removed on the eleventh day. The thirteenth day after the operation the patient's diet consisted of coffee and milk, bread, roast chicken, roast beef, eggs, and wine. He was out of bed for two hours and a half on the sixteenth day, and rapidly gained flesh and strength. Two days before the operation the man weighed one hundred and twenty-two pounds, and gained about thirty-three pounds in six weeks. He continued to enjoy perfect health when presented to the Bolognese Academy after the lapse of five months. Professor Loreta subsequently performed a similar operation in another case, and with equally good result; but in this instance he experienced much less difficulty in dilating the pylorus.—*The Lancet*, August 18, 1883.

THE CAPILLARY PULSE.—Quincke and others have called attention to a rhythmical dilatation of the capillaries, occurring synchronously with the heart-beats, in certain morbid conditions, or even in certain individuals in a state of apparent health. This pulse is seen most readily under the finger-nails, and has also been observed in the retina. It is most marked in slightly anæmic persons, and especially in sufferers from aortic insufficiency, though in neither case is it of constant occurrence. Dr. Albert Ruault, writing in *La France Médicale* of August 4, 1883, mentions a method by which this phenomenon may be conveniently studied. The head of the patient is firmly held in a suitable light, and then the forehead is rubbed for an instant by the flat of the finger-nail. If, now, the patient is the subject of a capillary pulsation, the white spot in the forehead will become reddened at the moment of cardiac systole, and at the same time the integument will be visibly elevated. M. Ruault observes that this phenomenon is nearly constant in cases of aortic insufficiency when the heart beats regularly and forcibly, but it is usually absent if the heart-action is irregular and feeble. Recent researches of Franck have shown that the mean arterial pressure in aortic regurgitation, so far from being diminished, is equal to, or greater than the normal. This indicates that the arterial system is in a state of tension. Now, says the author, if a momentary vasomotor paralysis be produced by drawing the nail across the forehead, the blood will be forced into the network of dilated capillaries at the moment of systole, and the skin will be reddened with each pulsation. This phenomenon is only met with in those pathological conditions in which there is an increased cardiac impulse, and, at the same time, a general arterial contraction. Aortic insufficiency, arterial sclerosis, and certain forms of anæmia are the conditions noted by the author as those in which the frontal capillary pulse is most readily observable.

RISE OF BODILY TEMPERATURE AFTER SIMPLE FRACTURES.—Dr. Grundler has been making a series of thermometric observations in patients suffering from uncomplicated fractures, and found in every case but one of those examined, a rise of from 2° to 4° F. above the normal. The degree of fever is in proportion to the size of the broken bone, and to the degree of extravasation. The highest temperature observed (102.5°) was in a case of fractured femur, and the lowest (100.5°) in fracture of the forearm. The rise began on the evening of the first day, and reached its highest point on the evening of the second to the fourth day.—*Centralblatt für Chirurgie*, August 11, 1883.

A POST-MORTEM CATALEPTIFORM STATE.—Brown-Séquard states that he has observed a peculiar cataleptiform condition in the muscles of the legs in pigeons, after having made a cross section of the cerebral hemispheres, the optic thalami, the cerebellum, the medulla oblongata, or the cervical portion of the spinal cord. It occurs likewise after a crushing of the head. In a short time, usually in less than fifteen minutes after death, the con-

dition manifests itself, so that the leg will remain fixed in any position in which it may be placed, even though it be opposed to the force of gravity. It has nothing to do with rigor mortis, and comes on earlier than that. It is produced most speedily after the head has been crushed. Neither the spinal cord, nor the motor nerves, nor the terminal motor plates are concerned in its production. There is rather, according to the author, a direct action of the central nervous system upon the muscles, the nature of which he hopes, by further investigations, to elucidate.—*Centralbl. für Klin. Med.*, August 18, 1883.

RECOVERY AFTER THE PASSAGE OF A RAMROD THROUGH THE BRAIN.—Dr. G. Fisher reports an instance of recovery after severe injury to the brain, which recalls the well-known case of Dr. Harlow, of Vermont, in which a tamping-iron was forced through the head by a premature explosion. In this case, an iron ramrod was discharged during the loading of a gun. It entered the back to the right of the fourth dorsal vertebra, passed upward along the ribs, and through the muscles of the neck, and forced a passage through the skull and the brain, projecting out nearly twelve inches from the left side of the head. An incision was made in the neck, and the ramrod was forced back by a hammer and extracted through the wound thus made. The patient recovered, but lost the sight in the right eye. A ramrod being propelled in the same direction through a dead body, it was found that in its course through the neck no important nerves or vessels were injured. The instrument passed through the right optic foramen, tore the optic nerve, and passed through the fissure between the frontal lobes. The destruction of brain-substance in this region was only a little over an inch in extent, and was confined to the anterior portion of the left frontal convolution. According to our present knowledge, such an injury should cause no motor or sensory disturbances. The author apprehended the appearance in time of insanity as the result of the accident.—*Centralbl. für Klin. Med.*, August 18, 1883.

EUCALYPTUS IN THE TREATMENT OF GANGRENE OF THE LUNGS.—Dr. Bonamy relates the case of a man, about fifty years of age, who was admitted to hospital suffering from cough, dyspnoea, and fever. A few days after admission the fetid odor of his breath became so extreme that it was necessary to separate him from the other patients. There was dulness in the axillary line on the left side over the middle portion of the lung. At this point there was tubular respiration and crepitant râles were audible at the end of inspiration. The sputa consisted of a black matter, detached portions of which were swimming in an abundant serous fluid. The cough was incessant, and the odor intolerable. A diagnosis was made of gangrene of the lung of superficial extent. The patient was first put upon a mixture containing carbolic acid, but no improvement following, this was replaced by tincture of eucalyptus. In two days after the last prescription the odor of the breath was much less offensive, and in less than two weeks the patient was cured.—*Le Courrier Médical*, August 18, 1883.

TREATMENT OF GRANULAR LIDS.—Dr. Arnoux claims to have met with great success in the treatment of granular lids by the following simple method: The lid is everted and wiped dry with a piece of blotting-paper. The granulations are then touched very lightly with a crystal of sulphate of copper, and immediately after a smooth cylinder of zinc is passed over them. Then the conjunctiva is carefully dried again, and, as far as possible, the impalpable black powder, which remains after the operation, is removed. The lid is then replaced, but not allowed to touch the ball of the eye for a minute or two. No subsequent cold applications are necessary, as there is little reaction if the operation be delicately performed.—*Gazetta Medica di Roma*, August 1, 1883.

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PATHOGENY AND TREATMENT OF APOPLEXY.

THE old word apoplexy (Greek, a stunning blow or shock) has been retained by most writers on internal pathology to represent a congeries of symptoms due to serious interruption of the encephalic circulation. Though formerly, owing largely to the influence of Rochoux, limited to interstitial hemorrhage, and consequently applied to the rupture of blood-vessels in any organ of the body, it now denotes, in the usage of the best authorities, the sudden suspension of cerebral action produced by an internal cause affecting the circulation (vascular rupture, congestion or anæmia) and acting directly on the encephalon.¹

Rochoux's numerous observations as to the pathogeny of apoplexy had led him to conclusions more positive and rigorous than his predecessors, Morgagni and Hoffmann, had ventured to entertain. The latter recognized in cerebral hemorrhage the principal, but not the only cause of apoplexy; there had been cases in the experience of these older pathologists (and Morgagni may be said to be the founder of pathological anatomy) where the necropsy revealed nothing but an excess of serum in the ventricles, entailing, in their judgment, paralysis from pressure; other cases disclosed no appreciable post-mortem lesions, and it was found necessary to admit the existence of "nervous" or "essential" apoplexies.

The dominant influence of Rochoux and his anatomopathological studies for a time threw doubt and discredit on the so-called essential apoplexies, and it was held that intra-cranial hemorrhage, or intense congestion with hemorrhagic tendencies, was always the antecedent of the true apoplectic ictus. The first work in which public attention was directed to arterial thrombosis as a cause of local gangrenes and softenings was that of Hodgson, on "Diseases of the Arteries," published in 1814. Later, and within our own epoch, came the valuable discoveries of Virchow, Panum, and Lancereaux, relative to embolism and thrombosis, and other causes of local ischemia; and now to apoplexy from hemorrhage or from hyperæmia we must add apoplexy from anæmia. Of still later date is the startling discovery of Charcot and Bouchard that cerebral hemorrhage owes its most frequent origin to the presence in the arterioles of the cerebral hemispheres or basal ganglia, of miliary aneurisms, the result of chronic periarteritis and softening of the middle coat.

However various the conditions which give rise to the apoplectic seizure, they are all reducible in last analysis to some circulatory disturbance. The heart under hypertrophy or excitement may send too much blood to the brain, and arterioles or capillaries may give way, and an interstitial extravasation disorganize nerve-fibril and nerve-protoplasm by the very fluid destined to nourish their histological elements. This accident is more likely to take place if the encephalic vessels are enfeebled from malnutrition or disease; and endarteritis and periarteritis with resulting calcareous and atheromatous degenerations, and multiple miliary aneurisms, favor the production of hemorrhage. All inflammatory and degenerative lesions of the endocardium and blood-vessels also predispose to the formation of clots, constituting emboli or thrombi, which may cause sudden obstruction of some intra-cranial vessel, with all the ensuing apoplectic phenomena.

As a typical example of apoplexy, we will take a case of hemorrhage into the left corpus striatum. An important motor ganglion, a halting-place, as it were, for the reinforcement and co-ordination of all voluntary impulses emanating from the cortex, a ganglion, moreover, in which all the muscular groups of the body have their representative elements, is all at once deprived of blood by rupture of its nutrient artery. So far it is in the same condition as though its arterial supply had been cut off by an obturating clot. In both cases function must cease, and necrobiosis occur, except so far as collateral circulation may restore the loss. In the hemorrhagic form there is a double lesion, the interrupted circulation and the extra-vascular clot, irritating, lacerating, and compressing nerve-fibrils and nerve-cells. Hence the "shock" resulting from hemorrhage is generally more conspicuous than the shock from infarction (by autochthonous or migrating clots). Certainly in the one case an initial coma is the rule, in the other it is the exception. There is right-sided motor, perhaps also for a time sensory hemiplegia, and there may be aphasia, whether from interruption of the channels of transmission of the voluntary influx destined to the muscles of phonation and articulation, or from involvement of Broca's convolution. According to McLane Hamilton, the face will be paralyzed on the same side as the arm and leg. There is also coma, which is generally temporary. What causes the sudden loss of consciousness? This is a problem over which physiologists have wrestled. The best explanation we can give is that the local paralyzing lesion has reflexly inhibited the hemispheres also. It is the radiation to the conscious intellectual centres of the basal irritation.

As for the frequency of apoplexy, it is one of the most common causes of death in old people. The liability progressively increases from twenty upward; cases under twenty are very rare. Of sixty-nine cases collected by Rochoux,¹ fifty were beyond the fiftieth year. What percentage of people in advanced life actually die from apoplexy it is difficult to determine, deaths from this disease being recorded in city registers as deaths from paralysis (a term by no means synonymous with apoplexy, though in popular usage regarded as such), and sudden death from heart disease being every day (for want of an autopsy) referred to apoplexy.

¹ Schützenberger.

¹ Rochoux: *Recherches sur l'Apoplexie*. 1814.

The most unobjectionable classification is as follows : 1, Congestive Apoplexy ; 2, Hemorrhagic Apoplexy ; 3, Ischaemic or Necrobiotic Apoplexy. The pathogeny of the last two forms has already been touched upon. In congestive apoplexy there must be something more than simple cerebral hyperaemia to account for the symptoms ; there must be an absolute stasis in the capillaries and veins, during which rupture is imminent. The pathological condition, then, producing coma, resolution, and paralysis, is one of suspension of function from interruption of the nutrient circulation, assisted, it may be, by pressure of the engorged blood-vessels on nerve-centres and conducting strands.

The old division of serous apoplexy may as well be banished from internal pathology, as it is doubtful if serous effusion alone ever gives rise to apoplexy.¹

As accurate diagnosis is essential to exact treatment, so it would seem desirable that the physician when called to a case of apoplexy should know what kind he has to treat. Is it congestive, hemorrhagic, or ischaemic ? He has (we will suppose) ruled out narcotism, alcoholic intoxication, syncope, and hysterical as well as epileptic coma. When the coma soon subsides without leaving paralysis, it may be inferred that the attack was of the congestive kind ; the march of the affection points out the diagnosis. Moreover in apoplectiform congestion, as Racle² has shown, the jugulars and veins of the face are distended, the whole brain is engorged with blood ; the symptoms are generally cephalalgia, obtuseness of the senses, enfeeblement of the muscular functions, but true paralysis is wanting.

Between apoplexy from hemorrhage and apoplexy from an intravascular clot the diagnosis is more difficult, for the symptoms of the two forms are often identical. If the patient is old, and has beady, calcareous arteries, the presumption is that arterial thrombosis is the cause. The presumption is strengthened if, as before indicated, and as Todd, Trousseau, and Alexander Robertson long ago pointed out, there has been sudden complete hemiplegia without loss of consciousness. The presence in the patient of the tuberculous or cancerous cachexia would favor the hypothesis of thrombosis. A limitation of the paralysis to one arm, a leg, or to the face would indicate vascular infarction rather than hemorrhage. Recamier laid down some rules of diagnosis, to which unfortunately there are very many exceptions. Contracture of the paralyzed members, anæsthesia of the same parts, and enfeeblement of the intelligence, pertain to hemorrhage ; complete resolution of the paralyzed members, conservation of sensibility and intelligence, to ramolissement. According to Charcot, aphasia belongs almost exclusively to ramolissement. Embolism is more commonly met with in young patients and in the great majority of cases coincides with valvular disease of the left heart ; it comes suddenly without prodromata, the paralysis is hemiplegic, the peripheral arteries are healthy, and there are often signs of obstruction in other viscera, notably the spleen, which is enlarged and painful.³

Such are some of the diagnostic points, but, as before

said, there will be many cases where you cannot be certain in your diagnosis.

Only one or two points connected with treatment demand consideration here. Prophylactic treatment can do but little to prevent the manifestation of the more serious forms of apoplexy. We are as powerless to retard atheromatous degenerations as we are to arrest senile decay. The patient with hypertrophied heart and diseased arteries should lead a quiet, temperate life. Remedies, such as purgatives, salines, and veratrum, which diminish arterial tension, may be indicated as prophylactics whenever there is reason to fear apoplexy. The same remedies are also indicated at the time of the attack. Cold applications to the head are also of utility, and the same may be said of warmth to the feet ; sinapisms may be applied to the extremities if due caution be exercised. Bleeding should never be employed in the grave forms, and it is only indicated, and that, perhaps, rarely, in the congestive form. Sometimes venesection may be the speediest means of reducing high arterial tension, and preventing hemorrhage. Purgatives may always be tried in congestive apoplexy, and very generally they will be found to be beneficial. When there is reason to believe that hemorrhage has taken place, there are no medicaments by which we can with certainty moderate or arrest the sanguineous extravasation. If an artery have undergone occlusion we can neither promote removal of the clot, nor prevent the resulting necrobiotic softening. There is no sufficient evidence that the large doses of ergot and bromides, too indiscriminately used in all cases of apoplexy, do any good, and the same may be said of the free use of strychnia for the resulting paralysis.

KERN'S CATAPLASMATA IN THE TREATMENT OF LYMPO-SARCOMATA.

IN an article published in *THE RECORD* last spring we mentioned some facts regarding the efficacy of Kern's poultices in lympho-sarcomata. We have since had many inquiries regarding the matter, and therefore take pleasure in presenting the substance of a lecture upon this subject delivered by Professor Busch, of Bonn. Professor Busch recounts the failures which he had experienced in treating malignant sarcomata with the knife, by electrolysis, and by injections of various kinds. He had learned to recognize the value of Kern's cataplasms when a young physician in the military hospitals, where he had often seen obstinate buboes melt away under their use. These cataplasms are composed of one part mustard-flour to five parts of black soap, the whole being enclosed in a gauze bag, and applied daily over the tumor for four or five hours or longer. A very intense irritation, amounting almost to an erysipelas, is produced. The sarcomatous tumors, if fresh, soften and disappear. The results of this treatment are best shown by giving the history of a case of progressive lympho-sarcoma as described by Professor Busch :

"The patient, a very powerfully built man of thirty-five, had noticed in the beginning of July a hard swelling beneath the left angle of the lower jaw. He used water applications, presuming it to be a tonsillitis. But as the tumor grew he sought medical advice, and at first inunctions of mercurial ointment, linseed poultices, arnica, and

¹ Flint : *Prac. Med.*, p. 576.

² *Guide Clinique*, 1866, p. 94.

³ Jaccoud : *Path. Interne*, t. I., p. 148.

poppy-seed were applied. On August 13th I was called in to examine the patient and was frightened to see the appearance of the man, who two months prior had been in the best of health. An immovable tumor extended from the middle line of the neck to the vertebral column, from the inferior maxillary bone to the internal half of the clavicle. The larynx was pushed to one side of the middle line and the sternal extremity only of the sternocleido-mastoid muscles was discernible. The pulsations of the carotid could not be perceived at its proper place, as it was surrounded on its whole course. The pains of the occipital region and vertex, so characteristic in these tumors, were felt by the patient. They were occasioned by the great stretching of the posterior auricular and occipital magnus nerves. The voice had become somewhat hoarser, as the result of pressure upon the pneumogastric or recurrent nerve. With these symptoms, and in the presence of the very rapid growth of the tumor, I could only express my opinion that in all probability the patient's life would be terminated within a few weeks. If I advised any remedy, it would be the poultices of Kern. Possibly they would not benefit a great deal in this case, and should this be the case in a few days they would be discontinued. Next day I took my vacation-trip and left the patient in charge of Dr. S—, who relates to me the succeeding events. The patient endured the poultice (one to five) very well, so that (instead of having it applied, like the other patients, for four to five hours) he let it remain upon the tumor for twelve hours. In the evening the canterized region was covered with vaseline and cotton and morphine given internally. Already on August 27th, fourteen days later, an evident diminution of the tumor and greater mobility was ascertained. The cataplasmata were continued for four weeks and iodide of potassium (5 to 200) given per os. After the tumor had completely disappeared, small quantities of iodoform were brushed upon it. I saw the patient, whom I did not suppose to be still among the living, on October 3d, cured."

Professor Busch is inclined to attribute the powerful action of this remedy to the erysipelatous irritation produced by it. Professor Binz, to whom he communicated this view, thought that the oil of mustard, penetrating the softened skin, might also be a factor. At any event, the result appears as undeniable as it is extraordinary. It is not likely that all cases even of fresh tumors would have so happy a termination. It is not stated whether the tumor returned.

POWDER OF BEEF-BLOOD AS AN ALIMENTARY PRINCIPLE.

OUR ideas of nourishing invalids with irritable and weak digestive powers have been somewhat revolutionized of late years by the remarkable results of Débove and Dujardin-Beaumetz with their methods of forced feeding; and they have clinically demonstrated that proper nourishment plays no unimportant part in the therapeutics of certain chronic and convalescent states. The indications for forced feeding are presented very frequently in practice, much more frequently, indeed, than many will allow.

Though the cases in which Dujardin-Beaumetz and

Debove, the splendid results obtained by Weir Mitchell and Playfair with systematic feeding, show that its application is not limited to that class. Many cases of hysteria, anæmia, chlorosis, and convalescence from acute diseases and organic affections are accompanied by loss of appetite and even disgust for food; due in great part to the fact that the stomach has become so unaccustomed to the presence of food that it has partially lost its digestive power, the best restorative of which is food in small quantities frequently repeated. As the normal bulk of food cannot be retained or digested, the quantity must be decreased, while the nutritive value must be correspondingly increased. For this purpose we have the various meat-powders, etc., many of which are valuable, though in some cases none can be relished, or even retained, on account of their insipidity and, to some, slightly nauseous taste.

Excellent results have been obtained from the use of dried beef-blood. Recently Guerder, of Paris, has made an extensive trial of the dried beef-blood, made, however, by a new and improved process. Its advantages over powdered meat are: it is much cheaper, is superior to it in alimentary properties, representing seven times its own weight of fresh blood, and it exercises a more pronounced stimulant action on digestion and on the general organism. Whether this stimulant action is due to the extractive matters of the dried blood, to its salts, or to the large proportion of iron contained in it, cannot be positively stated. It is highly probable, however, that the iron constitutes an important factor, as its proportion of 0.30 part per 100 is sufficiently large to represent medicinal doses of iron.

It is quite certain that the reputed indigestibility of blood is without foundation, as the blood-bread in common use in Sweden is highly nutritious and easily digested, as are the blood-puddings eaten in other countries.

Débove and Dujardin-Beaumetz have not had good results from the use of dried blood. Guerder attributes this want of success to the large quantities which they administered, and their faulty methods of preparing it. Indeed, their results with his preparation have been eminently satisfactory. Guerder had administered it in 51 cases. Of this number, 44 took it well, and without inconvenience, for several weeks. Three convalescents from typhoid fever were unable to retain it at all, while to the remaining 4, all chlorotics, it was disagreeable, producing unpleasant sensations in the stomach, and was sometimes vomited unchanged after several hours. While there is, of course, no fixed dose, we should be careful that the stomach is not imposed upon. A large spoonful may be given three or four times a day to children, with a little cold coffee, and two or more spoonfuls to adults. Pepsin may be added if it causes gastric disturbance. If the patient takes other food, the blood should be taken with it, preferably in a cold liquid, and, if necessary, disguised by some aromatic, as heat develops its peculiar taste and causes difficulty of absorption.

Although excellent results have been obtained from its use in chlorosis, convalescence from acute diseases, etc., its effects upon phthisical patients have been most remarkable. When the disease was not far advanced there was invariably an early increase of strength, weight, and

appetite. It is desirable that it be still further used, in order to determine, as nearly as possible, its exact value, and certainly, with Guerder's results, it is worth the trial.

Guerder's method of preparing the dried blood is as follows: Fresh beef-blood—sheep's blood is undesirable, having a very unpleasant odor—is defibrinated and cooked for five hours on a water-bath, then slowly dried in a current of warm air at a temperature of 104° – 108° F. This demands at least three days, as every trace of moisture must be removed in order to prevent decomposition.

In this connection we may also speak of another article—highly nutritious, easily digested, and retained, and but little used—viz., raw eggs. The only objection to their use is the individual objection of the patients, and this only before the first is taken—for they seldom object afterward. The egg may be broken into a glass, care being taken that the yolk is not broken, a little salt and pepper added, if desired, and the patient takes it. He scarcely has the trouble of swallowing, for it goes down of itself. We have seen patients retain easily and even relish a raw egg, who could retain nothing else, more than six hundred being taken in one case within three or four months. It goes without saying that the egg should always be carefully selected; and, indeed, for fear that one which has seen its best days should disgust the patient, it were better to prepare it out of his sight.

EXPULSION OF THE RELIGIOUS ORDERS FROM THE PARIS HOSPITALS.

THE Government of France has for some years been engaged in a crusade against the church, and has sought by every means in its power to suppress its ministers and to place difficulties in the way of the practice of religion by believers. As long as its efforts were confined to the expulsion of the religious orders and the secularization of the schools, the matter was one of but little concern to medical men, however much they might as individuals be amused or shocked at French ideas of liberty. But, being emboldened by the success of their measures in banishing religion from the schools, the members composing a majority of the Assembly have now turned their attention to the hospitals. They first passed a decree abolishing the office of chaplain in all the hospitals. This was done on the plea of economy, and it was asserted that the patients would by no means be deprived of spiritual consolation, as, if a request were made to that effect, the nearest parish priest would be summoned. But their subsequent action in driving out the sisters showed plainly enough that they were not actuated by motives of economy. Their design was to render as difficult as possible all access of the ministers of religion to the sick and dying in the hospitals. Every medical man, no matter what his particular belief or unbelief may be, knows from experience that the quiet of mind resulting from the consolations of religion often exert a most beneficial influence upon the sick, and it cannot but be regretted that the French authorities have seen fit to reject this adjuvant to medical skill and nursing. As stated above, a further decree has been promulgated, removing the sisters from the hospitals and supplying their places with salaried nurses. To those who know the value of good nursing and have occasion to see

the efficiency of the sisters of different orders in the various hospitals under their care, this move of the French Assembly seems little short of brutal. Whatever may be thought of the danger of permitting priests to exercise their vocations in the French schools and hospitals, certainly the integrity of the Republic can hardly be imperilled by allowing inoffensive sisters to nurse the sick. Even the authors of this measure have themselves been forced to bear unwilling testimony to the worth of these devoted women. At a recent meeting of the Conseil de Surveillance de l'Assistance Publique, the question of the secularization of the Hôpital Necker came up in the order for the day. But it was decided to retain the sisters for the present, because of the possibility of an epidemic in the city. As soon as this danger is over they must go, and M. Quentin engaged to supply the places of a hundred religious by an equal number of lay nurses before the end of the year. The French ministers are a little too intemperate in their anti-clerical zeal, and both doctors and patients will have cause to deplore the unwisdom of the secularization of the hospitals.

THE ANTISEPTIC ACTION OF DRUGS WITHIN THE BODY.

THE parasitic theory of disease is one that appeals most temptingly to the imagination of the therapist. Once the particular parasite is found upon whose presence in the organism the manifestations of any given disease depend, experiments will speedily determine what drugs are poisonous to it. Then, these two factors being given, what can be more easy than the solution of the problem of cure? It is only necessary to give the remedy in quantities sufficient to kill the parasite, and our patient is cured—provided, of course, that the microbe has not had time to produce irremediable organic lesions. When the disease is a local one and admits of the direct application of the antiseptic agent, this dream may be realized. Indeed, empiricism has often, in such cases, anticipated the deductions of science, and we find the explanation of the action of long-used remedies in the power they possess of destroying certain low forms of organic life. But in the treatment of systemic or internal diseases of parasitic origin a more complex problem presents itself. If the tuberculous patient carried his bacilli about in a bottle or a test-tube instead of in his lungs or other organs, their destruction would be a very simple matter. But when it comes to killing the micro-organisms which are scattered about in various inaccessible organs and tissues of the body, the dose of the required remedy must be so great that we run the risk of killing the patient as well as his parasites. Koch has determined by experiment that corrosive sublimate is fatal to the anthrax bacteria when added to the culture fluid in the proportion of 1 part to 200,000. If given in the same proportion to the mass of blood in a man weighing one hundred and thirty pounds, it would require at least two-fifths of a grain in a single dose. Binz endeavors to show that a proportionate dose may be given by intravenous injection to animals without fatal results. He therefore takes issue with those who have denied the possibility of destroying micro-organisms within the body, without, at the same time, endangering the life of the

patient. The value of Binz's experiments is, however, questioned by Buchner (*Centralblatt für Klinische Medizin*, July 14, 1883). The latter claims that corrosive sublimate in the proportion of 1 part to 200,000 of the animal fluids is fatal to the organism, and he refuses to accept the conclusions of Binz in disproof of his assertion. Corrosive sublimate, he says, enters into chemical combination with the albumen of the blood, forming an albuminate of mercury. This substance, although remaining in solution, is less readily diffusible and less capable of endosmosis, and hence there is no certainty that it becomes equally distributed in all the tissues. Further, the bichloride, by its transformation into albuminate of mercury, is robbed of a great part of its poisonous action. This is indicated by the less irritant action, and therefore the less immediately injurious effect upon the cells, of the latter salt when injected hypodermically. Buchner has found that double the quantity of albuminate of mercury is required to produce the same effects upon bacteria as are caused by a given amount of the bichloride. He does not deny that certain diseases are cured by the internal administration of antiseptic remedies, such as quinine, bichloride of mercury, salicylic acid, etc. But he asserts that they act, not as antiseptics, but in some other way, possibly by increasing the power of resistance of the organism to the action of the specific parasite. He says that were quinine to act as an antiseptic within the tissues, it would require in the average individual a dose of at least three ounces. Arsenic, again, possesses feeble antiseptic properties, yet its action in small doses in malaria is undoubted. It cannot be due to its poisonous action upon the malarial bacteria, and must, therefore, be owing to some specific effect whereby the tissues are enabled to resist and throw off the poison. The author concedes that there may be some relation between the property possessed by a drug of destroying micro-organisms outside of the body, and its known value as a remedy in disease, but he denies that the action in the two cases is the same. He thinks that newly discovered antiseptics should always be given tentatively in parasitic diseases, and believes that thereby many valuable specifics may be added to our list. But the attempt to secure an antiseptic action of any drug within the body is not only useless, but fraught with danger to the life of the patient.

THE RECORD'S CABLE REPORT OF THE BRITISH MEDICAL ASSOCIATION.

THE *British Medical Journal* contains the following appreciative notice of THE RECORD's cable report of the meeting of the British Medical Association. "The New York MEDICAL RECORD publishes in its number of August 4th an excellent summary of the proceedings of the recent meeting of the British Medical Association at Liverpool, forwarded by daily despatches through telegraphic cable. The outlay on this enterprising report must have been considerable, and we may refer to it with satisfaction, not only as an admirable example of journalistic enterprise, but as a striking evidence of the strong and growing feeling of sympathy and international interest which characterizes the relations of the profession in Great Britain and America. THE MEDICAL

RECORD speaks in terms of the most courteous compliment and congratulation of the organization of the British Medical Association and its results, and refers with special satisfaction, and in eulogistic terms, which we recognize gratefully without reproducing, to the words in which the health of our guests was proposed at the annual dinner, and the warm friendship felt and shown toward our American guests."

KAIRINE—THE LATEST RIVAL OF QUININE.

THIS new antipyretic agent has as yet attracted but little notice in this country, although it has for some time been the subject of investigations by our German confrères. It was discovered about a year ago by Dr. Fisher, of Munich, who states that it is the hydrochloride of oxyethylquinolinehydrid. If there is anything in a name, there ought to be no doubt of the value of the remedy, but this is a busy world, and life is short, so the name has been mercifully changed to kairine. The testimony thus far collected, concerning the properties of kairine, is somewhat conflicting. Dr. Girat has experimented largely with it on animals, and has found its lowering effects upon temperature to be very constant. It also slows the pulse and diminishes the number of respirations. He administered the drug hypodermically, and states that the member into which the injection was passed became paralyzed. The sensibility of the part was blunted, passing sometimes to complete anæsthesia. Elimination occurs, in part at least, by the kidneys, and is tolerably rapid, the presence of the substance in the urine being determined within twenty-five minutes after its administration. The urine acquires a dark green color. According to Dr. Girat's experiments, the toxic dose is said to range between one and two grains to the pound of the weight of the animal. Dr. Filehne (*Berliner Klinische Wochenschrift*, April 21, 1883) concludes, from observations made by him in disease, that kairine is a most valuable febrifuge, effective in all conditions accompanied by elevated temperature. He has employed it with success in typhoid fever, acute articular rheumatism, septicæmia, phthisis, and pneumonia. He recommends its use tentatively in commencing doses of seven and a half grains per hour for four hours, or until the temperature has fallen to 100° F. The dose is then lowered to three or four grains, to be again increased when the temperature begins to rise. It is stated that by carefully experimenting during the first day, the proper dose may be ascertained for each individual, which may then be adhered to in the subsequent treatment. These favorable effects have not been recorded, however, by all observers. Professor Riegel reports most unsatisfactory results in the treatment of pneumonia by kairine (*Allgemeine Medicinische Central-Zeitung*, July 28, 1883). He was unable to obtain any notable reduction of temperature by four hourly doses of seven and a half grains each, and even larger amounts were often powerless to produce the desired effect. Even when he succeeded in reducing the temperature nearly to the normal, it often rose again in spite of repeated doses of the remedy. As regards the pulse, it was by no means reduced in frequency as the temperature fell, and, furthermore, it was much weakened. An improvement in the subjective sensations

of the patient, as described by Filehne, was not met with, but, on the contrary, there was repeatedly observed such a depression, amounting almost to collapse, that it was necessary to discontinue the kairine and resort to stimulants. The same effect has been noticed by Seifert. Professor Riegel concludes that kairine is a dangerous remedy, in pneumonia at least, chiefly because of its depressing action upon the heart, and he cautions against its use in asthenic forms of the disease. It is evident that further trials are necessary before the exact value of this new substitute for quinine can be determined, and it is doubtful whether it will be able to maintain the high character as a safe and certain antipyretic which the early experimenters claimed for it. In fact, few new remedies answer fully to the expectations of their introducers.

THE WISCONSIN STATE MEDICAL SOCIETY AND THE ISOLATION OF CONSUMPTIVES.

As will be seen in the opposite column, the Wisconsin State Medical Society, during its annual session last week, passed a resolution virtually declaring consumption to be an infectious disease, and urging the necessity of the proper isolation and disinfection of those suffering from it.

This action will be regarded, we believe, as somewhat premature. Phthisis is, to be sure, now considered by pathologists as a tubercular infection, and the possibility of its very occasional contagiousness is not to be denied. But the profession is by no means yet prepared to accept the view that the disease is actively or dangerously contagious. Medical societies, therefore, by intimating that it is so, do an act that is sensational, weak, and injurious to their prestige.

News of the Week.

THE AMERICAN PHARMACEUTICAL ASSOCIATION held its annual meeting at Washington, D. C., on September 10th, 11th, and 12th, the President, Charles A. Heinath, in the chair. Mr. Sloan, from the Committee on Drug Market, submitted a report containing statements and tables reviewing the fluctuations of the market for the year, and stating, among other things, changes made in the tariff on drugs. Mr. J. W. Colcord, of Massachusetts, offered a resolution directing the Committee on Legislation to ask Congress to appropriate \$25,000 for the introduction of foreign medical plants into this country, and for the propagation and care of home plants. He said that the climate of the United States presents peculiar advantages for the growth of many foreign medical plants, and that Dr. Loring, Commissioner of Agriculture, favored the proposition. The Ebert prize was awarded to J. U. Lloyd, of Cincinnati. The following officers were elected for the ensuing year: President, W. S. Thompson, of Washington; First Vice-President, Dr. Charles Rice, of New York; Second Vice-President, T. H. Masi, of New York; Third Vice-President, E. W. Runyon, of San Francisco; Treasurer, Charles A. Tufts, of Dover, N. H.; Permanent Secretary, J. M. Maisch, of Philadelphia; Reporter of Progress of Pharmacy, C. L. Diehl, of Louisville, Ky.

THE ANNUAL MEETING OF THE WISCONSIN STATE MEDICAL SOCIETY.—This meeting was held at Milwaukee, September 5th, 6th, and 7th. Dr. Mason, of Milwaukee, First Vice-President, was in the chair. About sixty members were present. An unusually large number of papers was read. The officers elected for the ensuing year were: Dr. Dodson, of Berlin, President; Dr. E. W. Bartlett, First Vice-President; Dr. Jenkins, Second Vice-President. Dr. Reeves was continued in his office of Permanent Secretary and Treasurer.

The Society took official action in regard to the matter of color-blindness, urging that there be some legislation by the State regarding it.

The Society also passed the following resolution:

"Resolved, That in consideration of the advance as to a knowledge of the causes of consumption and of the now known infectious character of the disease, we use all the means in our power to have the phthisical members of families as much as possible separated from the healthy members, and also that we recommend the State Board of Health to take means to have such persons separated from intimate association with the well in our public institutions."

During the session, Dr. F. A. Marsden was suspended for having distributed patent medicine circulars.

The Society adjourned to meet on the first Tuesday in May, 1884.

THE WELL-KNOWN ANATOMIST, PACINI, recently died at Padua.

THE FLOATING HOSPITAL OF ST. JOHN'S GUILD has closed its work for this season. Forty-four excursions were made, on which 29,189 children and mothers were carried. The greater number of these were sent by dispensaries and the Board of Health.

THE TWELFTH ANNUAL SESSION OF THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, MEDICAL SECTION.—This Association held its annual meeting at Rouen, August 16th, 17th, and 18th. The Honorary President of the Medical Section was M. Verneuil; the President, M. Duploux, of Rochefort. Among the more prominent persons present were Drs. Huchard, Landowsky, Voisin, and Jolly. A paper was read by M. Pineau "Upon a New Fact Regarding the Transportation of Typhoid Fever." M. Deshayes reported a unique case of "Herpes Zoster following the Right Fifth Nerve, and accompanied by Neuralgia." M. Huchard read an elaborate paper upon "Hæmoptysis Occurring in Rheumatics who are not Tuberculous." M. Gallard introduced a discussion upon the "Theory of Menstruation." M. Gallard read the history of a curious case, which he considered "Tetanus of Gastric Origin." The patient, who suffered from persistent dilatation of the stomach, was subject to convulsive attacks of the limbs, the face and trunk not being involved. These attacks ceased under treatment of the gastric condition. MM. Audrien and Raoul Bravais presented a communication upon "Antimicrobial Medication;" under the name of "anti-epidemic granules," they presented some pills composed of "monosulphure de magnésium anhydre." These they claimed, when taken in proper doses, would remove the susceptibility to infectious disease. M. Mallez showed the Society a "Surgical Pantograph," by which the size

and contour of a body could be measured. M. Landowsky read a paper upon the therapeutics of "Piscidia Erythema," but communicated nothing new. M. Voisin made a plea for the use of the hypodermic method of giving medicines in nervous and mental diseases. M. Tessier tried to show that "typhoid fever" varied in amount (at Lyons) in accordance with the rise and fall of the subterranean or well-water. M. Cerné reported a case of "Spontaneous Gangrene in a Patient with Polyuria and Phosphaturia." The subject of "Alternating Diabetes" was brought up and cases where there was, at different times, glycosuria, polyuria, azoturia, were cited. M. Jolly read a paper upon "The Primary Function of the Phosphates in Living Beings." M. Gouguenheim read a paper upon "The Indications for Tracheotomy in Tubercular Laryngitis," in which he took the ground that the operation was rarely needed, and only in certain cases where there is rapid caries or infiltration. M. Beauregard read a paper showing the favorable results of "Osteotomy in the Treatment of Genu Valgum in Infants." He had never had any consecutive accidents in doing this operation.

THE INTERNATIONAL MEDICAL CONGRESS.—We have received a letter from Dr. Lange, Secretary-General of the International Medical Congress, which meets at Copenhagen next August, in which we are informed that the General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen: President, Professor P. L. Panum; Secretary-General, Professor C. Lange; Secretaries, Dr. O. Bloch, Dr. C. J. Salomonsen, and Surg.-Gen. Joh. Møller; Honorary Treasurer, Professor E. Hansen Grut; besides the presidents and special committees of the Sections, viz.: Anatomy, Professor Chievitz; Physiology, Professor P. L. Panum; General Pathology and Pathological Anatomy, Professor C. Reisz; Medicine, Professor F. Trier; Surgery, Professor Holmer; Hygiene and State Medicine, Dr. E. Hornemann; Military Surgery and Medicine, Director-General of the Medical Department of the Army Salomon; Mental and Nervous Diseases, Professor Steenberg; Obstetric Medicine and Surgery and Gynecology, Professors Stadfelt and Howitz; Diseases of Children, Professor Hirschsprung; Ophthalmology, Professor E. Hansen Grut; Diseases of the Skin and Syphilis, Professor Haslund; Diseases of the Ear, Dr. W. Meyer; Diseases of the Throat, Dr. W. Meyer. The special committees formed for the aforesaid Sections have, when they found it useful, completed their number by members living outside Copenhagen, partly in Denmark, partly in the other Scandinavian countries. The Organizing Committee is now at work preparing a programme.

DR. CALVIN ELLIS has resigned his position as Dean of the Harvard Medical School. Dr. H. P. Bowditch, it is said, will be elected in his place.

THE CANADA MEDICAL ASSOCIATION held its annual meeting at Kingston, Ont., September 5th, 6th, and 7th.

THE ENGLISH CHOLERA MISSION TO EGYPT.—Letters received from the medical men sent out from England to Egypt are, says the *British Medical Journal*, very discouraging. It does not seem likely that sanitary meas-

ures for the prevention of future outbreaks of cholera can be adopted for a long time to come. It is claimed that cholera has been in Egypt since 1865, and that cases occurred near Damietta last May. Antecedent to cholera, there had been an epidemic disease among horses, typhus carbunculus, so called, and next bovine typhus, which killed its thousands. The difficulties of carrying out efficient sanitation are found to be enormous. The habits of men, women, and children are such as habitually to defile their habitations and the surrounding ground. As to the Medical Department, it has been found to be in a far worse state than could have been expected. The registers of deaths in the villages are made out by the barber; the cases, in a large proportion, are never seen during life, and the barber enters whatever disease comes first to his imagination and his pen. The Egyptian medical officers are, as a body, found to be wretchedly paid, and very incompetent; cowardice and neglect of duty are very rife among them. They have not the confidence of the fellaheen, who seldom seek their advice, and the Arabs never, without exception. The hospitals are wretched, tumble-down hovels, filthy in the extreme, and the beds not less so. The lunatic asylum at Abbassieh is filthy beyond description, and its management indescribably bad.

ASSOCIATION FOR DISEASES OF THE RESPIRATORY ORGANS AND CLIMATOLOGY.—A meeting for the purpose of organizing the national "Association for Diseases of the Respiratory Organs and Climatology," will be held in the parlors of the Academy of Medicine in this city (12 West Thirty-first Street), on Tuesday, September 25th, at 10 A.M.

COLLEGE OF MIDWIFERY, N. Y.—The following changes have been made in the Faculty: Dr. Sarah E. Post has been appointed Professor of Physiology in the place of Dr. John Alsdorf, who has taken the chair of Diseases of Pregnancy and Parturition. Dr. Henry F. Hessler has been appointed Professor of Clinical Midwifery and German Instructor in Obstetrics. The sessions have been extended to six months—three months of didactic instruction, and three months of clinical work.

NEW BRUNSWICK MEDICAL SOCIETY.—This Society held its third annual meeting at St. John recently, when about fifty members were present. The following officers were elected: *President*, Dr. Vail; *First Vice-President*, Dr. Walker; *Second Vice-President*, Dr. Patterson; *Secretary*, Dr. G. M. Duncan; *Corresponding Secretary*, Dr. Coleman; *Treasurer*, Dr. Nevers. Dr. Steves, of St. John, proposed that a New Brunswick quarterly medical journal be established under the auspices of the Society. The next meeting will be held in St. John, in July, 1884.

THE ATLANTIC JOURNAL OF MEDICINE is a new monthly journal recently started in Richmond, Va., and edited by Drs. Robert B. Stover and Henry G. Houston.

THE CHOLERA EPIDEMIC IN EGYPT seems to be at an end. During its whole course—that is, in about three months—it has destroyed nearly thirty thousand lives.

PROFESSOR SCHWALBE, of Königsberg, has been called to Strasburg.

Reviews and Notices.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE. Fiftieth Annual Session, held at Nashville, Tenn., April 10 and 11, 1883.

THIS year's report has appeared with commendable promptitude, wherein it contrasts favorably with that of last year and with society reports in general. The volume contains several papers of interest and of refreshing brevity, and also the code of ethics of the American Medical Association. The society contains three hundred and thirty-eight members, and has lost three members by death during the year.

REPORT OF PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH. Quarterly Meeting, held at Springfield, Ill., June 29, 1883.

THE Illinois State Board of Health is doing a good work in seeking to rid the State of quacks. Its efforts hitherto have been productive of good results, and judging from the secretary's report, presented at this meeting, it intends to keep up the fight until all the travelling and advertising charlatans have sought refuge in other less-favored localities. Further than this, the board endeavors, by the only means in its power, expostulation with the offenders, to discountenance the practice of giving medical testimonials concerning the virtues of various nostrums and patented surgical appliances. May the good work go on.

TRANSFUSION: ITS HISTORY, INDICATIONS, AND MODES OF APPLICATION. By CHARLES EGERTON JENNINGS, L.R.C.P. London: Baillière, Tindall & Cox, 20 King William Street, Strand. 1883.

IN this little volume of sixty-nine pages the author has called attention to certain cases where transfusion would, as a rule, afford only temporary benefit, as well as to those in which this measure is demanded on the part of the practitioner, and is generally attended with success. His remarks are also supported by clinical experience and by statistics. In addition, the methods of application (illustrated), and the favorable conditions necessary to the operation are also presented, together with the immediate causes of failure, the several attending dangers, and the means of avoiding them.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY for the Year 1883. No. 3, Vol. VIII. Lansing: W. S. GEORGE & Co. 1883.

THE eighteenth Annual Meeting of the Michigan Medical Society was held at Kalamazoo, Mich., May 9 and 10, 1883. The usual business of annual meetings was transacted, the usual papers read, and the usual animated discussion over points of order held. The volume before us contains, in addition to the scientific papers, an amusing squib in verse by Dr. E. B. Ward, the title of which is "Pro Bono Professionis."

BACTERIA AND THE GERM-THEORY OF DISEASE. By DR. H. GRADLE, Professor of Physiology, Chicago Medical College. 8vo, pp. 219. Chicago: W. T. Keener, 96 Washington Street. 1883.

THIS volume comprises a series of eight lectures on the above subject, delivered at the Chicago Medical College by the author. The subject is, moreover, very fairly handled in each essential point. Beginning with the relation of the germ-theory of disease to the animal system, the examination and the cultivation of bacteria, fermentations, putrefaction, are then dealt with, followed by the action of bacteria in digestion, inoculation of germs, the germicide treatment, etc. Surgical infection is then taken up in its various forms. The chapter on tuberculosis, its infectious character and its inoculability, is not among the least interesting. The fevers, diphtheria, syphilis, and various local diseases, also receive

attention. Finally, the importance of the germ-theory of diseases in its relation to the future is considered.

The work is altogether one of undoubted interest, not only from the great importance of its subject, but chiefly from the large amount of original work done, and the completeness with which it is presented, even in minute detail; the latter being especially prominent, when it is remembered that most of our published information on this topic is, as a rule, in the form of abstracts from foreign journals.

EXCISION OF THE KNEE-JOINT, WITH REPORT OF TWENTY-EIGHT CASES. Illustrated by Thirteen Photo-lithographs and Wood Engravings. By GEORGE EDGEWORTH FENWICK, M.D., C.M., Professor of Surgery McGill University; Surgeon to the Montreal General Hospital. 8vo, pp. 68. Montreal: Dawson Brothers. 1883.

DR. FENWICK regards the operation of excision of the knee-joint as undeserving of the disfavor into which it has fallen, and he endeavors in this little volume to gain for it somewhat more consideration at the hands of his professional brethren than it now receives. His cases are comparatively few—twenty-eight in eighteen years—but the results are exceptionally good. Indeed, had other surgeons met with such uniform success, the operation would never have needed an apologist. The author's method of operation consists briefly in sawing off only so much of the joint surfaces as is absolutely necessary, preserving the epiphyses as far as possible. The articular end of the femur is rounded and made to fit into the hollowed-out head of the tibia. The surgeon's personal attendance to the after-treatment is insisted upon. It is to this method of section of the bones that the author attributes much of his success, and he hopes to see its general adoption in order that others may share in his good fortune, and unite with him in upholding the reputation of this operation.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By the late ALFRED SWAINE TAYLOR, M.D., F.R.S., Fellow of the Royal College of Physicians of London. Third edition. Edited by THOMAS STEVENSON, M.D. (London), Fellow of the Royal College of Physicians of London, etc. 2 vols., 8vo, pp. 1,359. Philadelphia: Henry C. Lea's Son & Co. 1883.

NO one need doubt at the present day that Taylor's work is the leading one on medical jurisprudence in the English language. It was quite fortunate for both medical and legal professions that the author in his last edition brought his treatise so thoroughly up to the times and so carefully and judiciously interpolated all the leading cases and decisions pertaining thereto. It was in that respect more than an improvement on the previous edition, as it was essentially revised from beginning to end, while much valuable matter was added under the head of poisons, wounds of throat, blood-stains, cicatrices, asphyxia, abortion, infanticide, insanity, and life insurance. Thus the work was left by its author at the time of his death. The task of subsequent revision has been undertaken by the former colleague of Dr. Taylor, Dr. Stevenson, who has shown himself in every way fitted for the task. He has evidently gone over the text with great care for the purpose of adding new facts of evidence under their respective headings, while steadily keeping in view the necessity of not increasing the number of pages. This has compelled him in many instances to curtail some of the chapters, notably those on medical evidence.

The chapters on poisoning have been in many parts entirely rewritten, the necessity for which can be readily understood by the recent advances made in this department of forensic medicine. New and illustrative cases have been added in many other departments. The editor has very wisely used his privileges of adding facts without in any way interfering with the author's views regarding the main principles upon which all proper medi-

cal evidence is founded. The volumes are published in good style.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F.R.S., Fellow of the Royal College of Surgeons, etc., with Introduction on General Anatomy and Development by T. A. Holmes, M.A. Cantab. With drawings by H. V. Carter. Edited by T. Pickering Pick, Surgeon to St. George's Hospital. New American from the Tenth English Edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F.R.C.S., with additions by W. W. Keen, M.D. 8vo, pp. 1,023. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS well-known work comes to us again as the latest American edition from the tenth English edition. As its title indicates it has passed through many hands, has received many additions and revisions. Consequently the publishers are content to issue it more as a reprint than as an improved edition. There is good reason for the latter course, as the work is not apparently susceptible of more improvement. Taking it all in all, its size, manner of make up, its character of illustrations, its general accuracy of description, its practical aim, and its perspicuity of style, it is the anatomy best adapted to the wants of the student and practitioner.

Reports of Societies.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(Continued from p. 271.)

AFTER the transaction of society business at the session of Thursday, September 6th, DR. J. J. CHISOLM, of Baltimore, Md., read a paper on

THE REMOVAL OF FOREIGN BODIES IN THE EAR.

He stated that the little bony projections on the exterior surface of the drumhead have often been mistaken for foreign bodies, and the attempt to extract them on the part of the general practitioner has produced disease and permanent deafness. To illustrate the common occurrence of attempts to remove these ossicles for extraneous bodies he cited several cases which had come under his notice. He believes that there are numerous cases of individuals living many years with foreign bodies in the ear without knowledge of the fact, and stated that most instances of inflammation of the ear were due more to injudicious attempts at removal than to the presence of the body itself. He had never seen, in all his experience as a specialist, a case of foreign body in the ear, not interfered with by another person, which he was unable to remove by the careful use of a syringe and warm water. In all instances of leguminous or other foreign bodies that increase in size by the absorption of water in the ear, he recommends

THE FILLING OF THE CAVITY WITH ALCOHOL TO PRODUCE SHRINKAGE BEFORE THE USING OF THE SYRINGE.

He uses pure alcohol.

DR. SPIERS GIBSON, of Staunton, exhibited

AN EXTENSION AND SUSPENSION SPLINT

of his own invention for treatment of fractures of long bones.

DR. L. McLANE TIFFANY, of Baltimore, Md., read a paper on

PLASTIC SURGERY OF THE FACE,

and after careful description of the anatomy of the face he instanced the different plastic operations of that por-

tion of the body. He referred to the peculiarity of the fact that the facial bones will often not become necrosed when denuded of their covering, differing from the bones of the trunk and extremities. He stated that he always adopted the old-fashioned method of marking off the flap before cutting in plastic operations, preferring tincture of iodine for that purpose.

He employs hot water as a hæmostatic almost invariably in surgery of the face, and uses iodoform and absorbent cotton on all granulating wounds of that part. He employs only the simple interrupted suture by means of silver wire. He laid great stress upon the necessity of bringing together the lips of all wounds of the face, simply in apposition without the slightest tension; and stated that he always makes a flap for the hare-lip operation, contrary to common usage. He gave full details of his mode of operating in the mouth. Dr. Tiffany exhibited several large plates and photographs of cases illustrative of his paper.

DR. JOHN N. MACKENZIE, of Baltimore, Md., read a paper on

DEFLECTION OF THE NASAL SEPTUM

and its treatment. He believed that a tendency to this condition was frequently inherited. The condition narrows the nasal orifice and increases the pharyngeal opening, and the irritation by reflex action on the vasomotor nerves often causes aural disease. Ozena is frequently produced from the condition by the air remaining in the nasal cavity imperfectly changed and putrescence invited. He described the present form of modification or replacement of deflected bony septum, which has for the past few years been known as Steel's modification of Adams' operation, and showed that Dr. Bolton, of Richmond, Va., some years before Steel's paper on the subject, described the identical method in his own practice in an issue of the *Richmond Medical Journal*. Dr. Mackenzie was emphatic in his advice to the members to look closely after the sequelæ which follow the condition named, and stated that it was his invariable rule to begin an examination of the throat and ear with a careful exploration of the nasal passage and retro-nasal space.

DR. J. A. WHITE, of Richmond, showed a selection of instruments and dilators for operating on deflected nasal septum and made a few remarks upon the operation, giving his reasons for his

EMPLOYMENT OF SEATANGLE BOUGIES FOR HOLDING THE SEPTUM IN PLACE

after replacing. He related the details of cases in which he had lately used Seiler's galvano-cautery for ulcer of cornea in pannus and granular lids as well as deflected septum. Dr. Wright also showed a small mass of what appeared to be iron-ore, taken from the nose of a lady over forty years of age, the history of the case showing that the foreign body was introduced in early childhood.

RUSSIAN BABIES.—A correspondent of the *New York World*, speaking of Russian babies, describes as follows what one sees in the house of a Russian peasant: He looks curiously at one odd little bundle laid upon a shelf, another hung upon the wall on a peg, a third slung over one of the main beams of the roof, and rocked by the mother, who had the cord looped over her foot. "Why, that is a child!" cries the traveller, with a feeling similar to that experienced on treading upon a toad which was supposed to be a stone. "Why, what else should it be?" answers the mother. Having learned so much in so short a time, the inquisitive traveller wishes to inform himself about the habits of the creature in the bundle; but his curiosity being somewhat dampened by the extreme dirt of the little figure, he inquires of the parent when it was washed. "Washed?" shrieks the horrified mother, "washed! what, wash a child? You'd kill it."

Correspondence.

THE GERM-THEORY IN ITS RELATIONS TO MALARIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Almost simultaneously with my recent article in THE MEDICAL RECORD (August 18, 1883) upon the unreliability of any theory yet advanced as to the ultimate cause of malaria, I find two papers pertinent to the same subject in the *Popular Science Monthly* for September. One of these deals with the germ-theory of disease, being a lecture delivered before the Chicago Philosophical Society by Professor H. Gradle, M.D. The other, by Professor A. F. A. King, M.D., entitled, "Insects and Disease—Mosquitoes and Malaria," being the abstract of a paper on "The Prevention of Malarial Disease," read before the Philosophical Society of Washington.

Permit me to briefly review some portions of these two articles.

Speaking of the "destroyers" which cause disease, Professor Gradle remarks: "They are no longer invisible creatures of our own imagination, but with that omnipotent instrument, the microscope, we can see and identify them as living beings, of dimensions on the present verge of visibility. The study of these minute foes constitutes the germ-theory."

From this quotation I presume the doctor employs the term "destroyers" as equivalent to "germs." He acknowledges, however, that they are only of dimensions "*on the present verge of visibility*" by the microscope. I agree with him there, if he means that they have not yet been actually seen with any degree of certainty. Still he proceeds to say that the germ-theory "has substituted a tangible reality for idle speculation and superstition, so current formerly in the branch of medical science treating of the causes of disease." He says truly that "obscure chemical changes, of which no one knew anything definitely, or 'impurities of the blood,' a term of similar accuracy and convenience, were accused, while with regard to contagious diseases medical ignorance concealed itself by the invocation of a 'genus epidemicus.' The germ-theory, as far as it is applicable, does away with all these obscurities."

I cannot at all subscribe to the last dogmatic assertion. I am quite sure that there are many zymotic affections (that class to which the germ-theory is peculiarly applicable) in whose study "medical ignorance" has no other alternative than simply to recognize and acknowledge "impurities of the blood," whose character has not yet been demonstrated; or to invoke a "genus epidemicus" as the only explanation, however unsatisfactory, yet afforded, for a sudden outbreak and wide extension of some particular disease. As an example I may cite diphtheria.

Professor Gradle asserts that bacteria belong to the *lowest* order of fungi. He remarks that "no error has retarded more the progress of the germ-theory than the false belief that the bacteria of putrefaction are identical with the germs of disease." What, therefore, may it be asked, are identical with the germs of disease? and must not germs be regarded as fungi?—or if not, what are they?

Dr. Gradle goes on to say that "in order to prove the bacterial origin of a disease two requirements are necessary: First, we must detect the characteristic bacteria in every case of that disease; secondly, we must reproduce a disease in other individuals by means of the isolated bacteria of that disease. Both these demonstrations may be very difficult. Some species of bacteria are so small and so transparent that they cannot be easily, if at all, seen in the midst of animal tissues. This difficulty may be lessened by the use of staining agents, which color the bacteria differently from the animal cells. But it often requires long and tedious trials to find the

right dye. The obstacles in the way of the second part of the proposition mentioned are no less appalling. Having found a suspected parasite in the blood or flesh of a patient, we cannot accuse the parasite with certainty of being the cause of the disease, unless we can separate it entirely from the fluids and cells of the diseased body without depriving it of its virulence. In some cases it is not easy, if possible, to cultivate the parasite outside of the body; in other instances it can be readily accomplished. Of course, all such attempts require scrupulous care to prevent contamination from other germs that might accidentally be introduced into the same soil."

By employing the expression "other germs" in the foregoing paragraph he can imply nothing else than that bacteria are germs, although previously he has expressly insisted that they are not.

Then bacteria-rods "form seeds or spores, as they are termed." Considering the minuteness of bacteria, and the consequent infinitesimal size of their spores, "which germinate again in proper soil," we are led to inquire once more, How about the germs? Almost every microscopist is familiar with the several forms of bacteria, as far as known. They exist universally, in the atmosphere high or low, in waters shallow or deep, in vegetables and in animals. They present no special peculiarities to designate disease. Those found in the tongue-scrapings of healthy persons cannot be distinguished from others existing in the blood and tissues of the victims to zymotic disorders.

Professor Gradle says: "When we experiment with an isolated disease-producing germ, it causes always one and the same affection, if it takes hold at all." Has the doctor ever succeeded in obtaining any such remarkable results with isolated germs? If so, the problem is solved.

As regards Pasteur's observations, Professor Gradle is not so sanguine as some others. He remarks that "Pasteur's own account" of the results of some of his experiments are "dazzling. But a repetition of his experiments in other countries, by his own assistants, has been less conclusive. In Hungary the immunity obtained by vaccination" (*i.e.*, against anthrax) "was not absolute, while the protective vaccination itself destroyed some fourteen per cent. of the herds."

"Yet, though much of the enthusiasm generated by Pasteur's researches may proceed further than the facts warrant, he has at least opened a new path which promises to lead to results of the highest importance to mankind." Let us trust that such may be the case. Thus far, however, it does not seem that Pasteur has demonstrated anything more *as to what are germs*, than did Jenner, the practical results of whose investigations required no theory to substantiate them.

In the second article referred to, Dr. King attempts to prove that mosquitoes are the chosen carriers of the malarial germs, and insert them into the human system. He remarks: "Viewed in the light of our modern 'germ theory' of disease, the punctures of proboscidian insects, like those of Pasteur's needles, deserve consideration as probable means by which bacteria and other germs may be inoculated into human bodies so as to infect the blood and give rise to specific fevers." Here, in the same way as Dr. Gradle, he speaks of "bacteria and other germs."

He goes on to say: "With our present knowledge of the 'germ theory' one would hardly dare, even once, to plunge an inoculating needle into the blood of a yellow-fever or typhus-fever patient, whether living and comatose, or recently dead, and then withdraw it and plunge it into his own blood or the blood of other persons; yet this is exactly what the mosquito is doing in nearly every yellow-fever epidemic, and what, perhaps, the flea is doing in the filthy jails and ships infested with typhus."

Now the profession are almost unanimous in rejecting the idea of personal contagion in yellow fever—so, if any germs are responsible for that disease, the mosquito

must extract them from some other source than the infected human body. It may possibly be otherwise with regard to typhus fever, which is well known to be intensely contagious. So with some other communicable diseases. Malignant pustules are occasioned by stings of flies which must have acted as vehicles for the contaminating element. A case was recorded in 1793 by Penada, an Italian physician, where a human being was seized with hydrophobia communicated by the bite of an insect. Bollinger remarks ("Ziemssen's Cyclopædia") that certain parasites, as fleas and lice, which are nourished by the dog, may transfer rabific poison to human beings and other animals by means of their blood-drawing apparatus. We can scarcely doubt that flies convey small-pox; and an apparently authentic instance of vaccination by the medium of a flea was reported in the *London Lancet*, June 22, 1872.

No one pretends that intermittent fever is contagious, although of the pernicious variety. Even the enthusiastic Tommasi Crudeli has never, so far as I am aware, entertained any such notion. But if his theory be allowed, that malaria may be transmitted from one individual to another by the injection into the latter from the former of what he terms the malarial ferment (only, however, that taken from *pernicious* cases), then it might readily be supposed that malaria could be carried from its terrestrial haunts to human beings, or from an infected person to a well one. Still, I am inclined to believe that this musical and rapacious insect, even if he invades our bed-chambers laden with the malarial ferment of Jersey (which by the way should need no coloring under the microscope), must be acquitted of any other crimes of poisoning than that of which we all have known him to be guilty. However, no one can deny that he is a pestiferous scamp.

Very respectfully yours,

CHARLES P. RUSSEL, M.D.

4 WEST 128TH STREET, NEW YORK CITY, August 25, 1883.

PRACTICE IN NORTH MEXICO.

TO THE EDITOR OF THE MEDICAL RECORD.

STR: It may not be uninteresting to my confrères to read something about medical affairs in this country, and about my professional experience during four and a half years of arduous work in the city of Monterey. The profession in this city is well represented by a number of physicians, graduates of the different medical schools of Mexico. They are generally well educated; possess a good classical education, before being admitted to the study of the profession, and a very fair theoretical knowledge. The text-books used at the medical schools are almost exclusively French works, translated into Spanish. Their practical experience they have to acquire, to a great extent, by years of practice and observation, the hospitals in the former Spanish-American colonies being far inferior to those of Europe or the larger cities of the United States, and, in consequence of this, the clinical instruction is rather limited. The Government cannot afford such large appropriations of money as are necessary to keep them in first-rate order, and it is well known that heavy expenditures are required for the proper maintenance of these important establishments, which are the pride of other civilized countries. Moreover, the old Spanish, or rather Moorish style of architecture is not adapted for hospitals, and affords but little comfort to the patients within their walls. The low floors, consequent dampness, imperfect ventilation, equally imperfect protection against the inclemency of the weather and absence of all provision for warming the rooms are certainly serious objections. Only the poorest classes therefore voluntarily resort to them. But the professional men of this country, as a rule, are highly intelligent and imbued with the earnest will and desire to continue their studies, even after they have received their degree of Doctor. They study and work assiduously, and, in this way, attain a standard of ability, which de-

serves high praise. Their gentlemanly deportment makes it an easy task to keep on friendly terms with them and to obtain even their friendly support and co-operation. I speak of Monterey only, as I have no experience concerning these matters in other parts of Mexico. The population of the north of Mexico is a mixture of Indian and Caucasian blood. Dr. Gonzales, of this city, a gentleman distinguished for his high scientific attainments, has told me that in the State of Nuevo Leon no man of pure Indian blood could be found. Within three centuries the amalgamation of the races has become complete. But the offspring of the two races represent in appearance mostly the Indian type. The excessive use of alcoholic liquors is but rarely observed. Their dress is plain, but not without taste. Their way of clothing themselves in winter is altogether insufficient. They simply wrap a blanket around themselves, but do not put on thicker underwear, and thus expose themselves to many diseases. I speak of those of the humbler walks of life, because the wealthier classes live almost in the same way as we of the more northern latitudes. It is true the winters are generally mild, yet they are sometimes sufficiently cold to require careful protection. The cities and smaller towns of Mexico are built in the old Spanish style, the houses are imperfectly ventilated, and those of the poorer classes often not ventilated at all; the floor is not or is hardly elevated above the streets and is made either of a kind of cement or of the soil stamped and beaten down, so as to make it more even and solid. When this country was settled by the Spaniards, the towns were laid out with the view of having a running stream of potable water close by, so that, in case of an attack or siege by hostile Indians, the inhabitants had that most necessary element within easy reach. In consequence of this, the site of towns and villages is frequently found in valleys, which do not present the conditions for salubrity, which are sought for in our time.

The Spanish colonists soon found out that in this country it was necessary to irrigate lands in order to insure a crop at all times, and thus, up to this date, agriculture is principally carried on on irrigable lands. It is hardly necessary to mention the well-known fact that irrigating ditches are the most fecund sources of malaria. The water runs in them for a few days; then it is directed into others, leaving the bed of these artificial rivulets exposed to the ardent rays of a Southern sun. Add to this the imperfect drainage of many yards and corrals: the fact that many houses are without privies, and the difficulty of getting rid of the offal and refuse inevitably produced by a large accumulation of human beings, and it becomes evident that the atmosphere is not always the purest, nor the conditions for salubrity the best. The climate of the north of Mexico, for the rest, is most agreeable. We do not have to endure the excessive heat in summer which prevails in Northern cities, nor the severe colds in winter. I might recapitulate in saying that the conditions for health would be very good had not man done some things to produce the contrary effect, and had left undone others of not less importance. As it is, diseases are not infrequent and the mortality is not by any means trifling. The official statement gives the latter 966 out of a population of 39,406 during the year 1880. Statistics of a later date I have not at hand. The most frequent diseases are those produced by malaria, the manifestations of which are manifold, from the simple intermittent to the formidable, pernicious, and all the different shades of remittents, for which so many names have been invented, but which I shall embrace in that class, as I wish to avoid confusion, and as my experience has taught me that the same disease may present itself, as to the outward symptoms, in a different way in different patients, and that complications occur in one case that fail to make their appearance in others. Even in different years these diseases differ in their symptoms and malignity, while the character of the remittent still cannot be denied if the proper

use of the thermometer is resorted to. The intermittents prevail nearly the whole year round; even in winter they do not cease, for the reason, probably, that if there are a few days with a temperature which hardly ever descends to the freezing-point, they are succeeded by warm days, during which we are made aware of the fact that we live in almost a tropical country. They are but rarely malignant, but most stubborn, and I have found myself repeatedly obliged to insist upon a change of residence for some time, in order to overcome their tendency to return. Masked intermittents are very frequent, such as neuralgia of one nerve or a group of nerves. I have had even some cases in which epileptiform convulsions took place, which had been treated already as cases of real epilepsy. A careful examination of these cases convinced me that they were manifestations of malaria; percussion showed considerable increase in size of the spleen, and the convulsions lasted much longer than they do in epilepsy; besides, the attacks did not come on suddenly and almost without premonitory symptoms, but after a preliminary stage, with considerable gaping and stretching, pains in the limbs, etc. The use of quinine revealed the real character of the disorder, and stopped the attacks which previously had resisted the use of bromide of potassium, etc. In Texas I had the opportunity of treating a similar case before, and therefore I had no unknown enemy to combat.

It would be tedious to enumerate all the different disguises under which one meets intermittents in a Southern country. The large majority of cases yield readily to a judicious treatment; but there are always some which leave a state of marasmus behind. Undoubtedly, in many it is consequent upon imperfect alimentation, since the poor are really poor in this country; but in other cases the disease itself produces a long, protracted state of anaemia, consequent upon the extensive destruction and insufficient reproduction of the red-blood corpuscles. I have had the opportunity to examine the blood of such patients and found the white corpuscles considerably increased in number, although not by any means approaching the proportion existing in leucæmia. Twice I have had an opportunity to observe mental derangement in consequence of protracted intermittents. They both succumbed after months of suffering. I have seen so much of intermittents in Louisiana and Texas that it appeared to me strange that only here, in Monterey, I should meet with cases of this kind. The fact was known to me that mental diseases may follow in the wake of protracted intermittents from the time that I read Griesinger's classical work in 1869, but I found only here the opportunity of observing it personally. As stated above, my efforts to overcome the disease were totally in vain. The experience of Collin, according to his work on fevers, seems to have been similar to mine.

EDMUND GOLDMANN, M.D.

MONTEREY, MEXICO, August 18, 1883.

HOW AN IMPACTED PEACH-STONE WAS DISLODGED FROM THE ESOPHAGUS.—Dr. J. S. Prettyman, of Milford, Del., writes: "Was consulted August 8th, as to what should be done in the case of an old man who had swallowed (or rather half swallowed) a peach-stone, which had lodged about the middle of the cesophagus. He could swallow nothing, and the tube seemed to be completely occluded. I advised rectal injections of lobelia inflata. The consultant, Dr. J. O. Pierce, of this town, administered ounce doses of the fluid extract every fifteen minutes until three ounces were thus used. The patient then was so urgent to go to the water-closet, that he was permitted, when, under active emeto-catharsis, the stone came up and he cried out in great joy, 'Doctor, I have got it.' The stone was a very large one and was so tightly packed in the tube that it would have been impossible to force it down without serious injury. No other apparent effect followed the use of the medicine."

New Instruments.

AN IMPROVEMENT IN CLINICAL THERMOMETERS.

By W. R. LEONARD, M.D.,

NEW YORK.

THE accompanying cut shows a registering indestructible magnified index clinical thermometer. It is similar in construction to one described by me in THE MEDICAL RECORD of August 24, 1878: "The contraction of the bore of this thermometer is so extremely minute as to obviate the necessity for any air-speck whatever, and then no possible destruction of the index can take place, as an index is formed at every observation by this peculiar construction itself cutting off the entire column above it from the bulb portion below it. Thus we may, if we choose (no necessity exists for so doing), shake the entire column (index included) into the bulb and every time we warm the bulb a new index is formed for us by the contraction itself." The improvement that I desire to draw attention to in this thermometer is the etching of the observatory corrections in combination with the scale upon the stem. When thermometers are examined by comparison with a standard instrument it is almost invariably the case that some slight errors are found to exist in the scale, and these errors are set down on a certificate which is supplied with the thermometer, and which is numbered and marked in accordance with the numbers and marks on the thermometer, to insure identity therewith. Now, when the thermometer is used and an exact reading is desired, a certificate or a copy thereof has to be consulted and the errors added to or subtracted from the observed scale reading. This is a troublesome operation, as it involves reference to the certificate of correction, which possibly may not at the time be within reach or may be lost. To obviate this difficulty Mr. James J. Hicks of London, England, has patented the device of etching or otherwise marking the errors on the thermometer-tube itself, as shown by the accompanying cut at *a, a, a, a*. The corrections as shown in the drawing are 94.0, 100.4, 105.0, 110.0. In this case this thermometer may be called absolutely correct as it only varies $+ \frac{1}{10}^{\circ}$ at 110 and this verification is from the Kew Observatory.

In this instrument the correction is in the shape of an addition, but in some cases they will be in the form of subtractions, when the sign minus is employed. The number and monogram or other sign of any examination office at which the thermometer has been compared with the standard instrument may be applied to the thermometer. By these means the thermometer carries with it the corrections found to be necessary, thereby greatly enhancing its utility, as the correct reading can be at once obtained by reference to the thermometer alone. These thermometers are manufactured by Shepard & Dudley, New York.

THE INCURABILITY OF CONGENITAL COLOR-BLINDNESS.—Referring to an editorial on the subject of color-blindness in THE RECORD of August 11th, Dr. B. Joy Jeffries writes, calling attention to the fact that it is almost universally conceded by ophthalmologists and experts that congenital color-blindness is incurable. He refers to the contrary view held by Favre of Lyons, France. Dr. Jeffries agrees in urging the value of educating the color-sense among the children of public schools.



Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 1 to September 8, 1883.

SHUFELDT, ROBERT W., Captain and Assistant-Surgeon. Granted leave of absence for three months on surgeon's certificate of disability, with permission to leave the Department of the South. S. O. 204, par. 3, A. G. O., September 5, 1883.

WAKEMAN, W. J., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Sidney, Nebraska. S. O. 92, par. 2, Department of the Platte, August 28, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending September 8, 1883.

DIEHL, OLIVER, Passed Assistant Surgeon. Detached from the Naval Academy and ordered to the U. S. S. Quinnebaug, European Station, per steamer of 15th ult.

ANDERSON, FRANK, Passed Assistant Surgeon. Detached from the U. S. S. Quinnebaug, on reporting of his relief, and granted leave of absence for three months.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 11, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
September 4, 1883.....	0	67	32	8	19	27	0	0
September 11, 1883.....	0	83	36	3	60	21	0	0
<i>Deaths.</i>								
September 4, 1883.....	1	24	2	8	1	21	0	0
September 11, 1883.....	0	27	7	2	6	15	0	0

THE LITERARY STATUS OF THE BOHEMIAN NATION.—Dr. N. Weidenthal, of Cleveland, O., writes: "In a recent issue you quote from a letter written by Dr. Councilman, of Baltimore, in which he makes a rather sweeping statement regarding the scientific and literary status of the Bohemian nation. If the doctor were a trifle better informed on this subject he would certainly modify the statement referred to. He is evidently not aware that Rokitsansky and Skoda, whose names will always occupy an important place in the history of medicine, were Bohemians; that Oppolzer, one of the greatest teachers and clinicians of his day, was a native of the same country. Professor Arlt, the distinguished eye specialist, of Vienna, Professor Albert, who was recently called to the chair of surgery at the same university, and Professor Czerny, of Heidelberg, are all Bohemians. Professor Bamberger, of Vienna, is a native of Prague, but perhaps should not be included in this list, as I believe he is not a Czech, but a German Bohemian. Professor Seegen, one of the leading authorities of the present day on balneology, is also a native of that city. I will not touch upon the non-medical side of the question, as that is of less interest to our profession. In medicine alone I might have given a longer array of names, but have deemed it sufficient to give a few which have acquired a

world-wide celebrity. It would surely be unreasonable to expect a small country like Bohemia to produce as large a number of illustrious men in any department of science or letters as countries with ten times its population. While I do not sympathize with the Czechs in their persecution of their German fellow-citizens, and consider the division of the old university of Prague to be in many respects an unfortunate occurrence, I do not like to see injustice done to any nation."

DR. ABERNETHY AND THE LATE GENERAL DIX.—In the biography of the late General Dix, written by his son, Morgan Dix, which has just appeared, is an account of an interview with the celebrated Dr. Abernethy. It will interest our readers especially, since it is known that the wisdom of the physician's advice carried General Dix from dyspeptic youth into eighty years of robust life. General Dix gives the account himself: "He received me with great civility, heard a few words of the story, and cut me short as follows: 'Sir, you are pretty far gone, and the wonder is you are not gone entirely. If you had consulted common sense instead of the medical faculty you could probably have been well years ago. I can say nothing to you excepting this: You must take regular exercise, as much as you can bear without fatigue, as little medicine as possible, of the simplest kind, and this only when absolutely necessary, and a moderate quantity of plain food, of the quality which you find by experience best to agree with you. No man, not even a physician, can prescribe diet for another. "A stomach is a stomach;" and it is impossible for any one to reason with safety from his own to that of any other person. There are a few general rules which any man of common sense may learn in a week—such as this: That rich food, high seasoning, etc., are injurious. I can say no more to you, sir; you must go and cure yourself."

A NEW METHOD OF DIAGNOSING CANCER.—In the *Journal de Medicine*, of Brussels, Dr. W. Rommelaère publishes a series of clinical observations illustrating a new fact in the pathology of cancer. He finds (in thirty-four cases) that in persons subject to cancer the amount of urea daily eliminated progressively diminishes until it is below twelve grammes. By studying the urea eliminated in cases, for example, where doubt exists between gastric ulcer and cancer, a diagnosis can be made. In twelve cases of gastric ulcer the daily urea elimination was about twenty-five grammes.

A NAIL EMBEDDED IN THE BRAIN.—In an autopsy on a patient dying in one of the Vienna hospitals, there was found in his brain an iron nail covered with rust, which to all appearances must have been there since early childhood. The man was about forty-five years of age, a bookbinder, and always passed for intelligent. Negative popular evidence, however, is of but little value. The man, at regular intervals, had epileptic attacks, and post-epileptic mental phenomena while in the hospital.—*Medical Press and Circular*.

DANGER LURKING IN SODA WATER.—The public analysts of Montreal and Toronto, Drs. Edwards and Ellis, have been examining samples of soda water, and report that in the majority of cases lead and sometimes copper is present. Dr. Edwards examined twelve samples purchased in Montreal and found lead or copper in ten of them. Five contained both lead and copper, and five contained lead only. In some samples only "traces" of the metals were found, while in others the water was "largely impregnated" with one or both of the metals. Dr. Ellis in twelve samples of Toronto soda water found only three which were free from lead. No mention is made of the presence of copper. The quantity of lead varied from .07 of a grain to .5 of a grain to the gallon, the average of nine samples being .32 of a grain. All of the above samples were taken from fountain cisterns, bottled soda water being invariably found free from metallic impurities.—*Sanitary Engineer*.

A FORMULA FOR USE IN IRREGULAR HEART ACTION.—In a discussion upon heart disease before the Boston Society for Medical Improvement, Prof. Bowditch said that he had found the following formula of great service in relieving even the most serious cardiac affections. He had used it for the last twenty-five years:

R. Pulv. digitalis gr. x.
 Pulv. colchici sem. gr. xx.
 Sodii bicarbonatis gr. xxx.

M. et div. in pil. No. 20.

These are to be taken three or four times daily at first; subsequently to be reduced until only one is taken at bedtime; the treatment to be continued for three to nine months.—*Boston Medical and Surgical Journal*.

THE POLLUTION OF WATER AT SUMMER RESORTS.—The Albany *Argus* reports the prosecution of F. G. Crosby, proprietor of the Crosby Side Hotel, Lake George, for draining the sewage from his premises into the lake. Suits were brought against him under a recent law which forbids, under penalty of \$300 for each offence, depositing or allowing to flow into Lake George any sewage or other polluting matters. The complainants withdrew the prosecution upon Mr. Crosby's agreeing to tear up the drains in their presence, which he is said to have done. Complaints of a similar nature have been heard from other quarters, notably from tourists in the Catskills.

DANGEROUS SUGAR OF MILK.—The American Institute of Homœopathy is becoming alarmed because of impurities discovered in sugar of milk. At its last meeting it resolved that any sample of sac. lac. yielding a residuum, after incineration, of more than $1\frac{1}{2}$ milligramme to each 10 grammes should be considered unfit for homœopathic use. This is right. Any impurities existing in a greater proportion than 15 to 100,000 must be exceedingly dangerous, if not absolutely fatal.

TREATMENT OF LICHEN RUBER BY UNNA'S OINTMENT.—Dr. Bockhart reports the cure of a case of lichen ruber in three weeks by the use of Unna's ointment. This is composed of one part corrosive sublimate, twenty parts carbolic acid, and five hundred parts diachylon ointment.—*Centralbl. für Chirurgie*, August 11, 1883.

MORE TROUBLE IN THE LONDON HOSPITALS.—For some time past there have been heard smothered complaints of the autocratic government insisted on by the matron of the King's College Hospital, and her aggressive attitude is said to have caused much justifiable discontent among students and staff. At length, however, the resignation of the matron was insisted on, and, after prolonged refusal, received. All of the head nurses, who sympathized with the matron in her opposition to the medical staff of the hospital, deserted their posts and left the building as soon as the fact of the matron's resignation was announced. In commenting on this occurrence, the *Medical Press and Circular* says: "That the lady would cling to her position as long as possible is to be expected; but what is really incomprehensible is that her subordinates should so far forget the traditions of charity and duty as to make the forced resignation of their principal an excuse for their own withdrawal from the wards without previously giving notice of the intention. All honor, be it added, to the nurses who, notwithstanding the absence of pretensions claimed by 'lady' nurses, remained with true womanly pity at their posts beside the beds of suffering patients, the while their cultivated 'superiors' followed in the wake of the indignant matron. Spite of the temporary inconvenience, the authorities of King's may congratulate themselves on a good riddance of women who could be guilty of so grave a dereliction of duty."

A NEW JOURNAL IN MEXICO.—A new recruit in the ranks of medical journalism has appeared in Mexico under the title of the *Revista Médico-Quirúrgica*. It is to be

published three times a month, and its first issue bears date of August 10th. In its English prospectus it claims to be "the first publication of its kind in the Republic of Mexico which has such a broad spread circulation so much in the country as abroad." It is to consist mainly of selections from foreign journals, and its first issue contains a number of good abstracts, chiefly from French and German sources. The editors are Drs. V. Blay, T. Noriega and J. Robles. We welcome our young contemporary and wish it a long and prosperous life.

REPORT OF A FATAL CASE OF INTESTINAL OBSTRUCTION FOLLOWING PERITONITIS.—Dr. Edgar A. Mearns, sends us the history of a case of the above character. "The patient, a young man aged nineteen, had had general peritonitis four years before. Since then he had suffered from occasional attacks of abdominal pain and constipation. The last and fatal attack came on July 30th and continued eight days. He was obstinately constipated. Large doses of castor oil, combined with copious rectal injections were given. There was no fever nor tympanites and no great pain. Vomiting was present, and on the fifth day it became stercoraceous. On the sixth day an injection of warm water and oil was passed high up into the large intestine. It brought away hardened feces. The vomiting ceased temporarily and it seemed that the obstruction had been overcome. Next day vomiting returned, however, and the patient died from exhaustion. An autopsy revealed the intestines matted together by the old peritonitis. The site of the obstruction was a tangle of united loops of intestine in the small gut, about the middle of the ileum. The vitality of this portion of the intestine was destroyed before death; and the loops were so tightly bound together by strong fibrous bands that the gut was perforated at each attempt to separate the coils by the most careful dissection. The gangrenous condition was produced by pressure in one of the loops, which was greatly dilated and hypertrophied by partial closure of the gut at the point of union of the loops of intestine. There was an accumulation of feces in one of them, the outlet of which was stenosed. During the progress of this case the question of attempting to afford relief by the operation of laparotomy was discussed. The autopsy showed that laparotomy, if performed, should have been done early; and, even so, the intestines would probably have been irreparably damaged in forcing the feces past the constriction, so that the probability of success would have been slight. As the sequel proved, the condition was relieved without operation; and had relief come a little sooner, while the patient was vigorous, he might have been saved for another occasion. Dr. Henry B. Sands records in THE MEDICAL RECORD, vol. xxi., p. 429, April 22, 1882, the result of a laparotomy done upon a precisely similar case, as follows: "The patient was a man about thirty, who had suffered from acute obstruction for a week before the operation. No exact diagnosis could be made. When the abdomen was opened, the intestinal coils were found extensively adherent to one another, in consequence of former peritonitis; and a careful search failed to discover the nature or seat of the obstruction. The abdominal wound was closed, and the patient died soon afterward from exhaustion."

A REMARKABLE CASE OF COMPOUND COMMINUTED FRACTURE OF THE FRONTAL BONE, WITH RECOVERY.—Dr. L. Tibbets, of Rockford, Ill., sends us the following history. A young man, aged twenty-nine, weight one hundred and twenty-eight pounds, was working at an emery wheel, fourteen inches in diameter, and revolving three thousand times a minute, when it suddenly burst, and a fragment struck him on the left half of the frontal bone. He fell down and was unconscious and quiet for about ten minutes; then violent muscular movements appeared. The frontal bone was depressed, the brain visible and pulsating. Four persons held him while Dr. Tibbets removed eight large fragments of the bone. The patient

was then more quiet. Hemorrhage was profuse, the brain membranes, longitudinal sinus, and a branch of the middle meningeal artery being lacerated. The wound was bandaged, and the patient carried home in a hack. "On the way home," says Dr. Tibbets, "he vomited blood several times, and after arriving, I gave him chloroform to quiet him while removing other pieces. One piece of the orbital plate, also a piece of the internal angular process of the frontal bone and orbit weighed one drachm. The number of pieces removed was nineteen, weight of largest (two of same weight) was one drachm. One piece was found on the opposite side of the shop, forty feet from where he stood. The combined weight of all the pieces found and removed was five drachms twenty-five grains. Hemorrhage was controlled by twisting the meningeal branch, and powdered persulphate of iron applied to the brain surface where the vessels were torn, and the wound left open until all oozing stopped, which was three hours. At two places on the left lobe, anterior, there were seen protrusions of brain matter about three-eighths of an inch in diameter. The wound was crucial shaped, extending from the root of the nose toward the middle of the left frontal bone. The flaps of skin were drawn together and a rubber drainage-tube inserted. Fluid extract of ergot $\frac{3}{4}$ j., and codeia, $\frac{1}{4}$ gr., were ordered every three hours. Some hours later he became conscious and would answer questions. Slept well that night. Next morning he could speak, take nourishment, and sit up. Temperature normal. Carbolyzed cloths were kept upon the wound. By the fifth day he was able to sit up half the time in a chair. At no time after the injury did he complain of any pain. The highest point of temperature reached was 102° , and this only for one or two days. For three weeks after injury he complained of seeing double. Though after this, his sight became normal and mind clear. I gave him examples of figures to add, columns five figures in length and nine in number, to test his memory and condition of mind. He added these readily and correctly. He sat up most of the time. In two months he walked over a mile. He had then been keeping books for the company for three weeks. I tested his sight, and found in each eye vision normal. He recently moved to Oneida, N. Y. Before leaving was able to transact business, as before injury. There was left a depression in forehead, when the bone was taken out, but, on pressure, it seemed quite hard. I have seen reported but one case similar to this, in 'Erichsen's Surgery,' page 287, when there was a comminuted fracture of frontal bone, where there were twelve pieces of bone; patient died on the ninth day. These recoveries are considered very doubtful. I have not seen, or been able to find a case reported, parallel with this, both for extent of injury and perfect recovery."

THE NERVE-CENTRES FOR UTERINE CONTRACTIONS.—Dr. Dembo claims to have discovered the ganglia concerned in the production of contractions of the uterus. He says they are situated in the anterior wall of the vagina, and are independent of the spinal cord.—*Centralbl. f. Gynäköl*, August 11, 1883.

THE USE OF ATROPINE AND MORPHINE BEFORE ANÆSTHESIA.—Dr. Aubert, of Lyons, lately forwarded a paper to the Biological Society of Paris on the Advantages of Combining Atropine with Morphia in Hypodermic Injections, in the following circumstances: 1. In all cases where injections of morphia are indicated, the analgesic action of the morphia being then considerably increased by the addition of atropine. 2. As an adjuvant to the anæsthesia produced by chloroform or ether. The nauseating effects of the substances are at the same time suppressed, which by the efforts of expectoration may, in syphilitic subjects, be attended with great danger to the surgeon or to his assistants. 3. The tolerance of the morphia is so increased by its association with atropine that it could be administered even a few minutes after a

meal without any fear of the supervention of vomiting. In the discussion that followed M. Poncet observed that all the means which tend to palliate the inconveniences of chloroformization have the effect of prolonging to a dangerous degree the anæsthetic sleep, which he considers undesirable, as it is preferable for the subjects operated on to recover their senses as soon as possible. Dr. Brown-Séquard then remarked that the employment of atropine has precisely for effect the diminution of the soporific action of morphia.—*Louisville Medical News*.

CONFIDENCE IN THE PROFESSION.—The following story, told in connection with a terrible outbreak of cholera on board an emigrant steamer, illustrates a remarkable degree of confidence in the profession. The deaths on board were so numerous that, for the purpose of indicating to the boatswain employed in removing the dead for burial, a cross was chalked against the berths where the corpses lay. By mistake, the fatal mark was attached to a berth where the inmate was engaged in a sound sleep. On the boatswain seizing him by the legs for removal, the intended victim called out loudly that he was not dead, but asleep—a remonstrance which drew from the old Scotch sailor the rejoinder, "Tut, tut, mon; the doctor knows better than you;" and who forthwith proceeded to endeavor to execute his commission.

TONGUE DEPRESSORS.—Dr. W. S. Gee, of Hyde Park, Ill., writes: "The article on the above heading, in a recent issue of your indispensable journal, calls to mind the statement of an old physician that 'many an instrument is uselessly modified merely for the sake of having the inventor's name attached.' This should be qualified in most cases, no doubt, but it is evident it is fitting occasionally. It has been my experience and observation with these instruments that most of them are not practically safe. I have used many different kinds and have decided on this course: For office use I have a glass rod, eight inches long and one-fourth of an inch thick with smooth rounded ends. This is easily cleansed, giving the least possible danger of transferring diseases. Is easily used, does not gag the patient, and in every way is more agreeable. When the necessity for the use of this instrument arises away from the office it is easy and fitting to call for a teaspoon, and I am sure an intelligent patient prefers this to a depressor taken from the pocket, which naturally enough excites his curiosity (silent, perhaps) to know when and where it was used last. If an examination of the throat with the laryngoscope is desired, Sass' is a useful one. A little more practical simplicity in our instrument makers is desirable."

A LARGE FAMILY.—The Madrid *Estafette* states that a Spanish gentleman, Señor Lucas Nequeiras Saez, who emigrated from his native land to America seventy years ago, recently returned to Spain in a steamer of his own, and brought with him the whole of his family, which consists of no fewer than 197 souls, sons-in-law and daughters-in-law not included. Señor Saez has been three times married. His first wife had 11 children at 7 births, his second had 19 children at 13 births, and his third had 7 children at 6 births. The youngest of this family of 37 is aged nineteen; the eldest, who is seventy, has 17 children, of whom the first-born is forty-seven. Of Señor Saez's 23 sons, all of whom are living, 13 are married, 6 are unmarried, and 4 are widowers; and of his surviving daughters, 9 are married. The granddaughters number 34, and of these 22 are married, 9 are unmarried, and 3 are widows; and of the 45 grandsons, 23 are married, 17 are unmarried, and 4 are widowers. There are also 45 great-granddaughters, and 39 great-grandsons, of whom 3 are married. Señor Saez has never tasted wine or any alcoholic liquor, and lives chiefly upon a vegetable diet, with but little salt. In spite of his ninety-three years, he is still hale and hearty, and makes a point of walking briskly for at least three hours every day.

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CONGESTIVE INDIGESTION.

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THERE are two conditions where indigestion is due to vascular congestion: one acute, the other chronic.

Acute congestive indigestion is often an alarming condition; so much so that death from exhaustion is imminent in many cases. When it is due to an irritant poison, death often is the result; but cases of irritant poisoning will not be included in this sketch, though the treatment here given applies after the specified measures for the particular poison have been adopted. The main indications of acute congestive indigestion are vomiting (especially when anything is taken into the stomach), and a red irritable tongue. There is usually a good deal of excitement present, though this may be masked by the exhaustion which is soon induced. In consequence of the rejection of all food, including liquid matters, the fauces are dry, and much thirst is experienced. The consequence is the patient craves for fluids and swallows them eagerly, with the result of their speedy rejection by the irritable stomach. The condition is one which requires a very steady hand on the reins, as well as considerable professional knowledge, for its successful management.

In the first place it is well to make sure that the case is not one of reflex vomiting from some irritation in the pelvis, as a pregnant womb, or an irritable ovary, especially if the patient be a young woman. Reflex vomiting does not carry with it any rise of temperature, and, what is certainly equally important, does not alter the aspect of the tongue. When vomiting occurs with a clean normal tongue, it is clearly not connected with primary disturbance in the alimentary canal. This is a very important matter, and forms a trustworthy broad guide in practice to the line of investigation to be taken in order to clear up the nature of the case; and here correct diagnosis gives the clue to the appropriate measures to be adopted. Still, practically, there ought to be no difficulty in making the diagnosis betwixt reflex vomiting and congestive indigestion. Taking the tongue as the guide, the mucous lining of the stomach is vascular, and that organ, bodily, irritable, and ready to resent the intrusion of any fluid. The thirsty sufferer gulps down a quantity of fluid, only for it to return almost as soon as down. The stomach is tender to the touch; and is contracted—in all probability, for exact physical examination is impracticable. The bowels are constipated because they receive little or nothing from the stomach. Diarrhea may be present as a troublesome complication.

In such a condition the great problem to be solved is how to feed the patient? It is quite clear that exhaustion is not far distant; and that the measures taken shall be prompt and effective. No medicine is retained, so it is impossible to soothe the stomach by opiates given internally. Of old there were two courses open: (1) to raise a blister quickly over the stomach and dust the raw surface with morphia; and (2) to throw up a starch enema containing a dram of laudanum. Now, fortunately, the hypodermic syringe supplies us with a ready means of bringing the system, and with it the stomach, under the influence of opium or its derivatives.

And in employing the syringe a cautious boldness is indicated. A full dose should be given at once; timidity suggests small doses repeated at short intervals. My own preferences are in favor of a dose which will probably procure sleep. After a few hours of sleep the stomach will be found much less irritable. At the same time an enema of pancreatized milk gruel, or of baked flour and peptonized beef-tea, might be administered when the patient is beginning to come under the influence of the opiate. If this can be given without much disturbance, and the enema is retained during the sleep, the patient will awaken considerably refreshed.

If necessary both manœuvres may be repeated. If the thirst be great, then chips of ice may be given to the patient to suck, and as the cool moisture passes over the fevered fauces relief is given. The room should be darkened, and the nurses should be as quiet as mice in their movements and sparing of speech; while whispering should be absolutely forbidden, for it is far more disturbing than speech. Watchful, deft-handed attendants are desirable, who can place a cloth moistened with vinegar or salvolatile, as circumstances require, over the aching brow without any unnecessary disturbance of the patient.

Such should be the line of treatment in what may be called critical states. As soon as the stomach is somewhat quieted down it is well to give a small opium pill. This might consist of one grain of opium in powder made up with half a grain of extract of opium. Such a trifle will scarcely offend the stomach, and is retained. If, however, the presence of even this trifle is resented, and the pill is thrown up, then make a lesser pill still, say one-fourth of a grain of morphia, by preference the muriate, with half a grain of the extract of opium. If the stomach have been at all soothed by the hypodermic injections, probably this will be retained. If not, administer an hypodermic injection, and when the patient is coming under the influence of it, try the little morphia pill again. If it is retained, then the local sedative action of the opium is secured, and this once achieved the after-treatment of the case becomes simple. It is in the treatment at this critical stage that the knowledge, the patience, and the resources of the physician are most taxed; when the patient is in much suffering, and perhaps thereby rendered unreasonable; while the relatives are almost beside themselves with apprehension on the one hand, and eagerness to be of some service on the other. Once the little mite of a pill is kept down, then the corner is turned in all probability.

The line on which the physician must proceed is distinct enough and intelligible enough; but it is easier described than followed out in practice. The patient craves for drink; the friends are anxious to give it; but the contracted, irritable stomach resents the presence of any bulk of anything fluid or other, and ejects it; the attempt having only further irritated the stomach, while no good end has been served.

Once having placed the pill successfully in the stomach, where it has remained, then the case moves on. The ice may now have a food-value attached to it, by freezing milk and giving a chip from time to time to be sucked. Or some rose-water containing some sugar, or other sweet and palatable fluid may be frozen and chips be given to the patient from time to time. But this must be done cautiously and no acid enter into the composition of the frozen fluid on any account. Acids, even

vegetable acids, though agreeable to the palate, are injurious to the irritated mucous membrane.

How long a hypodermic injection and a nutritive enema must be continued, at bedtime, mainly depends upon the circumstances of each case. When small sips of milk can be retained, and frequently taken, then the necessity for these measures is materially reduced. But the quantity taken at once must be kept very small; if vomiting be again set up, the steps must be cautiously retraced. The tiny opiate may be continued at bedtime for some time, even after a mixture is practicable. Bismuth with an alkali and a little solution of morphia, or some plain laudanum, or other galenical preparation, may be given twice or three times a day, and soothes the mucous membrane famously. Such is the line to be pursued patiently and cautiously; whether there be simple gastric disorder, or the condition come on in the course of some other malady, as typhoid fever. One great matter scarcely enough thought of is the amount of curdling of the milk which may go on in the stomach. If too firm a curd be formed it does not properly dissolve again, but remains a source of irritation to the stomach. When vomited the condition of matters is readily revealed. But if the curd pass downward it may escape notice. Should masses of hard curd be found in the motions, the milk must be mixed with some farina and a fixed alkali, like prepared chalk or calcined magnesia, be added, which will prevent the formation of too firm curd. When the firm curd is formed, it involves not only the wasting of the milk as a food, the patient being no better for it, but the greater matter, viz., irritation of the bowels till diarrhoea may be set up, or even some muco-enteritis. Frequently, indeed, is it necessary to give a more potent alkali than lime-water with milk when too firm curdling is found, and then the chalk or light magnesia can be stirred into the milk with a little biscuit powder if desirable, just before the patient drinks it.

But whatever is given let it be in small quantity at once, else the irritable, contracted stomach will certainly reject it.

An acute condition of congestive indigestion is found along with alcoholic excess under two totally different circumstances. First, after a debauch where the alcohol has been so concentrated that the mucous lining of the stomach is congested, almost inflamed. There is thirst and fever, and the sufferer drinks greedily, the fluid being retained only a very brief time. Then it is well to give the patient milk and soda-water, the carbonic acid gas acting as a local sedative. The little mite of a pill (mentioned above) may be given also, twice or three times in the twenty-four hours. As to how far the patient may have some effervescing beverage containing alcohol is a matter to be determined betwixt the patient and the physician in each case.

Then, at other times the case is rather as follows: The patient is acutely ill and is being plied freely with brandy and water, or its alcoholic equivalent, under the impression that exhaustion will thus be averted. But the tongue gets redder and the stomach more irritable and the bowels more tympanitic, until it is only too clear that the alcohol is producing acute congestion. Then the alcohol must be withdrawn, however strongly the general condition may seem to require it, for the gas evolved in the stomach and bowels presses up the diaphragm and not only prevents its descent, but the pressure embarrasses the heart. Indeed, the elastic pressure of the gas impedes both the respiration and the circulation, and consequently the alcohol is doing more harm than its stimulant effect counterbalances. Unless the alcohol be promptly stopped, under these circumstances the patient will probably sink. If there be no other remedy feasible the alcohol may be administered per rectum. (Probably the subcutaneous injection of strychnine would maintain the action of the centres of the circulation and the respiration as effectually as alcohol could do.) This last aspect of the relations of alcohol, given

medicinally, to acute gastric congestion is often overlooked; yet the condition is not so very rare! So much then for acute congestive indigestion.

Chronic congestive indigestion is found with all maladies which impede the blood-flow in the portal circulation. Consequently it is found with failure of the right ventricle, whether this be consequent upon a mitral lesion, leading to pulmonary congestion, or there is present some condition affecting the lungs generally, as emphysema or cirrhosis. Or it may be some hepatic condition which gives rise to the portal congestion, as cirrhosis or cancer. The effect is to produce fulness of the gastric venules, with a catarrhal condition of the stomach while the gastric juice is diluted, and therefore diminished in potency. The prominent sensation complained of by the patient is "sense of fulness," even when the stomach is empty. Why this sensation should be found with this fulness of the gastric veins, it is not easy to say, but the fact remains. The difficulty of digestion in all such cases is very great, and the management of the condition no easy matter. The impeded blood-flow affects the arteriales and the gastric fluid is sparingly formed, and is of enfeebled energy, being diluted from the venous fulness, and effusion resulting therefrom. Yet the nutrition of the heart and the respiratory muscles must be maintained, else it is clear the patient will soon sink. The food must consist of the blandest and most easily digested material, containing no solid materials, which would only be covered with a layer of mucus as it is rolled over and over by the movements of the stomach.

Milk and seltzer water, beef-tea or chicken broth with some biscuit powder, must form the dietary if the case is very serious. If the dyspepsia be slighter, then some milk gruel, milk puddings (made without an egg), or even white boiled fish may be sufficient. As improvement is made, the dietary may be made even more substantial, and nice thin sandwiches made with potted meat, stewed fruit and cream may be permitted. As to alcoholic fluids, if they agree and help the patient to eat and digest, there is no valid reason why they may not be allowed. Then as to direct medical treatment; at times some astringent, as compound kino powder, may be indicated by a catarrhal condition.

But the treatment *par excellence* is the relief of the venous congestion; and the stomach is needed for a good deal of medicine, as well as food. There is the filling of the arteries and the emptying of the veins, the improvement of the arterial blood-pressure, for which digitalis and its allies are available. The increase in the blood-pressure produces a freer flow of urine, and that is good—as well as a good indication of the medicine is acting well. As in all cases of right-side embarrassment the respiration is impeded, it is well to add some respiratory stimulant, as strychnia for instance. Such respiratory stimulant usually adds much to the efficiency of the stimulant to the circulation; and digitalis is rarely, if ever, indicated where the addition of strychnia is not also suggested, and the combination gives the best possible results. In some cases too, where digitalis does not suit the patient, the addition of strychnia will at once produce good effects. (This is a matter of such importance in practice, in my experience, that I beg the reader to give the subject his best attention. Some time ago I was called to a case in the country, where digitalis, potash, and scopolarium with elaterium had been given, with the result that the dropsy was rising, in a case of mitral stenosis. It was quickly apparent that the respiration rather than the heart was failing, and ammonia with strychnia was substituted for the potash, with almost magical effect; and the new direction has been maintained. All that has been said about the venous congestion, of right heart embarrassment, and its effects upon the gastric venules, was well pronounced in the case.)

By such means, together with a smart cathartic once or twice a week, which drains so much water away by the bowel, the condition of venous congestion is greatly re-

lieved. And a smart cathartic means a full dose of the agent adopted, which may be a pill of one-sixth of a grain of elaterium, or a powder of one-tenth of a grain of elaterium with ten grains of compound scammony powder. The good of such a full dose is to secure its acting freely. This is what Dr. King Chambers says: "In all forms of dropsy the effect which you desire to produce by remedies is strikingly dependent on the condition of the alimentary canal. Where the portal system is congested, I have given that strongest of purgatives, elaterium, in doses gradually augmented up to three grains, without any of the vigorous hydragogue action naturally following, and then, by applying a few leeches to the anus, so as to disgorge the abdominal veins, half a grain has produced excessive purgation with reduction of the dropsy." The reader may think the doses of elaterium here spoken of as certainly heroic. But when a patient is water-logged in venous fulness, the effect of a brisk cathartic is very different from what it is on a healthy person. There may be some risk of exhaustion or syncope at the time of the catharsis to be guarded against by free recourse to stimulants, if necessary, but the immediate after-effect is a sense of distinct relief.

Stimulants to the circulation, with respiratory stimulants, improve the circulation, while free catharsis relieves the venous fulness; these are the great measures to be adopted in chronic gastric congestion leading to indigestion—*i.e.*, measures addressed to the circulation. Then the dietary must be adapted to the state of the digestion, and some artificial pepsin may be very useful to help the dilute, feeble natural pepsin in the work of digestion.

Gastric catarrh is not, however, always the effect of venous congestion, and then astringents are clearly indicated. But when it is the outcome of obstruction to the circulation the cardinal measure to be adopted is the improvement of the circulation, upon which the gastric catarrh is relieved.

CIRCULAR RESECTION OF THE INTESTINE, AND CONSEQUENT UNITING BY SUTURE, WITH THE HIS- TORY OF TWO CASES.

By EDWARD J. ILL, M.D.,

NEWARK, N. J.

ABDOMINAL surgery has within the past ten or fifteen years received the attention of the most eminent surgeons, and nevertheless many points are still so unsettled that every contribution, be it ever so slight, should be received by the profession with interest.

Especially is this the case in operations upon the stomach and intestines, and every experience ought to be carefully recorded, so that deduction may be made and guide us in further researches. These operations have many enemies, and the results of those who operate will be watched with the greatest interest, and probably closely criticised.

It will be the province of this paper to speak especially of circular resections of the intestines for cases of gangrene from strangulated hernia, not including wounds of the intestines produced by accident, or where during the progress of other abdominal operations it has become necessary to remove a piece of intestine, nor the wonderful achievements gained from resections of the pylorus.

Randohr removed a piece of intestine (small intestine probably) two feet long, and united the ends by suture, in a case of gangrene from hernia, as early as 1727, and with good result. This was followed ten times, up to 1836, by French, English, and German surgeons, with the following results: five were cured completely, two had an artificial anus, and three died. From 1836 to 1875 it seems nothing was done in this line, and it is due to Langenbeck (1875), Kuester (1877), and Czerny (1878), to have revived this important operation. Since then the operation has been done thirty-four times, with

twenty deaths, making in all forty-four operations and twenty-three deaths. This, after a collection of cases by Mandelung and Rydygier, in November, 1881. Since then I have found notes of one case by Rydygier (*Berlin. Klin. Wochenschrift*, September, 1882), which was successful, and another by Dr. Q. A. Anan, in December, 1881 (*Schmidt's Jahrbücher*, 1881, p. 286), which was fatal.

A third case was reported by Dr. H. O. Marcey, of Boston, Mass., who operated in 1881, and to whom I am much indebted for the notes of his case. The case proved fatal.

The cases reported by Dr. G. D. Beebe, of Chicago; R. S. Sutton, of Pittsburg, Pa., and Wm. A. Byrd, of Quincy, Ill., do not properly belong to the scope of this paper, though the results, especially of the latter two, are very gratifying.

To this I should add two cases of my own, of which one recovered and the other was fatal. This makes a grand total of forty-nine operations and twenty-three deaths, or forty-nine per cent.

CASE I.—Strangulated hernia, seven days' standing, resection of large intestine, fecal fistula, cured. Mrs. S. M—, born in Russia, twenty-four years of age, widow, and mother of two children, aged seven and five respectively. Shortly after the birth of her first child she noticed a lump in the left groin, which she never entirely lost.

On April 2, 1883, she suddenly felt a pain in the left inguinal region, for which she sought medical advice.

On the fifth day thereafter, late in the evening, she was taken to the German Hospital of this city, where I found her in my ward on the next morning. The patient had a large swelling in the left groin, painful on pressure, of bluish-red discoloration, fluctuating, no impulse during cough, and no tympanitic resonance on percussion. She has not had a movement from the bowel since April 2d, and vomited mucus on the morning I saw her. She seemed very much depressed mentally. The pulse was 120, and temperature 100°. Alvine injections brought away very little feces. Hot poultices were applied, and the house physician directed to get some of the history, just detailed, from the patient's friends, as it was difficult to understand her. The patient remained quite comfortable until the evening, when she showed signs of prostration, and a hypodermic syringe brought away some bad-smelling reddish serum. I decided to operate the next morning by opening the tumor and finding its contents.

April 9th—the patient was etherized, and after incising the skin the subcutaneous tissue was found infiltrated with a yellowish-gray matter of slightly fecal odor. Very soon I entered the hernial sac from which the fecal odor was penetrant. A piece of grayish-looking gangrenous large intestine, which was perforated, was found. It was a femoral hernia and the stricture so severe, that it was difficult to introduce even the tip of the finger. After dilating and cutting the stricture somewhat it was found impossible to draw the gut down. I decided to do laparotomy, take the gut from its confined position, cut the diseased portion off, and unite the ends by suture. I had been fully prepared for this both by getting all things ready for this formidable operation, as well as by making myself familiar with its technicalities by operating successfully upon lower animals.

The wound at the hernia, the sloughing intestine, and the sac were thoroughly washed with a two and one-half per cent. solution of carbolic acid.

An incision three inches in length was now made in the median line, just as in ovariectomy. The small intestines were highly inflated and very congested, but there was no general peritonitis. The gut which entered the canal was soon found, all the firm adhesions separated with the finger, the gut withdrawn and brought out at the wound in the median line. It was found that the gangrenous part was the lower part of the descending colon, and the mesentery just implicated. The peritoneal covering of the intestine in the neighborhood of

the constriction was very much inflamed. A small opening was made into the mesentery, and two clamps were placed upon the healthy part of the gut to prevent the contents from escaping. The gut was now cut through quickly with a pair of scissors about one-half inch from the dead portion at one place, some of the constricted portion being left.

The hemorrhage was severe, and the clamps being rather in the way, they were now removed and the ends of the gut firmly held by my friend, Dr. Kornemann, to whom I am much indebted for his careful assistance in this case. Fourteen ligatures had to be applied to bleeding vessels. I had great care exercised so as not to produce any laceration of the mesentery or separation of it from the intestine, which would produce gangrene, as has been shown by the researches of Professor Mandelung in a paper read before the Tenth Congress of German Surgeons in April, 1881. I now commenced placing sutures of finest silk (which had previously been boiled in a five per cent. solution of carbolic acid) with fine, non-cutting, slightly curved needles. The first stitch was inserted into the intestine close to the meso-colon and just including this. The second stitch was placed in the same position on the other side of the gut. The next just opposite the insertion of the meso-colon, and the rest midway between the two extremes, until about thirty sutures were applied and as close to each other as possible.

The mode of inserting the sutures was such as to catch up the peritoneum and muscular coat, and not to include the mucous membrane. At the place where the tissue was inflamed the stitches tore through easily, and double thicknesses of the silk were used.

The gut was returned into the abdominal cavity after this, and the former had been thoroughly cleansed of all blood, a drainage-tube placed into the retro-uterine cul-de-sac, and the wound closed with eight deep silver wire sutures. This was covered with silk protective and carefully prepared iodoformed cotton. The lower wound was thickly covered with iodoform and cotton placed over it. Temperature after the operation was 98° ; pulse, 116; and respiration, 24. To prevent vomiting, one teaspoonful of hot water was given every fifteen minutes for twelve hours after the operation. In the evening, pulse, temperature, and respiration remained the same, but the tongue was dry and brown, skin moist, and patient complained of colic-like pains. There was slight tympanitis and occasional eructations of gas.

Hot barley-water was given during the night, and the patient remained quite comfortable.

April 10th.—At 6 A.M., eighteen hours after operation, the patient passed the first flatus, which was followed by an almost continual discharge all day. The eructations ceased and tympanitis disappeared, and there were very few colicky pains.

About 9 A.M. the dressing was changed, and about seventy-five grammes of grayish muddy-looking fluid removed from the drainage-tube. There was no unpleasant odor to this, still the tube was rinsed with a solution containing carbolic acid $\frac{1}{2}$, soda chlor. 5.0, and water 500.0, and dressing reapplied.

The lower wound was rinsed with two and one-half per cent. sol. of acid. carbol., and covered with iodoform and cotton. During the day milk and beef-soup were given in small and frequent doses. In the evening there was neither a rise in temperature, pulse, nor respiration, though the patient felt very weak, and larger doses of nourishment were given.

April 11th.—Dressing changed, and ten grammes of light straw-colored fluid removed from the drainage-tube. Gases still passed by the anus and gave no pain. The patient was nourished as during the night, and at 2 P.M., fifty hours after operation, the patient had an abundant, soft, natural-looking movement from the bowels, with but little pain. A second movement occurred two hours later, which was very painful and streaked with a little

fresh blood. A third movement followed at 6 P.M., and small doses of morphine were given to quiet the bowels.

April 12th.—The evening temperature rose to $100\frac{3}{4}^{\circ}$; pulse and respiration were the same as before.

April 13th, 9 A.M.—Patient has a desire to evacuate the bowels, and cannot be kept from straining. Dressing was changed, and still a small quantity of fluid removed from the drainage-tube. Morning and evening temperature $100\frac{1}{4}^{\circ}$.

April 14th.—Patient spent a restless night and had much straining. On changing the dressing quite a quantity of fluid feces had escaped on the left side of the tube. This was five days after the operation. Patient's tongue was very dry, as was also her skin. Temperature $100\frac{1}{4}^{\circ}$; pulse, 116; and respiration, 26. At this time I was utterly at a loss what to do about the drainage-tube; to remove it would probably allow feces to enter the abdominal cavity and kill the patient, nor was there any object in keeping it there any longer. The skin about the drainage-tube was thoroughly rinsed with two and one-half per cent. sol. of acid. carbol., and in the evening the same thing was repeated; but I was still meditating about the drainage-tube, which seemed to me a "nolle me tangere."

April 15th.—The quantity of feces which escaped this A.M. was still larger than yesterday. I had decided to introduce through the glass drainage-tube a smaller and shorter one of soft rubber. This was done without any difficulty, but a large quantity of feces followed the tube. Patient was very comfortable, and flatus were always passed per viam naturalem.

April 16th.—Dressing changed; drainage-tube removed, as it was filled with feces, and wound well rinsed with two and one-half per cent. sol. of acid. carbol.; two silver sutures removed, and iodoform dusted over the whole wound. Temperature was $101\frac{1}{2}^{\circ}$, and pulse varied between 120 and 130.

April 17th.—There was no reaction following the removal of drainage-tube. Two small abscesses formed along two silver sutures and these sutures were removed. In the evening warm water was injected into the rectum with an irrigator. After a pint had been injected the water came from the fistula.

April 18th.—The last stitches were removed to-day. Patient partakes freely of beef-soup, milk, finely chopped beef, and toasted bread. During the night patient passed several scybala per anum.

April 19th.—Patient's temperature rose to 103° without any definite cause. The fistula carefully cleansed, and again covered with iodoform. Patient again passed feces by the anus.

From April 20th to April 25th the condition remains the same, except that the temperature came down to 100° .

May 1st.—The quantity of feces from the fistula decreases as the quantity voluntarily passed by the anus increases.

May 2d.—No discharge from the fistula, and a well-formed passage by the anus.

Nothing more can be added to this already somewhat lengthy history, but that no bad symptoms followed the last date, and patient was dismissed cured entirely about fifty-one days after the operation, and remains so to this day.

CASE II.—Strangulated inguinal hernia, operation, cure; strangulation recurs, eight inches of small intestine gangrenous, resection, peritonitis, death. F. K.—, fifty-seven years of age, iron-worker, German, has suffered for four years from a right inguinal hernia, and for sixteen years from chronic gout, resulting in great deformity of hands and feet. Early in the evening of July 7, 1883, the rupture came down, and could not be reduced by the patient. He did not seek advice until July 8th, when he was sent to the German Hospital by my colleague, Dr. F. Schmascher, who requested me to operate. The patient was relieved by ordinary herni-

otomy, the sac not having been opened. The patient made a good recovery until July 20th, when, at 2 A.M., the rupture suddenly reappeared during exertion of turning in bed. Pains gradually increased. I saw him at 10 A.M. He was greatly prostrated, had a temperature of 102° , and his abdomen was tender and tympanitic. Taxis was applied without effect, and at 10 A.M. I operated to relieve the stricture. This time I was obliged to cut the sac, and, to my astonishment, I found the gut black and without the usual lustre. I cut the stricture and left the gut *in situ* to recover; if such was not the case, to remove the gangrenous portion as soon as I was prepared.

3 P.M.—The patient had been vomiting fecal matter in large quantities since the cutting of the stricture. The gut was re-examined and found to be in the same condition as in the morning, and I resolved to resect the gangrenous portion and unite the ends by suture. The gut was carefully drawn down through the inguinal canal, and eight and a half inches of small intestine removed. From the appearance of the healthy gut it was apparent that general peritonitis had already set in. The mesentery was ligated in toto, and the gut united as in the first case, except that a double row of fine silk sutures (Czerny) were used. From twenty-six to thirty interrupted sutures were used, and only three vessels ligated.

During the operation the gut became greatly distended and purple, partly from the slight constriction above and partly from the force which had to be applied in bringing the gut out to be conveniently handled. A rubber drainage-tube was inserted to the abdominal cavity and the wound treated with iodoform. Patient was given morphia soon after he came to from the anæsthesia. Temperature, 102° ; pulse, 126. He was greatly relieved from pain, vomiting of fecal matter recurred but once, eructations were frequent. He was treated the same as the foregoing case, excepting that morphia was given him for his peritonitis. During the following night patient suffered much from tympanitis and colic-like pain in the neighborhood of the wound.

July 21st.—At 7 A.M. temperature was 103° and pulse 132. Patient continued same as in the night. There was no great discharge from the drainage-tube, and brandy was ordered in large doses; ice-bags placed upon the abdomen. At 11 P.M. temperature was $105\frac{1}{2}$; the first flatus passed, tympanitis grew less, and eructations ceased. Wherever hypodermic injections of morphia were given ecchymotic spots appeared.

May 22d.—At 7 A.M. the patient suddenly got a severe watery diarrhoea, which was ejected with such force that the fluid passage reached the foot of the bed. Temperature was $105\frac{3}{4}$, pulse hardly perceptible; hands grew cold, coma set in, and death ensued at 10.30 A.M., forty-two hours after operation.

A post-mortem examination was made at 12 M. The gut was firmly united by fibrinous adhesions, and was situated in the neighborhood of the right inguinal ring. General peritonitis was present, which caused the death of the patient.

It seems to me proper to analyze these two cases, to compare with others of a similar nature and to draw deduction, which may throw light upon future cases; for I believe the operation not only justifiable, but its range of application wide, and every surgeon may be called upon to do it and without great preparations. To illustrate this I should say that in the brief time of seven years I have been called upon to operate for strangulated hernia twelve times, and three times the gut was gangrenous. Of course, there cannot be any great preparatory treatment, which is always of so great importance in capital operations, except, I should say, that all antiseptic precautions, especially about the ligatures and sutures, should carefully be observed. As to where the operation shall be done; whether the gut be dragged down through the hernial opening and there cut off, or shall laparotomy be performed?

In Case I. I was unable to drag the gut down; the tissue was so infiltrated with fecal matter that I was afraid of infection and troublesome hemorrhage should I make large incisions into Poupart's or Gimbernat's ligament.

In Case II. this could be done to some extent, but the inconvenience occasioned by operating in a small space and the congestion of the gut produced by the constriction at the opening made the operation a great deal more difficult. Section at the median line is quickly and easily done, the gut handled readily, the peritoneal cavity cleansed with perfect safety, and drainage well established if thought prudent. I shall hereafter always prefer laparotomy. Concerning the resection of the gut itself. Before the gut is cut some preventive will have to be taken to keep its contents within. Some—Billroth, Gussenbauer, and others—recommend digital compression, to which I can only agree; while others advise the use of forceps (Kocher) or clamps (Rydygier), and still others ligate with catgut or silk. I think digital compression best, because the same assistant can keep the intestines in general from prolapsing, and will also be able to adjust the two ends of the intestine.

In describing the operation in Case I., I have said that I left part of the constricted gut. I shall be careful hereafter to cut away all the diseased portions, as the sutures cannot be relied upon in cedematous and swollen tissue. The greatest care must be exercised not to strip the gut of its mesentery, as gangrene of that part of the intestine will surely follow, as was shown by Mandelung and Rydygier in their experiments upon animals. If the mesentery is gangrenous it must be removed by triangular excision, the vessels ligated, and the edges brought together by suture; if not, it may be ligated *en masse* and separated from the intestine by cutting close to the part to be removed; or else the vessels may be ligated separately. I have preferred to ligate in toto before cutting off the intestine in Case II., and found this to work admirably. The intestine must be cut across at right angles to its axis unless one severed end is smaller than the other and would therefore not adapt itself. In this case it must be cut across at an acute angle to the axis and the insertion of the mesentery, thus affording a greater circumference.

Sutures.—Concerning the material the operators differ in opinion. Czerny, Billroth, and Mandelung prefer carbolized silk, while Shede, Dittel, Riedinger, and Rydygier prefer carbolized catgut. From statistics published by Mandelung and Rydygier, there does not seem to have been any difference as to the result, which was used. There is no doubt that silk is easier handled than catgut, and does not produce any more irritation, provided it be thoroughly antiseptic. It becomes absorbed readily, although not so quickly as catgut, and would from this cause be more reliable.

How to apply the suture.—Upon this rests the success or failure of the operation to the greatest extent; it matters little, it seems to me, what material is used, as I have said before.

After section of the gut, the mucous membrane, if it protrude too much, may be cut off so as to be on the same height with the serous covering. I have not found this necessary in my two cases. To begin with, I have applied two sutures to the intestine, one on each side of the mesentery and close to the mesentery, then on the side of the intestine directly opposite to the mesentery, then stitches midway between these two extremes, and so forth until all sutures are applied. This method will most likely bring the parts best into apposition. The sutures must be applied so that it will bring serous surfaces together. This can be done by enclosing in the suture the peritoneal covering and muscular coat only.

Czerny very ingeniously has practised the method of applying a second row of sutures over the first (Etagen-naht), so as to imbed the first one between two peritoneal

surfaces, thus preventing completely the escape of intestinal contents into the cavity of the peritoneum.

Mandelung has used, with success, small plates of aseptic cartilage after the fashion of buckshot suture.

Jome Joppe, Nussbaum,¹ and Rydygier,² first apply a continual suture, and over this an interrupted one. Dr. H. O. Marcy, of Boston, has also applied a continuous suture. This certainly can be done quicker than the interrupted suture, but should one stitch tear, the whole work will have been useless.

I will not lengthen this paper by describing the different forms of invagination and following suture as was practised by Jobert and Mandelung, since it was not followed by good results.

The question naturally arises, how many patients die from a gangrenous gut due to strangulated hernia. I have taken pains to ask a number of prominent physicians in this neighborhood, to whom I am much indebted for their ready answers, what their experience was in this line. They have kindly furnished me with records of twenty-nine cases, of which twenty-five died, or eighty-six per cent.; this being an increase in deaths of thirty-seven per cent. over the operated cases, which certainly would show how justifiable the operation is, even in its infancy.

Out of the four cases which have recovered with an artificial anus, one recovered even from this spontaneously.

DOUBLE SALPINGO-OVARIOTOMY—RECOVERY.

REPORTED BY W. R. PRYOR, M.D.,

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History.—The patient is thirty-two years of age and married. She began to menstruate when sixteen years of age, and did so regularly up to the time of her marriage, ten years ago. Before and during her marital life she has suffered a good deal at each menstrual epoch. She has had two children, and two miscarriages; her last pregnancy resulting in a miscarriage about three years ago. Her present trouble dates from that time. For six weeks after this abortion she bled almost continuously, and at the same time suffered very acute pain in her pelvic organs. The symptoms were thought to be due to a laceration of the cervix uteri, which existed, and for which an operation was successfully performed by Dr. Watts. The bleeding ceased, but she remained in bed for over two months longer, with all the symptoms of severe pelvic inflammation. She improved a little, sufficiently to get up and walk about the room, but soon she had a relapse and was again confined to bed for many weeks. For the past three years this woman has continued in this way, alternately confined to bed with the most intense pelvic pain, which was relieved only by large doses of opiates; or up, scarcely able to walk, and every effort greatly increasing her suffering, she at last arrived at that point where life was made bearable by opium only; and she readily and eagerly accepted the proposition of an operation.

Examination.—The patient is thin, but in better health than we would expect to find her after hearing her history. The uterus was perfectly movable antero-posteriorly, but its mobility was very much restricted laterally, especially on the left side, in which direction it was slightly drawn. The left Fallopian tube could be distinctly felt as an enlarged and thickened cord, and most exquisitely sensitive to pressure. The ovary also of that side was very tender. There was not so much sensitiveness developed on pressure in the right ovarian region, but one could distinctly feel the ovary greatly enlarged. On examining her with Sims' speculum, we found a good deal of free pus in the vagina. This was wiped away,

and she was again examined in the dorsal position. Placing her in Sims' position again, we found that more pus had entered the vagina, but no fistulous opening could be seen. On making gentle pressure in the region of the left tube, pus was seen to ooze from the os externum in considerable quantities. As the pus was quite fluid and not mixed with tenacious mucus, and as there were no signs of metritis or endometritis, we naturally came to the conclusion that the Fallopian tubes were the seat of a purulent inflammation.

The operation was performed by Dr. W. Gill Wylie at 3.30 P.M. A Sims uterine repositr was placed into the uterus, and gentle upward pressure was made with it, thus greatly facilitating reaching the uterus and its appendages from above. The primary incision was short, not more than three inches, being more exploratory than otherwise; it was subsequently enlarged. After the skin all the tissues were divided upon a broad director, and the abdominal cavity entered to the left of the linea alba. We found the left ovary prolapsed and somewhat adherent low down to the wall of the true pelvis, with the tube firmly adherent to the ovary. The right ovary also was adherent, but the tube of that side was free. The ligatures used were of silk, and two were applied on each side of the structures to be removed. This was rendered necessary by the extent and vascularity of the adhesions. In passing the ligatures we used a full-curved round needle, about two and one-half inches long. After tying off, and removing the left ovary and tube, the stumps were held up for a few moments to make sure that no bleeding was going on, touched with Paquelin's thermo-cautery, the ligature cut short; and the stumps returned. The same method of procedure was employed with the right appendices uteri. Having removed all free blood and clots from the pelvic cavity, and again examining the stumps for bleeding, the abdominal wound was closed with silk sutures.

The following extremely useful precaution was taken in this case: As soon as the abdomen was opened several temporary silk sutures were passed through each lip of the wound, and including all the tissues from skin to peritoneum, thus preventing the stripping back of the peritoneum from the muscles when the hands are passed into the abdominal cavity. Should this accident occur it is usually impossible to prevent the sutures tearing through the peritoneum when we endeavor to close the abdominal wound. After the operation a carbolic dressing was applied. Operation completed in an hour.

First Day.—Patient slept till 7 P.M., then awoke with some abdominal pain. Pulse, 90. 9.30 P.M.: Has been asleep since 7.45. Vomits very little. Pulse, 92. 11.30 P.M.: Has slept most of the time since 9.30. Slight pain. Hiccoughs occasionally, and has a little eructation of watery material. Temperature, 99°; pulse, 94; respiration, 16–18. Sleepy. 11.45 P.M.: Increase of pain, occurring spasmodically.

Second Day.—4 A.M.: Slept steadily up to 1.30 this morning. Since then she has awakened occasionally. Temperature, 99½°; pulse, 100; respiration, 20. Complaints of thirst and slight chilliness. General condition excellent. Is quiet and mind calm, being disposed to drowsiness. 10.30 A.M.: Temperature, 100°; pulse, 92. 12 M.: Temperature, 99½°; pulse, 108; respiration, 10. 3 P.M.: Temperature, 100½°; pulse, 100. For the first time allowed her to have nourishment—koumiss in 3j. doses. 8 P.M.: Temperature, 101¼°; pulse, 118. Koumiss in 3j. doses. 10 P.M.: Temperature, 101½°. 11.30 P.M.: Temperature, 101°; pulse, 118. Since the operation fourteen ounces of urine have been drawn; she has taken ten ounces of koumiss, and has received gr. ijss. morphia, hypodermically. In the past twenty-four hours she has not vomited once, and has had but little pain.

Third Day.—10 A.M.: Temperature, 100°; pulse, 96. 3.30 P.M.: Temperature, 99½°; pulse, 108. 5 P.M.: Temperature, 99½°; pulse, 92. Midnight: To-day she

¹ Billroth and Lücke, *Deutsche Chirurgie* Liefer, 44, p. 136.

² Berliner Klin. Wochenschrift, p. 620, No. 42, 1881.

has taken nearly four pints of koumiss without in the least forcing herself; has received gr. jss. morphia, hypodermically; and fifteen ounces of urine have been drawn. Only once has she had pain. No vomiting.

Fourth Day.—10.45 A.M.: Temperature, $98\frac{1}{4}^{\circ}$; pulse, 84. Commenced giving her the expressed juice of beef-steak cooked rare. 6.45 P.M.: Added pancreatized milk to her menu. 8.30 P.M.: Temperature, 99° ; pulse, 88. Midnight: Dressed the wound to-day, under the spray. The first dressing was found but slightly stained by blood, and was perfectly aseptic. Firm union existed along nearly the whole line of incision. To-day she has received less than gr. j. morphiae. Drew sixteen ounces of urine. Abundance of koumiss, beef juice, and pancreatized milk taken.

Fifth Day.—10 A.M.: Temperature, $98\frac{3}{4}^{\circ}$; pulse, 80. 10 P.M.: Temperature, $99\frac{1}{2}^{\circ}$; pulse, 108. After this the temperature never reached 99° .

Eighth Day.—Sutures removed. Line of union unbroken except at one point in the centre where there was some ectropion of the skin. To this raw surface applied iodoform dressing.

Tenth Day.—Simple enema given, followed by a large and painless stool, the first movement since the operation.

Sixteenth Day.—Out of bed. Morphia has been gradually decreased, and was entirely stopped to-day without any bad results except a slight exhibition of temper on the part of the patient.

Thirtieth Day.—On making an examination to-day, we find the following condition of things: The uterus is freely movable in every direction. Douglas's cul-de-sac is occupied by a knuckle of intestine which can easily be pushed up. On each side, running from the uterine stump of the tubes, and apparently terminating at the posterior vaginal wall opposite the os externum, is a firm fibrous band which is slightly sensitive to pressure. These, I think, are the result of a slight inflammation, which took place on the second day, when her temperature first reached $101\frac{3}{4}^{\circ}$. Beyond this, and the absence of the organs removed, no indication of an operation exists.

Thirty-first Day.—Patient is menstruating. The flow is slight, and she has less pain than at any of her previous menstrual epochs. She has certain nervous symptoms, such as are often seen in women at the menopause.

Remarks.—The diet of this patient for the first few days is mentioned, because I think that it is one of the most important factors influencing cases of laparotomy. For the first twenty-four hours the woman received nothing into her stomach, except, occasionally, a teaspoonful of iced water. Had she been given, as is often done, milk and beef-tea *ad libitum*, her stomach, irritable as it was after the etherization, would most certainly have been markedly disturbed, and the efforts at vomiting would have defeated us in what we strive to obtain in these cases, viz., perfect rest of the abdominal organs. What little vomiting she did was more regurgitation than vomiting, as it was done without effort or nausea. When we did begin to give her nourishment, it was in gradually increasing quantities of the easily assimilated koumiss and peptonized milk. The quantity of morphia administered may seem excessive; but the effect produced upon this *habituée* was not more profound than would follow the taking of gr. j. opii t. i. d. by a person unaccustomed to its use.

107 EAST THIRTY-FIFTH STREET, NEW YORK.

TO DISGUISE THE TASTE OF MEDICINES.—Bitter and nauseous salines are best taken simply diluted with iced water. A mouthful or two of iced water, before or after the dose, to blunt the sense of taste, and the dose between them in a wineglassful of iced water, renders it easily taken by most persons.—*Squibb's Ephemeris.*

Progress of Medical Science.

PROLONGED SUSPENSION OF VITALITY FOLLOWING THE HYPODERMIC INJECTION OF MORPHIA AND ATROPIA.—Dr. Alexander reports the case of a woman, thirty-seven years of age, upon whom an operation had been performed for the removal of the left ovary. At noon, four days after the operation, she became very excited, and disturbed the dressings of the wound, so twelve minims of the hospital solution of morphia and atropine were injected. This represented three-fifths of a grain of morphia and one-fortieth of a grain of atropine. At one o'clock she became livid, and a nurse injected another five minims of the solution before the house-surgeon arrived. When he came he injected ammonia, gave brandy enemata, used artificial respiration, and applied electricity without effect. At 4 P.M., the nurse was laying the woman out, but Dr. Alexander came in and determined to proceed with artificial respiration, galvanism, and frictions. Up to 5.30 P.M., only a spasmodic breath every quarter of an hour, and a feeble beat of the pulse every now and then, could be detected. At 7 P.M., a nurse poured some coffee into the patient's mouth, and she suddenly fell back as if dead, but by turning her over on her side she was made to vomit. By nine o'clock the respirations were beginning to be more frequent and the pulse stronger; she soon became conscious after this, and recovered perfectly.—*Boston Medical and Surgical Journal.*

POISONING BY CARBOLIC ACID.—Mr. E. R. Williams relates the following case in *The Lancet* of August 18, 1883. A young girl, seventeen years of age, was admitted to hospital, having, it was stated, two or three hours previously taken poison, the nature of which, however, it was impossible to learn. She was completely anæsthetic, her muscles relaxed, eyelids closed, pupils dilated and inactive, skin cold and clammy, with large drops of perspiration running down the cheeks, temperature lowered, respiration feeble and shallow, the pulse at the wrist imperceptible, and the action of the heart feeble and intermittent. From this extreme state of collapse, by means of subcutaneous injections of ether, galvanism, etc., she gradually recovered. Careful examination revealing nothing as to the nature of the poison, it was deemed advisable to give her one-eighth of a grain of apomorphia subcutaneously. In fifteen minutes she expelled, with a gush, about five ounces of a dark-colored liquid, smelling strongly of carbolic acid. Having now ascertained what the poison was, the stomach-pump was used, and some olive oil injected. This she soon vomited, together with a little more of the same dark colored fluid. The urine passed was of a dark brown color and gave the usual tests for carbolic acid. The feces were also of a dark color. With the exception of some soreness of the mouth and throat, together with a little pain in the epigastrium, she recovered without a bad symptom, and on the fifth day after admission was discharged. It was subsequently ascertained that she had taken about one ounce and a half of the common crude carbolic acid.

THE TRACTION SUTURE.—Dr. Oscar H. Allis recommends the following device (*Annals of Anatomy and Surgery*, September, 1883) to obviate the tendency of sutures to cut their way out when there is considerable tension of the skin at the edges of a wound: After drying the skin thoroughly, he applies strips of adhesive plaster passing from the margin of the wound in the direction in which the sutures are to hold. The needle is then passed deeply through both plaster and skin, and before the sutures are tightened, an assistant approximates the margins of the wound by pressure from his hands. Sutures employed in this manner, the writer claims, have a firm hold upon the plaster, exert their traction upon a large surface, are less irritating and harmful,

and will continue an efficient action much longer than the ordinary integument sutures.

LYMPHATIC DISCHARGE FROM THE NOSE IN LEUCOCYTHÆMIA.—Dr. Cornil relates the case of a patient suffering from leucocythæmia who had a discharge from the nose of a thick, transparent, glairy fluid. It flowed slowly but constantly, and was neither thin like the discharge of a commencing coryza nor opaque like that of a more advanced nasal catarrh, but contained a large quantity of white corpuscles. The patient did not sneeze nor were there any tickling sensations in the nose. At the autopsy the mucous membrane of the nasal fosse was seen to be smooth, without ulceration, but thickened in places. The thickened parts presented a gray color on section. They were formed by an infiltration of the connective tissue with a mucous, transparent fluid, like lymph. It was this leucæmic infiltration of the Schneiderian mucous membrane which was the cause of the nasal lymphorrhœa.—*Revue Médicale*, August 11, 1883.

TREATMENT OF CORNEAL OPACITIES.—Dr. Michel recommends sulphate of cadmium, of the strength of two and one-half grains to the ounce of mucilage, as an application to opacities of the cornea. A camel's-hair brush, dipped in this wash, is applied to the centre of the spot and retained in contact with it for a few seconds. At first the application is made once a day, but after a while is repeated two or three times in the twenty-four hours. When the pain grows less, the strength of the solution may be increased to five grains or even seven grains to the ounce. When the opacity is of recent formation it rapidly disappears under this treatment, but when it is of old date the applications must be long continued.—*Revue Médicale*, August 11, 1883.

THE MORBID ANATOMY OF IODOFORM POISONING.—Dr. A. Hoepfi found, post-mortem, in four cases of death from iodoform poisoning a condition of fatty degeneration of the heart, liver, and kidneys. The process was only beginning in some, but far advanced in others. The author then instituted a series of experiments upon rats, guinea pigs, and rabbits, administering to them subcutaneous injections of iodoform in oil solution. In every case he found parenchymatous inflammation of the heart, liver, and kidneys. These experiments, however, do not serve to explain the peculiar cerebral symptoms observed in man after poisoning by this substance.—*Allgem. Med. Central-Zeitung*, August 8, 1883.

EXTRA-UTERINE PREGNANCY, WITH RETENTION OF THE FETUS FOR SEVEN YEARS.—A woman, thirty years of age, during the second month of pregnancy, was suddenly seized with violent pains in the lower part of the abdomen, followed by syncope, cold extremities, and vomiting. These symptoms indicated the commencement of a peritonitis, which lasted for three weeks. The pregnancy then proceeded without any further accident. About two weeks before the expected time the pains of labor began, and recurred with regularity and increasing frequency. Even the os began to dilate. Suddenly, after three days, all the pains ceased, the os closed again, and the patient resumed her ordinary avocations. She experienced a little inconvenience at first from an abundant secretion of milk. Six weeks later menstruation was re-established, and for seven years the courses appeared with perfect regularity, and the woman enjoyed excellent health. At the end of this time another attack of peritonitis confined the patient to her bed for several weeks, during which illness she passed a quantity of hair mixed with the feces. Five months later she began to pass little bones with her stools, and in the course of three months very nearly a complete fetal skeleton was thus collected. The bones were perfectly clean of the soft parts. They were in a more advanced stage of ossification than is normal in a child at term. At the time that this case was reported to the Anatomical Society of Paris by Dr. De Brun the woman was in excel-

lent health and still passing one or two perfectly formed bones with each stool.—*Le Progrès Médical*, June 30, 1883.

THE RADICAL OPERATION FOR HERNIA.—From a careful study of upward of four hundred cases, Dr. Leisrink arrives at the following conclusions: 1. The radical operation should never be attempted for the cure of reducible hernia. 2. In the case of very large and painful, or of otherwise incapacitating hernias, the operation is justifiable. 3. Old and feeble persons and very young children should not be exposed to the risks of this operation. 4. The radical operation is indicated after the reduction of strangulated hernia, unless for any reason it be desired to keep the canal open. 5. A radical cure is very seldom obtained; yet (6) the condition of the patient is usually greatly bettered by the operation. 7. In every case a truss should be worn after the operation. 8. The radical operation should always be performed under the most strict antiseptic precautions.—*Deutsche Medicin. Zeitung*, July 26, 1883.

APOPLECTIFORM ATTACKS IN THE COURSE OF LOCOMOTOR ATAXIA.—A man, forty-seven years of age, presenting the symptoms of locomotor ataxia (lightning pains, diplopia, ataxic walk, vesical and rectal disturbances, etc.) suddenly lost the use of his right arm and also the power of speech for the space of ten minutes. Four weeks later similar attacks, involving the entire right side, recurred twenty-two times in twenty-four hours. Each time the power of speech was lost, though the patient was perfectly conscious and could think correctly. Only once was ataxic aphasia (using the wrong words to express well-known objects) observed. A second patient was suffering only from the initial symptoms of tabes dorsalis. This man suddenly lost the power of speech without any paralysis or disturbance of the intellectual functions. In the evening of the same day a second attack occurred, in which consciousness was lost for a period of three-quarters of an hour. Professor Bernhardt states that these attacks were not to be referred to a commencing progressive paralysis with ataxic symptoms, nor were they due to syphilis, heart disease, alcoholism, or any other like condition.—*Deutsche Medicin. Zeitung*, July 26, 1883.

PHOSPHATE OF CODEIA.—Dr. Frommüller employs the phosphate of codeia for hypodermic injection. He says that it possesses the advantage over the muriate and sulphate of being much more soluble (*Memorabilien*, July 16, 1883). The substance crystallizes in slender four-sided columns, is white in color, and of a bitterish taste, and is soluble in four parts of water. Its action is very like that of morphia, but it is milder, and the symptoms of poisoning (such as great weakness, intense headache, bilious vomiting, etc.), are much less often encountered. It seldom causes local irritation when subcutaneously injected. The dose should be at least double that of morphia. The phosphate of codeia is especially recommended in the case of women and children.

THE PREVENTION OF SEA-SICKNESS.—In a communication addressed to the *British Medical Journal* of August 11, 1883, Dr. J. Henry Bennet claims to have discovered a preventive remedy for sea-sickness in the ingestion of strong coffee. He says that some years ago, while travelling from Paris to London, having some time to spare before the sailing of the steamer, he entered a restaurant and drank two cups of *café noir*. To his astonishment he was not ill at all during an unusually rough passage of the Channel, and he was induced to refer his immunity to the action of the coffee. Subsequent experience confirmed this belief. In order to obtain the desired effect, the coffee should be taken long enough before starting to allow of its absorption. Dr. Bennet has always found this simple remedy of great value in short voyages, but he is unable to say whether its influence would continue for a greater length of time than a few hours.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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IRREVERENCE AND QUACK ADVERTISEMENTS IN RELIGIOUS JOURNALS.

OUR religious contemporaries, with a few conscientious and commendable exceptions, still persist in their old policy regarding medical advertisements. Indeed, they are adroitly expanding this peculiar line of industry, so as to include the balder and grosser swindling schemes, which promise the guileless reader a phenomenal return on an infinitesimal investment. They should certainly be congratulated on the enterprise which enables them to present in a single copy such multifarious opportunities for the subscriber to refresh his mind, body, and estate. How the editors of these journals have rendered their consciences as elastic as their advertising columns must remain a matter of conjecture.

They can no longer plead ignorance as an excuse, for the expressed opinion of the medical press and the medical profession has been so decided and unanimous, that these gentlemen must know that, as far as the medical nostrums they advertise are concerned, many of them are for disgustingly immoral purposes, and all of them are swindles of the most despicable and pernicious kind. If these gentlemen claim that the papers would not pay without this class of advertisements, they are simply serving "Mammon" for the glory of God. It would be interesting to know to which of the two masters they are more devoted. Most educated people are willing to accord them the benefit of the doubt; but there may very likely be some unsophisticated individuals of a more or less heathen persuasion who would be quite at a loss to decide whether the salvation, whose joyful sound these journals proclaim, is to be considered from a religious or medical point of view. Well may these benighted "innocents" inquire of our editorial Fergusons, "Which is the bust, and which is the pedestal?" What a comfortably adjustable conscience that must be which will not allow a church fair to swell its assets by raffles and dancing, yet permits a journal to increase its income by a more palpable species of immorality. This peculiar kind of piety cannot help but remind us of the familiar anecdote of the grocer deacon and his clerks, which we might appropriately paraphrase to suit the times, and imagine our clerical *confrères* making their rounds through the composing-room somewhat as follows:

"Well, Thomas, have you finished 'Yours for Health?' "Yes, sir."

"And you, Richard, have you set up the Great Indian Secret for the Afflicted?" "Yes, sir."

"Henry, have you completed that Blood Purifier?" "Yes, sir."

"Then let us have prayers."

A short time ago there appeared in one of these medico-religious sheets a report of a prayer-meeting at which the editor was present. In the course of the meeting a young man stated that he had lost his situation because he would not mark goods above their real value. He would not have to sell them, he must merely label them. He preferred to avoid an appearance of evil, and so, though he could ill afford it, resigned. Our brother's remarks thereon were fairly redolent with adulation. Their gist was, "Well done. Take no thought for the future, for the Lord will provide." Ah, friend, you may not label goods falsely, but you advertise them, knowing their labels to be false. The youth at the prayer-meeting would not allow a mote in his eye. Cast the beam out of thine own eye: the Lord will provide. "But you don't indorse your advertisements?" No, we should hope not. But had your young friend said to his worldly employer, "I cannot mark your goods falsely, but if you will label them and give me some printed price lists, I will go on the street and hold a gospel meeting and distribute your lists with my tracts. I will not indorse your cheat, but I will advertise it," would you not have shattered his sophistry, and condemned this act as much as you lauded the other? Alas, sirs, "your actions do belie your words."

Now, brethren, let us follow out your policy a little further. We will suppose, with all reverence, that Christ had delayed his coming until the present century. Would you not deem it a most painful incongruity to see the Epistles of Paul interlarded with patent medicine advertisements? Is not the dignity and responsibility of your trust essentially the same as his? Would you not recoil with horror at the idea of beholding the tablet erected reverently for the loved ones you had lost defiled with the fulsome bait of the sharper and abortionist? Yet, because the tablet takes the form of an obituary notice—a tribute less lasting, perhaps, but surely as tenderly sacred to the bereaved—why is such an insult any less heartless or apparent?

If you are convinced you are justified in allowing these advertisements to appear in your columns, why do you not urge the universal application of your rule of conduct? Any patent medicine firm would print your whole paper if they could monopolize the advertising space. But why stop here? Let all the printing of the Church be done by these firms. If it is right and proper that Sunday-school lessons, hymns, sermons, the Scriptures themselves, should appear in your columns besprinkled with pile remedies and vermifuges, why not everywhere? It is perfectly practicable; try it. Think of the increased usefulness of your Boards of Publication, had they only to furnish the copy and not the cash, to the printer! Some people with antiquated notions might feel a little squeamish about using a Hair Restorer Hymnal or a Kidney Cure Testament in their devotions, but your papers are rapidly eradicating such old-fashioned ideas of propriety. Advise your poorly paid ministers to free themselves and their church from debt by alternating the "usual notices" with extracts from your papers at so much per extract. They would

merely proclaim from the pulpit what you give as Sunday reading at home.

Now, you may declare yourselves shocked and term all this an irreverent tirade, if you please. The irreverence is yours, not ours. Your family physician may tell you of a shock from another quarter. We believe there are few men but what revere, or at least respect, religion, pure and undefiled; but any attempt to spread simultaneously the work of the gospel and the work of the world, the flesh, and the devil, can only excite disgust. Can a journal, any more than a "temple," become in any sense a "house of prayer," while its outer court is but a "den of thieves?" Has the progress of the age permeated the Pilgrim's Progress of to-day, or have you forgotten the simple story of the "Prince of Dreamers." We wonder what honest John Bunyan would think of the manner in which these modern pilgrims pass through Vanity Fair, on their way to the Celestial City. Our old friends, Christian and Faithful, when besought by the merchants to buy their wares, put their fingers in their ears, and raised their eyes aloft, crying, "Turn away mine eyes from beholding vanity!" Our esteemed contemporary pilgrims, whilst zealously saying, "We will have none of your wares," add "We have been told your wares are evil and cannot indorse them, but give us of thy lucre, and we will advertise them." Would there were more John Bunyans alive to day!

A CITY OF MEDICAL SOCIETIES.

DURING the month of October the medical work of societies in this city begins. We give below a calendar showing the extent to which this work has now developed. There are registered in New York City altogether twenty-seven working medical societies, besides two societies devoted to public health, one to general science, one to microscopy, and two to veterinary medicine. There are also four alumni associations, one of which is very active in encouraging medical work.

A large number, indeed the majority, of the societies mentioned below are limited in membership, and hold their meetings at the houses of the members. Their objects are the promotion of friendly intercourse as well as of medical science.

The medical societies of this city have nearly all been the growth of the last twenty years. Of those now organized, not half a dozen existed previous to 1860. Between 1863 and 1870 ten societies, now existing, were organized, and in the succeeding decade nearly as many more.

While some of these local societies are weak and inactive, this cannot be said of the great majority, and the general effect of the existence of the numerous organizations has been most excellent. In no city can there be found so many physicians who are on such amicable terms with each other, nor does any other city produce so many contributions to medical science.

October 1st.—Medico-Chirurgical Society of German Physicians; Morrisania Medical Society. October 2d.—New York Obstetrical Society; New York Neurological Society. October 3d.—Medico-Legal Society. October 4th.—New York Academy of Medicine. October

5th.—Practitioners' Society. October 8th.—New York Ophthalmological Society. October 9th.—East River Medical Association; New York Surgical Society. October 10th.—Pathological Society; Society of Medical Jurisprudence and State Medicine. October 11th.—Harlem Medical Association; New York Laryngological Society. October 12th.—Yorkville Medical Association. October 13th.—Medical and Surgical. October 15th.—Medico-Chirurgical Society of German Physicians. October 16th.—Medical Section Academy of Medicine; New York Obstetrical Society (Private). October 17th.—Northwestern Medical and Surgical Society. October 18th.—New York Academy of Medicine. October 19th.—Roman Medical Society. October 22d.—New York County Medical Society. October 23d.—New York Dermatological; New York Surgical Society. October 24th.—Pathological Society. October 25th.—Obstetrical Section Academy of Medicine; Harlem Medical Association; Clinical Society. October 26th.—Yorkville Medical Association; New York Society of German Physicians. October 27th.—Medical and Surgical Society.

BOVINE VIRUS AND COMMERCIAL ENTERPRISE.

SOME of our Western countrymen have been quick to appreciate the fact that there is money in the bovine virus business if conducted in a certain manner. The *St. Louis Medical and Surgical Journal* states that a firm was organized in September, 1882, for the purpose of supplying "pure bovine virus." In March, 1883, there being considerable small-pox in the city, the Board of Health awarded to this company the contract for supplying the virus. During three weeks over ten thousand vaccinations were made, but without a single perfect success! The contract was at once annulled, but it is evident that if there had been an active epidemic, the consequences would have been most serious. It was afterward learned that the vaccine farm was under the direction of a dry goods merchant!

The lesson is obvious. There is a temptation to make a purely commercial venture of the preparation of bovine virus. The increasing popularity of this form of virus in the United States makes it doubly important that great care should be taken by physicians and health boards to know about the methods of its preparation.

THE LEPROSY COLONY IN TRACADIE.

LEPROSY is a disease but seldom met with in this country, and the cases seen from time to time in some of our large hospitals are too few in number to furnish sufficient data upon which to base any conclusions as to the origin and mode of propagation of the malady. It is said to prevail to a considerable extent in some of the Scandinavian colonies in Wisconsin; but in Tracadie, a small parish on the Gulf coast at the mouth of the Miramichi River, in New Brunswick, it has existed for upward of sixty years. An interesting account of this settlement, and of the lepers' hospital there situated, was published in the *Catholic World* of May, 1877. The writer was not a physician, and his observations possessed more of a social and religious than of a medical interest. Other notices of a similar character have been published since

then in various periodicals, but none of them has added much to our knowledge of the etiology of the disease. A correspondent who visited Tracadie during the past summer sends us a report of what he learned there concerning the origin of the disease in that settlement, from which we take the following condensed account:

The first settlers in Tracadie were the Le Bretons, who went there about the year 1778. They lived with the Indians, upon the coarsest and most meagre fare, and suffered great hardships, yet none of that name has ever had leprosy. The scourge first appeared in 1820 in the person of Ursula Landry, who, with her sister Isabel, came to Tracadie in 1798. They married two brothers by the name of Benoit. Popular tradition says that Ursula contracted the disease by washing the clothes of some French sailors, who were lepers, some time before she came to Tracadie. This explanation of the origin of leprosy in the colony is, however, far from satisfactory, as it is hardly to be supposed that twenty-two years could have elapsed after exposure to contagion before the disease should manifest itself. Ursula died in 1828. The second victim was her sister Isabel, and the third was François Sonier. This man affirmed that he contracted the disease by carrying Ursula's coffin, the sharp edge of which cut his shoulder, and then inoculation was effected by matter running from the corpse. François Sonier was ill a number of years, and his father's house was the rendezvous for the young people of the neighborhood. Several of these were afterward attacked with leprosy. François attempted once to go to Cape Breton to consult some person there who had quite a reputation for curing ulcers, and on the way stopped at the house of one Savoy. A member of the family, Mary Savoy, washed the clothes of the bed in which he had slept, and afterward herself contracted the disease. It was not until a number of persons who were intimate with the Soniers had contracted leprosy that public attention was drawn to it. Then the lazaretto on Shel-drake Island was established (1844).

There are at present twenty-four patients in the hospital, all coming from within a radius of twenty-five miles from Tracadie. From a study of the records, which have been carefully kept since the nuns took charge in 1868, it is seen that the average stay in the hospital was five years. If to this is added two or three years as the duration of the disease prior to the entrance of the patient into the lazaretto, we have an average duration of leprosy of seven or eight years. One patient, however, has been in the hospital for twenty-four years, and another for fourteen. So it would appear that the course of the disease is very variable as regards time.

Our correspondent spent a great part of his time in studying the mode of origin of the leprosy in this place. There are four possible ways, he states, in which the origin and spread of the disease may be accounted for, viz., heredity, endemic influences, contagion, and heredity and contagion combined. Although the general opinion of writers on leprosy is that it is propagated by hereditary influences, yet in no case reported in Tracadie can this be satisfactorily proved. In every instance there was abundant opportunity for contagion, so that the part played by heredity alone could not be determined. The theory of endemic origin is disproved by the fact that the

same conditions of race, habits, mode of living, etc., exist in other places along the coast where leprosy is unknown. The theory of the spread of the disease by contagion is supported by many incontestable facts. Peter Noel came from a perfectly healthy family. He slept during one summer with a man in the advanced stages of leprosy, and in a few years became himself a victim of the disease. A man by the name of McComb, living in a settlement some fifty miles distant, where leprosy was unknown, came to Tracadie and worked for some time in a lumber camp. He returned home a leper, and died. James McGrath caught the disease from Michael Gould. Peter McGrath slept with James, became leprosy and died. Peter lived for a time with the Drysdale family. Seven of Drysdale's children fell victims to the malady. It is a matter of common observation that unless the patients are early removed to the lazaretto, others of the family are attacked; and again, if the sufferers remain at home, but strictly isolated from the rest of the family, the disease is less liable to spread. Finally, it is impossible to account for the rapid propagation of the leprosy in families previously healthy, except on the theory of contagion. On the other hand, facts are not wanting which seem to oppose this presumption. Women have been employed in the hospital for years, washing the clothes of the lepers and scrubbing the floors of the wards, yet they have never themselves become leprosy. Neither the Sisters nor the medical attendant have contracted the disease. The case of one man is related who had lost three wives in succession from leprosy, yet he escaped. Other instances are on record of children, born in the lazaretto of leprosy mothers, and growing up within its walls, who have remained healthy. But these negative facts, however numerous, have much less weight than a few positive ones. Of a number of persons exposed to any contagious disease not every one is attacked. The attendants in the hospital, furthermore, observe every precaution, exposing themselves as little as possible to direct contact with the patients, and living in light and well-ventilated apartments away from the wards.

The following are the conclusions arrived at by the correspondent from his observations of the leprosy as it exists in Tracadie: 1. The origin and early spread of the disease cannot be explained on the theory of hereditary transmission, although this theory may in part account for its further propagation. 2. Although endemic influences, such as climate, mode of life, diet, etc., may be strong predisposing elements, they are in no case the sole cause of the disease. 3. Leprosy in Tracadie was imported from without, and, finding there favorable conditions, was propagated from one person to another by contagion. Finally, leprosy may be regarded as one of the least contagious of diseases, and one which will only spread under a combination of favoring circumstances such as were found in Tracadie.

The lazaretto is clean and kept in perfect order, and everything is done by the Sisters to ameliorate the sad lot of the inmates; but the building is gloomy at the best, and resembles more a prison than a hospital, and it would be a great boon to the suffering patients could a new and more commodious structure be erected. The writer speaks in most grateful terms of the courtesy

shown him while in Tracadie, and desires to acknowledge his indebtedness to Dr. Smith, the Rev. Father Babinneau, the Rev. Mother St. John, and Mr. Young, for much valuable assistance rendered him in his study of the disease. The value and importance of the work done in this humble way in an obscure and wretched village on the shores of the Gulf of St. Lawrence, cannot be over-estimated. To the untiring vigilance of the physician and the nuns in searching out and sequestering every new case of leprosy occurring in the village is doubtless due the fact that it has not ere this spread to other and distant places. For admitting the contagiousness, in however slight degree, of the disease, there are numbers of fishing villages all along our coast in which the condition of the inhabitants would seem to invite its approach, and once it had gained a foothold we would have Tracadies enough at home, and there would be no occasion to go abroad to study the leprosy. There is now good cause for the hope that the disease may eventually be stamped out in New Brunswick, and thus a danger, slight, but none the less real, to ourselves will be removed.

THE HIGH TEMPERATURE OF FEVERS.

THE opinion has been current for some time that the essentials of fever, such as increased pulse-rate, disturbance of the cerebral functions, and, later, certain parenchymatous degenerations, were the direct consequences of increased bodily heat. This widely accepted doctrine is now opposed by Dr. Unverricht. He says that although these so-called febrile symptoms are generally found associated with an elevated temperature, they are not therefore necessarily caused by it. Different kinds of fever are accompanied by varying degrees of cerebral manifestations. Thus a temperature of 103.5° in septic poisoning is associated with great depression of the nervous system. In relapsing fever, on the other hand, a patient bears easily 107° or more. The author cites numerous accurately observed cases to prove that a temperature of over 108° is not of itself fatal. He does not regard Litten's experiments in proof of the evil effects of high temperatures as conclusive, and opposes to them the observations of Volkmann, which go to show that high fever in aseptic conditions may be unattended with danger. Since, therefore, this point is still unsettled, Dr. Unverricht thinks that in the treatment of fevers the question should always be considered whether the harmful effects produced in greater or less degree by all febrifuge remedies will not outweigh the advantage hoped for in reducing the temperature. In fact, he thinks that in certain instances fever may be regarded as a process tending to the advantage of the organism. There is little doubt that since the introduction of exact thermometry into medicine, temperature variations have received a rather undue amount of attention. It is so easy and simple a matter to detect pyrexia and at once prescribe a febrifuge. Pulse observations and other valuable indications have been correspondingly neglected since the thermometer began to assert its claims. But while this much may be readily conceded, we are certainly not prepared to fully endorse Unverricht's opinions. In the ordinary run of febrile affections a high temperature must still be regarded as a

symptom significant of danger. And even if the severity of the individual case need not be gauged by the thermometer alone, the wary practitioner well knows and appreciates the meaning of excessive pyrexia. It is nature's warning that damage, if not already done, may be confidently expected. And from a therapeutical point of view it is quite clear that to be thus forewarned is, in a measure at least, to be forearmed. Expectancy, which is but a misnomer for helpless inaction, is therefore to be deprecated in all such conditions. And we must emphatically oppose the view which sees in fever nature's effort at restitution, and not a morbid process with destructive tendencies.

CARDIAC VERTIGO AND ANGINA PECTORIS.

SYMPTOMATIC, or cardiac vertigo, is an affection which, according to Germain Sée, is not uncommon in cardiac affections, being more frequent in aortic insufficiency, is so common, in fact, that when vertigo occurs in the course of heart disease we need, as a rule, look no farther for its cause. This fact suggests also that in cases of obstinate and distressing vertigo the heart should always be examined, especially if extreme pallor, a prominent symptom of aortic insufficiency, be present and will not yield to medication. In these cases M. Sée affirms that iron is absolutely indicated, though in many cases, on the contrary, iodide of potassium is indicated and gives excellent results. In these cases there are also observed the characteristic pains of angina pectoris coming on every few months, another prominent, though not constant, symptom of aortic incompetence. The anginous pains should of course be combated by hypodermics of morphine, the administration of chloral, or inhalations of nitrite of amyl during the access, and by bromide of potassium and digitalis, or convallaria, during the intervals.

It is interesting in this connection to notice the conclusions of W. Allen Sturge (*Brain*, October, 1882), regarding the etiology of angina pectoris. Having selected a typical case and minutely detailed each symptom as given by the patient, he concludes that the local attack on the heart is due to an organic modification in the substance of the cardiac muscle itself, or some change in the heart acting on the terminal filaments of the cardiac nerves; a commotion spontaneously developed in the gray substance of the sympathetic ganglia of the cardiac plexus, this being transmitted to the spinal cord and brain; a commotion spontaneously developed in the cervical sympathetic ganglia, which give off branches to the cardiac plexus, or in the ganglia of the vagus; a spontaneous commotion in the part of the gray substance of the cerebrum, which may receive impulses coming from above and below; a spontaneous commotion in the parts of the gray substance of the cord in communication with these ganglia by means of bands of nervous substance passing from the cord to the great sympathetic.

Of course a great number of observations are necessary in order to place these scarcely more than theoretical causes on the sound footing of etiological fact. This is recognized by the author, but he is of the opinion—in which most authorities concur—that in the greater number of cases of angina pectoris associated with organic

lesions of the heart or great vessels, the primary irritation probably takes place at the periphery of the cardiac nerves. Dr. Sturge admits, however, that there are cases of angina pectoris which are due to spontaneous lesions of the nerve-centres. Trousseau long ago pointed out the relation between angina pectoris and epilepsy. The paper, though far from conclusive, as the author admits, gives evidence of careful observation, and is an important contribution to our knowledge of this affection.

THE GASTRIC ULCER AND ITS RELATION TO CANCER OF THE STOMACH.

DESPITE considerable study and numerous experiments, our knowledge of the origin of gastric ulcer is still far from satisfactory. Cohnheim, indeed, succeeded in causing an ulceration of the mucous membrane of the stomach by artificially produced embolism and thrombosis of minute gastric vessels. These sores had the form of the typical ulcer of the stomach, but were not chronic and slow of healing as the latter commonly is. Other questions of interest, and, as yet, unsolved, are the mode of cicatrization of the ulcer and the relation, if relation there be, between chronic ulcer and carcinoma of the stomach.

In a brochure, recently published in Leipzig, Dr. Gustav Hauser endeavors, through eighty octavo pages and with the aid of seven plates, to clear up the mystery, and to demonstrate satisfactorily the processes of destruction and repair of gastric ulcer and the subsequent development of cancer. He attributes ulceration of the mucous membrane to an infarction caused by permanent obstruction to the circulation in the fine arterial twigs passing from the submucous to the mucous layers of the stomach. This obstruction may arise from the lodgement of an embolus, from thrombosis or from the rupture of one of these arterioles. The resulting ulcer is chronic only when there is actual disease of the blood-vessels occurring prior to, or at the same time with the infarction. For then the formation of new vessels necessary to the healing process becomes impossible. The more or less chronic course is directly dependent upon the severity of the disease in the vessels. The size of the ulcer is in proportion to the extent of infarction and also to the number of arterioles affected. Any disease of the arteries may give rise to this condition, but atheroma and fatty degeneration seem to play the most important rôle, at least in advanced age. The healing process begins by a sort of puckering together of the base of the ulcer, by which the edges are approximated and close adhesions formed between the mucous membrane and the parts lying beneath it. If the ulcer is extensive, with its base formed of a neighboring organ adherent to the stomach, the cicatrization is not complete, but the mucous edge becomes fixed to the muscular layer or to a greatly thickened connective tissue. This process, the author states, is attended with an enormous hypertrophy and proliferation of the glands immediately about the ulcer. At the same time the normal glandular epithelium becomes transformed into cylindrical epithelium. The hypertrophy of the glands is due to the increased supply of blood during the process of cicatrization, aided by the diminished resistance of the surrounding connective tissue. The glands are excited to increased action, and at the same time

the physiological resistance of the supporting connective tissue is wanting. Regarding the development of cancer in the cicatrix of an old gastric ulcer, the author asserts that such a process may take place. Large ulcers, which never become entirely cicatrized, are especially prone to cancerous degeneration. The disease, he says, begins in the lumina of the glands at the edge of the ulcers which have undergone the changes described above. The abnormal growth of the glandular epithelium continues and finally takes on a malignant character. Between a cancerous growth of the glandular epithelium and an abnormal hypertrophy of the same there is a difference only of degree. In either case, says Dr. Hauser, the causal conditions are the same, viz.: an irritability of the secreting epithelial cells, due to the increased flow of nutrient material, and a diminished resistance of the supporting connective tissue. He relates the history of a case upon which he bases his belief that carcinoma of the stomach may arise from disease of the peptic glands independently of any embryonic germ. As confirmatory of Dr. Hauser's view of chronic ulcer being dependent upon disease of the vessels, may be mentioned two cases related by Dr. Mattei (*Deutsche Medicinal-Zeitung*, July 5, 1883). No sufficient cause could be determined during life for the formation of the ulcers. At the autopsy there was found an amyloid degeneration of the liver and spleen, and a similar change in the gastric vessels had given rise to the ulceration.

News of the Week.

PASTEUR'S INVESTIGATION OF THE CHOLERA IN EGYPT.—The scientific mission to Egypt to investigate the cholera epidemic, for which a grant of 50,000 fr. has just been obtained by M. Pasteur from the French Chambers, consists of MM. Roux, Thuillier, Straus, and Nocard. M. Pasteur has formulated a set of rules for the guidance of his party, by means of which he hopes to guard against infection. All articles of food and drink must be boiled and then kept in heated vessels. Fruit must be washed in boiled water before being eaten. A two-per cent. solution of carbolic acid is to be used for washing purposes.

INCREASE OF THE PARIS HOSPITALS.—The Municipal Council has voted three million francs to be expended in increasing the hospital efficiency of the city. Two millions are to be expended upon the large hospitals already existing. One million constitutes the first instalment for the erection of a hospital for contagious diseases, one for chronic diseases, and one for juvenile incurables.

THE INTERNATIONAL HYGIENIC EXHIBITION at Berlin has closed, but it has been decided to establish a permanent Museum of Hygiene in that city.

ANOTHER NEW MEDICAL COLLEGE.—The Medical Department of Niagara University is the title of a new medical college recently organized in Buffalo, N. Y. It requires attendance upon a three years' graded course, and aims to exemplify the higher education. Judging from the announcement, not much is exacted in the way of preliminary education, although something is required.

PROFESSOR GERHARD LEOPOLD, of Leipzig, has been called to fill the vacancy as Professor and Director of the Royal Institute for Midwives at Dresden.

A NEW BUILDING FOR THE NEW YORK CITY HEALTH BOARD.—A movement is on foot to secure a new and separate building for the City Health Department.

MEDICAL SCHOOL OF HARVARD UNIVERSITY.—ONE HUNDREDTH ANNIVERSARY.—The celebration of the one hundredth anniversary of the establishment of the Medical School of Harvard University, and dedication of its new building, will take place on October 17, 1883. The following is the programme: Part I. (At the Massachusetts Institute of Technology, Huntington Hall, at 11 o'clock A.M.): Address by the President of the University; Oration by Emeritus Professor Oliver Wendell Holmes; Presentation of a portrait of Professor Holmes and a bust of Professor Henry J. Bigelow. Part II. (At the Medical College, Boylston Street): Prayer by Rev. A. P. Peabody, D.D.; Dedication of the new building to the purposes of medical instruction; Reception of subscribers to the building fund, and invited guests, by the Medical Faculty; Exhibition of the building.

DEATH OF DR. F. A. PICKETT, OF REDFORD, N. Y.—Dr. F. A. Pickett died on the morning of the 6th inst., after an illness of three weeks with typhoid fever. He graduated at the University of New York City in 1879, when twenty-four years of age, after which he removed to Redford, N. Y., where he practised until his death. He left a large and lucrative business by his sad and untimely death.

PRIZES FOR NEW REMEDIES IN TYPHOID FEVER.—Acting Assistant J. M. Main, of the Marine Hospital Service, reports from Brownsville, Texas: "The Medical School of the city of Mexico has called a convention of physicians to determine the properties and uses of simabacroni—its pharmacology, chemical analysis, and physiological action—demonstrated by experiment, with a view of ascertaining its usefulness in the treatment of typhoid fever. A prize of \$500 is offered for the best thesis on the subject; also a premium of \$500 for the best thesis on the usefulness of pulque in typhoid fever. Pulque is a refreshing beer from the heart of the maguey (*Agave Mexicana*). The President of the republic has appointed a sanitary commission which is to meet first at Vera Cruz during the present month. Its object is to consider and discuss questions of hygiene, disinfection, and prophylaxis."

YELLOW FEVER.—At Vera Cruz there were nineteen deaths from yellow fever during the ten days from August 20th to 30th.

No case of yellow fever has appeared in the city of Pensacola, the disease having been confined to the Naval Reservation.

Acting Assistant Surgeon J. M. Main reports, under date of September 3d: "Yellow fever has broken out at Tlacotalpan, and is spreading in a northerly direction. It has not reached Tuxpam. Tuxpam has enforced quarantine against all infected ports and inland cities. Typhus fever has appeared recently at Zacatecas. The death-rate is said to be ninety per cent. Small-pox is very fatal at Progreso; mortality 52.5 per cent. Yellow

fever has appeared at Campeachy, carried there by a Norwegian vessel. At Real del Monte typhus fever is prevailing, mortality being ninety per cent."

Sanitary Inspector Daniel M. Burgess, of the Marine Hospital Service, reports from Havana: "There were 708 deaths in this city during the month of August. Of the decedents 152 were by yellow fever, 19 by typhoid fever, 3 by bilious fever, 23 by intermittent, remittent, and pernicious fevers, and 1 by diphtheria. During the week ending September 7th there were 18 deaths by yellow fever, nearly all of them being among private citizens. The reduction in the mortality by yellow fever is not from any tendency in the disease to cease to spread, but from the want of material for it to feed upon, and the mild type of the epidemic or endemic. Some wharves are very dangerously infected, and all vessels which go to them and stay over three days are almost sure to suffer and become dangerously contaminated. Within the last two weeks whole crews of vessels laying at those wharves (liable to have yellow fever) have either had it while the vessel was there or soon after leaving. The navy and army have suffered very much, and the few remaining ones who have not had it continue to fall sick."

DEATH OF LOUISE LATEAU.—The death is announced of Louise Lateau, the Belgian stigmatisée, of Bois d'Haine. She was thirty-three years and seven months of age at the time of her death. Her case excited considerable interest at one time, and she was subjected to numerous medical investigations. Virchow, it is said, was asked to see her, but was unable to do so. On every Friday, it was said, she fell into a state of ecstasy, and blood flowed from the stigmata in her hands and feet.

DR. LOUIS F. PELTON, of Mount Kisco, died on Monday, leaving a widow and two sons. He was graduated from the New York University Medical College, in 1847.

AN UNPLEASANT EXPERIENCE.—Dr. William E. Beardsley, of Brooklyn, was recently called to attend a woman who was suffering from dyspnoea. He administered some aromatic spirits of ammonia, and, no relief ensuing, was about to repeat the dose, when the patient fell back dead in his arms. The husband, crazed with grief, rushed upon the doctor exclaiming, "Did I call you here to murder my wife?" and proceeded to do his best to murder the doctor. The man was a stout German, and Dr. Beardsley was considerably bruised in the encounter, and might have received very serious injuries had it not been for the timely intervention of others in the house.

THE LATE DR. J. D. TRASK, OF ASTORIA, N. Y.—It is seldom that the death of a physician is looked upon as a public affliction by the community in which he has labored. So it was, however, in the case of the late lamented Dr. Trask. The rich and poor crowded the church to pay their last tribute of respect to one who had served them so faithfully during life. The stream of mourners continued to file past the casket until long after dark, and even after the congregation had left the church many came to bid farewell to the dead who had been unable to attend the funeral services earlier in the day.

The scene throughout was one provocative of many sad reflections. There was an intensity about the grief of those present that is very rarely witnessed. The several departments of the City Government, the Citizens' Committee of Fifty, the Law and Order Society, and various other bodies were represented, besides which several distinguished members of the medical profession from New York City and other parts of the State were present. The big bell of the Church of the Redeemer and the fire bell were tolled at minute intervals during the afternoon and up to the time of the commencement of the service. As an author, practitioner, citizen, and Christian he did his work effectively, quietly, conscientiously, and for the work's sake. It would be well if such could be said of all of us.

AMERICAN ACADEMY OF MEDICINE.—The annual meeting of the Academy will be held at the New York Academy of Medicine, 12 West Thirty-first Street, New York, on Tuesday, October 9 (three o'clock P.M.), and Wednesday, October 10, 1883.—RICHARD J. DUNGLISON, Secretary.

A GOLD MEDAL TO W. H. SCHIEFFELIN & CO., OF NEW YORK.—Among the awards announced to exhibitors at the Holland International Exhibition at Amsterdam was a *gold medal* to Messrs. W. H. Schieffelin & Co. for their soluble pills and granules. This is a special distinction for their reliable preparations, as the award was made after a careful analysis of specimens of Messrs. Schieffelin's manufactures by the Government chemists.

THE ASSOCIATION OF GERMAN PHYSICIANS AND NATURALISTS held its fifty-sixth annual session at Freiburg, beginning September 17th.

COPPER AND CHOLERA.—M. Bailly, of Chambly, has adduced evidence that copper is not a prophylactic against cholera as asserted by M. Burq. An experience of sixteen years in connection with a factory where workmen are largely employed in copper has shown that the *employees* are not exempt from cholera, typhoid fever, or other infectious disease.

SLIGHTLY PREMATURE.—The Chicago police have certainly not been carefully instructed in the signs and tokens of death, as the following incident will show: A man named Lewis Lacy entered a street-car in that city a few days since in a drunken condition and refused to pay his fare. The conductor threw him off the platform, and seeing he did not move, told the driver to whip up, and the car rattled away and the conductor escaped. The police patrol was called, the body was put in a wagon, taken to the morgue, and placed on ice, while a large force of police were sent in search of the fleeing conductor. After being a short time on ice the body began to show signs of life, and in the course of half an hour Lacy was able to walk to the police-station. An examination showed he was not seriously hurt, and that his state of temporary coma was due wholly to liquor.

DEATH OF DR. SYLVESTER F. MIXER.—Dr. S. F. Mixer, of Buffalo died on September 17th. Dr. Mixer was born in Morrisville, Madison County, N. Y., De-

cember 27, 1815. He graduated from the Medical Department of Yale College when twenty-six years of age, and immediately began the practice of his profession in Buffalo. Six years later he took the degree of M.D. from the College of Physicians and Surgeons in this city. He was a prominent member of the Buffalo and Erie County Medical Societies, and the American Medical Association. From 1858 to 1874 Dr. Mixer was Attending Physician to the Buffalo City Hospital. He then became Consulting Physician to the same institution.

PROFESSOR MÜNCH, of Kiew, has been ordered to Egypt to study the cholera.

PROFESSOR BIZZOZERO has received the Riberi Prize of 20,000 francs for his investigations into the physiology and pathology of the blood.

YELLOW FEVER has appeared at Guaymas, Mexico.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE—MEDICAL SECTION.—We reported some of the work of this meeting in the last issue of THE RECORD. At the meeting, August 20th, M. Burot made a communication upon the "Variations of the Chlorides in the Urine." He showed an apparatus for the easy and rapid quantitative measurement of these chlorides. It consisted of a graduated tube and pipette, a solution of nitrate of silver (28.40 grammes per litre), and a solution of chromate of potassium. M. Onimus sent a communication upon a case of "Infantile Pseudo-paralytic Contracture." The patient had in all the extremities muscular tension, exaggerated reflexes, and contractures. All the members could be moved, but the effort was attended with ataxic chorea-like movements. No atrophy was present. Onimus referred the lesion to the upper part of the pons. M. Apostoli read a paper upon the "Electrical Treatment of the Ovarian Pain in Hysterics." M. Boucheron opened a discussion upon "The Pathogeny of Retinal Detachment." He referred especially to the rheumatic theory of its origin. M. Bouchut called attention to the "Relation between Intercostal Neuralgias and Angina Pectoris." He related the history of three patients suffering from intercostal neuralgia who were suddenly seized with angina pectoris. Other instances illustrating this transfer of morbid action were given. M. Verneuil presented a learned but not particularly instructive paper upon "Traumatic Auto-involution." M. Nepveu read a paper in which he claimed that micrococci were always present in the fluid of the peritoneal sac in strangulated hernias. Antisepsis should be applied accordingly. M. Leudet read a paper upon "Ulnar Neuritis caused by Repeated Contusions in following Certain Occupations." Carpenters, in planing, dyers, calico-printers, and shoemakers were especially liable to this trouble. M. Maurel read a paper upon "Normal and Pathological Albuminuria." He presented a somewhat original division of the albuminous fluids of the body. They are, he said, of two kinds: Those which are colored violet, and those which are not so colored by a solution of copper sulphate in potassa. In the latter class are the albumens passed in the urine during the acute fevers. In pathological albuminuria, or Bright's disease, the albumen passed is colored violet by the solution referred to.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, Pa. September 18, 19, and 20, 1883.

TUESDAY SEPTEMBER 18TH—FIRST DAY—MORNING SESSION.

THE Society met at the College of Physicians and was called to order at 10 o'clock by the President, DR. GILMAN KIMBALL, of Lowell, Mass.

MEMBERS PRESENT.

The following answered to the calling of the roll by Dr. Frank P. Foster, of New York, Secretary: Drs. Kimball, of Lowell; A. H. Smith and Parvin, of Philadelphia; Barker, Polk, and Emmet, of New York; Mann, of Buffalo; Johnson, of Washington; Wilson and Howard of Baltimore; Reeve, of Dayton, O.; Ingham, of Philadelphia; Jackson, of Chicago; Reamy, of Cincinnati; Van de Warker, of Syracuse, N. Y.; Campbell, of Augusta, Ga.; Byrne, of Brooklyn; Duer, of Philadelphia; Byford, of Chicago; Palmer, of Cincinnati; Sutton, of Pittsburg; Battey, of Georgia; Chadwick and Lyman, of Boston; Goodell, of Philadelphia; Gillette, of New York; Browne, of Baltimore; Reynolds, and Baker, of Boston; E. Wilson, of Philadelphia.

The address of welcome was delivered by DR. EDWARD DUER, of Philadelphia.

INVITED GUESTS.

The Council recommended the following: Alfred Stillé, M.D., President Philadelphia College of Physicians; William M. Welch M.D., President Philadelphia County Medical Society; Richard A. Cleeman, M.D., President Philadelphia Obstetrical Society; James Tyson, M.D., President Philadelphia Pathological Society; Robert P. Harris, M.D., of Philadelphia; I. R. Page, M.D., and Robert T. Wilson, M.D., of Baltimore.

The first paper was read by DR. JOSEPH TABER JOHNSON, of Washington, D. C., on

SUPERINVOLUTION OF THE UTERUS.

Sir James Simpson described this disease over thirty years ago, and stated that his patients remained fully uncured. Dr. Johnson introduced the subject, with the hope that discussion might follow which would throw light upon a hitherto obscure class of cases. Barnes believes that this condition is uncommon. One writer has found it to occur in about one per cent. of all cases. Dr. Cole, of San Francisco, has seen many of these cases. It must be differentiated from atresia of the uterus. Simpson claims that it may occur in the same connection as undeveloped uterus and other processes not involving an inflammatory process. The extent may vary from the slightest shortening to entire obliteration of the uterus and ovaries, as has been reported by Whitehead. The term implies that superinvolution only occurs after the process of involution has been set in progress by the emptying of a uterus once occupied by some mass or body which has produced its increase in size beyond the normal point, as, for instance, after cases of hydrometria, pyrometria, hydatids, or removal of the ovaries, uterine tumors, as well as upon the conclusion of utero-gestation or abortion.

Dr. Johnson then related the history of four cases occurring in his own practice, and concluded with a brief summary of the literature of the subject, so far as he was familiar with it. The points on which all writers on this subject agree are that excessive involution does occur from some cause; that electricity should be tried; and that in the great majority of cases it is incurable.

DR. BARKER, of New York, suggested, with regard to the term superinvolution, that it might with propriety be used in all cases where retrograde process has taken place to an extreme extent from any cause, as fibroids, acute uterine catarrh, etc. With regard to frequency, he thought it a difficult point to decide, but, for himself, was inclined to the opinion that it occurred quite as frequently as indicated by the author of the paper. In the large majority of cases no benefit can be given by treatment. One practical point was not referred to by any writer, so far as he had seen, and that was with reference to the class of cases which could be benefitted by treatment. Whenever he found superinvolution of the uterus associated with evidence of arrest or defective ovulation, very little could be effected by treatment. On the other hand, cases associated by evidence of any active ovulation, he thought could be cured sometimes, and the proof had been in the fact that the symptoms had disappeared, pregnancy ensued, etc. The symptoms which gave evidence of the existence of ovulation, associated with this condition of the uterus, were disturbances of the vascular and nervous systems at or near the menstrual period, such as intense headaches, flushing of the face and congestion of the eyes, pelvic pain, and sense of dragging, with nausea and vomiting, etc. The point he made was that superinvolution associated with functional activity of the ovaries might be benefitted by treatment. Galvanism was one of the prominent agents which he had employed.

DR. REEVES JACKSON, of Chicago, thought the question of differential diagnosis between superinvolution and the occurrence of premature climacteric was a difficult one to decide in some cases, and cited the history of a case. Whether or not the condition is one originating in the uterus was regarded by him as a question of great practical importance. If there is functional activity in the ovaries it may be assumed that the small size of the uterus does not depend upon disturbances of its own vascular and nervous supply, primarily.

DR. VAN DE WARKER, of Syracuse, thought the cases might be divided into those which show the cervix only involved and those in which the condition affected the body of the uterus as well. There are cases in which involution is confined to the cervix, the proof of which, can be found in certain cases of laceration of the cervix when the posterior lip is very much atrophied and the anterior lip in very nearly its normal condition. He thought Dr. Johnson's first case was one of that character.

DR. H. P. C. WILSON, of Baltimore, thought it exceedingly rare to meet with the condition described in the paper by Dr. Johnson. He was able to recall only two or three cases of superinvolution in women who have borne children, or had miscarriages or premature labors. He thought that in the cases in which the ovaries existed in the normal, or nearly normal condition, and were normally active, benefit might follow treatment.

DR. BATTEY, of Rome, Ga., said that in the majority of cases in which he had performed the operation with which his name had been associated, superinvolution of the uterus had followed, and in quite a number of cases it had been extreme. In many of the cases the uterus was apparently healthy at the time of the operation. He thought the question of superinvolution was one affecting the ovaries rather than the uterus; it is want of proper ovulation.

The discussion was continued by Dr. Byford, of Chicago, Dr. Campbell, of Georgia, and closed by Dr. Johnson.

THE IMPORTANCE OF CLEANLINESS IN SURGICAL OPERATIONS.

DR. R. STANSBURY SUTTON, of Pittsburg, Pa., read a paper on the above subject, in which he gave a review of ideas and theories entertained from time to time since Galen taught down to the present, concerning the real na-

ture and treatment of this important class of cases. The germ-theory received a large share of attention, coupled, and justly so, with the name and method of Mr. Lister. The conclusion reached by the author was that the best success in the treatment of surgical wounds came chiefly from cleanliness rather than from the use of antiseptics, technically speaking. Special personal attention must be paid by the surgeon to all the details, regulation and preparation of assistants and nurses, preparation of instruments and ligatures, exclusion of sponges, etc.

DR. S. D. GROSS, of Philadelphia, was invited to open the discussion. He thanked the Society for the compliment extended, but declined, for the reason that he came to listen and to be instructed.

DR. LUSK, of New York, thought that for the greatest number of operations the spray could be used with positive advantage, and cited four cases, all complicated, in which he operated in Bellevue Hospital with satisfactory results under unfavorable circumstances.

DR. WILSON favored the use of spray to render the air of the operating-room antiseptic, but did not continue it during the performance of the operation.

DR. CAMPBELL, of Augusta, Ga., referred to surgery as practised in the days before the antiseptic method was brought forward, and he was of the opinion that, all in all, about as good results were obtained then as now. Cleanliness was observed then and care in the performance of the operations.

The discussion was closed by Dr. Sutton, after which the Society adjourned to meet at 3 P.M.

FIRST DAY—AFTERNOON SESSION.

The Society was called to order by the President.

Drs. R. B. Maury, of Memphis, Tenn.; Wm. E. Moseley and Wm. P. Chunn, of Baltimore; and Samuel D. Gross, of Philadelphia, were elected

INVITED GUESTS.

DR. ALBERT H. SMITH, of Philadelphia, then read a paper on

HOT WATER IN SECONDARY HEMORRHAGE AFTER PELVIC OPERATIONS,

in which he stated that while the general value of this agent had been recognized since attention was first especially directed to it by Dr. Emmet, of New York, who gave Dr. Pilcher, of Detroit, credit for the original suggestion, and while it received constant employment in the larger cities, he had been impressed with the idea that in other localities its specific action had not been fully appreciated. Dr. Smith had used it with great advantage in hemorrhage occurring with pregnancy, and also in post-partum hemorrhage. It may be used as a prophylactic against hemorrhage in every case of labor, and also against local absorption. He regularly employed it in hospital practice for this purpose, injecting the vagina with water at a temperature of 115° to 120° F., sufficiently impregnated with some disinfectant, in every case of labor, simple or complicated, and continued the injection until the water returned without tinge. To its use after plastic operations especially he wished to direct attention. In secondary hemorrhage from opening of large vessels we have in the hot-water douche a means for its control of which he wished to make special mention. Dr. Smith then referred to cases reported in a lecture recently published from Dr. Skene, of Brooklyn, and expressed himself surprised, in the first place, that Dr. Skene had found that the hemorrhagic diathesis prevented the performance of operations, and more surprised that he had been unable to control hemorrhage during operation. Dr. Skene had ignored entirely the virtues of the hot-water douche. Dr. Smith was perfectly satisfied that it would arrest hemorrhage in cases precisely like those reported by Dr. Skene, as well as in many other cases in which

bleeding of an alarming character occurred. He then related the history of cases in which he had used this agent with most satisfactory results. He wished to direct attention to three points: 1, the great advantage of the hot-water douche over all means for arresting secondary hemorrhage; 2, its entire efficiency as a hæmostatic where it can be carried to the source of the hemorrhage; 3, the simplicity of its application.

DR. REAMY, of Cincinnati, briefly referred to the merits of this remedy, and said that for some time it had been his custom to have a stream of hot water running over the surface during the perineal operation, instead of using sponges.

Drs. Chadwick, of Boston, Goodell, of Philadelphia, and H. P. C. Wilson, of Baltimore, spoke of the efficacy of the hot-water douche as a hæmostatic.

DR. CAMPBELL, of Augusta, Ga., indorsed what had been said in favor of the hot-water douche. So far as post-partum hemorrhage was concerned, he had relied upon iodine, as recommended by the late Dr. Trask, for its control—one part of tincture of iodine to three or four of water, and injecting it into the uterine cavity. Dr. Campbell also said there were two kinds of hæmostatics; one which acts on the calibre of the bleeding vessels, causing them to contract and so arrest the bleeding, the other acting chemically on the blood, and so plugging up the lumen of the bleeding vessel. The first kind is of service in post-partum hemorrhage, the second answers only for the arrest of hemorrhage in cases where it is necessary to produce a clot to obstruct the circulation.

DR. GOODELL referred to the efficacy of hot vinegar as a hæmostatic.

DR. MANN, of Buffalo, referred to a case in which he was unable to control the hemorrhage with the hot-water douche.

DR. GOODELL thought Dr. Mann's case was one in which it should not be expected that the hot water would arrest the hemorrhage. [Cutting of the circular artery in cancerous tissue].

DR. BARKER asked what hæmostatic shall be used when the delay of fifteen or twenty minutes for the hot water to act could not be permitted without imminent risk of losing the patient's life. He was not prepared to answer the question. He had used in one such case the gentle application of cotton, wet in Squibb's fluid extract of ergot, and simply threw it out as a suggestion, that it might also possibly be of service in other cases.

The discussion was closed by Dr. Smith.

DR. C. D. PALMER, of Cincinnati, then read a paper entitled

SOME POINTS CONNECTED WITH THE SUBJECT OF DYSMENORRHOEA.

That this condition is mechanical in its origin is one of the most natural conclusions. In a certain proportion of cases obstruction in the uterine canal exists, and in the region of the external os most frequently. But the interest in the paper centred in the arguments to prove that the disease is not mechanical in character, but a functional disease, essentially a neurosis. Dysmenorrhœa occurs without any abnormal condition of the uterus which can be detected. There are instances in which well-defined abnormalities of the uterus exist, and yet there is no dysmenorrhœa. There are cases of stenosis without menstrual pain. There are cases of well-defined flexion and yet no dysmenorrhœa. Other points similar in character were made by the author of the paper. In all cases treatment should be purely constitutional until the necessity for local exploration becomes apparent and justifiable. The dysmenorrhœa expresses a fault in the nervous system at large, and local treatment may be united to thorough attention in that direction, but the cases requiring it are very rare after thorough general treatment has been tested. Iron when the flow is scanty and lacks color; arsenic when the flow is prolonged and too frequent. The virtues of iron may be increased

by the addition of *nux vomica*, phosphorus, etc. Electricity may be of service, especially in the partly neurotic, spasmodic, rheumatic forms of the disease. He had used a combination of bichloride of mercury and iodide of potassium with good results, independent of any specific disease. Two remedies he directed special attention to: 1, concentrated tincture of *cimicifuga racemosa* in moderate doses three days prior to the period and continued in smaller doses throughout the flow; 2, tincture of *pulsatilla* given in a similar way. Dilatation is indicated only in the neurotic spasmodic forms, and then after failure of medical and constitutional treatment. If stenosis of the canal exists, it may be opened up by incision; and if it does exist it should be opened up before secondary complications caused by it are developed.

DR. CHADWICK, of Boston, said that he had listened to the paper with great satisfaction, because it contained much the same teachings which he had been accustomed to give for several years. He had been gradually giving up the belief in structural constriction of the cervical canal, and consequently the belief in obstructive dysmenorrhœa.

DR. BARKER, of New York, regarded the subject as one of great interest and importance, and had listened to the paper with much pleasure. In most respects he was in thorough accord with Dr. Palmer, and rose merely to supplement the paper with some new points concerning treatment. He believed that mechanical obstruction, as a cause of dysmenorrhœa, existed in only a small percentage of cases. That it does exist in some cases, he thought all were convinced. On the other hand, patients who have had dysmenorrhœa until they became mothers have had the dysmenorrhœa return just as badly as before when menstruation has been re-established; and, therefore, as had been stated by Dr. Chadwick, while dysmenorrhœa and mechanical obstruction may co-exist, they do not necessarily bear the relation of cause and effect. He believed there are two forms of dysmenorrhœa—one dependent upon the uterus itself, and the other ovarian. Either form may be painful, but he believed that by careful inquiry a differential diagnosis could be made between them. In the uterine form there are cases which do not depend on obstruction, and which are yet attended by great pain up to the time of the flow; but as soon as the flow begins the pain ceases, and the patient is comparatively easy during the remainder of the period. In such case he regarded the pain as due to an effort of the uterus to get rid of the plethora by rupture of capillaries, etc. These two forms occur both in plethoric women and in those whose general condition is the ideal standard of health.

With regard to treatment for these varieties he fully agreed with the author of the paper concerning the efficacy of iron; but the preparation which he had usually prescribed had been the lactate, three to five grains three times a day, generally associated with chlorate of potash. This treatment is begun about ten days before the menstrual period should appear. Another remedy, which is almost specific in uterine dysmenorrhœa, is *apiol*; but to get its good effects its use should be begun at least *two days before* the period should return, and kept up in the period. Give *two* capsules, usually, after each meal.

There is another class of cases in which the flow is unattended by pain until it has continued for two or three days. These patients are usually strong, of full habit, complain of headache, vertigo, imperfect vision, etc., previous to the period. These belong to the ovarian variety, and here he uses the bromides, preferably the bromide of sodium, beginning about a week before the period and administering from ten to fifteen grains in the middle of the forenoon, afternoon, and at bedtime. *Apiol* is also serviceable in these cases.

The further discussion of Dr. Palmer's paper was postponed until the reading of papers had been completed.

The Society then adjourned to meet at 10 A.M. on Wednesday.

WEDNESDAY, SEPTEMBER 19TH--SECOND DAY--MORNING SESSION.

The Society was called to order at 10 A.M. by the President.

DR. GILMAN KIMBALL, of Lowell, Mass., President, then delivered the annual address, which consisted of a

BIOGRAPHICAL SKETCH OF DR. NATHAN SMITH, FOUNDER OF THE DARTMOUTH MEDICAL COLLEGE,

the genius, indomitable will, untiring energy of whom, the speaker believed, had done more for practical medicine and surgery than that of any other single individual in this country. With regard to his connection with the subject of ovariectomy, he was the second to perform it successfully in this country, the operation taking place at Norwich, Vt., in July, 1821. It was as truly original as was the first performed by McDowell, and simply by priority of date was McDowell distinguished beyond dispute as the father of ovariectomy. It was not Dr. Kimball's purpose to raise any question as to the justice of this claim, now acknowledged throughout the civilized world. While listening to the memorial address by Professor S. D. Gross, at the unveiling of the monument erected to McDowell, it occurred to him that something more might justly be said than to merely chronicle the fact by saying that Smith had the courage to follow in the footsteps of McDowell.

The President then gave a biographical sketch of Dr. Smith, who was born of respectable parents in Massachusetts, September, 1762. From this point the speaker traced the career of the subject of his discourse through his school days, entrance upon his professional work, and his subsequent labors as a physician and surgeon, in which were exemplified "the eagle's eye, the lion's heart, and a woman's hand."

The address closed with special reference to the operation of ovariectomy, and the opinion was expressed that, in point of absolute merit, Dr. Nathan Smith is entitled to the same honors which have been bestowed upon Ephraim McDowell.

After a few complimentary, and to a certain extent critical remarks by Professor S. D. Gross, of Philadelphia, DR. REAMY, of Cincinnati, read a paper entitled

A RARE FORM OF ABDOMINAL TUMOR.

The author of the paper related the history of three cases. The leading features as presented in the first case, seen in consultation, in July, 1878, were the following; as they existed in a patient thirty-eight years of age, married fifteen years, sterile, and in ordinary good health up to three years ago, and who was supposed to be suffering from ovarian tumor. The growth was abdominal, in front of the intestines, cystic, and contained fluid. It had no connection with either the uterus or its appendages, and no special change was produced in the condition of the abdomen whether the patient was in the upright or horizontal position. The fluid, removed by tapping, was red and contained blood-corpuscles, both in good condition and broken down. The paper closed with a brief reference to the scanty literature of the subject—namely, tumors of the omentum, and the three cases reported belonged to the variety of bloody. Microscopical examination revealed the tumor (the specimen presented) to be sarcoma.

DR. C. C. LEE, of New York, thought the cases belonging to the group described by Dr. Reamy were very rare, and that the possibility of diagnosing sarcoma of the omentum before induration had occurred had not been established. He could conceive that if the general rule of tapping was established this class of cases would become much better known than at present.

DR. SURTON, of Pittsburg, thought it impossible, beforehand, to determine whether, in any given case of tumor of the omentum, the disease was sarcomatous or carcinomatous. But if the tumor contains fluid, he

thought it dangerous practice to use either the aspirator or trocar. If the surgeon feels justified in opening the belly to obtain fluid for examination, use the hypodermic syringe. Besides, Dr. Sutton believed, in the present stage of surgery, that the operator is justified in discarding all punctures and in opening the abdomen by an exploratory section. If it is believed that the tumor is malignant after the opening has been made, the best surgery is to close the wound without interfering with the growth.

DR. CAMPBELL, of Augusta, Ga., thought that such growths were apt to be pedunculated, and that it was well, therefore, to remove the tumor and give the patient an additional chance.

DR. REAMY believed that, all things considered, tapping is a justifiable procedure, at least for the relief of symptoms. In two of his cases the operation was followed by recovery, and he believed it to be as well to tap as to cut the belly open.

A paper by DR. JENKS, of Chicago, on

A NEW METHOD OF OPERATING FOR FISTULA IN ANO,

was read by title.

DR. H. F. CAMPBELL, of Augusta, Ga., then read a paper on

CONGENITAL FISSURE OF THE FEMALE URETHRA, WITH EXTROPHY OF THE BLADDER.

A case was reported, and the interest centred in the question, When is the proper time to operate? It is a matter of quantity of tissue and space. He held that after puberty the operation might be performed with prospect of better result than if performed with the present limited quantity of tissue and space. The patient was a young female child.

DR. BROWNE, of Baltimore, related the history of a case with calculi, occurring in a child eight years of age. He proposed to perform the supra-pubic operation, and remove the calculus, but the family postponed it and the child died.

DR. MANN, of Buffalo, narrated a similar case to that reported by Dr. Campbell, and in which he advised operation at once, which was performed by Dr. Minter, of Buffalo, and with completely satisfactory results.

DR. T. ADDIS EMMET, of New York, then read a paper entitled

A STUDY OF THE ETIOLOGY OF PERINEAL LACERATION, WITH A NEW METHOD FOR ITS PROPER REPAIR.

During the last twenty years the author of the paper had given more thought to this subject than to any other likely to be brought before the Society. He had reached the conclusion that simple laceration of the perineum, extending even through to the sphincter, but not involving it, produces no inconvenience after the parts have once healed, except by the disturbances occasionally found of a reflex character from the presence of cicatricial tissue. It has been frequently observed that the disturbance after laceration of the perineum is not in proportion to the extent of the injury; also that the perineum has been lacerated for years without causing inconvenience; on the other hand, it has been equally puzzling to explain the amount of suffering attending the slightest degree of injury; and again, that the same kind and amount of suffering is experienced when no injury of the perineum has been received.

Notwithstanding the many modifications of Baker Browne's operation, Dr. Emmet believed that no one had relieved any of this class of patients by simply uniting the tissues which had been lacerated, and no more. *Some portion of the posterior vaginal wall must be engaged in the line of union in order to secure any benefit.* The true condition of the parts he regarded as a rupture of the pelvic fascia reflected over the muscles of the vaginal outlet,

and that to afford relief this fascia must be restored as nearly as possible to its original position.

In the operation it is useless to carry denudation so far externally as is often done. It should be limited to the true osteum vaginae, and the perineum should be further strengthened by bringing forward a transverse fold of the posterior wall of the vagina, even if there is no rectocele. The mistake should be avoided of taking too much of the posterior wall. The essential features of the operation are as follows: Make two transverse crescentic denudations, an outer one with concavity looking backward and an inner one with the concavity looking forward. To establish the situation of these crescents, three tenacula are to be employed. With two of these instruments the open mouth of the vagina is to be brought together by inserting the points at the level of the upper limit of the remains of the hymen, one on each side. The points thus seized would mark the extremities of the anterior crescent, and while they are held together with the instruments the third tenaculum is to be inserted in the posterior vaginal wall in the median line, at a point that could be drawn forward to meet the two former without giving rise to undue tension. This point would mark the centre of the posterior crescent. The denudation having been effected, the two crescentic denuded patches are to be stitched together. This has the effect of drawing the tissue of the perineum upward so that the vertical rent in the median line will be much shortened, and can now be closed with a few sutures, the last step not being essential.

The paper gave rise to a considerable number of questions, which Dr. Emmet answered, and illustrated his plan of operative procedure upon the black-board. The discussion of the paper was postponed until the afternoon session.

The Society then adjourned to meet at 3 P.M.

SECOND DAY—AFTERNOON SESSION.

The Society was called to order by the President.

Dr. Emmet's paper being before the Society for discussion, the author gave a brief *résumé* of his views as follows: Laceration of the perineum does not produce the trouble which is attributed to it. It is never lacerated as it seems to be; there is no such tissue there. The tissue in front of the rectum is frequently thicker than before the injury. No such body exists as the perineal body as it is represented in the books, and as operators strive to restore. The injury is more apparent than real. He held that even if the laceration of the perineum is not repaired the injury can be best repaired by bringing together a certain portion of the posterior wall of the vagina just at the entrance of the vagina, where it joins with the soft parts. He further held that we may exclude, in performing any operation, everything with reference to the external organs of generation outside of the line of the hymen around the vagina. The fascia, forming two sulci, is as important to keep up the perineum, the posterior wall of the vagina against the anterior wall, as a pair of suspenders is to keep the seat of a pair of pantaloons in place. By his operation, bringing a fold of the posterior wall of the vagina up, we restore the attachments and support, and may let the perineal injury go entirely, if the operator chooses to do so; it matters little whether or not stitches are introduced. The special feature was the part which the pelvic fascia plays in supporting these parts, and that the perineum has little or nothing to do with it. Whenever a condition is seen in which the posterior wall of the vagina is not in contact with the anterior wall, we might be sure that the *fascia* is not in proper condition.

DR. REAMY, of Cincinnati, thought that if this operation was to be substituted for the one so admirably described by Dr. Emmet in his book, it was a comfort to know that he had had an opportunity to undo the great

evil which he had done. He concluded from Dr. Emmet's last explanation, as well as from the paper itself, that Dr. Emmet believed all the perineal tissues down to muscles amounts to nothing. If this is true he should not be surprised to see some child born with all these parts lacking. He asked Dr. Emmet if he had not found any number of superficial lacerations where stretching of the posterior wall of the vagina does not exist, the separation from the deeper tissue is not great, and yet the posterior commissural junction of the labial walls on both sides up to the entrance of the vagina are lying above the circle of the hymen as it exists in the virgin state? He was unable to see how the proposed operation could do more than dispose of redundancy of tissue in the posterior wall of the vagina in a limited number of cases, and could not agree with Dr. Emmet if he recommended it as a substitute for his former operation for this injury.

DR. FRANK P. FOSTER, of New York, denied entirely that the perineum has anything to do with the support of the structures above it, when all the parts are in a normal condition. He thought there was not a single instance in anatomy where an organ rested upon anything beneath it. What the perineum will do, and often does do, but what it does not do normally, is quite another question. But it does not by any means follow that the perineum has no function.

DR. SUTTON thought that any operation for lacerated perineum that did not have for its object the speedy restoration of the perineal body could not stand in the light of the teachings of the last ten years.

DR. EMMET said he expected it would be stated that he had denied the existence of the perineum, although he had endeavored to explain how it was lacerated and drawn to each side like the separation of a curtain. He did not deny the existence of the perineum, but simply denied that any such surface exists as we have been led to believe, and which operators have aimed to build up. He thought the gentlemen would not disagree so much with him as appeared when they could have the opportunity to study his paper leisurely and carefully.

DR. C. C. LEE, of New York, then read a paper on

THE MANAGEMENT OF ACCIDENTAL PUNCTURE AND OTHER INJURIES OF THE GRAVID UTERUS AS A COMPLICATION OF LAPAROTOMY,

in which he gave the details of seven cases of this rare complication—all he could find in medical literature—including one that had occurred in his own practice. From them he deduced the following conclusions:

First.—The pregnant womb may be punctured or otherwise wounded during laparotomy without necessarily causing abortion.

Second.—Miscarriage seems with *a priori* and from clinical evidence to depend upon injury of the uterine contents, not of the womb itself, however severe.

Third.—If the former has certainly occurred, Caesarean section is indicated and should be promptly performed. In this case the utmost care must be subsequently taken to secure thorough drainage from the uterine cavity.

Fourth.—If the uterine walls alone are injured, the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through uterine tissue; if too small to be sutured, the bleeding points must be lightly touched with the thermal cauterium until oozing has ceased. Good surgery and the dictates of humanity alike demand that under such circumstances a chance of survival be given the child as well as the mother.

The paper was discussed by Drs. Wilson, of Baltimore, Garrigues, of New York, and Byford, of Chicago.

DR. A. REEVES JACKSON, of Chicago, then read a paper entitled

IS EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

The purpose of the paper was to discuss the single question in view of the facts known to us. His conclusions were as follows: He had endeavored to show: 1. That diagnosis of uterine cancer cannot be made sufficiently early to insure its complete removal by extirpation of the uterus. 2. When the evidence can be established, there is no reasonable hope of effecting a radical cure, and other methods of treatment offer far less dangers than excision of the entire organ, and are equally effectual in the amelioration of suffering, retarding the progress of the disease, and prolonging life. 3. Extirpation of the uterus is highly dangerous, and neither lessens suffering—except in those whom it kills—and does not give a reasonable promise of recovery, and should not be adopted in modern surgery.

DR. VAN DE WARKER, of Syracuse, explained how he had sloughed out the uterus by means of chloride of zinc, and exhibited microscopic sections which he believed illustrated that tissue not the seat of cancerous infiltration had been reached. He had operated in this manner in eight cases and with gratifying results.

DR. EMMET, of New York, said that the author of the paper had fully expressed his own convictions concerning this operation. He had opposed the operation from the beginning.

DR. BAKER, of Boston, said he was a believer in the local origin of cancer, and therefore that operative measures were of great advantage. He explained at some length his method of operating without removing the uterus, and several of his patients still lived, now at least five years after the operation was performed, and are apparently well. We thought that sufficiently early diagnosis could be made in many cases as to allow of complete removal of the disease. He thought that the cases in which complete removal—extirpation of the uterus—was justifiable were few in number.

DR. PALMER, of Cincinnati, endorsed Dr. Jackson's paper.

DR. SUTTON, of Pittsburg, thought the operation justifiable, and described different methods of operating, as practised by Schroeder and Martin.

DR. JACKSON, in closing the discussion, said that in performing this operation the operator was like the gambler who stakes what he does not own, the life of his patient against the heaviest of odds.

OFFICERS FOR THE ENSUING YEAR.

President—Albert H. Smith, Philadelphia; *Vice-Presidents*—James R. Chadwick, Boston; Samuel C. Busey, Washington; *Secretary*—Frank P. Foster, New York; *Treasurer*—Matthew D. Mann, Buffalo; *Members of Council*—T. G. Thomas, Fordyce Barker, New York; T. A. Reamy, Cincinnati; R. S. Sutton, Pittsburg; R. B. Maury, Memphis.

The Society then adjourned to meet on Thursday, at the close of the Executive Session.

[To be concluded.]

THE NUMERICAL STRENGTH OF THE PROFESSION IN PARIS.—The *Revue de Thérapeutique* gives an exact census taken of all the practitioners in Paris at the present time. There are in Paris and the communes of the department of the Seine, 1,915 doctors of medicine, 12 doctors of surgery, 83 *officiers de santé* 43 foreign doctors, 1,500 midwives, 845 *pharmaciens*, and 95 veterinary doctors. One of the oldest doctors in Paris is M. Ricord, born in 1800, and made a doctor in 1826. These figures are, of course, exclusive of the host of illegal practitioners of all kinds to be found in Paris.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(Concluded from p. 302.)

THE newly elected President, DR. J. EDGAR CHANCELLOR, of Charlottesville, being in the chair, the afternoon session, September 6th, was opened by DR. S. K. JACKSON, who read the report on

ADVANCES IN THE PRACTICE OF MEDICINE.

He said that although Huxley has dated the advance of medicine as occurring eight centuries ago, scientific medicine can be hardly said to have made much progress until the discovery of oxygen, and showed how much benefit the profession has derived from the young science of biology. By the advancement of the germ theory, the pathology and therapeutics of all diseases of parasitic origin have been revolutionized in the past few years, and the study of the differences between germicides is one of the most important questions of the day in practical medicine. For years mercury has been employed for the destruction of epizoe, but the profession, until within a comparatively late interval, did not know how much good in the destroying of entozoe was being done by its administration. Dr. Jackson proffered the law "that no organism can live in its own excreta—that the products of its life-processes become poisonous to it, stop its ravages, and destroy its life." He believed that it is only as a germicide or antidote that quinine is to be used, without reference to any other therapeutical or physiological quality it may possess. He spoke in favor of Koch's discoveries, announcing his full belief in their practical importance. Concluding, he gave some very interesting mortality statistics of the city of Norfolk, Va., showing the diminution in its death-rate from medical attention.

DR. DABNEY, of Charlottesville, said that "tubercular bacilli" are not yet proven, as the same micro-organisms have been found in many other places. He also instanced the fact that at the Brompton Hospital for Consumptives over fifteen thousand patients were treated in twenty years, and during that time there was no case of tubercular disease occurring among the attendants.

Dr. Wm. C. Dabney, of Charlottesville, read a volunteer paper entitled,

THE PRESENT ASPECT OF THE BACILLUS TUBERCULOSIS QUESTION.

He did not believe in the value of Koch's so called discovery of the bacilli of tubercle, in the face of the contradictory testimony offered by so many other observers. Lichtheim and Cramer have found micro-organisms, behaving precisely like Koch's bacilli with staining fluids, in the fecal discharges of healthy individuals; Spina claims to have found similar organisms in pus from a rabbit's thigh, formed after traumatic injury; Echile has found bacilli in purulent discharge from the ear, and Rosenstein has found them in the urine. Koch says that the bacilli are present in the incipency of tuberculosis, and are its essential cause, while Spina states that they are only found in caseous tubercular deposits that have been exposed to the atmosphere, and do not cause the disease. Koch's experiments have been mostly performed on the lower animals, rats, rabbits, and guinea-pigs, and Dr. Dabney points out the fact that the inoculation of these animals with various substances is liable to lead to caseous inflammation and tuberculosis.

DR. CHAS. M. SHIELDS, of Richmond, read the report on

ADVANCES IN OPHTHALMOLOGY AND OTOTOLOGY,

in the course of which, after dwelling on some of the advances in the physiology of the eye, he mentioned the investigations made in Dr. Hirschberg's clinic, bearing on sympathetic ophthalmia, in which after the enuclea-

tion of four eyes which had been subjected to the operation of neurotomy from two months to four years before, the ciliary nerves were found to have reunited. He thought that neurotomy should not be adopted as a substitute for enucleation unless the patient could be under occasional observation afterward, so that the eye could be enucleated if the cornea again becomes sensitive. The operation of trituration of the cortex of the lens in incipient cataract, to hasten its maturity, was favorably commented upon. The use of antiseptic precautions in cataract was advocated, but the spray of carbolic acid should be used before the operation to disinfect the air of the room. He does not use it during the operation because of its liability to dull the instruments, these latter being disinfected in alcohol. An addition to the therapeutic agents appropriate to the treatment of iritis, is the sulphate of eserine, used after the manner of Dr. Seely to contract the blood-vessels of the iris, while mydriasis is still kept up by atropine. It was also recommended in the suppuration following cataract extractions, the pupil being kept dilated here too by atropine. In peripheral ulceration of the cornea, eserine is becoming popular, and as a treatment for acute glaucoma its merits are better recognized. The electro-magnet for removal of metallic substances from the vitreous and ciliary bodies, the hydrobromate of homatropine for transient dilatation of the pupil for ophthalmoscopic examination, and the value of nitrite of amyl in amaurosis resulting from large doses of quinine were all mentioned at length. Passing to otology and laryngology, the reporter advised sulphide of calcium in doses of from one-sixth to one-fourth grain every two or three hours, in inflammation of the external auditory meatus and furuncles of the meatus. He had also found it useful in mastoid disease, but liberated pus when found to exist. The use of special instruments in removing foreign bodies from the ear was deprecated, as the larger proportion of them could be removed without harm by the syringe. In suppurative inflammation of the middle ear, the dry method of treatment had been found the most effectual. Powdered boracic acid is blown into the canal until it is filled, and kept in place by a bit of cotton, after preparing the ear by cleansing it with borated cotton instead of the syringe; this mode of treatment often curing old cases of otorrhea in two or three applications. The reporter advised the plan of Schalle in treating many cases of nasal and post-nasal catarrh, which is to apply powders of nitrate of silver and calcined magnesia, in the proportions of 1 to 6, 1 to 10, or 1 to 15 parts, to the nasal and post-nasal cavities. He closed by stating his belief that hypertrophic nasal catarrh was never permanently cured, until the redundant tissue had been removed, either by Jarvis' snare or the galvano-cautery.

Upon the conclusion of his paper Dr. Shields exhibited a sample of the new remedy for granular lids and pannus, abrus precatorius, or jequirity seeds, at the same time giving reasons for his belief that the seeds were not such a new article and great rarity as is commonly supposed.

Drs. Parker, Jackson, and White discussed the paper, the latter reading a monograph upon the subject of jequirity, in which he gave the testimony for and against the drug, concluding that its value has been clinically demonstrated to exist, and that it appears as if the profession has in its hands a remedy for that disgrace of eye surgery, granular ophthalmia.

DR. J. A. WHITE, of Richmond, read a volunteer paper on

INJURIES TO THE EYE,

illustrated by reports of a number of cases. So little is said concerning these affections in the text-books, that the detailed cases reported by Dr. White were of extreme interest and value, those illustrative of concussion and compression being especially so. One of the cases was peculiar for the rapidity of blood-absorption in the eye.

The patient, a boy of fourteen years, was struck in the eye by a stone July 1st; treatment by muriate of pilocarpine, for hemorrhage into the vitreous, began on the 4th; on the 6th, the vitreous was perfectly clear from blood; probably one of the most rapid absorptions of the kind on record, as the time occupied is usually from three to six weeks. Another remarkable case was that of a boy twelve years of age, who was struck with great force on the eye when the lids were closed, by a stone from a "gravel-shooter," rupturing the anterior capsule, without cataract following the injury. Dr. White stated that this result was almost unique, he had never seen a similar instance in fifteen years' eye practice. The iris was somewhat torn, and the exuding blood acted as a kind of plug to prevent opacification of the lens substance by the aqueous humor. He concluded with some very practical remarks on the stretching the zonula of Zinn, and dislocation of the lens, with cases.

DR. GEORGE BEN JOHNSTON, of Richmond, presented a report of forty-seven cases of

URETHRAL STRICTURE TREATED BY INTERNAL URETHROTOMY.

He claimed this operation as the surest method of curing stricture in the male urethra. The main features of his treatment are thorough division of the stricture and persistent local treatment for a long time afterward. He stated that many of his cases were re-examined from four months to four years after cutting, and no contraction was found.

DR. W. F. BARR, of Abingdon, chairman of the Committee on Advances in Hygiene and Public Health, did not report in full, but made an apology to the Society in writing, in the course of which he pointed out the facility with which any person is able to practise medicine in the State of Virginia, by the simple payment of a license fee, and mentioned the ineffectual efforts made in past years to procure remedial action from the Legislature.

The Secretary read a preamble and series of resolutions presented by DR. W. G. ROGERS, of Charlottesville, which were unanimously adopted, in favor of the Society appointing a committee to petition the Legislature at its next session to make it a penal offence for any druggist to refill a prescription containing opium, morphia, or any other narcotic poison, for any person, without the special order of a physician to that effect, on account of the influence in producing the "opium habit" and its kindred affections which the habit of indiscriminate prescription refilling, at present so common, has so often brought about.

DR. RAWLEY MARTIN, of Chatham, read a volunteer paper devoted to a description of an

EPIDEMIC OF DIPHtheria IN PITTSYLVANIA COUNTY,

occurring during the summer and fall of 1882. The origin of the epidemic was never found, although carefully searched for, and it seemed to have arisen spontaneously. All the cases were developed either along small watercourses, or near places where rank vegetation was most abundant, although one of the worst cases occurred in a private house, where the best sanitary conditions possible existed, miles away from any point of contagion. Decided croupal symptoms were generally absent, and many cases died after all throat affections had subsided. No adults suffered from severe symptoms, and the children attacked who died were between three and twelve years of age. Nursing children suffered from symptoms of an erysipelatos character. The epidemic subsided as suddenly as it had begun, and was followed by a general outbreak of follicular pharyngitis. A full dose of calomel at the beginning of a sthenic case of the disease invariably modified its course, and alcohol was one of the best remedies in all instances. A number of cases were saved by rectal alimentation. Sanitary conditions seemed not only to be of little use, but where they existed the symptoms were most malignant.

DR. WM. H. COGGESHALL, of Richmond, gave

REITER'S THEORY OF DIPHtheria,

which is simply that the disease is caused by the fibrin-destroying function of the liver not being properly fulfilled, and, as a natural sequence, calomel is indicated for the restoration thereof. Dr. Reiter gives twenty grains at once, and ten grains every hour afterward, until half an ounce of the drug is taken.

DR. BEDFORD BROWN, of Alexandria, read a paper based upon his

THIRTY YEARS' PERSONAL EXPERIENCE IN DIPHtheria.

He thought, from his observation, that two of the gravest symptoms in this disease are the peculiar erratic decline of the heart's action and the almost correspondingly rapid decline in the number of red corpuscles in the blood. His experience has taught him to believe thoroughly in the non-identity of membranous croup and diphtheria. It seemed to him very often that the cases where fever remained when the local symptoms began to abate succeeded the best. He recalled the time when diphtheria was considered a malignant type of a local disease. One of the very great favorites in local treatment then was a mixture of myrrh, creasote, and turpentine. He pointed out the different modes of using mercury. Formerly emetics were given, and then mercury in large sedative doses; in later times we give the latter in small, frequent, alterative doses. Quinine has held favor for use in this disease longer than any other drug, certainly for over a quarter of a century. He thinks that the paralytic effect of the diphtheritic poison on nervous systems can best be retarded by alcohol. He never saw a serious case recover where alcohol was not used. His experience has taught him that if belladonna, ergot, or digitalis cannot stay the paralyzing effect of the poison on the heart through the sympathetic system nothing else will. Such powerful agents as bromine and carbolic acid should be used locally with great caution. Dr. Brown always pays the greatest attention to the digestive organs during an attack of diphtheria, as in every serious case such organs are more or less in a condition of paralysis, and it often becomes a vital question as to how the patient shall procure enough strength from food to support the powers of life. He sustains the patient by means of diffusible stimulants, gives them plenty of fresh air and digestible food, and believes in the great importance of keeping the nose and throat as clean as possible. For this latter purpose he uses with an atomizer, listerine, 1 oz.; aq., 4 oz.; Labarraque's sol., $\frac{1}{2}$ oz.; carbol. acid, 6 drops. Internally, tinct. ferri chlor., 2 dr.; chlor. pot., 1 oz.; tinct. nuc. vom., 20 drops; tinct. digitalis, $\frac{1}{2}$ dr.; aq., 2 $\frac{1}{2}$ oz.; one teaspoonful every two hours.

DR. DABNEY said that he had seen cases occur where excellent sanitary surroundings were present, and was positive that peritonitis had been a sequela of diphtheria in his observation.

DR. S. B. MORRISON, of Rockbridge, never saw a case that was not constitutional in origin, but believed also in the constant use of local treatment. His own observation had taught him that the diphtheritic poison can remain quiescent in one place for years, and then break out suddenly. He thought that all our remedies should be used at shorter intervals in the disease than is the present practice, and that where the vitality of an individual is strong the disease cannot be contracted, notwithstanding full and frequent exposure. He had no doubt but that the germ of typhoid fever and diphtheria was the same, with a different manifestation in each case; and strongly believed in complete isolation of the patient in the latter disease.

DR. ST. PIERRE GIBSON, of Staunton, believed that peritonitis may be produced by diphtheria, citing a case in point; and had no doubt about the fact that the poison of diphtheria may linger in mountain regions for years without sign, and then suddenly become endemic.

DR. A. M. FAUNTLEROY, of Staunton, cited a case to

show its peculiar contagious or infectious properties, which had occurred in his own practice. A child dying from diphtheria at a distance was brought home, its body, packed in ice, lying for a few hours before burial in a room. A day or two afterward a strong, healthy servant-girl cleaned up the floor with warm water, where the ice surrounding the body had melted and dripped, and within a short space of time developed a malignant case of the same disease. In another instance a boy stopped over night at a house where diphtheria had occurred some time before, and the next day entered an asylum for deaf mutes, where thirty-two cases of the disease appeared in a few days. He had often found general disturbance before any appearance of local lesion. He thought local treatment was mainly important, because the membrane present becomes, after a time, putrefied, and, of course, if left alone the putrescent poison would be carried into the circulation by the lymphatics. This was the reason for the local employment of disinfectants. He found one of the most unpleasant concomitants of the disease to be the inability of the patient to ingest food, and instanced one case of recovery where the child was fed for three weeks through a tube. The local application he preferred was a combination of Monsel's solution, carbolic acid, and glycerine, applied with a brush. For internal treatment he used chlorate of potash, large doses of tincture of iron, five-grain doses of quinine, and unadulterated whiskey.

DR. WILLIAM SELDEN, of Norfolk, during forty years of practice, had never known a better systemic form of treatment than the chlorine made from muriatic acid and chlorate of potash according to "Watson's Practice," first edition. Of this he uses one-half drachm to four ounces of water, and has never seen a case die under such treatment. For local application he employs, alum, two drachms; salicylic acid, one drachm; sulphur, one drachm, with enough glycerin to bring the mixture to the consistence of honey, applying with camel's-hair brush. This may be styled the general Norfolk treatment.

Adjournment to 7.45 P.M.

Evening session opened at the time appointed, the President, Dr. J. Edgar Chancellor, in the chair.

Invitations were read from Rockbridge Alum Springs, Blue Ridge Springs, and Rawley Springs, asking the Society to accept the hospitalities of each place for next year's meeting. After full resolutions of thanks had been voted to the Rockbridge Springs Co. for their hospitality of this year (all delegates having been received free of charge during the session), the invitation from Rawley Springs was accepted. An invitation from Alleghany Springs was received too late to be voted upon.

DR. A. M. FAUNTLEROY, of Staunton, read a paper, by invitation, on

THE THERAPEUTIC VALUE OF ROCKBRIDGE ALUM WATER.

He gave a full description of the ten springs located at the place of meeting, and fully described the great value of the water in scrofulotic and syphilitic disorders, the different waters being extremely alterative and deobstruent in their action, and particularly valuable in many instances in dissolving tubercular deposits. In cases of dyspepsia the water of one or more particular springs diminishes the acid secretion from diseased gastric tubules, and in torpidity of the liver it restores the normal activity of that organ, probably through the presence of sodium sulphate held in solution.

The President, DR. J. EDGAR CHANCELLOR, delivered a short address upon the therapeutical employment of the Rockbridge alum waters, enumerating several serious cases of strumous disease in his practice which were entirely cured by their use.

DR. J. MARION SIMS, of New York, Honorary Fellow of the Society, by letter greeted his fellow members, and sent his best wishes for the success of the Society.

DR. J. J. CHISHOLM, of Baltimore, made a few practical remarks on diphtheritic eye troubles.

DR. L. McLEAN TIFFANY, of Baltimore, in the course of his remarks upon

TRACHEOTOMY IN DIPHTHERIA,

stated that in his opinion, while the operation never cures the disease, but simply relieves one oppressive symptom, it never kills the patient. He thought that it is almost impossible to decide just when the difficulty of breathing comes from the top of the windpipe, this indicating the value of the operation. He never had been able to exactly determine when the obstructing membrane was above the sternum and when it was below the common point of opening; and related the particulars of a peculiar case where he opened the trachea just before death, and found the windpipe so completely plugged with diphtheritic exudation that neither a tracheotomy tube nor a probe could enter.

DR. L. B. EDWARDS, of Richmond, mentioned a case where tracheotomy relieved dyspnoea, although the membrane was below the point of opening.

DR. W. W. PARKER, of Richmond, begged the younger members not to become discouraged when they lose a patient from diphtheria, as he did not believe that any physician saves all his cases of that disease.

DR. J. N. MACKENSIE, of Baltimore, stated that one of the after-effects of diphtheria not generally mentioned is adenoid growths in the post-pharyngeal space. He believed that the simplest treatment for the disease is the best, and relied mainly upon steaming for local treatment. He thought the later German topical application (one to two grains bichloride of mercury to one pint of water), was excellent.

DR. R. I. HICKS, of Casanova, mentioned a peculiar instance where a diphtheritic patient associated with many persons in the same locality without the production of another case of the disease.

Drs. Patterson, Whiting, Craddock, and others, discussed the subject of diphtheria and related a number of cases.

DR. S. K. JACKSON, of Norfolk, by request, described his method of preventing

CHOLERA INFANTUM.

He gives the following preparation to any child that is liable to contract the disease: sulphite of soda, hyposulphite of soda, bicarbonate of soda, each 32 grains, aromatic syrup of rhubarb, 2 ounces. One teaspoonful or less, according to age, every two hours each morning, until two or three doses are taken. He claimed never to have had a case of the disease in his practice since using the preparation.

The remainder of the session was occupied in transacting Society business, and after deciding upon malarial fever as the topic for general discussion at the next meeting, the Society adjourned to meet at Rawley Springs, in September, 1884.

There has never before been a meeting, in the history of the Society, so remarkably well attended and so replete with interest and instruction to the members, as that of 1883. Among the visitors present, Drs. Chisholm, Tiffany, and Mackensie, of Baltimore, Md., may be mentioned as having assisted greatly to make the session one of extreme practical value.

The officers elected for the ensuing year were: *President*—Dr. J. Edgar Chancellor, of Charlottesville; *First Vice-President*—Dr. S. B. Morrison, of Rockbridge; *Second Vice-President*—Dr. J. A. Graybill, of Amsterdam; *Third Vice-President*—Dr. Bedford Brown, of Alexandria; *Fourth Vice-President*—Dr. S. K. Jackson, of Norfolk; *Fifth Vice-President*—Dr. J. M. Estill, of Tazewell C. H.; *Sixth Vice-President*—Dr. T. J. Pretlow, of Jerusalem; *Recording Secretary*—Dr. R. B. Cabell, Jr., of Richmond; *Corresponding Secretary*—Dr. Hugh Taylor, of Richmond; *Treasurer*—Dr. R. T. Styll, of Richmond; *Executive Committee*—Dr. W. W. Parker, of Richmond, chairman; Drs. Black, Cunningham, Claibourne, and Gleaves; all other committees holding over.

Correspondence.

SUPPORTS TO THE PELVIC ORGANS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In studying various branches of surgery we are compelled to consider minutely the relations of various organs to one another, and many of them, such as arteries, veins, and nerves, are of great interest, inasmuch as they are directly concerned in many operations, and are the object to be reached or avoided, as the case may be, by the surgeon. Again, we study the relation of organs constituting the thoracic, abdominal, and pelvic viscera, that we may detect with accuracy certain pathological conditions, and at the same time determine the cause and select a method of treatment.

It seems to me that in no branch of surgery is this latter class of relationships so important as in that pertaining to diseases of women.

Do not understand me to say that a derangement in the situation of the pelvic organs is of more moment as regards the life and comforts of the patient than that of any of the thoracic or abdominal organs, but that the importance to the surgeon is in exact ratio with the facility with which abnormalities can be detected and treated, is a matter which I believe is generally appreciated.

Among the many disorders described by gynecologists, and the numerous causes to which they are attributed, there are some which I believe to depend upon conditions which have heretofore been unnoticed, or, if noticed, regarded of such slight value as to have escaped mention. These conditions are involved in the construction, relation, and action of the interfemoral and ischio-rectal regions, the nates, and the obturator internus muscles.

Respecting the ischio-rectal region, we have situated on either side of the rectum the ischio-rectal fossa, bounded internally by the sphincter ani, levator ani, and coccygeus muscles; externally by the tuberosity of the ischium and the obturator fascia, which covers the inner surface of the obturator internus muscle; limited in front by the perineal body, and behind by the lower border of the gluteus maximus muscle, and the great sacro-sciatic ligament. Each fossa is filled, in the healthy state, by a mass of adipose tissue of a triangular shape, with its base directed downward and resting upon the integument of this region.

Each mass will measure one inch transversely, one and a half inch antero-posterior, and two inches in length.

Now, when we consider the location, relation, and magnitude of the two bodies, and compare them in these various respects with the perineal body, it is reasonable to suppose that each of the three perform a similar function; but before describing this, I wish to speak of the interfemoral region.

We have covering the adductor group of muscles of either thigh a thick layer of fat, increasing in thickness as it approaches the perineum, and in the well-formed female sufficiently abundant to closely approximate the thighs. It will be noticed also that these accumulations of fat are controlled principally by the adductor muscles, and can be elevated and brought firmly together at the will of the person.

I know of no simpler way of demonstrating the action of these parts, than by calling attention to the phenomenon which takes place in an effort made by an individual to prevent an untimely discharge from the bowels or bladder.

This consists in expelling the air from the lungs, firmly adducting the lower limbs, and rotating them outward. By expelling the air from the lungs, the pressure within the abdominal cavity is diminished.

The adduction of the thighs is a very important act, inasmuch as it presses the interfemoral masses of adipose

tissue firmly together, and upward against the perineum, and having combined with it the outward rotation, produced partly by the lower border of the glutic maximus and the obturator internus muscles, we have the nates brought firmly together and pressing upon the ischio-rectal region. Thus the whole floor of the pelvis is raised, and the organs wedged upward near the brim and against the sacrum. By the contraction of the obturator internus muscles (which means an approximation of its extremities *and an increase in thickness*), we have a pressure exerted directly upon the sides of the pyramidal-shaped mass of fat contained within the ischio-rectal fossa, and indirectly upon the sphincter ani and levator ani muscles, and the capacity of the pelvis diminished.

Through this combination of forces we have a condition produced which relieves the sphincters and the muscles of the perineum from the strain brought upon them by the pressure from above.

The mass contained within the rectum is elevated, the urethra is firmly compressed, and thus an expulsion of either feces or urine prevented.

Now, that we have considered the gross anatomy and physiology of these parts in a healthy state, we can in very few words explain a few pathological conditions resulting from a deficiency of fat composing these supports.

Let us take, for example, a woman somewhat emaciated, or one whose peculiarities of constitution are unfavorable to the accumulation of fat, and we have the supports afforded by the region under consideration to a greater or less degree, and in many cases entirely wanting. The obturators, glutis, and adductors may contract, but the supports from the nates, ischio-rectal, and interfemoral regions are so deficient that they (the muscles) have nothing to act upon, and consequently the muscles forming part of the floor of the pelvis have the whole burden thrown upon them.

There may or may not have been a relaxation of the muscular system, but from the very fact that the pelvic muscles are continually exerting themselves, a lax condition must inevitably follow. Then comes the sensation of dragging and weight in the pelvis. Pain in the back and loins. Rectal and vesical irritation; great fatigue and weakness; leucorrhœa, and other signs of congestion; and later, after the muscles have lost their tone from the constant exertion, we have prolapsus, and the whole catalogue of displacements of the pelvic organs.

Another example of interest is afforded by a subject with a justo-major pelvis. There may be in this case a sufficient quantity of fat, and the muscular system in a state of perfect health, but that the support given by both will be to a great extent lessened will be readily perceived when we take into account the fact that the frequent concomitants of the abnormally capacious pelvis are very long necks to the femurs, giving great breadth to the hips, and carrying the shafts of the femurs, on a level with the perineum, very widely apart.

There is also a large outlet to the pelvis, with diverging rami of the pubes, separating the adductor muscles at their origin. Now, should there be sufficient fat to fill the space between the muscular portion of the thighs, it would be so heavy that, should the person attempt to walk or stand any length of time, the excessive weight would tire and drag down the muscles supporting it, and allow the pelvic organs to settle as previously described. In this way we account for many distressing sensations complained of by apparently healthy and robust women.

In consideration of the foregoing hurried and superficial elucidation of the subject, I trust that in future there may be some attention, at least, given to the support of the pelvic organs by—

First.—The interfemoral adipose pillars.

Second.—The fat of the ischio-rectal region.

Third.—The prominence of the nates.

Fourth.—The physiological thickening of the obturator internus muscles.

As regards the treatment of disorders accompanying

and resulting from a loss of these supports, much depends upon the attention given to the general system.

All pessaries, or artificial supports of any pattern, should be of sufficient size to compensate for the loss of tissue, and yet not large enough to cause pressure of such a degree as to prevent the reproduction of fat.

If possible, a support should be made of vulcanite (hard rubber), from a plaster of Paris cast taken of the vagina while distended, and as nearly as possible in a normal position. A support of this kind will fit accurately, and will consequently be sustained in position by a certain amount of atmospheric pressure.

In case of the justo-major pelvis, the patient will accomplish much by lying upon the back, and adducting the thighs against some power acting as an abductor; such as a spring hoop placed between the knees, or an elastic strap attached to either knee, and to the sides of the bedstead. *Don't apply these forces of abduction below the knees, or you will produce knockknee*; as I came very near doing in one case. By this manoeuvre there is no weight brought upon the floor of the pelvis while the limbs are separated, and by the exercise to the adductor muscles they will become sufficiently powerful to sustain and control the interfemoral adipose pillars.

Very respectfully,

FRANK W. HAVILAND, M.D.,

Late Resident Surgeon Brooklyn City Hospital,
Brooklyn, N. Y.

F 210 WEST 125TH STREET, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 8 to September 15, 1883.

BARTHOLE, JOHN H., Captain and Assistant Surgeon. Station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. S. O. 123, par. 2, Department of the Columbia, September 6, 1883.

BANISTER, J. M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Adams, R. I. S. O. 170, par. 3, Department of the East, September 10, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending September 15, 1883.

BEARDSLEY, G. S., Surgeon. Detached from the Galena and placed on waiting orders.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Detached from the Galena and placed on waiting orders.

PERCY, H. T., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the U. S. S. Galena.

BRIGHT, GEORGE A., Surgeon. Detached from Naval Rendezvous at Philadelphia, Pa., on September 30th, and ordered to the Galena, October 1st.

URQUHART, R. A., Passed Assistant Surgeon. Ordered to the Alert on October 6th, and on the arrival of that vessel at Yokohama, Japan, to be detached and to report for duty at the Naval Hospital at that place.

SIMONS, M. H., Passed Assistant Surgeon. To be detached from the Naval Hospital, Yokohama, Japan, on the reporting of his relief, and ordered to the U. S. S. Alert.

TO PRESERVE SURGICAL INSTRUMENTS.—The following formula is recommended by Professor Olmstead, of Yale College. Melt together six to eight parts of lard to one of resin, and stir until it is cool; it can be thinned with coal-oil or benzine. Applied to a bright metallic surface it effectually protects the polish, but the surface should be both bright and dry, as it will not prevent the continuance of oxidation already begun.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 18, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
September 11, 1883. . . .	0	83	36	3	60	21	0	0
September 18, 1883. . . .	0	69	38	3	22	19	0	0
<i>Deaths.</i>								
September 11, 1883. . . .	0	27	7	2	6	15	0	0
September 18, 1883. . . .	0	13	14	3	2	14	0	0

MEDICAL WOMEN FOR INDIA.—The *Indian Medical Gazette* thinks that the project, now being agitated in England, of sending out medical women to India is a visionary one, intended to meet a want which does not exist. Something practical is really being done in India, however. A philanthropic citizen of Bombay, Mr. Kirtledge, has collected a sum of 26,975 rupees, and got the promise of 13,554 rupees more, for the purpose of paying the salary of one or two lady doctors who are intended to have a hospital and dispensary established for them in Bombay, and do their best to obtain practice among native ladies in that city. A wealthy Parsee gentleman has offered a lakh of rupees for the purpose of founding a hospital in connection with this movement, and a large and influential committee, representing every section of the community, has been organized for the purpose of promoting the objects in view.

A STANDARD OF QUALIFICATIONS FOR INSURANCE EXAMINERS.—The medical examiner of "the Catholic Knights of America" says that he will accept no credentials signed by any physician whose diploma is not recognized by the great universities of America. All others will be regarded as incompetent to conduct the examination of applicants to the ranks of these knights. The next question to be determined is, which are "the great universities of America?"

THE COUVREUSE, OR MECHANICAL NURSE.—*The Lancet* gives the following description of the ingenious contrivance known as the *couvreuse*, or artificial nurse. It was in 1878 that Dr. Tarnier, when visiting the apparatus devised by M. Odile Martin, for artificially hatching and rearing chickens at the Jardin d'Acclimatation, suggested that a similar method might be applied with advantage to infants, especially in cases of premature birth. Two years elapsed, however, before any attempt was made to carry out this proposal; but in the course of the year 1880 a *couvreuse* was made, and brought to the hospital of the Maternité. This is a plain wooden case or box, measuring about 2 ft. 8 in. by 2 ft. 4 in., and 2 ft. 4 in. in height. The box has a double covering, the space between being filled with sawdust to retain the heat, and is divided into two parts. The lower half contains a reservoir, which holds about sixty litres of water, and is fed by a patent boiler that stands outside the box, and is warmed by an oil-lamp; or hot water may be used without recourse to the lamp. The upper portion of the box forms a warm chamber, where a little basket or cradle is placed, large enough to hold two infants. From an opening at the side, this cradle may be withdrawn, while the top of the box has a double glass covering, so that the children and the thermometer lying by their side can be constantly

watched. If the water used in the first instance is cold, it takes a long time to attain the required temperature : but once this is done the lamp need only be relit three or four times during the course of the day. It is best to warm the apparatus while the infants are being fed or washed. The temperature within the *couvreuse* is generally maintained at 86° F., and though the contrast on withdrawing the child to be fed or washed is very great, amounting often to 30° F., colds are not so frequent as among the infants nursed in the ordinary manner. Altogether the experiment is considered so successful, that it is proposed to supply all the hospitals of France with a *couvreuse*, and there is every reason to anticipate good results from this measure. Nor is this all. A small portable *couvreuse* is now about to be tried, which could be carried by hand from house to house. After this we shall probably have perambulators constructed on the same model. Although no very careful experiments have been made with respect to the ventilation within the *couvreuse*, yet this is evidently sufficient. Apertures are made in the lower portion of the box, the fresh air travels over the hot-water reservoir, and is thus warmed before it reaches the child. The increased temperature within the *couvreuse* insures a constant current of air, though the child is protected by its cradle and clothes from any draught.

OXALURIA AS A CAUSE OF SPERMATORRHOEA.—Dr. W. H. Dickerman, of Olean, N. Y., sends us the following communication bearing upon the etiology of spermatorrhœa : "While there is a diversity of opinion as to the cause of spermatorrhœa and its local symptoms, it certainly must be conceded that there is an abnormal condition of the nervous system manifested in every such case. Crystals of oxalate of lime are invariably present in the urine of such persons, and as it is generally conceded that free oxalic acid in the circulation is poisonous to the brain and spinal cord, we have a possible cause which should not be overlooked. As an illustration of this condition, the following case is related. A patient, Mr. S. W.—, aged twenty-nine, presented himself for treatment about one year ago. He had been laboring under great mental weakness for several months, and complained of a dull pain and a sense of uneasiness in the occipital region. He said he had frequent nocturnal seminal emissions. There was great irritability of the neck of the bladder, and frequent micturitions day and night. The passage of a sound revealed hyperæsthesia along the prostatic portion of the urethra and at the neck of the bladder. He denied ever having practised masturbation or indulged in excessive venery. He was greatly emaciated. The urine contained in suspension a milky, tenacious, gelatinous substance, and upon microscopical examination many spermatozoa were discovered. Crystals of oxalate of lime were present in abundance. Taking into consideration that in the oxalate of lime diathesis (oxaluria) there is a chronic poisoning of the brain and spinal cord, due to minute particles of oxalic acid in the circulation, I regarded the spermatorrhœa as of only secondary importance, and put the patient upon dilute muriatic acid treatment. In two weeks he returned and said he was well. An examination of his urine confirmed his statement, and he has not been troubled since. As a cure resulted under the acid treatment in so short a time, I was forced to believe that in this case there was no other cause than the oxaluria."

OTITIS MEDIA PURULENTIA AND MASTOID COMPLICATIONS.—Dr. M. E. Alderson, of Russellville, Ky., calls attention to certain cases, primarily of headache and acute pain in the ear, accompanied by discharges, which, as he justly states, do not always receive the necessary careful examination, but are too often dismissed with a few general directions, and thus, after a time, result in serious consequences. In treating these cases, the usual plan by injections of astringent and sedative solutions

he considers to be insufficient. Regarding the radical treatment by trephine, aside from the shock involved, especially in delicate subjects, he finds the results from this procedure by no means certain. The following conservative method is recommended by him, exemplified by the accompanying case : Mrs. —, aged thirty-three, has complained of headache for the past three years, which has become more persistent, until finally recurring every two or three days, and with increased severity. Has been treated for nervous headache by several physicians, and with only temporary relief. Purulent inflammation of both ears had existed for some time, and the external meatus was now covered with layers of thick pus, causing considerable distention and thus adding to the intensity of the pain, which was present on both sides of the head and face, more especially over the mastoid cells. After thorough cleansing with the probe and absorbent cotton, there was discovered by the speculum granulating mucous membrane and fleshy-looking membrano tympani. No polypi existed, and the hearing of both ears was good. For the pain, which was very acute and neuralgic in character, a mixture of aconite and gelsemium was ordered—a few drops q. 4 h. Locally, the entire external canal was packed with powdered boracic acid, previously mixed with calendula and carbolic acid, and thoroughly dried, the whole then being covered with absorbent cotton. This was allowed to remain for three days. The packing was then removed, the canal carefully dried, and the application renewed. To the mastoid process a fly blister was also applied once a week and kept discharging freely. Under this treatment amelioration of all the symptoms followed, and the final results were entirely satisfactory.

FILTH DISEASES IN RURAL DISTRICTS.—Dr. A. L. Carroll, of New Brighton, N. Y., writes : "Sir : On my return from Europe, my attention has just been drawn to a paper by Dr. George Hamilton, published in your issue of July 28th, commenting upon an article of mine on 'Filth Diseases in Rural Districts.' I have apparently been so unfortunate as to fail to make myself understood by Dr. Hamilton, or even to attract his careful reading ; for I cannot discover in my own article the words which he places in quotation marks, nor do I think that many of my statements legitimately bear the interpretation which he gives them. I have no desire, however, to enter upon a controversy touching the etiological researches which abound in English sanitary literature, or the occasional difficulties of diagnosis which all vital statisticians and registrars deplore. My only present object is to clear myself from the totally unwarranted imputation of making a 'thrust at the country physicians.' If Dr. Hamilton will honor me by again referring to my article, he will see that I made the more comprehensive statement that 'very few physicians in this country' have cared to learn the methods of sanitary inspection ; and the context will show him that the fault is imputed to our medical schools, most of which utterly ignore the teaching of hygiene, and graduate family practitioners well qualified, it may be, to treat disease after it has arisen, but without instruction how to detect the insanitary conditions under which their patients may be living."

THE CHAMPIONSHIP OF AMERICA IN TONSIL-CUTTING does not belong to Indiana, says Dr. Tauber, of Cincinnati, O., but to New York. It was stated to me that Dr. Lewis Elsberg, of New York, has excised more than 11,000 tonsils ; this would be, according to Dr. William's calculation, over two and one-half bushels.

TWO CASES OF ABSINTHE POISONING.—Dr. Albert S. Adler, of Lordsburg, N. M., writes : "A few nights ago I was called upon to attend two individuals who had been drinking heavily, and were now in convulsions. Hastening to their place of abode I found that one of the patients, a woman, in an epileptiform convulsion—uncon-

scious, small pupils, and frequent and small pulse. The other was also unconscious, but not then in spasms. All questions in regard to poisoning were altogether refuted by the other inmates of the house. I was about to resort to some stronger means in order to relieve their sufferings, when the young girl, returning suddenly to complete consciousness, claimed that she and her male friend had partaken of over a quart of some alcoholic liqueur, the principal part of which was absinthium. The epileptic convulsions had commenced half an hour prior to my arrival, and, as before stated, lasted in the girl but a short time during my presence; they had been more vehement and frequent in her because she had taken a larger quantity. The man was restored to his senses by slapping his face with wet towels. These cases of epilepsy are of more frequent occurrence than generally supposed. Magnan ('De l'alcoolisme, des divers forms, du delire alcoolique,' etc, Paris, 1874, and 'Annal. Médic. Psych.,' 1874, p. 302), was the first to describe the danger of absinthe drinking. His experiments on animals, as well as observations on man, have demonstrated that it was not the alcohol which brought forth the spasms, but that the absinthium was the source of the vehement symptoms. Alcohol occasions delirium and tremor, absinthium these two and epilepsy in acute alcoholism. Small doses of wormwood given to animals have the effect of producing tremor of the muscular system, dizziness, and in a surprising manner upstarts of individual muscles, in larger doses a complete formed epilepsy. In man, besides the alcoholic delirium, epilepsy is noticed. Among three hundred and seventy-seven persons addicted to the use of alcohol, Magnan found, in 1870, but thirty-one epileptic cases, and in 1871, among two hundred and ninety-one, only fifteen. In France it is regarded by the legal authorities as a poison, and only allowed to be sold in drug-shops. Magnan comes to the conclusion that if epileptic attacks happen in acute alcoholic-poisoning, it was only in absinthe drinkers, and that acute alcoholism without epilepsy, but with tremor of any degree, was but seen in persons partaking freely of wine or whiskey."

A NEW BOARD OF HEALTH has been appointed by the city council of Cincinnati, O. There are six members. Five are saloon-keepers, and the sixth is a so-called doctor, a frequent patron of the saloons, advertises to cure the opium habit, restore lost virility, etc. The Cincinnati *Lancet* is unable to see why so much medical wisdom was injected into the board.

TWO CASES OF ANEURISM EXHIBITING UNUSUAL PHYSICAL SIGNS.—Dr. W. S. Cheesman, of Auburn, N. Y., sends us the following: "While an *interne* in Bellevue Hospital, I had under observation, for some three months, a case whose history was as follows: Patient, a man, aged forty-nine, well muscled, and apparently hearty. Contracted syphilis in 1865. In October, 1878, he strained his back while lifting, but recovered. About three months later he over-indulged in liquor, etc., and pain in the back shooting around the abdomen and down the thigh commenced, and in a day or two he observed a pulsation in the abdomen. All these symptoms persisted. About a year later he detected a swelling behind the episternal notch, which caused pain and dyspnoea. He soon suffered from dizziness, pain in the head, flashes before the eyes, and some difficulty in swallowing. As will be at once supposed, these sets of symptoms had separate causes. Repeated physical examinations made it almost certain that the patient had two aneurisms, one of the lower thoracic or upper abdominal aorta, the other of the innominate, each giving rise to its own physical signs. The aneurism of the trunk imparted an irresistible heaving impulse to the lower part of the left chest, over which area a low, blowing murmur was heard. The aneurism of the neck was palpably evident behind the right sterno-clavicular articulation as a pulsatile tumor, over which a blowing sound was heard loudly. It gave

rise to much inspiratory stridor, a pressure-effect purely, the laryngoscope revealing nothing abnormal to account for it. An occasional cough had the aneurismal note, but the voice was natural. A curious pulsation was occasionally communicated to the larynx and the tongue. Every now and then the thyroid cartilage would rise and fall synchronously with the pulse of the aneurism, and when at these times the patient opened his mouth, the tongue was seen to pulsate backward and forward. How this motion was imparted to these organs was never ascertained. On auscultation of any part of the chest, one could hear a loud ronchus during expiration, which ronchus intermitted, the intermissions corresponding to the cardiac diastole. It was supposed that pressure on the trachea or a bronchus was made by one of the aneurisms, that this pressure was increased by the contraction of the thoracic cavity during expiration, and that the calibre of the air-tube was so much lessened at the acme of the aneurismal expansion, that a momentary ronchus was then produced. The patient improved, and was finally discharged at his own request. He re-entered hospital four months later, remaining a week. The physical signs were unchanged.

"On June 30, 1883, a laborer, aged forty-three, applied to me for relief of a hoarseness of three months' standing. He was nearly aphonic, and there was much dyspnoea. The laryngoscope showed the left vocal chord paralyzed in abduction. The right chord crossing the middle line in attempts at phonation occasionally met its fellow, and sound resulted. Looking down the trachea, there was distinctly apparent, near its bifurcation, a pulsation which narrowed the lumen of the tube, and at the same time moved it somewhat from left to right. Over the upper sternal region a small area of dulness was made out, and here a double blowing murmur could be heard. The heart was displaced downward and to the left. A thrill was felt in the subclavians. The cough was markedly aneurismal. No history of syphilis or strain. Aneurism of the arch compressing the trachea was diagnosed, and a gloomy prognosis given. Both opinions were verified about a month later by the patient's dying suddenly in the night with a tremendous hemorrhage. I regret that in my absence from the city no post-mortem was made. The physical signs which gave these cases their interest, and which I have not hitherto seen described, were: 1st, the pulsation upward of larynx and tongue; 2d, the intermitting ronchus in Case I.; and 3d, the pulsation observed near the bifurcation of the trachea in Case II."

IMPURITIES AND ORGANISMS IN THE AIR OF THE COMPRESSED AIR-CHAMBER.—In a communication addressed to THE RECORD, Dr. Arthur J. Wolff, of 66 Capitol Avenue, Hartford, Conn., late A. A. Surgeon, U. S. A., calls the attention of all who have occasion to use compressed air for the propulsion of various substances into the air-passages, to the danger thereby incurred of forcing disease germs into those organs. He states on the strength of experiments recently conducted by him that: 1. By the use of the compressed air-chamber, as at present constructed, we cannot avoid the access of impure air to the throat and air-passages. 2. The confined air-space affords the most propitious conditions for an enormous increase of the various spores, bacteria, fungi, etc., contained in the air of the room from which the supply is derived. 3. The mere mixture of this air for a short time with any solution that may be used in the spray apparatus, even having the most perfect antiseptic qualities or being in itself eminently a microbicide, is insufficient to sterilize it. 4. The use of this air is in itself, in certain cases, effective in producing an increase of the throat trouble. The author demonstrated the existence in the air-chamber of carbonic acid and chlorine in large quantities, when the air from a room in which these gases had been liberated was pumped into the receiver. The presence of micro-organisms was deter-

mined by the following experiment: Having brought the pressure in the condenser to indicate thirty-five pounds, he slowly passed the air through a series of three bottles, the sides and bottoms of which were smeared with glycerine. The glycerine being then removed and placed under the microscope, the presence was discovered of a great number of spores of cryptogams, bacilli, bacteria, micrococci, pollen of certain plants, indeterminate masses, and mineral particles. He discovered one variety of microbe in particular, about $\frac{1}{65000}$ th of an inch in length, which resembled the bacillus tuberculosis very closely in appearance and in the peculiarity of staining. The author proposes in subsequent experiments, by isolation and cultivation according to Koch's method, to determine the question of the identity of this bacillus with that which the modern theory recognizes as the cause of tuberculosis. He showed by further tests that the air was not purified by passing through the supply tube containing various antiseptic solutions, such as iodine, mercuric chloride, zinc chloride, quinine, etc. Dr. Wolff concludes with a description of the method employed by him to sterilize the air before it passes into the condenser. He passes it through a series of U-tubes filled with fine iron wire heated to redness. It is subsequently conducted through a bulb, loosely packed with absorbent cotton saturated with a solution of corrosive sublimate (1-500), and is then ready for use. The large measure of success which he has met with in the treatment of diseases of the respiratory organs he attributes in great part to the precautions taken to force only purified air into the air-passages. It is his desire to present these facts to the profession in order that they may receive thoughtful consideration, and that others may be led to adopt greater precautions to guard their patients from the probable dangers of the compressed air apparatus.

THE AMERICAN MEDICAL COLLEGE ASSOCIATION.—The *Southern Practitioner* reports the death at Nashville, Tenn., on the 20th ult., of the American Medical College Association. It announces the cause of death as "The Bellevue Stab." This reference is, evidently, to the famous advance and precipitate retreat of Bellevue Hospital Medical College, a couple of years ago, on the question of an advanced standard of medical education. Bellevue was loud in her demands for a higher standard, and in the fulness of time went up to possess the land. But she soon discovered that she had been too previous, as it were. She is of "the-old-flag-and-an-appropriation" style of patriot, and was loud for advance as long as the cry seemed popular and was likely to draw students. When, however, the students refused to follow, she quickly sounded the retreat, and thus, as our contemporary intimates, gave the death-blow to the movement to improve medical education in this country. But it is cruel to open these old sores, and more especially at this time, when Bellevue is so faithful to the Code of Ethics. Her new announcement flies the ethical colors on her mast. How long, in the light of past experience, will they thus ostentatiously fly? The size of her next year's class may have an effect in determining the answer to this question.—*Medical Age*.

LONGEVITY IN THE DIFFERENT STATES.—A student of the reports of the tenth census has compiled a table for the Boston *Commonwealth* for the purpose of showing in what State or States one has the best chance for a long life. New Hampshire seems to him to be the favorite refuge of green old age, for he finds that one-seventy-fourth of the inhabitants are at least eighty years old. The proportion among native white males is 1 in 80, but the environment in New Hampshire seems to have been even more favorable to the preservation of life in the other sex, for the proportion among native white females is 1 in 58. Other New England States do not contain quite so many old persons, the average proportion for the six being 1 in 134. Coming to New York, he finds that

for one person who has reached the age of eighty there are 161 who have not been so fortunate, and in the three Middle States the average proportion is 1 in 182. As he goes southward he discovers a greater preponderance of young blood, for in six South Atlantic States the average proportion is 1 in 203. The Gulf States afford a less attractive shelter for the aged, for the average is 1 in 300. In Texas, where so many worthy persons die with their boots on in the prime of life, only one octogenarian can be found in a group of 497 citizens. The average rises again in the interior States east of the Mississippi, but in the great lake States it falls to 1 in 263, a good old age being attained with the greatest difficulty in the wealthy and prosperous State of Illinois. In seven States west of the Mississippi River the aged rarely appear, for the average proportion is 1 in 453. In Iowa a crop of 334 persons yields only one who has reached the age of four-score; in Minnesota, Nebraska, and Kansas only one of these aged citizens can be found in a group that would yield two in Iowa, and in Colorado 1,150 inhabitants must pass in review before an octogenarian comes in sight. The old are even more rare in Nevada, but in California and Oregon the proportion is nearly 1 in 500. If the inhabitants of the whole country could be assembled in two hundred and twenty-seven groups, it would be possible to place at the head of each group one patriarch of eighty or more years. So our student, assuming that long life is the inalienable right of those who reside in New Hampshire, Vermont, and Maine, cries: "Flee to the mountains of New England for health and longevity!"

ITALIAN ENGLISH.—The proprietor of the Hotel de Bellevue at Pompeii, as a means of attracting English custom to his house, has issued an advertisement couched in the following extraordinary terms: "That hotel open since a few days is renowned for cleanness of apartments and linen, for exactness of service and for excellence of the true French cookery. Being situated at proximity with regeneration, it will be propitious to receive families whatever which shall desire to reside alternately into this town to visit the monuments newly found and to breathe thither the salubrity of the air. The establishment will avail to all the travellers visitors of that sepulchral city and to the visitors (willing to draw antiquities) a great disorder and expensive contour of the Iron-whay. People will find equally thither complete assortment of strange wines, and of the kingdom, hotel and cold baths, stables, and coach-houses, the whole with very moderate prices. Now all the application and endeavors of the host will tend always to correspond to the taste and desires of their customers, which will acquire without doubt to him into that town the reputation whom he is ambitious."—*The Caterer*, London.

TO DISINFECT WATER FOR HYPODERMIC USE.—A sure but, so far as we are aware, little practised method for disinfecting water for hypodermic use is to boil it. It is not sufficient that the water be boiled when the hypodermic solution is made for the case bottle; it should be boiled on the spot. The requisite amount is put into a teaspoon, a lighted match is held under it, and the fluid injected while warm. If the practitioner prefers, as many do, to make the solution p.r.n., the required amount of the drug or a pellet may be placed in the spoon, reduced to a powder—better still placed in the water and reduced—and the heat applied, the increased temperature favoring the solution. In this manner bisulphate of quinine may be used without any acidulous accessory, and without the unpleasant effects so often seen after hypodermics of quinine.

OIL OF WINTERGREEN (salicylate of methyl) diluted with an equal quantity of olive oil or soap liniment, applied externally to the joints affected by acute rheumatism, gives prompt relief, and, from its pleasant odor, is very agreeable to use.—*The Quarterly Therapeutic Review*.

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THE RECOGNITION OF CEREBRAL COMPLICATION IN AURAL AFFECTIONS, BY MEANS OF THE OPHTHALMOSCOPE.¹

By J. A. ANDREWS, M.D.,

NEW YORK.

CASE I.—*Otitis media purulenta chronica; abscess of middle lobe of cerebrum; death.*—G. J.—, house painter, aged twenty-four, had scarlet fever when twelve years old, since which time he has had more or less purulent discharge from his ears. While descending a ladder, December 18, 1878, pain developed suddenly in his right ear and corresponding side of the head. On reaching home, he went to bed; during the night he vomited; he thought it was an attack of fever and ague. Next morning he was dizzy and vomited. Took gr. xv. of quinine in the morning; at noon he felt worse and sent for his physician, who prescribed Kalium brom. for the head symptoms, and ox. cerium for the vomiting; in the evening of the same day the doctor's attention was attracted to the patient's ears, because of pain referred to depth of right ear. Temperature, 103° ; pulse, 100; resp., 30 per minute. I saw patient three days subsequently: he was conscious and talked intelligently. H. D. R. E., watch ad concham; acumeter, 1"; L. E., watch ad concham; acumeter, 4"; quite deaf for conversation. R. E., slight purulent discharge; drum membrane has a small perforation in its antero-inferior part; calibre of external auditory canal much lessened in consequence of swelling of its lining tissues. L. E., no discharge; no evidence of active disease in this ear. *Double optic neuritis.* R. E., counts fingers at six feet; L. E. V., $\frac{2}{3}$ %. December 24th, saw patient at 9 P.M.; two hours previous to my visit his condition had assumed a marked change; the pain in the right side of the head was intense; he vomited; temperature, 101° ; pulse, 110 and very feeble; he was drowsy, and passed his urine involuntarily; easily roused from drowsy state, when he conversed rationally. December 25th, 2 P.M., patient died in coma. No paralysis, no convulsions.

Autopsy.—Right external auditory canal filled with healthy-looking pus. Extending from the tympanic portion of the Gasserian fissure outward into the external auditory canal for four mm. but not involving the ossicles, the bone was ulcerated. The communication with the brain was made at the point of ulceration just referred to, this being effected through a small fissure in the centre of the ulcerated bone. The dura mater overlying the ulcerated bone was also ulcerated and separated from the bone by offensive-smelling pus; pia mater congested and numerous ecchymotic foci; the middle and anterior fossæ contained pus; brain normal in consistence. Encysted abscess in middle lobe of cerebrum; brain surrounding abscess cedematous; sinuses and internal ear normal. These conditions refer to the right side of the brain. The left temporal bone was not dissected, but there were no changes in the meninges overlying the temporal bone on this side.

Patient's mother informed me that two years after the scarlet fever he took cold in his ear and suffered a great deal with his head. He had headache at times for

several years. Inasmuch as the abscess was encapsuled, and death occurred a few days after the development of cerebral symptoms, we may justly refer the interval of ten years between the attack referred to by his mother and December 18, 1878, as the period of latency.

The above case is an exception to the law which Toynbee endeavored to establish, *i.e.*, that each of the centres of the ear had its peculiar division of encephalon to which it communicated disease: inflammation of the meatus audi. ext. extending to the lateral sinus and cerebellum.

CASE II.—*Otitis media purulenta chronica; optic neuritis; phlebitis sinus lateralis dextra; meningitis of convexity; death.*—P. H.—, aged forty-two, clerk, had had purulent discharge from both ears for eight years, which had never been treated. Three years ago there appears to have been an acute exacerbation and he was treated for inflammation of the brain, but the ears received no attention. Since this attack, patient states that he has enjoyed good health, but, on close questioning, I elicited the fact that for some time after the acute exacerbation referred to, he had headache, which was generally so slight that he did not think it was "significant." July 5, 1879, I was requested to see him. He had been confined to the house for two weeks, during which time he had been very irritable, and had severe pains in the head; the headache was diffused, and at times referred to the right side of the head. There had been no paralysis, nor convulsions, but he vomited during first week of his present trouble. For the first two days he had illusions and delirium; temperature had not been above 100.5° F. On occasion of my first visit I found patient suffering with severe diffuse pain in the head; purulent discharge from right ear; discharge very offensive; removal of the discharge revealed bottom of the canal filled with granulation tissue; right optic neuritis; left disk hazy, veins large and dark-colored, but not tortuous. R. V. = $\frac{2}{3}$ %; L. V. = $\frac{2}{3}$ %. Intensely sensitive induration extending in course of right internal jugular vein.

July 6th.—Swelling of the neck very marked; face puffy. Right processus mastoideus not sensitive to the touch, but patient was rendered dizzy and confused by a light tap on this part. Chills four times during day.

July 7th.—The right mastoid was entered, no pus found, but there was a sharp hemorrhage which stopped spontaneously. He expressed himself as relieved by the operation and slept for three consecutive hours after it.

July 8th.—Puffiness of the face much diminished; temperature at 9 A.M., 101.3° F.; pulse, 95; respiration, 20 per minute. 2 P.M.: temperature, 103° F.; pulse, 95; respiration, 26 per minute. 9 P.M.: temperature, 104.2° F.; pulse, 110; respiration, 32 per minute.

July 9th.—Suddenly he became unconscious, and death occurred in coma. No convulsions.

Autopsy.—All the sinuses contained some fluid blood; right superior petrosal and lateral sinuses contained red coagula, loose in superior petrosal but adherent in lateral sinus. The venous wall of lateral sinus on right side is thickened, its surface brown in color and the bony wall separating the sinus from the mastoid cells is ulcerated at three different points at which offensive smelling pus was seen between venous and perforated osseous wall. Right internal jugular vein contained a disintegrated thrombus. The tegmen tympani was very thick. The dura mater covering tegmen tympani and the adjacent portion of bone on right side was deeply congested, and

¹ Read before the American Otological Society, July 17, 1883.*

numerous small red points (hemorrhages) were seen. This condition was confined to the parts just mentioned and was not evident in any other part of the dura mater. Subarachnoid space and meshes of pia mater covering convexity of cerebral hemispheres and upper surface of cerebellum contains a moderate amount of sero-purulent exudation; the exudation extended down sides of brain and most abundant on right side, but at the base of the brain it was less abundant. The mucous membrane of tympanic cavity was swollen, tumefaction extending into the mastoid cells.

CASE III.—*Otitis media purulenta chronica; meningitis, optic neuritis; recovery.*—J. E.—, aged nineteen, has had purulent discharge from left ear for eighteen months. Short and stout in stature, strumous scars on face directly in front of left ear, also on neck of corresponding side. Right ear has never discharged. He had never been under treatment for his ear trouble. The discharge from the ear has been profuse until about a week ago, since which time it has been scanty. I saw the patient November 16, 1880, six days after the development of threatening symptoms. The left ear contains a large polypus springing from the superior surface of the external auditory canal, at about the junction of its cartilaginous and bony portions. Removal of the polypus, which was very vascular and had a broad attachment, showed the bone beneath to be exposed and rough. There were also two polyps springing from the tympanic cavity; these had such a slender pedicle that they came away while the snare was being applied. Their removal revealed pulsation at the bottom of the canal, and after repeated efforts with the catheter pus was blown through the perforation in the membrana corresponding to the point where the pulsation was noted, but, owing to the swelling of the canal, the perforation could not be seen.

Pharynx very much congested, and secreting thick mucus. Left membrana tympani was incised, considerable pus coming away, much more than was expected from the appearance of the drum membrane, which did not appear bulged forward in any part that was visible. Mastoid process red and painful. Severe headache; the pain was general, but at times it was most severe on left side of head and in forehead. Temperature 101° F.; pulse, 85 per minute. He was very restless; he vomited half an hour before I visited him. He complained of not seeing a certain picture on the wall. Left eye, marked optic neuritis; right eye, retinal veins enlarged but not tortuous, disk very red but not cedematous; no other change in fundus.

An incision over left mastoid showed the bone to be inflamed but firm. No improvement followed this operation, and thirty-six hours subsequently the mastoid was bored into; a small amount of blood, with a trace of pus, escaped from the opening. The cortical plate of the mastoid was very thick. A warm solution of kalium permanganatis injected into the external auditory meatus readily escaped through the opening in the mastoid, which passage I kept free by means of a drainage-tube. There could be no doubt in regard to the immediate result of the operation. He recovered from the influence of the ether rapidly, and in half an hour afterward fell into a quiet sleep which lasted for nearly four hours. On awakening there was less headache, and patient asked for some warm milk, of which he partook with relish.

November 18th.—Patient passed a quiet night; his sleep was interrupted, but he did not suffer from pain in the head. Temperature, 100° F.; pulse, 80 per minute. There is a free discharge from mastoid. I did not examine patient's eyes the morning following the opening of the mastoid, but I did so on the morning of the fourth day after the operation. The left disk was less cedematous and the veins less full and not so dark looking, but the improvement was not striking.

December 6th.—Patient has been steadily improving; there is only occasional headache, and then very slight. There is a marked change in the appearance of the left

optic disk; it is only slightly obscured, but the retinal veins are still fuller than normal. The right disk is now swollen and the veins are large and tortuous.

Patient passed from my care in February, 1881, about two months and a half after the beginning of the trouble. The left optic disk was then hyperæmic, the veins much less in size than when seen two weeks previously; the opening in the mastoid was closed. There was still a slight discharge from the ear. Right nerve is still somewhat obscured, but its improvement is very manifest. The patient was absent from New York until May 2d. I saw him on the 4th; the discharge had ceased since March. The left optic disk appears normal (?), the right disk is slightly hyperæmic. R. E. V. = $\frac{2}{3}$; no improvement with glasses; L. E. V. = $\frac{2}{3}$; right visual field normal; left visual field slightly contracted.

I have intentionally omitted many of the details of this case, and record only what I considered the essential features. The diagnosis of cerebral complication was believed to be confirmed by the ophthalmoscopic examination. I saw the patient for the last time in December, 1881. At that time there was, I thought, no abnormal change in either fundus, but the visual field of the left eye, therefore, on the same side as the ear affected, was slightly contracted.

CASE IV.—*Otitis media purulenta chronica; abscess of the brain; death.*—In the early part of the summer of 1879, Mrs. K.—, aged thirty-one, consulted me on account of distressing subjective noises in her right ear, and difficulty of hearing. At the bottom of the right external auditory canal were two medium-sized polypi; immediately in front of these growths the posterior and superior surfaces of the canal were ulcerated for a considerable extent outward. The left drum membrane presented the appearance of having been the seat of a perforation. She stated that she had had a purulent discharge from the right ear for about thirteen years; there had been a discharge from the left ear, but this had ceased spontaneously after a few weeks' duration. She suffered pain at times in the right ear. I advised the removal of the polypi; but when she was told that the discharge from the ear would not stop so long as the growths were allowed to remain, she seemed rather agreeably surprised, and said: "Why I have always been told that it was not right to stop a running ear." She further told me that during the past winter she had lost her young son, then living in New Jersey, who was said to have died of inflammation of the brain. I asked if he had had any ear trouble, and she replied, "Only a running." This had followed scarlet fever and had, at the time of his death, existed nearly two years. "But," she said, "I was advised to let it alone." In regard to her son's condition just before death, I elicited the following: "The boy complained of pain in his head [ear?] for several weeks before his death; he was unconscious for three days before he died; a blister was applied behind his ear, but this part [mastoid?] was so sore that poultices were ordered." This case seems plainly to have been one of middle-ear disease, terminating fatally from extension to the brain.

Mrs. K.— consented to the removal of the polypi, and this was followed by quite active inflammatory reaction, which, however, was promptly subdued by local depletion, etc. There were no visible changes in the optic nerve. After eight days' treatment she went to Chicago; I therefore lost sight of her until soon after her return, in November, 1879.

December 2d I was requested to see her. On her way from Chicago, three weeks before, she took a severe cold; she had had almost constant pain in the head for upward of two months, especially severe for the past five days, and was referred to the right side of the head. Facial paralysis had occurred on the right side, and there was vertigo. I found her suffering violent pain in the right side of the head and at the depth of the right external auditory canal; offensive purulent discharge es-

caped from the right ear. Vomiting; temperature, 102.8° F.; pulse, 95. Mastoid not tender on pressure, nor does percussion cause vertigo or pain. There is beautifully developed neuro-retinitis in right eye; no changes in left eye; counts fingers at about ten feet with right eye.

5th.—Patient is delirious.

7th.—Patient comatose; no convulsions. She died after having lain in coma for six hours.

Autopsy.—Corresponding to the point of ulceration in the external auditory canal, referred to above, a sinus was found extending into the antrum mastoideum. The roof of this cavity was destroyed by caries; pus to the amount of half a fluid ounce lay upon the carious bone. The dura mater overlying this collection of pus was very much thickened, but not perforated. In the right hemisphere of the brain a large abscess was found, filled with greenish thick pus; the surrounding brain substance was oedematous, but not disorganized; the abscess was encapsuled, but had ruptured into the brain, in all probability only a short time before death. The sinuses contained dark-colored blood, but no clots. The right lateral sinus was unchanged.

The foregoing cases have been presented, not because they exhibit any remarkable or unusual features that have not already received notice in literature, but they are offered more with the intention of eliciting discussion on a subject bearing upon which the writer does not find much satisfactory data in literature.

The cases of cerebral abscess tabulated by Gull, Rudolph Meyer, Wreden, Lebert, and others, furnish no facts which enable us to judge of the frequency or actual presence of signs of intra-cranial disease by the appearance of the fundus oculi. In the majority of instances in which reported cases of cerebral diseases, secondary to an aural affection, appear in literature, the eye is merely incidentally alluded to, *i.e.*, the state of the pupils, the presence of photophobia, or the condition of the sight. In many instances the question of an intra-ocular lesion was dismissed with the observation that the vision was $\frac{2}{3}$. The writer believes that most ophthalmologists will endorse the statement that optic neuritis and central vision $\frac{2}{3}$ are not incompatible. I have seen such cases, and I have now under my notice the case of a physician with advanced atrophy of the optic nerve, and central vision $\frac{2}{3}$, but whose visual field is very much contracted. Then again, when the ophthalmoscope has been used, the record reads: "One or both optic disks appeared obscured and the vessels enlarged." Now the writer believes that it is just such cases that should excite our suspicion of an intra-cranial complication in ear disease—especially purulent otitis media—in which other signs of extension of the trouble to the brain are obscure.

To what extent, in the cases under consideration, an oedema of the optic disk should influence our mode of treatment in regard to an operation upon the mastoid is, in the absence of sufficient evidence, necessarily an open question; but from a careful study of cases in which the mastoid has been opened, the operation does not appear to be a dangerous one when intelligently performed; and the writer would, without waiting for pronounced neuritis, accept the condition of the oedema of the optic disk in the cases under discussion as an indication for opening the mastoid; and if not with the expectation of liberating pus, at least to establish free drainage from the middle ear. The procedure is certainly consistent with a good surgical principle and is not likely to add to the pre-existing mischief.

Not until quite recently has attention been directed to the importance of examining the fundus oculi in aural affections. Allbutt, Kipp, Knapp, and Zaufal are the pioneers in this valuable work of furnishing evidence of the importance of an ophthalmoscopic examination in the class of cases under consideration. Allbutt¹ and Kipp²

have each reported two cases of otitis media purulenta with optic neuritis, in which recovery took place, and Zaufal³ has also recently recorded a case of a student, sixteen years of age, with purulent otitis media, and optic neuritis, which latter condition was observed to rapidly recede after trepanation of the mastoid, and the patient made a good recovery.

Acute otitis media does not commonly prove fatal; the pain in and about the ear often being so intense as to almost completely obscure the symptoms of any brain complication which may exist. The patient generally recovers from the acute symptoms, and there may remain impaired hearing and a purulent discharge from the ear, which latter may continue, if not treated, for weeks and months, and even years, when an acute exacerbation occurs, and the patient dies with the post-mortem evidence of abscess of the brain; the abscess, in many instances, having been formed at the time of the first attack of ear trouble, some years previously. This was evidently the fact in Case I., cited above; however, this is not an isolated case. Otological literature abounds with records of cases of cerebral abscess, which exhibited a long period of latency. In acute abscess there is, as a rule, little or no period of latency, and the disease ends fatally in a few days, the abscess in such cases not being encapsuled. Meyer⁴ states that the earliest appearance of a capsule is at six or seven weeks, and Huguenin demonstrated distinct evidence of the capsule not earlier than twelve weeks. The chronic abscess is characterized by a prolonged period of latency, which intervenes between the early congestive stage and that of the development of the purulent formation. Often the latency is interrupted by a slight degree of headache, which symptom obtained in Case I., and is often confounded with digestive disorders, and escapes scrutiny on that account. The duration of the latency varies from a few weeks to several months.

As far as I have been able to ascertain, the longest attested duration of brain abscess is that case observed by Härlin,⁵ in which the traumatism occurred twenty-six years before death. In another case, reported by E. Schott,⁶ abscess of the brain followed an injury sustained twenty-one years before. In the first case cited in this paper the abscess had, in all probability, existed ten years. The period of latency once being disturbed, the end of the disease is soon reached. Headache was the initial symptom in two-thirds of Meyer's cases of abscess of the brain, therefore somewhat more frequent than in brain tumors, where, according to Ladame,⁷ it ushered in the phenomena of the disease in one-third of the cases.

The intensity of the headache varies greatly: in one case it is almost unnoticeable, in others it excites excessive complaint by the patient. Generally it increases with the duration of the disease, and is more continuous and occurs less in paroxysms than the headache of brain-tumors. The headache is sometimes accompanied with fever, but this is very often absent, even in the terminal stage. A case reported by R. Deutschmann, in a recent number of Graefe's *Arch. für Oph.* (Bd. xix., Abth. i., 1883, p. 292), is a striking illustration of this fact. The case was one of abscess of cerebrum with choked disk; meningitis basilaris and perineuritis, also neuritis interstitialis optica, but at no time elevation of temperature. We find vertigo, and less frequently vomiting, and seldom convulsions or paralysis. It is a significant fact in connection with cerebral localization, that *the principal seat of abscess of the brain, secondary to ear disease, is in the medullary substance, seldom in the cortex*; which fact may account for the absence of certain nervous phenomena in these cases.

In regard to the clinical phenomena of *thrombosis of*

¹ Wiener Med. Presse, 1881, No. 46, p. 1452.

² Zur Pathologie des Hirnabscesses, Inaug. Diss. Zürich.

³ Quoted by Bruns, Handbuch der Chirurgie.

⁴ Ueber Gehirnabscess. Würzburger med. Zeitschr., ii., p. 462.

⁵ Symptomatologie und Diagnostik der Hirngeschwülste, Meyer, op. cit.

¹ Thomas C. Allbutt: On the Use of the Ophthalmoscope in Disease of the Nervous System and of the Kidneys, etc., pp. 322, 323, 324.
² Archives of Ophthalmology, vol. viii., pp. 75 and 148.

the *transverse sinus*, the symptoms of a painful oedema over the mastoid of the affected side, to which attention was first directed by Griesinger, is of diagnostic value. Schwartze (*Arch. für Ohrenheilkunde*, vi., p. 219) considers this symptom unreliable, but Wreden confirms the oedematous swelling in the region mentioned as a symptom of phlebitis of the lateral sinus, and the cases reported by Rammell, Kolb, Taylor, Moos, J. Orne Green, and others, support Griesinger's view. However, this symptom is not a constant one.

Phlebitis of the cavernous sinus declares itself by a congestion of the vein which empties into it, the ophthalmic, and its branches. As the result of this congestion there is oedema of the eyelid, conjunctiva, forehead, and nasal mucous membrane, entoptic phenomena, and diminution of sight (Wreden¹). These symptoms may, in the beginning of the disease, exist on one side only, but this will only be for a short time, since the disease soon spreads to the corresponding sinus of the opposite side. Congestive papilla alone would not necessarily furnish us with positive evidence of the *locality* of the obstruction since Sesemann² has shown that the superior and inferior ophthalmic veins do not empty the largest quantity of their blood into the cavernous sinus, but into the facial veins; therefore, when symptoms of obstruction show themselves, viz., oedema of the eyelids, fulness of the frontal veins, and exophthalmus, they are to be explained, not by a simple thrombosis of the sinus cavernosus, but by the presence of thrombi at the same time in the ophthalmic and facial vein.

The internal carotid artery, surrounded by the sympathetic plexus, and the sixth nerve, pass through the cavernous sinus, and the third and fourth nerves and the ophthalmic division of the trigeminus are found on its outer wall. We can, therefore, readily anticipate the local phenomena which would be developed in consequence of pressure of the inflamed sinus upon these nerves.

An inflammation of the *cavernous sinus*, is, in the majority of instances, accompanied by meningitis, and writers have heretofore attributed the phenomena of an affection of the oculo-motorius to meningitis; but Wreden describes two cases of phlebitis of the cavernous sinus (l. c., cases 9 and 10, pp. 95-96), which, notwithstanding the absence of meningitis, showed familiar signs of irritation and paresis in the areas of the oculo-motorius and other cerebral nerves. Symptoms of disease in the region of distribution of the trigeminus, occurring in phlebitis of the cavernous sinus, declare themselves most frequently in irritation and paresis of the ophthalmic branch; the second and third division of this nerve show these symptoms only exceptionally. Irritation of the ophthalmic branch gives rise to one-sided headache, sometimes sharply circumscribed, its greatest intensity being in the *forehead* and over the eyes.

Wreden's cases seem to invalidate Griesinger's (*Arch. d. Heilkunde*, iii., p. 446) declaration that the headache is due not to the affection of the sinus, but to the concomitant meningitis. Fixed, one-sided, circumscribed headache is, consequently, of differential diagnostic value in an affection of the cavernous sinus, because it proves irritation of a single branch of the trigeminus; while *diffuse* pain, spread out over the whole half of the head, speaks more in favor of the coexistence of meningitis of the median cranial fossa, whereby the second branch of the trigeminus (before its passage through the foramen ovale), or even the Gasserian ganglion, is involved.

Phlebitis of the *superior longitudinal sinus* is characterized by repeated and violent hemorrhage from the nose, which Wreden considers very significant when accompanied by epileptiform convulsions. This latter symptom is referred to capillary hemorrhage in the corti-

cal substance of the posterior cerebral lobes, produced by obstruction to the venous circulation of the surface of the brain (Wreden).

Phlebitis of the *superior petrosal sinus*, although producing no very characteristic symptoms, would give rise to great congestion in the labyrinth of the ear, with subjective noises and deafness, which is explained by the fact that the veins of the labyrinth terminate in this sinus.

In phlebitis there is almost always a marked febrile movement, and pyæmic symptoms are the rule in this condition. In Case II., cited above, chills were frequently repeated, and the temperature rose rapidly and with very slight remission. In Wreden's case of phlebitis of the cavernous sinus the initial stage was very short. On the first day the temperature rose and without remission to a morning temperature of 102.2° F., and gained in a few hours the maximum of 103.82° F. Such a sudden rise of temperature to a height of 39°-40° C., and more immediately on the first day. Wreden considers particularly characteristic of the beginning of the fever of an encephalic complication in purulent ear affections. Another valuable point in the differential diagnosis of the initial period of the fever, of encephalic complication, in inflammation of the ear, is that it rarely begins with a chill, even when, as Wreden observed in one case, the temperature was 104.18° F.; whereas in the fever of phlebitis of the cerebral sinuses and meningitis diffusa, usually the reverse is the case.

It is of importance that all cases of ear disease with suspicious but obscure symptoms of a cerebral complication should receive a careful ophthalmoscopic examination, and efforts be made to determine its value as an aid to diagnosis in the disease under consideration, and also to ascertain to what extent it should influence the treatment of the ear affection.

In Case III. (the writer's), the cerebral lesion was on the left side; the left eye was the first to become affected, and the first to recover (in the sense that there was no visible change in the optic disk or fundus oculi) and yet its sight alone was impaired. Mr. Nettleship has recently alluded to two cases (they are not reported in full), in one of which a tumor in the posterior inferior part of the right anterior lobe occasioned severe pain, chiefly on the right side of the face and head, with simultaneous double papillitis, and early extreme defect of sight in the right eye, but no failure of vision in the left eye till a year later. In the other case, the only lesion was softening of the under surface of the left frontal lobe, with atrophy of the left nerve. There was rapid blindness of the left eye without changes, and papillitis of the right without failure of sight. The left disk slowly became atrophied, the right recovered.

From the few accumulated facts it appears that the sight is most affected on the side of the lesion; and that papillitis with other symptoms of brain involvement is valuable corroborative evidence, and we also have some proof in the few cases of recovery, after neuro-retinitis and other signs of brain disease secondary to an ear affection, that the optic disk is, so to speak, a sort of indicator for the condition of the brain. But in the present state of the vexed question of the cause of the papillitis, it cannot be said that it tells us much of the locality of the cerebral lesion. Von Graefe's view of venous stasis and the theory of vaso-motor disturbance, are not supported by post-mortem evidence. Prof. T. Leber has more recently advanced a plausible view that the essential part of the transmission is taken by effusion of fluid into the sheath of the nerve, which did not act by simple mechanical pressure, since its quantity was often small, but by its phlogogenic properties. Leber, therefore, explains the origin of papillo-retinitis in cerebral diseases by assuming that the intra-cranial inflammation produces serous effusion which passes into the optic nerve-sheath, and excites irritating action on the papillæ and neighboring parts of the eye.

¹ St. Peter-burg Med. Zeitschrift, xiii.

² Paul Sesemann: Die Orbitalvenen des Menschen und ihr Zusammenhang mit den oberflächlichen Venen des Kopfes, *Arch. f. Anat. u. Physiol. u. wissenschaftl. Med.*, 1877, p. 137.

THE TREATMENT OF SCIENCE BY THE MILITARY METHOD.

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THE above heading looks professional, does it not? As if science were to be treated by some approved method, like any other disease. But that is not exactly what I mean. Science is far more capable of treating a military method as it deserves than is any military method likely to turn physician for the benefit of science. The military method of treating science is the method adopted by dunces the world over in trying to investigate what they do not understand, and cannot be made to comprehend. It commends itself by its simplicity, energy, and efficiency. It consists in taking the man who shows symptoms of being scientific out and hanging him in a red tape halter; if he kicks against being strangled it knocks him in the head with an official club, and says: "What a brave boy am I!" And all the rest of the dunces applaud the lynching. I do not see anything else to recommend the method. I never heard of any one who was cured of his science in this way. It is too heroic treatment—not a reasonable "kill or cure" method. It is all kill and no cure. It is what the literary dunces applied to Keats when they tried to cure him of his poetry. The universal mother took her poor child back to her kindly arms, and kissed away his tears. Tragedy like this is rare indeed—rare as are "these glorious sports of nature," as Huxley styles them, who make such tragedy possible. But the principle—the plan and method of treatment—is always one and the same, here, there, and everywhere; it is to-day, was yesterday, will be to-morrow, in civil as in military orders, applied alike to science, art, and letters. Applied to quivering flesh and shuddering spirit by that thing which has neither body to kick nor soul to damn—I mean the Confederacy of Dunces. It is simple, energetic, and effective, as I have said; but this kind of heroic treatment is open to serious objection. For it is the heroism of the Dunce. And what a brave boy he is, to be sure!

I cannot imagine how the preceding paragraph ran off my pen. I did not mean to speak of dunces—I never knew one who was not abundantly able to speak for himself, and the sound of his voice is familiar, if not musical. My idea was to say something about the relations between scientific and military affairs; about the position which I think the Army and Navy ought to take regarding scientists who are in military service; and especially about that curiosity known in the medical corps of the Army and Navy as a "second examination," or "examination for promotion." What I have to say is mainly prompted by Captain R. W. Shufeldt's article, entitled "The United States Medical Service," in a recent number of *THE RECORD*. I hope Dr. Shufeldt will follow up the subject. I like his way of putting it. He has a good sound case, and his vein will bear working. Granted, with Professor Huxley, that examination, thorough and searching, is an indispensable accompaniment of teaching, it does not follow that examination which has nothing to do with teaching is indispensable. In the latter case, it seems to me not even a necessary evil, but simply a nuisance, and no nuisance can ever be necessary. This second examination in the Army or Navy, of course, does not profess to *teach* anything. Does it learn anything, or discover anything? If an officer "skins through" by hook and by crook, is he not just as well off as one who sails through by luck, pluck, and force of circumstances? His position in the Army is not affected appreciably. He goes back to duty, and nothing has been lost or gained. If he is plucked, he goes back just the same, and makes it his duty to cram and come up again. He crams, comes up, passes, and knows no more or less than he did before, and is no better or worse doctor. To cram knowledge is not to know; crammed knowledge is invariably disgorged as

soon as the crisis is over, not digested and assimilated, and made a living power, as all real knowledge is. The man's consuming power, not his productive power; his capacity for containing, not for retaining; his mental endurance, not his mental armament—these are what have been tested. And this is the very test that some of the best men should not be obliged to endure, for they are the very ones least fitted to undergo such an ordeal. The man of mediocrity stands a better chance than they do, and generally passes a better examination.

The thing doesn't hurt the one as it hurts the other; and there are men—few, it is true, but there are men—whom to hurt seriously is to kill; whom to wound in spirit is to destroy. And *that* man is just the one who is worth the rest of the regiment. He is the one who lacks the heroism of the dunce. He is the one who demonstrates the military method of treatment, where scientific treatment should have been given instead, by turning the drama of examination into a tragedy. The possibility of such a grave contingency as this is enough to condemn the whole system.

The second examination has its merits, as "a sieve to catch the bad rats." I am satisfied that this is its principal merit, and its only recommendation. This raises the question, however, whether rat-catching is a dignified or desirable occupation for any army officer, under whatever name and style it may be pursued. To call it and treat it as a medical examination strikes me as the military method in full bloom—one of the most military methods that could be devised. The military method is the method of brute force, in its most brutal and forcible exhibition. It is applicable to insurrections, and rebellions, and revolutions of nations, but it does not apply to rat-catching. Nobody ever caught a rat by brute force—not even a rat-terrier could do that. He is instinctively strategic; and his instinctive strategy is simply the scientific treatment of the case. The military method is in order after the rat is caught—not before. A rat, and especially a bad rat, is apt to be an old gray rat, whose science is quite equal to any test that can be devised by an examining board. In this case it is ten to one on the bad rat, as against the man I described in the last paragraph.

Since the examination proves futile in the rat's case, and dubious or even dangerous in the man's case, let us see if it is not also entirely superfluous in any case. The military idea is, that the examination determines an officer's fitness for the position he holds, and for promotion to a higher position in due course. But that is absurd. It does nothing of the sort. It simply demonstrates an officer's fitness to pass an examination—absolutely nothing more. His fitness for his position, or his unfitness, is perfectly well known before. He has been in the service at least five years, perhaps ten or fifteen. He has been busy telling people whether or not he is fit for his position every day of his life during that period. He has built and furnished his house, for better or worse, and hundreds of his brother officers know it perfectly well when they see it. So do a thousand soldiers. In short, he has made his reputation, whatever it is. It is all abroad; it is in the air—pshaw! there is not a clerk in the surgeon-general's office but knows well enough how that officer "stands." Individually, of course, no clerk, no soldier, no line-officer, is as good a judge of the man's fitness for the position as any one of his medical examiners. Collectively, however, judgments of the rank and file is absolutely conclusive; nothing that he can say to his examiners, nothing that he fails to tell them, nothing that they can tell the surgeon-general, alters the case one iota. How should it, indeed? How should a conversation held for an hour or two with his examiners, when he is probably under strain and stress of mind, and of all hours in his career the least likely to appear himself, bear upon that silent, stealthy, steady inquisition he has endured for years? The latter is the examination that tells the true story; if his thousand and

one examiners consider him fit, he *is* fit, and there is the end of it—or ought to be. And if, after all that, the Board says he is unfit, why, the Board is doubtless mistaken—that is all.

Depend upon it no Board is going to find out anything about a candidate that everybody did not know before, excepting his ability to pass an examination under every possible disadvantage. If the Board differs with public opinion, the result may be mischievous, even dangerous; if it agrees with public opinion, it is at best an elegant superfluity.

I will go one step further, and say, that almost any officer of the medical corps is a better judge of his own proficiencies and deficiencies than any Board can expect to become under the present system of examination. He knows himself a great deal better than they can find him out, and could give a stricter, sounder, and more reliable account of himself under almost any other method of being called to account than the one now in vogue. And an officer of the medical corps of the army is almost invariably a man who would *do it*, too, fairly and squarely, saying just where he felt weak and where strong, just what opportunities he had had, and just how he had improved them, and just what he needed, moreover, to enable him to reflect the most credit upon himself and his corps, and do his patients the most good—all of which he is scared out of doing the moment the examination-battery opens fire on him.

I think, therefore, that this examination business is in the first place dangerous, in the second dubious, thirdly futile, fourth superfluous—in fine, a military method of treating science, when what it ought to be is a scientific method of treating a specific military contingency. That it is occasionally amusing, however, I can easily show.

Some ten years ago, holding then substantially the same theories upon the subject that I have here voiced, I was ordered before the Board. I had been nine or ten years in the service, mostly spent, as usual, in the West and South. I had some reputation, such as it was, as a scientist; none at all in the profession of medicine, for which I never had any fancy or any ambition, and in which, consequently, I never displayed any special aptitude or excellence. I had doctored people to the best of my ability, cut off their legs and arms occasionally, taken care of government property, sent in regular reports, and obeyed orders—always in an automatic and perfunctory way, with my head full of other things in which I took a vivid, resistless, and irrepressible interest. I was at the time writing some books at the Smithsonian in Washington, and expected to continue to do so indefinitely—and, in fact, I have done so ever since. The order came without warning—though if I had been told to expect it every day for five years before, it would not have made any difference, I suppose. I voted the whole thing a bore; and being very busy indeed, wanted to get rid of it as soon as possible. I could not possibly have spared the time to do any cramming, had I been given opportunity to do so, and should never have been better prepared than I was at the moment. I did not expect to be thrown, I confess, but I knew perfectly well the Board could do so if they wished to; so I reasoned that I had better make it as pleasant as possible for the gentlemen I was to meet by not troubling them to put too many questions, the replies to which might not affect them agreeably. In fine, I was disposed to waive answers altogether, and so leave the Board quite free to act at its own discretion. I went to New York immediately, and had a good time for a few days with some officers who were there on the same errand, and then presented myself. After passing the compliments, and having some pleasant chat, “the trouble began.” One of the gentlemen asked me about rheumatism and Bright’s disease. I said that I did not know whether the blood was acid or alkaline in the former disease, nor how to cure it; and that I had never seen a case of Bright’s disease. Another asked me what I

thought of somebody’s theory of phthisis. As I had never heard of the theory or its author, I said very truly that I did not think much of it, but presumed it had its merits. Another asked me about some delicate operation upon the eye, and I said I had never operated upon the eye, and never expected to. Things began to look queer, and it was odd-or-even whether I could make my theory of examinations work in that particular instance. But when it came the President’s turn to interrogate me I felt easier; for I knew by common report that he was going to ask me what an aspirator was, and I had taken the trouble, that very morning, to hunt up one and master its mysteries. The contrast between my bold and cheery reply to this momentous question, and my previous remarks on other topics, was too much for the gravity of my examiners, and there were five gentlemen grinning at one another like Cheshire cats in a moment. The aspirator finished the interview; and taking a hint from the President, with alacrity I bowed and withdrew. A few days afterward I received a letter from the Surgeon-General, informing me that the Board had found me qualified for promotion, but that I had apparently not kept up with the progress of medicine. Why, bless my soul, I could have told General Burns that, if he had asked me, instead of sending me to New York to prove it to four army surgeons by hunting up an aspirator! What puzzled me was, how did they discover that I was qualified for promotion? Excepting the aspirator, I had not given the slightest sign of knowing anything about my profession, to say nothing of keeping up with it. But I reflected that that was the Board’s business to discover, and how they did it was a conundrum I was not obliged to answer. Remembering, also, that I could catch up with the procession at any time I wanted to, I lighted a cigarette with the Surgeon-General’s communication, and thought no more about it.

But now, what were the actual facts in this case? How came the Board to make a favorable report on such an unfavorable basis? I take it, simply this: the report was not based upon anything that transpired in the examination-room, except in so far as a friendly rap over my official knuckles was given, to save the Board’s official conscience. If I had passed even a tolerable examination, the report would have been the same, minus the rap. I had simply presented myself *in propria persona*, and the report was wisely, justly, and courteously based upon what I was, not on what I happened to say or not say in that brief hour. My theory was proven: the examination was a nullity in my case, *and properly so*. Why? Because my examiners did *not* apply the military method to the treatment of science, having discrimination enough to apply the correct, which is the same as the scientific, method to the treatment of a military contingency. It was, in short, a piece of dunce-business we were about, they and I; and we both got out of it by rising superior to it.

Some one may rise to object, at this point, to my ungracious way of remarking upon what was, according to my own showing, great forbearance on the part of my examiners, and great good luck for me. I think I recognize the sound of the objector’s voice. It is a familiar one, not a musical one. No “forbearance” was shown me; the case did not require, nor indeed admit it; it was simply decided on its merits.

Take another case. I was recently conversing with a medical officer who had been thrown. It pained me to see the effect it had upon the man. Not that it hurt him in anybody’s estimation but his own, or is likely ever to do him any ostensible injury—nobody cares a straw about such things but the man himself. Nor did he—or could he—complain that the examination was not fair and just, or that he had not failed fairly and justly. So much the worse! It was a refined piece of wanton cruelty to which he had been subjected, leaving him not even the vantage-ground of complaint whereupon to settle the affair between his wounded spirit and him-

self by abusing his examiners, and proving himself an injured man. I knew this gentleman intimately, having served with him, and in fact been his patient more than once. His reputation, if not a brilliant one—as it would become should opportunity offer—was enviable. He was liked and respected by his associates; he enjoyed the confidence and respect of his patients; was zealous and faithful in the discharge of his medical and military duties; kept a good hospital; kept his accounts straight. He was sound, mentally and morally; not very strong physically; scrupulously nice, even over-sensitive, on a professional or personal point. Very well: he is ordered before an examining Board to plead a case of self-defence, counsel and client in one; a case upon which grave consequences appear to him to depend. He proves unequal to that emergency, and is advised that he may try it on again pretty soon, and must make it go next time, or go himself. Six or eight years of examination creditably sustained at the hands of a thousand self-appointed inquisitors go for nothing.

This officer, I contend, has been both wronged and injured. He has been wronged, by being subjected to needless cruelty, issuing from a cast-iron system, too hard and military to be applicable to the requirements of his case. He has been injured, too—injured mentally and physically—stung to the quick, wounded where he lives, in his very marrow. Without regard to the humanities, viewing him simply as a physiological mechanism, he has been put to a wrong purpose, and in handicapping him in this way, the service is crippled to the extent to which this particular cog in the wheel has been bruised and bent. All the boring and cramming he can do will be no offset to the deterioration the machine has suffered in being set to do a needless piece of work—"pass an examination." If I, or any other officer who had served with this one, and knew him well enough to give an intelligent and reliable account of him, had been asked to testify, we should unquestionably have done him that justice which, it seems, he was unable to do himself. This was probably a case the reverse of my own; one which—through no fault of the examiners—hinged upon a pernicious system, based upon a radical dunce-theory. It were far better, I think, to satirize the theory, and kick the system out of court, as I did, when I was satisfied that it would never do to let it be applied to me.

Since Dr. Shufeldt has adduced his own case with an audacious candor and confidence I cannot sufficiently admire—enough to send the cold-creeps down the spine of any well-regulated military man—I feel free to speak of it also. Now that he is out of the woods he can afford to laugh; but I suspect that the worst use he could have been put to, next to hanging, was that which he was put to when he was sent before the board. In the first place, needless pain was inflicted—always a stupid and unscientific thing to do. Secondly, he spent a year in grubbing a lot of old text-book bricks out of the cellar of his mind's house, and polishing them off for his examiners' inspection. That was so much time wasted, to say nothing of the mental friction required to think clearly with a load of useless bricks in the upper story. No mind works well when encumbered with unnecessary facts. Library shelves were made for a purpose; and, as old King George III. used to say, the greatest lawyers know no more law than the rest—only they know where to find the law. I cannot suppose that Dr. Shufeldt is any better officer or any better doctor for having succeeded in an examination, any more than I supposed him the contrary when he did not succeed. Nothing is proven either way, excepting the ability to work under stimulus, as Huxley says.

Knowing Shufeldt as intimately as I do—and I have for some years watched his career with special interest—I should say he was the last man who needed stimulus to work. He is whip and spur enough to himself; one upon whom the lash of the military method should never be suffered to fall; for when it does fall, as it did at his

first examination, the service suffers specifically to the extent to which he is injured himself. The medical corps loses exactly what it costs Dr. Shufeldt to catch up with his examiners and get himself in working order again; for all the effective energy he spent in that affair was simply wasted, and the corps gains nothing in return. To pass or not pass an examination is nothing *per se*.

What Shufeldt needs is neither stimulus nor discipline. He needs an opportunity, not an examination, in order to be put to the best use the army can make of him. So long as any man is voluntarily a member of an organization, civil or military, certain regulations and restrictions must be enforced in his case; but the greatest good to the greatest number is likely to come when rules are best adapted to the individual. It is the military method again, instead of the scientific, when all rules bind alike on all persons. The wisest discipline leaves the widest margin for individual idiosyncrasies; the right solution of the personal equation solves the general problem. To make a square peg fit a round hole is as impossible as the quadrature of the circle. One of two things must happen. Either the peg wears round, and sinks into the hole at last, or it stays square, works loose, and is gone. Nothing but friction during either process.

If I am not greatly mistaken, Dr. Shufeldt was cut out for a scientist, and has the requisite qualifications to become a great naturalist. I think I recognize the spark that is in him. If it is there, and no mistake, nothing can extinguish it, and I thank God every day of my life that there are men in the world whose inner light, like Greek fire, can burn under water, if needs must be. The practical question is, not whether such fire can be put out, for that is impossible, but what is to be done with it? Is it to be a producer or a consumer? Either is possible, equally possible, I almost said. Let it produce, and the world is the wiser and richer; for ideas are born in that kind of fire, and ideas are imperishable, and rule the world absolutely. Let it consume—well, ask Keats, for example, *what* it consumes.

On my theory that this young naturalist has the spark, he does not belong to the army. On the contrary, the army belongs to him, and nothing that the army can give him is too good for him. He never ought to know a "commanding officer." He never ought to hear sick-call blow. He never ought to see a patient. He never ought to put on a cocked-hat, and strap a sword on—that is, if my theory is correct. Give him only the necessary conditions of environment, and prove me wrong if am wrong. If I know anything, I know a naturalist, and I know what a naturalist needs—what a naturalist must have—what a naturalist will have, in or out of the army.

But, you say, this Dr. Shufeldt, is he not an army surgeon, paid by the Government to perform medical duty? Why should an exception be made in his case? He is not hired to be a scientist, he is hired for a doctor. What business has he to be writing books instead of attending to the sick and wounded of the army? What is all this long, rambling tirade about sparks? What is this man driving at anyhow?

My dear sir, I will tell you what I am driving at. I am driving at you. I do not recognize your face, but the sound of your voice is familiar and unmusical. I see that you have a red-tape halter in one hand, and an official club in the other. I see that you are a brave boy, but you belong to the Great Confederacy. You have the heroism of the dunce. You are the "Treatment of Science by the Military Method."

SMITHSONIAN INSTITUTION, WASHINGTON,
September 1, 1883.

TO REMOVE WATER FROM ALCOHOL.—If gelatine be suspended in ordinary alcohol it will absorb the water; but as it is insoluble in alcohol that substance will remain behind, and thus nearly absolute alcohol may be obtained without distillation.

MANGANESE AS A STIMULANT OF THE MENSTRUAL ORGANS AND AS A REMEDY IN CERTAIN FORMS OF AMENORRHOEA AND MENORRHAGIA OR METRORRHAGIA.

By FRANKLIN H. MARTIN, M.D.,

CHICAGO, ILL.

SINCE Ringer and Mussell, of London, called the attention of the profession to the gratifying results obtained in experiments performed by them (*Lancet*, January 6, 1883) in the treatment of certain forms of amenorrhœa by permanganate of potash, I have taken advantage of every opportunity that has been afforded me, both in dispensary and private practice, to satisfy myself as to the action and efficacy of the new remedy in that direction. I have been more than gratified with the result. I have found that manganese will not only relieve certain forms of amenorrhœa, but also of menorrhagia and metrorrhagia. It is, of course, unnecessary to say manganese, or any other one remedy, cannot be expected to relieve all cases of amenorrhœa or menorrhagia, when each is dependent upon so many different causes. As amenorrhœa is only a symptom, not a disease, it would have been much more satisfactory if Ringer and Mussell, in their little article, had mentioned with greater explicitness the peculiar forms of amenorrhœa in which they found their remedy to exert its great influence.

From my observations I have been led to consider manganese in any form a direct stimulant to the uterus and its appendages. It may exert this influence by acting as a direct vasomotor nerve-stimulant to the vascular system of the parts, and in consequence of the improved circulation directly increase the tone and nutrition of the organs, or it may exert its whole force through stimulation of the sexual nerve-ganglia, or even possibly the sexual *nerve-centres*, thereby bringing the organs to their normal state of action. At any rate, its action is prompt and direct. In bringing the uterus and appendages to a normal state of menstrual tonicity, when the lack of tone is dependent upon some previous depression of innervation, manganese, in my opinion, certainly has no equal. Even when the cause of the depressed innervation is still acting, this remedy will exert its stimulating power over the menstrual mechanism. In consequence of phthisis, menstruation had not occurred in a young woman, eighteen years of age, for four months. Experimentally the manganese was given in connection with her other treatment. Menstruation occurred within a week. Another young woman, twenty-four years of age, with an aggravating digestive trouble of some years' standing, had become very irregular—flowing profusely for a week or two, then scantily for an equally irregular time, again followed, perhaps without any warning, by a profuse flow or as likely a complete cessation. This state of affairs had been going on for more than a year. There was no pain with the flow. She was very weak and anæmic from the effects of indigestion and loss of blood. This patient was given two grains of the permanganate of potash, dissolved in one-half glass of hot water every night on retiring. It was kindly received in this way by the irritable digestive organs. In a very short time there was a decided improvement in the menstrual trouble, and the patient has since menstruated three times normally.

In young girls who are irregular in the early months of menstrual life, where it is simply caused by the natural weakness of the partially developed organs of generation, or where, from an overworked nervous system, the organs are robbed of their natural nerve force, this remedy seems to possess the stimulating properties requisite to bring them into healthy action. A remarkable case of this kind was that of a young girl who had menstruated once. Eight months had passed, and the menstrual flow had failed to appear again. The mother of the girl, being alarmed, sought advice. The permanganate was given in two-grain doses twice a day. Within a week the girl menstruated the second time in her life. In two other

cases of "missing" in young girls, without any apparent cause, or any other symptoms, the remedy given in the same doses a few days before the next regular period was expected, stimulated the organs to a normal flow. The action of the manganese was so prompt in these cases that I am convinced it was no mere coincidence.

It is well known that from exposure to cold the weakest organs of the body are the ones most liable to suffer. A woman, who, when exposed to cold, immediately suffers suppression, cessation, or excess of the menstrual flow, will invariably be found to possess susceptible and weak menstrual organs. In cases of this kind, viz., suppression, cessation, or excess of the menstrual flow, caused by "catching cold," with no other apparent cause, the most gratifying and prompt results are obtained from manganese. The above variety of cases are of so frequent occurrence that in them I have had numerous opportunities to test the new remedy, and I have yet to see it fail, in either amenorrhœa or menorrhagia, when due to the irritation of cold alone. In several cases where the flow was a week or ten days overdue, from "catching cold," the permanganate was given in large doses, and its almost magical effect demonstrated by the flow appearing within twelve hours.

Although I have had greater opportunities for testing the value of manganese in amenorrhœa than in menorrhagia or metrorrhagia, I have received unmistakable evidence of its power in the latter forms of menstrual trouble.

Menorrhagia and amenorrhœa in their outer manifestations are exactly opposite in nature, but they are very often dependent upon the same causes. When the cause is anæmia, or any depressing constitutional disease producing a perversion of the functional activity of the menstrual organs, and this perverted action consists of an irregular or excessive flow, this condition will as readily succumb to the stimulating effect of manganese as when the opposite condition exists. The following cases are of interest: A woman, aged twenty-six, sought advice for excessive and irregular flowing. She had been married two years and had one child, twelve months old. The child was large and strong, the mother physically slight. The mother nursed the child. For ten months she had stood the strain very well, when she commenced to fail, suddenly grew weak and anæmic, and began to flow excessively. This continued with but a few short irregular remissions until I saw her at the dispensary. She was given two-grain doses of the permanganate of potash four times a day, at the same time all other treatment was withheld. In three days the patient returned saying that the flow had stopped the next day after receiving her medicine. I then discontinued the manganese, prescribed iron and nourishing food, and she continued to improve. By digital examination nothing abnormal was found in the above case. Another case was that of a large, stout woman, thirty-five years of age, who came to the dispensary suffering from menorrhagia. Her menstrual periods were regular as to time but the quantity of blood was alarmingly excessive and would last for two weeks. She was married, had three children, the youngest three years of age. This abnormal condition of menstruation had been coming on by degrees for a year. The uterus was a little enlarged, and soft to the touch, otherwise, by physical examination, nothing abnormal. Four days before the expected flow she commenced taking the permanganate in two-grain doses three times a day. Menstruation came on at the expected time, and after a normally free flow for four days passed off naturally. Before the next period the same treatment was repeated, with the same marvellous result.

I have been particular to give here only typical cases. In a number of other cases I have received very gratifying results, and I am myself convinced that in properly selected cases others will be able to obtain like results.

Although manganese, like the allied metals, nickel, zinc, iron, and silver, has a direct influence on the blood as a tonic in anæmia, chlorosis, etc., it cannot be pos-

sible, in my opinion, that its peculiar influence on the catamenia can alone depend upon that virtue. To influence the organs of menstruation by acting as a general tonic, would necessarily be a slow process, and the effect would be very gradual. It undoubtedly, however, as a general tonic, has a predilection for these organs. This was noticed and commented upon by W. H. Broadbent, of London, after experiments performed by him, and recorded in the "Proceedings" of the Clinical Society of London for 1868-69, vol. ii., p. 122: "Manganese," he says, "seemed to have a special influence in promoting the return of the catamenia, and nickel a special property of checking leucorrhœa." But one can readily see by the character of the cases reported by Ringer and Mussell, and myself, that manganese must have a more direct mode of influencing the menstrual organs than by the necessarily slow one of a general tonic. As to what that influence is, I am not prepared to advance any more definite opinions than have already been included in this short article. I shall look with great interest in the future for the results of other experimenters in this direction, while personally taking advantage of every opportunity presented to extend my knowledge on the subject.

In prescribing the permanganate of potash (the most convenient preparation in which to administer manganese), it will be well to bear in mind a few points of importance. The preparation has a disagreeable, distressing effect on the stomach when taken undiluted, which may be obviated by administering when the stomach is full—immediately after eating—or dissolved in considerable water. In administering the permanganate in pill form, it must be remembered that excipients ordinarily used by dispensers will produce with the drug spontaneous combustion. The following basis has been found to act well: "Vaseline two parts, paraffin wax one part; melt, stir till cold, and add kaolin, three parts; mix well," roll out, and dust with kaolin (*Lancet*, January 13, 1883). Dry gelatin capsules I have found to be the most convenient form in which to administer the remedy.

THE BROMIDE OF SODIUM IN THE TREATMENT OF EPILEPSY.

By J. LEONARD CORNING, M.D.,

NEW YORK.

IN a recent lecture by Professor Dujardin-Beaumetz, published in *THE MEDICAL RECORD* of August 25, 1883, the following sufficiently remarkable statement occurs: "I have made many trials of bromide of sodium in epilepsy, and notwithstanding the considerable doses exhibited—ten to twelve grammes a day—I have never succeeded in arresting attacks either of petit-mal or grand-mal by this salt. I have therefore been astonished to see in Hammond's remarkable work on 'Nervous Diseases' that this eminent neuropathologist gives the preference to bromide of sodium in epilepsy." To American practitioners, at least, the above statement cannot fail to excite astonishment; not that it is at all extraordinary that there should exist some difference of opinion respecting the relative therapeutic value of the various bromides, but rather because the particular preparation known as the bromide of sodium should have been singled out as an object of disparagement. Now, if there is one fact relative to the bromide more thoroughly established than another, it is the superiority of the sodium salt, and for this reason, that the prejudicial effects which are so conspicuous a concomitant of the other bromide preparations are in great part absent in this (the sodium) salt. In this connection Dr. W. J. Morton says (*vide* Dr. Morton's admirable paper on the "Treatment of Migraine," *Medical Gazette* for July 21, 1883): "It is a matter of clinical experience that larger doses of bromide of sodium may be tolerated for months without evidences of the bromide rash and without failure of the health."

"On the contrary, a patient thus treated gains flesh, eats well, and has good color." "For instance, M. B—, treated for epilepsy, has taken 90 grains of bromide of sodium daily for one year and is the picture of health."

This is a *multum in parvo* of the whole question. We give the bromide of sodium, not because we expect to prevent the attack with more certainty than with the potassium salt, but because we hope to avoid the inevitable disadvantages to general health which are the result of a considerable and prolonged employment of the latter preparation.

But Dr. Dujardin-Beaumetz tells us that he has not succeeded in arresting the attack with the sodium salt. Now if there is one fact more thoroughly established than another, it is the ability of the sodium salt to arrest the epileptic seizure, not alone for weeks and months, but even for years. Thus my friend, Dr. M. Josiah Roberts, of this city, has recently communicated to me the history of a case in which he succeeded in reducing the number of attacks from two or three a week to only one every three or four months for three years, by the use of the sodium salt; and doubtless the result might have been materially improved had the patient paid due heed to general prophylactic measures.

I have employed the sodium both in epilepsy of adults, as well as in that of young children, exhibiting the remedy in far larger doses than could have been possible had the potassium salt been employed, and not only was the attack satisfactorily arrested but the general health of the patient showed substantial improvement, as proven by a considerable gain in weight. This was particularly true of a boy of fifteen years, who before treatment often had as many as four attacks in a single day. When I first saw this patient he was suffering from the bromide rash and his mental condition bordered on dementia, he had been treated with heroic doses of the potassium salt. Appetite was poor and general appearance of patient emaciated in the extreme. Owing to the sickly appearance of the boy his family had discontinued the use of all medicine, and the fits had returned with all their former severity. I ordered the bromide of sodium in forty-grain doses three times a day, and put the patient on eggs and milk. At the end of three months there had been an actual gain in weight of nearly twenty-five pounds, and the number of fits had been reduced from an average of about three a day to two or three a month. So great was the change in the mental and bodily condition of this boy that his own mother who had been separated from him during treatment hardly recognized him. Besides the above case, which is sufficiently striking, as exhibiting the remarkable constitutional effects of the remedy, I can recall several other instances in which I have had occasion to witness the wonderful effects of the bromide of sodium in epilepsy. As a matter of course some sort of attention should be paid to dietetics and general hygienic rules; but the same may be said with respect to almost any other remedy which has been employed in epilepsy. There is, therefore, no doubt that in bringing the bromide of sodium prominently before the profession in connection with the treatment of epilepsy, Dr. Hammond merits the gratitude of all who are interested in the therapeutics of this most frightful disorder.

As to the lack of success attending Professor Dujardin-Beaumetz's attempts with the bromide of sodium, I can only find in them one of those unaccountable exceptions, which, if not refuted promptly, is calculated to mislead those whose experience with the remedy in question is as yet limited. This seems to me the most charitable view to take of the case. To those, however, who have become intimately acquainted with the manifold advantages of this wonderful remedy, not only in epilepsy but in very many other neuroses, it must of necessity cause no little astonishment that a gentleman of such prominence as Dr. Dujardin-Beaumetz deservedly is, should at this late day, question the efficacy of such a well-established remedy as the bromide of sodium.

SOME REMARKS ON CANCER.

By JOHN FERGUSON, B.A., M.B., L.R.C.P.,

ASSISTANT DEMONSTRATOR OF ANATOMY TORONTO SCHOOL OF MEDICINE.

THOROUGHLY convinced that carcinoma is a local disease, and arises *de novo* as the result of some form of injury or irritation to the part that becomes affected, I began a series of researches in the year 1878. The result of these investigations I shall now briefly detail.

It is quite needless to say that cancer is of the epithelial type. There is nothing abnormal in the fact of its being epithelial, but in the fact that the epithelium occurs where it should not, and is arranged after a manner differing from that of normal tissue. There is evidently a date previous to which a tumor that ultimately becomes cancerous is not cancerous, in other words that there is a pre-cancerous period to such new formations. When and where to draw the exact boundary line between the condition that is yet benign, and that malignant, devouring state called a cancer, is not easily defined. Another question of great difficulty, yet of great importance, is, why the same kind and extent of injury, as far as we can judge, acts as the initiative which produces this dread disease in one person while it fails to do so in another.

The answer to this question I think we are to seek in what I shall call a constitutional tendency. I am strongly of opinion that this tendency in different diseases has not received due attention. A child is born free from any disease, yet with an inherited tendency to some form of ailment in one or other of its tissues. If this tendency to take on diseased action be marked in the case of the secreting glands, and particularly if this tendency exist in the epithelial elements, we have the main conditions necessary for the production of a cancer. There may be several existing tendencies in the epithelial cells of the skin and glands; still, as regards the genesis of cancer, I think the rapid multiplication of the cells is the most potent factor.

One fact to which I have paid much attention is that a cancer is not infective until the definite structure of this new formation has been evolved. Thus, so long as the secreting tubes of the affected gland are packed with epithelium, but no epithelium can be detected in the tissue outside of the tubes, while no alveoli are found filled with these cells, there is no infecting power to neighboring parts and adjacent glands. I make this remark very advisedly. While the secreting tubes are thus blocked up and filled with epithelium, but none found in the gland tissue, we have what may be regarded as the strictly local stage of the cancer growth. Once, however, the disease has advanced so far that the epithelial cells can be discerned in groups throughout the gland, there is no further safety from infection.

Another point of great moment is from what element in the gland does the cancer take its origin. To this I answer unhesitatingly, the epithelium. If we take a cancerous breast, which the surgeon has removed, keeping well clear of the diseased tissue, with the idea of preventing its return, then, after carefully preparing a great many sections of the tumor, we shall find that a section taken from the truly cancerous part will reveal all the histological characters of the disease; a section nearer the edge of the tumor often shows these conditions in a less marked degree; a section still farther out shows them still less definitely; and so on gradually, till all that can be detected as wrong is simply the secretory tubes crowded with epithelium. Follow in this manner, taking section after section, gradually proceeding to the outer parts of the tumor, and finally we reach healthy tissue. Should the removal be complete, and no neighboring portion of the body have become affected previous to the extirpation of the diseased mass, freedom from a return will likely have been secured. During the past five years I have examined twenty-three cancerous mammae, and with-

out exception found the above law to hold good. What does this argue? It seems to me that the only conclusion we can draw from this is that the diseased process begins in those tracks and channels that are lined by epithelium; and from these, as starting-points, invades the connective tissue of the gland.

The following case came under my notice: A young woman was delivered of an illegitimate child in December, 1882. About three weeks after she had an abscess in the left breast from exposure to cold. This I opened freely and it soon healed. In June she came to me, saying that she could not sleep for the pain of this breast. The pain steadily grew more intense, and I advised her to have it removed. Going out of the city for a short time for her holidays, she died of some acute abdominal trouble. I succeeded in getting the diseased breast for examination, and shall state briefly what I found. Nearly three hundred sections were examined. Throughout the entire gland the ducts were full of proliferated epithelium, while only in one small portion could the true appearance of cancer be found. This was about one inch from the point where the abscess had been incised. This was the most advanced part of the disease, and it was here only that the epithelium could be found in the inter- and peri-glandular connective tissue. Had this woman died a little sooner, no cancer tissue would have been found; had she lived a little longer there is every reason to think that the whole gland would have been more or less infiltrated.

Another point of great moment is the infectiousness of cancer. Although, as I have shown, cancer arises from some injury done to a part by which its normal elements are deflected into an abnormal arrangement of themselves, still after a time it loses its purely local nature and steps out into neighboring parts. It has long been observed that cancer affects the lymphatic glands lying near it, and on that side toward which absorbed material passes. In what way the glands become infected is a question that lies at the bottom of a long series of important facts, both pathological and therapeutic. Lymphatic glands above the seat of some irritation often become enlarged. As an example we might mention that of a boy who bruises his foot, and as a consequence of this the chain of glands in the femoral and inguinal regions become enlarged and painful. But as soon as the source of trouble in the foot is removed, and a little rest obtained, the tender and swollen glands become normal. It is not so in cancer. Once the glands have begun to enlarge, say in the axilla, the removal of the diseased mamma will not suffice. In this case a set of pathological changes are started which do not spontaneously stop. This points to the fact that it is not a simple irritation of the glands. The truth is that the same kind of changes are established in the gland that previously existed in the breast. Take one of these axillary glands and subject it to a most thorough microscopic examination and we find what we found in the cancerous breast. The secreting tubes are crammed with proliferating epithelium, presenting the same appearance as to size and arrangement of nuclei which was noticed in the parent source of infection. In more advanced stages of the disease in other sections of the same gland, or in sections of other glands, these epithelial cells can be detected passing beyond their proper limits and invading the walls of the secreting tubes; still further advanced, they can be found outside of the tubes in the gland tissue, and a little more and the alveolar arrangement of the cells and inter-glandular connective tissue is seen. Here is a set of events by which a new formation, or sort of new existence, is established within the animal body. By sowing apple-seeds varieties of apples are obtained; but by grafting, these varieties are perpetuated. A sort of species of tissue arrangement was originated in the breast as the result of the injury inflicted upon it; or, as the consequence of long-continued irritation. Once this kind of tissue species is

formed in the mammary gland it is conveyed to the near lymphatic glands, on the principle of grafting; when tissues have run into the carcinomatous mould there is a very strong tendency to reproduce themselves; and it matters little where they may be planted, if they take root at all, it is only to develop a cancer.

From the examination of nineteen very suspicious cancerous breasts, it does not appear that there is much tendency, if any, to affect the lymphatic glands, until that stage of new life is reached when the epithelium is distinctly abnormally situated. It is not until these cells are found without the secreting ducts and grouped in the connective tissue that we find any power to cause infection of the glands above. The nineteen cases just mentioned were in the very earliest stages of diseased action when the ducts were packed, but no alveoli formed. The appearance, however, so far as it went, was such as invariably occurs in the growth of a typical cancer. Most of these specimens were obtained from cases where death had taken place from some other affection; a few only where the mamma had been removed on the ground of suspicion. The great probability, indeed certainty, is that these breasts were cancerous in the early stage, judging both from clinical and microscopic characters obtaining in each. The only part in the evidence wanting to confirm their cancerous nature was the absence of definite aveoli containing groups of cells.

In another group of cases in which there was enlargement of the axillary glands, a microscopic examination of the new formation in the breast always revealed the true characteristics of cancer. This showed that in order to infect the glands the disease in the breast must have advanced to that stage, at least, when the epithelium is found in the connective tissue outside of the walls of the ducts, in a locality where it should not exist, and is abnormally arranged.

There is some peculiarity about cancerous epithelium which we may never be able to fully determine. It has a tendency all its own, so that when it is planted in a structure, as yet healthy, it has the power of producing diseased action, and this I think in two ways: First, by the proliferation of the diseased cells carried from the affected to the non-affected parts; and secondly, by exciting a diseased action in the epithelium of the part to which the infecting material is carried. This is what we might call the intrinsic quality of the epithelium from a cancerous gland. According to some of our great pathologists, there is no such thing as a cancer cell; according to others there is a difference in the so-called cancerous epithelium and that which is healthy. By these latter the epithelium is regarded as larger, more varied in form, and with larger and more distinct nuclei and nucleoli. The results of all my own observations, taking the great average of cells, is in favor of the latter view. Setting aside all microscopic distinctions, however, there is some vital property which, existing in certain epithelial cells, pre-eminently entitles them to be called cancer cells. We cannot under the microscope tell what spermatozoön would be capable of transmitting syphilis, and yet such a power may be resident within it.

At what period of the life of a new formation, destined to become cancerous, the elements of which it is composed acquire infecting power, we do not at present know. A few experiments may help to settle this question. A breast was removed in which the cancer condition was well marked. As stated at the beginning of this article, different sections gave different results. In some the ducts only were so crowded with epithelium, in some these cells existed outside of the duct-walls, and in some the alveoli and cell-groups were found. From that part of the diseased breast which yielded a good sample of cancer tissue I placed a number of grafts in the parotid and submaxillary glands of three young dogs, and awaited the results. The dogs grew, and in two out of the three cancer developed in the glands so treated. From the same breast, but from parts that did not yield

the cancerous arrangement of tissue, but simply an accumulation of epithelium in the ducts, portions were taken and planted in the same glands of three other puppies of the same litter. In none of these did cancer make its appearance, even at a period long after that at which the disease appeared in the two of the first group that were experimented upon. One of the first three became distinctly cancerous in eight months, the other in a little over ten; while of the three last pups, none showed any symptoms after a lapse of more than two years.

What, we might ask, is the infecting material in the case of cancer? Is it the fluid from the diseased part, the connective tissue debris, a new cell, or the epithelium? That it is not a new cell may be answered at once; for no new special cell belongs to the life history of cancer. On the other hand, it seems almost a certainty that the *materies morbi* for the spread of the disease is not from the connective tissue in any way. Take the example of cancer in the breast once more, and we find that the axillary glands may be very much enlarged at a period when the most careful and repeated microscopic examinations of the mamma reveal no evidence whatever that its connective tissue is breaking down. The most searching examinations also fail to show that anything likely to have come from the connective tissue can be found in the lymphatic channels. It seems, again, that it cannot be due to any fluid, pure and simple, unless it contains floating in it some solids from the cancer-growth. In the experiments performed on the pups, where a portion of the cancer was taken free from epithelium in alveolar spaces in the tissue, no cancer was produced by engrafting. Now, it can hardly be supposed that a section from the same tumor would not contain the same juices throughout, although the arrangement of the cells and fibrous tissue differed in different portions. That it is in all probability the epithelium that is the active agent in causing the appearance of cancer in neighboring glands seems to me almost to follow from what I have next to state. In no case have I been able to find any evidence of enlargement in the lymphatic glands prior to the date at which, when the cancer is removed, free epithelium can be found wandering, so to speak, in the connective tissue. When this stage has been reached, and not till then, have I been able to find in the lymphatic vessels or glands anything resembling the epithelium found in the alveoli of a cancer. After this date, however, such wandering epithelium can be detected.

One more remark, and I have done. There seems to be some strange change going on in the tissue of a part which is becoming cancerous; and up to a certain point it is benign, beyond this malignant. It is, in other words, acquiring a new power and existence of its own. For a certain period the ovum is only a mass of protoplasm endowed with vitality; by and by it comes to have a separate life of its own, independent of the parent, and possessing peculiarities which it in turn is capable of transmitting. It does not appear that the epithelium in a cancer has acquired infecting power until the alveolar condition has been attained, or, at all events, until the epithelium is found in the connective tissue.

THE RELIEF OF TOOTHACHE.—Dr. Kenneth W. Millican suggests the following convenient method (*British Medical Journal*): "It is a modification of a method recommended by Professor Babaieff to the Caucasian Medical Society. Melt white wax or spermaceti, two parts, and when melted add carbolic acid crystals, one part, and chloral hydrate crystals, two parts; stir well till dissolved. While still liquid, immerse thin layers of carbolized absorbent cotton-wool, and allow them to dry. When required for use, a small piece may be snipped off and slightly warmed, when it can be inserted into the hollow tooth, where it will solidify. The ease produced by this simple method is really very great."

Progress of Medical Science.

TREATMENT OF FISTULA IN ANO.—Dr. Poingt claims that any fistula amenable to treatment by the elastic ligature may be cured by simple drainage of the fistulous tract. The drainage-tube is inserted by means of a stylet passed up the tract from the external opening. At the end of two or three weeks the drainage-tube falls out, after having destroyed the superficial wall of the fistula. A granulating surface of small extent is left, which rapidly heals by cicatrization. The procedure is wholly painless, and the patient may pursue his ordinary avocations during the entire course of the treatment. The operation is never followed by any of those serious complications sometimes seen after the cutting operation.—*Le Courrier Médical*, July 28, 1883.

TREATMENT OF PSEUDARTHROSIS OF THE TIBIA.—Dr. F. Guérmonprez relates in the *Bulletin Général de Thérapeutique*, July 30, 1883, a case of ununited fracture of the tibia cured by means of successive slight irritations of the opposing surfaces of bone, occasioned by the moderate use of the member. He concludes that in cases of this kind walking within appropriate limits is not injurious, and may even be conducive to a cure. The limb is to be steadied during use by means of stiff, well-fitting splints closely bandaged to the parts.

DECOCTION OF LEMON IN THE TREATMENT OF INTERMITTENT FEVER.—Dr. Maghen states in the *Giornale di Clinica e Terapia* for March, 1883, that he has obtained excellent results in the treatment of intermittent fever and the malarial cachexia by a decoction of lemons. The remedy was recommended to him by another physician, and he tried it first in some old inveterate cases, without, however, anticipating any remarkable results. The decoction is prepared as follows: A lemon, as fresh as can be obtained, is cut up into small pieces and put into an earthen vessel. Three glassfuls of water are poured in and boiled down to one glassful, which is then to be strained through a linen cloth and cooled in the open air. As a result of his trials of this remedy, the author arrives at the following conclusions: 1. Decoction of lemon, employed in malarial affections, gives results equal, and even superior, to those obtained from quinine. 2. It not only cures when quinine does, but even in those cases in which the latter remedy is useless. 3. It is equally effective in cases of chronic malarial cachexia. 4. It presents none of the disadvantages of quinine (irritation of the mucous membranes and tinnitus aurium). 5. Its administration is possible even in catarrhal conditions of the digestive tracts. 6. In addition to these advantages it possesses the further recommendation of cheapness. In commenting upon these conclusions, Dr. Kahn (*Bulletin Général de Thérapeutique*, July 30, 1883) states that the natives of French Guiana employ with success the decoction of lemons to ward off a threatened attack of chills and fever.

PRIMARY PEPTONURIC DIABETES.—Dr. Quinquard describes in *La Tribune Médicale* of August 5, 1883, a morbid condition, characterized often by emaciation, thirst, polyuria, and marked cachexia. Examination of the urine shows it to be of low specific gravity, abundant in quantity, not precipitating by heat or nitric acid, but deviating the plane of polarization to the left. Millon's reagent produces an intense red coloration, and a precipitate is thrown down by tannin, mercuric chloride, chlorine, and iodine. All these reactions denote the presence of peptones. The urine should be examined immediately after having been voided. The subjects of this condition present the same clinical picture as do those suffering from diabetes mellitus. The cause is not always easily determined, though a sudden chill or lively emotions may be mentioned as probable causes. There is a defect of assimilation, from which ensues a general

disease, a true dystrophy. It is well known that peptones are excreted by the kidneys under certain circumstances, the condition being then a secondary peptonuria. But the cases seen by the author are stated to have been instances of primary peptonuria. There is another condition also in which peptonuria supervenes upon true diabetes mellitus, but this is very different from the disease under consideration.

ANTISEPSIS IN OVARIOTOMY AND BATTEY'S OPERATION.—In an article with the above title, appearing in the *Virginia Medical Monthly* for August, 1883, Dr. Battey presents the records of eighteen consecutive cases of ovariectomy and of Battey's operation. They were performed under strict antiseptic precautions, including the spray, and all terminated in recovery. While not believing that the spray or the use of carbolic acid in general is essential to success, the author thinks that weak solutions can do no harm, and that their use may serve to guard the patient against any slight imperfections in the details of cleansing. And he therefore says that he is content to hold them as valuable assistants in abdominal surgery until their utter uselessness has been more conclusively shown. He further says that his experience has been uniform upon one point, namely: that when a patient has been operated upon at her home and left to the care of her family physician, convalescence has been unduly slow and unsatisfactory.

RECTAL ADMINISTRATION OF SALINES.—The following is the plan pursued by Dr. W. Jaworski in the treatment of disorders of the large intestine (*Memorabilien*, July 16, 1883): In cases in which there is irregular action of the bowels (constipation alternating with diarrhoea, or either of these conditions alone), when palpitation reveals the presence of impacted fecal matters and points of tenderness in the large intestine, and when the stools are mixed with mucus, he uses injections of a two and a half per cent. solution of soda of increasing temperature. An ounce and a half of ordinary crystallized soda is dissolved in three pints of warm rain water, and as much of this as possible is injected into the rectum, and retained by the patient for about five minutes. This is done every day, at least five injections being practised. They have the effect of cleaning the bowel of the masses of mucus. Then at least five more injections are given of the same solution, with the addition of a tablespoonful of common salt. These are given only every second day. After the rectum has been well cleaned, and little or no mucus is seen in the stools, the author uses enemata of warmed Karlsbad water, to every bottle of which, in cases of obstinate constipation, a tablespoonful of sulphate of soda is added. It is advisable during the treatment by enemata, to intermit for several days at a time in order to ascertain what progress has been made. Where there is atony of the rectum it is well to give injections of pure cold water, with or without the addition of common salt, and these are recommended also in the after-treatment. The diet should consist chiefly of meat and milk. In cases of habitual constipation, without catarrh or any apparent lesion of the large intestine, the author begins at once with enemata of sulphate of soda. The first injections are warmed, and contain about two tablespoonfuls of Glauber's salt in three pints of water. Instead of pure water, the salts may be dissolved in Karlsbad water with advantage. Each day the water is used colder, and chloride of sodium is usually added to it. A mixed diet (excluding starchy food) is ordered. When a clearing-out of the entire intestinal tract is sought, a glass or two of cold soda-water, with a little sour wine, is ordered. In feverish conditions, or when the stools contain streaks of blood, very cold solutions of Glauber's salt and chloride of sodium are advised. The advantages of the rectal administration of the salines are summed up by Dr. Jaworski as follows: 1. The patient is spared the disagreeable taste and the nausea so often following the taking of salines. 2. Such a strict regulation of the diet is unnecessary, and the

salts may be given even after a full meal. 3. The entire intestinal tract is not uselessly irritated, but the remedy is locally applied, and acts for the most part only on the diseased portion. 4. The dose can be more easily regulated, for when salines are given by the mouth, the amount that reaches the rectum or acts upon it in any way is a very uncertain quantity. 5. The local effects of heat or cold may be obtained, together with those of the medicines employed, when the latter are given by enema.

CEPHALALGIA OF ADOLESCENCE.—Dr. R. Blache describes a form of headache, of not infrequent occurrence in individuals of either sex from twelve to eighteen years of age, which he thinks is deserving of recognition as a distinct morbid entity. It is not constant, but recurs with great frequency, and is evidently increased by mental effort. The pathogenesis of this form of cephalalgia he sees in a complex of altered nervous function, disturbances of the circulation, intellectual effort, and insufficient aëration acting during the period of puberty. The treatment consists in an active life in the open air, the use of suitable glasses if there are any defects of vision, and, above all, the absolute cessation from all mental work during a prolonged period.—*Archives Médicales Belges*, July, 1883.

RETARDED UNION OF FRACTURES IN DIABETES.—In a communication addressed to the Academy of Medicine of Paris (*Bulletin de l'Académie*, July 29, 1883), Dr. Verneuil related the histories of several cases in which the union of fractures occurring in diabetic subjects was delayed, imperfect, or entirely absent. He referred to the theory of Bouchard, who classes diabetes among the disorders attributable to a retardation of the nutritive processes, and he thought that the cases observed by him were corroborative of this view. For the repair of wounded tissues is a form of nutrition, and any delay or fault in the reparative process implies a corresponding defect in the function of nutrition.

A CASE OF AMAUROSIS TREATED BY THE PERCUTEUR.—There is a little instrument, called the percuteur, recently invented by Dr. Mortimer Granville, by means of which a number of taps in regular and very rapid succession, and of varying intensity, can be given to any part of the surface of the body. Dr. Granville's theory of pain is that it is due to abnormal vibrations in a sensory nerve, and he explains the action of the percuteur in the cure of pain and of other symptoms by the theory that it induces a new and orderly set of vibrations in the nerves to which it is applied. Dr. W. Carter relates a case in the *Liverpool Medico-Chirurgical Journal* for July, 1883, in which the application of this instrument was followed by the most striking benefit. He is not prepared to accept Dr. Granville's theory of the action of the percuteur, nor is he inclined to assert positively that his case was cured by it, but leaves his readers to form their own conclusions. The patient was a man forty-five years of age, of excellent physique, free from any taint of syphilis or hereditary disease. About five weeks previously he was seized, without any premonitory symptoms, with a headache, located chiefly in the temples. The following day the pain was worse, and was accompanied by a little chilliness and general malaise. Several times during this day he observed a dimness in the right eye. On the next day he was forced to go to bed by the severity of the pain in the head. On the fourth day he was totally blind, and experienced great pain in the eyeballs when moving them from side to side, but not when he moved them up and down. By the end of the week all pain in the head and eyes had disappeared, but the amaurosis persisted. Several careful ophthalmoscopic examinations revealed no abnormality. The pupils were dilated and but slightly responsive to light. Leeches were applied behind the ear, and iodide of potassium and solution of the perchloride of mercury were administered internally. His condition

remaining unchanged, Dr. Carter directed that the percuteur be applied daily for five minutes to the eyeballs and temples respectively. At the end of a week the patient was able to pick his way through the ward without assistance, and at the expiration of a month was able to read coarse print and to walk briskly through a crowded street without a guide. He was again submitted to an ophthalmoscopic examination, when it was discovered that he had commencing cataract in each eye. The author, while feeling no more certain that this lesion was a result of the treatment than that the restoration of sight was attributable to the same agency, is yet inclined to think that the rapidly successive taps on the globe of the eye so modified the structure of the lens as to lead to the production of cataract.

THE VARIATION AND DISAPPEARANCE OF CARDIAC MURMURS.—Dr. E. Hyla Greves writes in the *Liverpool Medico-Chirurgical Journal* for July, 1883, concerning the variations and changes so often observed in certain cardiac murmurs, dependent on definite organic lesions. He relates the histories of several cases, from a study of which he draws the following conclusions: 1. Although murmurs are among the most constant of the physical signs of heart disease, still their presence does not necessarily indicate the existence of incurable lesions, nor their absence that such lesions are not present. In forming a correct diagnosis and prognosis of any case, therefore, too much reliance must not be placed upon the presence or absence of murmurs, but other symptoms must receive careful consideration, for often on them alone is it possible to form a correct diagnosis. 2. The presystolic murmur of mitral stenosis, the most typical of all murmurs, occasionally disappears, the lesion still remaining. Mitral regurgitant murmurs, when due to simple relaxation of the heart's muscle, and dilatation of its cavities and orifices, as in chlorosis and general febrile conditions, in most cases completely disappear under appropriate treatment. 3. Tricuspid regurgitation is occasionally a temporary condition, due to bronchitis, etc., and when the cause is removed this condition is recovered from, as is indicated by the disappearance of the murmurs. 4. Aortic systolic murmurs, due to a permanent lesion at the aortic orifice, may undergo changes in their intensity, but never completely disappear. 5. Aortic diastolic murmurs in certain extremely rare cases have been known to disappear. In these cases a systolic aortic bruit is always present and remains persistent, thus indicating the existence of the lesion. 6. Pulmonary systolic murmurs are persistent when due to an organic lesion; but if non-organic, may disappear temporarily or permanently.

REMOVAL OF WENS WITHOUT THE KNIFE.—Dr. Carreaux removed a fatty tumor the size of a pigeon's egg from a young girl's foot by the following method, recommended to him by an old lady of his acquaintance. Frictions were made three times a day over the tumor by a mixture containing equal parts of hydrochloric acid and turpentine. The application was prolonged until the patient complained of a severe smarting. Then a plaster of hyoscyamus and mercurial ointment was spread over the part. The applications were made in this manner for eight or ten days, when signs of commencing inflammation appeared. They were then discontinued. A slight eschar formed at the most prominent part of the tumor, and being thrown off, left a small opening through which the contents of the tumor were gradually extruded. When the sac was empty the walls became adherent through inflammatory exudations, and the cure was complete in a month or six weeks. The author regards this method as of value when the patients dread the knife, and when the tumor is small, but advises against its employment in the case of large tumors, owing to the danger of septicæmia arising from suppurative inflammation of the walls of the sac.—*Journal de Médecine de Paris*, August 11, 1883.

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THE PREVALENCE OF TYPHOID FEVER.

THE Sanitary Superintendent, Dr. Walter DeF. Day, has submitted to the Board of Health a report on typhoid fever as it at present exists in this city, which, though brief, contains points worthy the careful attention alike of the medical profession and the public. It is gratifying to learn that this disease is now being carefully studied by the sanitary authorities with a view to its causation, the degree of its contagiousness, and the prophylactic measures best calculated to control its prevalence; and although the report now before us is only preliminary, the importance of care in the disinfecting and removal of excreta is plainly shown. Where, in repeated instances, there being no sanitary defects to account for it, five or six cases have occurred in one family coincident with neglect in the disinfecting and removal of excreta and soiled clothing—these having been allowed to remain for hours, throwing off their exhalations to be breathed by the sick and well housed together—there appears to have prevailed either lamentable ignorance or gross carelessness in the use of simple preventive measures. The theory of typhoid fever being communicated through the discharges from a patient suffering with the disease is now generally accepted, and on this subject the public should be informed. It is clearly the duty of every medical man to do something more than advise disinfection in a general way. He should explain fully just what is necessary to be done, and the best manner of doing it if he would accomplish without exception the entire object of his mission.

The increase in the number of cases of typhoid fever daily reported to the Sanitary Bureau during the present season is assuming a grave importance. We learn from Dr. Day's report that during the month of July there were 93 cases reported, against 40 for July, 1882, and in August there were 244, against 96 in August, 1882, while to all appearance we shall probably have during the month of September some 300 cases, against 117 during the corresponding month of last year.

The question very naturally arises, To what is due this rapid increase of the disease during a season otherwise remarkably healthy, and in a city where so much has been done to improve the sanitary condition of dwellings and their surroundings? We do not remember the time when our city has been in a better condition as regards general cleanliness than at present, and yet cases of what is especially regarded as a filth disease are daily

increasing in frequency. May it be in any degree due to the scarcity of water and a consequent deficiency in the flushing of our house-drains and sewers? Is our drinking-water or the milk we use contaminated with typhoid poison, or are there meteorological conditions which we do not fully understand influencing the course and type of disease?

We find upon inquiry that our city is not alone the object of this visitation. We hear of the same disease existing on all sides of us in different portions of the country. Of the 250 cases reported to the Sanitary Bureau from September 1st to the 24th inclusive, we learn that 35 came from the country, and from almost as many directions. We also learn that on railroad and other works in different portions of our State, where large numbers of laborers are employed who live in crowded barracks, typhoid fever has appeared in a very serious form.

These facts seem to point to the conclusion that this tendency to enteric affections is largely influenced by some general atmospheric or telluric causes rather than to local conditions, and yet when such general tendency exists, the disease, whatever it may be, is sure to locate and spread among localities where cleanliness is neglected and sanitary arrangements are defective. Hence the importance of careful and thorough inspections, not only of places where typhoid fever has appeared, but all places where sanitary defects may be found, with a view to correcting these defects and preventing disease. The physician, if he will, can do much toward aiding the Board of Health in this work, by promptly reporting his cases, and giving all necessary instructions to the family in each case, in regard to disinfectants and the general sanitary care of the sick and well. He cannot too strongly insist on the importance of absolute cleanliness, the immediate disinfecting and removal of all excreta, and if he is not familiar with the most approved disinfectants and the method of using them, he should lose no time in acquiring the requisite information. The activity previously displayed by the Board of Health in combating small-pox and typhus fever, and the success which attended its efforts, give us reason to hope that the problem how to stamp out typhoid may yet be solved.

THE MEDICAL COLLEGES AT FORT WAYNE.

WE have received a number of letters from reputable physicians living in Indiana, regarding the medical institutions at Fort Wayne, in that State.

It appears that there have been two colleges in that city, the Medical College of Fort Wayne and the Fort Wayne College of Medicine. The former was the older, and during its six years' existence it made some effort to establish a good standard of education. Its ambition and prosperity were cut short, however, by the establishment of the Fort Wayne College of Medicine. The new institution was rejected by the American Medical College Association on the ground that it "taught immorality." It was subsequently declared a nuisance by the Mayor's Court of the City of Fort Wayne. Following this, there appeared an annual announcement of the college in question, with an "especial notice," which is at once so ingenious in character and elastic in function that we print it entire:

"Inasmuch as this college is *not* a member of the 'Association of American Medical Colleges,' the Faculty desires to have it explicitly understood that it is in no respect bound by any of the regulations of that association; that our requirements for an admission to a final examination for the degree are entirely within the control and discretion of the faculty, and not governed by any arbitrary dicta; and that these requirements are substantially as follows, subject to any *desirable alteration*."

The opportunities for "desirable alterations" are then succinctly enumerated.

Before opposition like this the Medical College of Fort Wayne, to its credit be it said, collapsed, the loss not being probably a great one to the higher educational interests.

In the present status of affairs, it is unlikely that the earnest student of medicine will travel to Fort Wayne for educational purposes.

FISH AS FOOD, AND THE UNITED STATES FISH COMMISSION.

In a lecture recently delivered by Dr. B. W. Richardson, at a meeting convened by the British Fish League, the speaker said that the elements required for the sustentation of healthy life were the flesh-building, the force- or heat-producing, the mineral, and the watery. Most fish contained all these necessary constituents, some more than others. Pollack held all the necessary qualities very equally balanced. But the strongest and most nutritive fish was sturgeon, which equalled in all the essentials the best flesh meats. The speaker thought it was a question whether fish could not be made generally as nutritive as flesh meats, and he suggested that the Government should institute an analytical commission on the subject.

We have sometimes wondered why the United States Fish Commission, with its numerous corps of learned professors, has not made some careful investigations into the exact food value of fish. Fish is certainly not so good a food as flesh, and never can be entirely substituted for it. It has more water than the ordinary meats, or than game, and contains more inorganic salts in proportion to the solids than flesh. Further, it has a small amount of non-nitrogenous matters, and its nutritive ratio is as 1.2 to 1, when the ratio in normal diet is about as 1 to 3½, and the ratio in beef is as 1 to 1½.

According to Landois, the nutritive constituents of the different kinds of foods are as follows :

	Beef.	Pork.	Fowl.	Fish.	Hens' Eggs.	Wheat Bread.
Water.....	62.	55.	73.	76.	73.5	41.3
Albumen.....	12.	6.	19.5	12.	13.5	6.3
Albuminoids.....	3.	5.	1.3	4.		
Non-nitrogenous....	20.5	33.	4.7	6.	12.	51.
Salts.....	2.5	1.	1.3	2.	1.	1.4

The analysis given of fish, however, can only be considered to represent a few kinds. There are great differences in food value among the various forms of fish. Some accurate chemical analyses would be of great interest in studying the question of food fishes. It is very well agreed that a fish diet may cause disease as well as support life, that some tribes seem to degenerate and others to thrive upon this kind of food.

HOW BEQUESTS TO HOSPITALS MAY BE DIVERTED
A CURIOUS case has just been decided in Chicago adversely to the claims of the Woman's Hospital of the State of Illinois, and the Chicago Hospital for Women and Children, and aside from this point, which would make it interesting to medical men, it is remarkable as illustrating the fact that the intentions of testators are often absolutely frustrated.

In 1876 Miss Julia R. Newberry died in Chicago, leaving a will, in which was the following provision: "In event I die unmarried, leaving my mother surviving, I devise and bequeath to her all my property, both real and personal, of every kind and nature, upon the express condition, however, that she devise by will, to be executed before receiving this bequest, so much thereof as shall remain undisposed of or unspent at the time of her decease, to such charitable institution for women in said city of Chicago as she may select." After the death of Miss Newberry, her mother refused to take the property subject to this condition, saying that this refusal made the will of no account, and claiming the property as the only heir-at-law.

Under these circumstances the Woman's Hospital of the State of Illinois, and the Chicago Hospital for Women and Children, each claimed that they were properly designated by Miss Newberry in her will, and asked that a trust be declared in the property in their favor.

Upon the trial the Court did not decide as to the legality of the claim of Mrs. Newberry, but decided that the hospitals had no rights, as the making of a will in their favor was a condition precedent to Mrs. Newberry's taking under the will, and as she refused to take there was no ground upon which to rest their claim.

It was also held that the bequest in favor of some institution for women was uncertain and could not be upheld, for it was a matter of doubt whether there would be any property left at Mrs. Newberry's death. The whole case is an illustration of the uncertainty which hangs about even an apparently plain provision in a will.

THE PROPHYLACTIC WORTHLESSNESS OF COPPER.

APROPOS of some recent correspondence on a theory advanced by Dr. Burq concerning the immunity of workers in copper from contagious diseases, it may be of interest to cite the views of Dr. Bailly upon the same subject. At a late meeting of the Academy of Medicine of Paris, this gentleman protested in vigorous terms against the theory of Dr. Burq, and denied that there was any prophylactic virtue at all in copper. In fact, he seemed to regard it as an excellent microbe stimulant, and to incline to the opinion that these invisible but deadly organisms waxed fat and strong under its tonic influence. He stated that at Bornel and Ercuis, in the valley of the Esche, and at the neighboring hamlet of Chambly more than five hundred workmen are employed in the manufacture of various articles from *alferide*, an alloy containing ninety per cent. of copper. Yet typhoid fever is almost endemic in this valley, while the neighboring plateau, where Chambly is situated, is practically exempt. Out of fifty-three cases of this disease seen by M. Bailly in this locality, twenty-six occurred among the copper-workers, and of four deaths, all were

among the workmen, who should, according to M. Burq, have been protected by the nature of their occupation. Similar facts were observed, he alleged, in the case of other diseases. In 1832 Chambly was decimated by the cholera, while Bornel, lying but a short distance away, escaped the visitation entirely. This would, at first sight, seem to be an argument in favor of the prophylactic value of copper; but, unfortunately for the theory, the *alfénde* works were not then in existence.

The communication, made by M. Burq to the Academy of Medicine a short time ago, attracted considerable attention, and his conclusions were widely copied by the public press on both sides of the water. The facts were convincing as far as they went, and the theory was so fascinating in its simplicity, and was fathered by so eminent an authority, that it speedily won its way to the hearts, if not the intellect of the people. It would be so easy to wear a plate of copper under the clothing, and then bid defiance to all epidemics. And the practice would, furthermore, have an immense advantage over that of carrying a buckeye in the pocket as a preventive of rheumatism, for it would rest on a scientific basis, and would have the very best medical endorsement. Indeed we are surprised that the vacuum in the advertising columns of our religious contemporaries, caused by Miss Lydia Pinkham's early demise, has not already been filled by testimonials of wonderful escapes from the measles of children wearing the copper pad. But we have not long to wait before the copper pad appears, or else our faith in Yankee enterprise is vain. M. Bailly comes too late with his cold, hard facts, and while perhaps he may succeed in dismounting Dr. Burq from his cupric hobby, he will never be able to convince the world at large that he has done so.

A DANIEL COME TO JUDGMENT.

A GREAT reformer has arisen; an instructor of purblind humanity in the ways of correct hygiene; a rebuker of his medical brethren. *The Popular Science Monthly*, supremely devoted to the inculcation of scientific truths, and the promoter of scientific habits of thought, is the medium whereby the lucubrations of this new apostle of medicine (as it should be) are communicated to the human race.

Our professor of the new gospel of *physic*—pardon us, we do not mean the nasty stuff which purges, and which he abhors, but the *art of healing*—is a vegetarian. Apparently under no circumstances and in no conditions would he recommend an invalid to eat meat. Here he has almost the entire weight of the medical profession against him, and the best physiologists; founded as are their beliefs on an experience which is overwhelming. He is nothing daunted by this, however, and advises even the debilitated and the consumptive to eschew a flesh diet.

Our hygienist is, moreover, bitterly opposed to all medicines. For the asthmatic a "cold bath" is the most reliable remedy in the attack; no internal medication should be used. The dyspeptic should under no circum-

stances resort to drugs, "which only momentarily help one disease by inducing another." We are pleased to see in the last *Popular Science Monthly* quite an effective criticism on this therapeutic nonsense, by Dr. J. R. Black. "Only a person of superficial knowledge," says Dr. Black, "of strong physique, and bigoted withal, who judges all others by his own personal equation, could discourse thus. Men and women will eat and drink, either with or without knowledge, what they ought not, and as a consequence the stomach rebels, and intense suffering ensues. Only a short time since I saw a woman who had been writhing every few minutes with terrible gastric cramps for ten hours. Clearly it was an attack of acute dyspepsia. To the suggestion of an emetic she replied that a vomit nearly killed her. But another paroxysm of cramp led her to exclaim, 'Well, anything for relief!' In a few minutes she threw up nearly a gallon of fermenting food that filled her chamber with the fumes of a fetid sourness worse than that of an August swill-tub. Half an hour afterward she fell into a calm sleep. If humans will eat and drink what they ought not, eating not for need but for pleasure, not as a means but an end, the physician's duty is clearly to relieve suffering by the removal of its immediate cause, as by an emetic or cathartic." To this argument, illustrated as it is by an incident which happens in the every-day experience of physicians, Dr. Oswald makes no effective reply. In fact, no reply is possible.

So in regard to the treatment of constipation. It is not true that all our patients can attain a cure of this morbid condition by *dieting*. Not all our consumptives are in a condition, even in the early stages, to start off on an overland journey afoot to California!

As for the treatment of spasmodic asthma, it is not the experience of physicians that the inhalation of a little stramonium smoke produces after effects "worse than the disease." If any have seen the "vertigo," "heart spasms," and the "violent headaches," which Dr. Oswald describes, we certainly are strangers to such symptoms. Nor in practice do we think that it would generally be easy to induce our aged asthmatic patients to try the cold douche, albeit the best remedy, according to our writer. It would be an easy matter to review all of Dr. Oswald's writings and mark here, "fallacy;" there, "crude and not proven;" there, "impracticable."

There is much in these papers that is clever and interesting, and there are important hygienic lessons, but all is sadly marred by the dogmatical and paradoxical temperament of the writer, who is nothing if not a little "cranky." If the latter term seem a little harsh, we defend ourselves by saying once for all that we deem any man a "crank" who vehemently opposes the common-sense judgments and experience of mankind.

THE ILLINOIS HEALTH BOARD AND THE AMERICAN MEDICAL ASSOCIATION.

In the last quarterly report of the Illinois Health Board the Secretary, Dr. Rauch, gives an account of his experience at the meeting of the American Medical Association, which, as he says, he deemed it his duty for several reasons to attend.

The reasons for his attendance were made manifest by a discussion which occurred in the section on State Med-

¹ See Forget's Physiology, vol. i., page 104, for an exhaustive study of this subject, and a fair statement of the advantages of a mixed over a purely vegetable dietary. The facts adduced are startling and unanswerable.

icine. At the conclusion of a paper by Dr. Johnson, members inquired how the reader could be a member of a mixed board and also of the American Medical Association. A spirited discussion of the question ensued, the propounders of the query not only holding that it was wholly inconsistent with the Code of Ethics of the American Medical Association, and that no one claiming allegiance to it could engage in licensing homœopaths and eclectics to practice without forfeiting its privileges, but implying that the tendency of the work of a board so composed was injurious professionally. Other members of the section strenuously opposed these views, and cited the admitted results of the board's labors as a sufficient refutation of the implied strictures. The chairman of the section, Dr. Pratt, finally disposed of the technical question by referring to the formal action of the Association when the same point was sought to be made against himself. Some years ago, in the preparation of a bill similar to the Illinois Medical Practice Act, he had, he said, met in a convention of representatives of the different schools in Michigan, including homœopaths and eclectics. For this he had been arraigned on a charge of violation of the Code. The Association then held that the Code of Ethics could not be violated by any action of a member which was necessary to the discharge of an official duty under the law, and that the fact of membership on a representative board did not come within the purview of the Code of the Association governing the professional relations of medical practitioners.

The decision of course settled the case of Drs. Johnson and Rauch. But it is apparent that the decision was really a concession forced upon the Association, and that it is not consistent with the stand which that body claims to assume. For what right has a regular Association physician to take a position where his official duties force him into consultation and communion with homœopaths! And one might very easily ask why the Association, if it excuses Dr. Rauch, should not also excuse a physician who consults with homœopaths in the discharge of a professional duty under the moral law, which many have thought more obligatory than the enactments of legislatures.

NOW IT IS FIBRINE AND NOT FAT-CRYSTALS.—Dr. R. Gregg, of Buffalo, has been conducting some experiments on bacteria, and publishes the following remarkable summary of his labors: By boiling a quantity of healthy blood he obtained all the forms of bacteria. Then, with some pure fibrine obtained from a washed clot of blood and boiling it, proving that it was the threads of fibrine broken up into pieces and granules that gave the bacteria, the same results were obtained. Next, some blood was obtained and rotted under warmth and closely watched for two months, and here again the forms were obtained that the fresh-boiled blood gave. From these experiments Dr. Gregg concludes that all the bacteria of disease are forms of fibrine, and for the general good requests all investigators to repeat the experimental work and report to the public the results of such investigations.

PROFESSOR BUDGE, of Greifswald, has recently celebrated his fiftieth jubilee. Numerous honors and congratulations were bestowed upon him.

News of the Week.

BIRTHS AND DEATHS IN NEW YORK CITY AND ITS TENEMENT HOUSES.—Colonel Clark, Secretary of the City Health Board, made a statement recently before a Committee of the Legislature with reference to the excess of deaths over births in this city. He said the reason the statistics of deaths appeared to be so much larger proportionately than those of births was because there was no system by which a perfect registration of the births in the city could be obtained, and that one-third of the births at least were not registered. This fact accounted for the erroneous statement, made before the committee and frequently published, that the number of deaths exceeded the number of births in the city. The tenement-house population of the city—that is, the number living in buildings occupied by four or more families—aggregated eight hundred thousand, or a trifle more than one-half the entire population. The average number of tenement houses erected annually during the past three years was fifteen hundred. The city in its sanitary government was in advance of any city in the world, and it was also freer from small-pox and other contagious diseases than any other large city, and for that reason. Tenement houses were not so healthy as they might be, but their condition had been very greatly improved during the past few years, as property-owners found it beneficial to keep them in good condition, and now co-operated very generally with the Health Department authorities. The rules adopted here in relation to the plumbing of new buildings were now being adopted very generally in all the large cities of the country.

PROFESSOR ZEISSE, of Vienna, Physician to the General Hospital, has been raised to the rank of nobility, upon the occasion of his retirement from active work. Zeisse has made many contributions to syphilology.

DR. BOIS-REYMOND'S JUBILEE.—The twenty-fifth anniversary of Dr. Bois-Reymond's Professorship will be held in Berlin, October 25th. A bust of the eminent professor will be unveiled and a large number of his pupils will present commemorative scientific papers, which will appear in his *Archives*, forming a Jubilee volume.

KAIRIN, THE NEW ANTI-PYRETIC.—This drug has finally been put upon the market by a German firm, the price being 200 marks per kilogram, which is very much cheaper than quinine. Dr. Knipping, of Neuwied, has reported a successful experience with kairin in a case of puerperal fever.

MURDER OF A WESTERN PHYSICIAN.—Dr. A. B. McKune, of Council Bluffs, Ia., was shot and instantly killed by one Dr. E. D. Cross, of the same city. Dr. McKune was a well-known physician, member of the State and local Medical Societies.

DEATH FROM AN OVERDOSE OF MORPHINE.—Joseph W. Pilkington, a medical student, died a few days ago in this city from morphine poisoning. He had been in the habit of taking morphine recklessly to control a malarial cephalalgia from which he frequently suffered, and it is supposed that he took too large a dose at last. It is not thought that the self-destruction was intentional, as there

was no apparent motive for suicide. Mr. Pilkington was twenty-two years old. He was a student in the Bellevue Hospital Medical College, his home was in Sedalia, Missouri.

SMALL-POX is reported to be prevailing to a large extent among the laborers on the Georgian section of the Canadian Railroad.

AN ANTI-CHOLERA PILL.—Dr. Fonquet, of Cairo, asserts that the following prescription is efficacious as a prophylactic against cholera :

R. Asafetid.,
Opii,
Camphor,
Papav. niger....., āā .06 gramme.
M. Ft. one pill.

THE MICROCOCCI OF CHOLERA.—Dr. Stephen Kartulis, Physician to the Greek Hospital at Alexandria, has found minute round and oval cocco-bacteria in the blood and discharges of cholera patients, also in some of the filthy drinking-water used in the infected districts.

DR. TOMSA, of Kiew, has been appointed Professor of Physiology at Prague.

AUSTRIA has in its seven universities 2,418 medical students. United States has in about ninety medical colleges some ten thousand students.

THE RUSSIAN CONGRESS OF PHYSICIANS AND NATURALISTS held its annual session at Odessa, beginning August 18th.

THE PARASITE OF YELLOW FEVER.—Dr. Dominga Frieze, a Brazilian physician, thinks that he has discovered a parasite in the blood of yellow fever which is the cause of the disease. Animals inoculated with it died of yellow fever.

THE COLLECTIVE INVESTIGATION OF DISEASE.—The collective method of investigating disease, which has been pursued with so much earnestness in England, has been adopted by the Berlin Society for Internal Medicine.

THE NATIONAL LONGEVITY UNION is the modest title of a sanitary society, which, says the *Medical and Surgical Reporter*, has been recently organized in Erie, Pa.

MEDICINE IN NEBRASKA.—We have received a catalogue containing the annual announcement of a new medical college at Lincoln, Neb. The educational opportunities are most comprehensive and inviting. There is no charge for tuition, and there is (or was) a regular, a homœopathic, and an eclectic faculty.

THREATENED EPIDEMIC OF TYPHOID FEVER.—The number of cases of typhoid fever in this city continues to increase weekly. The possibility of an epidemic is to be borne in mind.

DR. N. SAPOLSKI, an obstetrician, of Moscow, died recently of septicæmia contracted while attending a case of childbirth. He was one of the editors of the *Medizinskoje Obosrenje*, a monthly journal published in that city.

INSPECTION OF FURNISHED ROOMS IN PARIS.—The police department of Paris has, at the request of the Municipal Council, instituted a service of inspection of furnished lodgings. Five regular inspectors and four

substitutes have been appointed at a salary of \$600 per annum for the former and \$25 per month for the latter. Each inspector must, on application, furnish a report upon the healthfulness of any lodging within forty-eight hours after the application is received. It is not stated whether the inspectors are medical men or not.

NIGHT MEDICAL SERVICE IN LEIPZIG.—The city of Leipzig has voted a yearly grant of \$250 to provide for a night medical service. The fee, to be paid by the city in case the patient is unable to do so, is set at the modest sum of \$1.50.

THE QUESTION OF CREMATION IN PARIS. — Acting upon the report presented by M. Brouardel, the Conseil d'Hygiène de la Seine has rejected the proposition to burn the bodies of those dying in time of epidemics, especially in an epidemic of cholera. The report stated that the interests of justice, as well as those of persons unjustly accused of poisoning, would be seriously compromised by the adoption of the practice of cremation, especially in the case of a cholera epidemic. It was said, further, that cremation would necessitate more handling of the bodies, and would therefore expose the living to greater danger up to the moment that the corpse was put into the furnace, than would interment. These objections were thought to overrule the obvious advantages of this method of the disposal of the dead, and the proposition was therefore rejected.

A RIVAL MEDICAL COLLEGE IN BEYROUTH. — The French have for some time been seeking to quietly extend their influence in Syria, with the view of ultimately assuming a protectorate over that country in the probable event of a disruption of the Ottoman Empire in the near future. As a further step in this plan, they are now about to establish a medical school with French professors in Beyrouth. One hundred and fifty thousand francs have already been expended in the acquisition of a suitable building and in the establishment of a chemical laboratory with all the necessary apparatus. The school is under the control of the French Government, and the professors have been selected from the Faculté de Médecine of Paris. The first session will commence in October.

WHOLESALE POISONING OF CONVICTS.—Over one hundred convicts in the Connecticut State Prison at Wethersfield were poisoned recently, it is supposed by eating some corned lamb. All those who ate of the lamb were seized with cramps and vomiting, while none were attacked who had not eaten the meat. The lamb was purchased of a Hartford butcher, and is thought to have been poisoned after leaving his shop. Ptomaines were probably the cause of the trouble. An analysis is to be made of both cooked and uncooked samples of the meat.

TYPHOID FEVER IN NEW YORK.—The city sanitary superintendent has made a report regarding the prevalence of typhoid fever in this city. He states that up to September 1st of this year, there were 539 cases, against 304 for the corresponding period last year. The disease is not confined to any particular locality, but is rather distributed generally over the city. Dr. Day calls attention to the neglect of proper disinfection in typhoid fever, as shown by the reports of the inspectors. The vital point in the sanitary treatment of typhoid fever is the effi-

cient disinfection of the clothing, bedding, etc., and whatever the board can do to impress this upon the medical profession of the city, particularly at this time, will be an important factor in controlling the disease during the approaching winter.

TYPHOID FEVER IN THE FRENCH ARMY.—An epidemic of typhoid fever of severe type has appeared in the military barracks of Mâcon, in the department of Saône et Loire, situated about forty miles from Lyons. The regiment quartered there has been transferred to camp at Cluny.

NOMINATIONS FOR OFFICERS OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At the stated meeting held Monday evening, September 24th, the following nominations for officers for the ensuing year were made: Dr. Austin Flint, Jr., nominated as uncompromising adherents to the Code of Ethics of the American Medical Association, T. Gaillard Thomas, for President; Charles A. Leale, for Vice-President; E. A. Judson, for Secretary; P. Brynberg Porter, for Assistant Secretary; Henry D. Nicoll, for Treasurer; and Drs. Charles McBurney, Richard H. Derby, Charles S. Wood, Charles Hitchcock, and Thomas H. Burchard, for Censors.

Dr. F. R. Sturgis nominated for President Dr. S. Oakley Vander Poel, who was willing to represent those who were in favor of sustaining the State Medical Society in its action concerning the Code. Other nominations were made as follows: for Vice-President, Dr. Andrew H. Smith; Secretary, Dr. Wesley M. Carpenter; Assistant Secretary, Charles H. Avery; Treasurer, Orlando B. Douglas; and for Censors, Drs. F. R. Sturgis, David Webster, Daniel Lewis, F. R. S. Drake, and Joseph W. Howe.

SIR WILLIAM MACCORMAC and **Dr. Lyon Playfair** are visiting this country.

A CANADIAN PHYSICIAN TO BE KNIGHTED.—It is understood that Dr. Grant, who has been the personal medical adviser of Princess Louise during her sojourn in Canada, will be knighted before the departure of the Princess for England.

YELLOW FEVER.—During the week ended September 15th there were eighteen deaths from yellow fever at Havana. Mr. E. E. White, United States Consular Agent for Ponce, Porto Rico, reports yellow fever prevailing in that city, especially among the foreign residents. Acting Assistant-Surgeon J. M. Main, of the Marine Hospital Service, reports one case of yellow fever in the City of Mexico, being an imported case. This, he states, is the second case which has occurred in the history of the city, the first case having occurred in 1865, a correspondent of the New York *Herald*, who died from fever contracted in Vera Cruz.

CHOLERA.—The Consul-General at Calcutta reports to the State Department that there were eleven deaths from cholera in Calcutta during the week ended August 4th, and twelve deaths during the week ended August 11, 1883.

During the week ended August 18, 1883, there was one death from cholera at Flushing, Netherlands.

In order to protect the Empire from introducing cholera now spreading in Egypt, the following measures have been adopted by the Government of Russia: In

the ports of the Black Sea, beginning June 29th: 1, to keep under quarantine for two weeks all the vessels arriving at any Black Sea port which have no certificate showing that they are safe from cholera; 2, to keep under quarantine for a week all the vessels coming, with certificate of health, from the Straits of Constantinople and from the Anatoly Coast, and also those having been under quarantine in foreign ports; and 3, to have quarantine exclusively at Odessa, Kertch, Theodosia, and Batum. In the Baltic ports, beginning July 14th: 1, not to admit to our Baltic ports any vessel coming directly from Egypt, which will have no certificate showing that they have been submitted to quarantine on their way; 2, to submit to sanitary investigation all the vessels coming from the other places of the northern coast of Africa; and 3, to submit to quarantine for six days all the vessels mentioned above in case of any doubt.

NEWS FROM PASTEUR.—M. Pasteur has sent a despatch to M. Dumas, stating that the commission sent to study the cholera in Egypt has made some very interesting observations of a novel character, and which tend to support his preconceived theories. He promises to communicate the details by letter.

PRINCE BISMARCK AND HIS MEDICAL ADVISERS.—An item is going the rounds, taken from the *Allgemeine Wiener Medicinische Zeitung*, which shows the discomforts to medical men of waiting upon German princes. It appears that Bismarck has never cherished any feelings of regard for his medical attendants; at any rate, he has never given expression to them, and it has been his constant habit to dismiss them whenever the fancy took him. It has often enough happened that he has discharged a practitioner of ordinary medicine to take up with a "homœopath," and sometimes to have both kinds in attendance at the same time. As he has said, "The method of treatment is of less consequence to him than the result." Sometimes he has fixed a time for his attendant within which he has required to be cured, or at least rendered fit for work. If the result has met the requirement, the patient has been content, but he has never had a word of acknowledgment or thanks for his medical adviser. When he was Deputy in Frankfurt he was attended by the then Regimentsarzt, now Director of the Imperial Health Office, Dr. Struck. When he was first in Friedrichsruh, Dr. Cohn, of Hamburg, was his attendant. When in Varzin he had a third. In Kissingen he had consulted Dr. Diruf. His wife is a believer in homœopathy, as well as a trafficker in a nostrum (made from magpies' wings) for the cure of epilepsy, and for some reason—perhaps influenced by his wife—he was for several years under treatment by professors of the "School of Homœopathy." Three years ago he returned to the rationalists, and consulted Professor Frerichs, whom he had consulted many years before; but within a short time he had made another change, and called in the professional man under whose care he now is. The present favorite is a Dr. Schwenningen, of Munich. This individual is a young man, thirty-three years of age, who, starting with brilliant prospects, has already succeeded in shutting himself out from relationships with most respectable families in consequence of

some indiscretion in connection with the wife of another medical man, one result of which was that both parties suffered a term of imprisonment. Bismarck, however, requires only medicine from his doctor, and the young man found his moral, or immoral, behavior no bar to the Prince's favor.

Bismarck suffers from sciatica and tic-douloureux; also from various gastric troubles, the result of his indiscretions.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its eleventh annual meeting at Detroit, Michigan, November 13th, 14th, 15th, and 16th. The following are the subjects chosen for special consideration:

1. *Malaria*.—Its etiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension etc.

2. *Foods*.—Their adulterations; healthy or deleterious modes of preservation and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

3. *Vital Statistics*.—Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

4. *The Control and Removal of all Decomposable Material from Households*.—The mechanical laws, constructions, and appliances relative thereto. The construction of all inside pipes and their connections, their traps and siphonage, flushing, ventilation. How they shall be connected with out-door receptacles and yet be free from ill effect.

Reviews and Notices.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL, IN TREATISES BY VARIOUS AUTHORS. Edited by T. A. HOLMES, M.A., Cantab., Surgeon to St. George's Hospital, and J. W. HULKE, F.R.S., Surgeon to the Middlesex Hospital. Third English Edition. In three vols. New York: Wm. Wood & Co. 1883.

With the lapse of twelve years since the last edition of Holmes' System, numerous and important advances have been made in the science and practice of surgery. Within the period named new principles have been established and many questions heretofore considered of little moment in their bearings upon the salvation of life and limb have invited such extended discussion and called forth so many facts of experience that the conclusions based thereon have virtually marked the points of new and radical departures in treatment. Among these advances we may notice the influence which the antiseptic treatment of wounds has had upon the statistics of all operations, but particularly upon those in dangerous localities, and usually believed to be attended with extraordinary risks. Whatever may be the belief in the influence of antiseptics, in whole or in part, every progressive surgeon has learned the value of the cardinal principles of cleanliness, local disinfection, and free drainage. In the volumes before us these principles are duly considered, and the different points in dispute are very judiciously presented. The same may be said regarding other subjects of equal importance in their bearings on surgical operation. Those, for instance, connected with abdominal

tumors and other affections of the abdominal cavity, nephrectomy, rapid lithotripsy, operations upon joints; the pathology and treatment of injuries of the spine, and also the exhaustive discussion of the pathology of tumors, based more particularly upon the labors of the German pathologists, as well as a critical examination of the different advanced theories concerning the relations of septicæmia to pyæmia. Osteotomy as an operative procedure in the treatment of deformities is treated of at length, making, as it does, a new and decided advance over the more conservative and less effective methods formerly in vogue. So much for a general review of the marks of progress in an art as shown in this masterpiece.

The main features of the work are preserved, and the general arrangement is not materially altered. The several parts are naturally classified in regard not only to regions, but according to the apparatuses affected, giving the best possible opportunities for the thorough study of a given subject from a special standpoint. Many of the older authors have passed away, but in each instance their work remains and is brought up by accomplished editors to the present standard of positive advanced knowledge. It has been a pride with each author to do his part as well as possible, and nothing seems to be wanting to that end, taking into account the length of time required for the publication of the book and making allowance for such new facts as may have appeared in the meantime. Thus it naturally happens that the essay on gunshot injuries does not embody the experience of the late Egyptian campaign, a matter of no great importance, however, considering the other data upon which the article is founded. The latter remark would hardly apply in the same degree to the recent views on injuries of the back, which have been unavoidably omitted, and also as to many advances in the treatment of fractures, the remedying of deformities, and many operative methods which are peculiarly American. But the work as a whole, claiming as it does to represent the English school of surgery, is complete in every respect, and really stands without a rival. It is published in three volumes, instead of four as formerly, and presents an attractive typographical appearance. As it stands it represents the original and latest Holmes' System of Surgery, and contains the most recent views of the many distinguished authors who first contributed to its pages.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series. Vol. VI., 8vo, pp. 446. Philadelphia: P. Blakiston, Son & Co. 1883.

THE sixth volume of these transactions is unusually full of good scientific material and well represents the amount of working force in the membership of the College. It contains thirty-one original papers on different topics connected with medicine and surgery; all have a distinct practical bearing. It is published in its usual handsome style, and is a credit to the typographical art.

TRAINING SCHOOLS FOR NURSES, WITH NOTES OF TWENTY-TWO SCHOOLS. By W. G. THOMPSON, M.D. New York: G. P. Putnam's Sons. 1883.

THIS small pocket manual contains a general review of the nursing system in this country and abroad, with an account of the different American schools in active operation. It contains much useful information for all such as are interested in nurse-training.

THE PHYSICIAN HIMSELF AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS. By D. W. CATHELL, M.D. Third Edition. 8vo, pp. 208. Baltimore: Cushing & Bailey. 1883.

THIS readable and instructive book has, in a very short space of time, advanced to its third edition. It is full of valuable suggestions regarding the proper pecuniary and social relations which should be maintained between physician and patient. Every physician who is in doubt as to the course he should pursue in obtaining business and keeping it, will read the work with much profit.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, September 18, 19, and 20, 1883.

(Concluded from p. 328.)

THURSDAY, SEPTEMBER 20TH—THIRD DAY—MORNING SESSION.

THE Society was called to order by the President.

The first paper was by DR. H. F. CAMPBELL, of Augusta, Ga., on

MENSTRUATION AFTER EXTIRPATION OF THE OVARIES.

By general consent the influence of the ovaries in menstruation has long been recognized, and there was nothing in his paper which indicated that he would deprive them of their very important influence in connection with this function. Since the introduction of the operation of removal of diseased ovaries, it has been noticed that menstruation continues in some cases, and this has been variously attributed to habit, periodical plethora, and more recently to the fact that in removal of the ovaries the Fallopian tubes are not removed, and therefore the excitor of the menstrual nîsus remains. The ovaries, unquestionably, are the ordinary exciters of menstruation. But are they the only exciters to activity in the genital organs? Certain cases were cited in which menstruation, lactation, etc., had been excited by irritation at some remote point, as from a parotiditis, suckling in the unimpregnated woman, etc. These cases showed that certain influences acting through the nervous system were efficient agents in establishing uterine and ovarian action. Pain follows amputation, not in the stump but in some portion of the part amputated, and because the nerve-centre has been adjusted and adapted to originating such a sensation, and may not periodical congestion and revival of the function of menstruation be the result of an original endowment of the nervous system continued for a time, although the organs which are ordinarily the exciters have been removed?

DR. GOODELL, of Philadelphia, was disposed to accept the view that this bloody discharge which, in some cases, follows removal of the ovaries, may depend occasionally upon irritation of some nervous centre. He had not removed both ovaries without forced menstruation appearing within the first *five* days, and he had attributed this to irritation set up by enclosed nerves. He was inclined to think that some of the ovarian structure was left behind in those cases in which so-called menstruation continued for any great length of time. It is often difficult to get the stump of the pedicle down sufficiently low not to leave ovarian structure.

DR. EMMET reported a case in which he removed both tubes and ovaries from a woman at the Woman's Hospital, eighteen months ago, and she has menstruated thirteen times regularly since the operation; the only change in the function being that the flow has continued for only about three days, whereas before the operation it lasted a much longer time.

DR. GARRIGUES, of New York, said that in studying these cases the exception should always be borne in mind—namely, the possibility of the existence of three ovaries. One exceedingly interesting case was on record, where, after removal of two ovaries, the woman bore a child.

DR. T. GAILLARD THOMAS, of New York, said he had not much to say on this subject for several reasons. First, scientific men have not reached an absolute decision concerning the influence of removal of the ovaries on the cessation of menstruation, nor as to the influence of the ovaries in the production of menstruation. He had removed both ovaries between fifty and sixty times, had followed the cases as well as possible, and had the im-

pression left on his mind that when the ovaries are present menstruation is the rule, and after they have been removed menstruation is the exception. He regarded the bloody discharge which occurs after removal of both ovaries, as a metrostaxis. He did not recollect to have ever seen a case in which regular menstruation occurred for thirteen months after removal of both ovaries. In his cases the bloody discharge had been irregular, almost invariably of the character of a metrostaxis, usually disappearing after a short time, may continue five or six months, and in rare instances for one or two years. He had performed Tait's operation ten or twelve times, and there had been no difference in the result from that which followed Battey's operation. All the ovarian tissue is more likely to be removed in Tait's than in Battey's operation, and that is the probable reason why menstruation occurs less frequently after the former than after the latter. He thought Dr. Emmet's case might be accounted for as Dr. Garrigues had suggested, and sustained the suggestion by referring to a remarkable case occurring under his own observation, where he found a third ovary, having removed two, and allowed it to remain. He did not believe that the Fallopian tubes have anything to do with the excitation of menstruation; but with the performance of the function they have much to do. He had had but a single case in which there was a paroxysmal discharge of blood from the uterus after removal of both ovaries, and in that instance there was no such regular intervals as twenty-eight days between the times of the discharge, and there were none of the regular symptoms of menstruation.

DR. MANN, of Buffalo, said this bloody discharge might be explained, occasionally, at least, by the existence of some disease of the uterus or vagina overlooked. He had had five cases in which both ovaries were removed, and in one there was metrostaxis, which continued for some time, and finally when he again saw the patient in consultation an examination revealed distinct cancer of the vagina.

DR. CAMPBELL said, in closing the discussion, that he did not wish to deny that the ovaries are the common exciters of menstruation, but merely to suggest may it not, after removal of the ovaries, be due to other causes than habit, periodical plethora, or the fact that the Fallopian tubes are not removed, and depend upon the action of some nerve-centre endowed to act, and continuing to act, for the performance of a certain function although the chief organs through which it manifests this power have been removed?

The Society then adjourned to meet at 3 P.M.

THIRD DAY—AFTERNOON SESSION.

The Society was called to order by the President, and the first paper was read by DR. WILLIAM H. BYFORD, of Chicago, entitled

REMARKS ON CHRONIC ABSCESS OF THE PELVIS.

The author of the paper spoke first of the different situations in which pelvic abscess may occur, the most common being in the connective tissue of the broad ligaments. He then called attention to the directions in which the pus is likely to discharge, the impediments with which it may meet, and which may change entirely the course of the discharge; to the quality of pus, laudable at first, but when the abscess becomes chronic containing an admixture of serum and blood. Dr. Byford studied with minuteness and detail the changes which occur in the lining membrane of a chronic pelvic abscess, at first like that of an external ulceration and finally the cavity is lined with cicatricial membrane, and with the loss of the granulation character of the inner surface pus is no longer produced. The changes occurring in the lining membrane might afford an indication for treatment. When in the granulating condition the granulations may become exuberant, and form fungoid masses,

and if these redundant masses are not removed they will give rise to and maintain pyæmic fever. In a chronic abscess, therefore, remove all these masses by scraping the inner surface with a dull curette or finger-nail; and there is no danger in this procedure, because the walls of the abscess are usually quite thick. A case, the notes of which had been furnished by Dr. D. T. Nelson. Adjunct Professor of Gynecology, was then reported, in which this method of treatment was adopted with excellent results. Dr. Byford discussed at some length the methods of opening these abscesses, the difficulties encountered and the liability to refilling unless the cavity or cavities have a free opening for the exit of the pus.

DR. T. G. THOMAS, of New York, thought Dr. Byford had rendered great service by examining minutely the internal surface of these cavities and following out the peculiar changes which take place. There was one point to which he wished to refer in connection with the subject in general, and that was concerning the propriety of *searching* for these abscesses. This point had been brought forward by the late Dr. Brickall, Dr. Mundé, and Dr. Lyman. He wished simply to say on this point, that he believed there is no more dangerous process in gynecology than to go seeking for these collections of pus. If it can be ascertained by conjoined manipulation that there is pretty positively pus in the pelvic areolar tissue, if we know exactly where to look for it, and if it can be distinctly discovered, then, and only then, should this exploration be made; but made without pretty positive knowledge on this point, very evil results will follow. He had employed the aspirator only as a means of diagnosis, and regarded it as a bad method of treatment, because a *free* opening should be made. His routine practice had come to be to cut into the abscess freely with Sims' long knife, and insert a small glass tube provided with a perforated flange so that it can be secured in position with sutures. When the abscess is large he stuffs the cavity with tow saturated with iodoform, repeats it in twenty-four hours, and thus goes on until cure is effected. He had not had any experience in the use of the curette, as recommended by Dr. Byford.

DR. GOODELL, of Philadelphia, regarded the method of treatment by the use of the curette as novel, but thought it might be an admirable way of effecting a cure. In the majority of instances the cases of pelvic abscesses he saw were of long standing, and there were more or less of fistulous openings. His method of treatment was first, if there is an opening from above, to pass in a long uterine sound and see if there can be established a communication with the vagina. If so, an opening is made, a drainage-tube inserted, and in that way he had succeeded in curing many patients. Other plans which he had tried had been irrigation with solutions of permanganate of potash, carbolic acid, etc., and injection with a much stronger solution of carbolic acid than is used for purposes of irrigation. With reference to aspiration, he had occasionally resorted to it, and while he was not satisfied that it is very good, he did not think it is quite so bad as Dr. Thomas was disposed to regard it.

DR. SURTON, of Pittsburg, had seen Esmarch scrape out pelvic abscesses at his clinics in Kiel, and he thought that this clinic might be regarded as an exponent of the surgical clinics of Europe. But the curette was not used with the view of removing the long granulations mentioned by Dr. Byford.

DR. CAMPBELL, of Augusta, Ga., spoke of the special beneficial influence which the tartrate of iron and potassa exerted upon chronic abscesses. Except for the source from which the recommendation came with reference to curetting the inner surface of an abscess, he would not feel disposed to favor the plan.

DR. BYFORD, in closing the discussion, said that the chief purpose of his paper was to call attention to a few points, and especially to the changes which take place in the lining membrane of chronic abscesses.

DR. G. J. ENGELMANN, of St. Louis, then read a paper on

ERGOT: THE USE AND ABUSE OF THIS DANGEROUS DRUG.

He believed that it is never necessary to use ergot in obstetrics. The use of the drug he would limit to the non-pregnant womb. It is not the question how it may be used, but the fact that it is used very generally, and its bad effects are not appreciated which makes it desirable that it should be stated authoritatively that the drug does much more harm than good and that its use should be discarded entirely.

DR. JOHNSON, of Washington, said that in his study of this subject he had been made aware of the fact that ergot is not used by physicians so generally and to the extent which he once thought it was, or to the extent which Dr. Engelmann says it is used. He had not found physicians who use the drug in the first stage of labor and thought that such a statement was erroneous.

DR. CAMPBELL invariably gave ergot after the birth of the child, and believed that it was important, and should almost always be used after the administration of chloroform.

DR. ALBERT H. SMITH, of Philadelphia, regarded the use of ergot in obstetric practice as an unmitigated evil. He did not believe that it is needed under any circumstances, and is always capable of doing harm, and generally does do harm. Its use in the third stage of labor might not be reprehensible, but in only a very few cases could it be used with benefit.

DR. ELWOOD WILSON, of Philadelphia, was astonished that Dr. Engelmann should recommend the banishment of ergot from obstetric practice. He doubted very much if any man present would be willing to approach a case of placenta prævia without the use of ergot. He had seen thirty-two cases of placenta prævia, and had used ergot liberally and with excellent results. He was also surprised to hear Dr. Engelmann state that ergot was of no use in post-partum hemorrhage. Dr. Wilson regarded it as of immense use in this complication of labor. The difficulty is that the ergot is given too late and in too large doses. He regarded the use of ergot in the third stage of labor as very important, and had it at his command in all cases.

DR. ENGELMANN said he feared he had been misunderstood. He did not mean to discuss the possible limits for the use of ergot, or refer to a scientific distinction for the proper indications for its use. He meant simply that it is a dangerous drug, does a vast amount of mischief, and from the fact that it is a powerful factor in stimulating uterine contraction, other measures less dangerous and which will accomplish the same end with equal efficiency should be substituted for it.

The following paper was read by title:

A THEORY TO EXPLAIN THE RELAXATION OF THE VAGINA AND PERINEUM DURING LABOR,

by DR. JAMES R. CHADWICK, of Boston.

DR. GOODELL, of Philadelphia, offered complimentary resolutions concerning the efficient services of the retiring treasurer, Dr. Paul F. Mundé, which were unanimously adopted.

THE PRESIDENT then introduced the President-elect, DR. ALBERT H. SMITH, of Philadelphia, who made a few appropriate remarks, after which the Society adjourned to meet in Chicago on the last Tuesday in September, 1884.

BETTER THAN CONDURANGO.—It seems that New Orleans has been enlivened by the dean of a medical college there, who diagnosed and treated an ulcer of the gums about a young lady's tooth as cancer. Having failed to affect a cure, the case passed to a dentist, who extracted the tooth and let the "cancer" get well. A true victory for nature.—*St. Louis Med. Jour.*

Correspondence.

OUR PARIS LETTER.

THE THERAPEUTIC AND PROPHYLACTIC VIRTUES OF COPPER—REPORT OF THE FRENCH MEDICAL COMMISSION ON CHOLERA.

(From our Special Correspondent.)

PARIS, September 5, 1883.

AT the meeting of the Academy of Medicine of Paris, which was held on the 21st ult., Dr. Bailly read a paper giving an account of his experience of the therapeutic and prophylactic virtues of copper, as recommended by Dr. Burq, in various affections, particularly in cholera and typhoid fever, in which latter maladies the metal was considered to be a specific. Dr. Bailly is practising at Chambly, a small town in the Department of Oise, and I send you an abstract of his paper, which will at the same time serve, in some measure, as a reply to the interesting letter of Dr. Grace Peckham, headed "Copper and Cholera," and which was published in *THE RECORD* of August 18th. Dr. Bailly stated that the medication by copper was submitted by various physicians to serious trial during the cholera of 1866, and the results were so deplorable that it appeared that a method so deceiving was doomed, and that thenceforth it would be relegated to the arsenal of retrospective therapeutics as a mere object of curiosity. Dr. Burq, however, having revived the subject, Dr. Bailly thought it opportune to refute Dr. Burq's assertions with the following arguments:

At Chambly there are upward of five hundred persons employed in the manufacture of articles of "affénide," an alloy of which copper forms nine-tenths. If Dr. Burq's theories are correct, these people ought to enjoy a certain immunity against cholera or typhoid fever, but during the twelve years he has been in medical charge of the manufactory he has found that this is not the case. In an epidemic of typhoid fever Dr. Bailly attended 53 persons affected with the malady, of whom 26 were employed in the copper manufactory, and whose bodies were consequently well saturated with copper; of this number 4 died, all of whom were well "coppered." As regards cholera, Dr. Bailly states that in 1832 Chambly was decimated; of 1,400 inhabitants, 87 perished. In 1849, the new epidemic caused 47 victims. About a mile from Chambly, at a place called Bornel, there was not a single case of cholera, but this immunity could not be attributed to the virtues of copper, as at that time the copper manufactory that is now at the latter place did not then exist. Dr. Bailly enters into further details, which, for want of space, cannot be reproduced here. I must therefore refer Dr. Grace Peckham and others interested in the question to the Bulletins of the Academy of Medicine. I may, however, observe that Dr. Burq is perhaps singular in his theories, as I am not aware that metallothrapy, as he terms it, has made much progress in the profession, whether in this country or elsewhere, at least according to his ideal of the method. Indeed, the idea cannot be said to have originated with Dr. Burq; as, so far back as 1832, a Dr. Méray, of Paris, vaunted copper in cholera, and his report of the efficacy of the metal in this disease caused such a sensation that on inquiry it was found that the results were greatly exaggerated. No further importance was attached to the report and nothing more was heard of the marvellous effects of copper until about thirty years ago, when Dr. Burq took up the subject, and he has patronized it ever since, but, as I have already said, almost single-handed, for one never hears of its employment by any other practitioner, at least as recommended by Dr. Burq. At a previous meeting of the Academy of Sciences, Professor Vulpian was cited as one of the partisans of Dr. Burq's doctrine of metallothrapy, but as he was not present on the occasion he wrote a letter to the Academy repudiating such an imputation in the following terms: "No

well-established clinical fact has authorized me to admit the preservative or curative influence of copper in the treatment of cholera. If copper had any real efficacy, it is probable that it would have been made known in all the countries where cholera reigns, and particularly in those parts of India where the malady is endemic." On another occasion, taking part in a debate on Dr. Burq's method of metallothrapy in hysteria and other nervous affections, Professor Vulpian stated that he was not able to speak more favorably of it in these cases. Dr. Burq has responded to Dr. Bailly's communication at the Academy of Medicine, but as he has advanced nothing new or important, I need not trouble your readers any further on the subject.

According to official information received from Egypt, the cholera is evidently on the decrease. The Council of Hygiene at Alexandria reports that the number of deaths from the disease during the two months that have elapsed since the outbreak of the epidemic, amounted to twenty-seven thousand among the natives, and one hundred and thirty among the English troops.

The French medical mission that was sent to Egypt to study the nature of cholera has reported that the disease with which it had to deal was incontestably Asiatic cholera, and that the discoveries already made are of a nature that will tend to subvert almost completely the theories in vogue as to its origin and pathology.

The theory of the contagious and parasitic nature of cholera is evidently gaining ground in the profession, but the following incidents would seem to militate against either idea. Among the passengers of the *Peluse*, condemned to quarantine at Alexandria, was an infant that had lost its mother from cholera, but the infant was not in the least affected, and was still alive and well when the vessel reached Marseilles, although it had been suckled by its mother within a few hours of her death. When the body of a sheik who fell a victim to the disease at Cairo was being prepared for the funeral a number of fanatic Mussulmans rushed up and drank of the water with which the body was washed. If the contagious or parasitic nature of cholera is correct, surely few or none of these people could have escaped contracting the disease.

ON THE THERAPEUTIC EFFECT OF IODOFORM AND ETHER IN THE TREATMENT OF SORE THROAT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I am tempted to ask a little space to call especial attention to two paragraphs of "foreign gleanings" that appeared in the last issue (September 8, 1883) of *THE RECORD*. They are the results of clinical observations on the part of experts, and their experience and statements confirm my own clinical observations and experience, published one year before either of the foreign contributions appeared in print.¹ While the title of my article refers only to ulcerated tonsils, the accounts of the cases cited gave full descriptions of sore and ulcerated surfaces of surrounding structures. The value of ether in combination with iodoform—to which I called attention—is now of additional interest to therapeutists. The testimony of the foreign observers forms a good addenda in support of my views and observations. "Ether in the treatment of sore throat: Professor Contalo employs an ether spray in the treatment of pharyngitis. Under its influence the temperature falls, the vessels contract, and the local condition is speedily improved. In two cases a fibrinous exudation was detached and not reproduced. Ether, according to the author, deserves a trial in pharyngeal diphtheria, not only as an antiseptic agent, but also because the pain is thereby greatly diminished, and the

¹ Clinical Observations on the Use and Value of Iodoform in the Treatment of Enlarged and Ulcerated Tonsils, *New England Medical Monthly*, June 15, 1882.

taking of nourishment facilitated." "A method of hastening the anæsthetic action of the ether spray: Dr. Vidal, at the Hôpital St. Louis, in Paris, shortens the duration of the process of congelation by the ether spray in the following manner: Making a slight prick with a needle at a point upon which the spray is directed. The little puncture made at this time excites a reflex constrictive action of the vaso-motor nerves, the blood is driven from the part, and the skin becomes white."

The observations and clinical experience of Drs. Contal and Vidal account for and explain the rationale of the success which I have attained in the treatment of ulcerated and inflamed tonsils and inflammation of contiguous structures by the combined application of ether and iodoform in the form of spray. The value of iodoform in the treatment of inflamed and ulcerated surfaces is now too well known to need more than mention. The little punctures claimed by Dr. Vidal as "hastening the anæsthetic action of the ether spray" find a parallel in the ulcerated points of the inflamed surfaces, both of tonsils and surrounding mucous membranes. I think I am not exaggerating in claiming that iodoform and ether combined, and applied locally in the form of spray, may fairly be regarded as a specific in the treatment of sore and ulcerated throat, tonsils, and contiguous structures.

MORRIS H. HENRY.

581 FIFTH AVENUE, NEW YORK.

WHITE LEAD PAINT AS A LOCAL DRESSING IN ERYSIPELAS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of April 14, 1883, an article from the *Lancet* urged the employment of white lead paint as a local dressing in erysipelas, and this article called forth several communications, all testifying to the usefulness of the carbonate of lead.

In the number of THE RECORD published on August 18th, another article, from the *Lyon Medical*, records four cases of erysipelas which were successfully treated with hypodermic injections of resorcin.

Unfavorable or negative results are seldom published, but the following cases, reported briefly from my notes, may not prove uninteresting, as the treatment includes the use of both of the remedies which are so highly spoken of. Although I had occasion to treat some thirty-five cases of erysipelas this summer, most of them were of the cellulito-cutaneous and cellular varieties, which demanded free and numerous incisions, and in which the depending upon milder measures would have led to disastrous results. Several of the cases, however, were of the cutaneous variety, and among these two seemed to present an opportunity for the fair trial of carbonate of lead. One of the two receiving also injections of resorcin.

CASE I.—Alice B—, aged thirty, who had been operated upon a week previously for the removal of enlarged lymphatic glands of the neck, was sent to the erysipelas ward on May 16, 1883, with a cutaneous erysipelas, which included the right ear, and which had extended anteriorly half way across the cheek, and posteriorly to the back of the neck; involving the integument as far down as the vertebra prominens. Blebs and vesicles had appeared only upon the helix of the ear when the disease had first manifested itself two days previously. The record of the vital signs is not of sufficient significance to be reported here. White lead paint, which I had carefully prepared myself with linseed oil, was spread thickly over the involved portions of the skin, and at the same time the following internal treatment was commenced: Tincture of the chloride of iron in half-drachm doses, well diluted with whiskey and with one-fourth of a grain of morphine added, every three hours. Five-grain doses of sulphate of quinine every three hours, and each dose to be given in the interval between

two doses of the iron. Rochelle salt in sufficient quantity to keep the bowels open. It may be well to mention that the paint, after being applied, was covered with gutta-percha tissue for neatness sake.

May 17th.—Erysipelas showing no tendency to further extension. Pain very much less than yesterday.

May 18th.—Erysipelas limited. Little pain. Internal treatment stopped.

May 19th.—Erysipelas extending rapidly along the cheek, and upward on the scalp. Temperature elevated in the morning, but reduced promptly by sponge-baths and quinine. White paint applied to beyond margins of diseased area.

May 20th.—Erysipelas extending more slowly. Lead paint removed and internal treatment recommenced.

May 21st.—Erysipelas leaving the parts first attacked, but extending down the front and sides of the neck. Fomentations of hot lead and opium wash, and carbolic acid solution (1—40) in equal parts are employed locally.

May 22d.—Erysipelas decreasing at all points.

May 23d.—Improving with great rapidity.

May 28th.—Discharged cured.

CASE II.—Ann McC—, aged fifty-eight. Brought to the hospital on May 25, 1883, suffering from idiopathic cutaneous erysipelas. The patient is not rational and cannot give a reliable history.

The skin over the entire face, with the exception of the chin, is very much swollen, and hyperæmic. The ears are involved. Blebs and vesicles cover all of the diseased surface. Much constitutional disturbance exists. No local treatment is resorted to at first. The intended internal treatment is substantially the same as in case No. 1. As patient has passed no urine for five or six hours after entering the hospital a catheter is inserted into the bladder, and an ounce and a half of turbid urine drawn. This urine is found to contain about fifty per cent. by volume of albumen, and a few granular casts.

The patient is now to take one drachm of bitartrate of potassium well diluted, and half an ounce of infusion of digitalis every four hours. And in case of a rebellious stomach poultices over the kidneys are to be substituted for the above.

May 26th.—Vital signs nearly normal. The erysipelas appears to be stationary. Less than three ounces of urine having been passed in the last twenty-four hours, dry cups are applied over the kidneys for fifteen minutes. Patient again cupped six hours later.

May 27th.—Vital signs normal, erysipelas stationary. Yesterday's cupping has been partially successful, as twenty-four ounces of urine have been passed in twenty-six hours. This urine, however, contains about sixty per cent. by volume of albumen, and is loaded with granular, epithelial, and hyaline casts. Blood is also present.

May 28th.—Erysipelas extending rapidly down the back of the neck. Vital signs normal. Urine in nearly normal amount since last note. The scalp, which is now œdematous, and the back of the neck, are enveloped in moist oakum, covered with oiled silk.

June 1st.—The erysipelas has rapidly departed from the face, but is travelling down the back with greater speed. The affected portions of skin to the left of the spinal column are painted over with tincture of iodine, and on the right side hypodermic injections of a five per cent. solution of resorcin are made into the subcutaneous connective tissues, in the hope of destroying the micrococci which fill the lymphatics in the advancing line of the disease. The injections, of two minims each, are made about a quarter of an inch apart, half an inch or more ahead of the whole advancing line on the right side of the spinal column, between the eighth dorsal vertebra and the right shoulder. There is now almost no urine excreted by the kidneys.

June 2d.—The erysipelas has continued straight on down the back without any check whatever from the local treatment. The affected portion of skin to the

right of the spinal column is covered with collodion, and a thick layer of white lead paint is spread upon the corresponding left side. Patient very stupid. Almost no urine.

June 3d.—The erysipelas has extended about two inches lower on each side of the spinal column, and is creeping toward the sides of the chest. All of the more recently diseased surface is washed with a saturated solution of sulphate of iron in the morning, and as the disease is still progressing at evening, collodion is substituted. There is probably as much reason in trying to control the local lesion as there would be in endeavoring to stop the eruption of scarlet fever by the use of the same remedies.

June 4th.—Patient dies quietly at 3 A.M. The result of the autopsy in this case was extremely interesting, but as it had no particular bearing upon the efficacy of white lead paint, or of resorcin, in controlling erysipelas, I will omit the description of it.

ROBERT T. MORRIS, M.D.

BELLEVUE HOSPITAL, NEW YORK CITY.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 15 to September 22, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon, Medical Director, Department of the South. Granted leave of absence for fifteen days. S. O. 94, par. 2, Department of the South, September 13, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. On being relieved from duty at the United States Military Academy, October 1, 1883, to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. Granted leave of absence for four months, from October 1, 1883. S. O. 213, par. 1, A. G. O., September 17, 1883.

GIBSON, JOSEPH R., Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report by letter to the Commanding General, Department of the South, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

HORTON, SAMUEL M., Major and Surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MEACHAM, FRANK, Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

SMITH, ANDREW K., Major and Surgeon. Relieved from duty at Willett's Point, N. Y., October 1, 1883, and assigned to duty at U. S. Military Academy, West Point, N. Y. S. O. 211, par. 7, A. G. O., September 14, 1883.

TAYLOR, MORSE K., Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

APPEL, DANIEL M., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MERRILL, JAMES C., Captain and Assistant Surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MUNN, CURTIS E., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MAUS, LOUIS M., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

PATZKI, JULIUS H., Captain and Assistant Surgeon. Relieved from duty in the Department of the South, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

PRICE, CURTIS E., Captain and Assistant Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

VICKERY, RICHARD S., Captain and Assistant Surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Columbia, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

WEISEL, DANIEL, Captain and Assistant Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

APPEL, AARON H., First Lieutenant and Assistant Surgeon. The leave of absence granted July 20, 1883, extended one month. S. O. 211, par. 10, A. G. O., September 14, 1883.

BREWSTER, WILLIAM B., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, from October 1, 1883, with permission to apply for an extension of four months. S. O. 107, par. 1, Military Division of the Missouri, September 15, 1883.

STRONG, NORTON, First Lieutenant and Assistant Surgeon. Now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglas, Utah, and there await further orders. S. O. 101, par. 2, Department of the Platte, September 17, 1883.

SALICYLATE OF SODA IN PHLEGMASIA ALBA DOLENS. —Dr. Vigar has met with success in the treatment of several cases of milk leg by salicylate of soda. He gives it in doses of one drachm per diem. He states that in all the cases in which he has tried the remedy the patients were able to leave their beds in less than three weeks, and all recovered perfectly without any cedema or nodosities on the leg.—*El Siglo Médico*.

Medical Items.

CONTAGIOUS DISEASES.—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 25, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
September 18, 1883. . . .	0	69	38	3	22	19	0	0
September 25, 1883. . . .	0	84	29	7	4	17	0	0
<i>Deaths.</i>								
September 18, 1883. . . .	0	13	14	3	2	14	0	0
September 25, 1883. . . .	0	12	2	5	2	12	0	0

REMOVAL OF KIDNEY AND GALL-BLADDER.—Dr. Langenbeck, at the recent meeting of the German Surgical Congress, showed a woman, aged thirty-four, from whom he had removed the gall-bladder successfully. Two years before she had had a floating kidney removed.

TREATMENT OF SIMPLE CHANCRE BY HEAT.—A member from Lyons read a communication before the Académie de Médecine on the treatment of simple chancre by heat. As the results of his experiments he was led to consider that the employment of an elevated temperature was an excellent means of annihilating the virus. The author recommended that a hip-bath should be given between 104° and 107°, and borne for several hours. He believed that this treatment would suffice to destroy the virus in twenty-four hours. In any case it was certainly the best treatment of phagedanism and those chancres complicated with phimosis that no dressing can attain. It is needless to add that the doctrine of M. Pasteur as to the cause of virulent diseases has suggested this treatment.—*Medical Press and Circular*.

INCISED WOUND OF THE KNEE-JOINT; PYARTHROSIS; ULCERATION OF THE ARTICULAR CARTILAGES; RECOVERY IN FIVE MONTHS.—Dr. R. C. Van Wyck, of Hopewell Junction, N. Y., sends us a carefully written history of a case of the above kind. The patient was a delicate, scrofulous boy, eleven and a half years of age. He accidentally received a deep transverse cut just above the left patella from the fall of an axe. The wound opened the knee-joint, but it was not attended to for over a week. Consequently suppuration set in, the opening healed, but the pus burrowed. A large abscess formed about the joint and finally penetrated it. Incisions had to be made on both sides of the joint and into the popliteal space in order to secure free drainage. Bed-sores developed, and the patient was reduced almost to a moribund condition. By free drainage, thorough cleansing of the wound, and proper diet, the patient began to improve. Dr. Van Wyck ascribes the favorable turn in the disease to the use of syrup of hypophosphites. As the boy convalesced a modified Stillman's splint was applied.

THE ETHER DOUCHE OR LAVEMENT FOR THE RELIEF OF PAIN.—Dr. C. H. Hughes speaks favorably of the use of lavements of ether for the relief of headaches and neuralgias.—*Medical Times*.

THE OATH WHICH THE GERMAN MIDWIFE IS OBLIGED TO TAKE is as follows: "I swear by the Almighty and Allknowing God, that I will practise the midwife's art to the best of my skill and ability, helping rich and poor with equal readiness. I will conduct myself as a true and conscientious midwife. So help me God!"

CHANGES IN THE STRENGTH OF SOME OF THE OFFICIAL PREPARATIONS IN THE NEW PHARMACOPŒIA.—The *Virginia Medical Monthly*, hearing that Dr. Squibb declines to follow the directions of the new Pharmacopœia regarding the strength of certain preparations, reads that gentleman a lecture. It says that "it looks over-officious in him to confront national opinion, confuse both doctor and druggist, and risk, perhaps, human life by obstinacy. By such a course as he is pursuing in this matter, he will do others injury, and himself no good. He will confuse everybody. If Dr. Squibb is the authority, let us authoritatively know it, as a profession; if the United States Pharmacopœia is the authority, let us be in accord on the subject where absolute harmony is essential. Because of such statements as he is making, or has published, and because of the action of local pharmaceutical societies throughout the country, we may do some good by suggesting to each doctor to ask his druggist whether he is following the revised U. S. Pharmacopœia or Dr. Squibb."

A HINT FOR NEW YORK CITY AUTHORITIES.—The municipal authorities of Berlin have adopted regulations forbidding the erection of houses over seventy-nine feet in height and having more than five lodging floors; at present they are built with seven or eight stories.

THE SURGERY OF VIENNA differs widely from that of America. There is not nearly so much acute surgery, if I may be allowed the expression; that is, fractures, dislocations, and general mash-ups are not common, due partly to the fact that the railroads are better managed than with us, the staging and scaffolding around buildings much more securely erected, the buildings themselves more substantially built, and partly, perhaps, to the fact that the people themselves are naturally cautious, and that as they are punished for being run over, they take pains to keep out of the way of vehicles. Tumors of all kinds, carious and tuberculous processes of the bones, deformities, joint diseases, and hernia, are very common.—*Cor. Maryland Med. Jour.*

TO DETECT ADULTERATIONS IN OLIVE OIL.—According to the *Moniteur de la Pharmacie* cotton-seed oil, when used as an adulteration or substitute for olive oil, may be detected by the following test: Put one part by weight of the oil to be tested in a test tube with two parts of pure colorless nitric acid, shake thoroughly for thirty seconds, and then let the test tube stand for five or six minutes. At the end of this time the oil will rise above the acid. If the olive oil is unadulterated it will be of a light gray color with a yellowish tinge, but cotton-seed oil will assume a dark brown, almost black, coffee color. Varying shades from a golden yellow to brown, according to the proportions of the admixture, will be produced in adulterated oil. By this method it is possible to detect the presence of five per cent. of cotton-seed oil.

THE RAPID INCREASE IN THE POPULATION OF CHICAGO.—In a paper read before the Chicago Medical Society and published in the *Medical Journal and Examiner* for September, 1883, Dr. Henry Ogdon reports the birth of five sets of triplets in that city within a period of five months. Not content with that, he supplements his paper with a report of two other cases of triplets born in the vicinity.

A PRACTICAL MEDICAL EXAMINATION.—The *London Medical News* relates an instance in which a candidate was treated with unusual consideration by his examiners. Requested by one of the latter to cut down on and tie the subclavian artery, the candidate did as directed, but could not at once find the vessel. Irritated, seemingly, by his failure, the examiner urged him to "Pick it up, sir; there it is, right under your nose," and on the candidate mildly suggesting that this particular structure was a cord of the brachial plexus, the second examiner present lifted it and divided a nerve. Examiner No. 1 then

at once repudiated having called this the artery, which, he affirmed, was another adjacent structure. Proceeding, therefore, to raise it and cut it through, he exhibited it in commencing triumph, which quickly collapsed as another nerve appeared in section. The candidate was passed.

HOW TO KEEP THE HYPODERMIC SYRINGE IN ORDER.—Dr. William H. Morse, of this city, describes the following method of keeping the hypodermic syringe in order. It is, he says, "the very best," the syringe being always ready and in good order even if it has not been used for months. The method, besides being simple, is inexpensive: "Unscrew the bowl of your syringe, take out the piston-rod, unscrew the *lower* piston leather and take it off, then put in its place a small piece of chamois skin, and replace the leather and screw it tight. Now trim the chamois to the size of the bowl, and replace the piston, and the work is done. You will observe that you have only placed a bit of chamois *between* the *two* piston leathers. You now have a syringe which is in working order the *moment* water is introduced."

A CURIOUS VERDICT IN REGARD TO AN INJURY OF THE EYE.—In a recent case in a Pennsylvania court a large verdict was obtained for an injury to the eye, which had apparently healed, but which might possibly become serious. The judge said "the cornea of the plaintiff's eye was cut in three places, and the iris became attached to the lower branches of the corneal injury. The power of the eye was permanently weakened, but its condition has remained unchanged for the last twenty months, while subjected to the severest tests, and during this time the plaintiff was able to work from eleven o'clock P.M. till seven o'clock A.M." Under these circumstances the Court held that a large verdict based upon a possible subsequent inflammation was excessive, and directed that a new trial should be had, where the actual and not the possible damage should be considered.

THE ORIGIN OF MALARIA.—Dr. Daniel Parker, of Calvert, Texas, sends us a communication in which he protests against the views recently enunciated by Dr. Charles P. Russel in *THE RECORD*, in an article on "The Change of Medical Opinion in regard to the Cause and Recent Extension of Malaria." He thinks that there are very few careful observers who will agree with the statement of Dr. Chadbourne, there quoted, that he "adhered to no opinion whatever, based upon sufficient facts to make it valuable, as to how malaria arises." Dr. Parker says: "The statement that malarial disease occurs where vegetable decomposition is, to any great extent, impossible, may be answered by saying that such places are probably influenced in this respect by atmospheric currents, water supply, or some at present unknown conditions, and that a thorough investigation of each locality in the light of its peculiar surroundings would be about as likely to prove as to disprove the time-honored theory. The counter-statement that 'very many more instances' exist 'where all the so-called conditions for the production of malaria have always been present without such poison having manifested itself,' may be reconciled by supposing that some factor, in addition to the simultaneous operation of air, heat, and moisture causing vegetable decomposition, is necessary for the production of malaria, or that in such localities certain conditions, with which we are at present unacquainted, exist prejudicial to the existence or activity of malarial poison. Neither of these explanations invalidates the accepted theory. If called on for facts in support of the theory in question, I should hardly know where to commence. The literature and experience of the profession teem with them. To say that exposure of the unacclimated to paludal emanations at certain seasons of the year, in certain localities, is followed by malarial disease, would convey much the same idea to any one of experience in such matters, as to say

that exposure of the unprotected to yellow fever atmosphere is followed by yellow fever. The relation of cause to effect is not more marked in one instance than in the other. This is not a revelation of scientific or professional research, but a matter of common observation. A large majority of the intelligent laymen in malarial districts can predict with a near approach to certainty whether a given locality will be healthful or otherwise, and they will all base their prediction on the exposure or non-exposure of the particular locality to emanations arising from vegetable decomposition, as determined by proximity to swamps or alluvial lands, and influenced by atmospheric currents, elevation, etc. To say that no such thing as a malarial germ exists, because no one has seen such an object, is simply to say that in this direction research has attained its utmost limits, and that there is nothing more to be learned. This is cutting off investigation precisely where we have reason to hope for the grandest discoveries, and needs only to be mentioned to show how entirely it is opposed by the experience of the profession, and by the spirit of progress which animates such workers as Pasteur, Koch, Belfield, and others."

THE RELIEF OF CRAMPS.—A correspondent of the *British Medical Journal* suggests for the drug-treatment of painful cramps the following, subject to the peculiarities of the patient: Ext. hyoscyami, gr. iij.; camphoræ, gr. ij.; morphinæ bromidi, gr. $\frac{1}{12}$, in a pill at bedtime. This pill has succeeded perfectly in a recent case. Another correspondent suggests small doses of bichloride of soda.

ARSENIC AS A PROPHYLACTIC AGAINST MALARIA.—Experiments have been carried out in Italy, under the direction of Tommasi-Crudeli, to ascertain the prophylactic value of arsenic against malaria. The results have, says a correspondent of the *British Medical Journal*, been quite favorable. The number of persons placed under arsenic was 455; 401 men and 54 women. Of these, 250 were victims of chronic malarial poisoning, 115 had been recently infected, and 90 were in fair health. There were cured, or, if well, there remained free from attacks, 338; 43 were not benefited; and in 74 the result was doubtful. He particularly notes that of the 90 who never had had any malarial fever, only nineteen per cent. were attacked in this unhealthy year, and those attacked only had slight fevers readily yielding to quinine. The treatment was begun with one lamel containing two milligrammes, about the one thirty-fifth of a grain, of arsenious acid daily. After four days, a second lamel was given, and so on, until four were taken each day. In a few cases, the dose was increased to seven lamels, about one-fifth of a grain, daily, and apparently with better results.

PHILADELPHIA DIPLOMAS IN AUSTRALIA.—The Rev. R. V. Danne, of Melbourne, stated that he desired to become a missionary, and attended a few lectures off and on at the Melbourne Medical School. He then sailed for America, and returned in nine months armed with a diploma from the Medico-Chirurgical College in Philadelphia. On the strength of this he sought registration as a regular physician, but was rejected. The diploma was said to have been a gem, and couched in the most wonderful Latin.

A WELL-MEANT ENDEAVOR TO RELIEVE SUFFERING.—A Chicago correspondent of the *Atlanta Medical Register* relates the following incident: "A physician living on the South Side was recently called in to catheterize the bladder of a man said to be dying from kidney disease and suffering from retention. On his arrival he found the patient comatose, and in the care of two female physicians of the homeopathic persuasion, one of whom had been vainly endeavoring to reach the bladder with a female catheter, which she tendered him on his arrival, alleging as the cause of her failure that she was

not accustomed to catheterize the male bladder. Saying that he had an instrument of his own which he was used to, he drew off twenty-four fluid ounces, and retired with a firm conviction that this was one of those events which make one smile even in the presence of death."

A NEW FORM OF ASPIRATOR.—An aspirator has recently been devised by M. Creuzan, of Bordeaux, which is worked without piston or stop-cocks. It consists essentially of a large caoutchouc bulb, which, by means of a special arrangement of valves, may serve as an aspirator or an injector. A glass cylinder is attached to the bulb, so that the nature of the fluid may be readily determined. There is no possibility of air entering the cavity from which the fluid is to be removed, and the instrument possesses the further advantage that the operator requires no assistant, but can readily hold the trochar in position with one hand and the aspirator with the other. Any quantity of fluid may be removed by simply compressing the bulb without detaching the instrument from the needle.

AN ADVANCE IN OPHTHALMOLOGY.—In a recent case of vitriol-throwing in France the victim, M. de la Roche, suffered a total loss of eyesight. But a morning journal of Paris gravely states that the medical attendants have succeeded in replacing his burned organs by the eyes of a rabbit and that he now sees perfectly.

HOW TO KEEP THE HYPODERMIC SYRINGE IN ORDER.—Dr. W. B. M——, of Vernalia, La., advises the substitution of "green-packing," such as engineers use, for the old piston leather in the syringe. The instrument can then be neglected for some time and yet be ready for use. A "Subscriber," from Chicago, writes that by getting one of Fowler's hard-rubber syringes, with hard-rubber pistons, no trouble is ever experienced.

IODOFORM AND ERYSIPELAS.—Dr. C. G. Roehr, of Ledyard, Wis., writes in reference to a statement by Dr. Seely, of Cincinnati, that iodoform caused erysipelas, as follows: "I think some two years since I saw in some German journal that, owing to the great increase in erysipelas, iodoform had to be given up in surgical dressing. I have seen antiseptics, including iodoform, tried thoroughly, and have seen a number of the so-called cases of erysipelas, and found them to be simply cases of erythema or dermatitis venenata. By experimenting I have found that it can be cured by quitting the use of the iodoform. I have caused and cured it in this way a number of times on the same patient—and it occurs in possibly one per cent. of all surgical cases. This is what our professors call idiosyncrasy, and we have the same result in the use of arnica and a number of other drugs."

TREATMENT OF THE OPIUM HABIT.—Dr. A. W. Jackson, of Wurtsboro, N. Y., writes us that he has been quite successful in treating cases of the opium habit by applying the following measures: First, cheerful surroundings, and plain, wholesome, assimilable food. Second, unceasing watchfulness on the part of the friends and attendants of the patient. Before the treatment is commenced, the patient should be put in as good a condition, physically, as possible. In an old case, commence the treatment by cutting off two-thirds of his daily supply of morphine. If he had been taking twelve grains per day, prepare the following prescription:

R. Morphine sulphatis..... grs. lvi.
Ext. belladonnæ solid grs. xij.
Quinine sulphatis..... grs. xxxv.
Capsici pulv..... grs. iij.
Ft. in mass et in pilul. No. 42 div.
S.—One pill ter in die.

Also give about eight to twelve drops conc. tr. avenæ sativæ in a wineglass of warm water ter in die. Also a glass or two of old ale during the twenty-four hours.

Milk punch can be given also, as the appetite will be found very difficult to manage. The supply of pills being calculated to last for two weeks, it becomes necessary to renew them at that interval. At each renewal cut off a given amount of the morphine until the pills contain only the belladonna, quinine, and capsicum. Continue with them for a month or less, and it will be found that they can then be dispensed with, and any good tonic substituted. The faradic current may be used also with advantage.

AMERICAN CATARRH.—Dr. Morell Mackenzie gives this name to a naso-pharyngeal catarrh which he found so prevalent in this country, that he calls it "a national complaint." He ascribes it to the universal prevalence of *dust*, in city and country. We do have plenty of dust everywhere, but less in winter than summer, while the "American catarrh" is far more frequent and obtrusive in the winter. Therefore, we fear that Dr. Mackenzie is too narrow in his etiological theory. The following is the doctor's somewhat highly colored description of the too atmospheric distribution of American soil: "Owing to the immense size of the country, and its sparse rural population, the country roads have not, as a rule, been properly made, and except in some of the older States, are merely the original prairie tracks. In the cities, notwithstanding the magnificence of the public buildings, the splendor of many of the private houses, and the beauty of the parks, the pavement is generally worse than it is in the most neglected cities of Europe; such indeed as are only to be found in Spain or Turkey. It must be recollected also that, whilst in the decayed towns of the Old World there is very little movement, in the American cities there is a ceaseless activity and an abundance of traffic. Hence the dust is set in motion in the one case, but not in the other. The character of the dust, of course, varies greatly according to the locality. In some parts, it is a fine sand; in others an alkaline powder; whilst in the cities it is made up of every conceivable abomination, among which, however, decomposing animal and vegetable matters are not the least irritating elements. An idea may, perhaps, be formed of the state of the atmosphere from a consideration of the fact that in many cities the functions of the scavenger are quite unknown."

THE TREATMENT OF CRAMP.—Surgeon Robert Mann writes in the *British Medical Journal*: "There is no remedy I have found to answer, except the raising the head of the bed. I cause two bricks to be placed under each leg, or a block of wood of the same thickness as two bricks. Patients who have suffered at night, crying loudly with pain, have found the above plan an immediate, certain, and permanent relief."

BORACIC ACID.—Dr. Squibb writes of boracic or, more properly, according to the nomenclature of the late Pharmacopœia, *boric acid*, as follows: "If the powder be needed, as is generally the case, it should be specified in the prescription. The powder should be very fine, and should be white and light, and entirely free from particles when rubbed between the finger and thumb, feeling very like powdered soap. It is only such powder that answers well in eye surgery or general surgery for dressings, and solutions are also best made from it. A saturated solution contains about nineteen grains to the ounce, and from ten grains in the ounce to saturation it is used as an eye-wash or to granulating and suppurating surfaces. It is a very bland and soothing application, both in powder and solution, relieving irritation and arresting suppuration. It is a potent antiseptic, much less expensive than salicylic acid, and it is odorless and more easily managed than carbolic acid. It is probably better than either to preserve hypodermatic solutions. In surgical dressings it has the great advantage over carbolic acid of not being irritant nor poisonous. But not being volatile it does not deodorize the air."—*Epiphenis*.

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METHODS OF MEDICAL INSTRUCTION.

INTRODUCTORY ADDRESS DELIVERED TO THE STUDENTS
OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY
OF THE CITY OF NEW YORK, OCTOBER 2, 1883.

By HERMAN KNAPP, M.D.,

PROFESSOR OF OPHTHALMOLOGY; SURGEON OF THE N. Y. OPHTHALMIC AND AURAL
INSTITUTE; LATE PROFESSOR AT THE UNIVERSITY OF HEIDELBERG.

GENTLEMEN: Which is the best method of medical instruction? Evidently that by which the student learns most. So long as students differ in aptitude to learn, owing to differences in mental capacity, attentiveness, energy, perseverance, preliminary attainments, and in bodily health and strength, fitting them for more or less prolonged labor—so long as such and other differences exist among the students, one and the same method cannot be the best for all. For the *student* it is of the greatest importance to select that school and follow that method which is best adapted to his individual qualification; whereas the *school* has to consider the character of the students who make up its classes. If there is more or less homogeneity among the students the course of instruction can be correspondingly uniform, but if there is great diversity the means and modes of instruction must be so numerous and varied as to furnish suitable opportunities for all.

Now, if there must be a mutual adaptation of student and college, the one will require of the other certain qualifications without which a working together for a given purpose is impossible. The student must possess a certain stock of general knowledge, and the college must command, first, a sufficient corps of well-qualified teachers, and secondly, a collection of auxiliary means and material of instruction, large and varied enough to meet the legitimate demands of every student. Among these means of instruction I will mention spacious rooms and abundant material for dissecting; an anatomical museum; chemical, physical, physiological, microscopical, pharmacological, and pathological laboratories; dispensaries; hospitals; autopsy rooms; and last, but not least, a large and well-appointed college building, which encloses a part of the mentioned institutions, and which is located at a convenient distance from the others, for instance, the hospitals, so as to make it the centre, the starting- and rallying-point—in short, the home of the student.

If we examine the manner in which medicine, at the present day, is taught in different countries we can distinguish two systems, which may be termed the European and the American.

It is quite remarkable that each system, with national subdivisions, bears the stamp of the political development of its country.

The European method is planned, regulated, supported, and controlled by the political government. The State allows nobody to enter upon the study of medicine unless he has had a collegiate education carried on under an official programme. When the student presents himself at the medical school for matriculation he must have his certificate of maturity in hand. Then he has to go through a systematic course of professional study for at least four years, after which he must pass a final examination before

a State board, and receives his license from the State authorities. The degree of M.D. is an academic honor, which in some countries is obligatory, in others optional. The medical schools, with all their appurtenances, are State institutions. The professors are appointed and salaried by Government, and are held responsible for the efficient teaching of all the departments of medical science and art in which the candidates for the license of practice are examined. The different schools of one or several countries, for instance all the universities of the German Empire and of the German-speaking provinces of Austria, Russia, and Switzerland, are brought up to the same standard. The student is at liberty to begin and complete his curriculum at one school, or to change as often as he pleases, only not during the course of a term. He can select also at his option that State board before which he desires to pass his fractional or entire examination. His license entitles him to practise in any part of the country. Of late, international agreements permit licentiates of medicine of one country to practise in another, subject to the laws of that country.

The *American method* of medical instruction differs widely from the European. It is the child of the free institutions of the country, letting everybody make of himself what he can, restricting his ambition by no barriers, asking few or no preliminary questions. The American medical students come from different stages of society and culture, one from the plough, another from college. Some of our colleges are inferior, others equal, and others—for instance, Harvard and Yale—superior to the German “gymnasium.” He presents himself at the medical school, saying: “I am willing to work, to work hard. Will you take me as I am?” The schools, with a few exceptions, answer cheerfully: “You are welcome.”

The young man matriculates and receives a little card, the programme of lectures and clinics, which informs him that eight or nine hours of instruction are provided for him every day. He goes to work with a will. During the first weeks he attends all of them, but when the interest of novelty and the enthusiasm for a high cause are gradually toned down by the hard daily labor, he chops off a goodly number of branches from the luxuriant programme. Next year, and perhaps the year after, he comes again and fills in what before he had left out. After three years' study under the guidance of a regular physician and after the attendance of at least two regular courses of lectures at a recognized college, each course of no less than twenty weeks' duration, he has to pass an examination in seven branches: anatomy, physiology, chemistry, materia medica, obstetrics, surgery, and medicine, before the seven professors, constituting the regular faculty of the school. If he passes this examination to the satisfaction of said professors he receives from them the degree of M.D., which lawfully licenses him to practise all the departments, general and special, at any place in the United States. Most of the Canadian medical colleges, as far as I can learn from their announcement catalogues, are arranged on the same plan. This plan was in operation in England for a long time, until the “Medical Act” in 1858 abolished it. Since that time the English medical student is no longer apprenticed to a practitioner, but has to undergo a preliminary examination in the classics, mathematics, history, and French, has to be at the medical school four full years, and is finally examined and licensed by one of the boards authorized by government.

Let me now sum up the characteristic features of the two systems :

1. *The European.*—A liberal preliminary education ; four years of professional study ; examination and license by a board authorized by government.

2. *The American.*—Requirements of preliminary education very modest or waived altogether ; a three years' tutelage under a practitioner ; during that time the attendance of two regular courses, each no less than twenty weeks, at a recognized medical school ; the one-class lecture system (*i.e.*, no graded instruction, but the second course a repetition of the first), a written examination in seven topics ; approbation and license by the seven professors constituting, as a chartered private corporation, the regular faculty.

If I have presented the two systems correctly and am asked which is the higher, I unreservedly declare myself for the European, and doubt whether there is any one in this assembly who would differ from me ; at least I am sure that I speak the mind of every one of the teachers at the University of the City of New York. But, gentlemen, we are not responsible for the existence of the American system, we have not made it ; it is, as I said before, the child of the free institutions of this country. The European system is the higher, is the higher still, and toward it we are tending. Will it always be so? No, most positively no! If the American method of medical instruction is the outgrowth of the American political constitution, it must grow and develop with it. The American constitution is the highest that has ever been framed, so sublime that it will take centuries yet for the people to become worthy of it. By giving every man equal rights of opinion, speech, and action, it takes away all barriers of individual development from the lowest position to the highest. I am not digressing from my subject, for the scientific progress of a nation depends in a great measure on its political condition. The science of man, anatomy and physiology, is the highest of all the sciences, and its application to the art of healing puts on it a divine crown. England had a free constitution before any of the modern European nations. In the last century it brought forth men like Harvey, Jenner, Abernethy, Astley Cooper, John Hunter, Thomas Young, and many others, whose names are registered in the history of civilization as benefactors of mankind for all time to come. They began to collect facts, founded hospitals, museums, and libraries whose treasures are still today inexhaustible sources of information for the most erudite scientist as for the tyro. These men learned and taught what they knew in schools conducted exactly like our own.

Then came the emancipation of Gallic thought at the time of the great revolution in 1792, and the French became the leading nation in politics, taste, art, and science until 1870. When I began my medical studies, in 1851, the text-books recommended at the German universities were prevalently translations from the French, and every one of us who aimed at a higher than an average position in life thought it incumbent upon himself to study, after his examination, at least six months in France, which meant Paris. When, fifteen years later, I visited again the medical school of that magnificent city I found that the text-books in the hands of the French students were to a great extent translations from the German, while in Germany the translations from the French had almost disappeared. The great French physicians, Bichat, Laennec, Magendie, Louis, Dupuytren, Nélaton, and many others, had disappeared and had not been replaced by men of equal eminence. Schools and collections had been neglected. The glittering third empire, despotic and hypocritical, erected on the horrible crime of the 2d of December, 1851, had laid, it seemed, iron fetters on the minds of one of the most gifted nations that the earth has ever produced.

German thought imperceptibly took the ascendancy in directing the march of European culture. To what

strength the despised and ridiculed German people had unostentatiously grown up was demonstrated by the crisis of 1870, when the gigantic but hollow balloon of French glory burst like a soap-bubble before the breath of the German army. The German successes, gentlemen, were not obtained by the chance of the moment—great events never are, they are the result of slow growth and long preparation. Shall I tell the younger members of my audience what was the origin of this astonishing rise of the German nation? It is expressed by a few words which King Frederick William III. of Prussia spoke in his inaugural address at the foundation of the university of Berlin in 1817: "We have," said the king mournfully, "been humiliated and depressed in every respect, our country is ransacked and impoverished, our population reduced to nine millions. We must try to gain what we have lost in material strength by the development of mental power." And as the university of Berlin—which to-day is, perhaps, the most active centre of scientific movement—was founded in a truly national spirit, so schools of all kinds and degrees sprang up throughout Germany by the hundreds and thousands. You all have heard the proverbial sentence which, in 1871, was echoed from one end of the globe to the other, that the Franco-Prussian war was decided by the German schoolmaster. Many of the men who have rendered the German medical school famous are still living. I therefore refrain from mentioning their names. Any one who has not been in Europe for ten years will be astonished at the immense progress observable in the medical departments of the German universities. The completeness and magnificence of the institutions surpass all expectation. Anatomy, physiology, chemistry, physics, the branches of natural history and pathology, the different departments of medicine, even the so-called specialties, have all their separate institutions, the smallest of which can compare in size with the average American college. On inquiring what was the cause of this recent rapid development, I learned that by the governments of the different States one-half of the money received from the French as war indemnity, had been used for military purposes, the other half for the universities. You see they are still true to the traditions of the old King of Prussia.

When will America come to take the lead in medical affairs? Will she ever? Gentlemen, I am convinced that so much as the European civilization is above the Asiatic, so much will the American outrank the European. The Asiatic castes hindered the development of individual talent, and the European society, with its odious distinctions of common people, gentry, nobility, and royalty, is only a faint photograph of its Asiatic prototype. An immense soldiery is used as much for the perpetuation of aristocratic prerogatives as for national defence. In our, my adopted, country each man can elevate himself as high as his physical and mental means will permit, no classes privileged by birth stand in his way, and, besides, he has elbow space enough to spread in every direction. If Europe has the advantage of an old culture, of museums, libraries, collections of art, and all kinds of scientific institutions, America gives her sons one advantage worth more than all the European treasures: *an unbounded opportunity*. To all of you, gentlemen, she offers a successful career.

Although I have unhesitatingly said before that the European system of medical education shows a higher standard than the American, I am sure that an American medical college is better suited to your requirements than a European. The European system is not all perfection ; it has its disadvantages as well as the American, and it behooves me to point them out so far as I can.

The European system is stereotyped, and strangles many a mind of an original and initiative turn. The preparation of a European medical student requires thirteen years. From his sixth to his tenth year he is in the grammar school, from the tenth to the nineteenth year he is in the "gymnasium," where most of the time is

devoted to Latin and Greek. He would be much better prepared for the profession of medicine if he gave more time to modern languages, mathematics, natural history, chemistry, and physics. In the four years of professional study he has to proceed so systematically and attend so many lectures, that often enough his patience is worn out by the theoretical exposition of a subject before any allusion is made to its practical importance. It wearies him; he becomes inattentive and plays truant. Let me illustrate this by an example. Zoology is one of the obligatory studies in Germany. A friend told me that when he was at Würzburg, the lecture on zoology was from one to two o'clock every day, immediately after dinner. One hot summer day, while the professor was lecturing on whales, he fought a desperate but unsuccessful struggle with Morpheus. The professor's words grew faint and fainter, like distant bells, till at last he fell asleep and only awoke when the bell was rung just in the midst of the professor's closing sentence, of which he caught only the last part, viz., "and therefore the whalers always place themselves on the left side of the animal." You do not know, said my friend, how much annoyance that nap has given me. I could not ask the professor, and since that time I have asked hundreds of people why it was that the whalers always try to get on the left side of the whale, but up to this day I have not yet received a satisfactory answer. Whether this story was original with my friend or not, I do not know; but it suggests the first advice, gentlemen, which I venture to give you: Do not sleep during a lecture.

If I were still young, I would read a little less Greek and try to get over my zoology before I entered a medical college. You must not think, however, that I consider the study of the classics, Greek in particular, as useless or superfluous. I do not think that a liberal education is complete without Latin and Greek. Apart from the intrinsic beauty and educational importance of the classics as a means of training the mind, Greek and Latin words form so large a part of our scientific vocabulary, and Latin is still daily so much used in prescriptions and medical literature that no physician can get along without them. But I protest against the inordinate time devoted to them in the European and also in the American colleges. That that time could be employed on more important subjects, is tersely expressed by these words of a German satirist: "If the Romans had been obliged to learn Latin as we are, they would never have found the time to conquer the world." It is said of the Germans that they think their time unlimited, and waste it in preliminaries. A German author, for instance, who wants to describe the history of a city, begins with the creation of the world. Permit me to recall to your mind that Washington Irving has done the same thing regarding this glorious metropolis, and that the American academic colleges are not a whit better than the German. Take Harvard as an example. The average age at which a boy enters the academic department is eighteen or nineteen years, and his brain must be pretty well stocked with Latin and Greek to make the entrance possible. To acquire the college degree costs four years more, during which his mind is fed again chiefly with Latin and Greek. After this college education he proudly enters the medical department, where he has to spend another four years. Then he would like to travel and see how they cure people on the other side of the Atlantic. All this, if his health be not broken, may make him a model student, but he will be a pretty old boy before he earns the first dollar, and circumstances may make it highly desirable for him to earn a dollar or two, or three, before he gets very old.

As to *preliminary knowledge*, it matters little where and when it is acquired. I consider it necessary, gentlemen, to know Latin grammar enough to write simple sentences correctly, and to read easy prose—for instance, Cæsar—without much preparation; to know Greek enough to be acquainted with the general spirit of the language,

with the laws of the formation and derivation of words. It is horrible to read in print of *prodromata glaucomæ*, of the *fenestrum ovalis*, and the like. In mathematics the principles of algebra, plain and solid geometry, and trigonometry with logarithms, are indispensable. In natural history, chemistry, and physics only the rudiments are needed, for these sciences, so far as they have a practical bearing on medicine, will be thoroughly taught in the medical colleges—at least they are in this one. I regard it as self-evident that every medical student must be fully conversant with the English language; and it would be very useful if he could read German and French without effort. Those of you who have not had the good fortune to learn these preliminaries in younger years I advise most earnestly to do so later, and to devote a certain time to it every day.

How to arrange your professional studies to the best advantage. Here comes in the question of the superiority of a graded course over the one-class lecture system. To advance from the simple to the complicated, from the lower forms to the higher, is decidedly a good educational principle, and for the exact sciences, mathematics for instance, no other method could be advocated. But in sciences such as medicine, in which a vast, I may say the greater amount of knowledge has to be acquired, not by reasoning, but by experience, it is a positive advantage to lead the student from the first day straight to the field of observation. There at once his attention is engaged, his interest awakened, his sympathy with human suffering incited, and the desire to help becomes a passion. Correct diagnosis is fascination, healing the purest happiness. Thus from the very beginning the student will become enthusiastic in his profession; and enthusiasm is the mightiest stimulus to work. It is objected that a young student cannot fully understand a clinical demonstration. This is true, but he will be able to understand some, and if the teacher be good, even a good deal of it, so that the student may, in one clinical hour, gather more useful information than from a text-book in ten hours. Are text-books, are lectures unnecessary? By no means. Text-books have to be studied faithfully, and with patience and leisure, because they are the complete and well-arranged repositories of our stock of knowledge, of which the richest and best conducted clinic can impart only fragments. Lectures, gentlemen, are the easiest and most impressive way to acquire the greatest amount of information in the shortest time. An harmonious combination of all the means of instruction is the best manner of learning. The clinic will show you the object of your studies; it puts the questions which you have to solve, and is the mightiest incentive to scientific work. The sick-room will drive you to the lecture-room and to the laboratories, the chemical, physical, physiological, and pathological workshops where you have to try your hands on lifeless objects until you have acquired sufficient skill to manage the ailments of living human beings. The operating theatre demonstrates the importance of the dissecting-room and of the collection of instruments and apparatus. The disorders of the nervous, visual, and acoustic organs will urge you to visit the cabinets of electricity, optics, and acoustics.

Use them all, gentlemen, all the means of information. Do not pass the whole day in the lecture-room and the evening in "quiz" classes, as by so doing you may at the end of your studies be able to pass a brilliant examination in writing, but unable to distinguish intoxication from apoplexy, scarlet fever from nettle-rash, a gathering in the ear from meningitis. On the other hand, do not lounge the whole day in dispensaries and hospitals, observing symptoms and witnessing operations. This plan is too apt to lead to unreasonable empiricism, whose votaries are satisfied when they have filled their note-books with prescription formulas of cough-mixtures, anodynes, nerve-tonics, alteratives, hypnotics, cosmetics, antipretics, and purges. While at the college, employ the chief part of your time to learn how to diagnosticate.

Almost everything else you can learn at home. To become a good diagnostician, which is the next thing to being a good physician, requires a teacher and abundant and well-selected clinical material, which you cannot expect to find in the first years of your practice. Weakness in diagnosis does more harm than all other shortcomings together. Without a correct diagnosis, a trustworthy prognosis and a judicious management of a case are impossible. Gentlemen, the diagnosis and the prognosis, not the treatment, make the physician, in the eyes of the public. I emphatically repeat these well-known truths, warning you not to neglect the scientific foundation of the art of healing while collecting a set of recipes, nine-tenths of which are useless. Do not fight symptoms with drugs before you have carefully searched for the cause of the symptoms. The poorest pathologist always prides himself on his therapeutical greatness. There is, in every science, a mythological part which is handed down from generation to generation, whose disbelievers formerly were crucified, now are ostracized. Shall I tell you where the mythology of medicine is stored up? In the handbooks of *materia medica*, *allopathic* as well as *homœopathic*. But do not think me a nihilist. If I believe that nine-tenths of what is said of the virtue of drugs is myth, I am convinced that the last tenth is a blessing to mankind.

I have ventured to give you only some general advice how to study, leaving the special arrangements to the teachers of the different subjects.

I come to the last part of my address: *What opportunities for your studies does this college offer you?* It offers all you can desire, and more than any one of you can make use of. Chemistry and physics are well taught, and I am happy to say, that Professor Draper lays more stress on physics than is commonly done. Its importance is at least equal to, in my opinion greater than, that of chemistry. In anatomy, not to speak of the teaching, the material and facilities for practical work are unsurpassed. All the other branches receive due attention. The large general hospitals, Bellevue and Charity, in which the clinics are held, are before our door, and contain eighteen hundred beds, which are always occupied.

Other hospitals of a more special character are near at hand and equally at your service for clinical instruction. The dead houses of Bellevue and Charity hospitals furnish abundant and freely available material in that most important of all the auxiliary departments of medicine, pathological anatomy. The different laboratories contained in the new wing of the college building, inaugurated last year, have proved a great success, and invite your attendance and appreciation. You receive there gratuitously private instruction for which in Europe you would have to pay high prices, as the assistants of the European schools make their living more or less from such courses. Every branch of medical study, theoretical and practical, is taught in this college. What else can you desire? The opportunity is given, it is for you to avail yourselves of it. You are at liberty to map out your own path of instruction, to gather much information or little. The freedom of learning is as fully granted here as at any German university. You are considered as men ripe enough to judge for yourselves, and select what is best for every one of you. The college-bred scholar has only to look over the catalogue to lay out for himself a systematic graded course of three or four years' duration. The German student does the same. The scientifically less prepared, but mentally no less strong student, may choose the practical method, gather all the information which the clinics and lectures afford, and fill in what he lacks in theoretical knowledge during the evening and the vacation. Though, perhaps, he will not greatly advance the science of medicine, he can doubtless become a competent physician and a successful practitioner. The European universities do the same as our schools. They exclude nobody from availing himself of all the resources

they possess. They matriculate and promote everybody without distinction, and at the same rates, which is honest enough. It is not the medical departments of the European universities that demand a certificate of maturity; it is the State that refuses admission to the final examination by which the license to practise is granted if the candidate cannot produce a college certificate of maturity and evidence of four years' professional study at one or several universities. Whether in this country, sooner or later, the State will or will not take the final examination of the physician in hand is not for me to guess at. Thus far the licensing power is granted to the medical schools, and the time will soon come when you will have to present yourselves ready to answer questions in the seven topics.

Seven topics! Are there only seven topics in the vast domain of medical science? If you say there are seven chief branches, the remainder are "specialties" of which the candidate need know nothing, you are mistaken. There are no specialties; the human body is an harmonious whole, nothing can be left out or set aside as serving a special, extraneous purpose, not even a tooth. The scheme of examination by speaking of seven branches, means that the whole of medicine is classified in seven larger divisions, each of which will have to be subdivided, but none of the subdivisions must be ignored. The faculty desire it to be understood that all the subjects that are on the programme are worth knowing and of importance. They desire it to be understood that all branches of medicine—may they be taught by the regular professors or may they, for the sake of convenience and efficiency of instruction, be placed in the hands of special teachers—will be examined into according to their respective dignity. Some of these so-called specialties have acquired an extent of theoretical and practical significance, not inferior to some of the seven branches. I will mention, for example, ophthalmology, which is commonly regarded as a part of surgery, but which has acquired such an importance in internal medicine that Nothnagel, professor of theory and practice at Vienna, said last year that no medical man should be licensed who could not handle the ophthalmoscope. It will not do, gentlemen, to march so directly toward the programme for your M.D. that you leave unnoticed vast domains of the science and art of medicine, because you think they will not be subjects of examination. The specialties will come under the head of one or other of the seven branches and be examined by the official teacher of that branch, the questions to be formulated either by the professor or by the special teacher. In ophthalmology, for instance, two questions will in future be regularly given to each candidate for M.D., the one by the professor of internal medicine, the other by the professor of surgery. Skin diseases, nervous and mental diseases, ear diseases, throat diseases, etc., are all most important parts of medicine. Patients affected with them will demand your services daily. By requiring sufficient knowledge in these branches, and providing you with the means of obtaining it, the faculty does you a favor and a service, for which you will bless it all your life.

Let me now say a word about *post-graduate instruction*. Those who want to go beyond the requirements for their diploma will find ample opportunity to do so in this college, and in the different hospitals and other institutions of this city and this country. He, however, who feels the sacred fire in him will not be afraid to cross the ocean in order to perfect himself in Europe. Let full liberty prevail in all this, let every one choose and act for himself, and let it be recognized that we must and shall have physicians in this country to whom the management of the most important diseases may be entrusted with the same confidence as to the first European authorities. This city certainly will not lack such physicians, according to the stubborn law which governs the relation between labor and reward. This law throws the best men where work is best rewarded.

Ten years ago I was consulted by a Boston physician for a serious ophthalmic difficulty. I advised him to stay in New York and have his eyes treated. He asked me, quite astonished: "Why, haven't we as good physicians in Boston as you have in New York?" I replied without feigned modesty: "No, sir, and you never will have; for talent, like merchandise, has a tendency to seek the best market." He understood, stayed, had his eyes cured, and soon afterward settled in New York himself.

Gentlemen, as civilization advances with the progress of science, the requirements of a candidate will be greater from year to year. The faculty of this college have the earnest desire, and make every effort in their power to advance the standard of proficiency of the students. Last year they added the laboratories and section teaching, this year they have founded the *College Dispensary*, in which the students have an opportunity to make themselves acquainted with the milder and more common forms of disease, for which people are not admitted to hospitals.

You see, gentlemen, there is every opportunity afforded for a thorough medical education. What method you pursue is indifferent, only follow it up. In learning languages there are also two methods: 1, the *systematic*, which begins with the declension of nouns and goes regularly through all the chapters of grammar, etymology, and syntax, before the pupil reads the simplest book; and 2, the *practical* method, which begins with sentences, from the start, and deduces the rules of grammar from examples in speaking and reading. This method has appropriately been called the *natural*, for it is the way in which the child learns its own language. Who can say which of the two methods is the better? The systematic is more adapted to the scholar, the natural preferable for the requirements of practical life. In both methods, however, a given amount of work has to be done. There are in the English language, for instance, thirty-six thousand words which have to be committed to memory in some way or other. This requires time and work. The same in medicine. Its large stock of knowledge can be acquired only by hard and persistent labor. If any one of you thinks himself capable of getting a sufficient knowledge of the essential parts of the theories and practice of medicine during two college courses of twenty weeks each, he is fundamentally mistaken. I advise every one of you, in the name of the faculty, so to arrange your curriculum as to attend three full terms at the college, a winter and a summer course making one term. The old philosophers held it to be the highest maxim, "Know thyself;" Carlisle says, in modern times the maxim should be, "Know thy work and do it." Both are good maxims. Gauge your own faculties, examine the task before you, plan your work carefully, begin without delay, and do not stop till you have reached the end.

This, gentlemen, reminds me that it is time for me to stop, and for you to begin.

THE SECRET OF LONGEVITY.—A French medical man, who has just died at the age of one hundred and seven, pledged his word to reveal the secret of his longevity, when no more, for the benefit of others. It was stipulated, however, that the precious envelope containing the recipe for long life was not to be opened until he had been buried. The doctor's prescription, now made known, is simple enough and easy to follow, but whether it is as valuable as he pretends is extremely doubtful. He tells his fellow-men that if they wish to live for a century or more, they have but to pay attention to the position of their beds. "Let the head of the bed be placed to the north, the foot to the south, and the electric current, which is stronger during the night in the direction of the north, will work wonders on their constitutions, insure them healthful rest, strengthen their nervous system, and prolong their days." It is, he adds, to scrupulous attention to the position of his bed that he ascribes his longevity, the enjoyment of perfect health, and the absence of infirmity.

REPORT OF A CASE OF ACUTE FATTY ATROPHY OF THE LIVER, WITH POST-MORTEM EXAMINATION.

By S. C. CHEW, M.D.,

PROFESSOR OF THERAPEUTICS AND CLINICAL MEDICINE IN THE UNIVERSITY OF MARYLAND.

THE following case is reported as a typical instance of a malady of not very frequent occurrence, in which the diagnosis, though attended with some difficulty, was made during life, and completely verified by a post-mortem examination.

J. G.—, a most faithful and exemplary member of the medical profession, was engaged in his usual duties until Sunday, July 15, 1883, when he suffered from a severe attack of gravel, the calculus passing apparently along the left ureter.

To relieve the pain he inhaled in the course of Sunday morning about three ounces of chloroform without much benefit, the suffering returning as soon as the influence of the anæsthetic passed away. In the afternoon his friend and medical attendant, Dr. W. F. A. Kemp, was summoned to see him, and immediately administered a hypodermic injection of morphia, with the effect of at once relieving his pain and giving him sleep.

On the following day he was free from pain and attended to his professional duties, as he did throughout the week and until Wednesday, July 25th, though he spoke of feeling badly, and to those who saw him he appeared far from well.

On Thursday, the 26th, he went out in the morning, but came home with a severe chill, which was followed by fever, in which the temperature rose to 103.5°. Persistent nausea and vomiting occurred, with pain in the back, chest, and limbs, and oppression of breathing. The symptoms being like those of remittent fever, his physician prescribed for him the sulphate of quinia together with the salicylate of cinchonidia, under which the temperature fell to 99°, but in other respects his condition remained nearly the same for the two following days.

On Saturday, the 28th, the pain in the chest and oppression of breathing suggested the possible existence of a central pneumonia, as yet not extending to the surface so as to be detected by the ear; and under these circumstances I was kindly invited by Dr. Kemp to see the case with him. The nausea and vomiting were still continuing, the ejected matter consisting chiefly of mucus and watery fluid without any discolorations; temperature 103°. There was a slight icterode hue of the skin and conjunctiva. The patient, though evidently suffering from pain and oppression in the chest, was calm and uncomplaining. A very careful auscultatory examination made by both Dr. Kemp and myself showed no sign of pneumonia. The symptoms still appearing like those of malarial fever of a remittent type, it was decided to continue the use of quinia in somewhat larger doses. On the following day, Sunday, the 29th, the nausea and vomiting had diminished, and the temperature was 98.5°.

On Monday, the 30th, the patient expressed himself as feeling better, and read the newspaper in the morning, but occasionally some wandering of mind was observed, and in the evening the jaundice was more marked.

Tuesday, 31st.—In the morning some degree of somnolency was apparent; the jaundice was still deeper, and the temperature had fallen to 97.5°. Percussion over the liver appeared to show some lessening of the area of hepatic dullness, but as the abdomen was very large and fat it was impossible to pronounce positively from this method of investigation as to whether the liver was diminished in size or not. At 5 P.M. it was found difficult to arouse the patient, and at 8 P.M. the stupor was still deeper. This condition continued all night.

Wednesday, August 1st.—At 11 A.M. the patient was profoundly comatose, and it was impossible to arouse him. The bladder had been evacuated involuntarily, and some blood had been passed from the urethra, not diffused through the urine apparently, but staining the sheet in spots. On passing a soft catheter into the bladder, urine to the amount of about two ounces was obtained, which was healthy in appearance, contained no blood, was of normal specific gravity, and showed no albumen when tested with heat and nitric acid.

The diagnosis of the case appeared now to lie between four affections: first, pernicious remittent fever; second, yellow fever; third, uræmic coma; fourth, acute fatty atrophy of the liver.

The first of these diseases was excluded by the consideration that quinia had been freely given, and that under its use perfect apyrexia had occurred.

The occurrence of yellow fever in a single sporadic case was impossible in the highest degree, as no instance of the disease has been known in Baltimore this year, and the summer has been remarkably cool, and not of that continuously elevated temperature which seems necessary for the development of yellow fever.

The suspicion of a renal origin of the symptoms, suggested by the coma and the constant recurrence of nausea and vomiting, was negatived by the result of the examination of the urine.

There remained, then, the fourth alternative—acute fatty atrophy of the liver; and after fully weighing all the facts in the case, the opinion was formed that this would be found to be the organic disease upon which the symptoms of the case depended.

The patient died comatose about 6 P.M. August 1st.

On the afternoon of the following day a necropsy was made by Dr. J. E. Michael, Professor of Anatomy in the University of Maryland. The lungs were found to be hypostatically congested, especially in the lower and posterior parts, but no pneumonic change was present. The heart was soft and largely overlaid with fat; its valves and orifices were healthy.

The abdominal parietes contained a very large amount of fat, as did also the omentum.

The stomach contained a good deal of dark fluid, evidently consisting in great part of altered blood, and resembling the black vomit of yellow fever.

The kidneys were dark in color, somewhat mottled, and surrounded with an unusually large quantity of fat; but they were not organically altered.

The liver occupied not more than one-half of the space which it would be expected to fill in the abdomen of a man as large as was the subject of the examination. When removed from the body, it weighed exactly 31½ ounces, or about one-half of its normal weight, which, in such a subject, should have been about sixty ounces.

In the only case of acute hepatic atrophy reported by Dr. Murchison, in his work on "Diseases of the Liver," that of a young girl aged nineteen, the organ is said to have been "extremely small, weighing only 28 ounces, or exactly one-half of the standard weight for the girl's age."

In a case recorded by Professor Flint, Sr., which was also one of a young female, aged twenty-one, the liver was reported to be much reduced in volume, weighing 29 ounces.

Now, if these weights, 28 and 29 ounces, indicate a very remarkable reduction in the size of the liver in young females, as they certainly do, the weight of 31½ ounces, as met with in the liver of a large man, would show proportionately fully as great a diminution of its normal bulk.

This alteration of the size of the liver excluded entirely the diagnosis both of remittent and of yellow fever, for in both of these diseases the liver is either larger, or, at any rate, not smaller than natural; while it is generally of a bronze hue in the former disease, and of a straw-color in the latter.

In consistence the organ was very soft and friable, and it presented the appearance of being much congested, being dark in color, but not of the deep ochre or rhubarb hue described by some observers. A portion of it was examined with the microscope by Dr. J. E. Atkinson, Professor of Pathology in the University of Maryland, and was found to have lost almost every trace of normal liver structure.

A certain amount of connective-tissue was present, but no hepatic cells were discoverable, and in their place large quantities of oil-globules and granular matter were found.

The small amount of urine obtained before death was alkaline in reaction and contained some bile-pigment; crystals of triple phosphate were visible under the microscope, together with a few hyaline casts. An examination for leucine and tyrosine gave negative results, but the absence of these products did not affect the diagnosis, for, as is remarked by Dr. Murchison, "the detection of these crystalline bodies in the urine of a case of jaundice may be said to clinch the diagnosis of acute atrophy of the liver, but the failure to detect them must not exclude acute atrophy from the diagnosis."

The verification by the post-mortem examination of this case of the diagnosis of acute fatty atrophy of the liver was complete. The case was *acute*, for until seventeen days before his death the patient was attending to his usual duties, not suspecting the existence of disease. The change in the liver was *fatty*, as shown by the destruction of its normal tissue and the presence of a very large quantity of oil-globules. The change was *atrophic* in character, as the organ was of only about one half of its normal weight.

Two circumstances, the sex and age of the patient, rendered this case one of especial interest. The disease is much more common in females than in males; of 31 cases collected by Frerichs, 22 were females. The age of the subject of this report was about sixty, whereas a large portion of those attacked with the disease are under middle age. Of Frerichs' 31 cases 26 were under thirty, and all except two under forty.

Little or nothing is known of the originating causes of acute atrophy of the liver, nor of the primary changes in the nutrition of the organ which lead to an acute fatty degeneration. The malignant jaundice of the older writers was believed to be sometimes superinduced by mental emotions of a depressing kind, the *pathemata mentis* of Cullen, especially fear and grief. Sometimes, according to Sir Thomas Watson, it has been produced by great bodily suffering, or by a severe surgical operation, or perhaps by the dread which attended it. When resulting from nervous influences, it is observable, he remarks, that the cases "are often fatal, with head symptoms, convulsions, delirium, or coma supervening upon the jaundice." It is highly probable that in such cases the structural disease upon which the symptoms depended was that which later observations have shown to be acute fatty atrophy of the liver; and it is conceivable that in the case here reported the severe pain attending the passage of the renal calculus may have first started the morbid action by which the nutrition of the liver was fatally deranged.

OVARIOTOMY IN A CHILD EIGHT YEARS OLD.—Dr. Duchamp recently performed ovariectomy in a child eight and one-half years of age. The cyst was tapped and about a quart of lemon-colored fluid extracted. Then the tumor with the left ovary and Fallopian tube was removed. The operation was easily performed, and the child made a good recovery. The author recalls other cases in which the operation has been performed on young girls, and in which the favorable issue has shown the wisdom of operating thus early, and of not waiting until the tumor has grown to such a size as to endanger the life of the child.—*Journal de Méd. et de Chir. Prat.*, September, 1883.

A CASE OF EPITHELIOMA ORIGINATING IN
ABSCCESS OF THE LACHRYMAL SAC.FROM THE PRACTICE OF DR. C. R. AGNEW AND DR.
D. WEBSTER.

By DAVID WEBSTER, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC.

Mr. K—, a Connecticut farmer, had lachrymal abscess at the age of forty-five, and was always afterward troubled with stillicidium, or a "watery eye." He consulted an eminent ophthalmic surgeon in 1872, thirteen years after the occurrence of his attack of acute dacryocystitis, and was advised to have an operation performed for opening his tear-passage, but neglected to attend to it. So the disease was without treatment until January 14, 1875, when Mr. K— came to New York and put himself under our care. He was then sixty-one years of age, and the lachrymal disease had existed for fifteen or sixteen years. There was a tumor of the size of a Lima bean over the tear-sac, and on its surface was an ulcer covered with a scab. Pus could be squeezed from the lachrymal sac. The eyeball was red, and there was some superficial vascular keratitis. There was no pain in or about the tumor, but "a little trifling itching." The vision of the eye was $\frac{2}{3}$.

We made a diagnosis of probable epithelioma, and Dr. Agnew removed the growth with a knife and placed it in the hands of Dr. Elijah A. Maxwell for microscopic examination.

Dr. Maxwell reported as follows:

"January 26, 1875.—I have examined microscopically the specimen, and herewith append what has been disclosed. The growth has a connective-tissue stroma made up of moderately large, spindle-shaped, nucleated cells; next, an infiltration of numerous round cells, resembling granulation tissue in form and arrangement of cells, and found most numerous in the central portions of the tumor, while the main bulk of the growth is made up of distinctly epithelial elements, showing the following varieties of cells. They were ovoid, polygonal, conoid, at the borders serrated, all with a large nucleus almost filling the cell and containing numerous nucleoli. Patches were found at the borders presenting the same appearances as the endothelium of lymph spaces, and giving one the impression of the probability of growth in this direction. It is, in my opinion, an *epithelial carcinoma* of the small-celled variety."

February 22, 1875.—The wound made by the removal of the tumor has entirely healed. There is still pus in the lachrymal sac.

Dr. Agnew now slit up the lower canaliculus and passed a narrow, probe-pointed knife down through the nasal duct to the nose. The passage was kept open by probing for a time and then the patient was allowed to return home.

October 21, 1876.—In about two weeks after the patient ceased to visit us two little nodules appeared in the same position from which the original tumor had been removed. They are now of the size of a small split pea each. The eye is the seat of chronic conjunctivitis and a glairy-looking pannus, as though there might ultimately be epithelial trouble of the cornea. The palpebral conjunctiva of the upper eyelid also looks threatening.

Mr. K— was advised to have the two recurring growths removed, but declined to have them interfered with at that time.

We did not hear from him again until September, 1883, when his nephew called at our office and completed his history. He stated that after the patient called upon us for the last time the growth increased rather rapidly, and became painful, always worse on taking cold. After about two years it had grown to a considerable size, and he placed himself under the care of a cancer doctor who put on a cancer plaster and "drew it out by the roots." The operation extended

through some weeks and was very painful, but the tumor was effectually destroyed, the site healed leaving a deep depression, and the growth never returned.

The patient died of typhoid pneumonia in March, 1881, after an illness of only eight days. It was his third attack of pneumonia, the first having occurred about fifteen years before his death, and the second within a few years of the first. There was no family history of cancer.

266 MADISON AVENUE.

THE DIAGNOSIS AND HYGIENE OF TYPHOID
FEVER.

By E. HOCHHEIMER, M.D.,

ASSISTANT SANITARY INSPECTOR NEW YORK HEALTH DEPARTMENT.

HAVING been assigned by the Board of Health to the investigation of the sanitary conditions attending or causing typhoid fever, several circumstances regarding its etiology and diagnosis have forced themselves upon my notice, to which, as they differ somewhat from generally received opinion, it appears advisable to call the attention of the profession, especially at the present time, when the disease is encountered with such unusual frequency.

Judging from the clinical picture of typhoid fever as usually given in the text-books, its diagnosis would seem an easy matter. The malaise which precedes its advent, the chill which marks its onset, the headache, epistaxis, diarrhea, abdominal tenderness, ileo-cæcal gurgling, roseola, tympanites, enlargement of the spleen, cough, appearance of the tongue, and, above all, the peculiar, regular remissions and exacerbations of the fever, make up a group of symptoms which stamp the features of a disease easily recognizable and not to be mistaken. Whatever may be the cause, whether the above description is a mere generalization, or whether there is something about the climate and hygienic condition of this city which materially modifies the appearance of the symptoms, I shall not stop to speculate. The fact, however, remains, that in the great majority of cases as at present met with, the task of arriving at a positive opinion is by no means an easy one. As a rule, this is not accomplished until the second or even the third week; and it is not magnifying the difficulty of making a diagnosis to assert that, in most instances, there is none of the exanthematous or zymotic diseases which it is so hard to recognize early. And yet this early recognition of the disease is of the highest importance, for many reasons: it will aid the attending physician to discover the conditions producing or assisting to cause the disease, lead to the use of proper precautions to prevent its spread, direct the correct line of treatment, and enable him, in uncomplicated cases, to foretell its natural course and duration, and thus keep the friends and relatives from expecting impossibilities, and dooming themselves to inevitable disappointment.

The disease ordinarily begins in a manner resembling an attack of malarial fever. The patient complains of weariness and inaptitude for exertion, and there is generally more or less elevation of temperature. There may be a chill, but this is the exception and not the rule; the same is true of the epistaxis. The condition of the intestinal action is variable: in many, diarrhoea is present, while in probably an equal number the movements are natural or the patient is even constipated. The appearance of the tongue is equally uncertain: sometimes it is coated, sometimes dry, sometimes almost normal. The coating, when present, may be white, yellow, or brown, and situated at the base, at the sides, at the tip, or in the centre; in short, it shows nothing more than is to be seen in any fever or inflammation. Abdominal tenderness is a more constant symptom, but not by any means met with in every case; in some instances it is probably present, but the patient's mental hebetude prevents its being appreciated. The cerebral symptoms are very irregular: while many subjects complain of

headache, or a sense of fulness across the forehead, others do not deviate in this respect from their usual condition. The "characteristic temperature curve" of the first week will seldom be observed.

The above hasty glance at the more common manifestations of the disease in question would apparently leave us in a very uncertain state of mind, in the first few days of the sickness, as to the nature of the patient's complaint. This is undoubtedly true, except where there has been another case of typhoid fever in the house shortly before, the diagnosis must be mainly made by exclusion. But the darkness is not so profound as it may, at first sight, appear. In the first place, there is the fever, more or less continuous; secondly, in addition, there are generally one or more of the other symptoms, and in this disease, to borrow a phrase from homœopathy, it is especially necessary to have in view "the totality of the symptoms;" thirdly, any case of "malarial fever" which persists longer than three days in spite of sufficient administration of quinine should excite suspicion of typhoid; and lastly, there is a symptom which is peculiar and so constant that it may almost be regarded as pathognomonic, *the roseola*.

The time at which these spots appear varies; they may be met with as early as the third day or not until the end of the first week. Nor are they always, strictly speaking, on the abdomen; they occur sometimes on the pubes, or, perhaps most commonly, over the lower ribs. Neither are they always confined to the trunk; in exceptional cases they invade the extremities as well, and this without any apparent relation to the severity of the attack. In size they are from the one-thirty-second to the one-sixteenth of an inch in diameter, depending upon the character of the skin, being smaller in young subjects and in those who have delicate skins. The same remark applies to their elevation above the surrounding integument; they may be not at all raised, or elevated almost to papules. They are smooth, and, when they are most palpable, in running the finger over them but a slight resistance is encountered. In color they are bright red, and they *disappear completely on pressure*, showing again quite promptly when the pressure is removed, the rapidity of their reappearance depending of course on the activity of the circulation. In number they vary within wide limits; there may be only one spot in the course of the disease, or, as stated above, there may be an eruption covering the greater part of the body and coming out in successive crops. But whether they be few or many, their presence is almost constant, and, if carefully looked for, particularly during the second week, they will be found in probably no less than ninety to ninety-five per cent. of all cases. In short, they are so peculiar and characteristic that they cannot fail to be of the highest diagnostic value.

The bronchitis, which generally shows itself at the end of the first week, is likewise one of the most constant symptoms; and while, of course, it may be accidental, taken in connection with the other symptoms it may assist in arriving at a conclusion in doubtful cases.

As to the sanitary conditions under which typhoid fever occurs, a few words must suffice. While it cannot be denied that in many, perhaps the majority of cases, no particular defect can be discovered, still in a very large number obvious cause can be found. Prominent among these may be mentioned untrapped or unventilated waste-pipes, leaky discharge-tubes, sewers, or soil-pipes, lack of water in the water-closets or school-sinks, and foul-smelling, badly cared-for privy-vaults. Where more than one case has occurred in a house, one or more of the above conditions will rarely be absent.

It would appear almost an impertinence on my part to say anything with reference to the precautions necessary to prevent the spread of the disease, and yet so frequently do both my colleagues and myself see them neglected, that it may not be out of place to call particular attention to them. It is apparently well established that the materies

morbi lies in the discharges from the bowels, and only becomes active after they have undergone a certain amount of decomposition or fermentation. The process of prevention is therefore simple and direct; all that is required is to thoroughly and speedily disinfect the stools or anything that has been soiled with them. Copperas is very good for this purpose, and has the advantage of being cheap and odorless. A solution of this should always be kept in the chamber or bed-pan, and when the patient has a movement of the bowels the vessel should be emptied at once and well rinsed and have some of the disinfectant again put into it. If the patient's linen or bed-clothes should accidentally be soiled, they should be changed at once and disinfected; for this purpose hot water is excellent, and the solution of chlorinated soda, known in the laundry under the name of Javelle water, is to be commended. The patient's undergarments, etc., should not be washed with the clothing of other members of the household. It is hardly necessary to add that to sprinkle carbolic acid or to strew chloride of lime about the sick-chamber is, to say the least, of doubtful utility. The practice of keeping the discharges for the doctor's inspection is a source of danger, and, except in rare instances, it should not be countenanced. These measures cannot be begun too early; the attending physician should not be content with giving general directions, but should lay down strict and minute instructions for disinfection, and by daily inquiry see to it that they are complied with.

207 EAST FIFTY-SEVENTH STREET.

POISONING BY SULPHATE OF ATROPIA.

SUCCESSFULLY TREATED WITH HYPODERMICS OF SULPHATE OF MORPHIA.

By LLEWELLYN ELIOT, M.D.,

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Cases of poisoning by atropia are becoming of frequent occurrence, more especially since the appreciation and application of its therapeutical effects increases. Ophthalmic troubles, rheumatism, pertussis, dysentery, the sweating of phthisis, poisoning by opium yield to its proper administration as if by charm. The dose for internal administration has been stated to range from .0005 gm. to .003 gm. ($\frac{1}{2}$ gr. to $\frac{1}{16}$ gr.). Like many other valuable remedies it is often abused. The following case was seen, in conjunction with Drs. J. I. Dyer and J. S. Harrison, during my service as Resident Physician to the Washington Asylum Hospital of this city.

Mary H—, white, aged forty years, born in Ireland, was admitted to hospital on December 11, 1881, for treatment for "double iritis" of short standing. She gave a history of frequent exposure and attacks of alcoholism and rheumatism, but nothing pointing to syphilitic taint. She was directed to use a solution of atropia sulphate, .133 gm. to 32 c.c. (gr. ij. to $\frac{5}{8}$ j.), applied night and morning; the strength of this solution was on December 16th increased to .266 gm. to 32 c.c. (gr. iv. to $\frac{5}{8}$ j.). No improvement following, she was on December 28th ordered potassium iodide, 1 gm. (gr. xv.) three times a day; emplastr. cantharid., .025 mm. (1 in.) square, to each temple, besides the following:

R. Massæ hydrargyri 8 gm. (gr. xij.)
Pulv. opii. 133 gm. (gr. ij.)

M. Ft. pil. no. xij. Sig.—One three times a day and continue until salivation appears.

On December 30th the blistering was repeated; on January 3, 1882, salivation appeared, for which she was ordered a wash of potassium chlorate, tincture of myrrh, and water.

From the commencement of the administration of the mass. hydrarg. until profuse salivation the iritis steadily improved, so much so that she assisted in a small way in

the ward duties. On January 19th, at 7.30 A.M., she took by mistake a teaspoonful of the atropia solution, .266 gm. to 32 c.c. (gr. iv. to $\frac{5}{8}$ j.), making her dose .033 gm. (gr. ss.). In a short time she complained of lightness of the head, and "feeling foolish;" nothing was thought of it, the mistake not being known. At 9.15, an hour and three-quarters afterward, symptoms of atropia poisoning developed. Pupils dilated, vision diminished, accelerated respiration, constriction of the throat, difficult deglutition, pulse 116, but weak. At 9.20 a hypodermic injection of morphia sulphate, .022 gm. (gr. $\frac{1}{2}$), was administered; at 10.20 it was repeated; at 10.50 a third was given, pulse, 96. At eleven o'clock the thermometer in the axilla registered $96\frac{3}{4}^{\circ}$ Fahr.; pulse, 96; respiration, 3 per minute, with marked symptoms of morphia poisoning. An electric battery was applied and in a few minutes another was brought into use. She responded. At 12.30, being placed upon the floor, she was subjected to violent shaking and flagellations at intervals. Her condition began to improve, at 4 P.M. she was given a few swallows of tea, for this strong coffee was substituted. At 9 she was put to bed. Her mind was not clear. During the following day her only trouble was partial loss of memory with muscular soreness. From this time she continued to improve; her sight being restored, she was discharged some weeks later. Nothing more was heard of her for some months, when in a drunken fit she jumped into the canal and was drowned.

The points of interest in the history of this case are, the complete cure of the iritis, the antidotal effects of morphia sulphate, the slowness of the respiration (3 per minute), and the subnormal temperature ($96\frac{3}{4}^{\circ}$ Fahr.). There can be no doubt as to the temperature, since it was taken with different instruments several times, for fear there might be some mistake in the reading or registering.

ADENOID VEGETATIONS OF THE PHARYNGEAL VAULT,

AND THEIR RELATION TO MIDDLE-EAR DISEASE.

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I PROPOSE to call attention to a class of cases that are comparatively common, accompanied by many unpleasant symptoms, and followed at times by quite serious results, yet frequently not recognized by the attending physician. Meyer, of Copenhagen, first called attention to this disease, and since then its symptoms, clinical history, and the histology of these growths have been so thoroughly studied and are so well understood that I shall not dwell long upon those points. The symptoms will depend upon how much respiration and phonation are interfered with, the amount of secretion, and to what extent the ears are involved. The nose is the natural respiratory channel, and no child will go about with its mouth constantly open when free nasal respiration is possible. In proof of this I cite the fact that in every case coming under my observation, in which a successful operation has been performed for the removal of vegetations, the patient has subsequently kept his or her mouth closed when at rest, although previously it had been constantly open. Phonation is very much hindered, especially in the pronunciation of the nasal consonants m and n. The term dead, applied to the voice by Meyer, describes it best and has been universally adopted. When the obstruction is considerable the nostrils are small, their walls thick and the nose compressed from side to side giving it a characteristic appearance. In a healthy and normal subject the anterior nasal openings are the smallest parts of the canals, and consequently when an extra amount of air is required the nasal wings are expanded and the orifices distended, but in these cases there is non-development from disease. If the children are

old enough they will expectorate the secretion, but if not it will be swallowed and coughed up, and this is not unfrequently the cause of a cough that resists all expectorants and anodynes. Sometimes it accumulates in such quantities as to interfere with respiration and wake the little patient several times during the night with a severe coughing spell.

Patients with a large amount of this adventitious tissue in the superior pharynx have a sallow complexion, which, together with the open mouth and compressed nostrils, gives them a characteristic distressed and idiotic expression, more pronounced if there is much deafness. So peculiar is the physiognomy in these cases that I have frequently been able to make a diagnosis from it alone as the patient entered my office or the infirmary, and in no case has my first opinion been proven erroneous by further examination.

All observers report this condition as existing in children of from five to fifteen years of age much oftener than at any other period; my own records show them in patients of from three to twenty-six years. A positive diagnosis can only be made by pharyngoscopic, rhinoscopic, or digital examination. Examination of that part of the pharynx below the soft palate frequently gives valuable information as to the condition of the membrane above, from the strings of mucus and crusts dropping down, the presence of enlarged glands on the posterior wall, and hypertrophied palatal tonsils; the naso-pharynx may, however, be almost entirely filled with vegetations without a trace of the trouble existing in the lower pharynx. The necessity of examining the whole surface anteriorly and posteriorly is therefore obvious. Pharyngoscopic examination sometimes requires considerable time and patience to determine accurately the condition in unruly children, and in such cases the parts should be examined by passing the finger behind the soft palate. In this way the whole space can be explored with perfect satisfaction to the surgeon and without danger to the patient, nor is this a painful manipulation. I usually make a digital examination in cases that readily permit of an examination with the pharyngoscope, in order to obtain more precise knowledge of the existing condition. My experience enables me to confirm the statement of Meyer, that the best place for observing this class of cases is among ear patients. He says ("Medico-Chirurgical Transactions," p. 191, London, 1870): "Among 102 cases of adenoid vegetations 72 suffered from disease of the ear. Among 2,000 children of the public schools of Copenhagen (the majority being between ten and fifteen years of age), he found 20, or one per cent. of dead pronunciation, and in all met with adenoid vegetations." At the Harlem Eye, Ear, and Throat Infirmary, since its organization in January, 1882, up to September, 1883, 179 patients suffering from middle-ear disease applied to me for treatment, and of these 27, or 1 in 6 $\frac{1}{2}$, had adenoid vegetations; 148 applied on account of throat and nasal afflictions, and of these 15, or 1 in 10, had this trouble, making a total of 42 cases among 325 throat and ear patients. Twenty-seven of the 42 cases of vegetations, or about three-fifths, had diseased ears. Of the 27 ear cases there were perforations in one or both drumheads in 14. While there was this large percentage of adenoid growths of the vaults there were only 7 cases of hypertrophied palatal tonsils, one-sixth as many as of the former.

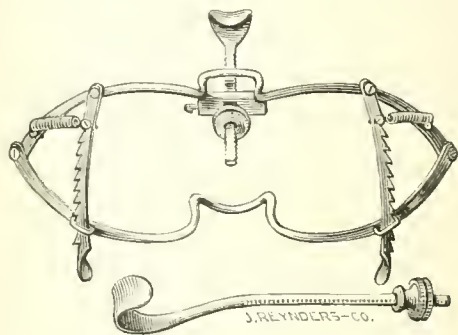
Hypertrophied palatal tonsils have from time immemorial almost been looked upon as a cause of middle-ear disease and volumes have been written about it, while the more common and important subject of hypertrophied pharyngeal tonsil has been entirely overlooked, simply because surgeons did not employ the pharyngoscope, and consequently were of necessity entirely ignorant of the condition of the membrane above the palate. In my experience enlarged palatal tonsils is only a part of a general catarrhal condition of the upper air-passages, is, in the great majority of cases, accompanied by ade-

noma of the vault, and is very much less common than the latter. Among the patients who applied for treatment of middle-ear disease, not accompanied by adenoid vegetations, there was well-marked naso-pharyngeal catarrh in nearly every case. My patients suffering from catarrhal throat affections almost invariably tell me that at different times they have been somewhat deaf, had tinnitus aurium and other common symptoms of otitis media, but it soon passed off and they considered it a trifling matter. If the hearing power of patients suffering from nasal catarrh be carefully tested it will frequently be found less than normal, although the subject is entirely unaware of the defect. Careful inquiry and study of these cases has convinced me that middle-ear disease not secondary to and the result of disease of the naso-pharynx is uncommon, and that the pharyngoscope and rhinoscope are as essential as the otoscope in making a correct diagnosis and applying proper treatment. I feel I have not done my duty to any patient that applies to me for treatment of a middle-ear affection until the nose and superior pharynx have been thoroughly examined. Upon this point Politzer says ("Diseases of the Ear," p. 303): "Experience teaches that when the naso-pharyngeal affection ceases the consecutive inflammation subsides, but that in a number of cases the inflammatory swelling and secretion in the middle ear continue, with the development of all the consequences I have already enumerated. On the other hand, in primary, or even in secondary affections of the middle ear, the inflammatory process, especially the swelling of the Eustachian tube, is maintained and recovery hindered by complication with or continuance of a naso-pharyngeal affection. From this may be seen the importance of minute examination of the naso-pharynx and the employment of rational treatment for the removal of an existing naso-pharyngeal affection as one of the principal conditions for affecting a favorable result in the numerous obstinate cases thus complicated." The aural disease accompanying adenoid vegetations of the pharyngeal vault is said to have been produced in three ways: First, by the pressure of the growths upon the mouths of the Eustachian tubes; second, by their interference with the circulation of air through the nose; and third, by an extension of the inflammation to the middle ear. My own belief is that it is caused almost, if not entirely, by an extension of the inflammation, during an attack of acute naso-pharyngeal catarrh to which patients in this condition are predisposed.

Patients present themselves with aural catarrh and purulent middle-ear disease as the result of nasal catarrh many times more frequently than they do with these troubles in connection with adenoid vegetations. All of the cases of acute middle-ear disease accompanied by adenoid vegetations that have come under my observation, have also had acute pharyngitis. In the great mass of these cases, applying on account of the ear complication, the vegetations are so small as not to press on the tubes at all, and do not interfere with respiration sufficiently to prevent the proper amount of air reaching the middle ear. The question now arises, whether operation for the removal of the vegetations is advisable or not. No ill effects have followed operation in any of my cases, and I believe none need ever occur if properly performed, but, on the contrary, the ears and general health may be very seriously damaged if left to nature. These growths must, of course, be approached either through the nose or through the mouth from behind the soft palate.

There have been five methods proposed for their removal, and used with varying success: 1, the curette; 2, caustics; 3, galvano-cautery; 4, the wire loop, which may be either the galvano-cautery loop or the *ceraseur*; and 5, the forceps. The only difficulty experienced in removing a hypertrophied pharyngeal tonsil is its inaccessibility. The nostrils are narrow and slit-shaped, through which only the smallest instruments can be

passed, and any manipulation in these cavities is always accompanied with considerable pain, so much so that children especially are unable to maintain the quietude necessary for the successful and easy performance of the operation. A very large percentage of these cases are also accompanied by hypertrophic rhinitis, which still further encroaches upon the calibre of the canals. In many instances it is simply impossible to pass any instrument through one nostril, on account of a deviation of the septum or an exostosis. Although the passage through the mouth is large the obstacle that has always been experienced is the spasmodic action of the soft palate, which instantly takes place upon the slightest irritation of the pharynx, thereby cutting off all communication. Palate retractors have been devised and employed, but they have all hitherto required the use of one hand for their manipulation, a fact that very seriously affects their utility. The method of passing strings through the mouth behind the palate, out of the mouth and then tying the ends over the upper lip is a very useful procedure, but does not counteract the action of the levator-palati muscle and consequently is not an entire success. The desideratum has been an instrument that will at once keep the mouth open, the palate retracted, and overcome the action of the levator-palati muscle. These objects are obtained by the use of the instrument made for me by J. Reynders & Co. It consists of a mouth-gag, differing from Whitehead's only in the absence of



a tongue depressor and the addition of a palate retractor. The palate retractor, devised by myself, is a broad, flat hook with a small round shaft, having a thread upon its whole length and a nut. To the mouth-gag I have added a bar with a slot and slidebolt. When the gag is properly placed in the mouth the bar will be just beneath the upper incisor teeth and parallel to them. After the gag has been inserted between the teeth and opened, the retractor is to be hooked behind the palate, drawn forward, the stem inserted in the slot, the bolt shoved beneath it, thus firmly holding it in place, and finally the nut on the stem is to be screwed up. I have used this instrument in fifteen cases of adenoid vegetations of the pharyngeal vault and find it to be all that is desired. In doing this operation I always give ether, because, first, it is quite painful; second, in children it is sometimes difficult to see the throat, and always impossible to operate there without restraining them by force; and third, there is no objection to it. The curette was Meyer's instrument, but he distinctly states (*op. cit.*): "One operation rarely succeeds in removing all of the vegetations, so that it often requires to be repeated. When the vegetations are of soft structure I employ cauterization with the solid nitrate of silver. In some few instances neither the operation nor the after-treatment by the use of caustics and the pharyngeal douche has succeeded in removing all traces of the vegetations." He also reports severe reaction, which in some instances resulted in perforation of the drumhead.

This method of treating the affection was original with Meyer and used by him more than by any other surgeon. Therefore, after reading the above opinion of it by its author, no further argument will be necessary to con-

vince us that it is not all that is to be desired. The second and third methods—namely, destruction by caustics and cautery—act upon the same principle, differing only in degree. After a considerable experience with such caustics as the saturated solution of chromic acid, sulphate of copper, the tincture of iodine, etc., I have entirely abandoned them, convinced they are useless in any considerable hypertrophy. The galvano-cautery I have employed in a number of favorable cases, but have never succeeded in curing any of them. It is a very painful procedure, difficult to perform in adults, almost impossible of accomplishment in children, and requires several applications, extending over a period of weeks; serious damage to the healthy parts is unavoidable and the cauterization is always followed by a good deal of inflammatory reaction. In my opinion this treatment should never be employed in the naso-pharynx, although for the treatment of the extreme hypertrophies of the tissue covering the turbinated bones it has afforded me better results than any other agent. With the aid of a speculum and ivory slide, introduced by Dr. E. S. Shurley, of Detroit, the turbinated bones can easily be cauterized without endangering the healthy parts, and in my hands many cases have yielded to this plan of treatment that resisted all others. The fourth plan is either the galvano-cautery loop or the cold wire snare.

Before the introduction of the Jarvis snare I removed post-nasal growths with an *écraseur* mounted with copper wire, but found great difficulty in getting it through the nose and over the tumor, simply because it would bend whenever it impinged against the solid parts, and of course the same is true of the platinum wire, but the steel wire will spring over a tumor without bending, thus permitting the surgeon to draw it down to the base or pedicle, and by turning the nut cut it off. The Jarvis snare is a single round tube that can be readily turned in the nostril, while the cautery loop of necessity consists of two tubes, making it much wider and of course requiring a correspondingly larger space to be turned in. The former will cut off anything one is required to remove here, and as it is cheap and always ready, while the latter is both costly and troublesome, I much prefer the snare. The modification of the Jarvis snare for use behind the palate, introduced by Dr. Bosworth, is superior to any other with which I am familiar, but the objection to it is the tediousness of the operation to both surgeon and patient. Large growths can be removed in this way without trouble, but the smaller ones in children of from three to ten years of age, who come under the care of the aurist on account of the accompanying ear disease, are very difficult to treat by this method. Many of them are simply broad, flat cushions, attached to the vault without any constriction at the base, and to which it is almost impossible to attach a snare even in adults who will tolerate the pain and discomfort, but in children it is still more difficult, for they resist as much as possible. Removal of these growths by the snare through the nose is generally much more difficult than through the mouth.

We now come to the consideration of the fifth method—the forceps. Dr. Cohen, in his book “Diseases of the Throat and Nasal Passages,” p. 262, says: “When the vegetations are large and the parts can be educated to quietude under manipulation the growths can sometimes be seized with properly curved forceps and be torn off or crushed off as the case may be.”

This is as favorable an opinion as any one can give, unless the movements of the palate can be controlled. With the mouth-gag and palate retractor I have shown you, properly curved forceps, and the patient fully anesthetized, the whole growth can be removed while the patient is recovering from the anæsthesia. Everything that can be taken hold of with the forceps should be removed, and then the index finger should be passed behind the palate and any shreds or small pieces found are to be scraped off with the finger-nail. This opera-

tion is adapted to all cases, but especially to those in which the vegetations are small, and in children who will not tolerate operative interference. The great advantages of it are, that it is radical—that is, the vegetations are all removed at one operation, there is never any inflammatory reaction, and it can be performed in less time than any of the other operations. There is no more hemorrhage in removing them in this way than in any other, and it ceases spontaneously as soon as the operation is completed.

Most of these cases are accompanied by hypertrophy of the tissue covering the turbinated bones, and in those cases I apply the galvano-cautery to them after the patient has been anesthetized, but before removing the adenoid tissue. If this hypertrophied erectile tissue is not destroyed, the patient will still be unable to breathe through the nose, and I have not yet found any agent that acts so promptly and efficiently here as the cautery. Although there is always considerable inflammation following the use of the cautery, I have never yet seen any harm result from its use in the nose.

I wish particularly to call attention to the difference between its use in the nose and the naso-pharynx. In the nose the healthy parts can be protected, the application limited, and it is entirely under the control of the surgeon. In the naso-pharynx the healthy parts are seriously damaged, the mouths of the Eustachian tubes frequently more or less burned, resulting in acute inflammation of the middle ear, and all of the serious consequences so liable to follow. I very frequently employ the galvano-cautery in treating hypertrophic troubles of the nose, and have never seen any evil results from its use, but, on the contrary, have obtained very decided benefit in every instance.

The first case I operated upon in this way was S. C. B —, aged six, with chronic aural catarrh, hypertrophy of the turbinateds, and pharyngeal tonsil. He was referred to me by Dr. Ira B. Read, who kindly assisted me in the operation. The patient was etherized, the turbinateds cauterized, and the vegetations removed with the forceps, the mouth and palate being controlled by the instrument I have shown you. I did not see the boy again for some three weeks. At this time his mouth was firmly closed, although it had been constantly open before the operation, and upon examination the superior pharynx was found entirely free from vegetations, while the turbinateds were so much reduced in size as to permit of free nasal respiration. The ears were also very much improved, and have since given him no trouble. The mother volunteered the information that the bad odor of the breath, and all the other unpleasant symptoms from which he had suffered so long, had entirely disappeared, and she considered it a very successful operation.

Since then I have operated in this way fifteen times, and in only one case failed to remove the whole mass at one operation. In this patient there was a small piece left just back of the septum, and although it was so small as not to interfere with respiration, I removed it with the nail of my index finger. The final result of this case was a perfect cure.

PARALYSIS FOLLOWING SIMPLE CATARRHAL SORE THROAT.—Dr. Lentz reports in the *Gazette Médicale de Strasbourg* for September 1, 1883, two cases of catarrhal sore throat followed by grave visceral lesions. In the first case there was albuminuria, and in the second paralysis of the lower extremities and retention of urine. From a study of the cases he concludes as follows: 1. Simple catarrhal sore-throat may be followed by grave phenomena, such as albuminuria or paralysis. 2. It seems to be in some cases the manifestation of miasmatic poisoning. 3. The paralysis is the result of a direct and specific action of the virus, upon which depends also the sore throat, and is not, as claimed by some, due to weakness following acute disease.

Progress of Medical Science.

CROTON-CHLORAL IN THE TREATMENT OF PERTUSSIS.

—In a paper read before the Kentucky State Medical Society (*American Practitioner*, August, 1883), Dr. W. C. Webb speaks very highly of croton-chloral in whooping-cough. He has treated a large number of cases with this remedy, and claims to have obtained a cure in nearly every instance within two weeks. The drug must be given in large and continued doses to obtain the best results. To a child one year old he gives one grain of croton-chloral every four hours. Children from ten to twelve years of age will bear two grains at a dose. After the first week the cough is generally so much improved that the remedy may be given less frequently. It is, of course, necessary to watch carefully the effects of the drug, so as to avoid the production of toxic symptoms.

INTESTINAL OBSTRUCTION CAUSED BY A CALCULUS.—Dr. Magnin relates in the *Journal de Médecine et de Chirurgie Pratiques*, for August, 1883, the case of a lady who, for several days, had suffered from obstinate constipation, and complained of violent pain in the abdomen. Purgatives of various kinds were administered, during five days, without effect, except to induce bilious vomiting and increased pain. At the end of this time the obstruction was relieved by the passage of a calculus the size of a duck's egg, of ovoid shape, and rough on its surface. The composition of the mass was the same as that of biliary calculi.

TREATMENT OF WARTS BY CALCINED MAGNESIA.—Various contributors to recent French periodicals have been relating their experiences in the treatment of warts by the internal administration of calcined magnesia. They all report favorably concerning it. The plan is to give seven or eight grains of magnesia per diem, and a cure of the disfigurement is said to be obtained in the course of one or two months. Dr. Lucas Championnière (*Journ. de Méd. et de Chir. Prat.*, August, 1883) suggests the trial of this same remedy in the case of epithelioma, and thinks that possibly we might obtain equally favorable results in this affection also.

REFLEX PARAPLEGIA.—Dr. Thomas Oliver relates, in the *Liverpool Medico-Chirurgical Journal* for July, 1883, two cases of paraplegia associated with morbid conditions of the genito-urinary apparatus, which would seem to be confirmatory of the theory of the reflex nature of paralysis in certain cases. The first patient was a man, forty-six years of age, of temperate habits, and without any history of venereal disease. He was working one day in a garden, when he suddenly experienced a severe pain in the back, which became so intense that he started for home. Before proceeding far, however, he began to stagger and soon lost all power in his legs. A fortnight later he was brought to the infirmary in a condition of complete paraplegia. He still complained of pain in the back, and at night there was subsultus tendinum, during which the pain was more severe. There was difficulty in passing water, and the flow would sometimes be suddenly arrested. Exploration of the bladder with a sound gave negative results. The urine contained a quantity of pus, and on a few occasions he passed a little blood. There was no rigidity of the muscles, and the plantar and patellar reflexes were normal. A localized area of dulness, extending from the eleventh rib to the crest of the ilium was detected, which was also extremely painful on pressure. A renal calculus was suspected, and a long needle passed into the right kidney came in contact with a hard gritty substance. Under the influence of rest and remedies administered for the relief of pain, the patient recovered the full use of his limbs, and has remained well. The second case was that of a lady, twenty-eight years of age, who had completely lost all power in her legs. Sensation was normal, and there was no muscular

rigidity. Vaginal examination revealed the existence of retroflexion of a heavy uterus, the lifting up of which was painful. As she had not menstruated for three months there was a possibility of pregnancy. Complete return of power in the limbs followed treatment of the uterine condition. The loss of power was stated not to be hysterical. Dr. Oliver concludes, from a study of these and other similar cases, that paralysis may be purely reflex in character, and he thinks that the term reflex paraplegia should be retained in our classification of diseases.

CARDIAC ECTOPIA.—Considerable interest was manifested at a recent *séance* of the Académie de Médecine of Paris, by the exhibition of a case of pregnancy at the ninth month, by M. Tarnier. The woman was a secundipara, and the sternum was bifurcated at the lower part, so that the beats of the heart were seen to take place immediately beneath the skin of the epigastric region. It was stated that the ventricular part of the heart could be seized between the fingers; by palpation over the upper part of the notch the contractions of the auricles could be detected. Apparently the diaphragm does not exist at the site in question. M. Marey said that this specimen of teratology would no doubt permit a verification in man of observations made upon the heart of animals. M. Beau had explained the beat of the heart as due to dilatation under the influence of the afflux of blood at the time of the ventricular systole. According to him the apex of the heart contracts during the diastole. In the case of ectopia, on the contrary, it was easy to perceive that the ventricle was soft during the diastole and hard during the systole; in the latter period the apex of the heart strikes the thoracic wall.—*London Lancet*.

SURGICAL INTERVENTION IN TUMORS OF THE BLADDER.—In a memoir read before the Société de Chirurgie of Paris (*La France Médicale*, August 4, 1883), Dr. Bazy sums up the indications for operation in vesical tumors, as follows: 1, in the case of a pediculated tumor, an operation is justifiable whatever the functional troubles may be; 2, when the tumor is sessile, an operation should be deferred until functional troubles present themselves; 3, when the suffering is intense, and death is inevitable from the results of pain and hemorrhage, entire ablation of the organ should be practised, a hypogastric fistula being formed. The contra-indications are classed under four heads: 1, the generalization of the neoplasm; 2, close adhesions to other organs—the most that could be done in such case would be the establishment of a permanent fistula; 3, diffuse infiltration of the walls of the bladder by the new growth—in such a case a fistula, if established, would be speedily closed by the neoplasm; 4, acute nephritis or advanced secondary degeneration of the kidneys. A commencing lesion of slight extent might be arrested by operation upon the bladder. The best mode of operating, the author thinks, is by hypogastric section. This gives a large opening into the bladder, is seldom followed by any immediate evil results, and is the most convenient location in which to establish a permanent fistula. Hemorrhage is at first a little abundant, but it quickly ceases. Extravasation of urine is not to be feared, but of course, free drainage should always be provided for. Perineal section is much less suitable, except in a very small proportion of cases.

PAROSTEAL SARCOMA OF THE RADIUS.—The following case is related by Mr. Henry T. Butlin in *The Lancet* for August 11, 1883: A strong, healthy-looking man was admitted to hospital on April 8, 1882. On the radial side of the left forearm, about midway between the elbow and the wrist, was a tumor as large as a small fist, but lobed and elongated. It presented toward the front, as well as on the outer side. The tumor was tense, fluctuating on the outer side, but firm toward the front; the skin covering it was stretched, but not discolored. In the axilla was one enlarged gland about the size of a

small nut. The man said that for four months he had been conscious of the presence of a lump in the forearm; but it had grown very slowly, and without pain, and therefore had not prevented him from pursuing his occupation, until about six o'clock on the previous evening, when suddenly, without warning and without any evident cause, it began to enlarge, and in less than half an hour had doubled its previous size. The enlargement was accompanied with excessive pain, which at once rendered him incapable of continuing his work, and compelled him to seek advice. The diagnosis was sarcoma of the radius, probably subperiosteal, which had enlarged from sudden hemorrhage. He was put to bed, the arm laid on a rest, and cooling lotions were applied. But the pain continuing unabated, it was decided to operate. An Esmarch's bandage was applied, and then a free incision was made into the tumor. A large quantity of clotted blood was turned out, but the bone, contrary to expectation, was nowhere bare. It was decided, in spite of the apparently malignant character of the tumor, not to amputate, but to scoop out the new growth and endeavor to save the limb. This attempt was successful, and though two small recurrent tumors have since been removed from the cicatrix, the patient has a useful arm, and has remained free from any appearance of the disease in other parts. Microscopical examination showed the tumor to be a spindle-celled sarcoma. Mr. Butlin thinks that a parosteal sarcoma is much less malignant than a subperiosteal tumor of the same nature, and he regards the attempt to save the member in such cases as certainly advisable.

ADONIS VERNALIS AS A HEART-TONIC AND DIURETIC.—This plant has been for a long time in use in Southern Russia as a popular remedy in the treatment of dropsy, but has not hitherto been submitted to scientific investigations made with a view to determine its physiological and therapeutical action. Professor Botkin has recently employed it extensively in his clinic at St. Petersburg, and Dr. Bubnoff presents a report of the results obtained (*Allgemeine Medicinische Central-Zeitung*, July 28, 1883). It was found to be of value in those cases of dropsy only in which there was pre-existing cardiac disease. After the administration of adonis vernalis the heart-beats were much strengthened, the size of the organ was diminished, and its tones were much louder. The systolic murmur of aortic stenosis especially was intensified. The heart's rhythm became more regular, and the pulse slower and fuller. The daily excretion of urine was increased largely, sometimes rising from ten or twelve ounces to eighty or ninety ounces in the twenty-four hours. In cases in which there was no actual lesion of the kidneys the albumen and casts disappeared. The subsidence of œdema went hand-in-hand with the increase in the amount of urine excreted, and at the same time the secondary symptoms depending upon œdema of various organs disappeared. The patients expressed themselves as feeling much better. The remedy was given in an infusion of the strength of 3j. to 3vj., to which two drops of oil of peppermint were added. The dose of this infusion was a tablespoonful every two hours.

A DYNAMIC THEORY OF CHOLERA.—Dr. John Chapman writes to the *Journal de Médecine de Paris*, of August 25, 1883, giving his views concerning the nature and treatment of cholera. He regards the disease as consisting essentially in hyperæmia of the spinal cord and sympathetic nervous system, upon which condition depend all the phenomena observed prior to the stage of reaction. His treatment consists in the application of heat to the entire surface of the body, while at the same time an ice-bag is applied along the spinal column. This application is continued as long as the symptoms of the algid stage (vomiting, intestinal discharges, and cramps) persist. The reaction sometimes becomes excessive, and then it is necessary to remove the ice-bags and apply heat to a part or the whole of the spine. He had an

opportunity, during the cholera epidemic in Southampton in 1865, to test his method in several cases of more than average severity, and claims to have met with more than the average success. He advances the following conclusions as embodying his convictions: 1. Although in exceptional cases cholera may present itself associated with blood-poisoning, it is not, as a rule, the result of this poisoning. 2. No proof has ever been forthcoming of the existence of a cholera poison, and there are strong reasons for believing that it exists only in the imagination of certain pathologists. 3. The existence of the so-called "cholera germs" is equally hypothetical. 4. Cholera does not travel from country to country. 5. The disease is produced *de novo* wherever certain determining conditions exist. 6. There are the strongest reasons for believing that cholera is neither infectious nor contagious. (The author admits, however, that the influence exciting the disease, in the centres of a cholera epidemic, may be felt by those who are not actually attacked. And, furthermore, since this influence renders all those within its sphere susceptible, the emanations from cholera patients, as well as all other impure and unhealthy emanations, may act as exciting causes.) 7. International regulations, by means of which various governments endeavor to resist the invasion of cholera, are of no avail; while the development and continuation of the disease are, in all probability, often favored by the restraint imposed by useless, and consequently unjustifiable, quarantine laws. 8. Although the exciting causes of the scourge are numerous and varied, cholera is essentially, invariably, and exclusively a phenomenon dependent upon abnormal excitation of the nervous system. 9. The chief element of a rational treatment of cholera consists in exercising a powerful and essentially sedative influence at once upon the sympathetic nervous centres and the spinal cord.

CHLOROFORM INTERNALLY ADMINISTERED.—This anæsthetic has enjoyed some repute of late in France as a remedy for the relief of pain when internally administered. It is prepared for this purpose in the following way: A flask is about three-fourths filled with distilled water and an indefinite quantity of chloroform added. It is then thoroughly shaken at frequent intervals for about an hour and then set aside. When the upper part of the mixture becomes perfectly clear it is decanted from the cloudy deposit formed by the excess of chloroform at the bottom. This "water of chloroform" is of the strength of about nine parts per thousand. Diluted with an equal amount of distilled water it has a most happy effect in the pain or nausea attending the process of digestion in dilatation of the stomach. Dr. de Beurmann recommends it also in pain accompanying organic disease of the stomach, in nervous vomiting, and in the vomiting of pregnancy. It is of rather agreeable flavor, and may be advantageously employed in combination with orange-water as a vehicle for the solution of chloral and other hypnotics, and also of salicylate of soda. At ordinary temperatures it is a stable preparation, and uninfluenced by the action of light.—*La France Médicale*, August 28, 1883.

TREATMENT OF CROUP BY SULPHIDE OF CALCIUM.—In a communication read before the Medical Society of Rheims (*Union Médicale du Nord-Est*, August 15, 1883), Dr. Meunier reported upon a number of cases of croup treated by sulphide of calcium in doses of three to four and one-half grains per diem. The remedy was given in granules of one-tenth of a grain each, one or two granules every hour. The author regards the sulphides as of great value in the treatment of diphtheria and croup, while not being, strictly speaking, antidotal to the specific poison of this disease. Their mode of elimination, in great part by the pulmonary mucous membrane, is a further recommendation for their use. Dr. Meunier's success in the cases recorded was not startling, yet was such as to warrant further trial of the sulphide of calcium in this disease.

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IDIOPATHIC ANÆMIA OF ADDISON.

It is now almost thirty years since Addison first described idiopathic anæmia, or, as it has been called since the appearance of Biermer's paper, in 1871, progressive pernicious anæmia. Even at that time, with only one case, its clinical characteristics, its course, termination, and *post-mortem* appearances were so accurately described that we may accept his description as true to the life to-day. True, up to the time of Addison's description (1855) seven cases of an unknown and undiagnosed disease had been partially described, but it is to the great physician of Guy's that we are indebted for much that we know of its clinical history.

A most interesting and instructive paper on this subject now appears in "Guy's Hospital Reports" (vol. xli., 1883), by Dr. P. H. Pye-Smith, in which he gives the complete clinical history of a case coming under his care at the hospital, with tables of all recorded cases up to the time of the writing. The case reported by Dr. Pye-Smith lived almost a year after entering the hospital. The patient, a male, had noticed an alteration in his complexion about a year before that time, and almost at the same time his skin became covered by little blisters, similar to those produced by stinging-nettles, which produced itching and stinging. Dyspeptic attacks, to which he had been subject, became more frequent, and soon the well-known symptoms of the disease became well marked. These, as is well known, are a pallid, yellowish skin—warm, moist, and soft, with the veins showing clearly through it on the extremities; white, pearly conjunctiva; pale, sodden, flabby tongue; great paleness of the oral and buccal mucous membrane; breathlessness on exertion; cardiac murmurs, generally systolic, bruits being also heard over the axillary, carotid, femoral, and subclavian arteries, sometimes over smaller vessels, and, as a rule, a *bruit de diable* is heard over the cervical region. Hemorrhages into the retina, though sometimes found, are not constant. When they do occur they are usually very small, and very numerous. The pulse is rapid at the onset, not unfrequently dicrotic, full in the early stages, collapsing, and compressible; and the temperature one or two degrees above normal, though when death is imminent it may sink to 95° Fahr.

The examination of the blood, however, furnishes, we may say, the most important clinical symptom. The hæmal unit is markedly decreased, as was well shown in the case reported, in which it was 38.4, being only a

little more than one-third of the normal. This proportion gradually, in some cases rapidly, decreases. The blood has a pale, thin, watery appearance, and is very transparent; the coloring matter being reduced in some cases to only twenty-five per cent. of normal, and the proportion of red corpuscles may fall below one-eighth, and when examined they are seen to have lost their spherical shape in many instances, are often crenated, and the coloring matter is irregularly collected either in the middle of the corpuscle, or eccentrically, and the tendency to form rouleaux is absent. There are various other and more rare minor symptoms, such as epistaxis, vomiting, etc., and there may be anorexia, though this last is by no means general.

Some of these will be recognized as symptoms occurring in every case of anæmia. There is breathlessness on exertion because the red corpuscles—the carriers of oxygen to the tissues—are diminished; and muscular weakness affecting both the voluntary and involuntary muscles from the same cause; coldness of the feet; passive exudations; and paleness resulting from the loss or decrease of hæmoglobin, with functional murmurs in the heart and great vessels; and fatty degeneration of the organs from deprivation of nutrition. It is, however, beyond our scope at present to enter into a consideration of the various anæmiæ which may result either from loss of the normal constituents of the blood from an appreciable and known cause, or from a diminished increase of blood-forming material, or from an increased destruction of formed elements. Two affections are now recognized which are not dependent upon any of these causes, but idiopathic or pernicious anæmia, and chlorosis, though having these points in common, are so different that it is unnecessary to enter into a differential diagnosis in this place.

Dr. Pye-Smith conveniently classifies anæmia under three heads: 1, Those cases which are secondary and symptomatic; 2, cases associated with diseases of the cystogenic organs, whether or not lucæmic; and 3, idiopathic, primary, or essential anæmia without any symptoms during life, and without any lesions after death which cannot be explained as directly due to anæmia. From the first group of cases idiopathic anæmia is distinguished by its severity, malignant character, retinal and other ecchymoses, and by the increased temperature and almost invariably fatal result; and from the second by the absence of lucæmia, the structural changes in the red corpuscles, and the absence of any especial enlargement of the spleen, or lymph-glands. Though our knowledge of the pathology of idiopathic anæmia is not sufficient to enable us to explain it, we believe that we are authorized in holding that it depends upon a too rapid and extensive destruction of red blood-corpuscles. Certain it is, that we have the evidence of this destruction and increase of pigment in the deep color of the urine, in the yellow tint of the skin, and in the saturated tint of the fat and muscles, the occasional pigmentation of the serous membranes, and possibly, also, in the excess of iron sometimes detected in the viscera, which it is suggested may be derived from broken-down hæmoglobin; it is possible, however, that it may be due to the ingestion of iron as medicine.

Age, sex, and occupation seem to be of but little

moment in the etiology of this affection; it is rather more frequent in earlier adult life, seems to be about equally common in males and females, and is probably more frequently seen in the lower classes, and outside of large cities. The fact that it sometimes comes on without any assignable cause, not only renders its etiology and pathology obscure, but makes it doubtful whether the sometimes detailed states, as dyspepsia, pregnancy, privation, and various discharges, are to be regarded as more than coincidences, though Coupland, in thirty-one cases, assigns pregnancy and the puerperal state as the cause in twenty cases, and the remaining eleven to privation.

As before stated, the evidence furnished by an examination of the blood is especially valuable. As regards the white corpuscles, they are, as stated by Wilks so early as 1857, not materially increased. Occasionally they may seem to be present in larger than normal quantity, but this is only due to a transient leucocytosis, and in several cases the number has seemed even to be diminished. The red corpuscles, however, may be enormously decreased—are always, in fact, much below normal, and are pale. The pale, watery condition of the blood, therefore, is due not only to the diminished number of red corpuscles, but probably also to a seeming deficiency of hæmoglobin. As regards this point there seems to be a difference of opinion. Dr. F. Willcox states (*Practitioner*, August, 1883) that the hæmoglobin value is largely increased, and Hayem found in one case that though the color of the blood was diminished from a normal of one hundred to ten, the number of corpuscles was only about one-tenth, so that there was no diminution of hæmoglobin in each corpuscle. The size of the red blood-disks is, however, largely increased, as stated by Eichhorst, Kohler, and Willcox, sometimes being so high as 9 mm. and even 12 mm. This is a valuable point in the diagnosis between idiopathic anæmia and chlorosis, if it be a constant condition, for although a few giant disks are seen in chlorotic blood, the average size is markedly diminished. In making the diagnosis, then, of idiopathic anæmia we cannot do better than quote Dr. Pye-Smith, who gives its characters as: 1, Absence of organic disease and of any recognized and sufficient cause of anæmia; 2, absence of uterine and ovarian complications; 3, severe and ingravescent anæmia; 4, irregular and occasional pyrexia; 5, retinal hemorrhage; 6, diminution of red blood-disks without lucæmia, and presence of small, deeply colored, red corpuscles; 7, maintenance of adipose tissue.

The treatment of pernicious anæmia, though by no means gratifying, or as yet well determined, is not entirely futile, for cases do recover. Pye-Smith records twenty recoveries out of one hundred and thirty collected cases. *Imprimis*, it may be stated that iron is of no value in these cases. Though it is a necessary constituent of the blood-coloring matter, it cannot increase the number of the corpuscles, and in this disease we have reason for asserting that the addition of younger red corpuscles is almost entirely suspended. According to Willcox, it seems that iron not only does no good, but is actually harmful by irritating the stomach and causing vomiting. In this form of anæmia we must, at present, accept one of two theories; either that the power of corpuscle

formation is suspended, or almost entirely abolished; or that the young corpuscles, if formed, have little or no power to absorb hæmoglobin, and consequently do not reach their full development, and the concentration of the coloring matter in a few large corpuscles, as claimed by Willcox, may be due to a compensatory process by which oxygenation of the tissues may still be carried on, even with the great numerical reduction of the corpuscles. The end and aim of all treatment in these cases is to increase the number of corpuscles, and since the administration of iron cannot accomplish this, theoretical and clinical reasons are against it. Arsenic, however, may and does, in many cases, produce not only an increased number of red corpuscles, but improves the general symptoms. Though, as a matter of course, we cannot suppose that iron is a specific for the disease, some excellent results have been obtained by its administration. This and transfusion, with careful diet, seem to offer the only hope for the subjects of idiopathic anæmia. Quincke recommends transfusion into the radial artery, but we do not see that arterial transfusion is at present to be preferred, except that there is less danger of introducing air than when a vein is opened. Five cases have had recovery follow transfusion, and arsenic has given still better results, though oftener used.

THE MIDWIFE AND HER RELATION TO THE PHYSICIAN.

THE recent efforts made to legalize a State Board of Examiners for the medical schools, together with the prompt recognition and suppression by the County Medical Society of quackery in this city, has awakened an interest in medical education and legislation that bids fair to elevate the professional standard.

Coincident with this a movement is rapidly spreading among the larger cities throughout the country for the employment of intelligent women as nurses for the sick and to attend women in labor. It may be traced in part to the growing demand for opening a new field and offering women of the better classes increased facilities for self-support, but chiefly to recent advances in medical and surgical practice, which require nicer care and closer observation of the sick than untrained helpers can give. To supply these needs, "training schools" for nurses have been established in connection with certain of the larger general hospitals; while in this city a "College of Midwifery" has been recently organized.

The author of this paper desires to call the attention of the profession to this matter, so that the proper relation of the midwife to the physician may be determined. The time has come when the profession must concede to the midwife a legitimate place in the community. A writer, in the *New York Medical Journal* of April 14th, of an editorial on this subject, says: "With the continued immigration constantly going on, there are now thousands of poor women who, if compelled to make the choice between the attendance of a medical practitioner and a resort to some public charity, would find themselves under the necessity of adopting the latter expedient. Most of the midwives in the United States are of foreign birth and training, if they can be said to have been trained at all, and their ways do not commend them to people of American birth. Hence many a woman that could have

afforded her services has shrunk from the experiment and become a burden on the community. With proper facilities for their education, and special legislation to protect them, there is no reason why a class of intelligent, well-educated American midwives should not arise amongst us. The result of such a change cannot but prove conducive to the welfare of all concerned. Members of the profession who, for one reason or another, practise obstetrics for fees utterly out of proportion to the value of the services rendered, will not suffer to any great extent by the establishment of a class of trained midwives; for the latter will draw their support rather from those who now pay no fee at all than from those who are able to employ even the humblest practitioner of medicine." That the writer's views are correct no one will deny; for further confirmation we can turn to France or Germany, where the midwife is as essential in the community as the curate, the lawyer, and the doctor. Her importance has been recognized, and, in order that her calling may be protected against the invasion of unqualified women, the State erects a legal barrier in the shape of a strict examination. If midwives in the United States were what they should be, or what they are compelled to be in Germany, there would be no need of any special legislative enactment; but unfortunately they are not. They are as a rule ignorant, and, worse than all, their ignorance is fearless; the evil done by their malpractice is beyond comprehension. Any physician who makes a speciality of obstetrics and diseases of women, and even one whose practice is not extensive in this direction, will be able to relate many cases where, through the brutish ignorance and stupidity of some midwife, a woman or her child, perhaps both, have died, to say nothing of the many uterine diseases traceable to her mismanagement.

Recognizing these facts, it is time that the profession should make some effort to elevate the midwife to her proper position in the community. It is not necessary to lay open the entire field of obstetrics to the midwife. On the contrary, her practice should be strictly limited; the knowledge imparted serving to indicate to her not only how to manage a normal labor, but above all when to send for a physician, and what to do pending his arrival.

Thus instructed, with proper legislation to protect the people from incompetency, the midwife's relation to the physician would be established, and her position in the community made useful and necessary.

AN INSIDE VIEW OF A COUNTY MEDICAL SOCIETY.

We have received from a correspondent in Pittsburgh, Pa., a letter giving a very dolorous account of the state of medical affairs in that city. We are unfortunately compelled to believe that the recital is very little exaggerated. The Allegheny County Medical Society is, we are told, in regular affiliation with the State and national associations, yet it contains many members who do most questionable acts, still professing adherence to the Code.

Says our correspondent: "One of our 'popular' members advertised for a year in the daily press that he had resumed the practice of his profession, while some physicians were not aware that he had ever quit it voluntarily. And again for the past year he has been advertising as giving 'special attention to diseases of the eye,

ear, nose, and throat.' Another member, who has been abroad, upon his return requested the press to announce the fact with certain additions as a matter of news.

"For several months an advertisement of two lines has met my eye, to the effect that a physician, who has been abroad, has reopened his office. And I am told that one of our specialists, who has a private hospital, has been so unsuccessful in his operations as to have acquired for it the name of 'Pittsburgh Abattoir,' in spite of all his self-laudation.

"As to boasting of cures and remedies, a thing proscribed by the Code, it is far too common to hear members of our society not alone boast, but even intimate that they 'know it all,' and that other physicians are unfit to treat certain cases.

"Certain of our members keep selected formulæ at favored drug stores, and write for 'my mixture,' etc., and, it is reasonable to think, exact percentages of those druggists. In one instance, a pharmacist informed me that having received a prescription for 'my application No. 1,' called upon the doctor (who has held many offices in the society) to find out what 'No. 1' meant, and was impolitely told that 'if he didn't know, he'd better take it to —, who did know.'

"Some old physicians attend families by the year, at ten dollars per head—a practice most unjust to young physicians, undignified and abominable. There are in our society 'no-diploma fellows' and eclectics. One member, I am reliably informed, practises 'both systems,' regular and homœopathic. And others examine in lunacy cases on the same commission with homœopaths, sign the same certificate, and justify themselves by saying, 'That's all right; it's not a consultation.' But it is professional association.

"I tell you truly, sir, there are quacks in our county society, and the thin veil of the Code cannot shield them. But since the death of the revered Dr. James King, there seems to be not a man in it with stamina to point them out. And, to our disgrace be it said, many bright practitioners, desiring not the association of such men, are not members of the society; and some others who are, contemplate resigning, the only link that holds them being the fact that membership here is compulsory to membership in State and national societies. To belong to our society is no honor. In this county a code should be individual."

Our correspondent further states that a project is on foot to start a medical college in Pittsburgh, and he deplores the consequences of such an undertaking. "The Pittsburgh profession," he writes, "is now sadly overcrowded. There is not a man in this whole community affluent through the practice of medicine. And many of us have to struggle for the necessities of life. I believe that the American Medical Association, as a matter of duty to the profession, should cause to be published widely, systematically, a bulletin to the effect that the profession *is* overcrowded *everywhere*, and to deter as much as possible further entrance."

The last suggestion of our correspondent reveals the earnestness of his feelings, which are shared by many struggling physicians throughout the country. This question, however, must be mainly settled by the laws of supply and demand.

THE PRESERVATION OF DEAD BODIES FOR DISSECTION AND OTHER PURPOSES.

SOME recent tests of the various methods of preserving bodies for dissection and other purposes, have been made by Surgeon-Major C. Sibthorpe, and reported in the *Indian Medical Gazette*. The experiments were carried on at the Madras Medical College during the winter session of 1882-83. At this place the thermometer in the winter season rarely falls below 63° F., and is often as high as 72° F.; hence dissection has been carried on under great difficulties. But these Mr. Sibthorpe believes he has overcome. The record of his experience is as follows:

Two bodies were injected with alcohol; one of these, fourteen hours after death, underwent putrefaction so fast that it had to be rejected; the other, injected within ten hours, was under dissection for fourteen days, but notwithstanding its being kept in a reservoir of alcohol, the muscles soon lost their color and the tissues shrivelled up.

Three bodies were injected with Wickersheimer's solution, one of these was under dissection thirty-seven days, another fifteen, and the third twenty-two. These bodies had also to be kept in an alcohol bath.

Seven bodies were treated with an injection of boracic acid and glycerine, which was prepared by boiling one ounce of the acid into twenty-four ounces of glycerine; about thirteen pints of this being used in each instance. This solution no doubt preserved the bodies to a certain extent, portions of one being twenty-six days under dissection. In two instances it did not arrest decomposition, and in most cases decomposition set in early in the internal organs.

Finally, by far the most satisfactory results were obtained by following the method first described by Mr. Howse (*Guy's Hospital Reports*, vol. xvii., p. 465).

This consists in injecting a saturated solution of arsenic followed up by the free use of glycerine, which latter Howse considers the preservative fluid, using the former for the purpose of preventing the generation of maggots and fungi.

In making the preparation the glycerine is heated to boiling-point, when it will take up a large quantity of arsenic. One pound to a quart was found sufficient.

About one quart and a half of the solution is first injected, and this injection should be made very soon after death. Then, in twenty-four hours, one or two gallons of glycerine are used to complete the process. Twenty-two bodies, embalmed by this process, continued in a good state of preservation for twenty-seven days, and might have been kept longer. No maggots or flies appeared, no decomposition took place, the muscles preserved their red color, there was but little odor, and no dissecting-wounds occurred. Mr. Sibthorpe believes that by this method dissecting can now be carried on as easily and comfortably in warm as in cold climates. The knowledge of this fact will be appreciated by many of our medical colleges where late spring or early autumn sessions are held.

In this connection we may draw attention to a recent paper by Dr. J. Polak, of Warsaw, who has been studying the same subject. Dr. Polak used first injections of thymol in glycerine and water, as recommended by

Virotsef, then injections of corrosive sublimate dissolved in the same substance.

He found, says the *Lancet*, in commenting on this paper, that thymol, like sublimate, when used in a sufficiently concentrated form, arrests decomposition of the whole body by simple injection of the fluid through the carotid or femoral artery, the corresponding vein being opened. But he also found that even an advanced state of decomposition of the limbs was arrested, and the signs of such decomposition disappeared under the use of injections of sublimate, especially if only spirit and glycerine and no water were used. The skin became mummified and of a dark brown color, and the muscles acquired the appearance of smoked ham under either method, and neither heat nor damp had any deteriorating effect. But a much smaller quantity of the sublimate injection than of the thymol was needed to produce these results. Moreover, the color of the skin was longer preserved, and the comparative cheapness of sublimate renders it, perhaps, preferable. Dr. Polak points out that the injecting syringes should be of glass, owing to the action of sublimate on copper. For ordinary anatomical purposes an aqueous solution—1 in 300 or 1 in 500—is amply sufficient, and is better than chloride of zinc.

A BLESSING IN DISGUISE.

WE have heard it argued in all apparent seriousness that the human race would have been better off had the medical profession never existed. It was contended that, generally speaking, the efforts of the physician are directed toward prolonging the lives of the weak, the decrepit, and the aged, and thus the race as a whole was deteriorated. Were there no physicians the weak and diseased would die, and thus be prevented from transmitting their ills to future generations. But doctors are a necessary evil, and if the hopes of those who look for the perfection of the human race rest upon the extinction of the medical profession, we fear they are doomed to disappointment. Yet they may find consolation in another quarter. *La Higiene para Todos*, of September 1, 1883, contains a notice of a small volume written by a certain Dr. Schwachkopf, upon the benefit to humanity of the cholera. The learned author proves, by the statistics of the disease during the past ten years, that cholera attacks only the weak and infirm, the rachitic, the scrofulous, and all those suffering from ills liable to be transmitted to posterity. Looking at the question from this point of view, he regards cholera as a providential agent by which the strength and vigor of the race is maintained. He therefore agrees with the English authorities, though on somewhat different grounds, in condemning quarantine, the sanitary cordon, and all measures of a like nature. Such measures, he says, are prejudicial to the good of mankind, they hinder the growth of a robust, clean, and healthy race, and in so far prepare the way for the irremediable decadence of nations. "It is to be noted," he continues, "that cholera does not remain in the countries which it visits. As soon as its work of sweeping out the feeble, the wretched, and the dirty is accomplished, it passes on. The disease is endemic in India, and to this fact is to be attributed the strength and vigor of the Hindoos in spite of the misery in which they live." These

views have been disputed by Professor Geistreich, who says that cholera does not attack the debilitated, but, on the contrary, carries off the most vigorous of the race. Notwithstanding the differences of opinion between these learned men, they both agree upon the necessity of keeping the cholera at a distance from the Fatherland. The one fears that the dread disease would carry off the three most noble ruins in Germany, the Emperor William, Von Moltke, and Bismarck; the other is equally solicitous about the safety of these three illustrious personages in the event of a cholera visitation, since he considers them the strongest and most robust individuals in the nation. Our esteemed contemporary of Barcelona wonders greatly at these very original ideas, and seems to have been completely taken in by the ponderous Teutonic joke of Dr. Softhead and Professor Strongmind.

THE INJECTION OF ETHEREAL SOLUTION OF IODOFORM IN FUNGOID SYNOVITIS.

THE treatment of chronic arthritis, and more particularly of fungoid joint disease, as at present practised is, to say the least, far from satisfactory to either patient or surgeon. If, as is by no means improbable, fungoid synovitis is but the first local expression of a commencing tuberculosis, the importance of a speedy cure is manifest, even leaving out of consideration the desirability of preserving the integrity of the joint. But to obtain a speedy cure by the methods of treatment at present in vogue is impossible. To those believing in the tubercular nature of these joint affections, their superficial seat offers great temptation to try the effect of local so-called antiseptic remedies. Many substances have been suggested as suitable for injection into the diseased joints, and some of them have been tried with alleged beneficial results. The late Professor Hueter was an enthusiastic advocate of intra-articular injections of carbolic acid, but others who have been led to adopt this method have met with but indifferent success. More recently Mikulicz has proposed the injection of a solution of one part of iodoform to six of sulphuric ether. Acting upon his suggestion, Drs. Neumann and Müller, of Karlsruhe, have treated a number of cases of fungoid joint disease by this method, with, upon the whole, rather encouraging results (*Memorabilien*, July 16, 1883). The injections were made at intervals of from four to fourteen days, a Pravaz syringe being introduced each time. They were exceedingly painful, and this was the chief objection to their use, for though there was some immediate increase of swelling it soon went down again, and an abscess was never seen to result. The treatment must, of course, be begun early in order to obtain the best results. We shall look for further trials of this method with interest, for anything that promises to expedite the tedious and exasperatingly slow cure of chronic joint disease is worthy of earnest consideration. The extremely painful nature of the procedure is certainly a serious disadvantage; but if the method is proved, on further experience, to be of real curative value, this should not militate against its use. It is probable, also, that some means will be devised to obviate this irritant action, or some other solvent of iodoform may be found to be of equal efficacy and at the same time painless.

News of the Week.

NEW YORK INFANT ASYLUM, MOUNT VERNON, N. Y.—It is reported that an epidemic of measles is prevailing at the country home of this institution, and that the mortality is unusually large, sixty deaths having occurred within three months in a household of two hundred and twenty.

YELLOW FEVER.—There were twelve deaths from yellow fever at Havana during the week ended September 22d. During the week ended September 13th there were thirteen deaths from yellow fever at Vera Cruz.

MEXICAN YELLOW FEVER.—It is proposed to establish an inland quarantine at Yuma, Arizona, to prevent the introduction of Mexican yellow fever into the United States. The fever is reported to be spreading rapidly upon the Mexican coast, in the vicinity of Guaymas.

SUICIDE OF PHYSICIANS.—Dr. S. Vander Haydon, of Winfield, L. I., committed suicide on the 15th ult., by shooting himself. Dr. Vander Haydon had recently tendered his services as surgeon to the French Government, asking for an appointment with the army at Tonquin. His application had been accepted.

Dr. R. C. Mullen, of this city, attempted on September 29th to commit suicide by cutting open the right femoral artery. In this, he failed, and he was taken to St. Vincent's Hospital. Dr. Mullen graduated from Edinburgh University in 1850, and practised in Michigan for some time. He had for several weeks shown symptoms of insanity, and had been lodging at station-houses in order to escape his imaginary foes.

ST. FRANCIS HOSPITAL, NEW YORK.—At the recent competitive examination for positions on the house-staff of St. Francis Hospital, New York, the fortunate candidates were Dr. T. Theodore Janeway and Dr. J. V. Kendall.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.—The opening exercises of the seventy-seventh session of this institution took place in the college building, on Monday evening, October 1, 1883, at eight o'clock. The introductory address was delivered by Professor George H. Fox, M.D.

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will meet in the New York Academy of Medicine, on Tuesday, October 9th (three o'clock), and Wednesday, October 10th. The address, by Dr. H. O. Marcy, of Boston, Mass., President, will be delivered on Tuesday evening, October 9th, at eight o'clock, on "The Recent Advances of Sanitary Science; the Relations of Micro-Organisms to Disease" (illustrated by micro-photographs projected upon the screen). The following papers have been promised for the general meetings: Dr. L. S. Pilcher, of Brooklyn, N. Y., on "The Relations of Medical Journalism to Higher Medical Education in America;" Dr. Traill Green, of Easton, Pa., on "The Imperfection of Technical Studies as a Means of Mental Culture;" Dr. R. S. Sutton, of Pittsburgh, Pa., on "Cleanliness in Surgery;" Dr. Benjamin Lee, of Philadelphia, Pa., on "The Value of an Acquaintance with Botany as a Preliminary to the Study of

Medicine;" Dr. Charles McIntire, of Easton, Pa., "Is it Fair? A Study of the Comparative Political Position of the Medical Profession in the United States;" Dr. A. D. Rockwell, of New York, on "The Exact Value of the Electrolytic Method;" Dr. J. Cheston Morris, of Philadelphia, Pa., "The Milk Supply in Large Cities;" Dr. Charles E. Cadwalader, of Philadelphia, Pa., "Considerations upon the Public Provisions for the Care of the Indigent Insane;" Dr. A. D. Rockwell, of New York, "The Late Dr. George M. Beard—A Sketch." Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs. Dunglison and Marcy).

FRENCH REPORTS FROM THE EGYPTIAN CHOLERA COMMISSION.—The French, at the first breaking out of cholera in Egypt, were very furious in denouncing England for having allowed the disease to be carried to Egypt from India.

Recently M. Jules Guérin announced to the Académie de Médecine that he had received reports from the Cholera Commission, in which it was stated very positively that the cholera was not brought from India but arose *de novo* in Egypt.

OBLIGATORY VACCINATION IN FRANCE.—Those interested in public health have achieved a victory in France. M. Jules Ferry, the Minister of Public Instruction, has decided that revaccination shall be made obligatory in all the colleges and lycées in France.

MEDICAL LIFE-HISTORIES.—We have already referred to the work that Mr. Francis Galton is engaged in, regarding the medical and physical history of individuals. This gentleman has recently announced in the *Fortnightly Review* a plan for obtaining from members of our profession medical genealogies having the special aim of tracing the hereditary character both of mental and bodily qualities. Mr. Galton has already tried the same plan on a large scale among eminent scientific men, with very valuable results. The points on which he wishes information are: race, conditions of life, form and feature, health and disease, vigor, sensation, artistic capacities, intellect, and character. He intends to give £500 in prizes for the best returns, and to publish the conditions of competition in October next. The competition will be open to all medical men. The results of Mr. Galton's plan will be watched with great interest.

DR. BROWN-SÉQUARD is a candidate for the seat in the Académie des Sciences made vacant by the death of M. Cloquet.

INTERNATIONAL MEDICAL CONGRESS AT AMSTERDAM.—At this meeting, held last month, a number of prominent medical men, representing Holland, England, Germany, France, and Scandinavia, were present. The propriety of holding annually an International Medical Congress to deal with hygienic questions specially affecting countries and colonies in the tropical portions of the globe was also mooted.

Sir Joseph Fayrer, whose long experience in British India enabled him to speak with the highest authority, declared that, in his opinion, the colonization of the plains of tropical countries by Europeans would never succeed. After three generations European families al-

ways died out. Even in the hilly districts of the tropics it was doubtful whether pure European blood could permanently perpetuate itself. Dr. Lewis stated that the children of English soldiers in India who were brought up in the hills from five thousand to seven thousand feet above the sea-level were always more or less unhealthy and weak in constitution, though if they were sent to Europe in time they might generally lay the foundations of robust health.

At the final general meeting, the question of the foundation of a special school for the training of physicians for the Colonies in tropical countries was discussed. The proposal of Professor Vandencorput for the establishment of an International Association to deal with the problem of epidemics was referred to the Special Committee for further inquiry, with instruction to report the result to the next Congress, which will be held in the Hague twelve months hence. The principal members of this Commission are Professors Vandencorput, De Chaumont, Lewis, Leroy, De Méricourt, and Da Silva Amado.—*Medical Press and Circular*.

THE ENGLISH CHOLERA COMMISSION.—All the members of this commission, except three, have returned to England.

Reviews and Notices.

A COMPLETE HANDBOOK OF TREATMENT. Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and containing nearly One Thousand Formulae. By WILLIAM AITKEN, M.D. (Edin.), F.R.S., Professor of Pathology in the Army Medical School, Examiner in Medicine for the Military Medical Services of the Queen, etc., etc. 12mo, pp. 444. New York: Birmingham & Co. 1882.

This book is a compilation from the last edition of Dr. Aitken's well-known work on "The Science and Practice of Medicine," and comprises the chapters on treatment as written by that author. The diseases are arranged in alphabetical order, with numerous cross references, whereby the reader is enabled to turn at once to any desired subject without being obliged to refer to an index. Under each heading is found a short definition of the disease, and then follows immediately the portion on treatment. Dr. Aitken's work is too well known to require any discussion here. The book before us is printed in clear type, on good paper, and is of a convenient size for handling.

THE TREATMENT OF WOUNDS: ITS PRINCIPLES AND PRACTICE, GENERAL AND SPECIAL. By LEWIS S. PILCHER, A.M., M.D., Member of the New York Surgical Society. With One Hundred and Sixteen Wood Engravings. 8vo, pp. 391. New York: Wm. Wood & Co. 1883.

This volume, constituting the number for August in Wood's Library, well sustains the high reputation for excellence which this series of medical books enjoys. The entire subject of the treatment of wounds is discussed in a concise and practical manner, and the lucid explanations in the text are made still more clear by numerous well-executed illustrations. The first part of the work is devoted to a general consideration of wounds and their immediate effects, of the physiology of repair and the character of the influences which are capable of retarding or perverting reparative action. The subject of antiseptics is briefly considered, and the mode of application of the various antiseptic dressings is described in detail. In the second part the author treats of spe-

cial wounds and wounds of special regions, whether traumatic or produced by the knife of the surgeon. In this part the method of application of the general principles, enunciated in the preceding chapters, to particular cases is described. In addition to the table of contents there is a very complete alphabetical index, by which the reader is enabled to refer readily to any subject. The work is eminently practical and thoroughly up with the times, all the latest methods of treatment of assured value being treated of in sufficient detail. Especially is this the case in the chapters on antiseptic treatment, a department in which the German surgeons have been notably active. Here we find collected all the most recent modifications as proposed by different operators, an acquaintance with which was previously to be obtained only by a laborious search through the periodical literature. We cannot but congratulate the readers of the library on securing so valuable a work as this, which in itself is worth a large part of the annual subscription to the series.

THE PRINCIPLES AND PRACTICE OF SURGERY, being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M.D., LL.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. iii., 8vo, pp. 784. Philadelphia: J. B. Lippincott & Co. 1883.

This third volume completes Agnew's Surgery. It is five years ago since the author commenced his task. During that period he has not been idle in his leisure moments. It has evidently been a pleasure to him to write, considering the faithful and earnest manner in which he has striven to get the results of his surgical experience. The work, as a whole, is quite voluminous. While on general principles we might wish it were less so, he has nevertheless given us an interesting, instructive, and exhaustive treatise. We would not undertake to say how he could curtail it, except, perhaps, regarding one or two special subjects. But even these are so admirably presented that we are forced to refrain from criticism. General surgery is supposed to include everything in the shape of operative treatment of every part of the body, and in a comprehensive treatise like the one before us it would probably be a disappointment to many surgeons if the entire range of subjects were not discussed. The author is always practical, and from such a point of view we cannot read too much of him. Besides, he infuses an individuality in his work which is highly commendable. Weighing everything according to the standard of his own experience, he is inclined to be positive and to the point. This gives to his whole work true originality, and makes it proportionately valuable to the student. The third volume partakes of the general character of the others, and is consequently an interesting and instructive one. Although appearing to lack system in its arrangement, we are inclined to believe that the author adopted the present plan of his last volume for the purpose of condensing within reasonable limits all the subjects not previously discussed. But the mere arrangement is of secondary importance to the subject matter. Each of the fourteen chapters is complete in itself, and this is probably all we need to expect under the circumstances. The volume commences with a discussion of the surgical diseases of the larynx and trachea, following in turn with sections on diseases and injuries of the nose and naso-pharyngeal region; diseases and injuries of the eye and appendages; diseases and injuries of the ear; malformations and deformities, including the domain of orthopedy; affections of the muscles, tendons, bursæ, and aponeuroses; surgical affections of the nerves, lymphatic system, skin, and subcutaneous connective tissue; syphilis; tumors; diseases of the mammary glands; electricity in its application to surgical therapeutics; operations for nerve-stretching; and lastly, massage.

Throughout the volume are scattered a large number

of illustrations—the majority original—of diseased conditions, surgical apparatus, and surgical instruments. As a whole these are very well drawn and present an artistic appearance. It would be in vain to even enumerate the various divisions of the different chapters, or even the different diseases described. It is much easier to ask one's self the question what is not in the book rather than what is omitted. But the author is enabled to get over so much ground by the admirable manner in which he brings out the salient points of the different diseases and their treatment. Some, for instance, are treated of in a few lines, but the reader is made to feel that this is all he needs. Other subjects are discussed at greater length, but are almost invariably accompanied with the author's idea of what should or should not be done. The rules of practice laid down are eminently safe and are founded on common-sense and large experience. Consequently this volume, with its predecessors, will be abundantly able to stand on its merits, which are of the highest order and which will place every purchaser of the set under lasting obligations to the painstaking and accomplished author. The volumes will take their place beside the most comprehensive, valuable works on surgery in our language, and withal will remain a credit to American surgery.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN, WITH A FORMULARY. By EDWARD ELLIS, M.D., late Senior Physician to the Victoria Hospital for Sick Children; late Physician to the Samaritan Hospital for Women and Children, etc. Fourth edition, revised and enlarged. 8vo, pp. 218. New York: Berningham & Co. 1882.

This is a reprint of the latest edition of Dr. Ellis' work on the "Diseases of Children." As the book is issued at a low price great pains have been taken to economize space. The type is small, the lines are not leaded, and the chapters follow one after the other without any interval. We question whether there is any real economy in such books, for the injury done to the eyes by reading several pages of close print without any resting-places of white more than offsets the slight reduction in price which such an arrangement permits of.

THE ESSENTIALS OF BANDAGING, WITH DIRECTIONS FOR MANAGING FRACTURES AND DISLOCATIONS; FOR ADMINISTERING ETHER AND CHLOROFORM, AND FOR USING OTHER SURGICAL APPARATUS, and containing a chapter on Surgical Landmarks. Illustrated by 136 engravings on wood. By BERKELEY HILL, M.B. Lond., F.R.C.S., etc., etc. Fifth Edition. Enlarged and Revised. 8vo, pp. xiii., 341. New York: J. H. Vail & Co. 1883.

A work which has so pleased the public as to reach a fifth edition may be said to have passed almost beyond the reach of the critic's pen. Besides the essentials of bandaging, additions have been made which now make Mr. Berkeley Hill's book somewhat of a *rade mecum* for the surgical dispensary and surgeon's office. Among the additions to the fifth edition may be mentioned descriptions of laryngoscopy and ophthalmoscopy, accounts of Thomas' splints, Croft's plaster splints, Carr's splints, and various other improvements in practical surgery which cannot fail to be of value to the student.

The explanations of the various bandages and the methods of applying them, illustrated by clear and well-made cuts, the succinct account and rules for the treatment of fractures and dislocations, and the clear description of the surgical landmarks of the body and the useful appendix giving directions for the treatment of hare-lip, cleft palate, tapping, operations for hernia, vesico-vaginal fistula, and various other operations, make the book the most useful work of its kind for the student and country practitioner of which we have any knowledge, while it will prove a valuable addition to the library of the city surgeon.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 24, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

DR. R. E. SWINBURNE read a paper (see page 373) on

ADENOID VEGETATIONS OF THE PHARYNGEAL VAULT AND THEIR RELATION TO MIDDLE-EAR DISEASE.

DR. JOHN P. GARRISH thought that here, as elsewhere, medical men frequently overlooked general symptoms and treated the throat and nose as though these were independent portions of the body. A frequent local and exciting cause of these troubles in persons predisposed to catarrhal inflammations was smoking cigarettes. The method of treatment which had given him the best results was constitutional, consisting in the use of cod-liver oil, the syrup of the iodide of iron, and iodide of potassium, with attention to the general condition, aided by syringing with some mild astringent or mucilaginous preparation. He had obtained good results from the occasional introduction of a bougie and producing a certain amount of pressure upon the parts affected.

DR. F. H. BOSWORTH said that the more he saw of throat disease, the more he was convinced the proper treatment was not in the use of gargles, or sprays, or washes, but in the employment of such measures as remove the organic changes which are the cause of it. In every case there is organic change in some portion of the upper air-passages which is the source of the entire trouble, and he had operated with far more satisfactory results here than in any other part of the respiratory tract. He had not used the forceps. He had had some very bad results from the use of the forceps. He believed that in the wire snare we have a much more ready and effectual means than in the forceps. Certainly the use of the snare is not necessarily painful, and he never had been obliged to give an anæsthetic, except in very small children. With regard to the galvano-cautery, he had used it in several cases, and his experience differed from that of Dr. Swinburne, who says that its use is not attended by unpleasant results. On the contrary, Dr. B. knew of no instrument more dangerous in the nose than the galvano-cautery; but that it could be used without unnecessarily burning tissues, Dr. B. believed there was no doubt. Certainly its use in the anterior nasal cavity caused pain, and he thought it could not be used at all without creating intense inflammatory reaction.

DR. H. H. CURTIS said he had removed these growths with the forceps, the galvano-cautery, and the finger-nail, and after each of these methods he had seen intense depression follow, like that which occurs not infrequently after amputation of the uvula. For the removal of the flat growths which cannot be removed by the wire snare he resorted to repeated scarifications and spraying the surface with a saturated solution of iodoform in ether. To this he added constitutional treatment, especially iodide of potassium in small doses, sometimes mercurials, and with these measures had obtained his most satisfactory results.

DR. O. D. POMEROY thought that a little too much had been made of these growths since Meyer wrote an article concerning them about ten years ago. They are nothing more than enlarged glands, in nearly all cases the enlargement being due to inflammatory hypertrophy or proliferation. It is not necessary to always remove them, for, like the faucial tonsil, they usually disappear when adult life is reached. So if the existing catarrhal condition can be removed by ordinary treatment by the use of spray, which he still continued to have faith in,

he would not remove these growths. Of course, if they became so large as to act like foreign bodies and obstruct nasal respiration, they should be removed.

Occasionally these growths encroach upon the Eustachian tube, and he believed that they are a prolific source of ear trouble. Meyer had referred to one interesting fact, namely, that he succeeded in picking out twenty cases among two thousand school children in which he inferred, from a peculiarly sad facial expression and nasal tones, that there were adenoid vegetations in the vault of the pharynx. When these symptoms present themselves there is no question about the propriety of removing the growths. Whenever they obstruct respiration certainly they should be removed. With regard to the method of removal, he felt a strong prejudice against the galvano-cautery, and it seemed to him that the Jarvis snare was the most efficient means we have. He had not found it necessary to give ether if the child is a large one. Dr. Pomeroy thought the weight of testimony was against removing the growths entirely at one sitting. The reaction is sometimes serious in character, and violent inflammation is often developed, which may extend through the Eustachian tube and produce severe otitis media. Care should be exercised, when removing these growths situated near the Eustachian tube, lest too much tissue be taken away, and a cicatrix form that may obstruct the entrance to this canal. He had used the nitrate of silver probe with good results, but by this method would not remove more than one growth at a time.

DR. O. B. DOUGLAS said that if others could use Dr. Swinburne's instrument as satisfactorily as had the inventor, it certainly would be a boon to the surgeon who attempted the removal of these growths. He wished to direct attention to the reflex disturbances produced by adenoid vegetations in the vault of the pharynx, and related a case in which the entire trouble produced by them was referred to the larynx, and when the growths in the post-nasal region were removed all the symptoms disappeared, and the voice was restored entirely. He thought he might differ, perhaps, with the author of the paper concerning the desirability of removing all the growths at once. At least his experience had been that too much inflammation follows such an operation, and therefore he believed it to be desirable to remove only a portion at one operation.

DR. BOSWORTH wished to protest in the strongest manner possible against the heterodox opinion expressed by Dr. Pomeroy when he says that unless ear trouble is present these growths may be allowed to remain. He wished to say that if these growths are let alone the children will have ear trouble, and that it is a most dangerous condition to allow to remain in a young person. Undoubtedly they will shrivel up, but shall we wait ten or fifteen years for this to occur, while during this time perhaps lasting injury may be done by them? He said, No.

DR. POMEROY said he thought he put in a proviso that if the catarrh is manageable, and the growths are not troublesome, they may be allowed to remain.

DR. BOSWORTH thought that a slight condition of this kind might produce incurable mischief.

DR. HOLCOMBE referred to the former practice of removing tonsils, whereas now only a very few are removed, and the change had been brought about by the observation that hypertrophy of the tonsils can be removed by local applications, and also that there is a tendency for it to disappear of itself after a while. This had led him to conclude that many of these adenoid growths can be removed by local applications, and he had used successfully for that purpose the carbolate of iron, injections of acetic acid into the body of the growths, etc. He accepted this method in preference to excision by any means.

DR. SWINBURNE said, concerning the reaction following the use of the galvano-cautery, that while he did not think it could be used anywhere in the respiratory pas-

sages without producing such reaction, yet inflammatory reaction which had terminated in any serious trouble he had not seen. He thought the forceps was not regarded as the best means of removing these growths *unless the palate can be controlled*; but with the palate, the mouth, and the patient controlled, the entire growth can be easily removed, and at once, with the forceps and without injuring the other parts at all, and he had not seen serious inflammatory reaction follow. The serious inflammatory reaction which others had seen after removal of these growths he believed was due to the method employed, or the manner of employing it, and he thought the objection to their removal at one sitting had no real foundation. He believed that every case should be operated upon, because of the liability to the occurrence of inflammation of the middle ear, caused undoubtedly by the presence of these growths. He believed that not only the ear, but the general health is endangered on account of being obliged to breathe through the mouth. While these growths, if left to nature, will atrophy more or less, perhaps in many cases disappear, yet they have been seen in patients fifty years of age. He had employed general treatment alone, but had not succeeded in curing his patients without resorting to local measures.

Dr. O. B. DOUGLAS exhibited

A NEW HYPODERMIC SYRINGE,

made by Reynders & Co., and so arranged that it can be carried in the pocket with the facility and safety of an ordinary pocket-knife.

The Society then adjourned.

TRI-STATE MEDICAL SOCIETY OF INDIANA, KENTUCKY, AND ILLINOIS.

Ninth Annual Meeting, held in Indianapolis, Ind., September 18, 19, and 20, 1883.

(Special Report for THE MEDICAL RECORD.)

The Society met in English's Hall and was called to order by Dr. J. L. THOMPSON, Chairman of the Committee on Programme. A prayer was offered and was followed by an eloquent address by His Excellency, ALBERT G. PORTER, Governor of Indiana.

Dr. Thompson then introduced the President, Dr. WILLIAM PORTER, of St. Louis, who said that the best reply to the Governor's eloquent address and to the salutation of welcome by the morning press was the three days' work.

THE REPORTS OF OFFICERS AND COMMITTEES

were then heard and accepted. Letters from abroad were then read by the Secretary: one from Dr. SAMUEL GROSS, emphasizing

THE IMPORTANCE OF THE TRAINING OF NURSES FOR TOWNS AND RURAL DISTRICTS,

and one from Dr. L. J. JONES, informing the Convention of the presence of the distinguished military surgeon, Sir William MacCormac, at Niagara Falls. Whereupon an invitation was sent the latter by the meeting, requesting the honor of his presence at the Tri-State Convention.

A CABLEGRAM,

conveying greetings to the Society from Dr. McKENZIE, of London, who was present at its last annual meeting, was received.

THE PRESIDENT'S ADDRESS

was deferred to the first evening session. It was replete with practical suggestions in relation to the future prosperous growth of the Society and inquired what better superstructure could be built upon the Tri-State as its foundation walls than the Great Western Medical Association. The address was referred to a committee, who, upon submitting its report, recommended a change of name and an enlargement of the Association's territory.

The name suggested by the committee and finally adopted by the Association was

THE MEDICAL SOCIETY OF THE MISSISSIPPI VALLEY.

The name will afford to every mind, American or European, a definiteness of geographical location and territory comprised within the boundaries of the Association.

The territorial limits are marked by great natural boundaries, the Alleghenies and Rockies, the Gulf and the Great Lakes.

THE MANNER OF THE ELECTION OF OFFICERS OF THE ASSOCIATION

was a subject that came up for discussion. Instead of the present incumbents appointing their successors, it was determined that the several members of each State represented should appoint one member to serve upon a committee for the election of officers.

THE OFFICERS ELECTED FOR THE ENSUING YEAR

are as follows: *President*—Dr. B. N. Griffith, of Springfield, Ill.; *Vice-Presidents*—Dr. J. W. Matthews, of Louisville, Ky.; Dr. C. G. Commegys, of Cincinnati, O.; and Dr. J. E. Link, of Terre Haute, Ind.; *Secretary*—Dr. G. W. Burton, of Michell, Ind.; *Chairman of the Committee on Arrangements*—Dr. F. L. Matthews, of Springfield, Ill.; *Chairman of the Committee on Programme*—Dr. C. P. Pearson, of Indianapolis, Ind.

It was decided to hold

THE NEXT MEETING OF THE ASSOCIATION

at Springfield, Ill., within two weeks of the middle of September, 1884, the exact date to be given at an early day.

The names of the Committee on Publication are: Dr. G. W. Burton, of Michell, Ind.; Dr. Wm. D. Byrd, of Quincy, Ill.; and Dr. H. I. Raymond, of Indianapolis, Ind.

The programme presented fifty-three papers for reading and discussion before the Society.

TORTICOLLIS,

by Dr. D. S. BOOTH, of Sparta, Ill.

The case related was that of a boy, twelve years of age, affected with extreme wry-neck, congenital in kind, not in degree. Subcutaneous tenotomy practised upon the tendons of the sterno-cleido mastoid and trapezius, and upon the deep cervical fascia, brought about an excellent result, and transformed an ugly deformity into the beauty of symmetry.

TREATMENT OF COMPOUND FRACTURES,

by Dr. AP MORGAN VANCE, of Louisville, Ky.

Shall compound fractures be treated by the open method, by through drainage, or by occlusion? If the wound is closed can the possible formation of pus be determined before any danger has arisen to the patient? Make use of the thermometer as your guide. High temperature during the first forty-eight hours is not alarming; after the second day it betokens pus-formation. The Doctor's practice was to occlude an ordinary compound fracture, and then, if pus should form, to establish drainage.

Dr. JOSEPH EASTMAN, of Indianapolis, said: I agree with the essayist in the belief that compound fractures may often be reduced to simple fractures, but do not think we could depend upon the thermometer at all times. I think with Dr. Thomas that the three great discoveries of medical science within the last century are vaccination, anæsthesia, and the clinical thermometer. My experience corroborates that of Dr. Tait, that in prolonged shock following surgical operations or compound fractures the patient might go down to death without the thermometer hanging out the red lantern signalling danger, but I have never known an instance of profound shock where the pulse did not beat more and

more rapidly until it ceased its pulsations, or until reaction set in. If I resorted to plaster-of-Paris splint for putting up a compound fracture, I should use the Bavarian form, admitting of inspection as often as required.

NERVE-STRETCHING,

by DR. J. B. WRIGHT, of Olney, Ill.

The operation seemed peculiarly adapted to chronic cases.

DR. BYRD thought that the rationale of nerve-stretching in the cure of neuralgias might be explained by the traction made upon the vertebral end, loosening adhesions and removing thickenings, thus allowing that part of the nerve-trunk near the vertebral foramen room for expansion. He laid stress upon the therapeutic value of extreme flexion of the thigh in sciatic neuralgia.

DR. R. E. HAUGHTON, of Indianapolis, based his pathology of neuralgic pain upon impaired nutrition of the nerve, leading to molecular change in its structure.

FRACTURE OF OS FRONTIS OF EIGHTEEN YEARS' STANDING,

by DR. W. S. HAYMOND, of Indianapolis.

The case cited was that of a woman hit in the forehead with a stone. Two months afterward had pain in her head which increased in severity continually. After years of suffering, an abscess opened in the scalp, and on passing a probe into the opening of exit of the pus, the frontal bone imparted to the hand of the surgeon a sensation of roughness. A depressed fragment, rough, necrosed, and suppurating, from injury eighteen years previous to the os frontis, was removed. It consisted partly of the external and partly of the internal table, and measured two by three inches. The neuralgia subsided. The extent of injury, severity of pain, and the duration of the lesion were remarkable.

DR. HOBBS, of Knightstown, related a case in which, owing to a syphilitic necrosis, almost the entire calvarium had to be removed at successive operations.

DR. EASTMAN drew the lesson that the most desperate cases are worth our best efforts, and advocated early use of the trephine in doubtful cases of head injuries with untoward symptoms.

DR. BYRD referred to the use of the trephine in the cure of epilepsy and insanity.

DR. THOMPSON had trephined twice in epilepsy at the time of the war with good results.

DR. G. V. WOOLEN, of Indianapolis, said that Dr. Haymond's results justified the operation. In extreme cases operate. In simple depression without symptoms let it alone; when bad results come, then operate. If epilepsy, suppuration, and neuralgia supervene, then the acute symptoms have passed away and no artery will be found crushed.

DR. JOHN COMINGORE said unless the fracture be compound or comminuted, wait. Do not cut down upon a simple fracture for purpose of diagnosis. In simple fracture with slight depression, the brain may accommodate itself.

MYELITIS DUE TO ARSENICAL POISONING,

by DR. A. W. BRAYTON, of Indianapolis. Recovery after ingestion of one ounce of arsenic.

SYPHILITIC INTERSTITIAL KERATITIS,

by DR. H. M. POST, of St. Louis.

The existence of this disease was established in 1857, by Jonathan Hutchinson. The diagnosis of superficial and interstitial keratitis should be readily differentiated if we look sharply at what is before our eyes and use oblique illumination. In treatment the sheet anchor is mercury, which is also a tonic in inherited syphilis. If iritis set in as a complication, forestall adhesions by dilatation of the pupil.

DR. THOMPSON remarked that at the very inception of interstitial keratitis what resembled a miniature snowflake appeared on the membrane of Desmet. In cases

where the tension is plus, use eserine and maybe also a double iridectomy will be required. Atropia, if employed in these instances, may lead to the glaucomatous process.

DR. POST thought that the indications for atropia or eserine, as the case might be, was too fine a point to broach before an association of non-oculists.

DR. THOMPSON gave the rule: If tension is plus use eserine, if minus use atropine. Any one presuming to practise ophthalmology should be able to tell plus, minus, and normal tension.

RESECTION AND AMPUTATION: THEIR RELATIVE VALUE,

by DR. R. E. HAUGHTON. The conditions that decide between amputation and resection are the situation and function of the joint, condition of constitution, and condition and nature of the disease. The author of the paper brought forward statistics to prove that excision was seven times as fatal as amputation in early life. No excision should be made in extremes of age, nor in phthisis, in acute disease, or malignant disease of the articular surfaces. The essayist leaned toward amputation as the rule.

DR. J. E. LINK, of Terre Haute, advocated resection of the elbow-joint, even if half the shaft of the humerus had to be excised. He declared his belief that preservation of the periosteum has nothing to do with the restoration of bone, except keeping open the cavity until osteal matter forms. In successful transplantation of periosteum, medullary matter has been removed.

DR. LINK also advocated resection at the ankle-joint as preferable to amputation above. As to the knee-joint, he was not quite clear which alternative he should adopt.

DR. EASTMAN said that recent statistics show that resection at the knee-joint is much more favorable than amputation. And why should it not be so, when in amputation so much tissue and the large artery and nerves of the popliteal space have to be severed, whereas in resection, by the use of the curvilinear instead of the H incision, not even the articular arteries need be wounded. In one resection at the knee-joint he had not used a single ligature.

DR. THOMPSON remarked upon the numerous sinuses that are apt to form after resection at the knee. In his army experience amputation at the shoulder did better than resection of that joint; but army statistics, he thought, did not usually go far enough.

DR. FRENCH, of Missouri, thought that the dangers of resections had been magnified, but that due discrimination should be used in the selection of cases.

DR. BYRD counted it his misfortune to have seen so many resections in English hospitals, some for extra-articular trouble! All got well!

DR. COMINGORE leaned in favor of excision of joints at the time of the war, but thought each case must be treated upon its own merits.

DR. HAUGHTON challenged any to refute the statistics of Bryant and MacConnac given in his paper. London surgeons were becoming opposed to resections.

PHYSIOLOGY AND PATHOLOGY OF INSANITY,

by DR. N. FIELD, of Jeffersonville.

The brain was an entity. Its pathology should be simple. Take a common-sense, rational view of any case in court, and do not allow the lawyers to perplex you by their artifices.

Then followed two papers on

SOME MENTAL PROBLEMS IN QUESTIONS OF MEDICAL JURISPRUDENCE,

by DR. C. G. COMMEGYS, of Cincinnati, and

INSANITY,

by DR. HAYS, of Chicago.

Dr. Hays said the negative character of insanity (negation of sanity) should be kept in mind. No verbal definition was possible, because a negation cannot possibly be defined in positive terms. In idiots the proper treat-

ment was the education of the perceptive faculty. Original defective perceptions, *i.e.*, incompleteness of original observation, were the forerunners of dementia. In mania, monomania, and melancholia, delusion was the characteristic faculty, a delusion being a false ideational concept, not a false belief, else, in the religious world, each denomination would consider the other insane. The true criterion of insanity was the retention of a false belief, notwithstanding that sufficient evidence is afforded to show its falsity. Egotism, exalted self-consciousness, is the essence of a lunatic's mania or melancholia.

SPONGE-GRAFTING,

by DR. EDW. BORCK, of St. Louis.

Sponges to be prepared in acid and iodoform. Sponge-grafts one line in thickness, covering the wound. Infrequent removal of dressings. Care for the granulations. Useful in recent railway lacerated wounds as well as in extensive ulcerations.

STONE IN THE BLADDER,

by DR. H. H. MUDD, of St. Louis.

The aim of the paper was to determine the extent of dilatability of the bladder compatible with safety, *i.e.*, its non-rupture. Capacity is desirable for a large quantity of water in litholapaxy. The dilatability of the bladder-walls was found to be very great.

THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER,

by DR. G. C. SMYTHE, of Greencastle.

Death may result from specific lesions of the disease, as intestinal hemorrhage or peritonitis from perforation. But the percentage of mortality from such causes is quite insignificant when compared with the mortality of typhoid from hyperpyrexia and the degenerations following. Excessive heat production and faulty heat elimination, one or the other factor, will be found, and should be combated by antipyretic treatment. Cold water by effusion or baths, or in some form of external application, with quinine in dose of twenty-five to fifty grains each alternate night so as to cause marked morning remissions, constituted the treatment strongly advocated in the first days of the fever.

DISEASES OF THE FALLOPIAN TUBE, WITH TAIT'S OPERATION AS A MEANS OF CURE,

by DR. THOMAS HARVEY, of Indianapolis.

Symptomatology and etiology obscure in the early stages. One of the most marked symptoms was the occurrence of intermenstrual pain, usually on a certain fixed day. Dr. Harvey was of the belief that this symptom of intermenstrual pain was caused by a stenosis of the tube or other obstruction to the passage of the ovule along the oviduct. The escape at intervals of a limpid or purulent fluid from the uterus, and the ability to pass a uterine probe into the dilated Fallopian tube afford a diagnostic symptom and sign that cannot be readily mistaken in their significance.

The author cited a case of tubal disease that had been diagnosticated by different surgeons as hip-joint disease, spinal curvature, ulcer of stomach, and hepatic colic, and the unfortunate patient had successively been cupped, bled, blistered, and made to wear a plaster-of-Paris jacket. An exploratory incision revealed ovarian disease, the ovary being brought into view through a small abdominal incision by elevating the uterus through the vagina.

Dr. Harvey sought to show that Tait's operation should not be resorted to until other means had failed to make a cure in disease of the Fallopian tubes. He had frequently injected a sixty-grain solution of silver nitrate into the dilated tube with good effects.

DR. J. R. SUTCLIFFE, of Indianapolis, related a case of death after intra-uterine injection of copperas, upon which he was called to make a post-mortem, which revealed the injected fluid in the peritoneal sac.

DR. HAYMOND related a similar case from white-oak bark injection.

DR. HARVEY declared the cause of death in such cases to be shock, and not peritonitis or septicæmia.

CHLOROFORM IN LABOR,

by DR. G. V. WOOLEN, of Indianapolis.

The indications for chloroform were found in its effects upon the nervous system, relieving pain and shock; upon the muscular system, bringing about relaxation; and upon the secretory system, stimulating the secretions. This paper was discussed at length, and brought out the following points, *viz.*, dangers of chloroform in labor, degree of anæsthesia compatible with safety, and mode of administration.

DR. HARVEY would not go beyond the second stage of anæsthesia, which sufficed to allay pain and effect relaxation. The third stage of anæsthesia arrests labor. The chloroform should be dropped upon a handkerchief by an attendant and administered by the patient herself, and that too only during a contraction.

DR. JOHN CHAMBERS, of Indianapolis, called attention to the numerous instances of death from chloroform, chronicled in the London *Lancet* during the past ten years. It was too generally the received opinion among the profession that authentic cases of death from chloroform in the lying-in chamber were exceedingly rare.

Dr. Chambers in his obstetric practice frequently employed ether, as a safer anæsthetic than chloroform, fulfilling the indications nearly as well as chloroform, and at the same time making it more difficult to plunge the patient into that state of dangerous anæsthesia, known as the third stage.

NOTES ON TRACHEOTOMY,

by DR. WILLIAM H. MYERS, of Fort Wayne, Ind.

The burden of the paper was that tracheotomy should not be regarded as a *dernier ressort*. With Trousseau, the essayist thought that it was as obligatory to perform timely tracheotomy as to tie the carotid artery when cut.

DR. EASTMAN also advocated early operation in cases of foreign body in the larynx, and related the case of a child with lodgement of a foreign body in its trachea, on whom he urged an operation before daylight, but was put off through the remonstrances of the parents, who deferred the operation till eight o'clock in the morning.

The child being raised from its bed in the morning by the nurse, the foreign body rolled into its larynx and caused fatal obstruction.

DR. L. J. JONES, of Chicago, presented a very practical paper upon

ERRORS OF REFRACTION AND DEFECTS OF ACCOMMODATION,

urging their correction and early relief by glasses prescribed by a scientific oculist and optician.

DR. WILLIAM BYRD, of Quincy, Ill., exhibited a

HUTCHINSON'S INHALER,

with which he had been using an anæsthetic compounded of bromide of ethyl, one part; chloroform, three parts; and alcohol, four parts. Had used it in 78 cases, without giving rise to vomiting, retching, or any untoward symptom; and had consumed but two and one-half pounds of the anæsthetic, the cases comprising many capital and tedious operations.

THE LAST AFTERNOON SESSION

was held in the beautifully decorated hall of the State Insane Institution, upon invitation of the superintendent, Dr. W. B. Fletcher. After the meeting a visit to the wards of the Institution was made by the members of the Society.

THE PARISIANS CONSUME ten thousand horses and four hundred mules annually. The excuse is that horse-flesh is good, cheap, and free from disease.

Correspondence.

OUR LONDON LETTER.

(From our Own Correspondent.)

THE MEDICAL HOLIDAY—HEALTH RESORTS—DEATH OF DR. BERTIER FILS—THE APPROACHING WINTER SESSION—COLD AND WARM WINTER RESORTS—STUDENTS NUMBERS—INTERNATIONAL CONGRESS OF ANTI-VACCINATIONISTS.

LONDON, September 24, 1883.

LONDON still exhibits a dearth of doctors, though it must be confessed that this statement is to be received *cum grano*; just as the more common assertion that "nobody is in town" is sometimes modified by the cynical addendum "except three and a half millions of people." These millions are all sufficiently cared for by a rather overstocked profession, and it is only the well-to-do and the consultants who have left their patients to the care of their less fortunate brethren or have followed them to their holiday resorts. Our wealthy patients are, indeed, scattered far and wide, and the majority will not return for weeks. Many of them have gone to drink the waters at the fashionable spas, and books on those "cures" are the chief representatives of medical literature. Thus Dr. Despres has issued a medical guide to Contrexéville, which is noted for its effects on the urinary organs, and, if we are to believe this local authority, may sometimes obviate the necessity of lithotripsy or the more dreaded cutting. Dr. Vintras, a French physician practising in London, has published a guide to all the spas of France, which is ably compiled and well got up. A work of much wider scope and of a more scientific nature is the "Mineral Waters of Europe," the joint introduction of Professor Tichborne, the well-known Dublin analyst, and Dr. Prosser James, of the London Hospital and the Throat Hospital. This physician also published lately a fifth edition of a small monograph on "Vichy and Its Therapeutical Resources," which first appeared nearly twenty years ago. Dr. Blanc has brought out a little book in English on "Aix-les-Bains," a most popular spa, which has just been patronized by our Princess Beatrice. Last year the younger Dr. Bertier, of Aix, published an English medical guide to this resort which was well received, and just as I was occupied with this letter comes the sad news of his untimely decease. He will be greatly missed by many English invalids who frequented Aix-les-Bains. He was a native of the place, but he spoke English fluently, and understood English medicine and English ways. After taking his degree in Paris his father, who still practises at Aix, sent him to this country to acquire our language and prolong his medical studies. He then began practise in his native town and speedily acquired a considerable position, his geniality and kindness, together with his talents, making him a favorite. This season the Princess Beatrice being sent to Aix by her advisers here for some rheumatic symptoms, was placed under poor Bertier's care. A day or two after his royal patient left he was taken ill with febrile symptoms. These soon developed into typhoid, and now I hear of his death, at the age of thirty-seven. *Sic transit gloria.*

Though our dead season is not over there are many signs that the next session is at hand. The medical schools are freely advertising their arrangements for opening on October 1st, and no doubt most of the introductory lecturers for the occasion have well advanced with the preparation of their addresses. It is a grand opportunity of speaking to the public. What a pity these gentlemen do not meet and agree together to send forth a loud, united protest against the manner in which medical legislation is burked, or an indignant remonstrance respecting professional grievances.

Another sign of the times is the appearance of books or pamphlets on winter climates. As the summer re-

sorts close those for winter open, and already people are preparing to follow the swallows, while a few are as ready to seek the quiet but cold air of high mountain valleys. The climatic treatment of consumption might have been expected to receive less attention during the war of the bacillus; but at present the fight does not penetrate far beyond professional circles, and invalids who have basked in the sunshine of Egypt or the Riviera often long for the South as soon as autumn's clouds set in.

A further notice of the coming session is forced upon medical readers by the simultaneous issue of "Students' numbers" of all the journals. Not that they seem to be valued by students, for they only consist of the "regulations" of the examining bodies and a few paragraphs of trite advice. These numbers are, in truth, mere baits for advertisers; these paid-for announcements make up the bulk of the bulkiest issue for the year, a veritable *farago libelli* as uninteresting as it is useless. Take a single item in proof of this, one of them gives students a few words about books, enumerating among those to be read on one subject more than would be found in a diligent physician's library.

International movements have invaded medical affairs, as witness the brilliant congresses at Philadelphia and London. We have also had parodies of these in the form of an "anti-vaccination congress," and the third of these strange gatherings has been summoned to be held at Berne. Many will regret to see that the fanatics of this movement have the support of Mr. Herbert Spencer. Philosophers in this nineteenth century seem curiously constituted. There will of course be an M.P. or two present, but they do not count for much. Then the ex-professor, F. W. Newman, is a supporter, but this quondam teacher of Latin has long ceased to possess any real authority, and seems to seek popularity in all sorts of unorthodox assemblies of pseudo-scientific pretensions. His book on the "Phases of Faith" attracted attention and turned not a few youths into the muddy stream of scepticism, but it was by no means scientific or even philosophical. Of course the coming "Congress" opens, not for inquiry but to advocate the prejudices of the insignificant minority who make up the "vaccino-phobiacs," as they have been called. Such an assembly may therefore vote its foregone conclusions in complete security that it cannot attract much notice from the scientific world. I see no "delegate" from America in the list which I have received. May we conclude that the people of the States are too well educated to favor the fanatics?

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 22 to September 29, 1883.

DE LOFFRE, A. A., Captain and Assistant Surgeon. Assigned to duty at Fort Niagara, N. Y. S. O. 182, par. 5, Department of the East, September 27, 1883.

HAVARD, VALERY, Captain and Assistant Surgeon. Assigned to temporary duty at post of San Antonio, Texas. S. O. 120, par. 10, Department of Texas, September 21, 1883.

REED, WALTER, Captain and Assistant Surgeon. Relieved from duty at Fort Omaha, Neb., and assigned to duty as Post Surgeon, Fort Sidney, Neb. S. O. 103, par. 5, Department of the Platte, September 22, 1883.

SHANNON, W. C., Captain and Assistant Surgeon. Assigned to duty at Fort Bridger, Wyoming. S. O. 102, par. 3, Department of the Platte, September 19, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Warren, Mass. S. O. 181, par. 3, Department of the East, September 25, 1883.

CARTER, W. F., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Washington Barracks, D. C. S. O. 182, par. 5, Department of the East, September 27, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Relieved from further duty at Creedmoor, N. Y., to return to his proper station, Fort Adams, R. I. S. O. 180, par. 1, Department of the East, September 24, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for extension of two months. S. O. 49, par. 1, Military Division of the Atlantic, September 25, 1883.

WAKEMAN, WILLIAM J., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Sidney, Neb., to rejoin his proper station at Fort D. A. Russell, Wyoming. S. O. 103, par. 5, Department of the Platte, September 22, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 2, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
September 25, 1883.....	0	84	29	7	4	17	0	0
October 2, 1883.....	0	86	26	2	11	41	0	0
<i>Deaths.</i>								
September 25, 1883.....	0	12	2	5	2	12	0	0
October 2, 1883.....	0	11	8	3	4	16	0	0

THE SOCIAL PURITY ALLIANCE.—As the college terms are now beginning and the medical student is abroad, we can print with propriety, the following interesting notice from the *Students' Journal*. Says the editor: "I have just made a discovery, which I am sure will interest many readers, which is that a society exists in connection with University College which the promoters hope will have a very important effect in extinguishing what is termed the 'Social Evil.' The society is termed the 'Social Purity Alliance,' the members of which pledge themselves, if unmarried, to abstain from the gratification of the animal passions. There is certainly, unless my observations have misled me, an extensive field for the operations of such a society as this among medical students. Many medical students act, when they enter upon hospital practice, as if the acquirement of the knowledge of good and evil was part and parcel of their professional education, and the results of their investigations are often very terrible and destructive. While wishing the 'Social Purity Alliance' success, I fear that the operations of the society will not have much effect upon the morals of medical or any other students, although the meetings of the society have been better attended than the promoters could have expected."

MEDICAL DEPARTMENT OF THE NEW YORK LIFE INSURANCE COMPANY.—Dr. Henry Tuck has been appointed Senior Medical Director of the New York Life Insurance Company, in place of Dr. Charles Wright, recently deceased. Dr. Abel Huntington has been appointed Junior Medical Director, as successor to Dr. Tuck. Dr. Buchanan Burr has been appointed Dr. Huntington's successor, as City Examiner.

THE SUMMER CORPS OF PHYSICIANS AND THEIR WORK.—From the report of Dr. E. H. Janes, Assistant Sanitary Superintendent, on the work of the summer corps, it is seen that the entire amount of work done during the two months of service is equivalent to visiting 43,915 houses, 198,932 families, and 6,601 cases of sickness. This includes not only tenement houses, but all classes of dwellings occupied by the very poor. Some visited once and others several times each. A great many of the cases treated were of a very mild type, needing but a single prescription, as is shown by the small number of deaths occurring, 28 in all, of which 10 were of cholera infantum, 4 of diarrhoea, 1 of dysentery, 2 of gastro-enteritis, 2 of diphtheria, 1 of scarlet fever, 5 of measles, 2 of phthisis, and 1 of marasmus. Besides caring for the sick, they distributed 17,542 circulars containing brief instructions on the care and feeding of infants, and the management of sun-stroke, and 3,293 free excursion tickets for the floating hospital of St. John's Guild. These excursions are regarded as an excellent auxiliary to the efforts of the Board of Health.

IMPURITIES AND ORGANISMS IN THE AIR OF THE COMPRESSED-AIR CHAMBER.—Dr. J. Solis Cohen, of Philadelphia, writes: "THE RECORD of September 22d has an abstract, p. 335, on 'Impurities and Organisms in the Air of the Compressed Air-Chamber.' The writer seems to have overlooked the fact that sterilization of the air for the condenser must be superfluous so long as the air remains unsterilized in the consulting-room, in the patient's apartments, and everywhere else where he breathes."

TARDY ACTION OF PILOCARPIN?—Dr. F. W. Ellis, of New Richmond, Wis., writes, that on January 10th he gave a boy, aged three years, suffering from ascites, a course of pilocarpin, covering two days. From the 11th to the 16th there was no effect. On the night of the 16th a fly-blister was applied. On the 17th all the characteristic symptoms of jaborandi appeared; profuse sweating and salivation, so that the circumference of the abdomen diminished two inches.

A CASE OF CONGENITAL AND HEREDITARY GOITRE.—Dr. G. S. Chalmers, of Alton, Ill., sends us the following unique history. He writes: "A few days ago I was called to a lady in labor and in due course she was delivered of a large boy. There was nothing remarkable in the progress of delivery, except that when labor had progressed well into the last stage, things almost stood still with the head firmly wedged in the lower strait. Imagine my surprise to see a well-developed goitre on the child's neck. The swelling came clean up under the lobes of the ears and with quite an enlargement over the windpipe. The enlargement felt moderately firm, as if from simple enlargement. The child seemed cyanotic at first, and had to be encouraged by cold water dashes and manipulation before it commenced breathing. And then it was fully an hour before the color got natural. As the cord beat quite actively I did not cut it for fifteen minutes. After this we soon found that if the head was kept fully extended breathing progressed naturally, but if the head became flexed, breathing became irregular, and the face cyanotic. It is now doing well, six days after delivery, and is a vigorous feeder. The mother is exophthalmic with quite an enlarged neck, and noticeably prominent eyeballs. I have never seen a case recorded of congenital goitre. What can be done for a case like this?"

THE LATE DR. BEVERLY LIVINGSTON, OF NEW YORK.—Whereas, The Medical Board of the Nursery and Child's Hospital, receives with deep sorrow the announcement of the death of Dr. Beverly Livingston, at the beginning of what promised to be an association of unusual usefulness to the institution;

Resolved, That we, his associates, hold in greatest esteem our remembrance of the life and character of our

friend, and desire to record our appreciation of his high attainments and skill as a physician, coming as they did from an ardent devotion to his selected life work, and our knowledge of his noble and elevated mind, and of his generous companionship.

Resolved, That we see in the melancholy event of his death that our institution, the profession, and the community are deprived of the influence and example of a pure, true, and earnest life.

Resolved, That we tender to the family of our late associate our heartfelt sympathy in their great bereavement; and that these resolutions be published in the medical journals of the city.

GEORGE G. WHELOCK, M.D.,

EDWARD L. PARTRIDGE, M.D.,

Committee.

THE RELATION OF DIPHTHERIA TO CONTAMINATED DRINKING-WATER.—Richard Cole Newton, Assistant Surgeon, United States Army, writes: "*The Sanitary Engineer*, for July 26, 1883, contains the following paragraph (page 177): 'In a recent monthly report of the Connecticut State Board of Health, mention is made of a family in Thompsonville where there were eight cases of diphtheria with two deaths. This family lived in a house with a small back yard containing the well and privy as usual, but in addition a deposit of filth a foot thick on a level, composed of putrefying vegetable waste and a mongrel mass of nastiness. The ground sloped to the well and the deposit of filth came close to it. The windows of the bed-rooms opened on this yard. The family that moved out had been afflicted with malignant scarlet fever with several deaths. In quite a number of (other) instances there were from four to six cases in one family, or oftener all the members, and in all that have been carefully studied some sufficient cause has been found.' This quotation contains an almost exact description of two establishments in the vicinity of this post. One is known as the Post Dairy and the other the Butcher Pen, although fortunately neither place is now used for the purpose indicated by its name. They are both about two miles away, and in each the well was sunk in the position most advantageous to receive the drainage of two large and very filthy corrals (cattle yards). The contamination of the water from these wells was so marked that it offended sight, smell, and taste, and yet, because it was cooler than the water from a creek, which flowed near, the well water was generally drunk by the people of both houses. At the dairy there lived a widow with four small children, and two or three servants, one of whom, a young woman, had a child of four years. About six weeks ago, the oldest child of the proprietor was seized with diphtheria, which in succession attacked the entire family of children. Three died, and one (the first attacked) recovered. The child of the servant did not contract the disease, although it constantly played with the others and lived under the same conditions, except that its mother would never allow it to drink the well water, which the others drank freely. At the Butcher Pen, a man, his wife and two children, one eleven years and one eighteen months old lived. The father was generally away at work. The mother and older child had 'chills,' and four weeks ago the baby, which was still sucking, developed a case of diphtheria, which went on like the other cases, but on the fifth day began to improve, and gradually recovered. Although between two and three weeks have elapsed since the convalescence of the last case was established, no further cases have shown themselves. There was not, so far as I can learn, any exposure to diphtheria on the part of those who suffered from it. Indeed their isolated position rendered such a thing quite improbable. No child in the post has developed any diphtheritic symptoms. The 'police' (cleanliness) of this fort, however, is the special pride of its officers. As to the treatment, the two cases that recovered re-

ceived less treatment than those that died. Two of the cases were under my sole care. One, the only son of the widow, and her especial pride, received every care that could be bestowed upon him. I followed, as far as possible, the treatment which I understand Professor A. Jacobi adopts in diphtheria, including the lime-water spray, which certainly did this good, that there was no fetor about the case, which had been very marked in the preceding ones, where no spray was used. This case did not die from strangulation (because the child both spoke and swallowed just before death), but from heart failure, whereas both of the other children, if the mother's account can be relied upon, died entirely from 'want of breath.' In the boy's case stimulation and frequent feeding with beef-tea and milk were crowded from the first. The child at the Butcher Pen was ordered a piece of bacon about the throat, to be worn constantly. Throat to be swabbed every hour with a solution of iron and chlorate of potash, and three-fourths of a grain of quinine to be given in solution every two hours. On the fifth day an almost confluent pustular eruption (which resembled a confluent variola at end of first week) appeared all over the throat and parotid regions. The next day an abundant rash, like scarlatina, showed itself all over the body. The fauces and tonsils now began to look better. The ulcers on the latter were smaller and less sloughy, and the case went on to recovery. I should add that the treatment was inaugurated by a few small doses of gray powder and ipecac and one or two doses of castor oil. This, with the medication already mentioned, comprised the entire therapy in the case. I should have attached more importance to the rash spoken of, if it were not a usual thing on all children, sick and well, during our long and hot summers. It is gratifying to note that the well on the dairy premises has been filled up and the house torn down, and our post commander is endeavoring to have the same good work accomplished on the other premises, although unfortunately he has no direct control over them."

SOME "CURES" FOR HYSTERIA.—A writer in the feuilleton of *L'Union Médicale* discourses in an entertaining and instructive manner upon the course and cure of hysteria. "One is always instructed," says the writer, "in travelling. It is also a pleasure to observe for one's self the productions of the soil, the manners of the natives, the color of their umbrellas, and the price of their clothing. But how much more lively is the satisfaction when the chances of travel put us in possession of some precious novelty in the direct line of our researches and habitual occupations! This is what has happened to me. I have made a capital discovery in therapeutics, and I do not hesitate to announce it at once for the benefit of humanity, and without taking any of the preliminary risk of submitting it to the Academic committee on secret remedies. On a recent trip, I came across one of my old patients, whom, for convenience sake, I beg to introduce as Madame Lerond. We had not parted on very good terms, at which you will not be astonished when you learn that she is a respectable shopkeeper, of forty years, who suffered from hysteria of the vaporous form, with luxuriant manifestations as regards the head, stomach, intestines, limbs, and of all the organs and functions of the body generally. Not only had I failed to relieve Mme. Lerond from her various discomforts, but a cloud had marked the end of our mutual relations. *Voici comment*: One day she asked me seriously to tell her frankly, for the sake of her children, whether she was not threatened with insanity, and whether she would really ever be well. After explaining that her symptoms were only those of a nervous debility, etc., etc., I concluded: 'In fine, Madame, without ever being very sick, you will always be a little *patraque*.' I was much pleased with this expression, which seemed to hit her case very exactly. But my patient did not see the matter in the same light, and with a very cold air she told me that the word *patraque* seemed

to her very impolite, and she was not used to being treated in such a way. I tried in vain to explain that Littré defined the word *patraque* as signifying familiarly a person who was weak and invalidish, and that it was frequently used in the best society. These arguments failed to excuse my *soi-disant* enormity, my patient being equally unfamiliar with Littré and the best society. I departed, resolved thereafter not to essay expressions with my patients unless I was sure they would be comprehended.

Meeting Mme. Lerond on my travels, however, a year later, I ventured to approach and inquire after her health. She replied, in a very radiant and satisfied manner, that she was completely cured. 'I congratulate you,' said I; 'may I inquire how you secured this happy result?' 'It was a Russian physician who came to the store last winter, and desired, with much solicitude, to treat me. After having examined me very carefully, he assured me that he understood my case exactly, but he could not cure me at once, as he would have to send to Russia for the remedy. He had no confidence in French pharmacists, but by sending to Russia he would be absolutely sure of the purity of the medicine. The remedy having arrived, I took at first one pill. Next day the doctor came to inquire about its effects. It had not acted well. He then directed me to take two a day for four or five days. I felt myself instantly relieved, and since then have had neither headaches, nor insomnia, nor bad digestion, nor weakness.' The story was told with the greatest confidence and satisfaction. 'Do you know,' said I, 'Mme. Lerond, of what this famous remedy consists which has done you so much good?' 'I know very well, but I have forgotten. It was a yellow and bitter—it was—it was—rhubarb!' It was indeed rhubarb that had cured my old patient of all her ills; but the rhubarb came from Russia, and was given by a Russian physician. French rhubarb, given by a French physician, would never have done it."

The above account reminds the writer of some other "cures" for hysteria: "One of the best agents against the gastric and vaporous forms of hysteria is champagne, but only on the express condition that it be taken in a cup, not in a glass. I still see a former hysteric, who passed a dozen years of her life a victim of her nerves, eating each day but three pieces of barley-bread, and desolating her family with her *bizarrerries*. In her case it was not a Russian physician, but a *religieuse*, who brought about her cure, by simply announcing that she would die if she continued. She did not continue. Another case had been for four years the despair of all her acquaintance. She swung through the whole circle of physical perversions. The mode of her cure was neither rare nor curious, for it was simply through the care of a homœopathic doctor, of whom she still sings the praises, and who deserves credit for this trait of sagacity—that he specified, in commencing her treatment, that it would not last less than an entire year. This was, in fact, the most powerful and most suitable globule which the homœopath used in the whole course of the treatment. And so on *ad infinitum*. An excellent formula against hysteria would be, I think, the following:

R. Diplôme de Philadelphie,
Rhubarbe de Russie,
Fumisterie,
Homœopathie, āā q.s.
M.—Gild the pill."

A NEW JOURNAL.—The question whether Philadelphia or New York, Boston or Chicago, is the real medical centre, has been easily and simply decided in favor of the first-named city by the establishment therein of a new medical journal, *The Medical World*. We assert this, because the *World* is not an ordinary ephemeris, and its scheme of organization could not have been evolved from anything short of a real medical metropolis. The *World* has introduced the chrono-era into medical journalism, and offers four portraits of eminent medical men yearly to its subscribers. The first four eminent gentlemen are rumored to be already in Philadelphia sitting

for their pictures. The second four, it is expected, will soon be on their way, and we know not how soon it will be before Philadelphia is crowded with eminent gentlemen demanding lithographic recognition in the pages of our esteemed contemporary. That the appearance of the *World* is a subtle device on the part of Philadelphia to entice the leaders of our profession into its midst can hardly be doubted.

COLOTOMY IN FRANCE.—Colotomy, says the correspondent of the *Medical Press and Circular*, is an operation very rare in France, as the French surgeons have considered it a dangerous and useless operation. M. Pollaillon brought a case under the notice of the Academy. The subject was twenty-one years of age, who had a hernia on the left side since infancy. Two years ago the hernia became irreducible, and a neuralgia of the testicle of the same side, which was attributed to the weight of the tumor. No bandage could be borne under these circumstances. M. Pollaillon attempted the radical cure with an entire success. M. Guérin criticised the operation of M. Pollaillon, which, according to him, was not equal to his own, which he practised over forty years ago, and which consisted in practising a series of subcutaneous wounds; the exudation resulting formed a cicatricial tissue which completely obstructed the canal and thus effected the radical cure of hernia.

PREPARING FOR SCIENTIFIC WORK AT THE NEXT MEETING OF THE NEW YORK STATE MEDICAL SOCIETY.—We have received a circular letter, which we print below, from Dr. Hutchins, President of the State Medical Society. It contains an appeal to the members and delegates of the State Society to supply scientific material for the next meeting. We can heartily commend the President's effort in this direction. The circular reads as follows: "The By-Laws of the State Society provide that to the Business Committee are left all the arrangements for its scientific work. The Business Committee is not appointed till the opening of the session, so that all the control it has over this work is to receive any papers that may be offered, appoint the hour when they may be read, and apportion the time to be consumed in the reading. No authority, under the By-Laws, is given to the President, or to any Committee, to secure the presentation of any scientific matter. The By-Laws tacitly assume that such material will be offered. Whatever efforts the President may make, to assure an interesting and instructive session, are solely on his own motion, and the disposal of all papers thus secured is at the discretion of the Business Committee. The President strongly desires that the session of 1884 may be entertaining and profitable to the large number of medical men who will gather at the capital from all parts of the State in midwinter, and to this end this circular is addressed to all the delegates and members of the State Society, asking their personal interest in providing a suitable programme for the meeting. It adds materially to the general interest if all parts of the State are represented, as thereby are called out the most diversified experiences. The session of the Society is so short that the attractiveness of the programme is enhanced if the papers are short, or an abstract thereof prepared for reading. By this means a larger number of topics can be presented, and a fuller discussion permitted. It is hoped that this appeal may be seriously entertained by the delegates and members, and special preparation be made for the next meeting, worthy of so distinguished a body, representing such important interests. The President desires that titles of papers, with names and addresses of authors, may be forwarded to him at the earliest convenience. A list of these, in the order of their reception, will be prepared and laid before the Business Committee at the opening of the session. This will enable the Committee to consult the convenience of authors as to the time of reading, and contribute to the easy and full presentation of the Society's work."

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CASES IN ABDOMINAL SURGERY,

WITH CONSIDERATIONS AS TO THE CAUSES OF DEATH.

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THE following group of cases have come under my observation during the past few months, and I have thought them of sufficient interest to present to the readers of THE MEDICAL RECORD.

CASE I.—*Double ovariectomy, without adhesions; death in ninety-five and a half hours.*—Mrs. S. G.—, aged 45, married nineteen years, sterile; began to menstruate when twelve years old; has always been regular until the last year, during which the intermenstrual period has been sometimes three, on other occasions five and six weeks; the quantity has never been in excess. A year ago she began to be annoyed with a sensation of cold, covering an area of about two inches in diameter, situate about the middle of the front of the right thigh. In a few months this spot began to be surrounded by a halo of heat, and then began to be the seat of pain which radiated up and down the thigh; lately the same sensations have existed on the opposite limb. She began to grow stout after marriage, and two years ago was a woman of massive proportions, weighing about two hundred and fifteen pounds. Since then her abdomen increased considerably in size, but she was persuaded it was the accumulation of fat common to some women at the change of life. She never experienced anything unusual until December, 1882, when she had an attack of colicky pain in the right inguinal region that passed along in the direction of the colon; it only lasted a few hours, and when examined by her medical attendant he told her she had a tumor.

December 12th.—Patient is a stout, healthy looking woman, her face looks full and bright, and certainly does not indicate the existence of serious trouble. Her pulse, probably accelerated by my presence, is 92; respiration, 20; temperature, 99°. The abdomen is distended by a tumor that nearly fills the cavity; it is most prominent in front, is everywhere dull on percussion, save a space of about three inches between the superior limit of the tumor and the sternum, and laterally behind; the surface of the swelling is perfectly smooth, tense, and elastic, non-fluctuant, or I should rather say that the thick abdominal walls render the sense of fluctuation obscure and uncertain. The configuration is that of an ovarian or uterine tumor; it fills the abdominal cavity so completely that it does not rise and fall with the ascent and descent of the diaphragm; there is no crepitation. From sternum to umbilicus, 7 inches; from umbilicus to pubis, 10 inches; circumference at umbilicus, 48 inches; three inches below it measures the same. It is difficult to measure from the anterior superior spines, on account of the superimposed fat, but as well as I can ascertain, it is the same on both sides from those points to the umbilicus, namely, 10½ inches. It was with difficulty I could reach the os, which was thrown backward, and I could not map out the body, but made out that it was antevverted.

Examinations of the renal secretion gave the following results:

February 12th, night: specific gravity, 1.028; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.020; reaction acid; no albumen.

February 13th, night: specific gravity, 1.028; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.026; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts.

February 14th, night: specific gravity, 1.032; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.025; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts.

February 14th, 8.30 P.M., to 15th, 8.30 P.M. (24 hours), passed a little less than a quart.

February 15th, 8.30 P.M., to 16th, 8.30 P.M. (24 hours), passed a pint and a half.

February 16th, 8.30 P.M., to 17th, 8.30 P.M. (24 hours), passed a little over pint and a half.

March 11th.—Patient complains of being distressed for breath. Circumference at umbilicus, 49 inches, three inches below it is 50 inches. It is impossible to find the xiphoid cartilage or the anterior superior spines, but the measurements are conjectured to be as before: there is at least two inches of abdominal fat that obscures the sense of fluctuation. It was only with difficulty I could draw the os forward, and I found it impossible to introduce the sound. I aspirated the tumor and withdrew about four ounces of fluid of the color and consistence of golden syrup; specific gravity, 1.014; alkaline; it coagulated on boiling, and the coagulation was dissolved by boiling with twice its volume of acetic acid (paralbumen). Under the microscope were found epithelial scales and plenty of large granular corpuscles. She was advised to keep her bowels regular with compound licorice powder, and take Buffalo lithia water.

March 28th.—Under the use of lithia the amount of urine has increased fifty per cent.

April 1st.—Has experienced some pain in the course of the left sciatic nerve, and a disagreeable sense of pressure in the rectum. Regarding the diminution in the renal secretion as due to pressure, and thinking that if permitted to continue it might compromise the results of an operation, early interference was advised, and it was contemplated to do it one week after the next menstrual period. Circumstances rendered it necessary to defer it a month longer; twenty-four hours before the day arranged for her to enter the hospital a case of erysipelas was found in one of the wards of the surgical pavilion, and it was determined not to admit her until all traces of this were got rid off.

Patient was admitted to the Presbyterian Hospital, May 5, 1883. A spacious room (4,500 cubic feet) in the administration building that had never been used, was prepared six weeks before her admission, by painting walls, ceiling, and floors; it was well lighted from the south and east, had apparatus for steam heating, and an open fireplace. A most thorough quarantine was established, bedsteads, bedding, etc., were new; nothing was permitted to come in contact with the patient that had been used in the Hospital Department. She was directed to have a warm bath every night, and to have her bowels regulated by compound licorice powder. Examination of urine for the three days after admission gave the following average: daily amount secreted 20

ounces; specific gravity, 1.025: reaction acid; no albumen or casts.

May 8th.—Had a light early breakfast, no lunch, an enema at 2 P.M. Preparations for operation as follows: No one was admitted to the room who had been engaged with any case of contagious or infectious disease; a reliable spray of pure phenol was used: all instruments: thoroughly cleansed and disinfected, were immersed in one to twenty solution: ligatures of silk had been boiled in one to twenty; fifteen large flat sponges had been thoroughly prepared by cleansing from sand and fat, and had been kept in one to twenty solutions for six weeks; temperature of room was between 75° and 80°.

Operation, 3 P.M.—Under the influence of ether it was possible to make a more satisfactory diagnosis. The tumor was found more movable, it could be lifted bodily upward, and the hands could be insinuated between its lower surface and the pubes. The uterus was found to the left and separate from the tumor; crepitus was also plainly elicited on moving the abdominal walls over the tumor; fluctuation was doubtful. An incision was made in the mesial line, commencing about two inches below the umbilicus and passing downward about six and a half inches. There was at least two inches and a half of fat in the superficial fascia; another layer of fat was found after division of the muscular aponeurosis—this of course was seated in the subserous connective tissue, and was very vascular. After the ligation of all bleeding points, the peritoneum was opened, exposing the cyst; this was found entirely free, there was not a single adhesion. Its walls were punctured with Spencer Wells' trocar, and after the evacuation of the largest cyst several smaller ones were treated in the same manner. The contents were so viscid as to occupy some time in removal, and when it was so reduced in size as to permit it, it was drawn through the opening in the abdominal walls, which were promptly closed, and maintained in coaptation by my friend, Dr. Watts, who assisted me. The pedicle was transfixed and tied on either side with a stout silk ligature, and supplemented by a second encircling the pedicle immediately below the first; the cyst was severed a quarter of an inch above the ligature. This large multilocular cyst was situate in the left ovary. The right was found to be undergoing the same process of degeneration; it was occupied by three cysts, united, about the size of a small orange: its pedicle was surrounded by a ligature and it also was removed. The two weighed with their contents sixteen and three-fourths pounds. The abdominal opening was then closed carefully with carbolized silk sutures, one-third of an inch apart, each suture taking up half an inch of peritoneum. The needles for introducing these sutures were made so that the punctures were no larger than necessary for the passage of the silk, and during their introduction the abdominal cavity was protected from the spray and blood from needle-punctures by a large flat sponge wrung out of warm carbolized solution. The toilet of the peritoneum was made as complete as possible, in fact it was left free of everything, and almost dry. The line of incision was covered with a strip of wet gauze protective, eight layers of freshly carbolized gauze and macintosh, the whole supplemented by a nicely fitting flannel bandage. The patient was placed in bed surrounded with hot bottles, and her head enveloped in a comforter. The House Surgeon, Dr. Freeman, was directed to let her sip hot water if she had any vomiting, and to give her occasional doses of tr. opii deodorata if she had any pain.

May 9th.—She vomited two or three times during the night; thinks the feeling of nausea was diminished by sipping hot water; had some pain, which required the administration of opium; it has now ceased; fifteen ounces of urine removed by catheter during the past twenty-four hours; temperature has reached 100°.

May 10th.—Was much disturbed during the night by a very heavy thunder-storm. Complaints of feeling faint, of

some abdominal pain and a constricted feeling, as of a band drawn tightly round the hips; her temperature went up one degree during the night, pulse 104. Noon today she began to vomit, and the matters ejected soon assumed the features characteristic of peritonitis. Metal refrigerating coil was applied to the head; tube was introduced into the rectum to facilitate the escape of flatus, and she was put upon aconite and opium. Toward evening hypodermic injections of bimeconate of morphia were substituted for the internal use of opium, and she was directed to be bed upon peptonized milk and Leube's solution of beef.

May 11th.—She slept greater part of the night. Vomiting ceased after the use of the bimeconate of morphia. Only twelve ounces of urine have been drawn during the past twenty-four hours, and it contained a trace of albumen. There is considerable meteorismus, everywhere resonant; no dulness, no fluctuation; pupils contracted, face flushed, pulse in the morning 100, went up toward evening as high as 120, respirations ranged between 13 and 18, temperature ran up to 102°. Toward night she began to perspire; the vomiting returned. Hypodermics of Magendie were ordered every four hours, and twenty grains of quinine per rectum. At midnight she was in a condition of stupor, respirations sighing and rapid.

May 12th, 3 A.M.—Pulse, 140; respirations, 24; temperature, 105°. Extremities becoming cold, hypodermics of brandy were given, but she gradually sank, regurgitating a thick, green, glairy fluid occasionally, and died at half-past three.

It is much to be regretted that an autopsy was not obtained in this case, as there are some conditions in the clinical history that could only have been cleared up by such an investigation.

I will now relate the history of a case of penetrating wound of the abdomen that was exposed to many of the influences that such pains were taken to exclude in the last case, and that did well in spite of them.

CASE II.—Report condensed from a history furnished me by Dr. H. B. McCarroll, House Surgeon. J. P——, native of Ireland, car-driver, twenty-seven years of age, single, was admitted to the Presbyterian Hospital, Sunday, May 27, 1883. Late the previous night, when engaged in a drunken brawl, he was stabbed in the belly. Excited by drink, he did not recognize the fact that he was wounded, and continued his debauch until midnight. On awaking in the morning he found something protruding from a wound in his belly, and his friends brought him to the hospital, twelve hours after the injury. His condition when seen by the attending surgeon (Dr. Briddon) was as follows: A large, strong, muscular man, he lay on his back with his legs drawn up; his face was ruddy, suffused from the effects of drink; his pulse full and strong, 72; respiration, 20; temperature, 100°. He makes no complaint of pain. On uncovering his abdomen a large mass of omentum was found protruding from a small punctured wound situate a little above and external to the centre of Poupart's ligament, its appearance somewhat changed by the length of time it had been prolapsed; its surface was sticky from effusion of lymph; it was ruddy red in color, and opalescent; it did not look as if it had suffered from strangulation, but only from exposure.

Treatment.—It was transfixed with a ligature of carbolized silk, which was tied on either side. It was then cut away, and after slightly enlarging the wound, the stump was returned into the abdominal cavity, which was closed with carbolized silk sutures. Small doses of deodorized tincture of opium were ordered to keep him quiet, and no other precautions were taken.

June 2d.—A case of erysipelas was found in a bed on the opposite side of the ward, which was at once removed from the building and placed in a hut used for the reception of such cases. The patient with abdominal wound was also removed into another ward.

June 4th.—A second case of erysipelas developed in

the ward into which the patient was moved, and at a distance of seventy-five feet from his bed. This case was also quarantined, and our patient was moved back into his old ward, which had been emptied and disinfected. On the third day his temperature reached 101° ; the following day it receded to 100° . His pulse never exceeded 92; in fact he did not have a single bad symptom, local or general.

The sutures were removed on the sixth day, and the patient was discharged cured on June 29th. He might safely have been sent out earlier, but it was feared he might strain the cicatrix if he was permitted to go out before it was quite firm.

Suppurating adherent cysts; double ovariectomy; septicæmia; chronic diffuse nephritis; death in ninety-six hours.—Reported by H. B. McCarroll, M.D. Mrs. L—, the patient, was admitted to the Presbyterian Hospital August 4, 1883. She is forty-four years of age, married, but has had no children. She enjoyed remarkably good health until thirty years of age, at which time she weighed one hundred and seventy pounds. Menstruation began at fifteen, and her periods were regular until fifteen years ago, at which time she was told she had anteversion of the uterus, which interfered with micturition and was accompanied by cessation of the menses and the occurrence of delirium and intense pelvic pain at the time when the menstrual periods ought to have appeared. Some months later the uterus was replaced, and all the symptoms abated and finally ceased. Patient was then quite well, with regular menstruation, until three years ago, when the periods became irregular, and one year ago finally ceased. Eight months ago she first noticed a tumor of considerable size in the right iliac fossa. It grew rapidly and attained its present size in a few months.

Examination.—Patient's general condition is poor. She complains of severe pain referred to the right lumbar region, at times extending across the back and down the left thigh. There is slight cedema of the left leg, frequent severe pains in the lower portion of the rectum, especially during defecation, and at times there is a discharge of blood from the bowels. Temperature, 99° ; pulse, 108. Urine: specific gravity, 1.020; acid; no albumen; quantity per diem, thirty ounces.

Physical examination revealed the presence of three abdominal tumors; the two larger were situated on either side of the median line, separated by a well-marked sulcus; they filled the iliac fossa, reaching about two inches above the umbilical line; the third was smaller, more tense and resisting, and was situated behind the larger one on the right side; it bulged the lumbar region. The tumors were distinctly fluctuant, but the larger ones were immovably fixed, the hands could not be insinuated beneath them, and they did not move during inspiration and expiration, crepitation could be made out laterally and above. Uterus anteverted and jammed down in the pelvis. The following measurements were taken: from ensiform cartilage to umbilicus, 7 inches; from ensiform cartilage to os pubis, 13 inches; right anterior superior spine of ilium to umbilicus, $6\frac{1}{4}$ inches; left anterior spine of ilium to umbilicus, $6\frac{1}{2}$ inches; circular measurement at umbilicus, 35 inches; circular measurement two inches below, $35\frac{1}{2}$ inches. A hypodermic needle was inserted in the tumors occupying the right and left lumbar regions and the fluid withdrawn from each contained a number of pus-cells, large and small. For three consecutive days preceding the operation an examination of the urine was made night and morning, with the following results:

First day, morning: specific gravity, 1.015; alkaline in reaction; no albumen; the microscope revealed squamous epithelium present. Evening: specific gravity, 1.018; alkaline; no albumen; contained triple phosphates, uric acid, and urates.

Second day, morning: specific gravity, 1.013; alka-

line; no albumen; contains some mucus. Evening: specific gravity, 1.016; alkaline; no albumen.

Third day, morning: specific gravity, 1.020; acid; a trace of albumen; pus-cells, uric acid, and squamous epithelium present. Evening: specific gravity, 1.020; acid; no albumen; contains few pus-cells and squamous epithelium.

Operation.—Performed by Dr. Charles K. Briddon, September 27, 1883, at 3 P.M. Patient under the influence of ether. An incision five inches in length was made in the median line and between the umbilicus and the pubis, when the subserous areolar tissue was exposed, all bleeding vessels were secured and the peritoneum was opened to the extent of the wound. It was then found that the omentum was drawn down in a fan-shaped process, adherent by its apex to the lower portion of the front of the cyst. Outside the lateral limits of the omentum, the cyst was adherent to the abdominal walls by bands that yielded readily to the pressure of the hand. The omentum was tied in two places and divided between. It was then found that more formidable adhesions existed below, and the worst of these existed in the true pelvis. The larger cyst was now pierced with a trocar, and when nearly empty of its viscid purulent contents and while it was being drawn through the opening in the abdominal walls, it was accidentally ruptured. In spite of the prompt application of large flat sponges, there is no doubt that some of the fluid entered the cavity of the peritoneum. The next step was to separate the adhesions situated in the cavity of the pelvis. These were most extensive in the very bottom of the cul-de-sac. They yielded without any great force, but the hemorrhage was very free and was arrested temporarily by sponges, and the pedicle of the larger cyst, which was found on the left side, was transixed with ivory needles charged with strong, closely twisted carbolized silk, and the mass was then removed. Attention was then directed to a second tumor, composed of several smaller cysts, involving the right ovary; the largest of these, about the size of a child's head, was reduced by tapping and the pedicle was secured as on the left side. The sponges were now removed from the cavity of the pelvis and there was found quite free hemorrhage from these points deep down in the very bottom of the cavity. It was very difficult to control this; the instant a sponge was removed a pool of blood obscured three points from which it issued, and when, after several unsuccessful efforts, the points were secured it was found equally difficult to pass and secure ligatures over the points of the forceps; in fact it was only done after turning the patient on her side opposite a window, which very much facilitated the manipulations. A thorough washing of the cavity was then made; it was several times filled with a hot solution of carbolic acid, and when completely cleansed, the abdominal wound was closed with carbolized silk sutures, a large glass drainage-tube being secured in the lower angle. The abdomen was covered with borated cotton secured in position by adhesive straps. Cyst and contents, independent of what was lost, weighed nine pounds.

September 28th.—Morning: Temperature, 101° ; pulse, 144; respiration, 22. Urine: specific gravity, 1.022; alkaline; no albumen. Patient rested comfortably during the night. The following method for washing out the cavity was devised: A long rubber drainage-tube was introduced through the glass tube, one end of which rested in the cavity while to the other end was attached a small funnel. The cavity was then thoroughly cleansed with a solution of boracic acid (gr. xvj. to $\frac{3}{4}$ j. of water) and the fluid was returned on the principle of the syphon. After cleansing the cavity thoroughly the drainage-tube was removed and in its place was substituted another, with a piece of lampwick running through its entire length. By this means thorough drainage could be obtained. Patient was ordered a diet of milk, mild stimulation, and opium in sufficient quantities to allay pain. Evening: Temperature, 103.5° ; pulse, 140; respiration, 32. Patient

somewhat restless, and complains of great thirst. No abdominal symptoms present. Urine: specific gravity, 1.022; acid: no albumen; amount passed, 28 ounces.

September 29th.—Morning: Temperature, 101°; pulse, 148; respiration, 28. Foul odor about the dressing; this was removed and the cavity thoroughly cleansed. Urine: specific gravity, 1.022; no albumen; acid in reaction: urates, triple phosphates, and squamous epithelium present. Evening: Temperature, 103.1°; pulse, 144; respiration, 28. Urine contains a trace of albumen; few pus-cells.

September 30th.—Morning: Temperature, 101.6°; pulse, 160; respiration, 28. Complains of a slight pain in right iliac fossa. Evening: Temperature, 105.6°; pulse, 160; respiration, 28.

October 1st.—This A.M., for the first time, casts were found in the urine; specific gravity, 1.020; acid; contains albumen, hyaline and granular casts. 2.15 P.M.: Passed into a comatose condition and died.

The following report of the pathological appearances has been furnished by the Pathologist of the Hospital, Dr. T. E. Satterthwaite: The tumors sent for examination, two in number, measured, the larger thirty centimetres in its greatest diameter, the smaller eleven centimetres in its greatest diameter. The larger contained 3,000 c.c. of a thick, tenacious, yellowish-brown fluid. The larger cyst had a thick fibrous wall, the interior of which was studded with papillary growths, the size varying from a robin's to a hen's egg. The smaller tumor appeared on examination, without opening, to be similar in character to the large one, and was multilocular. The fluid removed from these tumors prior to operation contained numerous pus-corpuscles, red blood-corpuscles, also the large granular corpuscles of "Glüge," and many cylindrical elements. The specific gravity of the fluid could not well be determined by the urinometer, on account of the density and tenacity. The fluids were tested for the various kinds of albumen, but owing to the great amount of pus no accurate conclusions could be reached. The fluid removed at the time of the operation presented the same microscopic appearances as the fluid removed before, except the cylindrical elements, which were absent. The fluid removed at the necropsy was less purulent than that examined before, but contained more blood.

Necropsy.—By William H. Reslin, M.D., Curator, twenty-nine hours after death. Body thin. Wound of operation in good condition. Thoracic cavity: Contents normal. Abdominal cavity: When the abdomen was opened no evidence of recent peritonitis was present. The wound of the operation had united, except at the lower extremity, where the drainage-tube was introduced. The peritoneum in the region of, and over the line of incision retained the glistening appearance of a normal serous membrane. The pelvic cavity contained about thirty cubic centimetres of bloody serum, but no evidence of recent peritonitis. There was, however, some thickening of the peritoneum, apparently chronic in character. The stumps from which the tumors had been removed were in good condition. Liver and spleen normal. The kidneys were slightly enlarged: weight, 155 grammes: capsules thickened and adherent, underlying renal surface granular; cut surface, pale; cortex slightly thickened. Microscopically the epithelia was found to be involved by granular and fatty degeneration; there was also a slight increase in the inter-tubular tissue. Chronic diffuse nephritis.

Remarks.—What circumstance or combination of circumstances might be regarded as responsible for the result in the first case of ovariectomy I have not been able satisfactorily to determine. Previous to the operation the patient might have been regarded as in the possession of perfect health, though it is true she was disabled by the bulk of the tumor and suffered much from its pressure effects. At the operation no adhesions were found. A minimum of injury was inflicted on the parts involved. A short incision might have sufficed but for the thickness

of the abdominal walls. There was not a single complication, unless the implication of both ovaries might be considered as one. Every recognized precaution against the known causes of death in such cases was strictly enforced to the minutest detail, and yet the patient died. Up to within the last few years it was considered prudent by many experienced operators to put off the operation until the suffrings of the patient demanded interference. Many reasons were assigned for such delay: it was considered that the emaciation consequent upon protracted disease was favorable to recovery; that the repeated attacks of peritonitis to which such patients are exposed destroyed the anatomical characters of the serous sac and its ability to resent traumatism by the usual process of inflammation. It is true that we do see many cases recover after very protracted and necessarily severe operations, the severance of almost universal adhesions, the use of almost numberless ligatures, the canter, rude handling, and long exposure of the sac. We see such cases progress favorably to convalescence with scarce a change in pulse or temperature, and when we see a case where the conditions all unite to warrant a favorable issue turn out badly, we naturally seek for the cause, and it will probably be by the careful analysis of individual cases that we shall eventually make out many of the causes of disaster. Delay is no longer considered as proper in cases of abdominal tumor. In addition to the suffering it entails, mental and physical, it exposes the patient to many of the accidents which belong to such cases, rupture of the sac, and the very various pathological changes, inflammation, suppuration, gangrene, and twisting of the pedicle, any of which conditions may render an operation imperative at a time or under circumstances that may jeopardize the result. The best authorities recommend an operation as soon as the condition calling for it is recognized.

Objection has been made to the performance of such operations in a general hospital. Such objections have been made by specialists, generally by gentlemen connected with institutions set apart for the treatment of diseases of women. I certainly would not sanction placing a woman who has been subjected to an abdominal section in a ward filled with cases of acute surgery; but if isolation is possible, and all modern precautions are taken, I can see no objection that would not equally apply to cases of strangulated hernia or penetrating wounds of the abdominal cavity, some of which, with protrusion of the viscera, resemble the conditions met with in the operation of ovariectomy, for instance, those in which masses of omentum have to be ligated and returned, and yet these cases do well. Are not the patients in special hospitals exposed to the same evils that exist in general hospitals? The wards in which patients have died of the common consequences of the operation, be those consequences simply inflammation or those more dreaded of infectious or contagious character, are again occupied by the same class of cases. Doubtless every precaution in the shape of disinfection is enforced, but this does not relieve them of the odium that attaches to the former. In my anxiety to avoid any preventable mischief in this case I put off the operation for a month on account of the presence of a case of erysipelas in an adjoining building; and yet, within a period of a few weeks, the second case related was admitted and exposed to the very influences I had so much dreaded in the first case. The man had been stabbed the night before his admission; his omentum had been protruded many hours; it was ligated and excised, and the stump was returned with no other precaution than the use of carbolized silk ligatures and sutures. A few days after a case of erysipelas was found within twelve feet of this patient; he was removed to another ward, where a second case of erysipelas was found. And yet, notwithstanding these exposures, he had an uninterrupted recovery; in fact, he had not a single untoward symptom.

It is the more to be regretted that we were not able to

obtain an autopsy in the fatal case, inasmuch as I have a lingering suspicion that the condition of the kidneys would have helped to explain the result. T. Spencer Wells, in the last edition of his work "On Ovarian and Uterine Tumors," refers to the influence exercised by functional disturbances of those organs on the results of the abdominal section. He expresses his opinion that in cases where the secretion is scanty the operation is apt to be followed by fatal suppression. In another place he says: "One condition which certainly requires correction before the operation is undertaken, is that common one where only a small quantity of highly concentrated urine depositing mixed urates in abundance is passed. If ovariectomy is performed on a patient in this condition, a serious amount of kidney congestion, with symptoms almost amounting to uræmic fever, is almost certain to follow the operation."

Lawson Tait, in his essay on "Diseases of the Ovaries," says: "Especial care must be taken to examine the condition of the urine, for the state both of kidneys and bladder is a most important factor in the success of the operation."

Vogel has calculated that a healthy adult ought to excrete per hour one cubic centimetre of urine for each kilogramme of weight of his body. The patient's weight, without the tumor, was about one hundred kilogrammes, and her average excretion ought to have been one hundred cubic centimetres per hour, and on referring to the history it will be found that it was very much below. The consequence of such a condition would be the accumulation of excrementitious material in the blood, and among the results of such contamination we find a tendency to inflammatory affections. Such were the opinions of Osborne and Traube, and their views have been corroborated by a host of other observers. Erysipelatous inflammations of the skin, purulent infiltrations in the pleural cavities, in the pericardium, less frequently in the peritoneum, and the localization of the inflammation may be determined by the condition of the part involved. In the case reported I was in doubt at first whether the symptoms on the third day were due to uræmia or peritonitis, but twenty-four hours' observation cleared up the doubt.

The condition of the kidneys, revealed in the autopsy of the last case, was sufficient to account for death. The scanty secretion of urine during the time she was under observation aroused suspicion, and repeated careful analyses were made, with negative results—facts unfortunately of too frequent occurrence.

RELIEF OF INTERNAL STRANGULATION BY ALTERNATE HOT AND COLD APPLICATIONS.—A man, forty-two years of age, who had some years previously suffered from a severe attack of peritonitis, was suddenly seized with violent colic. There was meteorism, the abdomen was generally tender on palpation, but more especially at a point a little to the right of the umbilicus. There was no passage either of fecal matter or of gas from the bowel, and purgatives, whether administered by the mouth or the rectum, brought no relief. The obstruction of the bowels continued several days, despite an active and varied treatment, stercoraceous vomiting set in and the patient was rapidly sinking. At this time, all other measures having been tried in vain, Dr. Roux (*Lyon Médical*, September 9, 1883) determined to try the effect of the alternate application of heat and cold to the abdomen. An ice-bladder was first applied and retained for an hour, then it was removed and compresses as hot as could be borne were placed over the abdomen. These applications were continued every hour through the day and night. In the evening some gas escaped from the bowel, and the following morning there was a slight stool. A mild purgative was now given and was soon followed by a copious evacuation, and the patient speedily recovered.

THE PLACE OF PANCREATIN IN THERAPEUTICS.

By J. S. HAWLEY, M.D.,

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THE great importance attached to the nutrition of the sick, in modern medicine, has naturally and very reasonably led to the administration of digestive ferments to aid in the preliminary act of digestion, and also to the adoption of many devices for conforming alimentary substances to the impaired digestive functions, which attend all acute and most chronic diseases. This impulse has been so potent as to force the pendulum of medical opinion and practice far beyond the point of equilibrium, and which at the present time seems to oscillate between the extremes of scepticism on the one hand and an easy credulity on the other. The rôle which pancreatin is now playing in this important field of therapeutics, the wide range of its digestive activities, and the extraordinary attention which has been directed to its use by the late Lumleian lectures by Dr. Roberts, are sufficient reasons for inquiring into its proper use. It is by no means uncommon for men even of genius and learning, who have been fortunate or wise enough to make a step forward in the treatment of disease or the amelioration of human maladies, to be carried by their enthusiasm and the exaltation which attends success to attribute to their discoveries or improvements an extent of application which subsequent observation shows to be unwarranted.

This remark is well illustrated in the title given by Corvisart to the first pamphlet issued by him on the use of pepsine, "Dyspepsie et Consomption." The very great control over the processes of digestion and nutrition which his discovery of the use of pepsin afforded, impressed him with the belief that its influence would be sufficient to arrest the ravages of consumption.

The question to be discussed in this paper is not as to the relative value of different digestive ferments, but, admitting the value of all, to determine what is the rational and effective mode of using pancreatin. The proposition submitted, and an attempt to prove which will be made, is, that pancreatin cannot be effectively or usefully administered by the stomach, but can only be employed for modifying foods before they are taken. The argument will be presented in relation to the anatomical, physiological, and experimental aspects of the subject.

When we examine the anatomical arrangement of the alimentary canal, and the order in which the digestive ferments are delivered to and brought into contact with the ingested food, we are struck with this peculiarity, that they are generated and delivered at points remote from each other. Comparatively recent demonstrations have shown that the pancreatic fluid possesses three distinct ferments, viz., amylolytic, proteolytic, and emulsifying. Now it would seem to be a fair deduction and sound reasoning to conclude that if the pancreatic fluid could effectively perform these several offices upon crude food, then the salivary and gastric secretions were useless and in excess of any want of the system. But their presence is proof of their necessity, and the existence of ferments lower down in the elementary canal, supplementary to them, is proof that their action is preliminary, and the fact that their offices are performed where the next lower ferment cannot reach them is proof of their incompatibility. So much may be concluded by *a priori* reasoning from the anatomical arrangement. The physiological aspect of the case will be found in harmony with and confirmatory of the above. The gastric juice is not only known to be acid, but its ferment, pepsin, is inert in any other than an acid medium, while the pancreatic fluid is alkaline and is inactive in any other vehicle. This one physiological fact is sufficient to show that the two ferments cannot act together. One other physiological fact goes to establish the same conclusion, that is, the destruction of the pepsin in the duodenum by the action of the bile. Herman ("Elements of Human Physiology," p. 174),

speaking of intestinal digestion, says: "Solution of albuminous bodies is effected, most probably, by the pancreatic juices, as the activity of the gastric juice which reaches the intestine is destroyed by the bile." Dr. Lucien Corvisart, speaking of the pancreatic digestion (*Braithwaite*, No. xxxix.), says: "When the gastric and pancreatic juices are separated they act in succession, and thus the peptone may be doubled; but when mixed, the action of each is checked—they neutralize each other. Nature prevents this conflict, first, by separating the two juices by the pylorus; second, by the bile, which destroys the pepsin, as shown by Poppenheim." Certainly the demonstrated fact that the activity of the pepsin is arrested in the duodenum, not only by the alkalinity of its fluids, but by the direct agency of the bile, is fairly conclusive evidence of the incompatibility of the two agents which meet these. But the question still remains, Can pancreatin pass through the stomach, come out unimpaired, and in the duodenum take up its office and play the same rôle as freshly secreted pancreatic juice? In other words, can pancreatin be usefully employed by administration by the mouth?

The extensive use of remedies in which pepsin and pancreatin are combined, implies a belief on the part of many physicians that pancreatin *can survive* the action of the gastric juice and pass on unharmed into the duodenum, where it is free to perform its office. So far from this being the case, however, there are many reasons for believing that pancreatin is digested in the stomach like any other proteid. Lehman says, "the principal constituent of the pancreatic juice is a substance resembling albumen or casein." Herman ("Elements of Human Physiology," p. 142) says: "Its specific constituents are several albuminous bodies, which are scarcely distinguishable from albumen itself, and to which many observers ascribe the ferment action" (pancreatin). Now it is difficult to understand why a substance of the nature of albumen or casein should not be digested by pepsin, whose sole object and use is to digest albuminoids, and whose ability to digest that whole range of substances is well known. But the determination of this point does not rest upon inference. It has been shown by Kühne that "pepsin in acid solution actually destroys trypsin (one of the constituents of pancreatin); trypsin in alkaline solution does not possess the converse power of destroying pepsin, which, however, is altogether inactive in an alkaline fluid."

Mr. E. Scheffer, of Louisville, Ky., has demonstrated, by careful experiments, the fact that pancreatin digested with pepsin loses its activity in respect to all its properties. From a number of experiments, ingeniously contrived for the purpose of demonstrating this, want of space will permit quoting only two: First, "To a solution of one-half grain of pepsin, in two ounces of acidulated water, was added two ounces of pancreas liquid, obtained by rubbing down and beating three ounces of chopped pancreas with small quantities of water until after three strainings four ounces of liquid were obtained, which readily saccharified starch at the temperature of the air. The pepsin solution containing the pancreas liquid, after four hours' digestion, was filtered, neutralized, digested with starch-paste, and tested, but no sugar action was obtained." Second, "To two ounces of pancreas extraction was added a solution of one fourth grain of pepsin in two drachms of water, acidulated with five drops of hydrochloric acid, and the mixture treated as described before. Neither from the acid nor from the neutralized solution, after digestion with starch-paste, did I obtain any sign of sugar by Trommer's test; while the pancreas extraction, by itself, treated with starch, had given the most copious precipitate of oxidulized copper."

To the same effect are the following experiments, made by Dr. William Roberts, of Manchester, England,¹ for the

express purpose of determining the question under discussion:

"I prepared a solution of lactic acid corresponding in saturating power to the normal gastric acid (2 per 1,000 HCl). To fifty cubic centimetres of this dilute lactic acid I added five cubic centimetres of a solution of pepsin, and five cubic centimetres of an active extract of pancreas. I prepared a second similar, but substituted filtered saliva for the pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period the solutions were exactly neutralized and tested, they were both found to be absolutely inert, not a vestige of amylolytic nor proteolytic power had escaped destruction.

"I had an opportunity of testing the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution was obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture placed in the warm chamber for one hour, at the end of that time it was exactly neutralized and divided into equal portions. One portion was tested with a drop of starch mucilage and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk rendered slightly alkaline with carbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

"With this evidence before me, I am unable to accept the conclusions of Defresne and others in Paris, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion, and who recommend the administration by the mouth of pancreatic preparations during the period of chymification."

It appears then that the evidence afforded by the anatomical distribution of the digestive fluids, by the physiological constitution of these juices, as well as the conditions under which they perform their functions, and the results of experimental inquiry, all point to the conclusion that pancreatin not only cannot act in the presence of the gastric juice, but is deprived, by gastric digestion, of all power to perform its functions.

There remains one more aspect of the question to be considered, viz., Can pancreatic preparations by any device be protected from the action of the gastric juice in their passage through the stomach, in such manner as to preserve their digestive potency intact until they arrive in the duodenum, where the conditions are favorable for their action?

Dr. Fothergill proposes to accomplish this by administering ten or fifteen grains of bicarbonate of soda with a dose of liquor pancreaticus at "the tail of the digestive act." "This passes it securely through the stomach; just as a guard of soldiers sees a merchant convoyed over an unsettled frontier infested by robbers." Theoretically considered this expedient is open to several objections.

First, the alkali and the liquor pancreaticus are commingled, hence the pancreaticus is as much exposed to the attack as the alkali; as if the soldiers who were sent to guard a company of merchants should mix indiscriminately with their unarmed charge, an attack upon this promiscuous assembly would be as likely to prove damaging to the guarded as to the guards. If the alkali could be made in some way to surround the pancreatin, so that the acid gastric juice could be neutralized before the pancreatin became exposed, more certainty would attend the device.

¹ Lumleian Lectures, page 36.

Second, it must not be forgotten that ingesta of no kind pass directly through the stomach. It is the nature and office of the stomach to retain its contents, and to pour out gastric juice upon them. Under these circumstances how long would ten or fifteen grains of alkali resist the acid of the stomach? It is proposed to give the alkali and pancreatin an hour and a half or two hours after the ingestion of a meal, at "the tail of the digestive act." Does not the digestive act continue from four to six hours? Can "the tail of the digestive act" be determined? Does not every fresh ingestion provoke a fresh discharge of gastric juice? Certainly such a procedure, to say the least, must be subject to very great uncertainties. The stomach is well called an "acid gulf," "which we have to guard against, else our artificial pancreatic secretion is useless, of no earthly avail." It seems more probable that this "acid gulf" would swallow up any adventurous pancreatin which should attempt to cross it, than that the rash adventurer should cross it in safety. But, theory aside, it is claimed that clinical experience justifies the conclusion. It, however, should not be forgotten that clinical experience is invoked in defence of the use of pancreatin, not only unguarded by an alkali, but actually in combination with acidulated pepsin, which both Dr. Roberts and Dr. Fothergill assert to be fatal to pancreatin. The whole course of therapeutics is strewn with the wrecks of remedies which have been foisted upon the profession by the *supposed results* of clinical observation. Perhaps nothing is more delusive than a fragmentary and ill-digested collection of clinical facts. The sources of error are too numerous, and the conditions too complicated, to allow clinical observations to determine any important conclusion until many facts, well observed and carefully collated, have been brought to bear on the question. More especially must this be the case when the clinical observations contravene what are supposed to be well-demonstrated scientific facts, as in the case under consideration. Science will be of little avail in promoting the advancement of the medical art, if facts established by research and observation are to be lightly set aside by clinical observations short of absolute certainty. It seems far more reasonable to conclude that clinical experience will in the end conform to scientific demonstrations.

But whichever way the progress of observation and experience may determine this question, pancreatin has before it a wide therapeutic field. Second only in importance to the promotion of the digestive act within the organism is the adaptation of foods to the conditions of disease. The whole subject of the nutrition of the sick may be influenced by the use of this agent. The patent fact that the stomach, in common with all other organs of the body, is impaired by all acute and many chronic diseases, affords a wide scope for the use of artificially digested foods; but more especially is pancreatin likely to revolutionize the vexed question of infant feeding.

The principal obstacle to the successful administration of cow's milk is alleged to be the density of the coagulum formed by the action of the acids of the stomach upon the casein of the milk, thereby preventing its proper digestion. The devices for overcoming this difficulty have been numerous, but none of them entirely satisfactory. The use of pancreatin preparations appear to meet this difficulty fully. Dr. Roberts' ascertained by many experiments that pancreatin acts with great rapidity upon the casein of milk, and if not fully peptonizing it, certainly rendering it non-coagulable by heat or acids. This would seem to leave little to be desired in the matter of the adaptation of cow's milk to the purposes of infant-feeding. In the case of feeding infants upon farinaceous substances containing a large preponderance of starch, as they all do, the objection to their use is deemed to lie in the inability of very young infants

to saccharify starch, either by the action of the salivary or pancreatic secretions. This inability to digest starch has been attributed to non-development of the salivary and pancreatic functions, which, it is alleged, has been physiologically demonstrated. But over and above any demonstrations, such inability might well be inferred from the fact that infants are constituted to receive, and the Creator has provided for their use, a food which requires the action of neither salivary nor pancreatic digestion. The salivary secretion, being only diastasic, finds nothing in the milk to act upon. The gastric juice is amply sufficient to digest the casein, and as to the fat in the milk, it does not require the action of the pancreatic juice, for *all nascent milk* is in a *perfect state of emulsification*. So it appears that the infant is fully able to digest milk through the action of the stomach alone, and we may fairly infer that functions would not be provided for before there was need for their employment. This amylaceous aepsia of infants has been met by numberless devices, as is attested by the legion of infants' foods, which, by methods more or less effective, have been devised to overcome it. The most complete as well as the most scientific of these methods, is that known as Liebig's, which consists in saccharifying the starch by the action of the diastase in malt. This is an expensive and somewhat difficult process, so much so as to be unsuccessful in the hands of the average mother or nurse, and has consequently fallen into the control of manufacturers. But by the use of artificial pancreatic preparations this conversion of starch is accomplished with the minimum of trouble and skill. It consists simply in adding to the cooked food, at blood-heat, the pancreatic liquid, and allowing it to stand in a warm place one hour. A process so simple and so effective certainly seems likely to banish many of the infant foods which are now urged upon the attention of mothers and physicians.

The question, "What is the place of pancreatin in therapeutics?" may, in view of the facts set forth above, be confidently answered: Not as a remedy to be administered internally, but as an agent for adapting foods to the impaired digestive functions of the sick, and especially to the preparation of cow's milk and farinaceous foods for infant feeding.

THE LATE DR. GEORGE M. BEARD.¹

A SKETCH.

By A. D. ROCKWELL, M.D.,

NEW YORK.

MR. PRESIDENT AND GENTLEMEN—The date and place of a man's birth, some of the details of his earlier life, educational and otherwise, an enumeration of the amount, and an estimation of the character of his work—these in the main fulfil the necessities of the ordinary obituary record.

All these points have, however, been more or less fully dwelt upon in the various notices of Dr. Beard that have been written, and in complying with the altogether unexpected solicitation of the president that I prepare a brief sketch of my late associate to be read before this Academy, I shall confine myself rather to what he *was* than to what he did. What he did, in the way of professional literary work, must be known to all who keep abreast of the current of scientific research, although few have any conception of the vast amount of labor that was accomplished in the short space of his forty-three years. The simple enumeration of his various books, monographs, pamphlets, and magazine articles, would consume the time that can well be spared for this presentation, and I shall therefore, as an evidence of his wonderful industry, ask you to accept my statement that few of his age in this or any other country, equalled him in the amount or variety of his literary work.

¹ Lumléian Lectures.

¹ Read before the American Academy of Medicine, October 9, 1883.

Opinions will differ as to the value of some of it, but that most of it was original, stamped with his own individuality, and presented in such a clear and lively way as to compel attention, all must agree. The impulse in him to work was so strong, that in his waking moments I do not suppose he was ever absolutely idle; his mind was constantly busy, appropriating the facts and casual suggestion of every-day life, for a possible future use or reference. However great the pressure of professional or literary work, he was always ready to drop everything for the purpose of conversing. It made but little difference whether the one with whom he was in communication was intellectual or the reverse, he would listen as long as anything was to be said, and no utterance of value, or striking manifestation of character, escaped him.

I have often been amused and even amazed at the patience and gravity with which he would listen to the most trivial talk and the most absurd expressions of opinion, but I soon learned that these not infrequently constituted the basis of much that was strong and original in his writings. The power in him to formulate the crude ideas of others, seemed to be instinctive.

Much of the wide and deep meaning represented by common and constantly reiterated expressions, he in some way drew to a point, and gave to it a "local habitation and a name." As has been well said of him, "he worked because he loved to work; not as a slave, but as a child filled with and prompted by filial devotion, and in the very hour of his dissolution he expressed the hope that some one would take up his work at the point he left it and carry it forward, and he whispered the wish that he might be permitted, as a contribution to his work, to place upon record the thoughts of a dying man."

Among many illustrations of his devotion to work, I recall the fact that soon after the late war, and in the beginning of our professional relationship, I observed among his effects an immense pile of manuscript, which upon inquiry I found to be a work of fiction, written for want of something better to do, while serving as assistant surgeon in the "Gulf Squadron." Parts of it were intensely interesting, and contained many graphic descriptions of life and character as he saw it, and if published would undoubtedly have proven a valuable contribution. He however regarded it as of little account. Its purpose as a vehicle of expression when there was no special work at hand, had been served, and he allowed it to become scattered and finally destroyed. Such was the facility and accuracy with which his thoughts struggled to the birth in written language, that his pen was equally ready at his desk or in car or boat, and his manuscript seldom received a correction; but the publisher will not soon forget, nor will I, the sad havoc he played with the proof-sheets in his additions and emendations.

Perhaps the most striking trait of Dr. Beard's character was his humor. With an expression of preternatural gravity, he yet seemed as was said of Jean Paul Richter "to exist in humor; to live, move, and have his being in it." That shallow endowment termed irony or caricature, which often passes by the name of humor, but consists chiefly in a certain superficial distortion or reversal of objects, and ends at best in laughter, found little place in him. "True humor springs not more from the head than from the heart," and in Dr. Beard it found its best expression in his intercourse with those far below him in the intellectual and social scale, and so the relations formed with this class became immediately pleasant and helpful.

In him was illustrated Carlyle's remarkable statement that "Humor is a sort of inverse sublimity, exalting as it were unto our affections what is below us, while sublimity draws down into our affections what is above us. The former is scarcely less precious or heart-affecting than the latter; perhaps it is still rarer, and as a test of

genius, still more decisive. It is in fact the bloom and perfume, the effluence of a deep, fine, and loving nature, a nature in harmony with itself, reconciled to the world, and its stuntedness and contradiction, nay, finding in this very contradiction, new elements of beauty as well as goodness."

The reputation for a certain eccentricity which was so universally accorded to Dr. Beard, was in great measure due to this element of subtle humor, born with him, for between the intense solemnity of his countenance and the thought about to be uttered, there was such an utter incongruity, that it is not to be wondered at that the stranger or casual acquaintance should look upon him as something of an enigma. Therefore it was that few men in our profession have been so little understood, or as it might be put, more grossly misunderstood.

One of the most kindly and genial spirits that went in and out among us, he has been subjected to an amount of abuse, both public and by private communication, most unmerited. Amidst it all, he was to outward appearances as unconcerned as if every shaft was directed elsewhere than toward himself. Against those who struck the hardest and with the least provocation, the only revenge he ever sought or wanted was the exercise, at their expense, of a little of his inimitable and quaint humor; at times, not unmixed perhaps with a shade of contempt. On the contrary, a notable characteristic of Dr. Beard in his estimate of the life and work of others, was *tolerance*; and more than this, he practically held that no character was ever rightly understood until it has first been regarded *not only* with tolerance, but with *sympathy* as well. One other element of character which contributed not a little to this antagonistic feeling, was a positiveness of statement which, in the minds of many, could proceed only from intense and offensive egotism. That Dr. Beard was egotistic, in the sense of placing a high value on his own interpretation of certain phenomena in physics and psychology, as against the opinions of non-experts in these realms of science, cannot be denied. It was, however, that egotism that comes from the consciousness of a clearer and a keener insight, and no better evidence of its inoffensive character is wanted than the fact that those who knew him most intimately, found nothing disagreeable in the manner of these expressions of opinion.

As he said of himself, "he never argued, he simply asserted." This was the result partly, of a natural disinclination to polemics, and partly to a settled conviction, that the surest path to establish the truth as he understood it, was to boldly and persistently reiterate it.

Many instances could undoubtedly be given, where those who were in any way placed in opposition to him, would bear unreserved testimony to the height of his conceit; and from their standpoint, this judgment would be correct. On one occasion, he was in court giving testimony in favor of the plaintiff in a suit for damages. The defendant's counsel, an astute lawyer, after a severe cross-questioning, in which in every way, he attempted to belittle the attainments of the witness, suddenly asked him if he had not been in Germany lately. The answer was that he had. "For the purpose of learning, I suppose?" suggested the lawyer. "Not at all," was the answer, "I went over for the purpose of instructing them."

Not many years ago, in a somewhat celebrated trial, he had been on the witness stand several hours, and had sorely tried the patience of the cross-examiners by his cool assumption of superior knowledge, until in anger one of them finally said:

"Then it is to be presumed that all authorities who differ from you in this matter, are in error?"

"It is to be presumed that they are," was the reply.

Some have said that he sought notoriety, and worked selfishly for his own ends. In regard to this, I write in remembrance of the time, after our separation, when impelled solely by his ever restless instinct for research, he

neglected every expedient of private prudence, for the purpose of investigating along lines which could in no possible way bring in any return, and in this he persisted, until his practice, which was his only reliance, was so nearly ruined, that for the time being he abandoned it altogether for another field. He soon returned to it, however, and with what success is well known. After his death, there was found among his papers, a rather extensive pile of manuscript, which for a better name, might be termed a series of autobiographical sketches. I refer to them here because they illustrate many points of his character, and especially this tendency to humorous exaggeration of which I have spoken. Any one who knew Dr. Beard with any degree of intimacy, was aware that he seemed utterly destitute of any financial sense, so far as having any appreciation of the value of money, excepting as a present necessity. Accordingly, there were times in his earlier professional life, and occasionally up to within more recent periods, when he was closely beset by clamorous creditors, until to most people life would have been a burden. It was during one of these periods undoubtedly, that the portion of the autobiographical sketches was written, referring to the mutual relationships of debtor and creditor. A more unique and quaintly humorous exposition of this relationship I can well imagine was never before presented. From so much that is good it is difficult to select, but I will venture to give one short extract :

"I congratulate myself, that few persons at my time of life, have succeeded amid severe discouragements, in honestly acquiring so admirable a band of creditors ; in that select circle, are found names, of whom, if the world is worthy, certainly I am not. It is truly worth all the deprivations and obstacles, and misunderstandings I have encountered in my pathway through this vale of sorrows, to have been brought into such an intimate relation, for next to marriage, debt is the closest of all connections, and tends to make the parties concerned, thoroughly acquainted.

"It has been said by those who regard themselves as wise, that you must winter and summer with one, before you can know him, but I will recommend a shorter and surer road to acquaintanceship—the getting in debt to a man or allow him to get in debt to you. Such delicate relationships, bring out as I have noticed, the finer and subtler and least suspected qualities of human nature, that would never reveal themselves to any other test whatever ; indeed, no man can be said to know himself, until he has been either a debtor or creditor.

"Not the least of the charms of the relationship of debtor and creditor, if one may judge from his own experience, is its permanency ; in this feature it is certainly superior to wedlock, or to any other earthly relation. Marriages are followed too often by separations, divorces, or at least by infidelities ; but my creditors, or their representatives, are never long away, they never sue for a divorce, and are faithful unto death."

Let it not be understood from this that the subject of this sketch was indifferent to the claims of others. His readiness further on when the ability came, to meet these obligations, is sufficient evidence to the contrary, and I have alluded to this somewhat delicate matter, that the testimony of one who knew him better than most others, might be borne to the essential integrity of his character in this respect ; and while with the rest of mankind his imperfections are sufficiently manifest, it is an education, in this age of greed and gain, and backbiting, to have held communion with a man, who, so far as all outward evidences are concerned, seemed altogether free from envy, hatred, and malice.

Judged by many an accepted standard, he would be readily enough disposed of, and consigned by self-satisfied plodders to the oblivion appointed for all strange and misunderstood things, but tried by the great law of culture, which leads every man to become what from the beginning he was created capable of being, "resisting

all impediments, casting off all foreign adhesions, and show himself at length in his own shape and stature, be these what they may ;" judged, I say, by this standard, he represents to his contemporaries, an interesting, unique and lovable personality.

A CASE OF TARTAR EMETIC POISONING.

RECOVERY AFTER TAKING ONE HUNDRED AND SEVENTY GRAINS.

By JAMES STRATTON CARPENTER, M.D.,

RESIDENT PHYSICIAN EPISCOPAL HOSPITAL, PHILADELPHIA, PA.

THOMAS C—, aged twenty-one, employed in the dispensary department of the Episcopal Hospital, was admitted to the medical ward on the afternoon of June 30th, with all the symptoms of acute antimony poisoning. It was learned on inquiry, that, mistaking a bottle of tartar emetic for one containing cream of tartar (the latter having on several previous occasions satisfactorily relieved the constipation to which he was subject), he had poured out several teaspoonfuls of the drug into a tumbler of water, and then drank the solution.

No unpleasant symptoms occurred for a quarter of an hour afterward, when he was taken violently ill, and vomited, as he expressed it, "a wash-basin half full." This was followed by several more attacks of vomiting, accompanied by a burning sensation, which later increased to violent pain along the œsophagus and in the epigastric region. When admitted to the ward, half an hour after taking the poison, he was in a condition of extreme prostration, amounting almost to collapse, with coldness of the extremities, a weak, thready pulse, and the accompanying symptoms of a gastro-enteritis that were distressing to witness. The contents of the stomach having been thrown off, the continued emetic action of the drug but served to add to its depressing effect on the system, and after the most violent and oft-repeated efforts at vomiting, which were followed by the ejection of a few drachms of bilious fluid, or of mucus mixed with blood, the patient would sink back thoroughly exhausted.

The full emetic effect of the drug having been obtained, the indications to be met were : First, the administration of the recognized antidote, tannic acid ; and second, the proper remedies for a gastro-enteritis, accompanied by a most alarming depression of vital energies. Copious draughts of the tannic acid solution were accordingly given, and these followed by albuminous drinks, the deodorized tincture of opium being given for the burning pain complained of in the abdomen. The thermometer at this time indicated a body temperature of but 95° Fahr., and the radial pulse, which was scarcely perceptible, was slow and intermittent in character, and it seemed as though the hope were not to be realized, that in the violent vomiting which had first occurred enough of the poison had been gotten rid of to prevent a fatal termination.

In addition to internal stimulation with small and frequently repeated doses of spts. frumenti and liq. calcis, external stimulation by means of hot-water cans and vigorous friction of the chest, legs, and arms with heated towels was kept up, and it was only after three hours' unremitting care that reaction was established. The temperature rose to 99.5°, and the pulse improved in rate and force. The patient had a typical "rice-water stool," streaked with blood and accompanied by rather severe cramps in his legs several hours after his admission, but this was the only evidence of the intestinal irritation that occurred of that character.

The abdominal pain was largely overcome by the deodorized tincture, of which gtt. cxx. were taken within two hours, in addition to a hypodermic of morphia. The distressing thirst was a difficult feature of the case to meet, but a most grateful drink was obtained by cooling

the egg and milk mixture with ice, of which he drank frequently in small amounts.

At first the urine was scanty and dark-colored, but contained neither blood nor albumen. The after-treatment was the continuation of the milk diet, with entire rest in bed for three or four days, when the patient was discharged cured, and up to the present time, over two months since the accident, has experienced no further trouble.

The amount taken was not less than one hundred and seventy grains—which I ascertained by afterward asking the patient to pour from a bottle of the tartrate of antimony and potass. the amount he thought he had taken, and then weighing it—a rather imperfect method of ascertaining the fact, but, when it is remembered the object the patient had in view in taking the supposed "dose of salts," the estimate will not appear at all too high.

In this case it may be interesting to note :

First.—The length of time that occurred between the ingestion of so large an amount of the poison and the production of its first symptoms, as being in accord with the accepted idea of the action of tartar emetic upon the centres, absorption being first necessary, rather than its having any direct local irritant action upon the membrane of the stomach, and so causing the violent emesis.

Second.—The urine, which, according to some authorities, in the beginning of mild, and even of fatal cases, is increased in quantity, was in the present case almost suppressed.

Third.—The respirations, which are said to become altered in rhythm by the action of the drug on the respiratory centres, were unaltered in character.

Fourth.—There were no disturbances of sensory function, the ability to appreciate thermic irritants being attested by the patient's ready recognition of the elevated temperature of the hot cans with which his bed was provided.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENN. SYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D.,

PROFESSOR OF GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

ABDOMINAL TUMOR IN A YOUNG GIRL—REMOVAL OF THE OVARIES IN THE TREATMENT OF CONFIRMED MASTURBATION AND OF OVARIAN INSANITY.

GENTLEMEN: The first patient that I show you is a young girl whom I have not yet examined. I shall elicit the history before you.

She is seventeen years of age and single. Puberty began at the age of sixteen and she has menstruated three times, the last time being in the latter part of last December. There have been intermittent abdominal pains and some nausea.

She has menstruated. This shows that there is no congenital atresia and that a passage exists. Before the first menstruation she had a "good deal of pain in the abdomen," but she did not suffer at the subsequent periods. I have asked her about the color of the discharge, but there appears to have been nothing abnormal about that. Were there retention of the menses the discharge would be exactly like tar. By retained menstruation we mean that the woman has menstruated, but that owing to some obstruction, either in the neck of the womb or in the vagina, the blood cannot escape. The fluid parts are absorbed and when it does come away, it is a thick, tarry fluid. There has been nothing of this kind in the present instance. To complicate matters, it appears that she has a tumor.

The first thing that you should think of in all cases of

suppression of the menses is pregnancy. It is astonishing how many blunders are made on that very point. Only a short time ago a lady was brought to me from a very distant city by a kinsman (who was a physician) to consult me in regard to a tumor, which turned out to be pregnancy. Had she not been a kinswoman the physician would probably have discovered the nature of the tumor. I have had many such cases. Pregnancy is the first thing that you should consider in all these cases, no matter how unexceptional may be the character of the girl, for all are liable to fall as did David, although he was "a man after God's own heart." This patient came here on account of the suppression, and knew nothing about the existence of a tumor.

Here you see the tumor for yourselves, and the question arises as to its nature. If this were pregnancy we should look for labor in the latter part of this month, the menses having stopped in December.

I now turn to the breasts. In pregnancy certain changes take place in the areolæ, with which you are all familiar. They are, however, not pathognomonic, and depend to a great extent upon the complexion of the skin. Remember, also, that the excitement of having the breasts examined will sometimes cause a condition of the skin resembling goose-flesh, and a supposed enlargement of the glands of Montgomery. In the present instance the breasts are not altered, and they do not contain milk. Her complexion is remarkably good, being, in fact, quite florid, but this may be due to excitement.

The tumor is on the right side, movable, somewhat irregular, and rather high up. I can place my hand below it.

I shall now examine *per vaginam*. In private practice my favorite method of examining is to bring the woman's nates over the edge of a hard mattress and place her feet on my knees. I find the cervix pushed away back and I also feel a second tumor, which appears to be a prolongation of the tumor above. To the touch this feels like a case of multiple fibroids, but such a condition in a white girl of this age would be very remarkable. It would not be so in a colored girl. I find a central hymen. Still there might be penetration without rupture of the hymen. There are then two tumors; one directly over the bladder, which is plainly too large to be the womb, and a second tumor above, united to the lower one. With the greatest care, I have introduced the sound. The womb is to the left, and appears to be wholly independent of the tumors. It measures three inches, but further information I cannot glean, because she is so restless and nervous that it is impossible to make a thorough examination. My diagnosis at the present time is that there is a solid tumor of the womb or of the ovary, and I think more probably of the latter, and I fear of a malignant nature. If this tumor were a foetus, it must be an extra-uterine pregnancy, but extra-uterine pregnancy should not stop the menses. The womb evidently has no connection with the tumor unless it be by a long pedicle. She will not submit to the administration of an anæsthetic to-day, but I shall try to persuade her to return next week and allow us to administer ether in order to make a thorough examination.

Removal of the ovaries in the treatment of confirmed masturbation and of ovarian insanity.—Our next patient has been a great sufferer. She has been bedridden since May, but for a long time before that was a great sufferer. She sleeps very little, has constant ovarian and vesical pain and great distress in the back and pelvis. The pain radiates from the ovary, down the inside of the thigh in the course of the genito-crural nerve. She finds it impossible to walk, and, although well nourished, is a confirmed invalid. In addition to these symptoms, she is unable to pass her water, and had to have it drawn by a physician, until she learned how to introduce the catheter herself. I grasp a fold of the abdominal wall and you see that there is at least an inch of fat, showing that

she is well nourished. The expression of the face is that of health. You may lay it down as a broad rule, that when there is severe pain in combination with a well-nourished condition of the body the pain is not due to organic or structural disease, but is the result of nerve trouble. There are, however, some exceptions to this rule.

Before sending the patient out, I wish to show you hypertrophied nymphæ and a condition of unnatural redness which exists about the vulva. These are the only symptoms that can be seen. (The patient was now removed.)

This is an interesting case. This girl spent over four years in as many institutions before I saw her, and yet she is no better. When I observed her bright expression of countenance, and her well-nourished condition, I at once concluded that she was suffering from some nerve trouble. On making a vaginal examination I found such marked symptoms that I turned to the physician with whom I saw the case and whispered to him, "This must be a case of masturbation brought on by mental trouble." He said that such was the case and that it had been found out in all the institutions in which she had been an inmate. There was excessive hyperæsthesia of the parts, but no uterine trouble proportionate to the severity of the symptoms. There was some congestion of the ovaries and of the womb. The ovaries were very tender and could be felt from below, a little enlarged. The nymphæ hung down like dewlaps, and this generally indicates masturbation by attrition.

The history is that she had an early disappointment in love. This produced the mental trouble which caused the excitement of these organs. We are all emotional creatures, and during the sexual life these organs exert a great influence over both men and women. Love is not an abstract idea, not sheer cerebration, but a complex emotion. It is an alloy made up partly of mind, partly of body. In this case the result of the disappointment was a shock and congestion to the whole nervous system, and a shock to those organs so exacting during woman's menstrual life—the ovaries. She got into the habit of masturbating and has practised it ever since.

This is a serious case, one of positive disease, and is not to be sneered at or put to one side with a shrug of the shoulder. This girl is a terror to her parents, who are glad to get her out of the house. They have had to employ nurses without number, and she has worn all of them out.

What is to be done? Such cases as this one open a new field for investigation. I purpose to remove the ovaries. Here is a woman lost to society and a burden to herself and friends. I do the operation experimentally. Strange as it may seem to you, the site of sexuality in woman, as well as in man, has not been positively determined. Even in the eunuchs, who had been so before the age of puberty, the sexual desires are not wholly obliterated. On this account the Turks (among whom I lived for many years) demand not only the removal of the testicles, but also the amputation of the penis flush with the pubes. In order not to wet his clothes, every eunuch has to carry with him a catheter through which to urinate. We see the same thing illustrated in our streets to an unpleasant degree by the cattle, for the steers or young oxen play the part of bulls. Women in whom the ovaries have never developed possess no sexual feeling; but when the ovaries are removed after puberty it is questionable whether the sexual feelings are at all influenced. I know of cases in which keen sexual desires were not in the slightest degree blunted by the operation. In explaining such cases, some say that all of the ovarian tissue has not been removed, or that there may be several supplementary ovaries. There is a certain degree of logic in this reasoning, for abnormal cases of this kind do occasionally occur, but it is not wholly sound.

Four years ago we had in this building an abominable case of masturbation, and in the most repulsive-looking girl I ever saw. She was a patient of one of my colleagues,

who in vain did all he could to quench her inordinate desires. A consultation was therefore held by several members of the staff as to the propriety of removing the ovaries. I objected to this operation in her case for the following reasons: In the first place, the girl was here without friends to advise her, and was innately bad; I thought also that in the future she might give me trouble by prosecuting me for having unsexed her, and such a tale would tell well on a sympathetic jury. In the second place, I was not sure that the operation would have the desired effect of making her a respectable member of society.

I was asked some time ago by the superintendent of an insane asylum to spay a half-idiotic girl. It was impossible to keep her under strict surveillance, and the sexual feelings were so urgent that she was at the beck of the first comer. She had already borne two illegitimate children. I told him that I should feel humiliated in removing the ovaries simply "to let copulation thrive," but I was willing to perform the operation in order to prevent an idiotic offspring, an end which seems to me legitimate. At the same time I told him that I must have a written authority from the managers of his institution that I had their consent. After an interesting discussion, the managers decided not to give the needful permission, and so the matter fell through.

Less than a week ago I was called to an insane hospital to see a case of erotic insanity exhibited by masturbation and foul language during menstruation. I was to decide whether or not it was best to remove the ovaries. After a careful investigation, I could not detect any local disease whatever. There was tenderness of the ovaries, but no enlargement could be discovered. The girl was perfectly sane outside of the menstrual period, and was anxious to have the operation performed. The father and mother have also signified their consent. I told the doctor that, while I did not feel sure that extirpation of the ovaries would remove the sexual desires, it was an operation well worth trying, for, if it did not cure her, it would prevent her from bringing into the world an insane offspring. Further, that the operation could do no harm, unless the patient died, and that death in such a case was so questionable a harm that it would not grieve me. I should feel that I had done my duty, and that she and society were better off. On the other hand, when I remove the ovaries for other causes and the patient dies it grieves me to the quick. I shall probably perform oöphorectomy in this case next month.

The first case of oöphorectomy mentioned in history was performed for the purpose of abolishing the sexual feelings. This case may be apocryphal, although it seems to be as well authenticated as many other accepted traditions of old-time heroes. It is said that a Hungarian sow-gelder became so infuriated at his daughter's lasciviousness that he forcibly extirpated her ovaries; but history, if my memory serves me no trick, does not tell us whether or not she was more chaste after the operation, and this is the point that I am after.

The father of the girl whom I brought before you came to me and told me that if his daughter would not consent to the operation, that he and his wife wished me to do it by force. This incident shows how wearied out they were with her pains, and aches, and screams, and fancies, and other hysterical manifestations, whose name is legion. I told the girl what her father had said to me, and added: "You are twenty-three years old and your own mistress, and I shall not touch you without your free consent." This she gave me in the presence of several witnesses. I once removed the ovaries by force, but I shall never do so again, for it is an act that a jury might take an ugly view of. The case is as follows:

Several years ago, when about to attend a meeting of the State Medical Society, a physician of the city in which the meeting was to be held, wrote to me that he had a case of ovarian insanity which he thought was a proper one for oöphorectomy and requested me to bring

my instruments along. He took me four or five miles into the country to a dilapidated hovel, where I saw a wretched girl just coming out of a violent insane attack. She was insane all the time, but had frightful exacerbations about the menstrual period, so that for three weeks in every month she would be beyond all control. I found on examination that both ovaries were low down, enlarged, and extremely tender. I considered it a proper case for operation. The parents, worn out with care and fatigue, were very anxious to have the operation performed, and at once gave the necessary consent. In the afternoon we returned, forcibly administered ether, and removed the ovaries. She has been much benefited by the operation. All the violent symptoms are gone, but her mind is weak. Had her parents put her in an insane asylum she would have got well.

I have wandered from my subject, but while speaking of ovarian insanity, let me mention some cases that I have cured. All of these were accompanied by erotic feelings.

One was a married lady who about a week before the menstrual period would begin to be insane and become uncontrollable. These attacks would last for three weeks. After the paroxysm was over she would be perfectly sane. She had been to two or three institutions. Although the physicians in charge of these institutions objected to the operation, I removed the ovaries. She was restored to perfect mental and physical health. One of the gentlemen who had opposed the operation was converted by this case, and a short time ago sent for me to come to his asylum to remove the ovaries in an analogous case. I could not go at the time, and shortly afterward the patient died from some acute disease.

The second case was one of those cases lying on the border-line between insanity and hysteria. She had become alienated from her family, and imagined that her friends were her worst enemies. She had excessive menorrhagia, and had been bedridden for years. I removed the ovaries, and she got mentally well, while her physical condition was very much improved.

A third case was that of a lady of most excellent family. From an accident she had received a severe mental and physical shock. This was the beginning of the disease. Her health began to fail, ovarian turgidity appeared, and finally ovarian insanity developed. About a week before the menstrual periods the most horrible hallucinations would take possession of her, and she had mental fights such as Christian had with Apollyon. Later in the period she had an irresistible desire to kill a friend to whom she was most tenderly attached. Then, to save herself from injuring him, she made attempts to take her own life. She also suffered from menorrhagia, and was reduced to a condition of the utmost weakness. I was asked to see the case, and concluded with her physician that the ovaries were the seat of the trouble. After a good deal of opposition on the part of the family, the operation was successfully performed. Before the operation she could not touch meat because there was blood on it. Blood was on her clothing, in the air, and on everything around her. Like Lady Macbeth she saw blood everywhere. As she recovered from the effects of the operation it was interesting to watch these hallucinations gradually leaving her. Soon she was able to eat meat, and took large quantities of it. Now she is no longer insane; she is doing well, and is a wonder to all her friends.

I had another successful case, but at this moment I cannot recall the particulars of it. Were Dr. Baer present he would probably remember it.

In view of the fact that the removal of the ovaries has cured these cases, I think that it may do good in this instance. While I am not positive that the sexual feelings will be eradicated, I feel justified in performing the experiment. As regards the operation, it is performed in the following manner: A short incision is made below the navel in the linea alba, sufficiently long to admit two

or three fingers. Each ovary, with its oviduct, is seized, the pedicle, consisting of broad ligament and blood-vessels, is transfixed, tied, and cut off. The wound is closed in the usual manner, but everything is done under strict antiseptic precautions. Although I do not believe with Tait that the oviducts preside over menstruation, I always remove them together with the ovaries, because by doing so I get a longer pedicle, and am less likely to leave ovarian tissue behind.¹

Progress of Medical Science.

SYPHILITIC FEVER.—Dr. Duflocq relates in *La France Médicale*, of August 30, 1883, the history of a young man, twenty-five years of age, who was admitted to hospital suffering from a fever. The attack had begun eight days previously with headache and vertigo followed by vomiting, after which fever and diarrhoea came on. There was also epistaxis a few days later. On admission the patient presented nearly all the symptoms of typhoid fever: the tongue was white; there was tenderness on pressure in the right iliac fossa, though the belly was not tympanitic; the spleen was slightly enlarged; heart and lungs were healthy. The temperature was 104.7°. The eruption of rose-colored lenticular spots was confluent over the abdomen, and very thick over the arms, legs, and thorax. They were large, slightly elevated, and disappeared momentarily on pressure. It was the great extent of this eruption that excited suspicion and led to further examination. A cicatrix resting upon an indurated base was found upon the glans penis, and there were enlarged glands in the groin. Mucous patches were discovered in the mouth and fauces. The patient was placed upon ordinary anti-syphilitic remedies, and the fever and eruption disappeared in about two weeks. Dr. Duflocq mentions as of diagnostic value in the differentiation of typhoid from syphilitic fever, the early appearance (third or fourth day), and the abundance of the eruption.

MANAGEMENT OF LABOR IN COPENHAGEN.—Prior to 1877 a purely expectant plan was pursued in the management of labor at the Maternity Hospital in Copenhagen. If delivery was not accomplished within three hours, then resort was had to extractive measures. Since September 1, 1877, the method of expression has been employed in every case. In comparing the results obtained in two periods of four years each, by the old and new methods (1,780 of the former, and 1,559 of the latter). Dr. Weiss states that: 1, the frequency of hemorrhage occurring during the period of delivery has been markedly reduced; 2, retained placenta has been met with much less frequently since the method of expression has come into use; 3, rupture of the membranes has occurred more often; 4, post-partum hemorrhage is now of very rare occurrence. In view of these facts, the author thinks that midwives should always be instructed to manage labor in this way.—*Le Courrier Médical*, August 25, 1883.

A CANDLESTICK IN THE UTERUS.—The following curious case is found related in *Le Courrier Médical* of August 25, 1883. A woman, aged forty-nine, subject since puberty to periodical attacks of mania, but with lucid intervals, was admitted to hospital on account of an abundant and fetid leucorrhœa. Examination of the uterus showed a cervix covered with granulations and irritated by a discharge coming from within the womb. A sound which was introduced struck against a metallic body. This was removed and found to be the brass socket of a candlestick, measuring three-fifths of an inch

¹ On September 15th the operation of oöphorectomy was performed on the subject of this lecture, in a private room of the University Hospital. The ovaries and tubes had taken on cystic degeneration. The girl recovered promptly, but too short a time has elapsed to determine the issue of the operation.

in length, and four-fifths of an inch in diameter with a rim one and one-half inch in diameter. This socket was evidently detached from a candlestick introduced at some time into the vagina. The last pregnancy dated back twelve years, so the foreign body could hardly have been introduced at that time before the involution of the uterus. And yet it is difficult to conceive of a contracted uterus, in a woman past the menopause, seizing and drawing up into its cavity so large a body as that described.

THE TUNING-FORK IN THE TREATMENT OF NEURALGIA.—Dr. Rasori uses the tuning-fork in the treatment of neuralgic pains, applying it while vibrating over the course of the painful nerve. The sitting lasts about half an hour, when the patient is usually relieved without further treatment. He relates the case of a woman who had suffered from vomiting during the neuralgic attacks, but after the relief obtained by the application of the tuning-fork she was troubled no more in this way (*Cincinnati Lancet and Clinic*). The principle of this treatment is the same as that employed by Dr. Mortimer Granville. He uses an instrument, recently described in these columns, called the percuteur, by means of which he is able to make a number of taps in regular and rapid succession, and of varying intensity to any part of the surface of the body.

CURE OF OBSTINATE SCROTAL ECZEMA BY HOANG-NAN.—Hoang-nan is a vegetable substance of repute in Tonquin as a remedy against rabies, the bite of venomous serpents, leprosy, and several other grave affections. It contains nearly three per cent. of brucine and a small quantity of strychnine. Dr. Barthélemy relates in the *Bulletin Général de Thérapeutique* of August 30, 1883, a case of chronic eczema of the scrotum in which this substance was employed with most happy effect. The patient, a gentleman about fifty years of age, had suffered for ten years from eczema of the scrotum, perineum, and upper and inner parts of the thighs. He had consulted numerous physicians, and had tried every conceivable remedy without experiencing any relief. Dr. Geneuil, the last physician to whom he applied, having read of the efficacy of hoang-nan in leprosy, determined to try it in this case. The patient commenced with seven grains per diem, gradually increasing to forty-five grains a day, in divided doses. While taking these large doses he felt the physiological effects of the drug (muscular tremors, trismus, and vertigo), but persevered with the remedy, and was rewarded at the end of ten days by a perfect cure of his affection. The amounts taken were larger than had been advised by Dr. Geneuil. In all five drachms were taken. The patient was seen eighteen months later, and had then had no return of the eczema.

RECOVERY FROM LOCOMOTOR ATAXIA.—Dr. Louis Henry reported the following case to the Victorian branch of the British Medical Association (*Australasian Medical Gazette*, July, 1883): A man, twenty-nine years of age, of temperate habits, and free from any suspicion of syphilis, had been suffering for some months from symptoms of progressive locomotor ataxia. The distinctive signs of the disease were well marked and steadily increasing in severity. He was first put upon large doses of iodide of mercury, but as neither the fulgurating pains nor any other symptoms were improved after a two weeks' trial, nitrate of silver, in divided doses of one grain per diem, was substituted. The patient was anesthetized and the whole length of the spinal region was cauterized with the button of the thermo-cautery. The ulcers were kept open by a covering of a strip of linen smeared with resin ointment. The patient was further ordered the use of foot-baths of hot water and common salt three times a day; and during his stay in bed was to wear stockings containing powdered mustard. After about three weeks of this treatment, the nitrate of silver being gradually

forced to one grain three times a day, the resin ointment was removed, and the back allowed to heal. The legs were now massaged twice daily, and a solution of iodide of potassium, eight grains, and liquid extract of ergot, one-half drachm, ordered to be taken at 8 P.M. and 3 A.M., with the view of allaying the slight pains in the legs and controlling the emissions, which rarely, but occasionally still made their appearance. A very marked improvement now began to show itself. The pains in the lower limbs completely disappeared, the abdominal constriction vanished, the emissions ceased, the walk and gait became more sure and natural, and the patient regained sensation in his feet, so that, with his boots on, he could, when the report was made, feel the divisions in the wooden floor. For the past two weeks he had been taking eight-minim doses of the liquor strychniæ, and faradization was applied to the spine and lower extremities by means of a wire brush. The improvement, which was very evident, would, the author hoped, be permanent.

ABSENCE OF THE UTERUS.—Dr. Tschernoguboff relates the case of a woman, twenty-four years of age, well nourished and of good physique. The labia were of normal appearance, but the clitoris was very small. The urethra was so dilated as to allow the finger to pass readily into the bladder. The vagina was very short and ended in a cul-de-sac. Combined vesical and rectal examination could detect no trace of a uterus. The woman had never menstruated nor had she ever had any vicarious hemorrhages. She had been married six years, but every attempt at coitus was accompanied with severe pain.—*St. Petersburg Med. Wochenschrift*, August 25, 1883.

A similar case was related by Dr. Stanley O. Warren at the recent annual meeting of the Maine Medical Association (*New England Medical Monthly*, September, 1883). The woman was twenty-five years old, of English descent. She had had an irregular flow of blood, slight in amount, from the rectum since her eighteenth year, and thought at times that it had come from the vagina. She had been married once and was making preparations for a second marriage. Intercourse was always painful, though sexual desire was present. The external genitals were normal, but the vagina was but an inch in depth and ended in a blind extremity. The ovaries could be detected by rectal examination; they were connected by a band of firm tissue which might have been a Fallopian tube or a rudimentary uterus.

THE LIABILITY OF ERROR IN EXAMINING FOR SUGAR IN THE URINE.—The following illustrates with what care and precaution every urinary examination in regard to the presence or absence of sugar ought to be made. Professor v. Heusinger in a late session of the Aerztl. Verein, in Marburg, declared that a certain individual desired to be examined in view of having his life insured. At the close of the physical examination he was requested to urinate. As he had micturated before entering the doctor's office he now could pass but a slight amount. The chemical examination gave a yellow-green precipitate (saccharine). At the examiner's request the man returned the next morning, and the urinary test presented a negative result. It turned out after a close questioning that the individual had suffered for months with gonorrhœa, and had used injections of sulphate of zinc. He had passed water and used this injection just previous to presenting himself for the first examination. Dr. Fettiën, who was then consulted, found that if a solution of sulphate of copper is added to one of sulphate of zinc and tartaric acid and caustic soda in excess, a blue fluid is formed which contains, besides the constituents of Fehling's solution, sulphate of zinc. Added to boiling urine, the zinc is precipitated as a hydrate with a grayish-green color and the solution turns from blue to yellow. If albumen is added the same phenomena are observed, only the fluid above the precipitated zinc is reddish.—*Berl. Klin. Wochenschrift*.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE MEETING OF THE NEW YORK ACADEMY OF MEDICINE, AND THE PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS OF THAT BODY.

WE think this institution, so important in every respect for the profession of this city, and we may well say for the country, is to be congratulated on its favorable progress toward a settlement of those difficulties which have for a time stopped its scientific work, and even dangerously imperilled its very existence.

Our readers are aware of the fact that at the meeting, April 19th, certain resolutions were passed, the main object of which was to instruct the Committee on Admission to report no physician for election as resident fellow who is known by the Committee to be in opposition to the Code of Ethics of the American Medical Association. A full report of the proceedings was given in our issue of April 28th.

The effect of this was to make a new test for election, not based on character, acquirements, or professional standing, but on belief. The resolutions were adopted by a large majority, at a meeting packed for the purpose, by inducing every one to be present who could be persuaded to vote for it, when no suspicion was entertained by those who could not conscientiously vote for such a radical change, that such a movement was to be attempted.

Two weeks before the present meeting the President sent a letter to every resident fellow, which will be found on another page, and certain proposed amendments to the Constitution and By-Laws which he deemed necessary to put the Academy in a good working condition, and to restore harmony and prevent all future trouble in the Academy. Very soon after, a circular card was sent to the fellows, which is also reprinted on another page. We especially call attention to this card, for we think all will agree that this is the most astonishing document that ever appeared signed by such distinguished names, as regards its audacity of statement and its English—particularly that of the last sentence. We are not surprised to learn that many supporters of the old code at once avowed their intention to vote for the proposed amendments.

At eight o'clock Thursday evening, October 4th, the President, Dr. Fordyce Barker, promptly took the chair. The hall was packed, filling the main room, the room be-

hind and the galleries, and very many were obliged to stand and quietly kept their places the whole evening.

After the routine business was finished, Dr. Austin Flint, Sr., rose to a question of privilege and asked leave to make a personal explanation: He stated that he had been frequently charged with inconsistency, in private and in public, in newspapers and in medical journals, and in other ways, in his action and conduct at two former meetings of the Academy. When the delegates to the Medical Society of the State of New York made their report in 1882, he then, at the request of the chief executive officer, whom at that time it would have been painful for him to deny any request he might make, moved, with entire heartiness, as it was in consonance with his own feelings, that the report of the delegates be accepted, and that further discussion of the topics and objects to which it referred be indefinitely postponed. He made the motion in good faith, because he believed that the discussion of ethics had no place in the deliberations of the Academy, but properly belonged to another society. At the last meeting of the Academy, he had voted for the resolutions of Dr. Austin Flint, Jr., and he had done so for the very reason that he believed their passage would have the same effect. He maintained that his conduct on both occasions was consistent and in harmony, and he hoped there would never again be a discussion of ethics in the Academy, either to-night or at any future time.

Dr. Flint was listened to with the closest attention and was applauded when he closed.

The President said he, and doubtless the Academy, had listened with great pleasure to the remarks of the gentleman whose name was held in the highest esteem by the profession, not only of this city, State, and country, but also abroad wherever there is a medical literature. He fully and cordially coincided with the sentiments expressed at the close of his remarks, and he hoped that the action of the Academy at this and the next meeting would effectively secure the result which both desired.

It was a favorable augury to see two men of the standing of the Ex-President and President again apparently working together for the same end.

A communication from the Council was then read, disapproving the proposed amendments and recommending their withdrawal. We have been informed that, including the President, there were present thirteen. That six advocated the foregoing communication and voted for it. The other six, thinking it of no consequence, as the Council had no authority in the matter, refrained from voting.

This statement was ready to be made, and the casting vote of the President on a tie would have been against the motion. But at this meeting it was found that the statement was not necessary.

Dr. Edward L. Keyes then moved the adoption of the proposed amendments of the Constitution and By-Laws.

In presenting these proposed amendments, Dr. Keyes remarked that he had been asked to do so by the President, and that he did so willingly, not only as a recognition of the great services the President had rendered the Academy, but also because he saw in their adoption an easy solution of the difficulties with which the Academy

was now surrounded, which difficulties would otherwise inevitably continue. He had always striven to live up to the old code, he was not a new code man, he had positively declined to join either party to the controversy now going on. It was therefore not in the interest of any faction, but wholly for the sake of peace, that he now offered the proposed amendments and moved their adoption as a whole.

Dr. Austin Flint, Jr., moved that the amendments take the usual course, and expressed the opinion that discussion on them at the present time was uncalled for.

Dr. Alfred L. Loomis seconded the amendments introduced by Dr. Keyes, and said that he did so gladly, for he was fully convinced that by their adoption the greatest danger that had ever threatened the Academy would be averted, and we should ever after be freed from such occurrences as had taken place at the last meeting. For the Academy to maintain its prosperity and its prestige, all matters of ethics and medical politics must be removed from it.

The President, interrupting: Every fellow has the power of expressing his approval or disapproval of any sentiments uttered by his voice if he can get the floor, or his vote, and I venture to suggest that it will better comport with the dignity of the Academy if all other modes of expressing either feeling be avoided.

Dr. Loomis, resuming: There were societies before which such matters properly came, but this was not one of them. The Academy was for scientific work and good fellowship, without fear of sharp tactics or bitter words. If the proposed amendments were carried, it would be impossible for any further disturbance of harmony to take place.

Our limits prevent us from giving more than a very brief abstract of the wise, temperate, and excellent remarks of both of these gentlemen, who spoke to the point, neither of them making any reference to codes.

Dr. Flint, Jr., disclaimed any desire to delay or obstruct the business of the meeting, but again urged that the amendments could not be acted upon to-night and ought not to be discussed. He renewed his motion, and it was now seconded.

Dr. C. C. Lee moved, as an amendment to Dr. Flint, Jr.'s, motion, that the Academy resolve itself into a committee of the whole, for the purpose of discussing the amendments. Seconded.

Dr. Flint, Jr., protested that his motion could not be amended.

The President decided that Dr. Lee's amendment was in order. It was put, and declared carried. A division having been called for, the amendment was found to have been carried by a vote of 135 to 15.

The President then said he considered fairness and courtesy required him to appoint as chairman one who stood on the record as having voted with the majority at the last meeting of the Academy. He should nominate one known to all as familiar with parliamentary usages, Dr. Ellsworth Eliot.

The Chairman named Dr. W. M. Carpenter Secretary of the Committee of the Whole.

By request the proposed amendments of the Constitution and By-laws were then read by the Secretary.

Dr. Louis Elsberg moved that when the committee

rise it report to the Academy in favor of the proposed amendments as a whole. Seconded by Dr. C. F. Taylor.

Dr. D. B. St. John Roosa thought fairness required that the President should have a chance to be heard as to his reasons for proposing the amendment.

Dr. Barker rose and spoke for about a half hour, commanding the closest attention and a peculiar stillness for such a large meeting, except when interrupted by applause. We regret that we can give but a brief abstract of his remarks.

He said he had not intended to take part in the discussion on the amendments, but was anxious to hear any objections to them that might be raised in a full and fair discussion. Since the request had been made, however, he could not hesitate. He repeated his gratification at Dr. Flint, Sr.'s, remarks. When, after the recent action of the State Society, it was feared that its action on the ethical question would be brought into the Academy, Dr. Flint, this renowned man whom he could not think of except reverently—had introduced a resolution to postpone the matter indefinitely. The resolution was carried unanimously, and had worked most successfully, until the action taken last spring, which had entirely changed the aspect of matters, and was, he thought, most injurious, imperilling the prosperity and usefulness of the Academy, inasmuch as it made two parties, the contention of which would keep out new members. He had, therefore, set about devising measures to undo the injury thus inflicted, and to guard against the possibility of further mischief of the sort. Without consulting anybody, but as the result of a careful study of the constitution and by-laws of similar scientific medical societies in Europe, such as the Royal College of Physicians, the Royal College of Surgeons, the Royal Medico-Chirurgical Society of London, the British Medical Association, the Academy of Medicine of Paris, and others, he had prepared the amendments of the Constitution and By-laws now before us. The ethics of these amendments were in every respect as high as those of any of the societies that he had mentioned. He had hoped that for the sake of the Academy he would have the support of those who had raised a perpetual monument to their memories by their liberal gifts in building this beautiful hall, in filling the shelves above us, and by their long untiring work for the Academy. He felt that they never would be willing to see their labors come to nought, and this property of the Academy, which, the Chairman of our Board of Trustees said the other evening, amounted to one hundred thousand dollars, practically ruined. All know that property devoted to a special purpose most rapidly depreciates when it fails of its object. He had been greatly pained when he found that his judgment was wrong, as he was sorry to say it often was, and that some of the best of these men were opposed to these amendments, which he believed so necessary for the future of the Academy.

This course reminded him of the farmer who saw a hawk on the ridge-pole of his barn, which he thought had stolen his chickens, and ran into his house, seized his gun, and fired at him. The wadding from his gun set fire to his barn, which was burned with all its contents. But the story is not ended, and there is another moral.

A bystander, who had listened to the story with gaping mouth and breathless suspense in all its details as to the size of the barn, how much it had cost, how many tons of hay, bushels of wheat, rye, and corn had been burned, exclaimed at the end, "Did he kill the hawk?"

Dr. Barker then explained his amendments, and answered some objections which had been urged. The Committee on Education was omitted, simply because it had no practical duty or utility; the Committee on Ethics, because its functions were relegated to the Council, and because it abolished an inquisitorial committee which was always liable to do as much harm as good. Unfortunately, there has grown up, from the unhappy controversy now going on, a kind of distinction between ethics in its highest and best sense and what is technically called the "code." He would advocate for the Academy the highest ethics, both in theory and practice, and if any of its fellows were found wanting in this particular, he would adopt a slang phrase of the day and say, "turn the rascals out." The resolutions passed at our last meeting made it absolutely imperative, in the interest of the Academy, that in the amendments all allusion to the code should be left out. If this was a misfortune, the responsibility will rest with those who introduced the resolutions.

Dr. Barker then alluded to some other objections, which had been urged.

Dr. Flint, Jr., thought that every one present knew, before the President's explanation, precisely what the amendments implied—they struck out the Code of Ethics, and the other amendments had had to be made to correspond. The report of this Committee of the Whole would amount to nothing. It was simply impossible for the amendments to obtain a three-fourths vote at the next meeting. Therefore, their introduction could only act as a firebrand. Discussion was wholly unnecessary, and he, and those who thought with him, would not take part in it.

The President moved to amend Dr. Elsberg's motion as follows: *Resolved*, That in the opinion of the Committee of the Whole it is advisable that the amendments to the Constitution and By-laws proposed this evening be adopted as a whole, and that the Chairman be so instructed to report. He also gave notice that he would subsequently move that, when the Committee rose, it should report progress, and ask leave to sit again on October 18th.

[A motion to rise having been made and seconded, it was put and declared lost.]

The President again brought up his motion instructing the Committee, and it was now seconded and declared carried. A division having been called for, the motion was found to have been carried by a vote of 103 to 34.

On motion the Committee rose, reported progress, and asked leave to sit again October 18th.

On motion of Dr. H. G. Piffard, the Committee's request was granted.

The President then took the chair.

Dr. Flint, Jr., moved that the amendments lie over until the next meeting, under the rules. Carried.

The meeting then adjourned.

As the matter stands, the amendments are now in the hands of the Committee of the Whole, and no motion in

regard to them, or action on them, can be taken by the Academy until the final report of this Committee.

It now seems nearly certain that so large a number of supporters of the old code feel it necessary to save the Academy, that the amendments will secure the requisite three-fourths vote.

We should think it not at all improbable that all opposition to the amendments may be abandoned in order to prevent the new code party from claiming a victory by the action of the Academy of Medicine. Weak, timid generals are very fearful of changing front during the time of battle. But Dr. Flint, Jr., does not belong to this class. Like Bismarck, he would not hesitate for a moment to give up a fight where he has nothing to gain and much to lose by victory.

The real battle on the "code" is to be fought at the County Medical Society, October 22d, where Dr. Flint, Jr., has frankly and squarely made the issue, and put at the head of his ticket the strongest man possible who would be sure of nearly an unanimous election, were it not that the election does not rest alone on the interests of the society and personal merits.

THE CLINICS OF NEW YORK CITY.

We present in another column a schedule of the clinics to be held in this city during the coming season. The total number per week is over one hundred and sixty, giving an average of about twenty-eight clinics each week-day.

The clinics in general medicine and surgery naturally take the lead in number, there being between twenty-five and thirty of each of these weekly. Eye and ear diseases, children's diseases, gynecology, neurology, come next in popularity.

Over two-thirds of the clinics have been established within the past year by the schools for post-graduate instruction.

New York has about forty public and private hospitals, with a capacity of over seven thousand beds. There are twenty-five dispensaries, treating a quarter of a million of people annually. There is, therefore, abundant material even for the numerous clinics.

ARTIFICIAL IMPREGNATION IN ITS MEDICO-LEGAL ASPECTS.

A CASE of much interest to the medical profession has recently been brought before the civil tribunal at Bordeaux. It appears that a certain physician in Bordeaux advertised widely that he was able to cure sterility in either sex, and no matter how obstinate. Attracted by these pretensions, M. and Mme. A., a childless couple, went to the quack and secured his services. The operation known as artificial impregnation was performed, but, as the evidence shows, in a bungling and incomplete manner. Conception did not take place, but on the contrary, some local injury was done. Despite the failure the quack claimed his fee, which was the moderate sum of fifteen hundred francs, and accused the woman of having attempted abortion. The case was brought before the court, which not only refused to award the fee but condemned the operator and the operation.

The decision does not affect the legality of the opera-

tion itself, but the judge condemned it as being a procedure which was unnatural, and which might, if abused, be a source of danger to society.

Artificial impregnation is an operation which in certain cases may be justifiable, but which is generally resorted to with extreme caution by gynecologists. The practicability of artificial impregnation was first shown upon the lower animals by Spallanzani in 1782. Dehant and Sims, about twenty years ago began to attempt it upon human subjects. In fifty-five separate experiments upon six patients, Sims only succeeded once, and he has now abandoned the operation. Some French gynecologists still endorse it.

LATHYRISM.

TOWARD the end of the last century, Duverney called attention to the danger of eating wild vetches, and described a paralysis of the lower extremities caused thereby. Since that time several observers have described lathyrism, and in 1880 a paper was presented to the International Medical Congress by Dr. Brunelli, giving the histories of several cases of this affection. At the meeting of the Paris Academy of Medicine of July 7, 1883, Dr. Proust detailed a series of observations made by him in an epidemic of the disease occurring recently in Algeria. The first symptoms appeared suddenly after a cold and wet night, and resembled those of a transverse myelitis, viz., high fever, lumbar pains, formation and trembling, motor and sensory paralysis of the lower extremities and paralysis of the bladder. In time, these symptoms were succeeded by those of degeneration of the lateral columns. The patients presented a very characteristic appearance. Locomotion was difficult and only possible with the aid of a cane. There was rigidity of the lower extremities. The feet were in extension and adduction, it was impossible to bring the heel to the ground and walking was accomplished on tip-toe. The patellar tendon reflex was greatly exaggerated and the ankle clonus was also marked. The eyes were unaffected and there were no lightning pains nor any other signs of ataxia.

No autopsies were made, but from the symptoms observed it is probable that the lesion consisted in a transverse myelitis or a hemorrhage of the cord, succeeded by degeneration of the lateral columns. The disease was apparently caused by a species of wild vetch (*lathyrus cicera*), called by the Arabs djilbes, which enters largely into the diet of the natives. All who were attacked had eaten of this vegetable, while among the tribes who did not use it there was not a single case.

The immediate exciting cause seemed to be exposure to cold, and moisture. M. Proust suggested that the injurious effects of the vetch might be due to a mildew. The disease would then be analogous to pellagra, the supposed cause of which is the *sporisorium maidis*, a parasite of Indian corn. Repeated examination, however, failed to show any diseased condition of the djilbes, while experiments upon animals would seem to demonstrate that the poison exists in the healthy plant. A resinous substance contained in the grain of the lathyrus caused death with paralytic phenomena when given to rabbits. The same paralytic phenomena were observed by Bourlier in animals poisoned by the ethereal or alco-

holic extract of lathyrus. The prognosis was generally favorable. In some cases a spontaneous cure was observed, while in others it was obtained as a result of treatment. This consisted in the administration of iodide of potassium internally and counter-irritation with croton oil or tincture of iodine applied along the spine. This report suggests the advisability of a careful study of the physiological action and properties of lathyrus. We may then possibly find that a potent drug can be added to the neurologist's armamentarium.

News of the Week.

A SUCCESSFUL RESECTION OF THE PYLORUS for cancer was recently made by Professor Heinecke, of Erlangen.

THE NEW MEDICAL COLLEGE AT QUINCY.—A correspondent of the *Peoria Medical Monthly*, announcing the organization of a new medical college at Quincy, Ill., states that the Decatur physicians are not going to be behind-hand, and will presently organize a rival institution. The writer says that the following will go into the prospectus: "For some time we have been convinced that the obstacles thrown around the pathway to the medical profession by designing men are altogether too numerous, and it shall be our endeavor to do what we can to fill the decimated ranks of the profession, and in this way help to hold up the hands, enlarge the sphere of usefulness, etc., of those who have already chosen this noble profession. We believe it cannot be successfully controverted that where members of our profession are most numerous, there the health of the community is in the best state of preservation. This being an undisputed fact, we shall labor for the good of mankind by so decreasing mortality, in filling the ranks of our profession, until we may see in every city and hamlet throughout this glorious republic of ours, one physician to every one hundred inhabitants."

A NEW MEDICAL COLLEGE IN CINCINNATI has been organized under the title of The Medical University of Ohio.

CONCERNING REPORTED LEPROSY IN WISCONSIN.—We have received a communication from Dr. J. T. Reeve, Secretary of the Wisconsin State Board of Health, regarding a remark made in a recent editorial that leprosy was "said to prevail to a considerable extent in some of the Scandinavian colonies in Wisconsin." "This report," Dr. Reeve states, is unfounded. He thinks it doubtful if there is at present a single case of the disease in the State. A few cases of leprosy have been brought into Wisconsin by immigrants from Norway, but not one case, as far as can be ascertained by the most careful inquiry, has ever originated there, and the disease can never be said to have "prevailed to any considerable extent."

THE EPIDEMIC AT THE NEW YORK INFANT ASYLUM, MOUNT VERNON, N. Y., AND THE CAUSE OF THE EXCESSIVE DEATH-RATE.—Dr. B. J. Burnett, Health Officer of East Chester, N. Y., submits the following facts in reference to the rate of mortality at the Mount Vernon branch of the New York Infant Asylum: "An epidemic unquestionably has invaded the above institution, the nature of which is more a matter of conjecture than ac-

tual knowledge, I opine, on the part of those who *ought* to possess definite and accurate opinions, in control of this institution. On the first day of August last there were contained in the above asylum 236 *children*. During August there were 23 *deaths*, and during September 33 died, a very heavy percentage you perceive. From the death certificates in my possession it would be a difficult matter to ascribe this excessive rate of mortality to any particular disease, as each of the certificates referred to specify from *two* to *five* causes of death under head of chief or determining, and from *one* to *three* of consecutive or contributing causes." This is a serious charge from a responsible source, which, we hope, can be satisfactorily explained by the asylum authorities.

YELLOW FEVER AT HAVANA AND VERA CRUZ.—During the week ending September 28th there were nine deaths from yellow fever at Havana. There were eight deaths from yellow fever at Vera Cruz during the week ending September 20th.

THE FOOD VALUE OF AMERICAN FISH.—Spencer F. Baird, Commissioner of Fish and Fisheries of the United States, in noting the editorial in *THE MEDICAL RECORD* for September 29th, urging the taking of steps for investigating the food value of American fish says, that this subject has occupied the attention of the Fish Commission for several years; and that since 1878 Professor W. O. Atwater, of Middletown, Conn., has been carrying on, practically, at its expense, a series of researches far exceeding in magnitude, and scientific as well as economical value, any others on the same subject. Professor Atwater is now in Germany, engaged principally in this work, which is still very far from being completed. He has, however, made several partial reports, one of which was published in the "Proceedings of the American Fish Cultural Association for 1882." A more elaborate report, containing the fullest possible data in regard to about sixty-two species of American fishes, is now in type, and will appear in a forthcoming volume of United States Fish Commission reports.

DEATH OF A MEMBER OF THE FRENCH CHOLERA COMMISSION.—M. Thuillier, one of the scientists sent under the direction of Pasteur to study the cholera in Egypt, has himself fallen a victim to the disease. He was the youngest member of the party, being but twenty-six years of age. He contracted the disease in the cholera hospital of Ghedid, in Alexandria, where he was engaged in its study. His funeral was attended by all the Europeans resident in the city, the consuls, the medical corps, members of the other cholera missions, and the English army surgeons.

THE MEDICO-LEGAL SOCIETY held its stated meeting on October 3d. Prof. John J. Reese read a paper entitled "Report of a Toxicological Examination for Arsenic." Mr. Charles F. Wingate read a paper entitled "Sanitary Laws relating to Building in New York."

THE PHILADELPHIA MEDICAL TIMES.—The editorship of this journal has been changed, and Dr. Frank Woodbury has been promoted to the position. We congratulate the publishers on having secured the services of so accomplished and experienced a gentleman.

Obituary.

SURGEON GENERAL CHARLES H. CRANE, UNITED STATES ARMY.

BRIGADIER-GENERAL CHARLES H. CRANE, Surgeon-General, United States Army, after a brief service of one year and two months, died suddenly at 6 A.M., October 10th, at Washington, in his fifty-eighth year. His predecessor, Surgeon-General Barnes, was retired under the act of the Forty-seventh Congress in August, 1882, and lived but a short time after his retirement. Surgeon-General Crane was President Arthur's personal choice, and his death, so wholly unexpected, was a great shock to him. A few weeks ago he complained of a severe cold, which irritated his throat and made respiration irksome. He went about performing his official duties until two weeks since, when, under the advice of his physicians, he remained at home. Two days before his death the symptoms became alarming, though it was not supposed the patient was beyond the reach of medical skill. Several of the eminent surgeons of the army were in constant attendance, and though no attempt was made to conceal his condition from the family or the public, the fatal result of the throat hemorrhage was a shock to official circles in Washington. Both Surgeons-General Barnes and Crane were attendants at the bedside of President Lincoln, and in the pictures extant of his last moments it is Surgeon Barnes who is feeling the pulse of the dying President. He was born in Rhode Island, but was appointed to the army from Massachusetts on February 14, 1848. After several promotions he was, on March 13, 1865, made Brevet Brigadier-General for meritorious services during the war of the rebellion, and on July 28, 1866, was promoted to be Colonel and Assistant Surgeon-General, and afterward Brigadier-General and Surgeon-General, July 3, 1882.

His remains were interred at Shelter Island, N. Y., yesterday afternoon, the following distinguished gentlemen being pall-bearers: Secretary Lincoln, General Sherman, Admiral Rodgers, Robert C. Schenck, Generals McFeely, Rochester, Rucker, Drum, Beard, Benet, Hunter, Holabird, Wright, and Perry, Commodore Fillebrown, Dr. J. M. Brown, United States Navy; Mr. Ross Ray, and Mr. Charles Knapp.

Reports of Societies.

THE AMERICAN ACADEMY OF MEDICINE. *Eighth Annual Meeting, held in New York, October 9 and 10, 1883.*

H. O. MARCY, M.D., PRESIDENT, IN THE CHAIR.

(Special Report for *THE MEDICAL RECORD*.)

THE meeting was called to order by the President on Tuesday afternoon. A number of members from Philadelphia, Washington, Boston, and elsewhere were present, the whole number of registrations being forty-seven. The entire afternoon was devoted to reading papers, having as their general aim the encouragement of a higher and broader medical education. An exception was that of an interesting sketch of the late

DR. GEORGE M. BEARD,

by DR. A. D. ROCKWELL. The paper, which is published in full on page 399 of *THE RECORD*, described Dr. Beard's studious habits, his sense of humor, his vigorous self-assertion, his literary industry, and his tolerance of others, even the humblest and most illiterate.

DR. TRAILL GREEN, of Easton, Pennsylvania, read a paper on

THE IMPERFECTION OF TECHNICAL STUDIES AS A MEANS* OF MENTAL CULTURE.

His theory was that technical studies might give special skill, the skill of the craftsman, but that they did not and

never could really educate a man in the broad sense of the word. Technical studies, perhaps, fitted a man for money-winning in many directions, but did not equip the man best for the needs of a learned profession.

DR. CHARLES MCINTIRE, Jr., of Easton, Pa., read a paper entitled

IS IT FAIR? A STUDY OF THE COMPARATIVE POLITICAL POSITION OF THE MEDICAL PROFESSION IN THE UNITED STATES.

Dr. McIntire showed how full the profession was of ignorant and incompetent persons, also how politically powerless and apathetic its members were. He inveighed against the indifference which both the public and physicians showed in allowing the country to be so flooded with persons who were really dangerous to human life and morality.

DR. BENJAMIN LEE, of Philadelphia, read a paper entitled

THE VALUE OF AN ACQUAINTANCE WITH BOTANY AS A PRELIMINARY TO THE STUDY OF MEDICINE.

He deprecated the neglect into which the study of botany had fallen among physicians and medical students. The result had been caused by a narrow utilitarianism, which made exhibitors and prescribers of drugs rather than enlightened physicians. The paper gave a historical review of the progress of botanical study in this country during the closing years of the eighteenth century and down to the present day.

DR. A. L. GIBON, U.S.N., read a paper entitled

THE HIGHER PLANE IN MEDICINE.

A standard of preliminary education that will go far enough to embrace a knowledge of the natural sciences, and of the structure and use of language; a graded curriculum of four years; a rigorous examination for graduation by disinterested boards; a three-years baccalaureate probationary to the doctor's degree. All these are not enough, if preceptors, professors, and physicians in general fail to impress upon their pupils that medicine is something more than an *art*, merely seeking to relieve individual suffering at so much a head; that its wider aim is to banish disease from the earth, prolong life, develop and improve the race, and thus increase the total of human happiness; that there is no grander or sublimer employment of the intellect than this study of man and his surroundings, catenated as it is with every other branch of knowledge; that he who is really "learned in medicine" is learned in many things, and moves in that higher plane which should be the aspiration of every man who presumes to add M.D. to his name.

For those who are content to look no higher than the requirements of a daily routine, it were better to make no pretence of education, but to recognize a class of general practitioners who can pull a tooth, apply a poultice, or chance a dose of calomel or castor-oil. Consign them to the *limbus fatuorum*, but do not claim for them equality and fraternity with educated physicians. The line must be sharply drawn. There can be no border land. If the degree of M.D. is to be presumptive evidence of professional ability, see that it is the exponent of something definite. Repudiate sham colleges and sciolist teachers, and relieve the profession from the burthen of the gross ignorance, illiteracy, and incompetence which are now its opprobria.

EVENING SESSION.

The President, DR. H. O. MARCY, delivered his

ANNUAL ADDRESS.

The progress of modern thought was touched upon, and the query made whether medicine had progressed at an equal rate with other sciences.

The value of sanitation and the necessity of more earnestly studying and applying its laws was urged. The impurities of the air were enumerated, and the dangers

encountered in badly ventilated rooms described. The organic dust in the air was believed to be the cause of the mysterious "epidemic constitution," so-called, and to be connected with the spread of disease and of surgical complications.

The impurities of water were described, and the consideration of soil-pollution in water-supply dwelt upon.

Numerous diseases are caused and distributed by impure water. The soil air was also a source of danger little considered. The power of these soil and water impurities has been shown by the disastrous effects of typhoid fever in Massachusetts. From 1840 to 1880 there were 390,000 cases of typhoid fever, with 40,000 deaths. In the war there were 93,433 deaths from injuries, and 186,216 deaths from disease. Of these latter deaths, 108,666 were from zymotic diseases alone. Besides this there were 1,700,000 cases of diarrhoea and 1,100,000 cases of dysentery. The number of deaths in 1830 in the United States from diphtheria was 38,398; from typhoid fever, 22,905.

The speaker had made some special experiments with germicides, and had reached conclusions much like those of Koch and Sternberg. Corrosive sublimate in a strength of 1 to 2,000 was as powerful as carbolic acid in a 1 to 20 solution.

The discoveries of Koch regarding the tuberculous bacillus, and its specific relation to phthisis, were thought by the speaker to be established. Some conclusions regarding the bacillus were given.

The disposal of the dead was a problem that needed attention.

The prospective development of the medical profession and of medical science were eloquently dwelt upon.

At the close of the address numerous micro-photographs of the lower organisms were shown.

The Society then adjourned to a supper.

SECOND DAY—WEDNESDAY, OCTOBER 10TH.

A telegram was received announcing the fatal illness of Dr. F. D. Lente.

ELECTION OF OFFICERS.

The Council reported the following nominations for officers:

President—Dr. Benjamin Lee, of Philadelphia; *Vice-Presidents*—Dr. Nathan Allen, of Massachusetts; Dr. A. L. Gibon, U.S.N.; Dr. George F. Shrady, New York; Dr. Edward J. Birmingham, New York; *Secretary and Treasurer*—Dr. Richard J. Dunglison, of Philadelphia; *Assistant Secretary*—Dr. Charles McIntire, Jr., of Easton, Pa.

The report of the Committee was accepted and the officers elected.

Dr. J. Marion Sims was elected honorary member. Twenty-six new Fellows were elected.

DR. L. S. PILCHER, of Brooklyn, delivered an address on

THE RELATIONS OF MEDICAL JOURNALISM TO HIGHER MEDICAL EDUCATION IN AMERICA.

Dr. Pilcher began by deprecating the somewhat too radical conclusions announced in some of the papers on the day before, regarding the absolute necessity of an academic training in order to be a useful physician. It would not be to the advantage of the Academy to have such an opinion go out as representing its views. The speaker instanced Hunter, Cooper, Paré, and Velpeau, as persons who had brilliantly succeeded as physicians despite their having been without a classical training. The speaker also protested against the slurring manner in which the *art* of medicine had been spoken of in comparison with the *science*. Harvey had been instanced as an example of what education, learning, originality, and skill could accomplish. Harvey, however, was unskilful in the art of medicine, while his contemporary, Sydenham, not a scientific man, was a brilliant *physician*.

"There is now," the speaker continued, "a revolu-

tion going on in the methods of medical teaching. The use of technical appliances, laboratory teaching, quizzing, etc., are now a part of the teaching system, so that now the average medical graduate is crammed to an extent which was not the case twenty-five years ago. It is a question, however, whether he is any better physician than he was formerly. The function and object of medical education was to make real practical physicians, those who could relieve pain and cure disease. That system of education which makes the best physicians in this sense will be the one finally adopted. Other things being equal, the person who has first had a good general education will have the advantage over others in the end."

The speaker was inclined to think that the increase of medical colleges was not an unmixed evil, owing to the effect of competition. The licensing of students by these colleges was, however, a mistake.

The speaker then took up the subject of medical journalism. The rapid growth of medical journalism was a sign of the increased education and mental activity of the profession. The fact that the great publishing houses were willing to put their capital into the large weeklies was an evidence of appreciation of the intelligence and educational ambition of the profession.

In the discussion of the paper, DR. STEINER said that in organizing the Academy the chief object was distinctly formulated. It was to encourage young men to secure a preliminary collegiate education before studying medicine. He protested against an attempt to discuss the primary object of the Association as a waste of time.

DR. HUNT, of Boston, speaking for outsiders, asserted that academic training was inconsequential and useless. He thought the real reform needed by the profession was closer adaptation to the methods of science.

DR. A. L. GIBON, referring to Dr. Pilcher's remarks, said that Hunter, Velpeau, and Cooper were not graduated in two years, but really had a long and careful preliminary education.

DR. SIBBETT spoke briefly, defending the aims of the Academy. The conditions of life and opportunities for education are very different now from those of a hundred years ago. Of eighty medical men in his county only three had the degree of A.B. Not five had ever contributed to medical science or literature, because they were not sufficiently educated.

DR. J. CHESTON MORRIS, of Philadelphia, read a paper entitled

THE MILK SUPPLY IN LARGE CITIES.

The importance of milk as a food, the dangers to infant life of its impurities, and the methods of delivering and of adulteration were enumerated.

The use of sealed jars for the delivery of milk was recommended.

There was a great difference in the quality of the milk of different kinds of cows. Thus the common native cow gives 1 pound of butter to 17 pounds of milk; the Devon, 1 pound of butter to 14 pounds of milk; Jersey, 1 pound of butter to 12 pounds of milk; Durham and Ayrshire, 1 pound of butter to 17 pounds of milk. The Devon cow contains more sugar and caseine, and its milk is more nutritious. The composition of milk was given. The total amount of milk annually consumed in Philadelphia was estimated to be 55,548,417 quarts, or about two-fifths of a pint daily to each inhabitant. The cost averaged \$100,000 a day.

DR. A. D. ROCKWELL read a paper entitled

THE EXACT VALUE OF THE ELECTROLYTIC METHOD.

The writer said he had long ago given up the attempt to treat malignant tumors by electrolysis. In a case of epithelioma of the face, however, he had recently obtained an entire disappearance of the growth. In some cases of intramural fibroids he had had remarkably good success. An illustration case was cited. In erectile tumors he had had his best results. One operation is generally sufficient.

The best method of procedure was to connect the needles with the positive pole and place the negative pole outside. The resistance is greater, but this can be overcome by increasing the number of cells. Cystic tumors can be as successfully treated as the erectile, but practically the application is less often needed.

Dr. Rockwell's conclusions were:

First.—The success met with in the treatment of malignant tumors is generally but trivial. In epithelioma, however, when superficial and easily reached, success may be had.

Second.—The electrolysis of *intramural* fibroids often reduces the size somewhat and gives great relief.

Third.—For erectile and small cystic tumors electrolysis is a specific.

Fourth.—Goitres, if small and soft, may be reduced in size, even by external applications. Even when hard, electrolysis may be beneficial, but the results are variable.

Fifth.—Hairs can be permanently removed.

Sixth.—In many cases of stricture, relief or cure can be obtained by electrolysis, but experience is not sufficient to speak of its value positively.

THE REPORT OF THE COMMITTEE ON PROGRESS OF MEDICAL LEGISLATION

was read by DR. R. J. DUNGLISON. The report stated that the progress made in the past few years had been most satisfactory. The views of Dr. Miller, of Minnesota, were quoted, in which he stated that the laws of West Virginia, Illinois, Minnesota, and Missouri were the best. It was stated that considerable disappointment had been felt as to the success of the registration law in Pennsylvania and New York. The workings of the new law in Mississippi, modelled after the Illinois law, passed in 1882, had already been very successful. The attempts of the Illinois Health Board to promote higher medical education were detailed. A list of the States which possessed some medical laws was given as follows: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia, and Wyoming Territory.

Since the last meeting of the Academy laws had been passed in Delaware, Michigan, Minnesota, and Missouri. The efficacy of the laws in the different States varied greatly. The following States have *good* laws, according to Dr. Rauch: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, and Louisiana; ten in all. Pennsylvania still lags behind, her law being little more than a registration regulation. New York's law has been much criticised. It was still thought a good law in the main by many, but needed a severe penalty for perjury. In Alabama the diploma confers no right to practise. In Arizona, Pennsylvania, and Washington Territory, the law is simply for registration. In Arkansas a bill for a medical law failed last year. In Texas and Nebraska the law is weak and ineffective. In Tennessee there is no law, and the practice of medicine is "free to all." In Utah there is no medical law except that provision of the penal code which punishes a physician who is drunk.

DR. R. S. SUTTON, of Pittsburgh, read a paper on the "Importance of Cleanliness in Surgical Operations."

[The paper will appear in full in a subsequent number of THE RECORD.]

DR. BUSH read a paper entitled "A Few Words Concerning Vaccination."

At the close of the reading of the papers, the new President, DR. BENJAMIN LEE, was introduced.

The Academy then adjourned to meet next year in Baltimore, Md.

NEW YORK PATHOLOGICAL SOCIETY.

*Stated Meeting, September 12, 1883.*GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.
THROMBOSIS WITHOUT EMBOLISM.

DR. VAN GIESON said that at the last meeting of the Society he presented a specimen of thrombosis occurring after parturition, and then expressed opinion that it was not due to embolism. [See MEDICAL RECORD, vol. xxiv., p. 246, September 1, 1883.] Since that time he had seen a case of very severe phlebitis, affecting both femorals, with apparent partial obstruction of the femoral arteries, at least the impulse of the arteries was very much diminished, occurring in a woman sixty-five years of age; at the present there is more or less coldness of the lower extremities without any distinct evidence of gangrene. Dr. Janeway had seen the patient, but his opinion concerning the case Dr. Van Gieson had not yet learned. He had, however, examined the heart very carefully, and, so far as physical signs go, found it entirely free from any evidence of valvular disease or hypertrophy. The occurrence of this case so soon after the one reported, and the absence of any evidence of cardiac lesions, still further inclined him to the belief already expressed, namely, that obstruction from thrombus is not necessarily due to embolism. In other words, there are cases of thrombus which occur independent of any mechanical obstruction by embolism; whether or not the change occurring in the intima of the affected vessel might be called inflammatory, he was unable to say.

DR. AMIDON asked if, in the last case, there was any evidence of the presence of the contracted kidney of Bright's disease?

DR. VAN GIESON replied that repeated examinations of the urine had failed to reveal any evidence of kidney disease.

DR. AMIDON said the reason he asked was because it is well known that, not only in syphilis, but in chronic interstitial nephritis, the condition of endarteritis obliterans occurs, and he was unable to see why it should not affect the femoral as well as the cerebral vessels. He had not, however, observed it in a peripheral artery of a limb.

DR. VAN GIESON said that he had not, except in the case referred to at the time he presented the specimen.

The Society then went into Executive Session.

Stated Meeting, September 26, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. GEORGE R. ELLIOTT presented a specimen of

SACCULATED ANEURISM OF THE ABDOMINAL AORTA,

accompanied by the following history: The points of interest were its occurrence in a person in whom the other organs were found in a healthy condition, the healthy appearance of the aorta above and below the aneurism, the small size of the tumor, and the absence of specific disease. Frederick M—, German, aged thirty-seven, married, and a cabinetmaker by occupation, was admitted into the New York Hospital, July 6, 1883. Family history bearing on the case was negative; alcoholic history was well marked; there was no evidence of syphilis. For eighteen months previous to admission he suffered from sudden attacks of pain in the left lumbar region, running down the course of the ureter to the testicle. These attacks varied from a few hours to several days in duration. Upon admission he was well nourished. Examination of the viscera, both thoracic and abdominal, revealed nothing abnormal; there was no marked abdominal pulsation, and no *bruit* could be heard; there was no abdominal tenderness upon palpation. For several days he continued to complain of pain above de-

scribed, together with pain at times shooting down the course of the left sciatic nerve, and often also of vague pains referred to the bladder. He continued in that condition until early on the morning of July 23d, when after some slight exertion he suddenly went into a condition of collapse attended with evident signs of internal hemorrhage, and the simultaneous development of a tumor in the left iliac region. A hard tumor could be made out by palpation, and a hypodermic syringe was introduced and blood withdrawn.

At the autopsy, made six hours after death, the left ventricle of the heart was slightly hypertrophied; in other respects the organ was normal. The other organs of the body were found in a normal condition. Behind the peritoneum on the left side of the spinal column there was seen a large clot of blood extending from the diaphragm to the sacro-iliac junction and floating up the kidney, ureter, and intestines. At a point of the abdominal aorta, one-half inch above where the coeliac axis was given off, a sacculated aneurism was found. The sac measured three inches in its longer diameter and one and one-half inch in its shorter. The tumor was found resting upon the bodies of the last three dorsal vertebrae. At the posterior inferior part of the sac on the left side there was an opening one-half inch in diameter and the parts in immediate contact were lacerated. Upon section the cavity of the aneurismal tumor contained laminated fibrin and recent blood coagula. The bodies of the tenth, eleventh, and twelfth dorsal vertebrae were found eroded but the intervertebral cartilages were quite intact.

DR. F. V. WHITE asked if the chronic alcoholism was regarded as a factor in the production of the aneurism.

DR. HEINEMAN said that alcoholism was one of the recognized causes of atheroma of the arteries.

DR. VAN GIESON said with regard to diagnosis that he had a somewhat similar case, in which there was found after death a small aneurismal tumor at the upper portion of the abdominal aorta with slight erosion of the vertebra, and the only symptom during life was a dull, heavy pain below the umbilicus that had continued for a number of months. No diagnosis had been made, although the man had been seen by several eminent physicians, and he died almost instantly. The practical point is this: when there is obscure abdominal pain, shooting through to the back, extending down the course of the ureter, and, after careful examination, all other causes can be excluded, and the patient has a history of syphilis, there is very strong presumptive evidence of aneurism. At least he had seen one such case, and made the diagnosis of probable aneurism, and, although the patient passed from his observation, Dr. Van Gieson learned subsequently that he died of aneurism.

DR. VAN SANTVOORD thought the apparently normal condition of all the other viscera would exclude alcoholism as a cause, and suggested that some local pressure from the patient's occupation would be a more probable cause.

INFARCTION AND ABSCESS OF THE SPLEEN.

DR. HEINEMAN presented a spleen which had been the seat of an old infarction, and had terminated in a large abscess—in a case of heart disease. The abscess was opened and the patient died two days later of progressive asthenia.

The patient was a male, aged twenty-one, native of Germany, single, and a waiter by occupation, who was admitted to the Mount Sinai Hospital, March 25, 1883. Family history was negative. Two years previous he had rheumatism, from which he recovered quite completely. Four months previous he was seized with pain in the left lumbar region, with pain and stiffness in both legs, most marked in the left, which continued acutely for three or four weeks. This subsided to a considerable extent, but the left lumbar pain returned with increased force three weeks ago, accompanied

by pain in the left chest. He has had no vomiting, but has suffered from thirst; his appetite has remained good. For the past fortnight he has urinated frequently and even had incontinence at times.

Upon admission, the patient was fairly nourished, had slight oedema of the left foot, pulse and respiration normal, appetite good. A loud systolic aortic and mitral murmur with a slight presystolic murmur and cardiac hypertrophy is recognized. Urine subsequently contained blood at times, but always continued to contain pus and mucus in varying amounts. The frequency of micturition continued at times. In May (two months after admission) hyaline and slightly granular casts were found, albumen was present at all times in varying amounts. The quantity of urine was at all times considerable.

After admission, the evening temperature was always slightly elevated, usually rising to 101° , and occasionally rising to 103° and even 104° . His pain in the left lumbar region continued after admission constantly, varying in amount, and gradually a fulness with tenderness upon pressure was developed over this region. Two months after admission he had distinct chills followed by febrile movement and sweating for several days. Five months after admission distinct enlargement of the spleen was apparent. Later fluctuation was recognized over the left lumbar region. Perinephritic abscess was suspected, but operation was for unavoidable reasons deferred until a month later, when an incision was made by Dr. Gerster over the lumbar region and an abscess cavity opened from which almost two quarts of bloody pus escaped. Microscopic examination showed the fluid to contain broken-down pus-globules and small broken-down round cells.

The patient, who was extremely emaciated and debilitated at the time of the operation, recovered from the immediate effects, and appeared in many ways more comfortable, but continued to fail rapidly and died September 14th, six months after admission to the hospital, and probably ten months after the beginning of his local trouble. Upon autopsy the following condition was found: Lungs, stomach, and intestines were normal. Heart dilated and hypertrophied, with large firm old vegetations upon the aortic valves, stenosis of the aortic orifice; thickening and stenosis of the mitral orifice. Liver was congested and nutmeg in appearance. Kidneys were of normal size, capsule not adherent, surface smooth and mottled, striations lost, and left kidney contained a few old decolorized infarctions. Bladder mucous membrane was inflamed and coated with pus and fibrin in places. There was slight burrowing of pus behind the left mesocolon which was evidently recent. Spleen was enormously enlarged. A large old infarction was found close to the capsule, part of which, together with the neighboring splenic tissue, had broken down into an abscess in the centre of the enlarged organ, forming a cavity six inches long, four inches wide, with old thickened walls and containing some degenerated pus. The walls were formed by the thickened capsule and adhesions with neighboring connective tissue structures and above and below by the remaining splenic tissue. The pus cavity had not ruptured and presented only the artificial opening.

Dr. Heineman remarked that abscess of the spleen after infarction from cardiac disease was of not frequent occurrence, though met with occasionally. Dr. F. Delafield had personally communicated the recital of three or four cases, in one of which the whole spleen had broken down. All these cases had terminated by rupture and the resulting peritonitis. Concerning the result in the case related, the abscess would probably also have ruptured, if it had not been opened, and had it been possible to recognize the nature of the trouble early in the disease it is not improbable that the result of surgical interference would have been more successful.

PHTHISICAL LUNG WITH PERFORATION.

Dr. Heineman also presented a lung which was removed from a patient, who had been in the service of Dr. Alfred Meyer at the Mount Sinai Hospital. The patient was taken ill two months before his death with the symptoms of acute pulmonary tuberculosis, he died September 25th, yesterday, from perforation and resulting pneumothorax. The perforation had taken place probably twenty-four hours before death. The lung presented the lesion of pneumonic phthisis, with the usual bronchitis and peribronchitis and was studded with cheesy nodules; the upper lobe was completely broken down into a single large cavity and the perforation was in the walls of this cavity. The point of interest here was perforation taking place within two months from the onset of the disease.

DR. VAN GIESON said, concerning the remarks with regard to blood and pus in the urine in cystitis tending to mask the symptoms, and to some extent to justify the diagnosis of perinephritic abscess, that in perinephritic abscess, a disease difficult to diagnose under any circumstances, the presence of pus in the urine is one of the least of the symptoms, unless there is communication between the abscess and the kidney, which is a rare complication. He would be inclined to attach but little importance to this as a symptom in perinephritic abscess.

DR. HEINEMAN: So would I.

DR. J. LEWIS SMITH said the case reminded him of an interesting one of perinephritic abscess which was finally relieved by operative measures. There was albuminuria for perhaps two or three weeks early in the sickness and afterward the urine became normal. The abscess made its way into the intestine, which fact obscured the diagnosis because the tenderness and fulness abated with the occurrence of the discharge.

UMBILICAL PHLEBITIS.

Dr. J. Lewis Smith presented a specimen removed from the body of an infant who died in the New York Infant Asylum, at the age of eight months. At birth it weighed eight pounds and six ounces, was plump and well developed, and the mother was healthy. When four or five days old it began to be feverish, one day the temperature rising to 104.3° F. There was no outward appearance of inflammation of the umbilicus, and the navel healed readily. At the age of two weeks there appeared an abscess on the scalp, one upon the back, and another upon the nates. These abscesses remained and new ones appeared as long as the child lived, showing that it suffered from septicæmia. At the age of four weeks orchitis upon one side developed and continued for three weeks, when it resolved. When the child was two months old a tumor appeared half an inch above the umbilicus, and when it had continued for a week Dr. Parker opened it, and it discharged bile instead of pus. There was no cough, but at times diarrhoea occurred. This biliary fistula closed soon after it was opened, and after that the discharge of bile occurred from the umbilicus, which continued as long as the child lived. The autopsy was made by Dr. Welch, who reported as follows: Length of infant, twenty inches; very much emaciated. There were the remains of a number of old abscesses upon the trunk and extremities. On opening an abscess on the right side of the occipital bone it was found to contain four drachms of pus, and corresponded to a carious defect in the occipital bone, one inch in length and half an inch in breadth. The dura mater immediately beneath was thickened, but the pia mater was normal. There was a small opening at the umbilicus, with a yellow margin, through which a probe passed into a cavity. The skin about the opening was normal except a small cicatrix about the umbilicus. The heart was normal. The lower parts of the lungs were congested, as also were the spleen and kidneys, the supra-renal capsules and bladder. The tunica albuginea of the left testicle was thickened. The stomach and intestines were normal. The umbilical vein was dilated to about twice

its normal size, its walls were thickened, and it contained yellow, thickened bile. One of the branches of the vein could be traced into the liver, where it opened into an abscess about the size of a walnut containing thick pus, and through this abscess a communication had been established between the umbilical vein and the bile-ducts. The gall-bladder and the hepatic and cystic ducts contained bile and appeared normal, and the liver, except for the abscess, presented a normal appearance. The abscess was in the right lobe, near the posterior border and extended to the superior surface. The umbilical vein opened at the umbilicus, from which point the probe passed into the dilated vessel, but it contained no blood. The peritoneum was normal, as also were the brain and spinal cord.

Dr. Smith regarded the case as a rare one. He had not seen a biliary fistula like this, and it had interested him that undoubted umbilical phlebitis may occur. Thrombosis occurs not infrequently with softening of the material and the formation of a fluid that presents the gross appearance of pus. Such a specimen he had presented to the Society within a year. But here there was a true umbilical phlebitis, because the walls were thickened and distended to the surface of the vein, and exhibited the appearance of an inflammatory process; while at the end of one of the branches was an abscess in the liver which established a communication between the liver and the umbilical vein, through which bile escaped.

DR. VAN GIESON asked if it was not unusual for a child to live for this length of time with secondary lesions arising from umbilical phlebitis.

DR. SMITH said he had not met with a sufficient number of cases to enable him to answer the question.

DR. FERGUSON said that some time ago he made an autopsy on the body of a child eight or nine years of age, who had been vaccinated two years previous to death. Three months after the vaccination a rash broke out over the entire surface of the body and three months subsequent to that the child complained of pains in the bones, and later on of intense pain in the head, and six weeks before admission to the hospital it was noticed that she was incapable of performing certain movements, and markedly that she was unable to move her head without moving her entire body. Shortly before admission she fell down stairs, remained in the position in which she fell, was taken up and put upon a bed, when it was found that she was only semi-conscious. After a time she gained consciousness and was removed to the hospital, and died at the end of eight or nine days. At the autopsy he found several open sores communicating with the bone beneath. On removing the brain it was found that the odontoid process projected into the foramen magnum, the ligament which was extensively diseased having broken, and had partially crushed the pons. The point of interest in the case was not so much the communication of the abscess with bones as the existence of tubercle bacilli in very large numbers, not only in the abscesses but in the bones beneath them, and in one or two isolated tubercles of the brain. One of the queries in the case was, How much did the vaccination have to do with the final condition?

The Society then went into executive session.

THE THERAPY OF SPASMUS NICTITANS.—Under this head Dr. Friedr. Betz relates the history of a boy, fourteen years of age, who had suffered for several years from a bilateral nictitating spasm of the lids. Several physicians had attempted to relieve him, but in vain. The boy was healthy, and his eyesight good. He had, however, quite long eyelashes and the edges of the lids were reddened. Betz performed epilation of numerous lashes above and below on both eyes. The result was immediately successful.—*Memorabilien*, August, 1883.

Reviews and Notices.

AN ENCYCLOPÆDIC INDEX OF MEDICINE AND SURGERY. Edited by EDWARD J. BERMINGHAM, A.M., M.D. 8vo, pp. 934. New York: Bermingham & Co. 1882.

THE plan of this book, as set forth in the preface, is excellent. The intention, as there stated, was to furnish a work that should give a comprehensive account of every disease, its etiology, symptoms, diagnosis, prognosis, and treatment, and which at the same time should consist of but one volume, thus greatly facilitating a ready reference. An account of nearly every disease known is there met with, though the cross references are not as numerous as they should be. Such common terms, for example, as Dupuytren's contraction, Menière's disease, Pott's disease, scoliosis, otitis, trichinosis, osteomalacia, trismus, and others, are not to be found. The several conditions are treated of under other headings, it is true, but in a work of this nature it is annoying to be obliged to think of all the synonyms of a disease before finding the subject wanted. Then, again, we were greatly disappointed in the articles. We had supposed that they were original articles, prepared especially for this work by the authors whose names appear in the list of contributors. But this is not the case. Some, indeed, appear to have been written expressly for this or some similar publication, but others, and among them some of the most important, are taken bodily from other sources. The articles on "Milk Fever," "Puerperal Convulsions," and "Puerperal Insanity," for example, are found word for word in the second American edition of Playfair's "Midwifery." The article on "Perityphlitis," by Dr. H. B. Sands, is an exact reprint of a lecture delivered by him before the Anatomical and Surgical Society of Brooklyn, on May 31, 1880, and published in the *Annals* for July of that year. The article on "Pneumonia" is in the form of a lecture and will have a charmingly familiar sound to those old students of the College of Physicians and Surgeons whose good fortune it was to listen to Professor Alonzo Clark. The articles are uneven, and do not bear the marks of careful editing. Nearly twenty pages are devoted to "Infantile Paralysis," while "Diseases of the Liver," are treated of in nine pages, and "Typhoid Fever" is disposed of in less than two. Of course, when there are so many different writers there must be a difference in style, but it need not be so marked as we find it here. The articles on surgical subjects written by Mr. C. B. Keetley are painfully jerky, and read very like notes jotted down by a lecturer whose memory needs to be refreshed from time to time. A succession of sentences of two and three words each is apt to weary the reader even of a condensed encyclopedia, and when the entire sentence consists of one word the shock is severe. Notwithstanding these faults of editing and compilation, there are many excellent articles to be found here, and the work is really valuable as a handy book of reference in hurried moments.

THE ROLLER BANDAGE. By WILLIAM BARTA HOPKINS, M.D., etc. With 73 illustrations. 12mo, pp. 95. Philadelphia: J. B. Lippincott & Co. 1883.

DR. HOPKINS'S little work on the roller bandage is a clear account of the various applications of that bandage to the different parts of the body, but illustrated by the most hideous drawings that can be imagined. This, however, is the fault of the book-maker. Dr. Barton has done his work well and deserves to have had better fortune with his cuts.

SEXUAL IMPOTENCE IN THE MALE. By WILLIAM A. HAMMOND, M.D. New York: Bermingham & Co. 1883.

THIS work of 274 pages is divided into four chapters, entitled, "Absence of Sexual Desire," "Absence of the

Power of Erection and of Consequent Intrmission," "Absence of the Power of Ejaculating the Seminal Fluid into the Vagina," and "Absence of the Ability to Experience Pleasure during the Act of Copulation and during the Emission of the Semen." Each of these topics is fully described and illustrated by cases drawn from the author's experience or cited from authorities, and each chapter is accompanied with therapeutic suggestions for the relief of the conditions described. Much space is given to the recital of instances of perverted sexual feelings and acts which in their results so frequently if not commonly lead to the induction of ultimate impotence. The literary style of the book is admirable, its information is instructive, and its external appearance is attractive.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 29 to October 6, 1883.

TILTON, H. R., Major and Surgeon. Assigned to duty as Post Surgeon at Fort Wayne, Michigan. S. O. 183, par. 4, Department of the East, September 28, 1883.

BRECHEMIN, LOUIS, Captain and Assistant Surgeon. Relieved from duty at Fort Columbus, N. Y. H., and assigned to duty at Fort Wadsworth, N. Y. S. O. 183, par. 5, Department of the East, September 28, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 6, 1883.

BEARDSLEY, G. S., Surgeon. Granted leave of absence for six months, with permission to leave the United States.

AUSTIN, A. A., Passed Assistant Surgeon. Orders to Naval Hospital, New York, revoked, and placed on waiting orders.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York.

PECK, GEORGE, Medical Director. Detached from the Naval Hospital, Mare Island, Cal., and placed on waiting orders.

MCMURTRIE, D., Surgeon. Ordered to report at Washington, D. C., October 3d, for Medical Survey.

CRAWFORD, M. H., Passed Assistant Surgeon. Ordered to report at Washington, D. C., October 3d, for Medical Survey.

DUBOIS, F. L., Surgeon. Detached from Naval Rendezvous, Philadelphia, and ordered as member of the Medical Examining Board, Philadelphia.

RUSH, CHARLES W., Passed Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Receiving Ship Colorado, New York.

JONES, M. D., Passed Assistant Surgeon. Detached from the Naval Hospital, Washington, D. C., and ordered to the Naval Hospital, New York.

ASHERIDGE, RICHARD, Passed Assistant Surgeon. Detached from the Naval Academy, and ordered to the U. S. S. Swatara.

APHASIA AT THE COMMENCEMENT OF TUBERCULAR MENINGITIS.—Dr. Schutz relates the case of a man with fungoid arthritis of the elbow, who was suddenly seized with aphasia without any other paralytic symptoms. He could read and write, but was unable to pronounce a word, even if it was spoken before him. Soon other symptoms appeared, cephalalgia, facial paralysis, and periods of excitement followed by depression; then deafness, pain in the neck, strabismus, and dilatation of the pupils, followed by coma and death. The autopsy revealed tubercular meningitis. Aphasia has usually been regarded as a late, rather than an early symptom of this disease. —*L'Abeille Medicale*, September 10, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 9, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 2, 1883.....	0	86	26	2	11	41	0	0
October 9, 1883.....	0	74	42	8	10	29	0	0
Deaths.								
October 2, 1883.....	0	11	8	3	4	16	0	0
October 9, 1883.....	0	25	2	6	5	14	0	0

SCHEDULE OF THE VARIOUS CLINICS TO BE HELD IN NEW YORK CITY THE COMING SEASON.

CLINICS IN GENERAL MEDICINE.

Monday: 11 A.M., Post-Graduate School and Bellevue Hospital; 2 P.M., New York Polyclinic; 2.30 P.M., New York Hospital; 5 P.M., Post-Graduate School.

Tuesday: 11 A.M., Post-Graduate School; 11 A.M., University Medical College; 10 A.M., Bellevue Hospital; 1.30 P.M., Bellevue Medical College; 1.30 P.M., Bellevue Hospital; 2 P.M., New York Polyclinic; 3 P.M., Bellevue Hospital.

Wednesday: 11 A.M., Woman's Medical College; 11 A.M., University Medical College; 2 P.M., New York Polyclinic; 5 P.M., Post-Graduate School.

Thursday: 10 A.M., Bellevue Medical College; 11 A.M., Post-Graduate Medical School; 12 M., College of Physicians and Surgeons; 2 P.M., Polyclinic; 2.30 P.M., New York Hospital; 5 P.M., Post-Graduate School.

Friday: 1.30 P.M., Bellevue Hospital; 2 P.M., University Medical College; 2 P.M., Polyclinic; 5 P.M., Post-Graduate School.

Saturday: 11 A.M., Post-Graduate School; 11 A.M., Bellevue Hospital; 2 P.M., Polyclinic.

GYNECOLOGICAL CLINICS.

Monday: 9 A.M., New York Polyclinic; 1 P.M., Post-Graduate School; 2 P.M., Woman's Hospital; 3 P.M., Polyclinic.

Tuesday: 9 A.M. and 3 P.M., Polyclinic.

Wednesday: 9 A.M., Polyclinic; 9 A.M., Woman's Medical College; 11 A.M., Post-Graduate School; 1 P.M., Post-Graduate School; 3 P.M., Polyclinic.

Thursday: 9 A.M., Polyclinic; 1.30 P.M., Bellevue Hospital; 3 P.M., Polyclinic.

Friday: 9 A.M., Polyclinic; 11 A.M., Woman's Medical College; 1 P.M., Post-Graduate School; 3 P.M., College of Physicians and Surgeons; 3 P.M., Polyclinic.

Saturday: 9 A.M., Polyclinic; 3 P.M., Woman's Hospital; 3 P.M., Polyclinic.

SURGICAL CLINICS.

Monday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 12 M., College of Physicians and Surgeons; 2 P.M., Bellevue Hospital.

Tuesday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 2.30 P.M., Roosevelt Hospital.

Wednesday: 10 A.M., Bellevue College; 11 A.M., Polyclinic; 12 M., Post-Graduate School; 1.30 P.M., Bellevue Hospital; 2 P.M., University Medical College; 2.30 P.M., College of Physicians and Surgeons; 3 P.M., Presbyterian Hospital.

Thursday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 2 P.M., New York Hospital; 2.30 P.M., Bellevue Hospital.

Friday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 3 P.M., Bellevue Hospital.

Saturday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 12 M., Woman's Medical Hospital; 12 M., University Medical College; 1.30 P.M., Bellevue Hospital; 2.30 P.M., New York Hospital; 2.30 P.M., Presbyterian Hospital.

EYE AND EAR CLINICS.

Monday: 1.30 P.M., Bellevue Medical Hospital; 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate Medical School.

Tuesday: 1 P.M., Post-Graduate School; 2.30 P.M., Post-Graduate School; 2 P.M., University Medical College; 2 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons.

Wednesday: 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 3 P.M., New York Eye and Ear Infirmary; 4 P.M., Post-Graduate School.

Thursday: 1 P.M., Post-Graduate School; 2 P.M., Polyclinic; 2.30 P.M., Post-Graduate School.

Friday: 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Saturday: 1 P.M., Post-Graduate School; 2 P.M., Polyclinic; 2.30 P.M., Post-Graduate School; 2 P.M., Woman's Medical College.

CLINICS FOR NERVOUS AND MENTAL DISEASES.

Monday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School.

Tuesday: 1 P.M., Polyclinic; 1.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Wednesday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School; 4 P.M., Manhattan Eye and Ear Hospital.

Thursday: 1 P.M., Polyclinic; 2 P.M., University Medical College; 1.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Friday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School; 4 P.M., Woman's Medical College.

Saturday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons; 4 P.M., Post-Graduate School.

CLINICS FOR DISEASES OF CHILDREN.

Monday: 10 A.M., Post-Graduate School; 10 A.M., Polyclinic; 1.30 P.M., Bellevue Medical College; 2.30 P.M., Bellevue Hospital.

Tuesday: 10 A.M., Post-Graduate School and Polyclinic; 3 P.M., New York Hospital (out-door department); 5 P.M., Post-Graduate School.

Wednesday: 10 A.M., Post-Graduate School and Polyclinic; 1.30 P.M., College of Physicians and Surgeons.

Thursday: 10 A.M., Post-Graduate School, Polyclinic, and University Medical College; 11 A.M., Woman's Medical College.

Friday: 10 A.M., Post-Graduate School and Polyclinic; 2 P.M., New York Hospital (out-door department).

Saturday: 10 A.M., Post-Graduate School and Polyclinic; 5 P.M., Post-Graduate School.

CLINICS FOR SKIN AND VENEREAL DISEASES.

Monday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons (skin).

Tuesday: 1 P.M., Polyclinic; 5 P.M., Post-Graduate School (skin); 7 P.M., Post-Graduate School (venereal).

Wednesday: 1 P.M., Polyclinic; 1.30 P.M., Charity Hospital (venereal).

Thursday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons (genito-urinary); 5 P.M., Post-Graduate School (skin); 7 P.M., Post-Graduate School (venereal).

Friday: 1 P.M., Polyclinic.

Saturday: 1 P.M., Polyclinic; 5 P.M., Post-Graduate School (skin).

CLINICS FOR DISEASES OF THROAT AND NOSE.

Daily: 2.30 P.M., Post-Graduate School; 4 P.M., Polyclinic.

Tuesday: 2 P.M., College of Physicians and Surgeons.

THE CIRCULAR LETTER TO THE FELLOWS OF THE NEW YORK ACADEMY OF MEDICINE CONCERNING PROPOSED AMENDMENTS IN THE CONSTITUTION AND BY-LAWS OF THAT BODY.—Dear Doctor: I assume that every Fellow of the New York Academy of Medicine must regard it as a most unfortunate event that anything should occur to interrupt its fraternal harmony, its useful work, and its progressive growth. While we cannot shut our eyes to the fact that this is the present condition of the Academy, it would be both useless and unwise to discuss the causes which have brought about this state of things, because, from their nature, they involve questions on which the most able, the most loyal, and the most conscientious men in the profession honestly differ. Let us accept this fact as inevitable, and that the Academy can do nothing which will effectively advance the interests of the profession by way of discussions, which irritate, but do not change convictions, or by arbitrary regulations, secured by shrewd tactics, but which carry no moral force. The Academy of Medicine is not fulfilling its mission when it is engaged in warm discussions of questions of casuistry, in polemical controversies, or in medical politics. The *Ephemeris* of Dr. Squibb quotes with approval an editorial from the *Boston Medical and Surgical Journal*, which contains the following sentence: "The lesson also is so obvious that he who runs may read, that the more our Societies confine themselves to their proper field—the joint cultivation of medical science and good-fellowship—and the less they meddle with medical politics, the better will it be for their own future and the common good of the profession." It seems to me that the truth of the above sentiment has been unfortunately, but clearly, demonstrated by our Academy of Medicine. The question which we have now to meet is: What measures can be taken to secure for the Academy a return of its prosperity? by which I mean a restoration of its fraternal harmony and good-fellowship; a renewal of its active scientific work; an increase of its funds for the growth of its library and the adequate support of its journal department. Since our last meeting this question must have occupied the minds of all our Fellows, who appreciate the importance of the Academy, which should represent the highest scientific work of the profession of this city. All must feel that the character of the profession and the grade of individual reputation is deeply involved in a wise settlement of this question. I trust that no one will suspect me of a wish to force my individual views upon the Academy, but that, in consideration of the experience which I have had in its affairs, each will understand the spirit in which I venture to offer a few suggestions to be discussed, amended, or improved at our first meeting in October. I do not feel it necessary to apologize for expressing the hope and the belief that every Fellow of the Academy who feels a proper sense of his personal responsibility, and what he owes to the profession and the public, will be present, and contribute by his voice or his vote to a satisfactory adjustment of our present difficulties. It must be obvious to all, that to attain this end we must make a new departure on certain questions, to which it is unnecessary to refer more definitely. There is an "irrepressible conflict" of views and opinions which cannot be settled by parliamentary tactics or a majority of votes, but must continue until in the progress of time the moral sentiment of the profession is crystallized in a public opinion which will have the force of law. No possible good can come from profitless and irritating discussions of these questions in the Academy of Medicine. It therefore seems to me of vital importance that now, in making a new departure, everything in relation to them should be buried in the past and forgotten. No unhappy dif-

ferences can be settled, no principle or cause can be advanced, no society or individual can be benefited by keeping up a galling wakefulness and feeding the living ulcer of a corroding memory of the past. The anodyne draught of oblivion is the first specific remedy for healing such ills as those under which the Academy is now suffering. The next point to be secured is such a change in our organic laws as to make it impossible that trouble and danger can ever again occur in the Academy. At our first meeting in October, certain amendments to the constitution and by-laws will be proposed for discussion, and at the following meeting they will be submitted to the vote of the Academy. Every change proposed has been the result of a most careful study of the subject, and has a distinct purpose which will be obvious to all. I think that it will be apparent that the whole intent of the proposed amendments is to make the Academy of Medicine a purely scientific society, independent of all other organizations; to place its standard of ethics on a higher plane than before; and to prevent the possibility of any future troubles by the introduction of matters foreign to its avowed objects. Respectfully submitting the above suggestions to your candid consideration, I remain, very sincerely yours, FORDYCE BARKER.

THE OTHER SIDE OF THE QUESTION, AS PRESENTED BY THE COUNCIL FOR UPHOLDING THE NATIONAL CODE.—Dear Doctor: The Council of the Organization for Upholding the National Code of Medical Ethics in the State of New York, begs to call your attention to a circular recently issued in which are proposed certain amendments to the constitution and by-laws of the New York Academy of Medicine. The Council cannot but regret the issuing of this circular as a covert movement, under a plea for harmony, in behalf of the organized effort in opposition to the National Code of Ethics. The proposed amendments, were they adopted, would eliminate from the constitution and by-laws everything relating to ethics, and surrender the Academy to those who advocate the abolition of all ethical codes. The Academy would thereby be deprived of the right of representation in the American Medical Association, and of affiliation with other medical organizations out of the State of New York. It may be assumed that there is no disposition on the part of those who are for upholding the National Code of Ethics to raise any discussion respecting the Code in the Academy. The Code has never been made a subject of discussion in the Academy by any one in favor of upholding it, and there is no ground for the supposition that it ever will be, unless it becomes necessary in the way of defence. The resolutions presented and adopted at the last meeting of the Academy had for their object the prevention of any future discussion relating to the Code. Every true friend of the Academy is earnestly requested to attend its meetings in order to resist the introduction of discussions and controversies in relation to ethics, by simply maintaining, in their integrity, the time-honored constitution and by-laws of this institution, to which it owes its origin and prosperity. Abram DuBois, Austin Flint, Austin Flint, Jr., J. W. S. Gouley, John H. Hinton, Samuel T. Hubbard, Wm. T. Lusk, Samuel S. Purple, T. Gaillard Thomas, *Council*.

DIABETES AND THE BROMIDE OF POTASSIUM.—French therapeutists are still debating the question of the value of bromide of potassium in diabetes. According to a recent communication to the Académie de Médecine, bromide of potassium forms a good adjuvant in certain cases, but as it has a very depressive effect on the system it should only be used concurrently with other remedies which would raise the tone of the constitution. M. Bouchardat agreed with this view. He believed that the salt in question was useful in certain cases, but should be used with prudence. He thought that preference should be given to *régime* and gymnastic exercises. M. Lanier said that in the cases of children and the aged bromide of potassium should not be used. M.

Hardy could not adopt the views of his colleague; he obtained very good results from the bromide in diabetes. He gave it in the dose of a drachm daily, and instead of the strength of the patient diminishing under its influence, it increased. The opinion of your correspondent, who has had the opportunity of using it in this malady, is that it certainly is of great use, as it effectually calms the great agitation of the patient, especially at night, when the great thirst prevents sleep.

TYPHOID FEVER AND ETHER.—A French physician has published five cases of typhoid fever treated by subcutaneous injections of ether, which he considers as the best mode of administering stimulants in the adynamic forms of the disease. Two injections, of twenty drops each time, were made daily, and under its influence the patient was aroused and delirium ceased. In pneumonia, these injections are of the greatest utility, as they are in every malady assuming a typhoid form.

A THERAPEUTIC SUMMARY.—The following notes by Dr. Ad. Vomáčka, of Leitmeritz, give, in a very condensed form, some of the suggestions and additions which have been made of late to therapeutical literature:

Typhoid fever.—Tinct. iodin., 0.5; glycerin., acid. carbolic., āā gtt. 5; tinct. iatanh., 10.0. Give 5 to 10 drops every one or two hours, in tea or coffee.

Alcoholism.—At the beginning give hypodermic injections of sulphate of strychnine, 0.005 per dose. Internally give several times daily 4.0 to 8.0 of tincture strychni. As a prophylactic put a small amount of strychnine in the whiskey.

Anorexia.—Give pepsin, with potassium phosphate.

Asthma.—Potassium iodid., 20.0; vini, 180.0; syr. aurant., 20.0. Sig.—one-half teaspoonful three times a day. After some days increase to one teaspoonful; continue for two or three weeks, then gradually decrease.

Ascariides in children.—Sem. cucurbitæ decoct., 30.0; aquæ aur. fl., 3.0; mel. dp., 30.0. Give twice in the morning, then a dose, 15.0, of castor-oil.

Condyloma of the penis.—Wash with salt water, then powder with calomel; corrosive sublimate forms in small amounts, causing the condyloma to decrease.

Diabetes mellitus.—Solution of bromide of arsenic is to be given in doses of one drop in a glassful of water. This dose is gradually increased to three drops three times a day, always in the same amount of water. The urine is to be constantly examined. When the amount of sugar is decreased, as usually happens in about fourteen days, then decrease the arsenic to one-drop dose again. This can be kept up for years. Extreme attention need not be paid to the diet, but ordinary care as regards acids, starchy and sweet food should be taken. The greatest enemy of the diabetic is bad air, the air of chambers. Fresh air is most essential.

Chronic diarrhœa.—Zinci oxid., 3.5; sodæ bicarb., 0.5. Divide in four powders, and give one every three hours.

Diphtheria.—Potassium iodid., potassium chlorat., āā 4.0; aquæ, 100.0. Give one teaspoonful every half hour to children under five years of age, two teaspoonfuls to children under ten years of age.

Dysentery.—Decoct. quiniæ, 200.0; potass. chlorat., 4.0. Use in twenty-four hours.

Epilepsy.—Sodii bromid., ammon. bromid., āā 10.0; aquæ, 300.0. Give four to eight tablespoonfuls per dose in infusion of valerian. As supplementary give extract belladonnæ, zinci oxid., āā 1.0. Div. in pil. No. 40. Give about four pills daily. Keep the bowels open.

Gonorrhœa.—Injections of chloral hydrat., 3 to 250 of water, twice daily. Internally, potassium chlorate, 3.0 per dose.

Whooping-cough.—Olei terebinth., 10.0; syr. althææ, 80.0. One teaspoonful every three hours. Children between one and a half and four years of age may be given five to eight drops of tincture of eucalyptus in sugar-water, every three hours, or tinct. eucalyptus, 3.0; glycerin, syr. simpl., āā 15.0; aquæ, 100.0. One teaspoon-

ful every three hours. Cure may be expected in three or four weeks.

Phthisis.—Give twice daily, by an inhalation apparatus, twenty drops of a mixture equal parts creasote and chloroform dropped upon a sponge. Internally iron (?), quinine, hypophosphites, and cod-liver oil.

Insomnia.—Cannabium tannicum.

Syphilis.—As a substitute for mercury : 0.3 bichromate of potassium in 600 parts of carbonic acid water.

Chronic rheumatism.—Pulv. capsici annui, 8.0 ; adipis, 30.0. Rub upon the affected part for ten minutes with the gloved hand.

Warts.—Burning with sodium æthyl. Hemorrhoids, bleeding, iodoform suppositories, 1 to 20. Fifteen suppositories ought to be sufficient.

Vomiting of pregnancy.—I. Potas. bicarb., 5.0 ; potass. bromid., 20.0 ; aquæ, 60.0.—II. Acid. citric., 4.0 ; syrup., 4.0 ; aquæ, 120.0.—A teaspoonful of I., and a tablespoonful of II. mixed, and drink effervescing every half hour.

REMARKABLE FECUNDITY.—Dr. F. P. Atkinson writes to the *British Medical Journal* as follows : "I have just come across a somewhat remarkable, well-authenticated instance of fecundity. The lady, who was of good position, married at sixteen years of age and died at sixty-four. She had thirty-nine children (all by the same husband, whom she survived) thirty-two daughters and seven sons, and they were all single births except two, which were twins. An interesting point is that all the children lived to attain their majority."

FUMIGANT MIXTURE AGAINST MOSQUITOES.—Munch, in *L'Union Médicale*, vouches for the efficacy of the following :

R. Pulv. potas. nitrat. 30 grammes.
Acid. carbolic 20 "
Pulv. insecticide (Persian) . . . 125 "
Pulv. carbon. lig. 250 "
Gum tragacanth q. s.

FRENCH HOSPITALS.—A recent inquiry made by the Bureau of Public Assistance shows that there are at the present time in France 1,563 hospitals and asylums of all kinds, giving a proportion of one establishment for every 24,000 inhabitants. The officials and *personnel* of all these amount to 28,676 persons, viz., 2,787 physicians and surgeons, 3,050 dressers and hospital attendants, 11,286 on the religious staff, and 11,553 servants. The number of beds in the 1,563 establishments is 164,955, of which 71,192 are at the service of the sick, 54,245 for incurables and infirm patients, 16,050 for children, while 23,459 are reserved for those engaged on the nursing staff. With regard to ordinary cases, the number of patients admitted amounts to about 360,000 every year, with an average of 40,000 for special treatment. In general the proportion of admissions into the hospitals are 90 to every 10,000 inhabitants.

HOSPITAL ACCOMMODATION ON THE CONTINENT.—An article in the *Journal de Statistique Suisse* gives the following figures respecting the number of beds in proportion to the inhabitants in some of the countries of Europe, from which it appears that Switzerland is the best furnished with accommodation in this respect. The statistics are as follows :

Country.	Population.	Number of beds.	Number of inhabitants per bed.
Switzerland	2,846,102	17,757	160
Wurtemberg	1,881,505	8,814	213
France	37,672,048	140,000	269
Hesse	884,218	1,975	448
Austria	21,747,069	38,251	569

Lunatic asylums or hospitals for the insane are not comprised in these figures. Switzerland contains fourteen of these establishments, which between 1877 and 1881 re-

ceived 7,700 patients, of whom 4,044 were men and 3,656 were women, an average of about 1,540 new patients per year. Of this number the mental condition of 21.31 per cent. of the men and 2.81 of the women could be directly traced to the abuse of alcohol.

A RARE FORM OF IMPERFORATE ANUS.—Dr. Hattie A. Galentin, of Cleveland, O., communicates the following : "In THE MEDICAL RECORD of July 28, 1883, is epitomized a case of imperforate anus very similar to one which occurred in my own practice a few months since. When first brought to my office on March 28, 1883, the child, a female, was five months old, large, and apparently healthy. The mother stated that its bowels had not moved for nearly two weeks. I prescribed hydrargyrum cum creta, to be followed by a large dose of castor-oil. Two days later, no evacuation having occurred, a soapsuds injection was ordered. The mother declaring it impossible to pass the smallest nozzle of a Davidson's syringe, I examined, and found the perineum a perfectly plain surface, the point where the anus should be marked only by the usual pigmentation. Halfway between this point and the posterior commissure, in the median line, was a fistulous opening one-eighth inch in diameter. The mother said the child's bowels had always been regular till two weeks before. I introduced a small French soft catheter and injected through it sufficient water to liquefy a large quantity of fecal matter, which was discharged through the fistula, to the evident relief of the child, who had been making vigorous, though unsuccessful efforts to empty the bowel. Four days later I operated, having in the meantime used several injections through the catheter, and thus emptied the bowel of a large accumulation. The fistula was an inch in length and nearly straight. A probe, bent at a right angle, when passed through it, presented at the point where the anus should have been, and could be distinctly felt through the thick skin closing the bowel. I cut down upon the probe point, passed a director through the fistula and out of the opening just made, and cut through the tissues as in an ordinary case of complete fistula, completely dividing the sphincter. The bleeding, which was profuse, was controlled by ferri persulph., the bowel washed out with carbolized water, and two laminaria tents left in the wound. Six hours later, the laminaria tents refusing to stay in place, tupelo tents were substituted and gave perfect satisfaction. After two days dilatation the wound was permitted to heal. The operation was followed by no fever, no inflammation, no disturbance of any kind, and *no incontinence*. The fistula healed nicely, the artificial anus proved ample, and no trouble has since been experienced. The remarkable point in this case is that until the child was four and one-half months old, the malformation gave rise to no inconvenience ; indeed, it was not known to exist, the parents regarding the mouth of the fistula as a very small anus 'in the wrong place.' And that so small a fistula should have proved adequate for so long a time is truly surprising. Only when the child began to take solid food did symptoms appear. The fistula must have been completely formed during foetal life, as meconium was passed soon after birth."

NEW USES FOR THE THERMOMETER.—Dr. J. T. Welch, of Keyport, N. J., writes : "Being called to prescribe for a patient living in the hills above Keyport, who had long been afflicted with epilepsy, and whose mind was now somewhat impaired, I noticed a remarkable pallor of countenance and that the surface of the body was very cold to the touch, so produced a clinical thermometer to ascertain the temperature. The young man evidently looked upon it as a part of the treatment, and further impressed by the admiring awe of his relatives, closed his lips upon it with as pious a care as though it had been Tyndall's prayer-gauge, and speedily seemed oblivious of all earthly things. So rapt was he that when I went to withdraw the thermometer he gave a

start like one rudely assailed. 'How did it affect you?' queried I. 'Very well indeed,' he replied; 'I think it has made me feel much better.' And then, raising his hand with an air of benediction, he added, 'It had such a quieting influence.' An hour afterward I visited a young domestic in another family, who was convalescing from a mild attack of typhoid fever, where the temperature had ranged from 100° to 102° for several days. While here I related the above incident to her employers, who laughed heartily, but the girl, with a look of scornful superiority, cried out, 'Pooh! he mustn't ever have seen one before! why, I have had two at a time in my mouth, and thought nothing of it.' 'Why was that?' asked I. 'When I was on Randall's Island.' 'Yes, but why? what were two used for?' 'Because—because,' blurted she in confusion, 'my fever was so high they couldn't tell it all on one!'

THE DISEASE OF THE MONEY COUNTERS.—A Washington correspondent visiting the Treasury Department, noticed that many of the women employed in counting bank-notes looked ill and had sores upon their hands or heads. The superintendent gave the following account of the trouble: "Very few," he said, "who spend any considerable time in counting money escape the sores. They generally appear first on their hands, but frequently they break out on the head, and sometimes the eyes are affected. We can do nothing to prevent this. All of the ladies take the greatest care of themselves in their work, but sooner or later they are afflicted with sores. The direct cause of the sores is the arsenic employed in the manufacture of the money. If the skin is the least abraded, and the arsenic gets under the flesh, a sore will appear the next morning. The habit that every one has of putting the hand to the head and face is the way the arsenic-poisoning is carried to those portions of the body. See here," said Mr. Rodgers, stopping by the side of a young lady, and picking up a glass vessel containing a sponge, "this sponge is wet, and is used to moisten the fingers while counting the money. You see how black it is. That's arsenic. Every morning a new piece of sponge is placed on the desk of each employe, but before the day is over it is as black as this. I have known half a dozen cases where ladies have been compelled to resign their positions. There are three ladies who were here six years before they were afflicted with sores. About three months ago they were so visited by them that they had to quit work. They have been away ever since, and the physician's certificate in each case says that their blood is poisoned with arsenic."

"FOR THE ARREST OF NASAL HEMORRHAGE," writes Dr. Lewis, in the *Polyclinic*, "I know of no device so good as one that may be readily extemporized with a strong piece of cord and some small pieces of sponge. The cord is tied securely to a piece of sponge, cut rounded, and just large enough to be forced backward through the nostril. Then a number of similar pieces of sponge, with a hole through the centre of each, are threaded successively on the cord. The sponge on the end of the cord is then pushed, with a probe or dressing forceps, through the nostril, quite back to the faucial orifice; and the rest of the threaded pieces of sponge are slid back, one at a time, until the nares is tightly filled. When the patient becomes secure against a repetition of hemorrhage the plugging is readily removed, one piece of sponge being withdrawn at a time, with the dressing forceps. The posterior nares may also be easily plugged by introducing either a slender gum bougie or a piece of thick catgut string, with a cord attached, through the nares, catching one end of it in the fauces with forceps, and drawing it forward through the mouth. To the cord which follows a piece of sponge or pledget of lint is tied, to be drawn up into the posterior nares. A method of making unobnoxious and painless pressure within the nares, in cases of obstinate epistaxis, is by a piece of the intestine of a chicken or other small animal, about twelve inches long,

partially filled with either air or water. One end of the intestine is, while empty and collapsed, pushed backward through the nares; when thus lodged the air or water in the other end is forced, by compression with the hand from the pendulous portion, into the part lodged in the nares. Strong, equable compression can thus be made, rendering hemorrhage impossible."

MARRIAGE AND MORTALITY.—Dr. William Pratt writes concerning this subject: "Take the male sex, and it is seen that from twenty-five to thirty years of age, 1,000 married men furnish 6 deaths; 1,000 bachelors furnish 10 deaths; 1,000 widowers furnish 22 deaths. The figures, however, become very unfavorable if the marriage be contracted before twenty. Out of 8,000 young men married before twenty, their mortality has been found to be, before marriage, only 7 per 1,000; after marriage, 50 per 1,000. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have with perfect justice marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and the happiest life; the best for the individual and for the community."

MULTIPLE SARCOMATA.—Our Cincinnati correspondent writes: "In the City Hospital, under the care of Dr. Rathaker, is a case remarkable for the number of sarcomatous tumors or nodules present. Five hundred and sixty-eight nodules have been counted that project above the surrounding surface. The nodules vary in size from a pea to a walnut. The patient is a white man, native of this city, fifty years of age. He is not emaciated, and has no great amount of pain. Some of the tumors are somewhat painful when handled. Some of them are pigmented, but the great majority are uncolored, a very few are ulcerated. The man also has a large sarcocele. The patient last winter had a nœvus (at least that was the diagnosis then) removed from his back, since which time these nodules have made their appearance. The patient has no general pigmentation of surface. Dr. Rathaker intends to publish a full report of the case." Another remarkable case was reported last year by Dr. Wm. H. Talls, of this city. It was a case of general melanosis, originating from, or preceded by a melanotic sarcoma. The patient before his death became very dark, or black, not only the skin, but the brain, internal organs, etc., being deeply pigmented.

DR. GEO. HAMILTON TO DR. CARROLL.—Dr. Geo. Hamilton, of Philadelphia Pa., writes: "I was not a little surprised and mortified on reading in your last issue the note of Dr. Alfred L. Carroll, objecting to the manner in which I had replied to his critique upon my views in regard to the subject of sewer-gas, contaminated water, etc., in the production of typhoid fever and, incidentally, diphtheria and scarlet fever, as expressed in a lecture before the College of Physicians of this city. On referring at once to the paragraph to which Dr. Carroll has called my attention, I was mortified to find that his imputation was well founded. In the second column of his paper, in *THE RECORD* of June 9th, one-third from the top, occur these words: "Very few physicians in this country have cared to learn," whilst in my paper *the*, instead of this, appears, and thus changes the meaning of the sentence entirely. A too hasty habit in reading and writing can alone account for this error, and I regret that the absence of Dr. C. from the country did not admit of an earlier correction. It is possible that a few words, more or less, may have been used in a quotation, if so, they have escaped my observation."

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FURTHER INVESTIGATIONS INTO THE NATURE OF EQUINE SCARLATINA,

AND THE USE OF EQUINE VIRUS AS A PROTECTIVE AGENT.

By J. W. STICKLER, M.D.,
ORANGE, N. J.

SINCE May 1, 1883, I have inoculated with human scarlatinal virus two colts and one calf, with the following results: First colt, about one year old, in good condition; not having a discharge from either nostril; visible mucous membranes normal in appearance; rectal temperature before inoculation $101\frac{1}{4}^{\circ}$ F.; after throwing the animal I injected into its right jugular vein about thirty drops of the fluid portion of some blood abstracted from a patient having scarlatina simplex. I also introduced under the skin of the thorax a blood-clot from the same patient, and caused the colt to swallow about two drachms of pharyngeal mucus. The temperature gradually rose till it reached $102\frac{1}{2}^{\circ}$ F. (May 12th). Other than the elevation of temperature there was nothing abnormal noticeable; but during the night of May 12th the colt lacerated the skin, just inside the elbow, and at 11.30 A.M., May 13th, the temperature was $102\frac{3}{4}^{\circ}$ F.; May 14th, 8 A.M., temperature $103\frac{1}{2}^{\circ}$ F. The temperature then began to fall and reached $101\frac{1}{4}^{\circ}$ F., May 16th, 3 P.M. The inter-maxillary glands were somewhat enlarged and sensitive; the mucous membrane of nose and eyes injected, and from the nostrils there was a discharge ofropy mucus. Thinking that the inflammation resulting from the injury might possibly have masked some of the symptoms due to the action of the virus, I again injected (May 19th) into the jugular vein some pharyngeal mucus from two well-marked cases of scarlatina (both children). The only effect seemed to be an increased redness of the mucous membranes of the nose and mouth, *i.e.*, an intensifying of the redness which was developed after the first inoculation. There was a slight sore throat, which disappeared with the fading of the redness of the mucous membranes. The symptoms enumerated had almost entirely disappeared by May 24th. There was no subsequent oedema of the extremities or sheath, neither was there any desquamation of the cuticle or mucous membranes that I could discover. The rectal temperature of the calf before inoculation was $101\frac{1}{2}^{\circ}$ F.; the condition of the animal was in every particular good. Human scarlatinal blood was injected into the general circulation, and under the skin of the abdomen. After a few hours had elapsed the skin at and near the point of inoculation became uniformly reddened and somewhat sensitive to pressure. There was no systemic disturbance, save a very slight elevation of temperature. The redness and sensitiveness of the skin increased till May 24th, when I discovered pus at about the centre of the area of redness. The temperature at that time was $102\frac{1}{2}^{\circ}$ F. The mucous membranes were not affected; no enlargement of the lymphatics; recovery was complete by June 1st. Second colt, one year old. Her temperature for four successive days before inoculation was as follows: June 18th, $101\frac{3}{4}^{\circ}$ F.; June 19th, $101\frac{3}{4}^{\circ}$ F.; June 20th, $101\frac{3}{4}^{\circ}$ F.; June 21st, $101\frac{3}{4}^{\circ}$ F. The colt was perfectly well, so far as could be determined by a careful

examination. June 28th, enveloped her head in a bag, containing a chemise worn by a scarlet-fever patient. This I allowed to remain adjusted about seventy-two hours; July 2d, injected into left jugular vein, and into vein of leg some human scarlatinal blood; July 9th, introduced under skin of abdomen some epidermal scales from a scarlet-fever patient. Within forty-eight hours after the first inoculation (July 2d) the temperature began to rise, the colt became less active, showing a disposition to keep quiet. On the sixth day she began to cough slightly at intervals, and although the appetite was good, there was difficulty in swallowing. The visible mucous membranes were quite red, and at certain points they had somewhat the appearance of the mucous membrane of the pharynx in man when affected by scarlet fever. The inter-maxillary glands were enlarged and sensitive, and when the throat was pressed upon, the colt evinced uneasiness. There was a discharge of tenacious mucus from the nostrils. An examination of the interior of the pharynx revealed an unusual redness.

During the time the throat was sore and the mucous membranes affected, the temperature ranged between $101\frac{3}{4}^{\circ}$ F. and 103° F. In this case there was a desquamation of the skin at a few points where I had not previously seen any eruption. There was no swelling of the extremities or any symptoms of renal complications. Dr. Fenner, a veterinary surgeon of long experience, saw the first colt when she presented the symptoms already given, and he pronounced it a case of scarlatina similar to mild cases he had seen in his own practice. Dr. Hawk also saw her at about the same time, but was less positive in relation to the significance of the symptoms. He stated that he had seen many cases of what he regarded as true equine scarlatina. Drs. Lyon and Corliss saw the second colt. Dr. Lyon said it was a case of equine scarlatina, the symptoms being due to the action of the human virus which had been introduced into the blood. He believes in the existence of the disease (scarlatina) in the horse, and gives me the following history of a case he treated not long since: He was called on Monday to see a gelding, eight years of age, having enlarged submaxillary glands, sore throat, and elevation of temperature. On Tuesday the hair and skin of face, neck, and shoulders were found to be elevated at intervals, forming papules which could be felt with the fingers. The soreness of the throat was more intense on Tuesday, and a bright scarlet eruption was seen upon the mucous membrane of the septum nasi. During Wednesday the rash disappeared and the soreness of the throat became less troublesome. There was a discharge of mucopurulent matter from the nose. The temperature ranged between 103° F. and 106° F., and the pulse between 60 and 70. After the eruption had entirely receded, the skin began to desquamate, and it was with difficulty that the groom could cleanse the animal so as to make him presentable. There was developed afterward dropsical swellings of the sheath and extremities. Dr. Corliss, who saw the last colt, was somewhat doubtful about the condition, thinking that it might not be a specific lesion: he had never in his own practice treated what he felt confident was equine scarlatina.

I have also inoculated several children during the last summer, all of whom had been, and were at the time of inoculation exposed to the influence of air contaminated by the breath and exhalations of a scarlatinal patient. In the following instance the child had been in constant

companionship with her sister, who had scarlet fever, for five days, sleeping with her at night. I inoculated the healthy child in the arm, and notwithstanding she was not isolated, but allowed to remain in the same room with her sick sister, she did not develop the disease. In the next four cases the source of contagion was a child aged about five years, who was allowed to remain in a room in which her three brothers and sister were continually playing. I inoculated the four children at the same time, after which they were allowed to remain exposed to the contagion. Within the first twenty-four hours the two oldest developed scarlet fever, and within the next twenty-four hours the remaining two contracted the disease. On April 18th I inoculated two brothers, aged respectively seven and three and one-half years; they had been exposed several days, but neither one contracted the disease.

In both these cases there was considerable inflammation about the point of puncture, and in one quite free suppuration supervened. The next four cases were inoculated after an exposure of two or three days. The youngest child, about ten days after vaccination, began to show signs of a general systemic disturbance, *i.e.*, vomiting, impaired appetite, restlessness, and slight fever. In a few hours an eruption, characteristic of scarlatina, developed, beginning at point of inoculation and spreading uniformly over the body and extremities. There was neither sore throat nor headache in this case, and no albuminuria afterward. The next two had an eruption upon the neck, trunk, and extremities, but no vomiting or sore throat, and but very slight rise of temperature. The skin in each case desquamated in small scales after the disappearance of the eruption. Not one of the cases was confined to bed from the time of inoculation till complete restoration to health. The fourth child escaped without any disturbance, except that due to the action of the virus (locally). The last two children I inoculated had been playing in the same room with a sister who had scarlatina anginosa. The duration of exposure had probably been about three days. Five hours after being vaccinated one of the girls developed scarlatina simplex, and at the expiration of about five days the second child contracted the disease. Both these cases were followed by albuminuria, although they made a good recovery. Having carefully considered these results I am inclined to form one of two opinions, namely, that the virus used did not have any protective power, or that in the unsuccessful cases the failures were due to a pre-existing state of impregnation of the system with the human scarlatinal poison. Some of the first cases I inoculated (already reported) have been exposed to scarlet fever through the influence of air more or less charged with the specific infecting principle, and yet they have escaped the disease. It is no doubt true that some persons have but a slight predisposition, and the absence of the disease in some of the instances might be explained on that basis. I have also learned that human scarlatinal blood, even when taken from a patient having quite a severe type of the disease, does not necessarily induce the disease, or cause death when injected under the skin of the rabbit or other lower animals, and I reason from this fact that the most satisfactory way to determine whether a person has been protected by inoculation against scarlet fever, is to expose the person to the influence of the poison as it operates through the media which are supposed generally to convey it from the affected to the healthy, *i.e.*, by means of the air, fine epidermal scales, etc. John C. Peters, M.D., has written a series of articles in the *Sanitarian*, concerning the literature of equine scarlatina, and a perusal of them will disclose the fact that the disease has been recognized and described by various veterinarians who are believed to be reliable in their statements.

George Armitage, D.V.S., describes two forms of the disease, scarlatina simplex and scarlatina anginosa. He states that the simple variety usually makes its appear-

ance after an attack of influenza, "so called," has existed some days, or it may appear in an animal hitherto apparently free from the disease named. It consists of a number of blotches affecting the skin of the body, face, neck, and legs, which give rise to scarcely any swelling but cause the hair to stand erect and staring. Those parts covered with loose, thin skin, and having little hair, have rounded pimples which may be distinctly felt as well as seen. The legs swell and cause stiffness in some instances, but they are not always affected. The nasal membrane is also studded with scarlet spots having no uniformity in size, but which shortly give rise to a thin, serous discharge, subsequently changing to a yellowish or brownish color; occasionally these spots are confined to one nostril, and may constitute the whole of the outward signs, neither eruption nor swelling of the limbs being present. Soreness of the throat is evident, which sometimes creates inconvenience by causing the animal to leave off feeding. The scarlet spots gradually fade, and disappear after a few days, and the skin eruption also declines, the cuticle peeling off in large quantities, because of which the coat becomes very scurfy. The second form (scarlatina anginosa) appears as an aggravated condition of the simple form. In it the limbs swell rapidly and pit under pressure. Circumscribed tumefactions occur, which are hot and tender; these may unite, forming larger swellings; others decline; while still others remain distinct, and at a later period become moist on the surface by reason of the discharge of a thin, yellowish fluid. Small swellings or pimples occupy the rest of the surface of the skin, similar to those of simple scarlet fever. The spots on the mucous membrane of the nose enlarge, and frequently run together, forming larger blotches, or the Schneiderian membrane may have a deep scarlet hue, sometimes merging into purple. The throat is involved greatly, noisy cough, with abundant discharge of mucus having various shades of red and yellow. Respiration is interfered with, the inspiration partaking of a roaring kind of sound, with snuffling through the nostril. Swelling takes place beneath the jaws, sometimes also under the shoulder and in other places. Symptomatic fever usually runs high in proportion to the amount of eruption and soreness of throat. Pulse weak, small, and compressible (60 to 100) in intense cases. Respiration rapid. Bowels constipated, although diarrhœa is rapidly induced. Urine deficient, thick, and offensive. In the most favorable cases the throat affection disappears side by side with the eruption on or about the fifth day.

FUNCTIONAL DISEASES OF THE HEART.

By E. P. HURD, M.D.,

NEWBURYPORT, MASS.

PART I.—PHYSIOLOGICAL.

CLAUDE BERNARD in some of his physiological works felicitously shows the fundamental similarity and unity of all living elements, whether pertaining to the highest or the lowest organisms. The primary conditions of living are the same in all: warmth, moisture, pabulum, oxygen. These must be supplied by their environment; aquatic animalcules obtain them in the liquid medium in which they live, and the essentially living elements of the higher animals dwell in and are constantly bathed by an "interior medium," the circulating blood, which is their real environment. The life of these anatomical units is in strict and absolute dependence on a constant renewal of this fluid, and the heart, of all the organs of the body, is the one whose function begins the earliest and lasts the longest. It begins its untiring work long before it is developed; its perseverance in toil is in the ratio of the importance of the mission which it fulfils; it is the *primum movens*, and the *ultimum moriens*.

"Whatever the complexities of the human organism," says Frederick Harrison, "there is throughout the whole the solidarity of a single unit."

The presence of a nervous system is no more an indispensable factor of this organic unity than is the presence of a circulatory system, and integrity of the central organ of circulation is necessary for the healthful performance of all function.

The demonstration of this proposition is the well-known effects of disease of this organ. Take as an example a well-marked case of aortic insufficiency (Corrigan's disease). Here, with every diastole of the heart, a portion of blood, thrown into the aorta during systole returns, and you have constantly the pulse of unfilled arteries; there is oligæmia in the capillary system. As a consequence the vital elements are everywhere ill nourished. The brain is anæmic and irritable, thought is sluggish, psychical action generally is perverted and deranged, innervation languishes. The powers of the digestive system are impaired; the alimentary canal is the seat of venous stasis in which the other abdominal viscera participate; frequent attacks of dyspnœa (dyspnœa which becomes more and more permanent) testify to the profound disturbance of the pulmonary function.

The reciprocal influence of the organic processes on the heart has been for ages a matter of observation, though it is only of late years that its mechanism has been known; if integrity of the heart be essential to the healthful performance of the systemic functions generally, integrity of the latter is equally essential to the normal working of the heart.

The slightest emotion causes some brief disturbance of that organ; a powerful emotion may temporarily or permanently suspend its action; the stimulus of volition may goad on the heart to efforts which end in exhaustion or in disease. Peripheral irritations—manifested to consciousness as pain—may raise the blood-pressure in the viscera, and visceral irritations may augment the heart's action, or inhibit it altogether.

Nothing can, in fact, be more interesting than this whole study of the reciprocal action of the organism on the heart. Hard thinking calls, as it were, more blood to the brain, and the heart does not fail to respond to the demand; severe muscular exertion drafts more blood to the muscles; the process of digestion requires more blood than is required during a quiescent state of the stomach; during gestation the heart of the pregnant woman is taxed to an extraordinary degree, etc.

If every powerful sensation may, as stated above, exalt or depress the heart's action, and if obscure visceral sensations may have the same effect, then it is obvious that the heart may be deranged, temporarily or permanently, by its environment, if the disturbing causes be too violent or too persistent. That the heart is something besides a mere force-pump or hydraulic machine; that it has a wonderful power of adapting itself to changes in its internal and external circumstances; that it is in the closest relations with the tissues which it nourishes—sharing in their well-being, suffering with their derangements—is explicable, as a physiological fact, by a consideration of the nervous mechanism of the circulatory organs.

The cardiac innervation comprehends certain intra-cardiac ganglia, extra cardiac ganglia, and nerves, derived from the sympathetic and cerebro-spinal system.

I. *Intra-cardiac ganglia.*—There are in the walls of the heart certain ganglia whose office is to promote and regulate the rhythmical working of the cardiac muscle. Not that the ability rhythmically to contract is not an inherent property of the myocardium to a certain extent, independent of the nervous system. It is nevertheless true, that in the performance of its ordinary function the heart is governed by nervous influence. Certain of these ganglia (ganglia of Remak) are placed at the point of entry of the nerves of the heart, the cardiac branches of the sympathetic and pneumogastric, whose terminal filaments are lost in these ganglia; they occupy the sinus of the vena cava. Other ganglia, those of Bidder and Ludwig, are situated in the auriculo-ventricular furrow. In these ganglia originate fibres, some of which, centrifugal, are distributed

to the muscular fasciculi; others, centripetal, terminate in the endocardium. These ganglia, with their centripetal and centrifugal nerves, constitute an excito-motor arc, and are to a certain extent independent nerve-centres.

II. *Extra-cardiac ganglia.*—If we are to understand by this term every nerve-centre which influences the heart, we should have to include the entire cerebro-spinal and sympathetic system; the cardiac centre, *par excellence*, however, is the medulla oblongata. When by means of powerful electric currents you excite the rachidian bulb between the tubercula quadrigemina and the calamus, you obtain an arrest of the heart, or a simple slowing of the movements of this organ, according to the intensity of the current employed.¹ If previously you cut the pneumogastric nerves, the excitation of the bulb at the point indicated produces an acceleration of the movements of the heart. It would seem, then, that the medulla oblongata may, according to circumstances, cause retardation or acceleration of the cardiac contractions; it is especially the centre of impressions, which reflexly affect the frequency and rhythm of the cardiac movements.²

It is inferred that the effect of increased blood-pressure in slowing the pulse when the vagi are intact is brought about through this augmented pressure stimulating the cardio-inhibitory centre in the medulla, and thus partially inhibiting the heart (M. Foster, "Physiology," p. 151). The inhibitory action of the pneumogastric on the intra-cardiac ganglia is not well understood. That this inhibition coexists with augmented innervation and augmented energy is indisputable. Through the influence of the pneumogastric a more complete and extensive *libero-motor* action is obtained in the intra-cardiac ganglia, which, thus energized, slowly but thoroughly evoke the consentaneous activity of all the constituent fasciculi of the myocardium. It is "a long pull, a strong pull, and a pull altogether."

Other extra-cardiac ganglia exist in the cervical portion of the spinal cord. These ganglia may be regarded as the centres of the accelerator nerves—the thoracic-spinal filaments, as well as those which emanate from the great sympathetic (the latter having its origin in the spinal cord). Von Bezold has proved that excitation of the spinal cord, especially in its upper portion, augments the energy of the heart and the arterial pressure. It is worthy of note that these centres (auxiliary cardiac ganglia) are in the closest relation with the vaso-motor centre, and that any excitation which raises arterial tension may be attended with accelerated cardiac action. Ludwig and Thiry have clearly proved this intimate relation.

III. *Accelerator and moderator nerves of the heart.*—There are certain nerves whose office is to quicken, others whose office is to moderate the action of the heart.

1. *The accelerator nerves* are intimately blended with the sympathetic system passing through and being associated with the lower cervical and the upper thoracic ganglia, but they are ultimately derivable from the cervical spinal cord. Irritation of the sympathetic or cervical spinal cord produces acceleration of the heart's pulsations through these nerves.³ Very strong faradic currents are needed for effecting this result; these nerves seem to be unaffected by the various poisons which act upon the vagus and other parts of the nervous system; they are effective in the midst of profound asphyxia.⁴ They are not considered as antagonistic to the pneumogastric, for if during maximum stimulation of the accelerator nerves the vagus be stimulated, even with minimum currents, inhibition is produced with the same readiness as if these were not acting. But little is known of the actual share which these nerves take in the natural actions of the economy.⁵

¹ Germain Sée: *Maladies du Cœur*, p. 420. Paris, 1882.

² Germain Sée: *Loc. cit.*, p. 421.

³ Foster's *Physiology*, p. 148. Germain Sée: *Maladies du Cœur*, p. 417.

⁴ M. Foster: *Loc. cit.*

⁵ Baxter: cited by Foster.

Indirectly, by reflex action, acceleration of the heart's movements is produced by excitation of the great splanchnic nerves, which causes contraction of the intra-abdominal vessels, increase of blood-pressure, and acceleration with augmentation of energy of the heart's action.

2. *The moderator nerves.*—It was a surprise to the world when Weber announced, forty years ago, the discovery that galvanization of the pneumogastric would arrest the heart's action. It was a greater surprise when the experiments of Weber, repeated by Budge, Waller, Brown-Séquard, and others, demonstrated that the heart, instead of being arrested in a state of spasm or contraction, was in a state of complete relaxation under the inhibition of a stimulus conveyed along the par vagum. A moderate excitation of the pneumogastric slows the heart's action, a violent excitation arrests it in diastole; but this excitation, if continued, is followed by acceleration of the cardiac movements from exhaustion of the pneumogastric. According to the experiments of Waller, the direct inhibitory fibres of the pneumogastric are derived from the spinal accessory.

If the pneumogastric is, *par excellence*, the moderator nerve of the heart, among its filaments is a sensory nerve, which is distributed to the heart, and which when irritated produces by reflex action dilatation of the splanchnic intra-abdominal vessels and lowering of the arterial pressure with slowing of the heart. This nerve is an inhibitory nerve, acting indirectly; it has a common origin with the pneumogastric in the medulla oblongata. Discovered by Ludwig and Cyon, it is called the depressor nerve of Cyon. Any excitation of the terminal endocardial filaments of this nerve is reflected from the medulla oblongata on the splanchnic nerves through the intermediation of the spinal cord, extreme dilatation of the abdominal vessels takes place under the influence of this excitation, and a large sluice-way is opened for a great mass of blood; there is thus a considerable depletion of the blood-vessels of other portions of the body, the peripheral resistance is reduced to a minimum, the heart's work is lessened, and the blood-pressure is lowered.¹

As auxiliary to the cardiac nervous mechanism above mentioned, we have the vaso-motor nerves of the entire economy. Acceleration or retardation of the movements of the heart may be obtained by influences affecting the vaso-motor nerves. If we may consider these nerves as consisting of vaso-constrictors and vaso-dilators, any irritation of a sensory nerve will cause vaso-constriction of a part, and this augments peripheral resistance, and the work of the heart, whose pulsations are characterized by greater frequency and energy. The influence of an impression on the vaso-motors sufficient to markedly raise the blood-pressure and quicken the heart is seen when the great splanchnic nerve is moderately excited by electricity, as this nerve contains the vaso-constrictors of the intra-abdominal vessels—an experiment which has been described by Vulpian, Foster, and all recent physiologists. On the contrary, section of the great splanchnic is attended with abdominal vaso-dilatation and a marked fall in general blood-pressure, with lessening in the force and frequency of the pulse.

Influence of the blood-vessels on the heart.—Any considerable modification in the peripheral circulation, due to vaso-constrictive action, is attended with acceleration and augmentation of the heart's action. Claude Bernard attempts an explanation of this fact in a remarkable lecture on the physiology of the heart and its relations with the brain, delivered in 1865, but, singularly, invokes only the well-known influence of the pneumogastric. Vulpian has studied the subject more profoundly.² "Suppose," he says, "that under the influence of severe pain, caused by a wound, or even by pinching the skin in some place, there is produced a

contraction of the greater part of the arterioles of the body, there will be augmentation of arterial tension, and the heart will have to struggle against this excess of tension. This organ will then be forced to put forth more energy to propel each ventricular wave into the aorta and arterial system. Not only will the cardiac contractions be more vigorous, they will become more rapid. Now it is clear that this reaction of the heart is not purely a mechanical effect. The modifications which characterize its movements are due to the putting in play of the apparatus of innervation of the heart. Under the influence of augmentation of the intra-arterial pressure, the blood contained in the ventricle undergoes, at the moment of systole and the opening of the sigmoid valves, an excess of tension. Hence results, without any doubt, a particular impression in the endocardial extremities of the centripetal nerves of the heart. This impression is carried to the rachidian bulb by the pneumogastric. There a phenomenon of central innervation takes place, as a result of which a centrifugal excitation, emanating from the medulla oblongata and the cervical region of the spinal cord, is conducted to the intra-cardiac ganglia by the cervical sympathetic cord and its ganglia. The fibres emanating from the cervical sympathetic cord and the superior cervical ganglia are probably those whose operation provokes a redoubling of energy of the movements of the heart. As for the acceleration of movements, this depends on excitation of the accelerator nerves which spring on each side from the third branch of the inferior cervical ganglia.

We see from this that the simple fact of contraction of the vessels has for necessary consequence, when the heart and its nervous apparatus are in the normal state, a very remarkable reflex modification of its movements.

If the peripheral vessels, arterioles and veinules dilate instead of contracting, phenomena just the reverse take place, the heart will contract more feebly and more slowly. The impression produced on the endocardium by the diminution of intra-arterial tension, will be necessarily very different from that which took place under the conditions which we have just examined.

Different phenomena of central innervation also are awakened in the rachidian bulb. This time the centrifugal excitation will put in activity the cardiac fibres of the pneumogastric. Under the influence of excitation of these fibres the movements of the heart will become weaker and slower.

The important point now to be noted is this: If the heart may be modified in its action by the condition of the arterioles and capillaries of a more or less circumscribed portion of the body, it may be deranged thereby temporarily, and even permanently. Functional derangements coexist with integrity of the heart-substance and the valves; but a persistence or intensification of the causes which give rise to functional troubles may produce organic disease. There is a morbid condition of the arterioles and capillaries known as arterio-capillary fibrosis, described by Gull and Sutton, Broadbent, Burdon-Sanderson, Mahomed, Lecorché, and others. According to Gull and Sutton's hypothesis, this pathological condition, when it affects the renal circulation, is the chief secondary etiological factor of chronic Bright's disease—the morbid alteration of the blood—which causes these vascular degenerative changes, being primary. The high arterial pressure which results from this sclerosed condition of the arteries eventually entails on the heart dilatation and hypertrophy; but long before this structural modification takes place, the heart, laboring to surmount the peripheral resistance, manifests by exaggerated action its increased burden. The irritation of the centripetal nerves of the endocardium by morbid blood is undoubtedly, in these cases of chronic interstitial nephritis an important factor in the production of the ensuing cardiac changes. It is none the less true, however, that the mechanical obstructions are enough of themselves seriously to tax and embarrass the heart, which if it fail

¹ Vulpian: *Appareil Vaso-Moteur*, t. i., p. 354.

² *Ibid.*, t. i., p. 366.

to meet the extra demands made upon it, will make known its incompetence by derangements of rhythm, passive dilatation, and asystolism.

Relation of work to the heart's action.—Severe exercise—physical and mental—increases the frequency and energy of the heart's pulsations. Augmentation of function necessitates a more abundant sanguineous irrigation. The working muscles or working brain demand more blood, and the heart is stimulated to increased activity. The mechanism is not easy of explanation. There are probably simultaneously going on vascular contraction and vascular dilatation, augmentation and diminution of pressure. Vaso-dilator action undoubtedly predominates in the parts under exercise, and though peripheral resistance is lowered, vascular tension is raised. This is practically the case, although theoretically it would seem as though it must be otherwise.¹ The pulse beats rapidly and with energy. A relatively quick pulse is quite compatible with a hard, strong pulse, and in experiments on animals it is generally noted that the movements of the heart are accelerated with augmentation of the intra-arterial pressure. It is also true that in the human subject a slow pulse and a strong, high-pressure pulse very often go together. The heart may meet its increased tasks by slow powerful beats, or by greater celerity of action, putting forth as much force in the one case as in the other.

The practical point to be now presented is this: If exercise compels the heart to do more work, severe exercise may enfeeble, and even exhaust the heart. This is the important physiological lesson for us now. There is no hard and fast line between that exaggerated action which accompanies overwork, and that exaggerated action known as palpitations.

The heart undoubtedly possesses extraordinary endurance and is popularly said never to rest. It may, however, be overtaxed and enfeebled, like any other muscle. This enfeeblement may manifest itself as want of muscular tone, which may result in dilatation, or in hyper-irritability of the intrinsic nervous ganglia of the heart, or its sensory nerves, the latter pathological condition finds expression in ataxia, arrhythmia, or intermittence, all resulting from exhausted cardiac innervation.

Modification of the heart's action by toxic agents.—We can experimentally produce accelerated action of the heart in animals by injecting certain poisons, as nicotine. After a moderate subcutaneous injection of nicotine there results a considerable acceleration of the pulse from paralysis of the inhibitory system.² We have actually produced palpitations, such as we see so often in smokers, from the depressing effect on the functions of the par vagum of tobacco. The toxic effect of nicotine is exerted on the bulb, whose reflex excitability it lessens and abolishes.

Similar effects on the heart and pulse may be produced by belladonna, or its alkaloid atropia, which is a veritable paralyzer of the pneumogastric.

Influence of emotion on the heart.—Enfeeblement and even paralysis of the inhibitory cardiac centres is witnessed under the influence of strong emotions. Everybody is familiar with the effect of fear in accelerating the heart's action. Intense sorrow or disappointment suspends the functional activity of the higher nerve-centres, and the heart in consequence lacks certain important stimuli to action. This organ, then, is hindered and inhibited in its action by the painful emotions; while the cheerful emotions raise the blood-pressure and energize the heart and circulation. These are facts of common experience.

It is scarcely possible at the present day to give a satisfactory explanation of the effects of the emotions on the heart and circulation. Fear and rage, for instance, cause powerful perturbation of the vaso-motor system, and make the heart beat quickly, wildly, and violently; and yet, as Darwin says,³ it does not pump the blood

more efficiently over the body, for the surface seems bloodless, and the muscular strength soon fails. At other times, the first depression is followed by vigorous reaction, in which the heart rebounds, as it were, like the horse which has felt the spur. The heart is, as Claude Bernard says, the most sensitive of the organs of the vegetative life, and undergoes some modification in response to every emotion.

The lesson which I wish now to convey is this: If the heart may be modified in its operations by strong emotion, it may be deranged thereby. Persistence of the cause will produce persistence of the effect, and functional perturbations engendered by grief, suspense, disappointment, etc., may, if the depressing emotion be long continued, become chronic. Here we have a possible explanation of many of those cases of chronic, so-called "essential" palpitations, when, for a series of years, there is inordinate frequency of the heart's pulsations without organic disease. Every disturbance of rhythm necessitates a new adjustment in correspondence with changed conditions, and equilibrium of any kind once established, tends toward permanence. The persistence of organic habits is, as Mr. Herbert Spencer would say, a corollary from the persistence of force.

Physiology thus furnishes important hints as to the possibility, the causes, and the modes of functional heart-troubles. The next paper will be occupied with Pathology.

LICHEN RUBER OF HEBRA AND LICHEN PLANUS OF WILSON.

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In this paper I will describe the symptoms, anatomy, prognosis, and treatment of lichen ruber of Hebra, and of lichen planus of Wilson, with the object of comparing, in these several respects, the two forms of eruption described under these terms, and of estimating the tenableness of the grounds for regarding them as inflammatory or exudative affections, and but different forms of the same disease.

All writers except Auspitz consider the papules in both cases to be inflammatory in origin, and all except Neumann regard them as but constituting different forms of the same disease.

I will describe lichen ruber first and lichen planus afterward.

Lichen ruber of Hebra.—The symptoms here given are principally those described by the Vienna dermatologists, as their opportunities for studying the disease have been so much greater than those of physicians of other countries. In America I have had the opportunity of observing only one case, that of a man under the care of Dr. McMaster, of New York City. From this person I removed several papules, and the drawings Nos. 1 and 2 were made from sections of some of these papules.

Symptoms.—At the commencement of the disease the eruption consists of isolated, slightly scaly, millet-sized papules which appear in two forms; in the one form they are disseminated, of a bright or brown-red color, very dense in consistence, conical in shape, and the apex covered with a firmly adherent, dry, white, scaly mass which gives a rough feel to the touch. In the other form they are also disseminated and of similar size as those of the preceding form, but are pale-red in color, of a waxy shining appearance, the surface is smooth, rounded, and has a small central depression. This central depression corresponds to the orifice of a hair-follicle. The eruption may appear upon any part of the body, but generally commences on the thorax or abdomen and afterward extends to the extremities, genital regions, and other parts of the body. The papules preserve their original dimensions during their entire

¹ See Vulpian's Explanation, loc. cit., t. i., p. 476.

² Germain Séé: Op. cit., p. 232.

³ Expression of the Emotions, etc., p. 76.

existence, never increasing in size by growth at the periphery, the extension of the eruption always depending upon the formation of new papules of similar size and appearance to the already existing ones. These new papules which are being continuously formed arise either in an irregular manner upon the skin or in a row-like arrangement around or between existing papules. From this constant formation of new papules the skin over a greater or less area becomes more and more occupied by the eruption, until finally the whole area is covered by them, and consequently neighboring papules come in contact. When this last condition is present the eruption appears as a connected, red, infiltrated patch, covered with scales, and having a dry, rough, uneven surface. At the periphery of such an area or patch, characteristic individual papules are always to be observed.

Instead of this irregular and diffuse manner of formation of subsequent papules, they sometimes arise in the form of several circles of closely seated papules around an already existing papule. Afterward the more centrally seated papules sink in, become absorbed, and finally disappear, generally leaving the skin pigmented and atrophied in spots. In this manner variously sized patches arise, the central part of which is pigmented and contains atrophic depressions, while the periphery is formed of one or more rows of wax-like shining, umbilicated papules. I take it for granted that the umbilication of these papules as here met with depends upon the retrograde process taking place in them, and is not a primary condition. The papules never undergo any changes except resolution from cessation of the formative process, or atrophy from degeneration of the elements forming the papule.

The irregular and diffuse form of extension of the eruption is much more frequent than the aggregated and circular, and is generally the only form present, but the other may also occur exclusively, or, as occasionally happens, both forms are observed on the same person; in which case the former is met with principally on the trunk, and the latter on the extremities.

No matter in which form the eruption spreads, or whether it is accompanied by atrophy and pigmentation or not, it finally, as a rule, extends so as to occupy the whole cutaneous surface, when all signs of papule formation disappear, and the skin appears everywhere reddened, thickened, furrowed, and covered with numerous thin, whitish scales. The skin of the face becomes dry, cracked, and scaly, the lower lids ectropic, the upper lids droop. The thickness of the skin is especially to be observed on the palms of the hands and on the soles of the feet, where the eruption does not appear as papules, but as great thickening of the corneous layer. The fingers and toes in consequence of this thickening stand out apart from each other, half bent, and show, besides redness and infiltration, deep fissures and rhagades. Muscular movement is interfered with, especially at the joints so that the patient can only with difficulty keep the extremities fully extended or flexed, and consequently seeks a position between these two conditions.

When the eruption is general over the whole surface the nails always become affected; they are greatly thickened from a deposit of nail-substance from the bed of the nail, are of a yellowish-brown color, very brittle, and have an uneven surface. If the deposit takes place from the matrix alone, then the nail consists only of a short, thin, brittle plate, which projects from the flesh.

The nutrition of the hairs at the seat of the eruption is always interfered with, the hair becomes thinner, falls out, and is replaced by lanugo hairs. The hair of the head, axillæ, and pubis, situations where it grows stronger, and is most deeply seated in the skin, resists the process longer than that of the rest of the body.

The eruption appears without prodromal symptoms, and the papules, if situated on the covered parts of the body, may have developed without the knowledge of the

individual affected. During the first stage, and also subsequently, there may be considerable itching present, but it bears no relation to the intensity of the eruption, and is much less than that accompanying many other skin affections. The general nutrition of the body is not interfered with until the eruption occupies a considerable area, when it suffers, and if the entire cutaneous surface is occupied by the disease the system becomes more and more affected, and after a few years the person passes into a marasmic condition from which he dies, unless he previously succumbs to complications depending upon this marasmic condition, as pneumonia, pleurisy, intestinal diseases, etc. This is the natural history of the disease, but under proper treatment the eruption may disappear without affecting the general constitution, or leaving traces of its previous existence upon the skin. When removed by treatment the disease is not liable to return. If it is not very extensive it may also disappear spontaneously.

Histology.—According to Hebra¹ no matter how red the skin appears before death it is found on post-mortem not to be thickened, but only pale, flabby, devoid of fat-tissue, and covered with a greater or less amount of scales. Under the microscope the hair-follicles are funnel-shaped with the apex of the funnel downward, and the papillæ and papillary vessels enlarged.

Neumann ("Lehrb. d. Hautkrankheiten," p. 308, Wien, 1880) found the corneous and rete layers increased in size, the interpapillary portions of the rete enlarged and showing growth downward into the corium. The papillæ were partly sunken and atrophied, and partly, especially at the periphery of the papule, enlarged, and contained broad-meshed elastic fibres. The blood-vessels were enlarged, and cell-infiltration, especially around the vessels, was observed. The sweat-glands, ducts, and orifices were dilated by epidermic cells. The cells of the external root-sheath of the hair were increased, and formed conical projections into the surrounding tissue like in acinous glands. The root of the hair had a brush-like form. The muscles of the skin were hypertrophied.

Biesiadecki ("Untersuchungen aus dem Path. Anat. Institute in Krakau," Wien, 1872) does not consider that the changes described by Neumann, as occurring in the sheath of the hair-follicles, are characteristic of the disease or a necessary part of the process, as he found normal follicles within the area of the papules. He found the papillæ at the periphery of the papule swollen, the corium oedematous, the rete enlarged, and the central part of the papule corresponding to an area of about eight papillæ, sunken in and atrophied, thus producing the central depression or umbilicated appearance already described. He thought the atrophied centre corresponded to the place of insertion of a muscle-bundle, a view not compatible with the follicular origin of the papules. He also found colloid degeneration of the walls of the papillary blood-vessels.

Kaposi ("Path. u. Therapie der Hautkrankheiten," Wien, 1880, p. 403) agrees with the previous observers, but does not regard any of the changes described as characteristic or sufficient to explain the gravity of the affection.

From the foregoing we find that Neumann, Biesiadecki, and Kaposi do not agree as to the significance of the abnormal changes observed by them. All agree that the papillary blood-vessels are dilated and that there is an increase in the thickness of the corneous layer. That the hypertrophy of the external sheath of the hair-follicle is not characteristic as shown by its absence in some cases within the area of a papule. They attribute the umbilication of the papules to an atrophic process affecting the rete and papillæ of the central part of the papule, that is, the depression is a secondary condition depending upon retrograde changes occurring in an acuminated papule. The dilated papillary blood-vessels, the enlarged papillæ, the perivascular cell infiltration are probably

¹ Lehrb. der Hautkrankheiten, I. rster Band, Zweite Lieferung, p. 391. 1874.

the grounds for each of them classifying the eruption as an inflammatory exudative affection.

Before entering into a discussion as to the inflammatory nature of the disease, or as to what processes or conditions should exist in order to justify us in classifying a cutaneous disease as inflammatory in nature, I will describe the changes observed in the skin in the papules removed from Dr. McMaster's patient. I will first describe the changes which occurred in a recent papule, and afterward in one of much longer duration.

Fig. 1 represents a section of a recent papule as seen with a low magnifying power.

The section includes normal skin at both ends and a transverse section of an entire papule. With a low magnifying power, as the section is here represented, the corneous layer is seen to be greatly increased in thickness in the situation corresponding to the seat of the papule, the thickness being greatest in the central portion and becoming gradually less as the periphery is approached. It is very undulating in appearance, the most depressed parts corresponding to the orifices of sweat-ducts or hair-follicles. The rete mucosum is slightly increased in thickness by growth upward toward the free surface, as shown by the uneven upper part of the papule portion, as compared with the normal rete at the ends. There is also a growth downward into the corium of the interpapillary parts of the rete. This growth in thickness of the rete mucosum is neither of marked extent nor general throughout the whole area of a papule, as in some places the rete is of normal thickness. The corium appears to be normal. The papillary blood-vessels are slightly dilated, and a few lymphoid corpuscles may be seen in their neighborhood. Some hair-follicles are hypertrophied and others normal, except at their orifice, which is wide and filled with corneous cells. The unstripped muscle-bundles are seen to be hypertrophied.

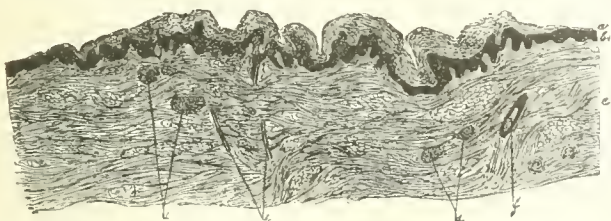


FIG. 1.—Vertical Section of a Recent Papule of Lichen Ruber. *a*, corneous layer; *b*, rete mucosum; *c*, corium; *d*, unstripped muscle-bundles cut transversely; *e*, sweat-ducts; *f*, hair-follicle. The section includes normal skin at the periphery.

Examined with a high power, the corneous layer is found to be greatly hypertrophied, from an increase in the number and size of the corneous elements. The individual elements also show an aberration from the normal process of corneous transformation, as many of the cells of the lower layers are incompletely transformed, as shown by the presence of nuclei, and their coloring with carmine. The nuclei present are either granular in appearance or like vesicles (*aufgeblacht*)—that is, large, round, transparent bodies. These incompletely changed cells are met with especially about the orifices of the sweat-ducts and hair-follicles. All the corneous cells are much larger than normal and more polygonal in shape, especially in the lower strata. The rete mucosum appears slightly hypertrophied throughout the greater part of its extent, but in some places is of normal thickness.

There is a slight growth downward of the interpapillary portion of the rete, and a more marked growth upward from the super-papillary part, giving to the upper part of this layer an uneven surface. The rete cells are of normal size and appearance, and seem to be merely increased in number. The granular and stratum lucidum layers are not as distinct as usual, but this may depend upon the locality from which the section was taken, as they were not prominent in the healthy tissue. The papillæ are increased in size from the growth of the rete

downward; their blood-vessels are somewhat dilated, and a few emigrated corpuscles are present immediately outside the vessels. There is no appreciable œdema of the connective-tissue from inflammatory exudation. The corium is normal, except some of the blood-vessels are slightly dilated and a few emigrated corpuscles are present. The sweat-glands are normal, except the duct in the corneous layer, the walls of which are formed by large cells, some of which have vesicular nuclei. The hair-follicles are unaffected, except at the orifice, where there is a large collection of corneous cells. The muscle-bundles are hypertrophied to a marked extent.

Summing up the changes observed in the recent papule, we find the principal one to be in the corneous layer. Here there is a great increase in thickness from increase in the number and size of the component elements—not a true hyperplasia, but an increase from a para-typical process, producing a thickening of this layer. This thickness is also especially present at the orifices of the sweat-ducts and hair-follicles. The changes in the rete and in the corium are slight in amount, and there is an entire absence of any actual exudation, emigration, or change to an embryonic condition of the fixed elements of the corium, conditions indicating an inflammatory process.

In papules which have existed for a considerable length of time there is a continuation of the processes observed in the recent papule and afterward retrograde changes leading to atrophy of the part, or there is a return to the normal condition by cessation of the pathological process.

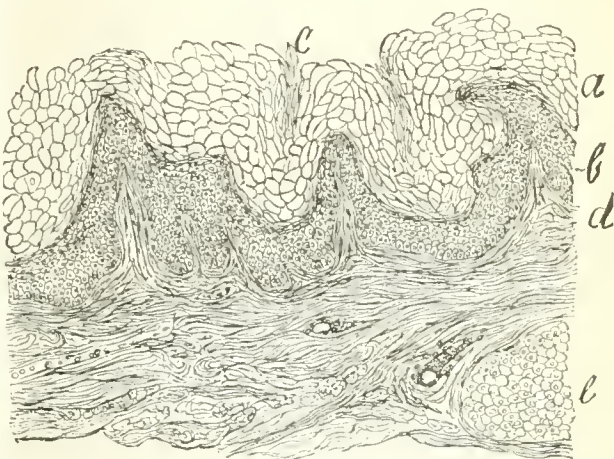


FIG. 2.—Vertical Section of a Papule of Lichen Ruber which had existed Several Weeks. (More highly magnified than Fig. 1.) *a*, corneous layer; *b*, rete mucosum; *c*, region of sweat-duct orifice; *d*, corium; *e*, unstripped muscle-bundle (from the lumbar region).

The corneous layer is much thicker than* in recent papules, but the character of its elements as regards shape, size, structure, and chemical constitution remain the same. Coloring with carmine shows a number of them, especially in the region of the orifices of the sweat-ducts and hair-follicles, still contain a granular nucleus while others have a vesicular one. The free surface is not provided with the dry, flat, squamous cells observed in normal epidermis from this region. The rete mucosum is somewhat increased in size and from its upper portion it sends projections toward the free surface. This unevenness of its upper surface as seen in Fig. 2 depends but very slightly upon the rete, for we observe that where these projections exist the rete is not specially increased in thickness, as the cutis papillæ beneath these extend farther upward than elsewhere. As the papillæ are not increased in size, at least to any marked extent, and the rete above them is not thicker there than in other situations, it follows that the uneven upper portion of the rete is produced by the hypertrophied corneous layer. This hypertrophy of the corneous layer is greatest in the region of the orifices of the sweat-ducts and hair-follicles, and there the projections extend farthest downward. The rete

cells are not increased in size, but in many places are very small, a result probably of pressure upon them by the corneous layer. The granular layer and stratum lucidum are not well defined. The interpapillary portions of the rete are increased in size in some situations by slight growth downward into the corium. The cutis papillæ are but slightly enlarged, the enlargement depending upon the changes in the interpapillary rete: the papillary blood-vessels are somewhat dilated, and a few emigrated corpuscles are present outside the vessels. Some of the papillæ are diminished in length from the downward pressure of the rete and corneous layers.

The structure of the corium is normal except in the neighborhood of the blood-vessels. The majority of the blood-vessels are dilated and surrounded by a variable number of lymphoid corpuscles—emigrated corpuscles. The dilatation of the blood-vessels and the number of emigrated corpuscles is greater than in recent papules, but not sufficient to denote any active process. The unstriped muscle-bundles are always much hypertrophied, much more than in any other cutaneous disease. Some hair-follicles show hypertrophy of the external hair-sheath while others are normal.

In the central portion of old papules a retrograde process often occurs, consisting in a degeneration of the rete and destruction of a portion of the underlying corium. In some of my sections I found a separation of all the rete except the lowest layer of cells from the cutis. I am unable to describe the changes which led to atrophy of the part, as I did not remove any papules with atrophic centres.

Deductions.—In the examination of sections of papules of lichen ruber of recent or long existence, it will be observed that we find no liquid exudation; no emigration of white blood-corpuscles, except a few from the blood-vessels of the papillæ and upper part of the corium, the number of which increases with the duration of the disease; no change in the fixed elements of the part to embryonic conditions, that is, none of the characteristic microscopic appearances observed in a vascular tissue, which is the seat of an inflammatory process. The few changes observed in the papillæ are due to distention of the blood-vessels and consequent stasis, while the slight increase in size of some of them results from a growth downward of the interpapillary rete, a growth which is perhaps never the result of an inflammatory process. Some (Auspitz) maintain that there never is a hypertrophy of the rete, the result of an inflammation of the skin, but, I believe, that though it is an unusual occurrence, yet it nevertheless occasionally occurs in cases of chronic eczema. Dilated blood-vessels and the presence of emigrated corpuscles may also denote an inflammatory process in the skin, but unless this process is primary, and not secondary to other pathological conditions, the disease in which it occurs is not to be classed among the inflammatory or exudative affections. In many skin diseases that we know are not inflammatory in nature dilatation of the blood-vessels and emigration of white blood-corpuscles occur, but only as a secondary condition, as for instance, in ichthyosis and verruca. The changes in these two diseases, as regards dilatation of the blood-vessels and emigration of corpuscles, are secondary to other changes in the epidermis, and hence are not inflammatory diseases. If lichen ruber was an inflammatory disease, the changes in the corneous layer would require to be a secondary condition, and the result of nutrition changes consequent on the inflammatory process. We find, however, from microscopical examination, that the primary and principal changes occur in the corneous layer, that the other changes observed are slight in comparison with them, and, furthermore, that such changes as occur in the corneous layer, are, I believe, never the result of an inflammation.

From a clinical study of the papule there is also nothing in its mode of origin or appearance which makes it probable that the disease is an inflammatory one. The

redness present is principally a hyperæmic redness, as shown by the absence of an inflammatory areola; there is no pus formation, no abscess, no vesicles, no erosion, no exudation upon the free surface, no inflammatory infiltration into the cutis, no pain; no increase of temperature, judging by the feel—in other words, the essential clinical characters of an inflammation are absent. It is true that a disease may be inflammatory in origin and consist of nothing but papules, as occurs in ordinary lichen or papular eczema, but in this case several of the above-mentioned clinical characters of an inflammation are present, and microscopical examination shows not only dilatation of the blood-vessels, but also exudation, emigration, and change in the tissue of the part. In the majority of cases of this papular eczema, also, papules are intermingled with vesicles or papulo-vesicles, whereas in lichen ruber the papules never become vesicles and never change in character, except to undergo revolution or atrophy.

From a consideration of these clinical and anatomical characteristics of lichen ruber it seems unjustifiable to classify it among the inflammatory or exudative affections of the skin, provided my observations on the anatomy of the papule in its different periods of existence, and views as to the conditions to be necessarily present to constitute an inflammatory process, be correct. The arguments advanced in reference to the clinical characters necessary to constitute an inflammation are similar to those held by Dr. Auspitz, and may be considered tenable.

The anatomy of the papule, as far as the condition of the corium and blood-vessels is concerned, does not differ much from that given by Neumann, although he regards the slight emigration as proof of an inflammatory process. A reference to his drawings will show how insignificant this emigration is compared even with that of the skin in scarlatina. I find that the principal pathological changes are present in the corneous layer, and that the changes in the other tissues are secondary and slight in amount. There is great increase in thickness in the corneous layer—a hypertrophy and an aberration in the process of horny transformation, as already described. Now the horny transformation is a complicated physiological and chemical process, and an excess or aberration of the process may occur without simultaneous changes in the rete. An excessive production of corneous cells may, by pressure upon the rete corpuscles, produce a super-nutrition of these corpuscles and consequent thickening of the layer as occurs in callosities. This continuous pressure upon the rete and underlying cutis, a pressure which increases in amount until the papule has reached its acme of development, is a sufficient explanation for the atrophy which occurs in the centre of old papules without the addition of an amyloid degeneration of the papillary blood-vessels as advanced by Biesiadecki, a condition which was, moreover, not present in my sections. The hypertrophy of the external root-sheath of the hair was absent in some of my sections as well as in those of Biesiadecki, and consequently cannot have the importance attached to it by Neumann. The hypertrophy of the unstriped muscle bundles, on the contrary, is evidently a constant condition and an essential part of the process of the disease.

In lichen ruber, then, we find that the principal pathological changes occur in the corneous layer, and that these changes consist in an increase in thickness from an excessive production of corneous cells and an aberration in the process of horny transformation. These changes occur especially in the region of the orifices of the sweat-ducts and hair-follicles. There is a digression from the normal physiological process of horny transformation—a keratosis, and a para-typical keratosis, a para-typical anomaly of horny transformation. It is shown to be a keratosis by the changes in the corneous layer being the primary and characteristic pathological condition, and to be a para-typical keratosis by the di-

gression from the normal process of transformation, as of the cells, as regards size, shape, structure, chemical constitution, and manner of being cast off. Lichen ruber, then, is not an inflammatory disease, but arises from a continuous collection of epidermic cells from an anomaly in the process of their production and casting off, and these cells, by pressure upon the underlying tissues, produce the other changes occurring in the rete and corium.

Prognosis.—The disease, if allowed its natural course, or is not treated by means of arsenic, invariably proves fatal, as shown by the result in the first fourteen cases under Hebra's care. When treated by arsenic in the manner recommended by Hebra, the disease can always be removed, unless the person is already in a very advanced stage of marasmus.

Treatment.—With the exception of arsenic there is no known preparation, either applied externally or given internally, that has any effect upon the course of the disease. Arsenic alone is to be relied upon, and if given in sufficiently large doses and its use persisted in the eruption will disappear. It is to be given at first in small doses, and the quantity increased every four or five days until the maximum dose which can be well borne by each individual is reached, and this dose continued until the eruption has disappeared, when smaller quantities should be given for three or four months longer. To abate the itching, baths or the application of fat substances alone or combined with carbolic acid, salicylic acid, or zinc may be employed, but, as a rule, are of little benefit.

(To be continued.)

ON SOME NATURAL MODES OF CURE IN EMPYEMA.

BEING THE ABSTRACT OF A CLINICAL LECTURE.

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GENTLEMEN: Most of you have seen what *Art* can do in the treatment of empyema, and I am thankful to say that, by the plan we now follow, of thorough drainage with a large canula and antiseptic dressings, we have had very fortunate results; but to-day I wish to call your attention to two cases which illustrate what *Nature* can do in the way of cure in this formidable affection. Left to itself an empyema may terminate as follows: 1, By perforation of chest-wall, of lung, and of diaphragm; 2, kill by septic or other influences; and 3, it may be absorbed or dry up. Of these three modes perforation is not very common either into the lung or externally, while into the abdomen it is very rare. Septicæmia claims no small proportion of fatal cases. Amyloid degeneration and tuberculosis kill not a few. Inspissation of the purulent contents and gradual absorption is perhaps the rarest of all terminations. A natural cure may take place by perforation of the lung or by the absorption of the pus, and of the three cases of empyema which you have had an opportunity of studying this session, two furnish illustrations of these modes.

Let us first study the case of the Swede who was discharged from Ward 11 a few days ago. The clinical report is as follows:

CASE I.—*Typhoid fever; empyema; expectoration of the pus; recovery.*—Christopher I—, aged twenty-three, a Swede, was admitted to hospital on March 26th with typhoid fever. The attack was moderately severe, but presented no special features. The chest was examined on admission, with negative results. Toward the end of April (28th) as the temperature kept up, and he had a cough with shortness of breath, the lungs were examined, and absolute dulness found at the right base, extending as high as the spine of the scapula behind, and the fourth rib in front. The breath-sounds were not audible, and both tactile and vocal fremitus were absent. A hypodermic needle was inserted, and about twenty

minims of creamy pus withdrawn. Patient had no chills, no sweating; there was usually an evening exacerbation of temperature, two or three degrees, only once reaching 103°. It was decided to wait for a week before operating, and meanwhile to improve his general condition as far as possible. On May 1st, without any aggravation of symptoms, he began spitting up pus, and in the course of twenty four hours filled the spittoon (capacity 26 ozs.). The cough was very troublesome, not paroxysmal, and the pus was brought up in rounded masses surrounded by clear mucus. *En masse* it looked like pure pus, but the isolated sputa resembled closely those of chronic phthisis. No elastic tissue was found; pus cells were the only elements. On May 3d the area of dulness was found to have diminished considerably, and at the angle of the scapula breath-sounds could be heard, distant on tranquil respiration, harsh and distinct on deep inspiration, and these accompanied by *very fine crepitant râles*.

For nearly three weeks the expectoration of pus continued, the amount at first large (15–22 ozs.), and by the 20th was reduced to a couple of ounces daily. The dulness gradually diminished, and by the 13th a comparatively clear note was obtained on the portion of the infra-scapular area next the spine. Breath-sounds weak but quite audible; moist sounds on deep inspiration. His general condition improved rapidly, temperature became normal, and he was discharged June 4th. A slight area of dulness remained in the outer part of the infra-scapular region. While under observation a loud, rough, systolic murmur developed, heard in the third and fourth interspaces to the right of the sternum; not at the apex or at the base. It was transmitted to the right base, and was first noticed during auscultation of this part.

I may safely say, gentlemen, that in no case which has been in the wards this session did we watch with greater interest the progress of the disease, and we can regard the result with equal satisfaction.

That an empyema may perforate the lung and be coughed up has been known for centuries; but a knowledge of the fact that this occurs without the development of pneumothorax, and constitute one of the most favorable modes of termination of the disease, does not appear to be very widely diffused. Hippocrates, indeed, knew of it, and in several places speaks of recovery from empyema (after pneumonia) by perforation of the lung and expectoration of the pus.

Traube¹ in an article, published in 1872, entitled "On a Natural Mode of Cure in Purulent Pleuritic Exudation," has called special attention to the fact, and mentions, as a curious circumstance, that he alone, of all the physicians who had written on empyema since Hippocrates, had observed it. In this, however, he was mistaken, for it had not escaped the notice of the Irish physicians in the palmy days of the Dublin school. Dr. Greene² narrated several cases of the kind, and the late Dr. R. L. Macdonnell, the first professor of clinical medicine in this school, and who was at the time clinical assistant to Dr. Graves, in his important paper "Contributions to the Diagnosis of Empyema,"³ clearly recognized this group of cases.

There appear to be two ways in which an empyema may discharge through the lung; first, by opening into a bronchus and the formation of a fistula; and, second, by a local necrosis of the pulmonary pleura, exposure of the parenchyma, and a soaking of the pus through the spongy lung-tissue into the bronchi. In the first way pneumothorax usually develops and aggravates the danger. When the pus perforates by a large and free opening the patient may be suffocated by the sudden gush of fluid which is passed into the tubes more rapidly than it can be expectorated. Several cases of this kind are on

¹ Gesammelte Beiträge, Bd. iii., s. 44, 1878.

² Dublin Medical Journal, vol. xvii., 1840.

³ Ibid., 1844.

record. The establishment of a bronchial fistula may be followed by temporary relief, but permanent recovery is rare. In the second way the pus is usually discharged without the formation of pneumothorax, and we must regard this as one of the most favorable modes of termination in empyema.¹ Traube was certainly the first to give a satisfactory explanation of the process, as he had an opportunity of studying the condition of the pleura and lung in one of these cases, and found on the lower lobe an oval area two and one-half by one inch with the pleura destroyed, and the lung tissue fully exposed, but no direct communication with the bronchi. That pneumothorax does not occur he explains in the view that while the powerful coughing efforts compress the chest, and are sufficient to drive the pus through the exposed lung tissue into the bronchi, the affected side is immobile, or nearly so, and the slight expansion during inspiration has not force enough to aspirate air into the pleura.

Greene, in the paper already referred to, clearly distinguishes between the two classes, stating that "in cases of effusion a copious and purulent expectoration is a frequent accompaniment, depending in some instances on a fistulous communication established between the seat of the collection and a bronchial tube, and that when such a communication has taken place it may be recognized by well-known and characteristic signs. But in other instances the expectoration may be equally copious and purulent, while all the physical signs of such communication are absent, and where, consequently, the symptoms in question cannot be referred to such a lesion." In the latter case he thought, as did also Dr. Macdonnell, that the pus was the result of a vicarious secretion from the bronchial membrane, the action of a sort of reciprocity between the serous and mucous surfaces. Dr. Macdonnell draws a very proper distinction between the symptoms in the two groups, which I think holds good in the majority of cases. When a bronchial fistula is established a large quantity of pus is expectorated with violent and sudden paroxysms of coughing, the quantity at times being so great as to cause suffocation; whereas when no distinct fistula is established, but the pus soaks through the spongy lung substance, the expectoration, though amounting to many ounces in the twenty-four hours, is spat up gradually and in small quantities at a time. This latter mode appears to be not uncommon, it is decidedly more frequent than the development of a bronchial fistula, and a large proportion of the patients recover, sometimes with great rapidity. We have had several instances in the hospital during the past few years, and when I mentioned the subject at the Medico-Chirurgical Society three or four instances were narrated by members. Perforation of a bronchus and the establishment of pneumothorax is not always fatal. Attimont, in his essay,² collected ten cases of recovery after expectoration of the empyema, and some of these were undoubtedly cases of bronchial fistula.

One other point in connection with this case is worth noting. You remember that when the effusion was disappearing, a very fine crepitant râle was heard with inspiration, at the angle of the scapula. It was as fine as, and resembled closely, the pneumonic crepitus. In two other cases of pleurisy I have observed the same phenomenon as the effusion was absorbed, and was not a little puzzled. Dr. Macdonnell, already referred to, also noted this, and described it in another paper, "On the Occurrence of Crepitus in Lung after the Absorption of Pleuritic Effusion."³ Is it, however, in the lung? I mentioned to you at the bedside that it might be *pleuritic*, due to the contact and friction of the two surfaces after the absorption of the fluid, and if so it is in corroboration of the views of Dr. J. R. Leaning, of New York, who holds that the pneumonic crepitus is not a pulmo-

nary but an interpleural sound, due to the friction of the sticky surfaces.

The patient before you, who has been in hospital a few days, illustrates a very different process, but one which is leading to a satisfactory termination.

CASE II.—*Empyema of seven months' standing; absorption of the fluid with retraction of the chest; local perforations of the pleura and subcutaneous abscesses.*—

A. B.—, aged twenty-three, from the Eastern Townships, of good stock, and always strong and healthy. Gives the following history: Quite well until November last, when, while lifting a heavy stone, he felt a stabbing pain in the right side, which continued at intervals for two weeks, during which time, however, he was able to get about and do work. He then took to bed, got weak and feverish, particularly at night. Had chills, and often sweated a great deal. Slept on the left side as a rule; when on the right the pain was increased. Had a cough through the winter; not much expectoration. Lost flesh rapidly. Has not been confined to bed all the time, but got up and went about when he felt able. Latterly he has been improving, cough has disappeared, has no fever or sweats, and thinks he is gaining flesh.

The history points to some chronic chest trouble. When stripped for examination he presents an exceedingly interesting object for clinical study. General inspection shows a tall, bony man, pale and emaciated, and the attention is at once attracted to the lopsided appearance of the body, due to a marked depression of the right shoulder and a decided flattening and shrinkage of the right half of the chest. As he breathes quietly you observe that while the left side expands the right is absolutely immovable, and this is still more marked when he takes a full breath: the left chest expands to an unusual degree, the infra-clavicular and mammary regions swelling out in a striking manner, while the right side remains fixed. From behind the same, flattening and want of movement are noticeable. Closer inspection shows very narrow intercostal spaces on the right side, and in the infra-axillary region there are two flat swellings in the seventh and eighth spaces, and in the latter, also, a fresh cicatrix. The apex-beat can be seen in the fifth space close to the edge of the sternum. There is a croton-oil rash on the front of the chest. Palpation reveals more distinctly the narrowing of the intercostal spaces; the ribs do not appear hypertrophied. The small flat tumors in the seventh and eighth spaces fluctuate, and do not appear to communicate with each other. He states that one has already disappeared, and a fourth was opened and discharged about a spoonful of pus. He has noticed them for a couple of months. Tactile fremitus is marked in the upper part of the right side; below there is no special intensification. The edge of the liver can be felt at the costal border. Mensuration shows the right half of the chest to be nearly an inch smaller than the left, not as much as you might suppose on inspection, but the eye is in this matter very apt to be deceived. Percussion gives in front, on the right side, a flat, somewhat tympanitic note as low as the nipple, flat below this, and absolute dullness behind. The left lung is everywhere resonant. On auscultation, the breath-sounds are absent in the dull regions below, feeble in the supra-scapular and infra-clavicular regions, and on deep inspiration a few râles can be heard. Vocal resonance is much intensified on right side, particularly in places. The examination of the abdomen reveals nothing special; the liver is not enlarged. General condition during the three days he has been in hospital has been good. Eats and sleeps well; has no fever; pulse about 80. A needle was thrust into the eighth interspace behind, but no fluid was obtained. There is laudable pus in the small flat tumors. He does not wish them opened, and returns home to-day. With good food, fresh air, and tonics, he will continue to improve. If the small abscesses remain, his attending physician will open them, but they may disappear, as one has already done. He

¹ Loc. cit.

² Considerations sur les Résultats de la Paracentèse, etc., 1869.

³ Dublin Medical Journal, 1845.

will recover, with a damaged lung and shrunken side; but with compensatory enlargement of the left, and a gradual improvement and distention of the upper part of the right lung the respiratory area will be amply sufficient for the purposes of an ordinary life.

As to the diagnosis in this case—could you mistake it for anything else? The only other affection which produces a somewhat similar condition is fibroid phthisis or cirrhosis of the lung, in which there may be the depressed shoulder, flattened and contracted chest, with immobility, dulness, and weak breathing, but the history would be one of long-standing lung trouble, and there would be cough, expectoration, and special auscultatory signs. With the local abscesses perforating the intercostal spaces, the diagnosis in this case is, at present, easy enough; but some years hence, when these have disappeared and nothing is left but the retraction, dulness, and feeble breathing, it might not be so easy without a full history. The condition of this man's chest illustrates in another way what nature can do in effecting a cure when an empyema is not interfered with. The effusion has evidently been pretty copious, and as the weeks and months elapsed became more concentrated and has gradually been absorbed, until now there is probably not more than a few ounces left. With the disappearance of the fluid another change has gone on; the flaky membranous exudation covering both layers of the pleura has become organized and converted into a dense fibrous tissue which may have a thickness of from half to one inch. In the process of absorption pockets of pus may have been left between the thickened pleural membranes, and sometimes this pus becomes caseous or even cretaceous. The angle between the costal and diaphragmatic layers of the pleura may be filled with a wedge of solid fibro-cartilaginous tissue which defies all attempts to separate it from lung or diaphragm. The firmness of these old pleuritic membranes is extraordinary, and in the removal of the lung, in such a case, the only way is to strip off the costal layer and take the attached portion of diaphragm. The dulness in front and behind in this patient's right side is due chiefly to these thickened membranes, and corresponding to the seventh and eighth interspaces there are small pockets of pus, perhaps isolated, as they often are, and communicating by sinuses with the small external tumors. The lower lobe of the lung is condensed and airless, the upper and middle lobes, though thickly coated with false membranes, probably contain a good deal of normal and functionally active tissue. What produces the great deformity? When a sero-fibrinous fluid is absorbed, or after its withdrawal by aspiration, the lung expands, and although, as you have had several opportunities of observing, for months after there may be basic dulness and defective expansion, there is no retraction. In chronic pleurisy, however, the serous layers are unusually thickened, the false membranes organize, and there is produced a large amount of new connective tissue, which gradually shrinks, prevents the expansion of the lung, and little by little drags in the side, narrows the intercostal spaces, pulls down the shoulder, may curve the spine, and displaces contiguous organs, drawing the heart over and the liver up, until there is presented such a typical condition of *rétrécissement thoracique* as exists in this case. Although the shrinkage and condensation of the organized membranes play the most important part in the process, some share must be attributed to other agencies, such as posture—the patient favoring the affected side—atmospheric pressure, and muscular contraction. Will this side ever expand again? Not to its full extent or near it. In time the upper regions of the lung will dilate more fully and there will probably be some movement in the anterior part, now absolutely quiet, but the deformity will remain and the lower part of the right side will never expand. It is true that occasionally a remarkable amount of expansion may take place after a *pleuritis deformans*. Sir Thomas Watson refers to two examples of complete re-expansion of the

side, contracted after chronic pleurisy, but such cases are extremely rare.

Perforation of the costal pleura and the formation of a subcutaneous abscess constitute the condition known as *empyema necessitatis*, which is not often seen. In this instance the external collections are small, and probably connected with encapsuled *deposits* within the pleura. One has already disappeared, and a second, which was opened, healed rapidly, and the two which remain are not connected with each other, and probably not with any large amount inside. There are two or three points of interest about *empyema of necessity* to which I will refer as you are not likely to see another instance of it for some time. When it breaks, or is opened, the fistula which forms may remain for years and be difficult to heal. There is a case on record of one Dr. Wendelstadt, a Bavarian, who had such a fistula for over thirteen years and enjoyed fairly good health. Necrosis and caries of the ribs are apt to occur and retard recovery, as the sinuses which result run in various directions and are very difficult to heal. A case of the kind occurred a year or so ago in the practice of Dr. Rodger, of this city, and at the autopsy we found the skin and pleura of the antero-lateral region on the left side riddled with sinuses communicating with carious ribs and small pockets of pus within the thick layers of false membrane. Occasionally in *empyema necessitatis* the external tumor pulsates synchronously with the heart, and might be mistaken for aneurism. This was the result of a communicated cardiac pulsation, and was first described by Dr. Macdonnell, in the paper already referred to, and not by Dr. Walshe, to whom the credit is usually given.¹

Progress of Medical Science.

KAIRIN, THE NEW ANTIPYRETIC.—We have already called attention to a newly described drug, which has been italicized by Hallepeau as that which “of all antipyretic agents is in non-toxic doses the most certain, the most powerful, and the most rapid in its action.” This drug is a methyl hydrate of oxyquinoline, having the formula $C_{10}H_{13}NO$. It is derived from quinoline and exists under two forms known as *kairin* and *kairin M.*, the latter being that which has been most extensively used. It was first introduced to the notice of the profession by Dr. W. Filehne, Professor of Physiology at Erlangen, who asserted it to be a most powerful antipyretic, not only in typhoid and other continued fevers, but in all febrile conditions, including pneumonia, phthisis, and acute rheumatism. The drug exists in the form of a grayish-yellow, crystalline powder, easily soluble in water, and of a bitter, aromatic, somewhat disagreeable taste. The method of giving it, as described by Filehne, is as follows: Doses of thirty to fifty centigrammes must be administered every hour or hour and a half. After the first dose, the temperature falls about one degree, and after the third or fourth dose, it has reached the normal. The defervescence is accompanied with sweating, but the pulse remains full and the patient feels well. If now the drug is at once discontinued, the temperature rapidly rises, and the patient very likely experiences a chill. In order to prevent this, the *kairin* is continued in smaller doses of twenty-five centigrammes, frequently repeated, *i.e.*, as often as every three-quarters of an hour. The temperature then slowly rises, but with no disagreeable symptoms. In feeble subjects smaller doses (six to twenty-five centigrammes) will produce apyrexia, while in others even larger amounts than those first named are required. The drug appears generally to be well tolerated, but it sometimes causes vomiting and headache. It is eliminated by the kidneys and gives the urine a green color. Since Filehne's first article it has been used

¹ The mistake has arisen from the fact that Dr. Walshe has described two remarkable cases of intra-pleural pulsating empyema.

by several other observers, who all confirm the first statements regarding its powerful antipyretic effect. Freymuth has made some particularly interesting studies of its action in relapsing fever. He found that although it rapidly reduced the temperature it had no effect upon the movements and form of the spirilli, showing that the production of apyrexia and the destruction of the infecting germs were two different things. Given in proper doses, the relapses could be prevented. Freymuth found, however, that in several cases, gastric disturbance and prostration were so great that the remedy had to be discontinued. Hallopeau has recently announced his experience with kairin. He employed it in two cases of lobar pneumonia and in one of phthisis. Temperature charts are given, showing that the drug acted rapidly and powerfully in all these cases, and Hallopeau thinks its remarkable antipyretic power to be demonstrated. The question whether the apyrexia thus produced is always desirable is another matter which still remains to be settled. Filehne has recently made two further communications in which he gives directions as to the dosage of kairin, and states that there are two very similar bodies, kairin and kairin M. The latter, has, as we mentioned, been chiefly used, but Filehne believes the former to be somewhat more enduring and agreeable in its actions. Still more recently, Guttman has reported his experience with kairin M. to the Berlin Medical Society. He had employed it in seventy cases. His experience confirms in a measure that of previous observers, but he does not speak with enthusiasm as to its effect upon the course of the disease. Riess, who has used kairin in eight cases, thinks it of less value, on the whole, than quinine or salicylic acid, but he admitted that his experience was too limited for him to speak positively.

ANTAGONISM BETWEEN PARALDEHYDE AND STRYCHNINE.—Professor Vincenzo Cervello concludes from a series of experiments made upon animals that paraldehyde will prevent the appearance of toxic symptoms of strychnine if it is given before they have manifested themselves, and will cause them to subside if they have already appeared. This antagonism is manifested in any case, whether the paraldehyde be given before or after the strychnine or at the same time with it. But the converse of this does not appear to be true. Strychnine seems to exert little or no influence over the narcosis of paraldehyde. The phenomena caused by the latter drug seem to predominate, the only effect of strychnine being a retardation in the appearance of the paraldehyde symptoms. From another series of experiments, the author was led to think very highly of paraldehyde as a narcotic. The drug, in his hands, always caused a tranquil sleep, preceded by no period of excitement, during which the respirations were quiet and somewhat slower than normal. The patients complained of no headache, nausea, or any other unpleasant symptoms upon awakening from the paraldehyde sleep. Professor Maselli has met with like favorable results in his use of the drug. He has employed it in over three hundred cases of neuralgia, mental diseases, and other affections in which insomnia was a distressing symptom, and has found great satisfaction in its use.—*Bulletin Général de Thérapeutique*, August 30, 1883.

THE RATIONAL TREATMENT OF DYSENTERY.—In an article of some length in the *Bulletin Général de Thérapeutique* of June 15, 1883, Dr. Kobryner enters a protest against the so-called specific treatment of dysentery by ipecac. He thinks that this drug is seldom of any value in the treatment of this affection, and that often it does positive harm. The proper treatment, he thinks, consists in fulfilling the indications presented by the disease, and not in the routine method, based on pure empiricism, of forcing down immense doses of ipecacuanha. There are, he argues, five special indications to be followed in the treatment of the grave forms of dysentery. The first is to rid the patient of everything that may aggra-

vate or keep up the morbid condition. This end is to be attained first by the administration of an emetic. In the milder cases this is not necessary, as the onset of the disease is usually preceded by a longer or shorter period of general malaise, when there is but little appetite. The patient eats only a little light food, and the stomach consequently is nearly or wholly empty. In dysentery of severe type, on the contrary, especially in times of epidemic, the invasion is sudden, and the patient may be seized shortly after the ingestion of a full meal. The process of digestion is suddenly arrested, and the stomach must be relieved of its load as speedily as possible. Then the rest of the digestive tract requires attention. The intestines are filled with a quantity of fecal matter which must be got rid of. This is to be accomplished by the administration of any of the ordinary salines or laxative mineral waters. In mild cases this is all the treatment usually required. The second indication is to moderate the fever. This end Dr. Kobryner attains by a restricted diet. When the fever is high the fast must be absolute, but as soon as it begins to fall some light soup may be allowed. Solid food is not allowed until the patient is absolutely free from fever. Infants at the breast may be permitted to nurse, but must take only a little milk at a time. They should not be urged if they refuse the breast. In bottle-fed infants, milk is not allowed, but they can have only light broths and a little albumen and water. The third indication is to relieve the colic. While opium is the specific for pain, it is not to be thought of in dysentery. Notwithstanding all our efforts to unload the bowels, it often happens that hard fecal masses are expelled from time to time, and if opium is given they are retained and increase the irritation. The remedy for the colic of dysentery is calomel. In spite of its ordinary action in increasing the intestinal discharges, it relieves the pain, and, in this case, diminishes the number of the dejections. The fourth indication is to restore the blood to its normal richness. This is a most important part of the treatment, and is best accomplished by perchloride of iron in doses of eight drops per diem for nursing infants, and a proportionate amount for older patients. In addition to this may be given a drink of white of egg in water (the whites of six or eight eggs to a quart of water). It is not until the sixth or seventh day that the signs of impoverishment of the blood become evident, so that the treatment by iron and albumen is not to be begun until that time. The last indication, which is met with in only a certain proportion of cases, is to treat the intermittent character of the symptoms. Quinine is the remedy here.

GANGRENE OF THE LOWER EXTREMITIES FROM OB-LITERATION OF THE ABDOMINAL AORTA.—Dr. Gyselynck reports in the *Archives Médicales Belges*, for August, 1883, the case of a man, twenty-three years of age, admitted to hospital suffering from palpitation of the heart following an alcoholic debauch. The pulse was beating about two hundred times a minute, though it was impossible to count it exactly. There was oppressed breathing and slight cyanosis. There was no improvement for five days, notwithstanding an active treatment by digitalis and blood-letting. At the end of this time the pulse suddenly fell to 64, but was intermittent. There was at this time a coldness of the feet and legs with anæsthesia. The coldness continued, gangrene of the entire lower extremities ensued, and the patient died after four weeks of suffering. At the autopsy, the abdominal aorta was found completely obstructed by a large clot situated a little above the bifurcation. There was an ulceration of the inner coat of the artery in this situation, and the supposition was that the thrombus arose from a deposition of fibrine and leucocytes at this point.

THE MENTAL CONDITION OF CERTAIN DIABETICS.—In some subjects of diabetes, states *Le Practicien*, certain changes in the moral nature are so marked as to point to a correct diagnosis before an examination of the

urine has been made. A young man who, in consequence of this disease, has lost his virile power will state the fact of his impotence to his physician with a sort of indifference, very different from the anxious fear displayed by the hypochondriac under like circumstances. At a more advanced stage of the disease, when the quantity of sugar in the urine is considerably augmented, the mental state changes. The patient becomes sad and is the prey of hypochondriacal forebodings. His character changes; from being free and open-hearted he becomes morose and moody, speaks but little and smiles less. He becomes parsimonious, and tries to cut down the expenses of his household, begins to keep exact accounts, calculates his resources, and declares that he is ruined and that his family will die in the poor-house. The man of middle age who, without apparent cause and without exhibiting any other mental disturbance, becomes all at once avaricious and presents delusions of rapidly approaching financial ruin, is most frequently a diabetic. If these melancholic forebodings continue, and if on examination the presence of sugar in the urine is established, the chances are that the patient will end his life by suicide. In the later stages, after the disease has existed for some length of time, still another mental condition is noted. The patient is lazy and wants only to be let alone; he will spend hours sitting in his arm-chair or lying on his lounge in a state of complete mental and bodily inactivity; his mind is clear, and his intelligence is unimpaired, but he is apathetic, he has no desire to walk or to talk, and seeks no occupation. Later, while preserving all his mental faculties intact, he begins to indulge in soliloquy, and relates incidents and recalls old memories to himself in an undertone. Finally, he falls into a state bordering on marasmus, and is carried off usually by that most grave of the complications of diabetes—pulmonary phthisis.

CEREBRAL DISEASE FOLLOWING POISONING BY ILLUMINATING GAS.—A man, fifty-six years of age, of previously good health and free from hereditary taint, was asphyxiated by coal gas. He recovered from the physical effects, but suffered from insomnia, weakness of memory and depression, and was unable to pursue his former occupations. Later, he had auditory illusions and refused to take food. The only motor disturbance was a facial paresis on the right side. Toward the end the patient was ataxic and had a tendency to fall forward while walking. Death was sudden and resulted from a fracture of the ossified thyroid cartilage. The autopsy revealed a spot of yellow softening, the size of a bean, in the corpus striatum on each side. This involved the inner portion of the nucleus lenticularis and the internal capsule. Dr. R. Gnauck, who reported the case (*Wiener Medicinische Wochenschrift*, September 1, 1883), regards as worthy of note the fact that such a lesion gave rise to no marked motor disturbances. He states that three other cases have been reported by Lesser of a similar lesion due to a like cause.

LOW TEMPERATURE IN CACHECTIC CONDITIONS.—Dr. P. Lucas-Championnière relates in the *Journal de Médecine et de Chirurgie Pratiques* for September, 1883, the case of a child suffering from erysipelas, in which there was not only no fever, but even a notably reduced temperature. The thermometer registered only 91.5° F. He calls attention to the case as illustrating a fact of considerable importance, namely, that in certain cachectic conditions, inflammatory affections which are ordinarily accompanied by considerable fever may run their course without determining any such reaction, or may even provoke a reduced temperature. One should not, therefore, be prevented from making a diagnosis in such a case because of the absence of fever.

CHROMIC ACID IN AFFECTIONS OF THE MOUTH.—Dr. Cauquil, writing to the *Bulletin Général de Thérapeutique*, No. 12, vol. civ., concerning the employment of

chromic acid, as recommended by Dr. Butlin in diseases of the tongue, states that he has also found it of value in stomatitis. He has used it with success in mercurial sore mouth, in the strength of one to five. In other cases of syphilitic pharyngitis with hypertrophy of the tonsils he has obtained good results with the same solution.

INHERITANCE AS A CAUSE OF DRUNKENNESS.—In support of the theory of the hereditary transmission of the thirst for alcohol, Dr. J. S. Jewell related the following remarkable instance at the meeting of the California State Medical Society (*Pacific Medical and Surgical Journal*, September, 1883): The patient was the third son of his parents, and was sorely afflicted with alcoholism. He stated to Dr. Jewell that himself and younger brother (the fourth son) had always, almost from infancy, been too fond of liquors, while his two elder brothers were strong total abstinence men, and never touched liquor; the latter were also men of wealth, while the younger, who were inebriates, were poor. He said that he had often heard his mother say of his father, that during the first five years of their married life he (the father) did not use liquor in any way, and would not associate with men who did. But about the fifth year after their marriage, about the time the third son was begotten, the father had many business reverses, took to drink, and died after being an habitual drunkard for several years.

DISLOCATION OF THE HUMERUS FROM SNEEZING.—Dr. William Rickert reports in the *Maryland Medical Journal*, for September 29, 1883, the case of a man, who while cleaning a house, felt an inclination to sneeze. He stopped work and, raising his left arm above his head, supported himself with the other hand against the side of the stable. While in this position he sneezed, and immediately felt that something was wrong with his shoulder. Examination showed an infraclavicular luxation of the head of the humerus, which was quickly reduced under anæsthesia.

THE PATHOLOGICAL CHANGES IN GONORRHOEA.—Professor Hamilton, of Aberdeen, has had an opportunity to examine microscopically the condition of the urethra in acute gonorrhœa (*The Practitioner*, September, 1883). The epithelium of the urethra is disposed much as in the bronchus, in three strata—the deepest of flat cells, the middle of pear-shaped cells, and the superficial of columnar cells. In acute gonorrhœa the process consists mainly in an exaggerated and irregular proliferation of the deeper strata of cells, the cell-production being so rapid that the discharge contains but few of the fully developed columnar forms. The denudation of the surface in this process explains the scalding pain on micturition. The secretion of the mucous glands is increased, as in bronchial inflammation. There is also considerable corpuscular infiltration of the mucous membrane, leucocytes being accumulated in the sub-epithelial lymphatic spaces; and although there does not exist an elastic basement membrane, which, according to the author, prevents the escape of these interstitial products on to the free surface in bronchitis, he nevertheless doubts if that occurs here, believing rather that the cellular exudations in the meshes of the mucosa are carried away by the lymph stream. There was not in the specimen any marked congestion of the blood-vessels; and the trabecular tissue of the penis was not abnormal unless accumulated leucocytes in the cavernous spaces may be so considered. Strictures are produced in chronic urethritis probably by the submucous tissue becoming cirrhotic and contracting upon the lumen; the absence of "fixed joints" indicating the difference in results from chronic bronchitis when the tubes are dilated. The tubules of the testicles and of the epididymis from the same case also showed marked catarrhal inflammation, being filled with debris and epithelial cells in all stages of disintegration, but there was no interstitial inflammation whatever.

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TRANSFUSION OF BLOOD AND INTRA-VENOUS INJECTIONS OF SALINE SOLUTIONS.

TRANSFUSION of blood seems to have originated with Lewer, of England, whose work, about the year 1666, records several experiments performed on dogs, into whose veins arterial blood from other dogs was made to flow by direct communication of the divided vessels. In 1667, Emmerez, of Montpellier, France, performed transfusion on a patient of Denis, injecting into the vein of the sick man nine ounces of lamb's blood; the patient was in extreme prostration from typhoid fever, but recovered; his recovery being attributed to the operation. In 1668, transfusion was performed in Italy, by Fracasati, Riva, and Manfredi, on human subjects, the donors of blood being healthy men. The first signal successes of transfusion awakened great hope in the operation, and it was speedily resorted to for a great variety of disorders. In accordance with the prevalence of humoral theories of pathology it was supposed that the whole mass of the blood might easily be renovated by supplying to the diseased individual the pure blood of healthy men, or even animals; even madness, it was alleged, might be successfully combated by transfusion. As a result of this infatuation the practice was speedily abused, was continually followed by disaster and death, and leagues were formed against it. In 1675 transfusion was proscribed in France by an Act of Parliament. For almost a century and a half transfusion was completely abandoned, to be taken up anew about the year 1815 by Blundell, who recommended it in cases of extreme debility from hemorrhage or wasting disease. Blundell, whose "Researches, Physiological and Pathological, on Transfusion," appeared in 1824, advised to perform the operation by means of a syringe which should take up the blood from a cup into which it was made to flow, and inject it directly into the vein of the patient. Diefenbach, in 1828, was the first to employ the terms *mediate* and *immediate* transfusion; *mediate*, when it is done by means of a syringe, and *immediate* when the artery of one animal is made to communicate directly with the vein of another animal. He was also the first to use defibrinated blood. Since then the operation has been very much perfected by means of the instrumental apparatus of Moncoq and Belina, as improved by Charrière, Collin, and Mathieu. These, however, have the disadvantage of allowing air to be admitted to the blood of the donor before it is injected, an evil which is remedied

by the more complex transfusion instruments of Schliep, Neudorfer, and especially Roussel.

It is not our purpose in this article to discuss the advantages or disadvantages of transfusion of blood. Suffice it to say that experience has proved that whether whole blood be used or defibrinated blood, serious accidents may result from the operation, however great the care and expertness of the operator—and death has not seldom happened while the transfusion was going on from blood-clotting, or from the penetration of air. It has been shown that but a small part of the product of transfusion can be assimilated; the globules of the donor of blood, whether animal or man, rapidly undergoing dissolution in the serum of the individual whose circulatory system became their new habitat. Ponfick and Sardeis have shown that this solution is the more rapid, the greater the difference in the animal scale between the species whose sanguinous fluids are mixed. Veritable embolic infarctions are likely to occur from the agglutination of heterogeneous corpuscles. Despite every precaution air will sometimes penetrate along with the blood, although this accident is much less likely to happen with the improved modern apparatus above mentioned. Fever, hæmaturia, even albuminuria have followed cases which proved successful—an expression of the difficulty which attends grafting one kind of blood on another. Even defibrinated blood is not free from these dangers. Landois has shown that whipping blood to free it from fibrin does not, to any great extent, clear it of corpuscles, and De Christoforis affirms that the globules remain whole and sound notwithstanding the beating. To obviate the inconveniences and dangers from the use of blood, whole or defibrinated, intravenous injections of milk have been proposed, and of saline solutions. The intravenous injection of milk has a curious and instructive history of its own, which we have not time now to pursue. Suffice it that it has been attended with several remarkable successes, as practised by Hodder, Joseph W. Howe, T. Gaillard Thomas, Wm. Pepper, and others, and is believed to give as satisfactory results as transfusion of blood. At the same time it is by no means free from danger, and Culcerq has shown that the fatality attending these injections is due to the formation of fatty emboli, from agglomeration of the milk-corpuscles.

The intravenous injection of saline solutions has of late come into vogue as a safe and efficient substitute for transfusion of blood. This practice originated with the earnest attempts of physicians to combat the cholera during the epidemic of 1830. Janichen, of Moscow, Latta, of Scotland, and Magendie, of France, are credited with having successfully performed saline transfusions about this epoch. It was believed, and the result justified the theory, that the algidity and other fatal accidents of cholera were due to the too great elimination of serum in the stools, hence the indication presented itself to inject an artificial serum to supply the place of the serum that was lost. These saline injections have been practised in Asiatic cholera more or less often since that period; sometimes successfully, at other times with only a passing amelioration, but nothing has ever occurred to indicate that any danger attended their use.

This very year Dr. O. Jennings, of London, has taken up the subject in an able monograph on transfusion,

urging the general introduction of intravenous saline injections in all cases where heretofore transfusion of blood has been supposed to be indicated. A year or so ago Bischoff reported a case of post-partum hemorrhage, where the patient, in a state of complete collapse from loss of blood, was restored by the injection into the peripheral extremity of the divided radial artery of two hundred grammes of a six per cent. solution of common salt. This solution was rendered alkaline by the addition of two drops of liquor potassæ. The injection was slowly made, the whole time occupied by the operation being an hour. During the transfusion the patient, previously cold and moribund, revived, the pulse came back, and at the end of the transfusion was only 122 per minute. There was no symptom of oppression, such as is generally witnessed during the transfusion of blood.¹

This very year Szamann has reported a similar case, in which the intravenous transfusion of a weak saline solution, made slightly alkaline by a little liquor sodæ, undoubtedly rescued a woman from the agonies of death from uterine hemorrhage.²

From the *Bulletin Gen. de Thérapeutique* (tome cv., 3d liv., p. 125) we obtain the details of an interesting case reported by Heyden, which is very similar to those of Szamann and Bischoff above referred to. A glass funnel was used, connected with a simple gutta-percha tube, ending in a metallic canula, which was made to penetrate the median vein, in which it was tied. In the space of five minutes fifteen ounces were injected of a saline solution consisting of six grammes chloride sodium, twenty drops of liquor sodæ, and one litre of distilled water. (This is the solution of Schwarz.) A period of calm followed in which the pulse regained its force and became slow, and the extremities became warm. In the course of an hour the patient (previously unconscious) came to herself, and made a rapid recovery.

The credit of this method of transfusion of saline solutions has been wrongly assigned to both Little and Schwarz, who really did nothing but improve on an old method. The merit of Schwarz consists in having based this operation on a special theory of the action of the transfused liquid, which experience has confirmed. This theory is succinctly set forth by the review writer in the number of the *Bulletin de Thérapeutique* above alluded to. In cases of profuse hemorrhage the resulting fatality has been attributed to the loss of the requisite number of blood-corpuscles. The oxygen of respiration, not finding a sufficient number of carriers, reaches the nerve-centres in far too small proportions, and life was extinguished, with the heart's action, from want of oxygen. Such being the theory, it was natural, in order to remedy these accidents, to supply new globules to the blood; hence transfusion found justification. The corpuscular element was the useful and all-important one.

The blood-corpuscle, says Schwarz, is in no sense the useful element in transfusion, and he has proved it by bringing to life numerous hares bled to syncope by injecting into their veins the solution whose formula we have given above. The useful element is the vascular tension; the heart does not perform its function, does not contract unless a sufficient quantity of fluid is poured

into its cavities, and this fluid must be under a pressure sufficient to bring into play the contractile energies of the heart. Inject, then, into the venous system an alkaline liquid homogeneous with its serum, and re-establish the vascular tension, you will restore activity to the circulation and will prevent the production of fatal accidents. According to Schwarz, then, it is not the quality of the liquid injected, but the quantity which is of real importance.

If the theory of Schwarz shall prove to be true (and the facts which are above given are strikingly demonstrative), a great future is in reserve for the intravenous injections of saline solutions, which must supersede the more ancient sanguineous injections; such transfusion being attended with much less difficulty and less danger.

THE TRANSMIGRATION OF BACTERIA FROM THE MATERNAL TO THE FETAL CIRCULATION.

CONSIDERABLE attention has been called of late to the possibility of the passage of micro-organisms from the maternal blood to that of the foetus through the placenta. Truzzi and others have published the results of some experiments made by them in vaccinating pregnant women to determine whether the children born of them would be likewise protected. They found, however, in every case that the children responded readily to vaccination performed a few days after birth, thus demonstrating either that the micro-organism of vaccinia was unable to pass through the placenta, or else that it was so modified in its passage as to have lost its power of reproduction. It has further been shown that the placenta offered an impassable barrier to mineral substances reduced to a very fine powder and introduced into the maternal circulation.

The motionless rods characteristic of malignant pustule have never been found in the blood or other tissues of a foetus taken from a woman dead of this disease. But in the affection called *charbon symptomatique*, the bacteria in which are endowed with independent movements, the transmigration through the placenta has been ascertained to occur. Dr. Chambrelent, of Bordeaux, in a series of experiments conducted in the laboratory of the *Faculté de Sciences*, has studied the action of the extremely minute bodies described by Pasteur as characteristic of chicken cholera. These organisms, according to the latter, resemble very closely in their size and characteristics, the microscopic granules of small-pox and vaccinia. His method was as follows:

A culture fluid, whose extreme virulence was previously determined by experiments upon a chicken and a rabbit, was used in the inoculation of a number of pregnant rabbits. The animals all died within twelve hours. Other rabbits and chickens were then inoculated with blood taken from the foetuses which were carried by the poisoned rabbits. The results were not uniform. The presence of the characteristic granules in the blood of several of the foetuses was incontestible, and inoculations of this fluid brought about a fatal result. But death in these cases was longer delayed than when the blood of the mothers was used. Others of the foetuses seemed to be unaffected, as inoculations practised with their blood and with culture fluids made from it were followed by negative re-

¹ Centralf. f. Gyn., 1881, p. 545.

² Berliner klin. Woch., July, 1883. Med. News, August 25, 1883.

sults. M. Chambrelent concludes from these experiments that the microbes of chicken-cholera may pass through the placenta, but that they are contained in much smaller number in the blood of the fœtus than in that of the parent. As regards the latter part of his conclusion, the question remains whether this diminished number is due to the partial barrier offered to their transmigration by the placenta or whether the fœtal blood is a less suitable fluid for the reproduction and multiplication of the microbes. According to a writer in the *Gazette des Hôpitaux* it would seem that the latter solution is the correct one. For it is not so much an explanation of the reduced number as of the retarded action of the microbes that is sought for. The action of a small number of micro-organisms in a given fluid is as speedy as that of a large number, provided their virulence be unimpaired. The cause of this modified virulence he finds in the diminished proportion of oxygen contained in the fœtal blood. The microbes of chicken cholera, as those of variola and its allied affections, require a large quantity of oxygen for their full development. This they cannot obtain in the fœtal circulation, hence their attenuation in this fluid. This theory might serve also to explain the failure of Truzzi's experiments with vaccinia. It was not the placenta that impeded the passage of the microbes, but the blood of the fœtus that refused them sustenance. The variolous organisms, already profoundly modified and weakened before their introduction into the maternal circulation, found no incentive to development in the poorly oxygenized blood of the fœtus, and hence became inert and died. Very different is the action of the fully developed microbe of small-pox, which so often kills the fœtus even though it spares the mother. It is strong, and its development is not entirely repressed for want of air.

If this theory be correct, the question suggests itself whether it would not be possible, through culture in an atmosphere rich in oxygen, to restore the strength of the cow-pox granules so that they would again produce variola.

INCINERATION.

In an article in the September number of the *Princeton Review*, Mr. John D. Bengless has presented, in an able and candid manner, the arguments in favor of cremation. The United States Cremation Company has republished this article and is using it in the propaganda of its faith.

The arguments presented by Mr. Bengless are not new, but perhaps the economical side of the matter has not been presented so forcibly heretofore. The total average cost of burial in New York City is estimated to be not less than two hundred and fifty dollars, while the expense of cremation will be only about sixty dollars, including an urn and a niche in the Columbarium. Mr. Bengless also affirms that there will be no trouble in cremating all the dead of large cities by means of the "octuple crematory" of Bombay, or the "multiplex portable incinerator" of Brussels, which we confess are new terms in mortuary technology.

We have said before that cremation has not taken well in this country, and that there was nothing to deplore in the fact. It can doubtless be made a useful mode of

disposing of the dead in many cases, yet we do not think that either sanitation or sentiment demand it; and in many parts of the country it will be a long time, if ever, before it can be made practicable or economical.

TRAINED NURSES FOR THE COUNTRY.

WE have received a letter from a correspondent calling our attention to the need of trained nurses for the country. It is urged that neither country physicians nor their patients yet appreciate the help they can receive from this class of persons.

It cannot be doubted that more and better nurses are needed and could be employed in the rural districts and small towns. It takes some time for the profession and the public to be educated up to an understanding of the increased effectiveness of medical skill when assisted by intelligent nursing. Still this knowledge is rapidly growing, and perhaps as fast as could be expected. We have already over twenty training schools in this country which are yearly sending out numerous graduates. These for the most part remain in the cities, where the pay is better and employment more regular.

It will not be long, however, before our cities are supplied, and we believe that the country will furnish an excellent field. The pay here must be smaller, but it will be more than is usually paid for teaching the district schools, and the expenses of living make it possible to save as much as if one were receiving higher wages in the city. We trust that our country practitioners will encourage as much as possible the importation of trained nurses among them.

News of the Week.

THE NUMERICAL STATUS OF THE CODE CONTROVERSY.

—Some misapprehension exists as to the exact state of affairs regarding the Code controversy, owing to the misleading statements of some of our out-of-town contemporaries. There are in the State of New York 10,000 physicians (in 1880, 9,272), of whom the homœopaths claim 1,000. Of the remaining 9,000, there have been 2,403 who have signed a paper upholding the National Code, "until it is changed by the American Medical Association." Many of these, as is well known, signed under the belief that the said association would soon make some change, and not from any antagonism to the principles represented in the State Code. It may be questioned, therefore, if a majority, or even a third of the reputable medical men in this State favor the views and position championed by Drs. Squibb and Flint, Jr., and by our out-of-town contemporary.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—

The annual meeting of this Society will be held in the hall of the Young Men's Christian Association, corner of Fourth Avenue and Twenty-third Street, Monday evening, October 22, 1883.

CONCERNING A CHARGE AGAINST THE PRESIDENT OF THE ACADEMY.—In a report of the last meeting of the New York Academy of Medicine, in the *Boston Medical and Surgical Journal* of October 11th, there appeared

what seems to be intended as a serious charge against the president of the Academy. Every man of honor would so regard it. The idea is distinctly conveyed, that two names had been used on the notices, one as mover and the other as seconder of the amendments, "without proper authorization," and that they "had declined to serve in this capacity." Both had agreed "to serve in this capacity," and neither declined until after the notice was printed.

We make no comments until sufficient time has elapsed for the writer to correct his statement.

THE INQUEST AS TO THE EPIDEMIC IN THE EAST CHESTER ASYLUM.—The Coroner's inquest in the case of Emma Nicholson, who died at the Mount Vernon Home of the New York Infant Asylum, has been concluded. The jury returned a verdict in substance as follows: "We find that Emma Nicholson died at the East Chester Branch of the New York Infant Asylum, October 5, 1883, from a complication of diseases, the immediate cause of her death being scarlet fever, diphtheria, and pleuro-broncho-pneumonia. Within the last two months fully thirty per cent. of the children in the asylum have died. This fearful rate of mortality, in our opinion, is the result of gross negligence upon the part of those having charge of the medical and sanitary departments, and the lack of attention of the president of the society, acting under the authority of the Board of Management, in appointing a person incompetent of performing the duty required of a physician in charge of such an institution. We respectfully request that immediate steps be taken for the suppression of the epidemic in the asylum. We further request the Coroner to ask the District Attorney of this county if this matter is not a proper subject for criminal investigation."

We think it probable that the above verdict may represent but one side of the case, as we are informed that a competent sanitarian and medical visitors are attached to the asylum.

A NEW MEDICAL JOURNAL.—The first number of the *Medical Student*, edited by William G. Mortimer, with its editorial office in the midst of medical teachings, and especially designed for students preparing for examination, is upon our table, and has a tidy appearance. The two noteworthy articles in this number are a sketch of the life of Prof. William A. Darling, with illustration, and an interesting letter from J. Milner Fothergill.

MEDICAL COLLEGES NOT RECOGNIZED.—At the last meeting of the Missouri State Board of Health, held at Springfield, the diplomas of three of Missouri's Medical Colleges were refused recognition. These colleges were the Joplin Medical College, the Kansas City Hospital College of Medicine, and the St. Joseph Northwestern Medical College.

STAMPING OUT SMALL-POX.—The Sanitary Association met on October 13th, in New Orleans, to confer with the commercial bodies and Cotton Exposition delegates as to the best plan for preventing the spread of the small-pox. A plan for the permanent extinction of small-pox was submitted, providing for the employment of fifteen physicians, at \$100 per month, as sanitary inspectors; ten sanitary police at \$50 per month, and the

appropriation of \$500 for the purchase of vaccine virus and disinfecting material. The city is to be thoroughly inspected from house to house, vaccination tendered, and premises disinfected. Those who decline vaccination are to be listed, with their residences and occupations, for public information. This plan was approved of by the representatives of the Cotton Exchange and Chamber of Commerce, and \$5,000,000 (?) appropriated to carry it into effect.

AN OFFICE THIEF.—A colored boy, a mulatto, about eighteen years old, is going about the city asking to be employed as an office-boy. He is a sneak thief. He gives his name as Henry Harris.

AN AGED PHYSICIAN.—It is reported that Dr. Jackimovicz, of Jarvszinka, in the government of Kiew, Russia, has just died at the age of one hundred and six, and that he was able until nearly the close of his life to superintend the working of an extensive practice.

THE LAWN-TENNIS LEG.—The English journals have reported lately several cases of rupture of the plantaris muscle in lawn-tennis players. Dr. Philpot relates another instance in *The Lancet* of September 22, 1883. His patient stated that while serving a ball with the "cutting-down" stroke he felt as if some one had struck him sharply upon the calf of his leg, and immediately the limb became powerless. A few days subsequently large ecchymoses appeared, not only over the seat of the injury, but on the front of the leg as well, showing probably that the muscle itself was extensively lacerated. Perfect rest for a week till all local symptoms had subsided, and then a starch bandage and a high-heeled shoe, seemed all the interference required.

A PERIPATETIC TEMPERANCE LECTURE.—It is said that Weston, the pedestrian, has announced his intention of undertaking a tour through England and Wales, with a view to demonstrate the superiority of tea over beer and alcoholic drinks in general during periods of prolonged muscular exertion. He proposes to walk fifty miles a day for one hundred days, and at the close of each day's walk to deliver in the town to which his day's journey may have brought him, an address on temperance, having for its title, "*Tea versus Beer.*" He is anxious for medical men of the towns through which he may pass, and in which he spends the night, to visit him, for the purpose of recording the state of his temperature, respiration, pulse, etc. It is proposed to commence his tour on November 5th, and should this date be finally adopted, the task, if successfully accomplished, will be completed on February 28th. As Sunday will be taken as a day of rest, the actual distance traversed each week will be three hundred miles.

UNIVERSITY OF VERMONT.—Mr. John P. Howard, of New York, has offered to rebuild the medical department of this old university at Burlington, giving it large dissecting-rooms, a large hall for its anatomical museum, and a lecture-room for three hundred hearers. The expense will be about \$40,000. He offers to convert the present medical college building into a gymnasium for the university students. The same gentleman rebuilt the main university building last year, and ordered a colossal statue of General Lafayette, who relaid the cor-

ner-stone of the centre building in 1825, to be modelled by Mr. J. Q. A. Ward. This statue was unveiled with appropriate ceremonies at the Commencement of the university last summer. These magnificent gifts, with many others to the town, including an opera-house to the Home for Destitute Children, the latter largely given by himself several years ago, make a summary of \$400,000.

EPIDEMIC OF DENGUE IN EGYPT.—*El Ensayo Médico* states that there was an epidemic of dengue in Egypt at the same time that the cholera was raging. Over thirty thousand persons in Cairo alone were suffering at one time from this painful affection.

THE EXISTENCE OF YELLOW FEVER in Pensacola and in Brewton, Ala., continues to be a matter of dispute among health officials.

FIGHTING TO KEEP THE CODE QUESTION IN THE NEW YORK ACADEMY OF MEDICINE.—A meeting of physicians who are opposed to any change in the present status of the Code question in the Academy of Medicine, was held at Mott Memorial Hall, October 15th. A call had been issued to the effect that it was thought to be of the greatest importance to the welfare of the Academy of Medicine that the proposed amendments to the constitutions and by-laws should be defeated. An invitation was extended "to meet some of the friends of the Academy who are opposed to the passage of these amendments and who desire to put an end to the discussion of codes of ethics in that body." The call was signed by Drs. Alonzo Clark, T. M. Markoe, Abram Du Bois, John T. Metcalfe, and H. D. Nicoll. Dr. Ellsworth Eliot presided, and there were about one hundred physicians present. There was an informal discussion of the proposed amendments of two hours' duration, in the course of which preliminaries were arranged for action on them at the regular meeting of the Academy on Thursday evening.

Reports of Societies.

MEDICAL SCHOOL OF HARVARD UNIVERSITY.

One Hundredth Anniversary, held in Boston, Mass., October 17, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE celebration of the one-hundredth anniversary of the establishment of the Medical School of Harvard University, and the dedication of its new building on the corner of Boylston and Exeter Streets, commenced this forenoon in Huntington Hall, at 11 o'clock. President Eliot, in opening the exercises, spoke of the three men who founded the School one hundred years ago, amid many trials and discouragements, and from whose modest beginning has grown up the present School with its staff of forty-seven teachers. The speaker alluded to the great advance recently made in medical science, its brilliant future, and the means for its advancement. He then welcomed the guests and benefactors of the School, and introduced "the oldest professor of our School and the youngest, the man of science and of letters, our teacher and our friend, Dr. Holmes." The feature of the occasion was the oration by Professor Oliver Wendell Holmes. He commenced by taking a retrospective glance at the period when the Harvard Medical School began its teachings, and which brought the professional condition of the earlier epoch to

that of the present. He distinctly remembered the Boston practitioner who walked among the dead after the battle of Bunker Hill, and pointed out the body of Joseph Warren among the heaps of slain. Eight years had passed since John Jeffries was treading the bloody turf on yonder hillside. The independence of the United States had just been recognized by Great Britain. The lessons of the war were fresh in the minds of those who had served as military surgeons. Dr. John Warren, a younger brother of Dr. Joseph Warren, who fell at Bunker Hill, was the first to suggest the founding of a medical school in connection with Harvard College, and was the first Professor of Anatomy and Surgery. Those who remembered his teaching had spoken with admiration of the eloquence and enthusiasm with which he lectured. Dr. John Warren was a man of great energy, spirit, and ability. The lectures of the newly-founded school were delivered in Cambridge, until the erection of the building known as the Massachusetts Medical College, in Mason Street, in the year 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the university town, but Dr. Warren did not ask whether it was easy or not. Benjamin Waterhouse, honorably known for having been the introducer of vaccination into America, was the first Professor of the Theory and Practice of Medicine. Dr. Holmes remembered him well by the scar of the vaccination. His powdered hair and *queue*, his gold-headed cane, his magisterial air and diction, were familiar to him from his boyhood. The first Professor of Chemistry was Aaron Dexter. It was the forming period of that science. Black, Cavendish, Priestley, Lavoisier, were building it up with their discoveries. A course of chemical lectures delivered in Boston or Cambridge at that day was probably, as it certainly was at a later day, very entertaining, and not wholly un-instructive. The apparatus of illustration was doubtless very imperfect in Dr. Dexter's time compared to what is seen in all the laboratories of to-day. We may admire his philosophy and equanimity, therefore, in recalling the story I used to hear about him: "This experiment, gentlemen," he is represented as saying, "is one of remarkable brilliancy. As I touch the powder you see before me with a drop of this fluid, it bursts into a sudden and brilliant flame." Which it most emphatically does NOT do as he makes the contact. "Gentlemen," he says, with a serene smile, "the experiment has failed. But the principle, gentlemen, the principle remains firm as the everlasting hills."

The speaker next referred to the times when he was a student of medicine, and then drew vivid pen-pictures of the medical worthies he had met here and abroad: John Collins Warren, James Jackson, Jacob Bigelow, Walter Channing, Boyer, Dupuytren, Lisfranc, Velpeau, Civiale, Cruveilhier. Two or three waterlogged old professors were moored to their chairs, one of them not so very old, but with a good many ancient barnacles about him, one formidable three-decker. Broussais, with his upper tier of guns still above the water line and banging away at the assailants of his famous "physiological doctrine." What had been the most signal advance in the science and art of medicine between 1783 and 1833? The first half of the century we are considering. In medical science the method of studying the human body by its constituent elements. The general anatomy of Bichat—which is to common descriptive anatomy what geology is to geography, would still hold the first place if it could claim all that the microscope has done for it. It was, at any rate, a great onward movement with far-reaching results for physiology and pathology. Next to this would come the discoveries of Sir Charles Bell and Magendie of the distinct motor and sensitive functions of certain nerves and nerve-roots. The most important practical achievement was the introduction of vaccination. He knew that it had been, and is even at the present day the subject of violent attacks and bitter prejudices. There was always an unconvinced and irreclaimable minority. Those who

believed not Moses and the prophets would not believe though one rose from the dead to convince them.

Laennec's invention of auscultation held the next place to vaccination in the records of practical improvement during our first half century. The recognition of the affection of the kidneys known as "Bright's disease," and the separation of the too familiar and fatal malady, diphtheria, from those with which it was long confounded, are other notable advances made during the period in question. Comparing the two half centuries the following improvements might be balanced against others: Against the discovery of the double nerve-function, the extended knowledge of the reflex function; against "general anatomy," the cell doctrine due to the discoveries by the use of the achromatic microscope to which we also owe the discovery of the minute organisms, so important in the history of disease; against vaccination we may offset surgical anæsthesia; against the stethoscope, the medical thermometer. We must divide the honors of lithotripsy and those of ovariectomy between the two periods. The beneficent changes in the treatment of insanity effected by the earlier labors of Pinel and Esquirol have been admirably carried on in the more recent period. But the last fifty years had not been less productive. Modern chemistry was no longer a mystery of pyrotechnical display; physiology was a new science; anatomy involved the more exact study of regions; operative surgery had achieved the triumph of ovariectomy, resection of joints, paracentesis. In the prevention of disease the gain had been most extraordinary as evinced by the study of the germ theory. The phrase of "drain fever" had saved hundreds of lives.

The practice of drugging for its own sake, the fatal bequest of the English apothecary or "general practitioner," whose profit was made on his medicines, he pointed out to the medical profession of this country, as he believed, when, some twenty and more years ago, in guarded terms, often misquoted, he denounced it somewhat too epigrammatically for some of his friends of the Massachusetts Medical Society. Professor Gairdner, of the University of Glasgow, had recently used language much plainer than his innocent allusion to the probable effect of sinking a car of miscellaneous drugs among the fish. Bleeding was an almost unknown operation. Of the four great remedies of Dr. Holyoke's and Dr. James Jackson's time, antimony had fallen from grace, and calomel, instead of being next the apothecary's right hand, as the letter "e" is to the printer's, has gone to an upper shelf, where it may be supposed to repent of its misdeeds like Simeon Stylites. Cotton Mather had said, a century and a half ago: "I am not sorry that antimonial emetics begin to be disused." He had said, too, more rhetorically, "Mercury, we know thee; but we are afraid thou wilt kill us, too, if we employ thee to kill them that kill us." This was a lively way of putting a thought long afterward made into a famous saying. While old drugs and old methods have become obsolete, new drugs and new methods have come in to take their place. The less the patient is annoyed with over medication, painful and disgusting remedies, the more tractable he is likely to be, and the less likely to throw his medicine out of the window, where it will kill the chickens instead of the fishes, the more attention is likely to be paid to air and cleanliness and comfort, and the more to the kind of nourishment and the modes and times of giving it. In proportion as the worth of the apothecary diminishes, the cares of the nurse are called upon to render disease endurable by all the arts known to a skilful attendant. Little things mean a great deal in the sick-room. "Will you have an orange or a fig?" said Dr. James Jackson to a fine little boy now grown up to goodly stature, and whom he might be fortunate enough to recognize among his audience of to-day. "A fig," answered Master Theodore with alacrity. "No fever, there," says the good doctor, "or he would certainly have said an orange." Now it is just in these little unimportant

all-important matters that a good nurse is of incalculable aid to the physician, and the growing conviction of the importance of the thorough training of young women as nurses is one of the most hopeful signs of medical advancement. So much has been done and is doing that the days of the Sairey Gamps and Betsy Prigs are numbered. I have often wished that disease could be hunted by its professional antagonists in couples—a doctor and a doctor's quick-witted wife making a joint visit and attacking the patient—I mean the patient's malady, of course—with their united capacities; for I am quite sure that there is a natural clairvoyance in a woman which would make her as much the superior of man in some particulars of diagnosis as she certainly is in distinguishing shades of color. Many a suicide would have been prevented if the doctor's wife had visited the victim the day before it happened. She would have seen in the merchant's face his impending bankruptcy while her stupid husband was prescribing for his dyspepsia and indorsing his note. She would recognize the lovelorn maiden by an ill-adjusted ribbon, a line in the features, a drop in the attitude, a tone in the voice, which mean nothing to him; and so the brook must be dragged tomorrow. The dual arrangement of which he had spoken was, he supposed, impracticable; but a woman's advice, he suspected, often determined her husband's prescription. Instead of a curtain-lecture on his own failings, he gets a clinical lecture. On the puzzling case, it may be, of a neighbor suffering from the complaint known to village nosology as "a complication of diseases," which her keen eyes see into as much better than his as they would through the eye of a small-sized needle, she will find the right end of a case to get hold of, and take the snarls out as she would out of a skein of thread or a ball of worsted, which he would speedily have reduced to a hopeless tangle.

The speaker in enumerating the advances made, gracefully and feelingly alluded to the brilliant achievements of Bigelow in crushing stone by a new method and in reducing dislocations by simple and effective manipulations. The speaker then glanced at the present methods of study, and compared with the past the high standard of medical education exacted by the Harvard Medical School and the facilities to that end, as given in the princely accommodations in the new medical building.

The audience was large, and the address, delivered in Holmes' inimitably happy style, was frequently interrupted with uproarious applause.

Dr. Francis Minot, on behalf of the donors, presented to the school a portrait of Dr. Holmes, painted by J. W. Alexander, to be placed in the college in remembrance of his invaluable services to Harvard University, to the medical profession, and to the community.

Ex-Mayor Samuel A. Green then presented to the school, on behalf of the donors, a bust of Dr. Henry J. Bigelow, executed by Launt Thompson, of New York. Dr. Green spoke of Dr. Bigelow's great contributions to the science of surgery, especially dwelling upon his researches on the hip joint and its dislocations, his wonderful operation of rapid lithotripsy, and his advocacy and advancement of the use of ether as an anæsthetic at the Massachusetts General Hospital after its discovery by Morton.

After this the audience proceeded to the new school-building, where prayer was offered by Rev. Dr. Peabody, and the building dedicated to the purposes of medical instruction.

Addresses were made by President Eliot in behalf of the Corporation; Henry Lee, Esq., in behalf of the donors, and Professor Henry W. Williams, in behalf of the medical faculty.

The building was then declared open to the inspection of the guests and was viewed with great satisfaction. Among the visitors were Sir William McCormac and Sir Lyon Playfair, Mr. Clinton T. Dent, of London; President D. C. Gilman, Johns Hopkins Hospital, Baltimore;

President Laws, University of Missouri, and President E. G. Robinson, Brown University, Colorado; Robert Murray, United State Army; Professors Osler, Campbell, and Howard, Montreal; Drs. Mullen, of Hamilton; Atkins, of Toronto, and Professor T. Sterry Hunt, of Montreal; Professor Carmalt, of Yale College; Drs. J. Marion Sims, Fordyce Barker, C. R. Agnew, J. C. Dalton, W. H. Draper, T. E. Satterthwaite, C. C. Lee, G. F. Shrady, of New York; Drs. Mears, Minis Hays, H. C. Wood, Tyson, and Woodbury, of Philadelphia; Drs. Wood, Gerrish, and Dana, of Portland; Twitchell, of Keene, N. H.; Gale, of Brattleboro, Vt.; Drs. Caswill, Ely, Miller, and Parsons, of Providence, and many others representing different parts of the country. In the evening a reception was tendered at Young's Hotel where a bountiful collation was served.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 18, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

ACTION ON THE PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

AFTER the reading of the minutes of the last stated meeting and the report of the librarian, the Academy went into Committee of the Whole, with Dr. Ellsworth Eliot in the chair.

DR. AUSTIN FLINT, JR., said he did not desire to discuss the proposed amendments, but wished to say a few words in explanation. He did not pretend to represent any one or anybody, but simply was the spokesman of a certain number of gentlemen who are deeply interested in the Academy, and who believe that it can be best preserved in its usefulness by maintaining its present Code of Ethics, and who are uncompromisingly opposed to these amendments, one and all. The one object of the amendments is to eliminate from the By-laws and Constitution of this Academy everything relating to medical ethics, and to reduce it to a purely scientific body. Dr. Flint further spoke of the effect which would be produced upon the Council by the adoption of the proposed amendments, and at the close of his remarks moved that the committee rise.

After some discussion as to whether or not the motion to rise was debatable, and in which the decision of the Chairman was sustained that it was not, the committee rose.

After further discussion as to whether the Committee of the Whole had yet reported, and in which the decision of the President was sustained, the Secretary of the Committee of the Whole at the stated meeting held October 4th, Dr. W. M. Carpenter, was requested to report, who then read the resolution offered by the President and adopted by that committee.

The resolution was that the Committee of the Whole regarded it as advisable to adopt the proposed amendments to the Constitution and By-laws.

DR. A. FLINT, JR., moved that the report be laid upon the table.

On this motion the ayes and nays were called.

After some discussion as to which should be used in calling the names of the voters, the register of the evening or the roll of the Academy, it was decided by a vote of 88 ayes to 84 nays that the register should be used. The vote on the motion to lay upon the table was then defeated by a vote of 115 nays to 96 ayes.

DR. A. L. LOOMIS then moved that when the vote on the amendments is taken it be by ballot. Carried.

Dr. Loomis then moved that the Academy proceed to ballot on the proposed amendments and by-laws.

DR. A. FLINT, SR., moved as an amendment that the proposed amendments to the Constitution and By-laws be indefinitely postponed.

The ayes and nays were then called for and the result was: Ayes, 94; nays, 117.

DR. LOOMIS then renewed his motion that the Academy proceed to ballot on the proposed amendments. Carried.

THE PRESIDENT appointed as tellers Drs. H. D. Nicol and Daniel Lewis, with the Assistant Secretary, Dr. A. M. Jacobus.

The result of the ballot was 121 votes for and 92 against. The amendments were declared lost, as they required a three-fourths vote to adopt them.

THE PRESIDENT then said: I beg the indulgence of the Academy for a few moments only. Duty and honor demand that every member of an organization like this Academy of Medicine, with its high scientific aims and its joint stock property necessary to make those aims attainable, should cheerfully bow to the will of the majority. No one can doubt that it was with pain and regret that I announced the vote of failure to adopt the amendments which I regarded as most important for the future of the Academy. Having given my reasons for this belief in a letter addressed to every Fellow, and having at the last meeting still further explained my views, and having failed to convince a sufficient number to secure their adoption, I bow with submission to the decision. No one can assert that I have sought to secure my end by personal influence or personal solicitation. I have felt that this matter should be left to the intelligence and judgment of such a class of men as constitute this Academy, unbiased by passion or partisan feeling. I am well aware that it demands a higher tone of principle, and a more noble magnanimity, to cheerfully acquiesce in the will of a minority, but I now earnestly beg of all to forget, so far as this Academy is concerned, all past controversies, many of which, I am convinced, are not so much differences as to principles, as differences in regard to details—and that all should unite in earnest work for this Academy in its high endeavors to advance medical science, to support and increase this important library, for which so much has been done in the past by most liberal benefactors, and to keep up the journal and circulating department. For my own part, I can only promise for the future what I have sought to give in the past, my best efforts in this direction, not only while I have the honor to hold my present position, but ever after. [Great applause.]

DR. A. L. LOOMIS read the preamble and resolutions passed at the stated meeting of the Academy last spring, by which the Committee on Admissions was instructed not to report for active fellowship the name of any candidate who could not sign the By-laws of the Academy containing the Code of Ethics of the American Medical Association, and then moved that they be *rescinded*. He urgently appealed to the Academy to support his motion in the interests of harmony.

DR. E. C. HARWOOD rose to a question of privilege and submitted in writing an explanation of his vote on the resolutions at the time of their adoption.

DR. A. FLINT, JR., raised the point that the motion was out of order, because when the resolutions were adopted their reconsideration was postponed indefinitely.

THE PRESIDENT ruled that the motion was in order, on the ground that rescinding and reconsidering are entirely different.

DR. FLINT appealed from the decision of the chair.

The chair was sustained.

DRS. ROOSA and AGNEW supported the motion.

DR. LEON opposed it, and moved to adjourn, but his motion was lost.

DR. PIFFARD moved the previous question. Carried.

The motion to rescind and abolish the preamble and resolutions adopted at the meeting in April, 1883, was carried. [Great applause.]

The Academy then adjourned.

Reviews and Notices.

ANLEITUNG ZUR TECHNIK DER ANTISEPTISCHEN WUND-BEHANDLUNG UND DES DAUERVERBANDES. VON DR. MED. G. NEUBER, Privatdocent an der Universität Kiel. Kiel: Verlag von Lipsius und Tischer. 1883. A GUIDE TO THE TECHNIQUE OF THE ANTISEPTIC TREATMENT OF WOUNDS AND THE PERMANENT DRESSING. By DR. G. NEUBER, Privatdocent in the University of Kiel.

SINCE the adoption of the antiseptic method in Professor Esmarch's clinic at Kiel, several modifications have been introduced and carried out with marked success by Dr. Neuber. The most remarkable of these is the method of permanent dressings ("Dauerverband"), by which a large proportion of operation-wounds have been completely healed under one bandage or dressing. Details of this method and its results have been from time to time communicated through papers by Dr. Neuber in the *Archiv für Klin. Chirurgie*, which have been frequently quoted. The present volume of about one hundred pages, with numerous illustrations, is intended to be a complete guide to the practice of the Kiel clinic, together with a statistical record of its results. But it is more than this. It is a thoroughly good treatise on the subject of wound-treatment, and as such, and quite independently of its relation to the author's own methods, we recommend it warmly to the reader, and hope that a translation may place American surgeons in a position to show such creditable statistics as are exhibited in its pages.

INSANITY: ITS CLASSIFICATION, DIAGNOSIS, AND TREATMENT. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M.D., Professor of Medical Jurisprudence and of the Anatomy and Physiology of the Nervous System at the New York Post-Graduate School of Medicine; President of the New York Neurological Society; formerly Physician to the Department of Nervous Diseases of the Metropolitan Throat Hospital, and of the North-Eastern Dispensary. 8vo, pp. 415. New York: Bermingham & Co. 1883.

A PERUSAL of this work can hardly fail to leave the impression that there are at least two factors in its etiology. To speak in a psychiatric, we will not say Pickwickian, sense, these might be designated as the psychical and somatic. The psychical factor may be perceived in the natural desire of the author, as explained in the preface, to embody his individual views on certain phases of his subject, which have previously appeared in isolated communications to the medical press, in "the first systematic treatise on insanity published on this side of the Atlantic since the days of the immortal Rush" (and which, by the way, is dedicated on the previous page as an "humble tribute").

The somatic factor—to force the metaphor a little—crops out in the excess of spleen manifested in the author's numerous and uncalled-for uncomplimentary allusions to the attainments and qualifications of certain alienists, whose expert testimony in a recent *cause célèbre*, with which the profession are too familiar, happened to conflict with his criterion. It is with considerable hesitation that we make any reference to a subject, which is at best an unpleasant one, but Dr. Spitzka's policy in this particular is far too pointedly expressed to admit of any other inference than that this publication is intended, not merely as a vindication of his own position, but also to accomplish the alienistic annihilation of those gentlemen whose views on insanity in general, and on Guiteau in particular, have been the reverse of his own. It would have been more considerate, not to say logical, in Dr. Spitzka, after having observed "the failure" of his brother experts "to properly co-ordinate"

upon the witness stand "their impressions" of the murderer of Garfield "as the basis of logical conclusions and actions," to simply prove to them that they were the unfortunate subjects of "the so-called chronic delusional insanity" with marked symptoms of "moral perversion," instead of emulating "the Fourteenth Street assassin" by running a muck among them armed with a venomous pen. He should not only have remembered that "no delusion was ever cured by ridicule," but should have also taken into account the fact that, in the absence of any "scientific treatise on insanity on this side of the Atlantic," the "special points" on which he based his diagnosis might yet have been "comparatively new" and strange to them. We believe some such classification as we have suggested would have possessed quite as much intrinsic weight with intelligent "students and practitioners," as his own amiable division of the alienists who failed to agree with him on one particular case into "a combination of medical politicians, gynecologists, and laymen" (p. 357). Dr. Spitzka, however, having proved to his own satisfaction that the testimony of these individuals was "in harmony with the age, circumstances, and surroundings" of such a "combination," and thus depriving them of even the pitiable plea of insanity, proceeds to "knock them out" with a display of vigor and vivacity more suggestive of a follower of Mr. John L. Sullivan than "the immortal Rush." Vituperation is poor logic, and it certainly is unfortunate that the "first systematic treatise, etc., etc.," should savor so strongly of the campaign document. Extreme assertions, especially those of a personal character, are always to be taken *cum grano salis*. So, when such assertions are coupled in a scientific treatise with the expression of views which, in the present state of American psychiatry, the author admits to be extreme, he should not complain should the profession show a tendency to treat them with the same seasoning.

It has been far from a pleasant or congenial task to criticise in this manner Dr. Spitzka's otherwise scholarly work. That he has allowed personal animus to enter into a scientific discussion is the glaring defect of the book. It is forced upon the reader in a way which calls for comment. We think the profession at large will agree with us that such comment should be emphatic and condemnatory. That our remarks have been neither "finical or hypercritical," we submit the single fact, which the reader will scarcely be able to convince himself is a coincidence, viz., that, whereas every expert on the Guiteau trial, with but one exception, is industriously called upon in these pages to figure in a rôle analogous to that of the "terrible example" in a temperance lecture, the single witness whose testimony supported Dr. Spitzka receives the most effusive and flattering recognition. A glance at the index shows that reference to this authority is made no less than ten times, while Esquirol, Krafft-Ebing, Meynert, Maudsley, Bucknill, Take, and other minor lights, are either dismissed with the most casual mention or "damned by faint praise." The inference is obvious.

The strictly scientific part of Dr. Spitzka's book is deserving of considerable praise. The accomplished author displays throughout a masterly grasp of his intricate subject and a familiarity with its bibliography which is in the highest degree commendable. The volume has been issued in fairly neat form, though the few woodcuts, with one or two exceptions, are poor. The chief fault discernible in the author's style is the rather common one of an undue preference for forced derivatives, which is plainly to be attributed to an attempt to secure thoroughness and exactness of expression, but which often has the effect of causing his elaborate sentences to appear involved and unnatural, necessitating somewhat the same strain upon the attention which one experiences in reading a too literal translation of one of the ancient classics. It is, however, interesting to learn that "verbigeration" in cultivated parietic dements "in less edu-

cated ones" is replaced by a "*word diarrhæa!*" (p. 210). The oversight which makes "*Prosencephalon*" a Latin word (p. 101) would be trivial did it not occur in a discussion on derivation. Aside from the author's tendency to sacrifice simplicity to detail, the presentation of his arguments is direct and decided, his illustrations usually apt and well put, and his exposition of the most important points forcible, though occasionally dogmatic.

Dr. Spitzka's elaborate definition of insanity is avowedly altered to meet the exigencies of medical jurisprudence, although we question whether an American jury which is not chosen from the members of the Concord School of Philosophy would derive a much clearer idea of insanity from it than from Shepard's playful *dictum* about the "neurine batteries of the brain." We might also venture to question the soundness of the syllogism that, whereas "mental pathology has made more rapid progress in Germany, Italy, and France, where little stress is laid on such definitions, than in England or America," and whereas "an English author on lunacy" has offered a definition with the object of "puzzling the lawyers," that *therefore* in Anglo-Saxon countries the "chief need for the definition is a medico-legal one."

Dr. Spitzka's definition is neither much worse nor much better than many others with which the profession is familiar. While it may certainly be true that "the inability to correctly register experiences and impressions in sufficient number to serve as guide for rational conduct is an essential feature of idiocy or imbecility; and while it may also be true that "the failure to co-ordinate impressions as the basis of logical conclusions is the characteristic feature of insanities manifested by delusive opinions, insane projects, and imperative conceptions"—and while the words "in harmony with the individual's age, circumstances, and surroundings" are added as qualifications, with propriety, nevertheless, until we have some mathematical standard by which to prove that any given impression is registered correctly, that any given conclusion is logical, and that any given action is "in harmony with the individual's environment, such a definition will be worthless in a court of law. Any lawyer could make it exclude the insane, and include the sane, at will. He certainly has not improved upon Dr. Bucknill's classical definition of insanity as "a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, have separately or conjointly been produced by disease," which is shorter and clearer than his own, and fully as accurate.

In our opinion, Dr. Spitzka underrates the importance of the psychological treatment of his subject throughout. Such a treatment is assuredly more truly scientific, and can be made as completely practical as one more distinctively clinical or pathological. It may be that the enthusiasm with which he has developed the somatic elements of insanity has blinded him in a measure to its psychical bearings. The chapters on "The Physical Indications of Acquired Insanity," "Somatic Signs of Insanity Indicating the Existence of a Constitutional Taint of, or a Predisposition to Insanity," and "The Morbid Anatomy of Insanity," are by far the most readable and suggestive, as well as the best sustained in the book. But this very fact makes the work an uneven one. Aside from these, his discussion of monomania and parietic dementia will probably prove most interesting to the student of psychiatry. He has evidently taken a great deal of pains to give a perfect "classification of insanity." In this he has shown more than his usual skill and adroitness, and the classification is certainly a sound one from his point of view.

ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF LOUISIANA TO THE GENERAL ASSEMBLY, FOR THE YEAR 1882. Baton Rouge: Leon Jastremski, State Printer. 1883.

THIS voluminous report, consisting of over six hundred pages of printed matter, besides several intercalated sta-

tistical tables, embraces a period of eighteen months, from January 1, 1882, to July 1, 1883. The volume contains a detailed report of the quarantine and sanitary operations of the board during this time, an account of the commercial growth of the State under the successive dominations of France, Spain, and the United States; peculiarities in the political and medical history of Louisiana, the etiology of phthisis, the climate of Rio Janeiro, a letter to his Excellency the President of the United States, treatises on yellow fever and malarial fevers, illustrated with eleven highly colored lithographic plates, and a varied assortment of other interesting material. The Louisiana State Board of Health has done some hard work, and some very necessary and valuable work, but if it is no more economical in other matters than it is in the use of paper and printer's ink, we fear it must be a very expensive institution.

PRACTICAL LESSONS IN ELEMENTARY PHYSIOLOGY AND PHYSIOLOGICAL ANATOMY for Schools and Science Classes. By D. M'ALPINE, F.C.S. Twelve Plates. London: Bailliere, Tindall & Cox. 1883.

THE book before us is of the size of an atlas, and contains a folded leaf with colored lithographs showing the vertical section of a frozen child, also separate lithographs of the different viscera. Besides this, there are two full-page lithographs showing sections of the rabbit, and numerous other plates showing different tissues and organs.

The author's object is to present a work which will be practical, realistic, and attractive to science students. In selecting the rabbit as the animal whose anatomy is to be studied, the author has made a wise device, for it is much more easily handled than the cat or dog.

WHAT TO DO FIRST IN ACCIDENTS AND EMERGENCIES. By CHARLES W. DULLES, M.D. Second edition, revised and enlarged. With new illustrations. Philadelphia: P. Blakiston Son & Co. 1883.

THIS little manual is intended more especially for use in the absence of the physician. The immediate treatment both of surgical and other injuries and accidents is presented in a plain and very acceptable manner, and will undoubtedly prove a useful guide in many emergencies. Among the various cases dealt with are: Drowning, fits, effects of heat and of cold, sprains, fractures, wounds, hemorrhages, etc., etc., together with various domestic emergencies.

POISONING BY SALICYLATE OF SODA.—Dr. Pineau writes in *L'Union Médicale*, of July 5, 1883, of a young man, suffering from typho-malarial fever, who took by mistake two and a half drachms of salicylate of soda. Nothing unusual was noticed for over two hours, when the patient was suddenly seized with extreme weakness, amblyopia, and tinnitus aurium. The entire surface of the body became blue and the extremities were cold. Finally such a profuse perspiration broke out that the mattress was soaked, and the patient was enveloped in steam as if in a vapor-bath. This condition lasted for about three hours. When seen several hours later, the patient was pale and still covered with a cool sweat. He had not urinated for about twenty-four hours, but passed at this time nearly a pint of strongly acid urine, not albuminous, and containing 26.4 grammes of urea per litre. The patient recovered without special treatment. The fever from which he was suffering subsided and convalescence became at once established. The reporter does not state the mental condition of the patient, except to say that he did not at any time lose consciousness entirely.

LACTIC ACID IN DIPHTHERIA.—Dr. J. P. Lytle reports favorable results with a spray of lactic acid in diphtheria. He says that it rarely fails to dissolve the membrane in two or three applications. The solution used was of the strength of lactic acid, grt. xxx.; aquæ, ʒi.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A
TRIP THROUGH THE GREAT NORTHWEST.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: Having participated in the opening excursion of the Northern Pacific Railroad, your correspondent had rather exceptional opportunities to observe many of the distinctive features of the far West, together with its peculiarities of life and manners. It may interest some of your readers to be made acquainted with the impressions, more particularly from a medical point of view, which the wide West makes on what is commonly there called an "Eastern tenderfoot." Now, "tenderfoot" is not to be construed as the Western equivalent of that much evolved and more abused specimen of mankind, familiarly styled "dude." For even the Montana cowboy recognizes the latter. Not that he has ever seen the true prototype of a class that was erstwhile so numerous among us. But he is convinced that a person caught in the act of wearing a white linen collar, and who looks as though he might have recently shaved or washed his face, must be a dude, true and proper. And, moreover, since the typical Westerner freely, and often quite forcibly, expresses his convictions, the term "dude" is at present perhaps oftener employed west of the Mississippi than east of it. Please pardon this explanatory digression, but it really seemed essential to point out that the tenderfoot need not necessarily be a dude, and *vice versa*.

Your correspondent spent one week in Chicago, and endeavored to ascertain the status of the medical profession there. Considering the amount of talent in its ranks, it stands much lower than it should. The principal blame for this unfortunate circumstance must attach to the physicians themselves. The Chicago doctors are under-paid, and, therefore, under-estimated.

The phenomenal growth and commercial prosperity of this great Western metropolis excite the wonder and admiration of all visitors, native as well as foreign. This unparalleled rise is without the slightest exaggeration one of the wonders of the world. But the Chicago doctors lag behind, pecuniarily and in popular esteem. And why? Simply because as a class they charge too little for their services. The Chicago of to-day is no longer a merely rising city, whose inhabitants fondly dream of future glory. It is a great living actuality, with an assured future of still greater accomplishment. Why, then, have the Chicago doctors retained the "small-city fee?" In commercial capitals the principle of valuation is the predominant one. Price determines worthlessness as well as worth. Whatever is excellent commands a high figure. Hence the people argue that cheap doctors must be poor doctors. It would be difficult to convince the average citizen of the fallaciousness of such reasoning. The remedy for this evil is self-evident. Let the doctors charge more. The old established physicians must lead this reform movement. They will lose patients at first, but they will gain in prestige, and their incomes will not suffer. In the end they will have elevated the profession as a whole, while they will have benefited themselves as individuals.

This is not idle talk. It is the earnest advice of one who would fain see his chosen profession lifted above, or at least to the same level with other callings. For such eminence is but the just reward for a life of ceaseless toil and self-sacrifice, and for the unhesitating assumption of graver responsibilities than any other profession entails. And in this connection the writer would be pardoned for humbly suggesting to the profession at large the advisability of inculcating "high-fee" principles, as essential to the proper standing of the doctor in the community. Sordid motives should ever be foreign to our profession. But let us recognize the actual commercial value of our services, without sham hesitancy, without

the assumption of false modesty, without maudlin sentimentality. For as yet ours is a young country, where commercial values rule the day. In the ideal world that is to replace the present imperfect one, the doctor may well make fifty cent visits, and take the balance out in sentiment; but at present sentiment will not pass current in buying bread. And God knows the doctor needs bread, as much, if not more so than other mortals. And now let there be no further digression, but a broaching of more novel themes.

Concerning the evils of hospital management, and the intrigues of rival medical schools, it is quite unnecessary to write. Pretty much the same flavor attaches to these matters in Chicago as in New York. The less one dwells on such sore spots of the body medical the better. A few words about a new and highly deserving charity that has been quite recently inaugurated in Chicago. It is called the Lakeside Sanitarium. It has for its object the treatment of infantile diarrhoeal diseases occurring during the warm weather. A commodious pavilion has been erected fronting the lake. Here the poor mothers take their suffering babies, the latter remaining all day. Hammocks, a kitchen, bathing facilities, the necessary drugs and restoratives have been provided, and a medical staff makes several daily visits. Dr. Randolph, formerly of the St. Francis Hospital, of New York, is one of the physicians in charge. He kindly explained the system to your correspondent, and pointed out the gratifying success that had already attended the life-saving efforts of this young institution. The immediately rallying effects of the pure lake breezes are a matter of constant surprise to all who witness their action upon the babes removed from crowded tenements. A rather serious drawback, however, would appear to be the present impossibility of allowing the little ones to remain in the sanitarium over night. But of course, with the growth of the institution, this defect will be remedied.

In taking leave of this city, it may not be amiss to repeat a story, that seems to your correspondent quite typical of Chicago and its rapid growth. A patriotic citizen having returned from a prolonged journey abroad, meets an old friend in the street, when the following brief colloquy ensues: "Well, old boy, I'm glad to see you back, do you think we've changed any while you were away?" "Changed," replies the former, "why don't you know we have lied about Chicago, and lied about her, and continued to lie about her. And yet to-day she is away ahead of all our lies!" Mayor Carter Harrison probably knows of this story.

About Minnesota it would be easy to say, with perfect justice, many pleasant things. In the first place, the Eastern traveller cannot fail to be agreeably affected by the exhilarating effects of its dry, crisp air. There is something so very unmalarious about it that one feels inclined to doubt whether the Minnesota doctor ever prescribes quinine. Almost the entire State is elevated from one thousand to two thousand feet above sea-level. Hence, its climate shows those peculiarities that are more or less characteristic of the entire Northwestern region—that is to say, there is an almost daily change from hot to cold, with a thermometrical range above 50° in spring and winter, and a variation of about 40° for the summer. Nevertheless, neither the almost tropical heat, nor the extreme cold ever become so oppressive and unbearable as we are accustomed to find them in New York.

Chronic pulmonary diseases appear to be rare in Minnesota; and indeed its salubrious climate would lend itself readily to the establishment of sanitary resorts for those afflicted with such maladies.

One circumstance strikes the traveller as quite peculiar in Minnesota, and that is the conspicuous absence of very old persons. Indeed, to a greater or less extent this applies to the entire region traversed by your correspondent. Leading physicians resident in the various towns and villages along the road are ready to admit this,

as a feature of the new life in their rapidly growing country.

The explanation they offer is based not on one, but on several facts, all operative in the same direction, viz., that of curtailing man's natural term of existence. Most potent among these various factors is the high tension of all human activity out there. Working with half-power is a thing unknown. All faculties are enlisted, all energies constantly strained to accomplish the chosen task of life. What wonder, then, that nature's stock of reserve force is early exhausted; and a sudden, complete collapse, as of the one-hoss shay, is the rule, not the exception. Death seems merciful, and does not linger in the lap of long and painful illness, as is so frequently the case with us. It takes the system by surprise, as it were; there is a short, sharp struggle, with a quick decision either one way or the other. Slight ailments would appear to be both less frequent and less attended to than in the East. Chronic affections are likewise fewer, in proportion, than elsewhere. Of course, all this is to be taken in a broad, general way, and not as a rule without exceptions.

One derives the impression, from the above, that the people there have no time to dally with disease. They are constantly in a hurry, even when sick. Evidently, they have not yet reached that point of civilization which allows them to "make haste slowly."

Respectfully yours,

EDMUND C. WENDT.

136 WEST THIRTY-FOURTH STREET,
New York, October 10, 1883.

(To be continued.)

THE THERAPEUTIC VALUE OF THE COLORADO CLIMATE.

TO THE EDITOR OF THE MEDICAL RECORD.

I HAVE been a reader of THE RECORD for four years, and do not remember ever to have seen a line in that journal in reference to Manitou or the State of Colorado as a health resort. I have observed also that among the numerous invalids who come to this section from nearly all parts of the world, it is rare to see one who hails from New York. The writer practised medicine in Brooklyn for three years, and I do not remember any mention of this place by the physicians of that city during that time. It has occurred to me, therefore, to endeavor to call the attention of New York physicians to the merits of Colorado as a resort for those afflicted with lung diseases. For this purpose I prefer to speak of my own experience and immediate surroundings, rather than make use of the various statistics collected by others.

The population of Colorado is largely made up of persons who came here originally on account of some lung disease, and have either recovered or found relief.

From the careful observation of such cases as have come under my care or notice, I think the following statements may be formulated as true: Spasmodic asthma is invariably and immediately relieved by a residence in Colorado. Asthma, accompanied by emphysema, bronchitis, or consumption, is relieved only in proportion as the catarrhal state of the air-passages is improved. Hay fever is not relieved. Nasal catarrh is usually much worse for a few weeks, when decided amelioration or a cure follows. The effect of this climate upon consumption is peculiar. The barometer stands at 22 or 23 inches; consequently the rarity of the atmosphere is great, and acts practically like a cupping-glass upon the blood-vessels. The altitude of Manitou is one and a quarter mile above the sea, and, as would be expected, an extraordinary expansion of the lungs is required to supply oxygen to the blood. Much of the reserve space of the lungs is called into use; diseased tissues are forcibly torn open; a passive catarrh of the lungs is converted into an active inflammation; slight or profuse pulmonary hemorrhages often occur; and what was be-

fore a slight cough, with moderate expectoration, becomes frequently a violent, almost incessant, cough, with profuse expectoration. With this there is usually more or less elevation of temperature. In a period of time varying from one month to one year, the fever disappears, the cough diminishes, and the expectoration becomes more scanty, and from this time on, in favorable cases, the patient progresses toward a complete recovery. As far as I am able to judge, no cavities result from this violent disturbance of the lung tissues.

I have sketched briefly a typical case, as observed in many instances. As would be inferred, this would represent a patient in the earlier stage of catarrhal pneumonia, in whose lungs no serious damage had occurred before coming here, and whose vital forces were still good.

Where the lungs are very seriously affected, and the vital forces are much impaired, the process of healing which I have outlined, viz., the conversion of a passive, lingering catarrh into an active inflammation, is not well borne, and is apt to end fatally much sooner than in a mild southern climate.

As far as my observation has gone, every case of consumption accompanied by early hemorrhages has been cured in this climate, if the patient has come here within a few months of the invasion of the disease. The time required for the symptoms to cease is from three months to two years. In other cases, unaccompanied by hemorrhage, resorting here shortly after the invasion of the disease, the majority have been entirely relieved of all symptoms. A certain proportion have succumbed to wasting hectic fever; others have fallen into a chronic condition, where progress in neither direction seems to have been made for ten and even twenty years.

The climate of Colorado is extremely dry. It never rains from the middle of September until the middle of April—seven months. Three years ago there was no rain for eleven months. In the summer showers occur nearly every day at about three o'clock in the afternoon. Snow-falls come in the winter months. They seldom exceed two inches in depth, and lie upon the ground not longer than twenty-four hours. In 1881 there were two such flights of snow in Manitou; in 1882, three. During the winter the days are warm. An overcoat is not required. At night it is always cold, both in summer and winter.

Manitou is located at the foot of Pike's Peak. The scenery is such as to attract twenty thousand visitors annually. There are here nine mineral springs. Three are chalybeate; the remainder closely resemble the Apollinaris in taste and properties. There are here frequent mails and telegraphic facilities, railroads, banks, churches, and much that reminds one of New England life, while law and order are as good as in any place in New York.

The cost of living is from \$40 to \$100 per month. I add these details, as they are the subject of frequent inquiry by letter.

I could readily add many pages of notes of cases which have come under my observation, but they are tedious at best, and seldom read. It is of importance to say, however, that experience has abundantly demonstrated the fact that persons who have been relieved of all their symptoms here are extremely liable to a relapse if they return to the place where the disease was originally contracted.

FREDERICK FULLER, M.D.

MANITOU, COLORADO.

PERSISTENT HICCUGH CURED BY SUBCUTANEOUS INJECTIONS OF Pilocarpin.—Dr. Ruhdorfer, of Götzendorf, relates the history of a girl nineteen years of age who, for three months, suffered from an obstinate hiccough. All kinds of sedatives were employed in vain. Subcutaneous injections of pilocarpin, gr. ss. in ℥ xv. of water, finally gave relief. Stadler has reported a similar case cured by the same means.

THE ABORTION OF TYPHOID FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The medical profession is skeptical as to the possibility of aborting typhoid fever. The editor of the *Medical Age* says: "We have given our opinion of the man who claims to abort typhoid fever, and while we may now regret the somewhat inelegant language in which it was couched, we shall not modify it until such evidence is brought to bear against it as will stand the test of science." Now, if Professor Busch can cure sarcomatous tumors with so simple a remedy as mustard and black soap, we need not despair that a scientific remedy to abort typhoid fever will be discovered. In my experience I was never able to accomplish that much-desired feat until in the epidemic of last year, but invariably stood a helpless spectator, witnessing one case after another attacked in the same family. That year I was attending a case in the third week, when two other members were complaining of the initial symptoms, and I gave them the following: Tinct. iodine, gtt x., every six hours; Fowler's solution, tinct. baptisia, āā gtt. v., every six hours, alternated with the iodine, so the doses came every three hours. In addition to the above, if malarial action was present, gave quinine in three-grain doses through the night. The result was abortion in all cases in the prodromic stage, and in a large per cent. of cases in the early stage of the fever before serious lesions of the mucous surfaces had occurred. Was that treatment scientific? The action of iodine and arsenic as bactericides are well known, but baptisia, being more restricted in use to the eclectic school, is not so generally appreciated. It is the vegetable analogue of the other two remedies and principally used because of its eminent antiseptic virtues. I procured the homœopathic mother tincture as the most reliable preparation. After learning the abortive effect of the above treatment I adopted it in a few advanced cases with benefit. The bronchitis improved and in one case the temperature fell two degrees by the next day.

J. M. WARD, M.D.

CORNELIA, MO.

[We print the above not so much for its real value as to show how entirely unconscious of the nature of the problem (which he thinks he has solved) our esteemed correspondent is. He evidently belongs to the "impressionist school" of which we have before written. It is one thing to believe in a remedy, it is quite another to demonstrate its efficacy. In order to do the latter, evidence must be diligently collected and presented. The most careful records of the alleged aborted cases should be made, otherwise the skeptical world will say that they were not typhoid cases at all, but that the patients were, perhaps, a little bilious.—ED.]

THE CONDEMNATION OF VESALIUS.—*À propos* of a recent painting representing Vesalius starting back affrighted at discovering signs of life in a man whom he supposed dead, and whose thorax he had just opened, M. Bouchut writes in the *Paris Médical* that the subject of the picture is historically incorrect. The story is that upon opening the chest a movement of the heart was detected, which was taken as proof that the subject was yet alive. For this Vesalius was tried before the Inquisition, and condemned to death, but at the urgent solicitation of Philip II. this sentence was commuted to a pilgrimage to the Holy Land. A Spaniard, named Morejon, has shown, however, that no such thing ever occurred. Vesalius was never tried before the Inquisition, and consequently never condemned. His pilgrimage to Jerusalem was made because of ill health, and from pious motives, and it was only with great difficulty that he could obtain from the king, whose physician he was, permission to undertake this journey.

Obituary.

FREDERICK D. LENTE, M.D.,

COLD SPRING, N. Y.

DR. FREDERICK D. LENTE, an eminent physician and surgeon, died at Cold Spring, Putnam County, N. Y., in the sixtieth year of his age, on the 13th inst., of cerebro-spinal meningitis. Dr. Lente was born at Newbern, N. C., in 1823, and was a graduate of both the University of that State and of the University Medical College of New York. After leaving the latter college he studied for a time under Dr. Alfred C. Post, and was afterward, under Dr. Valentine Mott, for two years, on the house-staff of the old New York Hospital, which at that time had attained its greatest reputation. In 1851 he was appointed surgeon of the West Point Foundry, at Cold Spring, and filled that position until 1870, when he came to this city, and was almost immediately appointed to the Chair of Gynecology and Diseases of Children at the University Medical College. He filled other positions of honor and influence in this city, but in 1871 he was compelled to give them up on account of threatened failure of his health. He returned to Cold Spring, and, resuming his former position there, remained until 1875, when he once more left it and entered upon the practice of his profession at Palatka, Fla., during the winter months, and at Saratoga Springs in the summer. Dr. Lente was one of the founders of the American Academy of Medicine and its first President, and at the time of his death he was a member of the Neurological, the Pathological, and the New York and Dutchess County Medical Societies, the American Public Health Association, the Board of Managers of the Hudson River State Hospital, corresponding member of the New York Medico-Legal Society, and honorary member of the North Carolina Medical Society. Dr. Lente had an extensive acquaintance and reputation through the Northern and Southern States as a general practitioner and as a surgeon. He was not only skilful and successful here, but he had an original and observant mind. His numerous contributions to medical literature were always valuable and were widely noticed. His work was characterized by great thoroughness and exactness. Personally, Dr. Lente was very popular among all who knew him, and was warmly esteemed by an unusually large circle of friends.

Navy News.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 13, 1883.

HILAND, THOMAS, Surgeon. Granted leave of absence for one year, with permission to leave the United States.

SIMON, WILLIAM J., Surgeon, and CRAWFORD, M. H., Passed Assistant-Surgeon. Ordered to report on November 1st for duty on board the U. S. S. Trenton.

A CASE OF CONGENITAL HYDROCEPHALUS, WITH IMMENSE CRANIAL DEVELOPMENT.—Dr. C. I. CONOVER, of Charleston Four Corners, N. Y., relates the history of a patient, Mrs. D—, whom he had been called to attend in confinement. He found a breech presentation. After a time, no progress being made, and the child being found to be dead, the mother was anesthetized, and the base of the infant's skull punctured. About three pints of hydrocephalic fluid flowed away. The child was finally expelled. All parts of the child were normal except the head, which measured, we are told, twenty-three inches, the normal measurement being thirteen. Dr. Conover has preserved the head in a bottle to convince the incredulous.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 16, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
October 9, 1883.....	0	74	42	8	10	29	0	0
October 16, 1883.....	0	59	40	4	17	37	0	0
<i>Deaths.</i>								
October 9, 1883.....	0	25	2	6	5	14	0	0
October 16, 1883.....	0	19	5	3	4	13	0	0

STATE VETERINARY SOCIETIES have recently been organized in Illinois, Michigan, Wisconsin, Ohio, Indiana, Iowa, and Pennsylvania. It is proposed to organize one in this State.

ASTHMA CURED BY GALVANIZATION OF THE NECK.—Dr. Peter Eade reports a case of essential asthma of a year's standing cured by galvanizing the neck. The current was applied daily for ten days.—*British Medical Journal*.

THE STEREOSCOPE IN THE STUDY OF ANATOMY.—Mr. S. F. Elliman has been making experiments with reference to the use of the stereoscope in illustrating the anatomy of the domesticated animals. He exhibited his pictures before the Veterinary Society of the Gironde. The following comments are quoted by the *Journal of Comparative Medicine*: "Applied to anatomical subjects the stereoscope causes to stand out in a manner not less remarkable the complicated parts; it prolongs the view to the bottom of the great nervous cavities; it detaches the muscle from the bone which it covers; in short, it recalls to the student, as to the surgeon, the anatomical peculiarities belonging to each region of the body. One might say, to a certain point, that, thanks to this instrument, it is possible to study anatomy in one's own room; that is to say, without operating on the dead body, by the aid of which the conformation of the organs is generally studied. The application of the stereoscope to anatomical studies is, then, a very happy idea, and of which one must allow the Bordeaux Exhibition has given the first example."

IN A CASE OF HEMORRHAGE FROM THE INTERCOSTAL ARTERY, from homicidal stabbing, I arrested the flow immediately by making pressure within the pleural cavity, directly on the vessel, by introducing into the wound the handle of a door-key. The key was then turned transversely, so as to make direct pressure, and maintained in that position for some hours, until there was no more tendency to hemorrhage. The same mechanical action might be effected by the similar use of the handle of an ordinary gimlet.—DR. LEVIS, Philadelphia.

HOW TO HANG.—The death of Marwood, the London hangman, has revived a melancholy interest in the best methods of strangling people. An English journal describes a new invention in this particular line which is said to be remarkably effective. The inventor brought his machine to London and showed it to various persons there. A reporter who examined it writes: On near examination it was found that the rope was the ordinary half-inch white hemp, passed double through a brass clamp, forming a loop which could be adjusted to the exact thickness of the neck of the criminal. Immediately

before the clamp was fitted a brass crescent measuring nine inches from tip to tip and projecting three inches from the rope. This brass crescent is so adjusted as to lie on the shoulder of the condemned, while the double rope is looped on one side so as to allow a drop of from two to four feet. The principle of the invention is that the moment the criminal is swung off the crescent presses against the side of the head, while the rope pulls the neck sharply in the opposite direction, snapping the spinal column like a stick of sealing-wax, and occasioning instant death. "It cannot fail," said its inventor, as he lovingly fitted the hempen loop round the neck of one who was present at the interview, and screwed the clamp tight at the right distance. "It will hang you sideways, back or front, just as you like; it cannot fail; just drop off this table and it will be quite sufficient. No need of a long drop, no pulling men's heads off their shoulders; everything painless; the very invention that is wanted. The leverage gained by the three-inch projection of the brass crescent will snap any one's neck." "But might not the rope snap?" he was asked. "No, because its double; Marwood uses a five-eighth inch rope for a long drop; one-half inch double for a short drop will be more than is necessary. Jack Ketch always used the one-half inch. The thinner the rope the surer the job. You can hang a cat with a whiplash, but not with a half-inch rope." "How did you try your experiments?" "By making lay-figures of various weights, fixing a block of wood as a head on a stout pole, surrounded by wire springs to represent the vertebrae of the neck. I have tried it with many weights and many lengths of drop, and never found it to miss. In the cause of humanity and civilization I appeal to you to secure the adoption of this humane invention." The inventor, after disengaging the apparatus, then left for the Home Office, carrying with him his invention for presentation to the Home Secretary. His name is Scholefield, and he is now working at Palmer's ship-yard at Jarrow.

A VIAL FOR CARRYING SOLUTIONS FOR HYPODERMIC USE.—Dr. S. Mitchell, Jr., of Hornellsville, N. Y., sends the description of a vial which he has devised for carrying solutions for hypodermic use. The object is to provide a vial from which the solution can be readily drawn into the syringe. To accomplish this a tube perforated at the lower end is passed through the closed top of the vial to its bottom. The upper end of the tube is funnel-shaped. The needle is passed down into the tube and easily sucks the solution out of it.

DR. HOLMES' ADVICE TO A YOUNG PHYSICIAN.—Dr. Holmes, some years ago, wrote as follows to a young man who requested his advice about becoming a doctor: "My dear young friend—To be a physician the following requisites, if not absolutely necessary, are very desirable: First—A sound constitution. The wear and tear are very great, and cares, broken rest, irregular meals, and exposure of all kinds demand great stamina. Second—An unselfish nature. You must always think of your patient's welfare, not of your own comfort or habits. Third—You must be content to wait a long time before you establish a paying reputation. Fourth—Much of your work being distasteful, wearisome, wearing to the body, and almost fruitless to the mind, you must gradually harden yourself to the routine, and for this you ought to have an easy and accommodating temper. Fifth—You must be in constant familiarity with suffering of all kinds, which must either make your feelings tough, or keep you in distress. Medicine is very exacting. I don't believe much in literary doctors. I would not have one that was in the habit of scribbling verse, or stories, or anything of the kind. Yours, very truly, O. W. HOLMES."

DERIVATION OF THE WORD CHARLATAN.—In former times physicians received and treated their patients in their own (the physicians') houses, and seldom made visits outside, or if they did they went on foot. But there

came to Paris at one time a medical genius who knew how to care for himself better than he did to cure his patients. His name was Latan. He had a wagon (char) filled with medicines, and used to drive about through the streets seeking out patients and proclaiming the virtue of his remedies. He was the first travelling-doctor, and as he went through the streets the people used to say: "*Voilà le char de Latan.*" From this came the abbreviated form, charlatan, which came to be applied to all travelling quacks.—*Berliner Tagesblatt.*

The commonly accepted derivation of the word is from *circulatanus*, a corrupted form of *circulator*.

PATHOLOGICAL SPECIMENS FROM PREHISTORIC TIMES.—At the recent meeting of the French Association for the Advancement of Science, Dr. Prunières exhibited some bones found by him among the remains of the cave dwellers. There were specimens showing fractures united without deformity in the long bones, and one fracture of the atlas, with the fragments united to the axis in such a way as to reduce to one-third of its normal size the vertebral canal. There were also several vertebrae showing a spina bifida, the subject of which had lived to adult life in spite of the lesion.

CYSTIC TUMOR OF THE THIGH FOLLOWING RUPTURE OF THE CAPSULE IN MORBUS COXARIUS.—Dr. Alfred M. Leonard, of Camden, N. Y., reports a case under the above title. The patient, a young lady, at the age of thirteen fell from a tree striking squarely on the heel. She experienced some pain in the right knee and the limb continued to be weak. Three years later she fell while skating and struck upon the right hip. Inflammation of the joint set in. The patient was put in bed and extension applied. This was followed by the use of a long hip splint. After about three months symptoms of rupture of the capsule appeared. At the same time a small tumor made its appearance below, and behind the trochanter major, which increased rapidly in size, extending downward and laterally, soon necessitating the removal of the splint. It was accompanied by a complete cessation of all inflammatory symptoms; she has had no pain, or discomfort otherwise than that caused by the bulk and weight of the tumor, or any febrile symptoms that would indicate toxæmia. An operation was performed, and ninety-two ounces of thin yellowish fluid withdrawn, containing large quantities of cholesterol crystals, mucin, and epithelium. The sac was removed, adhesions broken, and the wound dressed antiseptically. The wound healed by first intention, except a small fistulous opening which continues to discharge a thin, whitish fluid. The patient walks with a limp, but without artificial support. The movements of the joint are perfect and the limb but little shortened.

A CASE OF CYANOSIS IN WHICH THE INTER-AURICULAR AND INTER-VENTRICULAR SEPTA WERE BOTH DEFICIENT.—Dr. Hattie A. Gallatin, of Cleveland, O., reports the case of a male infant, eight months old, who suffered from cyanosis and occasional fainting spells. The child lived to be two and a half years of age. It was tall and delicate, with a disproportionately large head. The face, arms, and upper part of the body were usually cedematous, the surface cold, the patient chilly. The antero-posterior diameter of the chest was increased, the area of cardiac dulness large. Various murmurs were heard at times, the most constant being a *presystolic rippling* sound. The cyanosis was not always present, but came on in paroxysms with accompanying dyspnoea and orthopnoea. The paroxysms, at first rare, gradually increased in frequency until death. The appetite was good. There was considerable diarrhoea. The autopsy revealed the following conditions: heart normal in position and very large; lungs normal, though somewhat compressed by the heart, and dark colored; pericardium greatly congested, and usual quantity of pericardial fluid; the heart was of the size of the

adult female heart, with right auricle of unusual size; aorta, pulmonary artery, pulmonary veins, and venæ cavæ normal in position. Right auricle found to be very greatly dilated, being capable of holding two fluidounces. The foramen ovale was open about three-fourths of an inch in diameter with lax margin. The annulus ovalis seemed entirely wanting. No trace of Eustachian valve. Openings of cavæ, the walls, appendix, and muscoli pectinati, all normal. The auriculo-ventricular opening was a little large. Right ventricle: capable of holding two fluidounces. Walls one-half inch thick. Columnæ carnæ, chordæ tendinæ, and tricuspid valve normal. On attempting to pass a probe from the ventricle through the pulmonary artery, to my surprise the other end appeared in the aorta. Closer examination showed the inter-ventricular septum to be deficient at its upper margin, so that the aorta and pulmonary artery both communicated freely with either ventricle, or with both; most freely, however, with the right. The opening was three-fourths of an inch in diameter, and at the upper margin of the inter-ventricular septum. The semilunar valves of aorta and pulmonary artery were perfect. Left auricle: capable of containing less than an ounce, while the right had a capacity of two ounces; otherwise normal. Left ventricle: capacity of one and a half ounce. No abnormality but the deficient septum. Cases of cyanosis in which the inter-auricular and inter-ventricular septa are both deficient are not of frequent occurrence. Smith, in his table of one hundred and sixty-four cases, does not mention any of this variety, unless he includes them under cases of "one auricle and one ventricle," which seems improbable, as both septa were present though imperfect. Other authors mention this condition, but he has not been able to find any reliable statistics concerning it. Nor has he found any satisfactory cause assigned for the almost complete remissions of cyanotic symptoms noticeable in nearly all cases. In some malformations the possibility of well-oxygenized blood circulating exists, but in many others it is precluded by the nature of the malformation, as in the case above recorded. Why, then, and how, do the remissions occur? Can any one enlighten me? It is manifestly impossible that when both septa are deficient pure arterial blood should at any time circulate, yet in this case, during the first eighteen months of life, the remissions were apparently complete, and often no cardiac murmur could be detected. That the treatment mitigated the symptoms and prolonged life I have no doubt. For some months the patient took morphia in infusion digitalis with marked benefit, the paroxysms becoming more severe and lasting longer whenever the medicine was omitted for a day. On several occasions when the cardiac disturbance was particularly intractable, marked benefit was derived from the use of chloral hydrate in hypnotic doses.

CATTLE AFFECTED WITH CANCER.—The Sanitary Inspector of Chicago announces the discovery of numerous cases of cancer (?), generally of the tongue, among the stock-yards of that city.

DEATH OF AN OLD PRACTITIONER.—On October 7th Dr. John C. Tibbets, aged ninety, died at his home in Warsaw, N. Y. He claimed to be the oldest continuous practitioner in the State, if not in the United States, having been engaged actively for seventy-one years in his profession. He was graduated when only eighteen, and began practice with his father at Warwick, R. I. He was United States Examining Surgeon for many years.

MEDICAL EXAMINERS IN PLACE OF CORONERS IN RHODE ISLAND.—A bill was introduced into the Rhode Island Legislature last May abolishing the coroner system and substituting medical examiners as in Massachusetts. The bill under the rules passed over to the December session. At the quarterly meeting of the Rhode Island State Medical Society, the subject was discussed,

and the bill, in its general features, was unanimously approved. Dr. Williams, of Boston, an honorary member of the Society, was present, and explained the medical examiner law of Massachusetts. This law, he said, worked to entire satisfaction and with manifest economy. The cost to the State is about two-thirds that of the old coroner system, and in large cities where the services of the examiner are required it is even less. The results to the prosecuting officer are much more satisfactory. The report is made by an expert in scientific legal style, instead of in the miscellaneous way so common under the coroner system.

THE PROPHYLACTIC USES OF CATS.—Dr. F. Bradnack, of New York, sends us the following curious history: "Some time ago I was hastily called to a house on Eighty-sixth Street. Briefly stated, what I found was as follows: A young woman (German), having occasion to go out, had left her infant, aged sixteen months, laid upon a pillow by an open window. Her carelessness was promptly rewarded, for she had not been gone three minutes before the child fell out of the window and struck upon a stone pavement about twelve feet below. It was picked up and carried into the house by one of the neighbors. I found, upon examination, that the back (dorsal and lumbar regions) was badly contused. Naturally expecting to find the skull fractured, I made a minute and careful exploration. To my astonishment, there was neither cranial fracture nor displacement. There was not even a scalp abrasion apparent. Puzzled at this, I asked if any one had actually seen the child fall from the window. This question produced one of the neighbors, an intelligent man, who deposed as follows (I quote the substance of his statement): 'The reason why the child's head was not smashed by striking the pavement is that exactly under the window from which it fell there lay asleep a large tom-cat. The head of the child struck squarely upon the belly of the cat. I was standing close by at the time, and saw it.' Upon my expressing some incredulity at so unprecedented a coincidence, the man asseverated that the facts were exactly as he had stated them. I dressed the child's back with simple anodyne and emollient applications, and prescribed a small quantity of chloral hydrate to insure sleep. The next day, barring the superficial abrasions over the dorsal and lumbar regions (which soon after healed entirely), the child was doing quite well. What was perhaps fully as strange is the fact that the cat was sitting on the hearth, and also doing 'as well as could be expected under the circumstances.' From subsequent inquiry, I learned that another man also witnessed the fall. He was considered a trustworthy person by his neighbors. He fully confirmed the testimony of the first narrator. In short, there is no reason for doubt concerning this remarkable coincidence. They who are too hasty in denouncing the feline race as a nuisance would perhaps do well to bear this case in mind."

REGISTERED PHYSICIANS IN LOUISIANA.—In accordance with a law passed by the Legislature in 1882, it is now obligatory upon all physicians practising in Louisiana to be registered by the Board of Health. The number of physicians thus registered up to July, 1883, was 559, of whom 156 were practising in New Orleans. Two parishes are reported as being without a duly qualified physician, and in Union Parish all the practitioners, to the number of nine, are registered as without diploma, their qualifications being a more than five years' practice before the new law came into effect.

THE SANITARY COUNCIL OF KENTUCKY.—The second semi-annual meeting of the Sanitary Council was held at Glasgow on Tuesday, October 2d. In the absence of the president, Dr. J. A. Dixon, Dr. B. H. Grinstead was called to the chair. Dr. J. N. McCormack, of Bowling Green, Secretary of the State Board of Health, was elected permanent secretary. Dr. Grinstead, Health Officer of Glasgow, read a carefully prepared paper on

"The Adulteration of Medicines," with special reference to the prevention of such adulteration. This was followed by a paper, by Dr. J. S. Linch, of Glasgow, on "The Management of Small-pox, and its Restrictions." Both of these papers elicited interesting discussion, the speeches being limited to five minutes. Dr. J. W. Holland, of Louisville, presented an elaborate paper on "The Cause and Prevention of Cholera," citing the history of the disease in many cities and towns of the State in 1873, to support the commonly accepted view that the disease is miasmatic, contagious in character, and was to be controlled by cleanliness, isolation, and the careful disinfection of the alvine discharges, and everything with which they come in contact. The discussion of this paper concluded the day session. A large and intelligent audience greeted the council at the evening session. Dr. R. M. Alexander read a carefully prepared paper on "The Reasons for Sanitary Legislation," and was followed by Dr. Pinckney Thompson, of Henderson, with an excellent and thoroughly practical paper on "Domestic Hygiene." Dr. Holland read a paper by Prof. L. Eddy, of Danville, on "The Reciprocal Relations of the People and the State Board of Health." Dr. McCormack presented "A Plea for the Teaching of Hygiene in the Schools." Prof. A. W. Mell, of Glasgow, made an address on "School Hygiene." The Council adjourned to meet in Bardstown on the first Tuesday in April, 1884. The Sanitary Council is a voluntary organization, open to all persons in the State interested in the question of public health, and is purely advisory and educational in character. This was the first working meeting, the initial meeting having been held in Louisville in March last, and the attendance and interest manifested encourages the originators of the organization to expect much good from it. It was called, and the first meeting held under the auspices of the State Board, but the intention is to keep it entirely distinct from that body. The experience at Glasgow teaches that the work of the Council cannot be gotten through with in one day and night, and the programme for Bardstown will be so arranged as to give more time.

STATEMENT OF DEATHS FROM YELLOW FEVER AT VERA CRUZ, 1881, 1882, and eight months in 1883.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1881.....	28	21	27	28	94	234	132	39	22	24	18	4
1882.....	1	1	2	1	5	11	7	14	8	5	5	12
1883.....	5	3	7	16	90	261	200	67				
Totals	34	25	36	45	189	506	339	120				

Total for 1881.....	671
" 1882.....	72
" 1883 (eight months).....	649

DEATH FROM AN OVERDOSE OF CARBOLIC ACID.—A death was caused recently in the Hôpital Tenon of Paris from the careless administration of carbolic acid by one of the nurses. The victim was a young girl, suffering from typhoid fever, for whom a potion containing phenic acid was ordered. The head nurse, whose duty it was to administer the medicines, although she had nothing to do at the time, told one of her assistants to measure out the dose. The latter did so, using the wrong measuring-glass, and gave the poor patient over an ounce of pure carbolic acid.

THE USE OF LARGE DOSES OF ACONITIA IN SCIATICA.—Dr. J. D. Mulhane writes to us in reference to Dr. Tilton's criticism of the dosage of aconitia. He states that he had an obstinate case of sciatica in a man, a hammerer on the Pan Handle Railroad. He gave him finally aconitia in doses of gr. $\frac{1}{8}$ three times a day, or gr. $\frac{1}{4}$ per day. The patient was relieved and able to resume his work.

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THE ARCHITECTURE AND FUNCTIONS OF THE CEREBELLUM.¹

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The cerebellum.—The cerebellum or "hinder-brain" consists of two lateral hemispheres, joined together by an intermediate portion, which is called, from a fancied resemblance to a worm, the "vermiform process." The peculiar appearance of this process is due partly to its shape and partly to transverse ridges and furrows which are very apparent. When the under surface of the cerebellum is examined, this process appears as a well-marked projection, the "*inferior vermiform process*." On the upper surface it is only slightly elevated, forming the so-called "*superior vermiform process*." In birds as well as in some animals lower in the scale, the vermiform process alone exists.² It is the part first developed in mammals. In most mammals, moreover, it constitutes a distinct central lobe, clearly demarcated from the lateral portions—the hemispheres of the cerebellum.

The *cerebellar hemispheres* are separated behind by a deep notch. Below, a deep fossa (*vallecula*), which is continuous with the notch seen posteriorly, lodges the inferior vermiform process. This hollow also receives the medulla in front and the falx cerebelli behind. The hemispheres are convex on their lower surface and tend to partly conceal the inferior vermiform process; above, however, they are somewhat flattened in the centre and slope downward toward the sides, causing the slightly elevated superior vermiform process to be less distinctly outlined than the inferior.

The cerebellum measures about three and a half inches transversely, about two and a half inches from before backward, and about two inches in depth at its thickest portion, although it thins out at its lateral borders.

The surfaces of the cerebellum are everywhere marked by deep, closely set, transverse, and somewhat curved fissures. These are often of considerable depth, the larger ones concealing many folia which do not reach the surface of the cerebellum. Some of these fissures are better marked than the rest, the most conspicuous being the *great horizontal fissure*, which starts in front at the middle peduncle and extends around the outer and posterior border of each hemisphere, being prolonged into the posterior notch where it joins with its fellow of the opposite side. This fissure separates the cerebellum into an upper and lower portion, which correspond to the upper and lower surfaces. Each of these portions are subdivided by fissures, somewhat more distinct than the rest, into small lobes. The names of these lobules can be found in any work upon descriptive anatomy. The *tonsillæ* and *floculi*³ are the more important. The vermiform process, or "worm," is also subdivided into lobules. Physiological experiment or pathological research has not yet positively located any special functions in these lobules, so that they are of use chiefly in describing

the situation of lesions of the cerebellum and the course of fibres to the cerebellar cortex.

Sections made through the substance of the cerebellum show a beautifully foliated or arborescent appearance, named "*arbor vitæ*," in consequence of the medullary or white substance of the ganglion being prolonged into the laminae. The main branches of the medullary substance, or groups of them, correspond to the lobules of the cerebellum. These are connected, as the cerebral convolutions are, by festoon-like fibres (*fibræ propriæ*). The medullary substance is more abundant in the hemispheres than in the worm (vermiform process). In the centre of each hemisphere a nucleus of gray matter, the so-called "*corpus dentatum*" is seen in all vertical and transverse sections of that region. In structure it resembles that of the olivary body of the medulla oblongata, having a wavy layer of yellowish-brown substance externally, and white matter in its centre. At its upper and inner part this wavy layer is interrupted, so that the plicated capsule is not complete. The fibres which are contained within the processes cerebelli ad cerebrum (superior peduncle of cerebellum) and the valve of Vieussens may be traced, in part, to the corpus dentatum. Stilling, who has made elaborate researches respecting the minute structure of the cerebellum, describes three other collections of gray matter within the white centre of the hemispheres. These are named the "*nucleus emboliformis*," the "*nucleus globosus*," and the "*nucleus fastigii*." These nuclei are not distinctly isolated in all parts, but are connected, here and there, with one another and with the corpus dentatum. Their functions are not yet determined. The "*nucleus fastigii*" is often called the "nucleus of the ventricular roof." It is situated in the white mass of the worm, and lies in the roof of the fourth ventricle. It probably receives fibres of the *auditory nerve-root* and the *trapezium*. This nucleus is separated from its fellows by a thin septum of white matter. The two other nuclei described by Stilling lie in intimate relation with the dentate nucleus of the hemisphere.

The cerebellum, as a whole, is described as possessing *three peduncles*. These are collections of nerve-fibres which pass out from, or into, the substance of the hemispheres. The *superior peduncles* (*processi cerebelli ad cerebrum*) are directed upward and forward from the mesial part of the hemispheres. The *middle peduncles* (*processi cerebelli ad pontem*) emerge from the lateral part of the hemispheres and pass to the pons varolii. The *inferior peduncles* (*processi cerebelli ad medullam*) escape from the hemispheres of the cerebellum between the other two; pass forward, outside of the superior peduncles to reach the lateral wall of the fourth ventricle; and then turn sharply downward to become the so-called "*restiform bodies*" of the medulla oblongata. Each of these processes will be considered separately.

We are now prepared to consider the minute structure of the cerebellum and its processes. The various theories which have been advanced in regard to the probable functions of this ganglion can be intelligently discussed only after a knowledge of its connections with other regions of the cerebro-spinal system. Experimental physiology frequently conflicts with the observed effects of pathological lesions of the nerve-centres. This is due chiefly to the fact that many of the so-called "ganglia" of the brain, which were regarded by the older anatomists as homogeneous structures, are now known to consist of

¹ A part of a course of lectures delivered before the students of the University of the City of New York.

² The *vermiform process* appears to be a complete ganglion in itself, associated with its own nerve-tracts. The *cerebellar hemispheres* are added, in the higher grades of animals, in proportion to the development of the cerebral lobes.

³ The *floculus* is believed by some authors to be directly associated with a fasciculus derived from the pneumogastric nerve.

collections of distinct nuclei or "centres," each of which may possess different peripheral connections; moreover, important nerve-strands, which are often connected with remote collections of nerve-cells, also traverse these nodal masses of gray matter, in some instances.

The cerebellar cortex.—The external gray matter of the cerebellum differs in its microscopical appearance from that of the cerebrum, which has been described in a previous lecture. It consists of three layers: an outer, consisting of both cells and fibres; a middle, consisting of large cells, termed the "corpuscles of Purkinje;" and an inner, which is reddish-gray in color and of a granular structure.

In the *outer layer* most of the fibres have a direction at right angles to the surface of the cerebellum. The greater proportion of these fibres are simply the prolongation of the processes of the large cells of the middle layer (cells of Purkinje). Others are fine, tapering fibres, which seem to rest by a broad base on the pia mater, which covers the outer layer. These fibres make up a dense felting, enclosing free nuclei and scattered cells. The cells of this layer are granule-like bodies, the larger of which are apparently connected with the processes of the cells of Purkinje. The smaller probably belong to the matrix; the larger are supposed to be nervous in function. Along the innermost portion of the outer layer nerve-fibres may be also demonstrated, which run parallel with the surface of the cerebellum.

The *middle layer* is characterized by the peculiar cells¹ found embedded in it—the "cells of Purkinje." Most of these cells are flask-shaped, although a few are irregular in form. The long axis of the cell is placed at a right angle to the free surface of the cerebellum. Their diameter varies from $\frac{1}{800}$ to $\frac{1}{1000}$ of an inch. Two sets of processes may be demonstrated as arising from these cells, viz., one passing through the outer layer of the cerebellar cortex and one passing through the inner layer. The former are of large size and are connected, in some instances, with the corpuscles of the outer layer; others pass directly through the layer to become lost at its surface. In either case, they subdivide repeatedly in their passage through the outer layer. The inner set of processes are fine and undivided, and pass into the granule-layer, where some probably become continuous with the axis-cylinders of nerve-fibres composing the medullary portion.

The *inner layer*, called the "granule layer," lies next to the medullary centre of the cerebellum.² It consists of granule-like corpuscles which are imbedded in groups in a gelatinous matrix. Nerve-fibres can be demonstrated to join with the processes of the cells of Purkinje within this layer. The cells of this layer are both round and angular. Each consists of a nucleus, a thin envelope of protoplasm, and processes which unite with the plexus of nerve-fibres in its vicinity. They measure from $\frac{1}{2500}$ to $\frac{1}{4000}$ of an inch.

It will be evident, after this hasty description, that the cortex of the cerebellum differs markedly from that of the cerebrum, in spite of the various structural types of the latter. The cells of Purkinje are characteristic of the cerebellum alone. The number of layers is less than in the cerebral cortex. We are apparently justified in attributing to the cerebellum some functional attributes of a special type, because similar anatomical elements are to be found in no other region. The theories which have been advanced respecting the functions of this ganglion will be considered later.

In cross-sections of each fold or lamina of the cerebral cortex may be seen a central medullary or white portion, resembling the stem and diverging branches of a twig, with its attached leaves. This "*medullary centre*" can be

shown to consist of bundles of fibres which run parallel with each other or interlace, until they turn obliquely into the gray matter of the cortex. It is still undecided whether these fibres terminate in the "granule layer" of the cortex, becoming joined to the axis-cylinder processes of the cells of Purkinje, or by a union with the plexus of fine fibres described as existing in the outer layer.

The central white substance of the cerebellum.—The peduncles of the cerebellum have been mentioned in the early part of this lecture, but much remains to be said respecting the probable course of the fibres contained in each, during their passage through the white or medullary centre of the cerebellum. The course which they pursue outside of the limits of this ganglion will also merit subsequent attention.

The fibres of the *superior peduncle* (Fig. 1) can be traced almost entirely into the interior of the "nucleus dentatum;" although a few can be demonstrated to pass around the outer side of this central mass of gray matter without entering it, and some mesial fibres can be shown to enter directly into the white substance of the vermiform process. As was stated to be the case with the corpus striatum and the optic thalamus, it is probable that a few of the fibres which apparently enter the substance of the nucleus dentatum do not become joined with the cells of that body, but simply pass through it to go to the cerebellar cortex; on the other hand, it is equally probable that most of the fibres which enter it become associated more or less intimately with the cells found within that body, and that they are subsequently continued to a peripheral termination in some part of the cortex. The fibres which enclose the nucleus dentatum are so matted together into a feltwork that it is impossible to trace the course of even distinct bundles from their entrance into the cerebellum to their termination in the cortex.

The fibres of the *middle peduncle* leave the pons, to enter the lateral part of the white substance of the cerebellum as two main bundles. One is composed of the superior transverse fibres of the pons; the other consists of the lower transverse fibres of the pons mingled with those of the *inferior peduncle* of the cerebellum (*restiform body of the medulla*). The upper bundle passes obliquely downward over the lower, and enters the lateral and anterior portions of the medullary centre of the hemisphere. The lower bundle, after joining with the fibres of the restiform body of the medulla oblongata, turns upward, and radiates into the upper part of the medullary centre of the corresponding hemisphere of the cerebellum and the upper part of the vermiform process. Stilling states that the fibres of the restiform body pass, in part, into the nucleus dentatum, while the rest curve over the nucleus, the so-called "semicircular fibres."

Finally, certain *commissural fibres* are described by Stilling as existing in the cerebellum. These may be divided into two sets. The first are analogous to the commissural fibres of the cerebrum, crossing the median line and probably joining homologous regions of the cerebellar cortex in the two hemispheres; the second analogous to the collateral fibres of the cerebrum, connecting one lamina of the cortex with another and arching around the fissures between the laminae. The latter set are confined to one hemisphere and do not cross the median line of the cerebellum. The direction of these fibres is transverse to that of the "peduncular" cerebellar fibres.

It is evident, therefore, that the general arrangement of the cerebellar fibres bears a striking resemblance to that of the cerebrum; the *nucleus dentatum*, *olivary body*, *red nucleus*, and *gray matter of the pons* being the analogues of the basal ganglia of the cerebrum, and the "radiating," "commissural," and "associating systems" being similar in many respects.³ The cerebellum, like the cerebrum, may be said, therefore, to exhibit three

¹ The bodies of these cells are colossal (sixty to seventy millimetres in length, and twenty to thirty millimetres in thickness). They appear to be enclosed within a loose-fitting capsule, formed of connective-tissue fibres (Obersteiner).

² The striking resemblances between this layer and the granular strata of the olfactory lobe have been commented upon by Meynert. The cells of this layer are regarded by Gerlach as connective-tissue elements; by Henle and Merkel as lymphoid elements; and by Stilling as small multipolar nerve-cells.

³ See article by the author in the New York Medical Journal, April, 1880.

so-called "projection systems" of fibres, as follows: 1, the *inner* projection system, the fibres of which serve to connect the cortex of the cerebellum with the nucleus dentatus of the same hemisphere and the olivary body, the red nucleus of the tegmentum, and the anterior gray substance of the pons varolii of the opposite side; 2, the *middle* projection system, the fibres of which connect the enumerated masses of gray matter with the gray matter of the spinal cord; 3, the *outer* projection system, the fibres of which are included in the expansions of the central tubular gray matter to the periphery of the body by means of the spinal nerves.

The following diagram will help to make certain points clear regarding the intimate structure of the cerebellum and its connections with adjoining parts. It is, of course, purely schematic, but, if used in connection with actual representations of the parts, it will prove of great value in comprehending many statements which are to follow. In this diagram the shaded parts represent collections of gray matter, the lines indicate the direction and extent of individual sets of nerve-fibres which are in direct communication with the shaded masses.

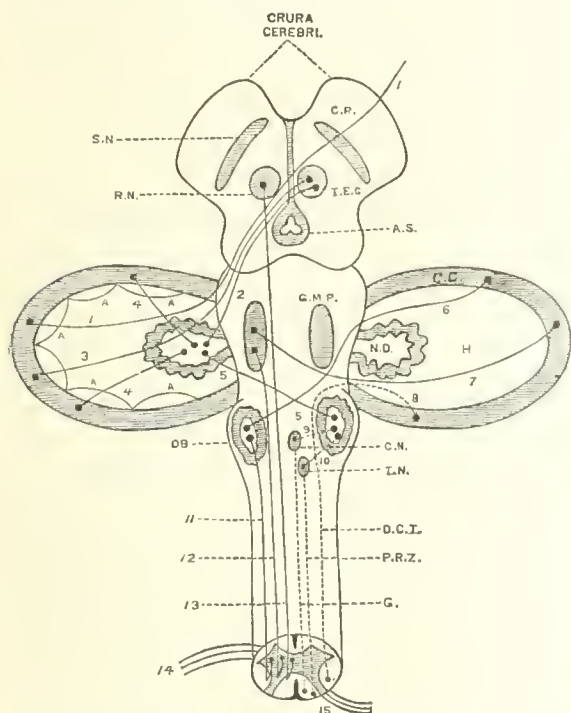


FIG. 1.—A Diagram designed to Illustrate the Various Sets of Fibres comprised within the Cerebello-Spinal System. (Modified from Ross.) C.R., crusta cruris; T.E.G., tegmentum cruris; A.S., aqueduct of Sylvius surrounded by the tubular gray matter; S.N., substantia nigra; R.N., red nucleus of the tegmentum; G.M.P., anterior gray matter of the pons; C.C., cerebellar cortex; N.D., nucleus dentatus; O.B., olivary body; C.N., clavate nucleus; T.N., triangular nucleus; D.C.T., fibres of the "direct cerebellar tract" of the spinal cord; P.R.Z., fibres of the "posterior root zone" of the same; G., fibres of the "column of Goll"; 1, cerebro-cerebellar fibres; 2, fibres from the red nucleus of the tegmentum to the dentate nucleus of the cerebellum; 3, fibres from the red nucleus of the tegmentum to the olivary body of the opposite side; 4, fibres from the cerebellar cortex to the dentate nucleus; 5, fibres from the dentate nucleus to the olivary body of the opposite side; 6, fibres from the cerebellar cortex to the anterior gray nucleus of the pons of the opposite side; 7, fibres from the cerebellar cortex to the anterior gray nucleus of the pons of the same side; 8, fibres of the direct cerebellar tract; 9, fibres connecting the clavate nucleus and the olivary body of the same side; fibres connecting the triangular nucleus and the olivary body of the same side; 11, fibres passing from the olivary body to the horns of spinal gray matter; 12, fibres passing from the anterior gray matter of the pons to the horns of spinal gray matter; 13, fibres passing from the red nucleus of the tegmentum to the anterior horns of the spinal gray matter; 14, fibres escaping from the spinal cord through the anterior root of a spinal nerve; 15, fibres of the posterior root of a spinal nerve entering at the posterior horn of the spinal gray matter. The dots in the cut end of the spinal cord, near to 15, indicate the relative position of the different tracts with which they are connected. A, A, A, represent fibres which are destined to connect different convolutions of the cerebellar cortex (*fibre propriae*).]

The arrangement of the middle projection system of fibres pertaining to the cerebello-spinal apparatus is less definitely settled than that of the cerebro-spinal. It is probable, however, that the cerebellum receives afferent sets of fibres (sensory) from the spinal cord, and gives off also certain efferent sets of fibres (motor), which are brought into more or less direct communication with the motor tracts of the crura, pons varolii, medulla, and spinal cord.

The *afferent* fibres of the cerebellum probably reach that ganglion through the following channels:

1. By means of the *columns of Goll* (G.), which terminate in the so-called "*clavate nucleus*" (C.N.).
2. By means of the *columns of Burdach* or the *posterior root zone* (P.R.Z.) of the spinal cord, which seems to be structurally related with the so-called "*triangular nucleus*" (T.N.).
3. By means of fibres which connect the *triangular* and *clavate nuclei* with the "*olivary body*" of the corresponding side of the medulla oblongata (9 and 10).
4. By means of the "*direct cerebellar tract*" of fibres (D.C.T.) which is found within the lateral column of the spinal cord near to the extremity of the posterior horn of the spinal gray matter.
5. By means of fibres connected with the *auditory*, and possibly with the *sensory root* of the *fifth cranial nerves*. The auditory fibres are associated chiefly with the corpus dentatum and the nucleus fastigii. They decussate either in the medulla or cerebellum. They pass through the auditory nucleus before entering the cerebellum.

The *efferent* fibres of the cerebellum are probably comprised within the following fasciculi:

1. Bundles of fibres which connect the *dentate nucleus* and the *cerebellar cortex* with the *corpus striatum*, by means of the "*processus cerebelli ad cerebrum*." This bundle is also in intimate relation with the red nucleus of the tegmentum, and probably is structurally related with some of the nerve-cells found in that nucleus (2 in Fig. 1). Luys believes that the corpus striatum is charged, when its nervous force becomes exhausted, by means of this process of the cerebellum. If this be the case, the cerebellum exerts some influence upon the motor impulses emitted from the cerebral hemispheres; because all such impulses are probably modified within the corpora striata before they are transmitted to the more distant parts of the nervous apparatus (the gray matter of the spinal cord, and the spinal nerves). The probable relations of cerebral and cerebellar influences upon muscles will be discussed later.
2. Fibres which connect the *red nucleus of the tegmentum* with the anterior horns of the spinal gray matter (13).
3. Fibres which connect the *olivary bodies* of the medulla oblongata with the anterior horns of the spinal gray matter (11).
4. Fibres which connect the *anterior gray substance of the pons Varolii* with the anterior horns of the spinal gray matter (12).

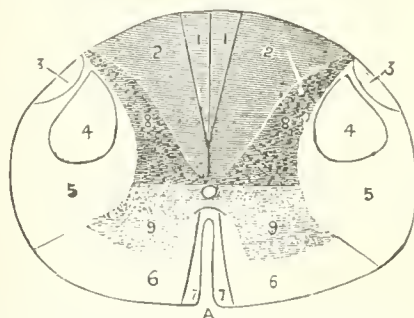


FIG. 2.—A Diagrammatic Section of the Spinal Cord, designed to Illustrate the Situation of Various Nerve-Tracts. (Seguin.) A, anterior fissure; P, posterior fissure; 1, columns of Goll; 2, columns of Burdach; 3, direct cerebellar column; 4, crossed pyramidal column; 5, lateral column; 6, anterior fundamental column; 7, direct pyramidal column; 8, posterior gray horns; 9, anterior gray horns; shaded part, aesthesic system; unshaded part, kinesic system.

The diagram of the various segments of the spinal cord, to which I now direct your attention, will help, if used in connection with the preceding one, in comprehending the course of the various bundles of fibres mentioned.

¹ If the brain be considered as a whole, fibres passing from the cerebellum to the cerebrum by means of the superior and middle peduncles, as well as those passing to the tubercular quadrigemina, by means of the valve of Vieussens, may be classed as *afferent* fibres. Spitzka denies the existence of *efferent* cerebellar fibres (outside of the superior and middle peduncles).

From the imperfections of our present knowledge, much that is stated here regarding the exact course of the afferent and efferent impulses of the cerebellum must be somewhat conjectural. The results of experimental physiology and of pathological research are not, and cannot well be, of a positive character. Many conflicting theories have been at different times advanced regarding the functional attributes of this ganglion. These will be considered when the anatomical data have been fully presented.

Processus cerebelli ad cerebrum (processus e cerebello ad testes, superior peduncle of cerebellum).—In connection with previous lectures,¹ chiefly in those which treated of the corpus striatum and the optic thalamus, the relation of the cerebellum with the medullary portion of the cerebrum by means of special fibres has been mentioned. The special group of fibres which compose the *processus cerebelli ad cerebrum* appear to start anteriorly from among the radiating fibres of the cerebrum and are forced apart, in the region of the crus, above the corpora quadrigemina, by the introduction of a nodal mass of gray matter, characterized by nerve-cells and granular material, the so-called "red nucleus of the tegmentum." In the region of the lower half of the superior corpus bigeminum this tract appears as a simple bundle of fibres, which are not destitute of nerve-cells but whose circumference is much less than in the region of the red nucleus. The nerve-cells of this bundle are of extreme size, and appear to be arranged parallel with the *vessels* of that region rather than with the nerve-fibres. In some cases they bend to fit the angles of the branches of the arteries, and send out long prolongations that run longitudinally along, and probably in their walls (Meynert). Even in the "red nucleus," this arrangement may be demonstrated. The presence of nerve-cells within this tract does not cease until after its decussation and its escape from the corpus quadrigeminum. It yet remains to be demonstrated whether the crural portion of the *processus cerebelli ad cerebrum* is the only seat of a peripheral termination of nerve-cell processes in the walls of capillaries in the midst of the central organ.

If successive cross sections of the region occupied by this tract be studied, it will be seen that the *processus cerebelli ad cerebrum* of either side approaches the median line and that the fibres eventually decussate. The region occupied by these decussating fibres lies between the "posterior longitudinal fasciculus" and the "stratum lemnisci," the remaining bundles of spinal fibres which enter the tegmentum having been crowded away by them. After their decussation, these fibres pass outward until they reach the inner surface of the inferior lamina of the lemniscus, which forms a sort of protective cover for them. Meynert has compared the outline of the two processes to the form of a horse-shoe, whose opening is directed backward. This opening represents an area which embraces those fibres of the "tegmentum cruris" destined for the spinal cord lying between the stratum lemnisci and the posterior longitudinal fasciculus. The decussating fibres of the cerebellar tract force their way among the fibres of the tegmentum cruris to reach their lateral position; hence, cross sections made at different altitudes show ever-varying relations between these fibres and those of the tegmentum. Stilling and Arnold, who have made a special study of the course of the fibres of the *processus cerebelli ad cerebrum*, differ as to the completeness of the decussation, the latter denying that all the fibres cross the median line. Meynert confirms the view, originally advanced by Stilling, that the decussation is complete.

After the decussation of its fibres, each *processus* disengages itself, both superiorly and externally, from the fibres of the tegmentum cruris in which it was embedded. Opposite to the point of greatest convexity of the pons Varolii, it becomes uncovered by the inferior lamina of

the lemniscus. Later in its course it becomes buried in the white substance of the cerebellum, and finds an ultimate connection with the "nucleus dentatus," the central mass of gray matter within the cerebellar hemisphere.

(To be continued.)

NOTES ON GYNECOLOGICAL THERAPEUTICS.

By HORATIO R. BIGELOW, M.D.,

WASHINGTON, D. C.

Constipation.—Women seem to be especially subject to intestinal torpidity. Their sedentary lives, and the manifold disturbances of the uterus, or of the uterine adnexa, which are of very common occurrence among them, seem to be conducive to irregularity. Carelessness, too, in observing fixed hours, the necessary prerequisite to the formation of a habit which impresses itself upon normal peristalsis, is not infrequent. Many instances of obstinate constipation of long standing have yielded to simple rules of observance. A woman should be taught to go to the water-closet at a stated hour each morning, and wait patiently, without undue straining or nervous agitation, the consummation of her desire. This routine, faithfully carried out, fixes itself upon the intestinal function, so that the bowels become accustomed to a daily movement at a definite hour. But there are cases, especially in women with retroverted, prolapsed, or enlarged uteri, in which there is always a residuum left just above the internal sphincter. There is inability to expel it, either because the fundus uteri pressing upon the rectum, occludes the normal lumen—expulsive efforts causing a high degree of pain in the womb, and increasing the amount of prolapse, which obtains in all conditions of retroversion to a certain extent—or else from loss of tone in the lower bowel itself. Many patients of regular habits frequently complain of this unsatisfied desire. The wearing of pessaries or of cotton tampons will occasionally bring about such a result. To overcome this, to insure a satisfactory movement which shall cause no uterine inflammation, which shall empty the rectum entirely, and which shall counteract the astringent properties of iron tonics, has been a favorite field of investigation. Impacted feces, from an insufficiently emptied rectum, will act as a foreign body, and give rise to much constitutional disturbance. I have lately been in the habit of using, and with complete satisfaction, a very domestic remedy, which I venture to give the profession: One-half pound of figs, one ounce pulverized senna, one ounce pulverized sulphur. Chop the figs up as fine as possible, then add the senna and sulphur, and two tablespoonfuls of granulated sugar. Knead as one would dough, and moisten with a little essence of vanilla. Roll out and cut into thin pieces the size of a quarter of a dollar. Take one-half of one of these tablets, or even a whole one if necessary, as occasion may require. This will bring about a natural movement without strain or pain of any kind. It creates no uterine irritation and does not force the uterus low down into the pelvic cavity as many such preparations are apt to do. If the liver be implicated, I have had good results from parvules of podophyllin, as made by Warner of Philadelphia, given at short intervals.

Malt.—Hoff's malt, taken after meals, is a good tonic, but not, strictly speaking, a digestive. It acts admirably in the marasmus of uterine affections, where the object is to build up the system with wholesome nourishing food. But there is a certain class of cases in which dyspepsia is not only a prominent, but an aggravated and pertinacious symptom—a dyspepsia that is purely reflex, not due to any primary derangement of the stomach, liver, or bowels, and which gets better only as its exciting cause improves. I have used many preparations of malt with varying results. A convenient test is to place in a test-tube a given amount of starch, then add a teaspoonful of malt, and notice the time which elapses be-

¹ Published in the *Journal of Nervous and Mental Diseases*, February and April, 1883.

fore the starch is entirely digested. Then add a few drops of iodine, and if the characteristic reaction takes place, we may be sure that there is something lacking in the malt, otherwise we would have no purple or blue color. Saliva, too, is related to the digestion of starch, just as the pancreatic juice emulsifies fats, and the gastric juice digests proteids. As contradistinguished from Fothergill's assertion that malt extracts act better in the presence of an alkali, it is a fact that their greatest diastolic power is in the presence of acids. To preserve them from deterioration glycerine is used in large quantities. Reed & Carnrick's maltine, when it first made its bow to the public, seemed to meet all demands. But latterly, whether owing to a larger amount of heat being used in its preparation, so as to avoid the use of so much glycerine, which costs about one hundred dollars per barrel, or to some other cause to me unknown, it has fallen below the standard, having little or no power over starch. Loeffland's malt, an expensive imported preparation, is much more active, but does not entirely digest the starch in the test-tube. Trommer's malt digests the starch rapidly and gives no reaction whatever to the iodine test. This latter, therefore, I have used latterly, and have always found that it accomplished what I desired. This test, together with microscopic examination, were made and verified by one of our ablest chemists and microscopists in Washington. Now I do not pretend to say that an extract of malt is indicated in all cases, but I do believe that much disappointment has arisen from the employment of an inferior article, which has nothing to commend it but a flaming advertisement. There are patients who grow much better under the judicious employment of malt, and there are others who receive no benefit whatever from any preparation. If the dyspepsia be intercurrent with a generally weakened constitution, so that all the functions are tardily carried on, the elixir of iron, quinine, and strychnia will be found to subserve an admirable purpose. If it be due to the excitability of the stomach, which occurs after frequent vomiting, such as occurs in the intra-menstrual period and is due to hydro- or pyosalpinx, or to a subacute inflammation of the peritoneum, or to an ovaritis, small quantities of milk and lime-water, frequently administered, followed by finely minced raw beef, will be indicated. A cup of *hot* water will frequently allay the nausea, pain, and craving for food. Of course such suggestions as will come to the mind of every intelligent practitioner in regard to food should be urged with force. A weakened stomach is sure to rebel against a dose of hot bread or highly seasoned fatty food. I am of the opinion that such women should take their most substantial meal at midday, and be satisfied with a light supper.

I wish to call especial attention to the Carlsbad Sprudel Salt (either the new salt, or the Eisenquelle, or Karlsbad, or the Giesshübler Sauerbrunn) in the treatment of dyspeptic women with yellow eyes, sallow skins, and a general torpidity of the liver and intestines. A heaping teaspoonful in a half-tumbler of warm water, gives an easy action, promotes the flow of bile, and permits the digestion of suitable food. Dr. Hlawacsek says of them that coming into contact with the mucous membrane of the intestinal canal, they act: (1) As animating, modifying, and soothing the nerves of the part; (2) as healing with regard to the mucous membrane of the ventricle and duodenum; (3) as removing acidity; (4) as purging. By being absorbed into the system they dissolve: 1, The tenacious and thick bile contained in the biliary ducts, and are even capable of dissolving gall-stones in course of formation; 2, they remove congestion of the blood generally, but chiefly of the mesenteric vein; 3, they disperse accumulated lymph; 4, remove fatty tumors due to fibrous inflammatory products; 5, they improve and ameliorate the condition of the blood and lymph, chiefly when it shows itself by an accumulation of albuminous azotic compounds. They give dark bilious mo-

tions, thus freeing the system from the superfluous accumulation of the compounds of carbon and hydrogen. Nothing equals them in "plethora abdominis." The Schlossbrunn and the Marktbrunn are cold waters, and are the ones upon which patients usually begin. The Sprudel salts, however, are most in vogue in this country. Their action is not purgative in the strict meaning of the word, and their use need not be discontinued during menstruation. The Sprudel salt contains in 100 parts: Sulphate of soda, 37.69; chloride of sodium, 0.39; carbonate of soda, 5.99; traces of sulphate of potash, and 55.52 parts of water. One or two teaspoonfuls may be added to the imported Karlsbad, Selters, or soda-water. The Eisenquelle is a chalybeate water, and should be mixed with one-third of Giesshübler-Sauerbrunn to prevent cardiac pain.

The *left side pain*, so common among many women, may be due to the dragging on the pleuro-colic ligament, attributable to an overloaded colon, in which event the remedy is plain.

Hot water vaginal douche is of pre-eminent value. In ovaritis, lymph-adenitis, inflammations, and in nearly all the diseases of the uterus and its appendages, nothing will be more grateful. For this purpose I make use of Merriam's arrangement. It is less fatiguing to the patient than the fountain syringe, while the reservoir holds more water, runs out slower, and can be kept at an even temperature. The pelvis being elevated, the water reaches every part of the vaginal envelope, which it cannot do with the ordinary method. Its value may not be overestimated.

Electricity.—I have used galvanism, from eight to fourteen cells, with a current interrupted six times per second, in some cases of ovaritis and salpingitis, with marked benefit. Dr. Mundé used it with an electrode in the rectum and a large sponge over the lower abdomen, with some success, in a case of lymph-adenitis. In cases of spasmodic (reflex) contraction of the gall-duct, due to ovarian trouble, giving rise to symptoms of catarrhal jaundice, it has also stood me in good stead. In all instances of lymph formation and exudation it is of great value. The localized and general faradic current is of common use in neurasthenia.

Pessaries.—There are some reasons which almost lead me to believe that pessaries are an abomination. The resultant ease and comfort may be followed by after-suffering, and is continuous only with the wearing of the support. No permanent cure is brought about; the vaginal walls are put upon a stretch, so that they lose their contractility, and can never be relied upon for any natural support to the uterus; the bladder and rectum are both intolerant of the pressure, and the superimposed uterus suffers at the fundus in a large proportion of cases. In retroversion I have found scores of women who complained of rectal tenesmus and pain, irritation at the neck of the bladder, and of a sore spot at the fundus, who were wearing a most carefully adjusted pessary made from exact measurement. In anteversion they accomplish absolutely nothing. The whole principle is wrong. Gehring's pessary is the best I have used in these cases, but it does not cure the flexion. Some women, especially those with lymph-adenitis (see Mundé's article, *American Journal of Obstetrics*, October, 1883), can wear no support whatever. So far as I possibly can I rely upon pneumatic pressure, replacement, and astringent tampons. In other cases I use the pessary for want of something better, but always with fear and trembling. I never use the stem, for I cannot see how it will cure a flexion, and the attendant risk is great.

Iodoform.—Useful in quieting nausea, and as suppository in ovaritis and inflammation of the uterus. Also of service in lymph-adenitis. Of this latter I know nothing from experience. I have never diagnosed a case, and am indebted to Dr. Mundé's article for pretty much all that I know about it. As a quieting lotion I use a preparation introduced by Dr. Carrier, of iodoform, eucal. glob. (fl. ext.), and glycerine. Iodoform is a valuable alterative, and useful as a topical application in eroded or ulcerated surfaces.

CHLOROFORM NARCOSIS DURING SLEEP.

By JOHN H. GIRDNER, M.D.,

NEW YORK.

IN THE RECORD of April 28, 1883, I published an account of a number—five—of unsuccessful attempts to anæsthetize persons while asleep, without awakening them, by impregnating the inspired air with the vapor of chloroform. I wish now to add to this record eighteen other experiments made by myself, with the kind assistance of Dr. Norris, of this city, House Surgeon to Bellevue Hospital. The date was the night of September 19, 1883.

I.—Boy, aged seven. A small hand-towel, moistened with chloroform, held about twelve inches from the face and slowly brought nearer; at the end of one minute, and when the towel was within about six inches of the face, the boy awoke with a start, and looked around in a frightened manner.

II.—Boy, aged ten. Towel held two feet away, carefully brought nearer; woke in three and one-half minutes with a start.

III.—Boy, aged ten. Towel twelve inches; awoke immediately.

IV.—Boy, aged eleven. Towel twelve inches; awoke immediately.

V.—Boy, aged eight. Towel twelve inches; woke in fraction of a minute.

VI.—Woman, aged thirty-three. Towel held eighteen inches from face; awoke in one minute.

VII.—Woman, aged thirty. Towel eighteen inches from face; awoke in one and one-half minute.

VIII.—Boy, aged two. Towel held two feet from face and slowly brought nearer; awoke at end of three and one-half minutes.

IX.—Man, aged fifty. Towel held three feet from face and very slowly brought nearer. At the end of seven and one-half minutes he showed signs of restlessness, turning in bed and moaning in his sleep, and awoke frightened.

X.—Man, aged twenty. Towel eighteen inches from face; awoke in about three minutes.

XI.—Man, aged twenty-five. Towel twelve inches; awoke in about three minutes.

XII.—Man, aged seventy. Towel two feet; awoke in four minutes.

XIII.—Man, aged twenty-eight. Towel eighteen inches; awoke immediately.

XIV.—Man, aged sixty-two. Towel eighteen inches; awoke in about three and one-half minutes.

XV.—Man, aged twenty-five. Towel two feet; awoke in about three and one-half minutes.

XVI.—Man, aged sixty-four. Towel two feet; awoke in four minutes.

XVII.—Man, aged twenty-six. Towel two feet; awoke immediately.

XVIII.—Man, aged twenty-four. Towel two feet; awoke in three minutes.

Dr. Norris tells me that he has made three other unsuccessful attempts to narcotize children with chloroform while asleep without their awakening.

Since writing my former paper I have received a large number of communications on this subject, both oral and written, from medical gentlemen throughout the country, including many of the oldest and most distinguished surgeons, and in every instance their experience has been identical with my own. Since I last wrote there has also been a number of letters published in this and other journals detailing what at first sight might seem to be successful attempts to transfer persons from natural to chloroform narcosis without an interval of consciousness. Some of these letters have also criticised my experiments, and placed me in a false position. I can but think, however, that this latter mistake was due to superficial reading of my paper.

One gentleman says, speaking of my paper: "In which he takes the ground that chloroform narcosis dur-

ing sleep is impossible." I need not tell any one who reads my paper carefully that there is nothing in it to warrant such an assertion. I was unbiassed at that time, and was, and still am, as anxious to know the truth as any one. Of the dozen or so of cases reported since I last wrote, in which it was claimed that persons had been chloroformed while asleep, I must say they are all unreliable, for the reason that not one of these reports contains conclusive evidence that the patient was ever transferred from the unconsciousness of natural sleep to that produced by breathing chloroform. As a rule, the subjects were children on whom it was desired to perform some slight operation, as the removal of a bean from the nose, cutting off the foreskin, etc., the latter being the most important operation performed on these supposed-to-be chloroformed children. Now, every surgeon who has had much experience knows that such operations as these can be performed on children during natural sleep without their awakening. I have opened a large abscess of the thigh in a small boy, requiring a cut one inch long and half an inch deep, while he slept, without his waking. Dr. Linengood, of Bellevue Hospital, reduced the fragments and applied the proper splints to a fractured forearm of a child, one year old, while it slept in its mother's arms; and Dr. Cunard, of the same institution, amputated a crushed finger for a child and dressed the stump without waking it from a sound sleep; and I have seen a man with half the flesh eaten from one great toe by hungry rats while he slept after a hard day's work in an empty tumble-down house. Thus it is plain that the evidence brought forward by the gentlemen who have reported these cases to prove that their patients were anæsthetized, is not evidence at all. It was possible to have performed all these operations without ever having held a cloth moistened with chloroform near the faces of these sleeping children.

The symptoms of anæsthesia, or narcosis from chloroform, are so well marked, and generally so well understood, that it seems useless to repeat them here. Complete muscular relaxation throughout the body, and the consequent stertorous breathing, the loss of reflex action, as shown, for instance in the failure of the eye to close when the eyeball is touched with the finger, etc., etc., are the symptoms; and when I know they have been produced by chloroform inhalation in a sleeping person without that person being aroused to consciousness, then I will believe that chloroform narcosis during sleep is possible.

HYSTERICAL PSEUDO-PHTHISIS.—In young women suffering from chlorosis and hysteria there is often, according to Dr. Fabre (*Centralblatt für Gynäkologie*, September 8, 1883), a condition simulating phthisis. There is a cough, with expectoration, and even spitting of blood. Physical examination reveals dulness at the apex (usually on the right side), feeble respiration, and occasional râles. The author regards these symptoms as due to a vaso-motor disturbance exciting a pulmonary congestion. Other organs may also be subject to functional disturbances. Obstinate anorexia, gastric pain, occasionally diarrhoea, but more frequently constipation, are not seldom present. The pulse is weak and frequent, like that of fever, although the temperature may be normal. Sometimes, however, there is elevated temperature, but it is only transitory, and regular evening exacerbations are never observed. The expectoration is not purulent, but may be mixed with blood. While in true phthisis there is emaciation, in these cases the patients often increase in weight. Sweating, as a rule, is not met with. The differential diagnosis is often difficult, and the author relates that cases have not infrequently occurred in which a diagnosis of pulmonary consumption was made, but the patient nevertheless recovered. The condition may exist without material improvement for months, or even years.

OXYGEN AND SOME OF ITS COMPOUNDS
AS THERAPEUTIC AGENTS.¹

By SAMUEL S. WALLIAN, A.M., M.D.,

BLOOMINGDALE, N. Y.

PRIESTLEY, who divides the honor of its discovery with Scheele, was the earliest experimenter with oxygen as a physiological agent. He demonstrated that birds, dogs, rabbits, and other animals immersed in an atmosphere of this gas became more lively, active, and brilliant; that dogs trained for the chase could endure greater hardships, and for a longer period, when allowed to breathe the gas for a short time previous to the start than similar animals not thus prepared; and that animals asphyxiated by being compelled to inhale carbon dioxide or other noxious gases were speedily resuscitated if treated immediately with pure oxygen.

Lavoisier confirmed these results, and further demonstrated that the muscles of animals repeatedly subjected to the influence of the gas became very firm, decidedly interfering with their tenderness if speedily designed for the shambles!

These results attracted some attention, and were followed by considerable experimentation on the part of pathologists and physiologists.

Among these early investigators, Dr. Beddoes—not "Eddoes" as quoted in the London *Lancet*—was the first medical man of repute who gave the subject any serious attention. He was assisted by some of the most eminent scientists of his day, including Sir Humphry Davy. These original experimenters labored under serious disadvantages, particularly that of evolving the gas in suitable quantities and of sufficiently pure quality for medical use. After many trials and numerous failures, with not a few accidents, Beddoes declared himself beaten, not by his own loss of faith in the potency of the new remedy, but "by the difficulty of making it available." He did not escape the usual storm of ridicule which invariably greets an innovation, especially if the latter falls short of an immediate and pronounced success. However, his partial success inspired other efforts in the same direction, and he was followed by Drs. Hill, Thornton, Cavallo, and others. Over-sensitive to unkind professional criticism, the latter conducted their experiments in comparative seclusion.

In 1820 Dr. Hill published a brochure reporting the results of these efforts, which, although full of instructive facts and suggestions, attracted little attention, and members of the profession at the present day would be surprised to know that experiments so conclusive were so long since attempted, or that a work of such unusual professional candor was ever issued.

Thornton, Cavallo, and McCormack followed, somewhat later, with still more searching and extensive trials of the gas, and each unequivocally asserted that it would eventually be found a potent and valuable therapeutic agent. They failed to awaken much interest in the subject, and met with the customary storm of ridicule and unreasoning opposition.

Within the last quarter of a century, although little has been said on the subject, various men of note in the profession, including Goolden, Birch, Alexander, Erichsen, Richardson, Demarquay, and others have more or less investigated, occasionally used, and without exception admitted the potency of oxygen in the treatment of disease.

In this country but casual attention has been given to the subject, and beyond an occasional exhibition in some extreme case in hospital practice, little has been reported, the opinion still obtaining with those who have considered the subject at all, that the use of non-atmospheric oxygen in the treatment of disease is of doubtful utility, if not positively dangerous.

Literature on the subject is meagre and unsatisfactory.

Little has appeared in this country, and, as yet, no American publisher has ventured the reproduction of such fragmentary foreign works as have occasionally appeared.

In an article ("Super-Oxygenation as a Therapeutic Measure") in the *Chicago Medical Journal*, vol. xxvi. (1869), pp. 116-120 and 139-152, I gave the results of some of my earlier experience with various super-oxidizing agents.

As a rule, the medical press, both at home and abroad, has shown very little interest in the subject, evidently acquiescing in the prevailing verdict—the only marked exceptions being the London *Lancet* and the *British and Foreign Medico-Chirurgical Review*, in both of which interesting articles have occasionally appeared.

Demarquay's reports to the Academy of Medicine (Paris, 1866)¹ were considered conclusive and satisfactory as far as the subject was covered by his experiments; but have never been reproduced for American readers.

In 1856 appeared in London a small volume under the extremely classical title of "Pneuma-Therapeia." Its author, who was presumed to be McCormack, withheld his name, probably for prudential reasons, since its arguments and reports of cases were addressed more to the public than to the profession; and in an appendix, the Medical Pneumatic Apparatus Company, with the address "46 Regent Circus, Piccadilly, London," advertised to supply both oxygen and the necessary apparatus for manufacturing and administering it.

This little anonymous volume repeated some of Hill's reports of cases treated, including *scrofula*, *dyspepsia*, *chronic dysentery*, *asthma*, *dyspnea*, and *asphyxia*; also referring to the experiments of Beddoes, Davy, Weeks, Cavendish, Coleman, Goodwin, Menzies, Liebig, and others.

Dr. S. B. Birch, of the Manchester Medical School, issued a monograph on the subject of oxygen as a curative agent ("On Oxygen," London, 1857), but it met with very ungenerous criticism and did not find its way to this side. A second edition (London, 1858) was the first contribution to the literature of the subject which commanded any degree of attention.

Ten years later, already investigating the subject of oxygen compounds, I procured a copy of Birch, and am indebted to him for valuable suggestions.

This author says (*op. cit.*, p. 148):

"It (oxygen artificially prepared) is a powerful, really scientific, and agreeable curative agent; is capable of far more extensive range in its application to the rational treatment of chronic disease than, perhaps, any other remedy—is *pre-eminently Nature's own therapeutic*, affording assistance in her own way without opposing the intentions of her ever-present *vis medicatrix*, and is entitled to the position of a *curative* in a variety of intractable diseases, otherwise incurable by any other known means, or tacitly acknowledged to be so; . . . is occasionally *the* remedy, and then the only one worthy of the name, in certain contingencies where life must be (and frequently is) sacrificed by neglecting a fair trial of it."

He adds: "It may with safety be predicted that, sooner or latter, non-atmospheric oxygen will be universally admitted as one of our most valued remedial agents" (*op. cit.*, p. 149).

The verification of this rather sanguine prediction has not yet transpired. Whether on account of the serious and hitherto insuperable difficulties of making the treatment generally available in private practice, or from lack of professional enterprise and ingenuity remains to be investigated.

With the general profession a sort of chronic impression prevails, based on neither science nor experience, that the therapeutic use of non-atmospheric oxygen has been tried and failed?

¹ Read before the Franklin County (N. Y.) Medical Society, June 5, 1883.

¹ See also *Gazette Médicale*, Paris, 1866.

Professor Da Costa says: "Of all the gases oxygen is now being most tried, particularly for the relief of dyspnoea and in low fevers, or during convalescence from low fevers, and in chlorosis. We must await these new trials, for the former experiments were unsatisfactory. But excellent results have quite lately been claimed for oxygen inhalations by Demarquay—who is at present investigating the subject—not only in the conditions named, but in diabetes, in senile gangrene, and in prolonged suppuration" ("On Inhalations," Philadelphia, 1867).

In this country, very little has been heard from these later investigations, except in connection with the subject of antiseptics. In fact, the past decade, in the history of medicine may not inaptly be termed *the age of the germ-craze*. The microscope has monopolized the laboratory, and wellnigh superseded the inductive method. Morbid products have been accorded more prominent attention than vital processes; results studied with the most elaborate minuteness, to the exclusion or ignoring of their underlying causes.

There is no doubt, however, that the shortcomings of impure and carelessly manufactured gas have done more than all else to bring the use of oxygen and its congeners into disregard, if not discredit, and to prevent its timely use by the profession at large.

Again, the usual methods of generating it in a sufficiently pure form for medical use are a conspicuous drawback to its general use by even those who are aware of its value and anxious to avail themselves of it. Some apparatus is required, and careful chemical manipulation, which in time, no doubt, will be delegated to the pharmacist and manufacturing chemist.

At present the process by means of chlorate of potassa and manganese dioxide is the most practical and economical for ordinary purposes. The apparatus required is neither complicated nor expensive. Some care is requisite, but the gas afforded can be secured in a state of almost absolute purity. Various inventors and manufacturers of surgical instruments have, from time to time, brought out unique and ingenious contrivances for evolving and administering the gases, of which might be mentioned one by Dr. Biegel, and that of Galante, of Paris. The Pneumatic Medicine Company, and also Barth, of London, condensed the gas in iron flasks, and added devices for its convenient dispensation.

Fleitmann proposed a process for the rapid liberation of oxygen in a tolerable state of purity (which in a medical sense is nothing short of *intolerable*) by means of calcium chloride and monoxide of cobalt. Since it required that the chloride should be in a state of saturated solution previous to the addition of the cobalt, it was unwieldly and never became popular.

Improving on this suggestion the Messrs. Robbins & Co., of London, succeeded in combining the two substances in the form of dry powder, which is ready for instant use on the addition of simple boiling water, and, it is said, may be preserved indefinitely without deterioration. The process of combining the two substances is reserved by this firm as a manufacturing secret.

An intimate ally of oxygen, therapeutically speaking, is found in *nitrogen monoxide*, N_2O —the "nitrous oxide" of the old nomenclature. It is almost as potent an oxidizing agent as oxygen itself. It supports combustion nearly as well; its specific gravity is greater, and it is distinguished from oxygen by its much greater solubility in water. Doubtless, from this cause, it is much more rapidly and extensively absorbed into the system when inhaled.

It is best known through its general use as a dental anæsthetic. When perfectly pure—a rarer circumstance than need be—it may be inhaled for some time with impunity; in fact it may be safely assumed that the rational use of the pure gas is practically, if not absolutely, free from danger, since out of the millions of instances of its

exhibition to patients of all ages and conditions, the very few fatal cases reported were quite probably attributable to impure gas, irrational or ill-timed administration, or accidental causes.

The anæsthesia induced by its free inhalation, quite unlike that from chloroform, ether, ethyl, bromide, and other anæsthetics, is transient, pleasurable, unaccompanied by a stage of excitation, and is not followed by depression or other unpleasant after-effects.

Under a pressure of fifty atmospheres, it becomes liquid, and at $-120^{\circ} F.$, Faraday succeeded in reducing it to a solid. In the latter form, applied to the skin, it produces a painful, burn-like blister (Fownes).

That it is an oxidizing agent in a marked degree, and that its therapeutic value is not limited to its use as an anæsthetic, is evident from its chemical and physical characteristics. At the same time it combines properties so different from those of oxygen, that the two are by no means therapeutically identical.

Several small volumes have been devoted to this gas, all but one of them, so far as I am informed, limited to a study of its claims as an anæsthetic.

In 1860 Dr. George J. Ziegler, of Philadelphia, issued a little volume, now out of print, in which he claimed much for this gas in the treatment of several forms of chronic disease. Experimenting somewhat extensively, his success led him to assert emphatically that, if properly exhibited in suitable cases, it would be found not only a *materia medica* but also a valuable *materia alimentaria*. Classing its anæsthetic and antispasmodic properties as secondary, he insisted that it served as a *direct source of supply to the blood and tissues*.

Later, some enterprising but unscrupulous pretenders "discovered" in this gas the so-called "oxygenized air," which a dozen years ago was extensively advertised as a cure-all. "Rights" to manufacture and administer it (!) were sold to gullables for a round sum, the process of generating it being bunglingly disguised by the addition of ferric carbonate or other inert coloring material to the ammonium nitrate used. Even to this day a firm in Philadelphia is still harping on the miraculous alchemy of "compound oxygen." What their office remedy may be I do not know; but the trash they send to their mail correspondents, calling it "home treatment," is a barefaced swindle and utterly worthless, being nothing more than a weak solution of the nitrates of lead and ammonium, or of ammonium muriate and St. Croix rum.

The process for evolving nitrogen monoxide is simple and well known to every tyro in chemistry. The gas should be washed through not less than four waters (wash-bottles)—half a dozen would be still better—before it is fit for inhalation.

The *peroxide of hydrogen*, HO_2 , was discovered by Thenard in 1818, but has not until quite recently attracted any attention as a physiological agent. Assmuth and Schmidt made some unsatisfactory experiments with it in 1864. Richardson soon after used a solution of it in water, and approved it for internal administration. Its very unstable nature and disagreeable flavor, however, prevented any degree of popularity, and not until 1878 were any satisfactory experiments conducted. In that year Gutmann and Schwerin demonstrated that it underwent decomposition in the tissues, liberating free oxygen in quantity sufficient, when pushed, to induce gaseous pulmonary embolisms, with arrested capillary circulation, and finally fatal results.

About the same time Stöhr, experimenting with it as a disinfectant, employed it extensively in cases of phagedænic and syphilitic ulcers and diphtheria. According to this author the pus from venereal ulcers lost its virus after two hours contact with a concentrated solution of peroxide of hydrogen. The discharge from ulcers treated with it quickly assumed a more benign character, healthy granulations appeared, and losses of substance were rapidly repaired.

More recently MM. Péan and Baldy have given this agent quite extended trial in the surgical wards of the Hôpital St. Louis (Paris), as a substitute for carbolic acid in antiseptic dressings. Under its use the general sanitary condition of the wards notably improved, cases of traumatic fever and erysipelas became less frequent, and it was found especially desirable as an application in dressing flaps, after amputations, union by first intention being decidedly encouraged by it. As compared with carbolic acid and other antiseptics it possessed the manifest advantage of being devoid of both unpleasant odor and toxic influence, while its application was painless, if not even agreeable.

Following in the wake of these promising and suggestive tests, Dr. Landolt found its use in ophthalmic surgery to be a great advance over that of any known antiseptic, since it can be used of a strength sufficient to effectually destroy all forms of microzoa without injury to the delicate structures to which it is applied in ocular surgery, which is not true of carbolic acid, alcohol, salicylic acid, etc. He also found it to be possessed of very remarkable detergent properties, promptly cleansing suppurating surfaces, arresting septic fermentation, and rapidly checking suppuration in even neglected cases of gonorrhœal ophthalmia.

For more extended details of Dr. Landolt's interesting experience, see the *London Medical Record*, for March, 1883.

At this point, some inquiry as to the *modus operandi* of super-oxidizing agents and the final disposition of the quantity of oxygen daily consumed or *appropriated* in the human system will not be out of place.

A healthy adult, at active exercise in the open air, inspires daily one thousand gallons of oxygen, diluted with four thousand gallons of nitrogen.

Regnault and Riesel have shown that the decarbonization of the blood is one of the minor offices of the oxygen inspired. Of the one thousand gallons daily required, from ten to twenty-five per cent.—one hundred to two hundred and fifty gallons—is *absorbed, directly and in a free state, into the blood* (Magnus).

The marked affinity of the blood for oxygen is indicated by the physical fact that the former readily absorbs two and one-half times as much of the latter as water at the same temperature.

Nor is it true that the carbon dioxide exhaled during animal respiration is wholly formed in the lungs. It already exists in the venous blood before it reaches the lungs, while both carbon dioxide and free oxygen exist in arterial blood (Dalton).

Magnus found the proportion of free oxygen to carbonic acid by volume in arterial blood was as 10 to 25; in venous blood as 10 to 40.

Thus in the pulmonary circulation carbon dioxide is given off and oxygen absorbed, while in the general circulation the oxygen gradually disappears, and is replaced in the venous blood by carbon dioxide. The free oxygen in the general circulation exists there in the form of a simple solution. It is finally absorbed from the blood of the capillary vessels, and *becomes fixed in the substance of the vascular tissues*. The blood is therefore a circulating fluid destined to transport oxygen from the lungs to the tissues, *for it is the tissues themselves which finally appropriate the oxygen and fix it in their substance* (Dalton).

Burdon-Sanderson has further shown that the red blood-cells are the main carriers of oxygen, and that the condition of inflammation, in its earlier stages, essentially consists in a sluggish and finally immobile condition of the white blood-cells, from want of a due and regular supply of oxygen; and that the activity of the white blood-cells is in exact proportion to the amount of oxygen present. This would seem effectually to refute the prevailing impression that an over-supply of oxygen to any part necessarily induces an inflammatory condition.

The principal source of the carbon dioxide of the blood

is the decomposition of the tissues, an essential part of their constant metamorphosis. The experiments of Marchand prove that *even here it is not a process of direct union of oxygen with the carbon of the tissues, but in some other and more indirect mode*.

Further evidence that oxygen and its congeners are important elements in every stage of the process of tissue-building, that oxygen itself is an element *in quo multum alimenti est*, is scarcely necessary. It is evident, however, contrary to the generally accepted ideas, that oxygen should be classed as a *restorative* rather than a *destructive*, and as *contributing directly toward constructive rather than destructive metamorphosis*.

Instead of constantly breaking down tissue by true chemical oxidation, as is almost universally taught and unthinkingly accepted, it really replenishes wasted tissue, both by supplying in itself an essential element toward such repair, and by stimulating and correcting, at every step, the assimilative process.

On the other hand, admitting that the stereotyped assumptions in physiology are true, the rate of metamorphosis is held to be the gauge of vitality. Imperfect or impeded metamorphosis is disease, arrested metamorphosis is death.

In many of our therapeutic efforts of late are we not too eager to hasten *constructive* transformation, almost forgetting that this process must in all cases be both preceded and accompanied by *destructive* action! And do we not ignore the glaring fact that *no molecule of matter, whether of nerve or muscle-fibre, bone element, or blood-plasma, can be made to assume its position in the animal economy except through its direct association with this vital and inevitable element—oxygen!*

Throughout the organic world oxygen in some of its protean forms, is the universal basic element; the addition or elimination of a single equivalent often sufficing to transmute the blandest article of food into the most virulent poison, and *vice versa*.

(To be continued.)

A CASE OF INEBRIETY WITH CRIMINAL IMPULSES.

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THE following case has a peculiar interest, not from its novelty, but as a type of a large class who are best known to criminal lawyers, and whose career is one progressive march of degeneration.

William B.—was placed under my care in 1881, as a periodical inebriate, who at this time was suffering from delusions and delirium in which he heard voices urging him to kill his wife and set fire to the house. He also felt a strong impulse to kill some one at times, particularly when recovering from the effects of spirits. He loved his wife and told her frankly of this state. If he went out in the street he seemed to hear the same voices telling him to do something startling that would create a sensation, and impulses to find an occasion to do so filled his mind. These impulses were pleasing and indulged in, although recognized as foolish vagaries of the brain. He would walk about for hours, living over in his mind scenes of great excitement, such as rescuing some great man from death by a runaway, or saving him from the cars, or from drowning, or a burning building. He would come home all exhausted and tell what he had thought, go to sleep, and hours after wake up with but a faint recollection of it. His parents were inebriates and neurotics, and died in early life. He was brought up by an uncle, and was educated as an inventor and machinist. He was temperate and intensely devoted to his work. Having made several profitable inventions, he became wealthy and married, living well in good surroundings. At thirty-five years of age he began to drink, from the loss of a child by drowning, the result of his carelessness.

Ten years after, from drink, he became a workman in the factory he had once owned. He used spirits to great excess, periodically, and the free interval became shorter steadily. The drink paroxysm came on without any intimation, and would not be realized until he had drank several glasses of spirits; then he would struggle against it, but to no purpose. Usually he would be walking the streets, after his work was over, with no thought of drinking, and only complaining of general exhaustion, when suddenly, without thought, he would enter a saloon and drink. When the spirits began to affect him he realized the danger for the first time. He never drank in company at the beginning. His mind remained about the same until the effect of alcohol passed away, when melancholy and hallucinations appeared. Not only his senses were disturbed, but his reason and judgment suffered, and he fully realized it in the remark "that it seemed like a thick cloud, full of deceptive voices and impulses that he was powerless to disobey, although he knew they were wrong."

The second or third day's removal from alcohol brought relief from these mental conditions, and later the memory of them grew fainter, and only remained as dim shadows of the past, his mind recovered its apparent force, and he seemed to be more anxious to be successful. He spent his leisure in reading and drawing models of new inventions, living very temperately in every respect. If some one should present the subject of temperance in private, or from the lecture stand in his hearing, he would be strangely agitated, and always drink within forty-eight hours. The same result would follow if he should try to help any one who was intoxicated.

A temperance revival in the neighborhood had the same effect of causing him to drink, although he was a shining example of those who were cured by grace. Three years before admittance, for the first time he had an impulse to place obstructions on the railroad, and thus witness an accident. From that time these impulses varied more or less, and from his own statements were often influenced by newspaper accounts of crime and deeds that created a sensation. If, while drinking, he should read of some great sensation, in which one man became very noted, he would revel in the thought, and even speculate how he could do the same. Later, these morbid fancies grew into homicidal impulses, which filled his mind with the greatest alarm, for which he sought every means to drive away. He drank to stupor for this purpose, and then when he recovered drank again as the only means for relief. His recovery under my care was rapid, and all these morbid states faded away. His mind was unusually clear about himself, and except a degree of nervous irritability, and a shrinking from personal contact with any one, he was not to any general observation different from others. Six weeks after admission he awoke one morning depressed, and soon after heard voices and felt impulses to burn up a neighboring church. Then they changed to a plot to blow up all the saloons in the city with dynamite at one time. He was fully aware of the nature of these thoughts, but it afforded him pleasure to go over the details and think of the results of this plot. The next day they faded away, and left but little impress on his mind. Four weeks later, after a period of some excitement concerning a business transaction, a similar plot filled his mind to destroy a drug store whose proprietor was not reputable. This was the last appearance of these morbid states, and after being under treatment eight months, he went away restored. Nearly two years after he was well and temperate, living in a country village, occupying a position of respectability.

These morbid states had not returned, he lived retired and avoided all excitement of every kind.

In all probability this recovery will be more or less permanent, depending on the surroundings and freedom from any great strain or drain.

This case was on the borderland of crime, and would

positively have developed into a homicide or incendiary very soon. In court the only evidence in defence would be periodical inebriety, and possibly the purposeless or motiveless character of the crime. In the prosecution it would appear that the crime was premeditated and performed coolly, and beyond some transient excitement and muscular trembling there was no clear evidence of delirium tremens or alcoholic mania. The mind would appear to be clear, and his statements of voices and impulses to do the act would be considered a mere plea in defence. If the medical expert of criminal courts should be called on to examine the case, looking at his present state and comparing it with the general features of the crime, he would find nothing to indicate legal irresponsibility.

The result would be that all these cases would suffer the full measure of punishment, the practical effect of which is to make criminals and paupers of them ever after.

In this way our courts, from want of study and knowledge of the cases which are brought before them, are cultivating and developing the very conditions which they seek to prevent.

This case would be called alcoholic mania in the early stages, and very largely concealed, because the patient recognized its nature, and was ashamed to acknowledge its presence. These delusions and hallucinations were held in control by a very slender cord, which might break any moment, and pass off like a storm, leaving the mind comparatively free and clear, no matter what had occurred.

It is impossible to estimate the mental capacity of the person who commits crime following or during a paroxysm of drinking from a general study of the character of the crime. In this case the delusion or delirious conception to commit crime was known only to his wife. If he had killed her, no one could have corroborated his statement of a morbid impulse. The fact could only have been brought out by a careful study of his history.

In a case which had been sent repeatedly to jail for drunkenness and assault, it appeared that after a certain period of excess in the use of alcohol most positive delusions of persecutions appeared and readily attached themselves to any one who opposed him, that he assaulted any one on the slightest provocation, with all the characteristics of an insane man; yet the court, lawyers, and medical experts saw nothing but drunken fury, that punishment in jail could best relieve.

In another case an inebriate, after a certain point in the use of spirits, embarked on the most questionable business transaction, lost all consciousness of right and wrong, committed criminal acts of various kinds, was arrested, and the court considered only the nature of the acts, their evident premeditation, and the coolness with which they were committed, and fixed the punishment to the extreme limit of the law. In both of these cases, heredity, and a marked history of physical causation and progressive degeneration extending back for years was noted; but, as in most of the cases of this disorder, it was unknown, not studied, and concealed from general observation. These men had, to all appearance, a full knowledge and control of themselves, and yet they were literally waifs without power and ability to guide or direct their actions.

Alcohol seemed to suspend their self-control, and leave the disordered impulses subject to every wave of influence. Upon this point turns all questions of responsibility, not upon knowledge of right and wrong, and feeling, but upon power of control. This is the teaching of science, above all law, or decisions of courts. The inebriate, or man who uses alcohol to excess, has always a defective organization, either originating before alcohol was used or developed by this poison. In both cases states of physical and psychical degeneration exist, which make it impossible for the mental operations to be carried on normally.

In my studies many cases appear in which these strange, unaccountable criminal impulses are present that do not develop into crime. Why they do not is not known; but it is clear that all the conditions are present. The impulse and disposition, and the details of the act is lived over in the mind of the person, but its literal fulfilment is not consummated. I think future studies will show that these impulses are common, and refer to every state and condition of the mind and body. When they appear in kleptomania or pyromania, or any of the many crimes that are so often associated with inebriety, they are both pathological and psychological.

The methods of cure by legal means, to confine them in the worst mental and physical conditions, and then turn them out less able to become good citizens, less able to live a normal healthy life, is a disgrace to our civilization.

These cases are in our neighborhood and at our fire-sides, and mutely appeal to us for help.

They are victims of physical conditions which physicians only are competent to determine. Courts and moralists are incompetent; they must be studied by scientific men from a physical point; then much of the confusion of the present will clear away.

Progress of Medical Science.

A YOUNG ETHER DRINKER.—A remarkable case of ether drinking is related in the *Gazette des Hôpitaux* of September 15, 1883. The patient when first seen by Dr. Sédan was but ten years of age. He was bright and intelligent, studied hard, and was one of the best scholars in his school. He confessed that he drank ether and said that it was by means of this that he was able to stand at the head of his class. Every means was tried to cure him of the habit, but in vain. He would steal money from his parents, and then go out at night to buy ether in the pharmacies. This was continued for nine years, the daily amounts of ether consumed rising gradually until he drank between one and two pints every day. He never experienced any ill effects beyond the intoxication, and death resulted finally from mitral disease, from which he had suffered for many years.

THE TREATMENT OF ABSCESSSES OF THE NECK.—Dr. John A. Lidell, in a very instructive article on this subject in the number of *The American Journal of the Medical Sciences* for October, 1883, points out that sudden death may occur from deep-seated abscesses of the neck, or the continuance of life may be greatly endangered, much oftener than is generally supposed, and that these abscesses in the neck are more frequently attended with hemorrhages due to the opening of important blood-vessels by ulceration or erosion, and by *ramollissement* consequent upon the disorders themselves, than abscesses in the other surgical regions. The superior liability of cervical abscesses to the spontaneous occurrence of dangerous hemorrhages arises in part from the greater number and importance of the cervical blood-vessels; but more particularly from the inanition and exhaustion, or low state of the constitutional powers, and consequent feebleness of the reparative forces, which rapidly result from most of the deep abscesses of the neck, or rather from the inability to swallow enough food to support life, and from the powerlessness to get any refreshing sleep, or even repose, with which these abscesses are oftentimes attended. The septic or toxæmic influence of the fetid secretions and exudations which present themselves in the oral and faucial cavities in many instances, also aids materially to still further depress the patient, and weaken the reparative processes of his system. These deep-seated abscesses of the neck, when allowed to run their own course, do not exhibit any tendency to a spontaneous cure; but, on the contrary, they

always tend to destroy life by burrowing or spreading, etc.; and Dr. Lidell shows that the earlier they are laid open and evacuated the better for both patient and surgeon. As soon as fluctuation is discerned, the abscess-cavity should, without delay, be freely laid open, the coagula turned out, the bleeding-point, or source of the hemorrhage, brought distinctly into view, and the delinquent vessel itself should be ligatured on each side of the aperture in its walls. But should the ligatures cut through, the actual cautery must be applied to the bleeding point, the primitive carotid artery should be firmly compressed against the cervical vertebræ by the surgeon's thumb or fingers applied on the anterior part of the corresponding side of the neck, between the larynx or trachea and the inner border of the sternocleido-mastoid muscle, with force enough to press the artery backward and inward against these vertebræ, and flatten it thereon. Should this procedure fail, it will be advisable, especially in cases where the bleeding proceeds from tonsillary abscesses, to ligature at once the primitive carotid artery.

HERPES OF MALARIAL ORIGIN.—The following are the conclusions arrived at by Drs. Verneuil and Merklen in a recent memoir: 1. Herpes is one of the frequent manifestations of the paludal poison. 2. The eruption may precede the onset of intermittent fever or occur during any one of the three stages of the attack. It may even show itself after the fever has been subdued by quinine. There is then no etiological correlation between herpes and fever, notwithstanding their frequent coincidence. This proposition is important, maintaining, as it does, that herpes is not a result of the high temperature, but is, like the fever itself, a result of a more general cause, viz., the malarial poison. Hence we find a new class of skin diseases, the *paludides*. 3. Malarial herpes presents no special characteristics. Its most usual seats are the borders of the lips, the edges of the nostrils, and other parts of the face most richly supplied with nerves. 4. The black crusts, or at least the black vesicles of herpes seem to belong to the pernicious forms of malarial fever. 5. In exceptional cases, paludal herpes shows itself in the form of zona. 6. In its most common forms, it may be preceded and accompanied by vaso-motor troubles and disturbances of sensibility of the skin about it. The cause of the eruption seems to reside in a nervous lesion, perhaps in a congestion of the cutaneous nerve-branches, resulting from a localization in these nerves of the paludal poison.—*Journal de Médecine de Bruxelles*, August, 1883.

THE PRURIGO PAPULE.—In the October number of *The American Journal of the Medical Sciences* for the current year, Dr. Morison, of Baltimore, considers that the prurigo papule is formed by an infiltration beginning around the upper layer of vessels of the corium, and that this infiltration extending upward surrounds the papillary vessels, enlarges the papillæ, thus pushing up the epidermis, which becomes thickened at an early stage above them, and at last penetrating it, forms within its layers a small vesicle containing serum, blood, and lymph-cells. The signs of infiltration surrounding the hair-sheaths and sweat-ducts are secondary, and they play no especial part in the process. Their presence in the papule is accidental, and it is certain that the primary changes in the skin are not in connection with them. The color of the papule at first does not differ from the rest of the surrounding skin, on account of the depth of the slight infiltration with which it begins. For the same reason, it is at first only felt, and not seen, as the infiltration has not extended high enough to push up the epidermis perceptibly, but is sufficiently great to give a feeling of knot-like hardness underneath it. He considers the whole process due to an inflammation, and that all the signs of chronic dermatitis follow regularly, according to the length and duration of the disease, and the amount of scratching, which the itching, as a secondary symptom, causes. Clinically the formation of the papule

coincides with this description, for there is always noticed in the beginning of the disease, after careful investigation of the skin, a slight roughness, and a sensation as of running the hand or finger over small knots, covered with an intervening membrane. At this stage there is no itching. In fact, the itching does not begin until the infiltration has so far advanced that the papules are more distinct. If before this occurs the treatment is begun, no itching appears. This proves, as Kaposi says, that all the symptoms of the disease go hand in hand with the increase or decrease of the papules.

SCOTT'S METHOD IN THE TREATMENT OF WHITE SWELLING.—A method of treatment of white swelling, advocated by John Scott in 1828, but afterward fallen into oblivion, was revived by Dr. Suchard, in 1879. The latter begins by rubbing the joint briskly with a sponge or coarse cloth dipped in spirits of camphor so as to produce rubefaction of the skin. Then the part is covered with lint, spread with equal parts of mercurial ointment and soap cerate, over which adhesive plaster is applied in strips as for ulcers of the leg. Over all is molded a leather splint. The dressing is renewed every week or every fortnight, according to circumstances. Dr. Cazin has modified this dressing. He employs friction in the same way as Dr. Suchard, but in place of the mercurial ointment he uses vaseline thickly spread on cotton. Adhesive plaster is then strapped about the knee. Over this he lays another layer of cotton and then applies a silicate of soda bandage. The dressing is reapplied every two weeks. When the bandages are removed, the skin beneath is often the seat of an intense erythema. It is then necessary to wait a few days before reapplying the dressings. This treatment is said to have been followed by surprisingly good results.—*Journal de Médecine de Bruxelles*, August, 1883.

EXCISIONS OF THE TARSUS.—In cases of tarsal disease, amputation through the leg or at the ankle has been and still is regarded by surgeons generally as much to be preferred to any more conservative treatment. Dr. P. S. Conner, of Cincinnati, in the October issue of *The American Journal of the Medical Sciences* for the current year, has collected the reported cases of tarsal excision. The three questions he considers are: 1. Is excision a safe operation, or at least attended with no greater mortality than the alternative amputation? 2. Is it likely to put an end to the disease, or is recurrence of the morbid process in the unremoved bones of the foot to be expected? 3. Will the patient, after recovery from the operation, be left with a serviceable limb? As respects the preservation of life, he finds that excision of the whole tarsus, or of one of its great divisions, is not much, if any, more dangerous than an ankle-joint amputation, and not very much more so than a middle tarsal operation. It has, moreover, the advantage of permitting, if necessary, of the subsequent removal of the foot, which, in the cases tabulated, was performed seven times with but a single resulting death. That the disease is very unlikely to reappear is shown by the fact that in only three cases did such recurrence take place. This fact, however, is not so strange as it may at first seem, as it is in direct accordance with the recognized law that the more thorough the removal of diseased bone the less will be the likelihood of a relighting up of the bone inflammation. By far the most important question of the three proposed is that which has reference to the functional value of the saved foot. He holds that its usefulness is likely to be sufficiently great to warrant the taking of a somewhat increased risk of life, and in subjecting the patient to the necessarily much greater duration of the period of healing—a period that, though it may be as short as four weeks, may occupy more than twice as many months or even half as many years. Of the 108 operations tabulated by Dr. Conner, 10.18 per cent. resulted fatally. Of the 95 cases, the end-results of which are known, 10.53 per cent. were failures; 6.32

per cent. left the subjects of them able to walk with a cane or crutch; in 24.21 per cent. there was, after complete consolidation had taken place, no pain nor tenderness, little or no limp, and the individuals were not prevented by the condition of the foot from earning a livelihood; and in 47.37 per cent. the result was so good that the gait was not a bad one, the support of the body was firm, and locomotion was so easy and perfect that the individuals could, without special fatigue, walk long distances, even twelve to fifteen miles a day.

FATTY STOOLS IN DISEASE OF THE PANCREAS.—Dr. Ziehl records a case of cancer of the pancreas occurring in Professor Erb's clinic at Heidelberg. The case itself presented no unusual features, but the predominance of gastric symptoms suggested the stomach as the seat of the disease, which was marked by the appearance of a painful tumor in the left side of the epigastrium, and by jaundice. The motions were of a peculiar silvery-gray color, and found microscopically to consist in great part of masses of acicular crystals soluble in ether; chemical analysis showing the stools to be composed of fat to the extent of half the solids. On dissection there was found a large scirrhus cancer of the pancreas, which had invaded the walls of the stomach and duodenum, and occluded the common bile-duct. The pancreatic duct was dilated and distended except at its termination, which was lost in the cancerous mass. The writer, after saying that the case illustrates the well-known fact of pancreatic disease being marked by the occurrence of fat in the stools, shows that the form in which the fat occurred in this case was exceptional, almost requiring the microscope for its detection, whereas it usually occurs in amorphous masses recognizable at once, and not in crystalline form. He further shows, by reference to cases recorded by Friedreich, Nothnagel, and Gerhardt, that when fatty crystals in excess are present, there is not only pancreatic disease, but also occlusion of the bile-duct, the last-named author finding crystals resembling tyrosin and leucin in a case of catarrhal icterus.—*The Lancet*, September 22, 1883.

CALCULOUS AND OTHER AFFECTIONS OF THE PANCREATIC DUCTS.—Dr. Johnston, of Washington, D. C., in an elaborate paper in the October (1883) number of *The American Journal of the Medical Sciences*, presents a good clinical study of this subject. Although he has been able to collect only thirty-five cases in which, upon post-mortem examinations, stony concretions were found in the pancreas, he cannot but believe that calculi are present in the pancreas far oftener than is supposed, and he can only attribute the paucity of medical literature upon the subject to the inexperience or carelessness of observers.

OPERATIVE INTERFERENCE IN IRREDUCIBLE DISLOCATIONS.—In a paper on this subject in the *Revue de Chirurgie* of August 10, 1883, Dr. Poincot formulates the following conclusions: 1. In considering the question of operation, dislocations must be divided into three classes, according as they are recent, of short, or of long standing. 2. Direct operative interference in recent luxations should not be attempted, except in dislocations of the ankle and of the thumb, in which division of the tendo-Achillis and of the lateral ligaments respectively may be practised. 3. In luxations of longer standing subcutaneous section is first to be employed. Arthrotomy should be reserved for those cases in which the vicious position of the bone renders the limb useless, or menaces its vitality by pressure on important parts, as in certain dislocations of the shoulder and of the knee, or when the dislocated fingers impair the utility of the hand. 4. In old dislocations, in which subcutaneous section is of no avail, arthrotomy, with or without resection, is necessary in the ginglymoid joints, such as the elbow, knee, ankle, and fingers; for the enarthroidal articulations, as the jaw, the shoulder, and the hip, osteotomy would be preferable.

PULMONARY CONGESTION OF RHEUMATIC ORIGIN.—In the medical section of the Association Française pour l'Avancement des Sciences, Dr. Huchard presented an interesting paper on this subject. Congestion of the lungs may occur during an attack of acute articular rheumatism, and may be generalized, in which case it is often most alarming in its severity, or local, when it is usually unattended with danger. Or, perhaps more frequently, it comes on without any articular symptoms in rheumatic subjects. There are two forms under which the congestion presents itself. In the first, it is acute and may be shifting. This variety may often be accompanied by profuse hemoptysis, preceded by symptoms of pulmonary congestion. But the hyperæmia may not go as far as hemorrhage, and then there are symptoms only of great oppression. Sub-crepitant râles are audible, together with blowing respiration. There is dullness on percussion, and absence of vocal fremitus. Such a state is sometimes incorrectly diagnosed as pleurisy. The second form is stationary and chronic. The congestion may persist for years, finally disappearing entirely upon the advent of articular symptoms. Such cases are very liable to be mistaken for tuberculosis. The hemoptysis, the author thinks, is due to the giving way of portions of the vascular walls in which pathological changes of rheumatic nature have taken place. It is analogous to the rupture of the cerebral vessels in apoplexy. Arthritic hemoptysis, while of much less gravity than that occurring in pulmonary tuberculosis, yet calls for systematic and persevering therapeutical management. M. Huchard recommends the prolonged use of quinine, salicylate of soda in small doses. The arsenical preparations, or the iodides of potassium and of sodium, also in small doses. He also uses intestinal derivatives, such as aloes, leeches to the anus, dry cups, or even phlebotomy.—*La Tribune Médicale*, September 16, 1883.

CLASSIFICATION OF THE PORRO OPERATIONS.—Dr. Robert P. Harris, of Philadelphia, states, in *The American Journal of the Medical Sciences* for October, 1883, that, from a careful examination of the literature of this subject, he finds that we have no less than nine forms of operation, some of them differing very materially from the original, all called by the name of "Porro," and classified together, although having very different rates of mortality. It is hardly necessary to claim that this is very unjust to the originator, and unfair to his operation. If the Porro method is to stand upon its merits, rated by its proportion of cures, we must in justice exclude from the record all the cases not strictly deserving of the title. As it would only complicate matters to make nine orders of cases, Dr. Harris proposes to combine them where this can be fairly done, and thus reduce the list to four classes. 1. True Porro operations; Porro-Müller operations. 2. Puerperal utero-ovarian amputations, with the pedicle dropped in. 3. Premature ablations of the gravid uterus, the fœtus not being viable. 4. Pré-vôt's operation, misnamed "Porro." (Utero-ovarian amputation after laparotomy for rupture of the uterus. Dr. Harris appends a tabular record of 140 cases, from which it appears that the Porro operations, carried out as originally designed, has saved $46\frac{1}{4}\%$ per cent. of the cases; the Porro-Müller method, unmodified, has saved $52\frac{1}{4}\%$ per cent.; and the combined, $48\frac{8}{10}\%$ per cent. of the women, and 90 out of 118 children.

MASSAGE IN THE TREATMENT OF HYPOPYON.—By gentle pressure and light friction over the eyeball through the lower lid, Dr. Just has succeeded in diminishing the purulent collection in the anterior chamber and causing it to become mixed with the aqueous humor. In several cases of hypopyon treated in this way he has seen absorption occur very rapidly. Dr. Hirschberg obtains similar results, when the collection of pus is not fixed, by causing the patient to turn frequently from side to side, changing the position hourly. Dr. Klein has employed enassage also in other affections of the eye, such as

phlyctenular conjunctivitis and diffuse parenchymatous keratitis. It is contra-indicated when it causes pain or provokes a persistent ciliary irritation.—*L'Union Médicale*, August 25, 1883.

CLOSURE OF THE JAWS AND ITS TREATMENT.—Dr. J. Ewing Mears, of Philadelphia, in an able paper in *The American Journal of the Medical Sciences* for October, 1883, discusses the various operations which have been suggested for the relief and cure of permanent closure of the jaws and the objections urged against them. He then narrates a case in which he operated in the following manner: By division of the ramus of the jaw, about its middle, exsection of the condyle and division of the insertion of the temporal muscle, thus releasing the coronoid process and affecting its removal with the condyle—division of the masseter muscle at its points of origin—non-interference with the cicatricial band. By this plan he hoped to secure sufficient space for free movement of the remaining portion of the ramus, and he proposed to utilize the cicatricial band as a *quasi* ligament, and obtain movement of the bone between this band and the internal pterygoid muscle. By division of the masseter at its point of origin, he proposed to relieve the tension of this muscle and more effectually prevent union of the divided fibres. The plan of operation suggested and practised is novel, in the fact that it includes removal of both coronoid and condyloid processes with the upper half of the ramus, as well as division of the masseter, external pterygoid, and temporal muscles, at the point of origin of the former, and the insertion of the latter. The advantages claimed over other methods are: 1. Its application to all forms of permanent closure, that due to temporo-maxillary ankylosis, as well as to cicatricial formations. 2. The utilization of the entire body of the jaw in opening the mouth, not only affording in this way greater advantage in mastication and articulation, but serving to prevent deformity. 3. The formation of a more perfect artificial joint in the removal of both processes, thus overcoming the resistance of the more or less fixed upper segment, when the joint is made either in the body or the ramus of the bone.

PROGNOSIS OF MITRAL STENOSIS.—Dr. Duroziez, writing in *L'Union Médicale*, states that mitral stenosis is not of such grave import, as regards life, as is commonly supposed. It is true it causes more or less acute suffering, but the patients live nevertheless. He records a number of cases of this affection, from a study of which he draws the following conclusions: 1. Mitral stenosis, simple or combined with other valvular lesions, permits in exceptional cases, life to pass the sixtieth year. 2. The complication of mitral regurgitation does not aggravate the prognosis. 3. The coexistence of aortic insufficiency renders it more grave. 4. The complication of a tricuspid lesion is of very serious import.

DELIVERY OF HYDATID MOLES BY EXPRESSION.—Dr. Gregoric advocates a new method for the treatment of hydatid moles (*Allgemeine Wiener Medizinische Zeitung*, August 21, 1883). When the diagnosis is definitely made, uterine contractions should be induced by a vaginal tampon and subcutaneous injections of ergotine. Then, as soon as the os is dilated for about an inch, the contents of the womb are to be forced out by Credé's method. This need not be done rapidly, but may be practised repeatedly at short intervals. The mole is squeezed out through the vagina, as the author expresses it, like a sausage. The uterus quickly contracts, and the hemorrhage ceases.

JEQUIRITY IN GRANULAR LIDS.—Drs. Parisotti and Galezowski have not met with the success in the employment of jequirity that other oculists have obtained. The local trouble was not aggravated, neither was it in the slightest degree benefited. But an intense febrile reaction followed the application and continued for over ten days, while the immediate effect of the jequirity was to cause great suffering.—*Recueil d'Ophthalmologie*, August, 1883.

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NEW METHODS OF TREATING WOUNDS.

THE ingenuity of German surgeons has been much exercised within the last two or three years in order to devise some new method of dressing wounds. It is now nearly two years since carbolic acid and the Lister dressing began to be superseded in many hospitals by the use of iodoform. The latter drug was so enthusiastically adopted that its introduction into general surgery was thought to constitute an epoch in modern surgery. It was soon found, however, that many other substances would answer as well or better. In 1880-1 Kocher began to recommend his bismuth dressing. He used the subnitrate of bismuth suspended in water in a strength of one per cent. The wound was covered with this and over it a dressing of gauze and rubber was applied somewhat like that of Lister. Remarkably good results were reported by himself as well as by Langenbeck and some others. In a few cases, however, it was stated that a gangrenous stomatitis was excited, and it is known that if the amount of bismuth (subnitrate) be excessive, symptoms resembling lead poisoning develop.

In September, 1881, Esmarch began to use at his clinic an iodoform dressing covered with bags of dried turf-mold. Neuber reported excellent results from this.

In 1882, Fischer of Strasbourg, recommended the use of naphtholin as a substitute for carbolic acid and thymol.

For a considerable time, oxygenated water has been used by MM. Pean, Paul Bert, and Brochin, in the wards of the Paris hospitals. It continues to be used in some special classes of diseases, as those of the eye.

After Koch's experiments which demonstrated the superior power of corrosive sublimate as a germicide, its use in surgery was taken up. Kummell formulated a method of applying it in the treatment of wounds which goes by his name, and which has been very generally adopted.

Kummell's dressings consist of sublimated gauze and cotton, sublimated silk, sublimated catgut, sublimated oil, and sublimated inorganic dressing materials. These latter comprise powdered glass, sand, coal ashes, asbestos, lint made from spun glass, and, for purposes of drainage, capillary threads of spun glass. Sublimated gauze and cotton are designed to take the place of carbolic gauze and cotton. They are made hygroscopic in the usual manner, and then impregnated with the following: cor-

rosive sublimate, 10 parts; alcohol, 4,490 parts; glycerine, 500 parts.

Bruns, of Tübingen, has recommended the use of wood wool. This consists of finely ground wood, such as is used in the manufacture of paper. It is clean looking, delicate fibred, soft, yellowish-white, having an odor of fresh wood, and absorbs immensely.

The wood-wool possessing the highest absorbent properties is obtained from the *Pinus picea*. It is passed through a sieve, dried, and impregnated with a solution of half per cent. of sublimate and ten per cent. of glycerine. It is extraordinarily cheap. It is exceedingly elastic even in thin layers, so that bandages can be put on more lightly with this than with any other dressing. It takes up twelve times its weight of water.

Dr. Bruns claims that high absorbent qualities in surgical dressings are of vast importance, "as primary wound healing takes place the more readily the more completely the discharges are conducted from the wound—the dryer the wound and its vicinity are kept—as it is under these circumstances that decomposition processes are most securely excluded. If the dressing has absorbed the secretions of the first few days, the evaporation and drying up of the contained moisture should be permitted; then, as the discharge from the wound diminishes, the dressing, now dry, can remain a considerable time as a permanent one. With this object in view, it is indispensable to omit the occlusive layer of the typical Listerian dressing, as the drying of the dressing is prevented by it. With the same object in view he prefers the covering of the wound with glass-wool in place of the protective, as under this the suture line is of necessity kept moist.

In his own clinic the mode of dressing, according to the *Medical Times and Gazette*, is exceedingly simple. After the wound has been disinfected by copious irrigation with a one per cent. (.1 per cent.?) solution of sublimate, and the drainage-tubes have been placed in, the suture line is covered with a layer of glass-wool. Upon this is placed a sufficient quantity of wood-wool either simply wrapped in sublimate gauze or sewn up in the form of a pillow. The latter form is preferred for hospital use. He considers it best then, first to place on the wound a small pillow, then a larger one that will widely overlap this in all directions. These are to be fastened on with a firm binder.

In addition to the above methods others have been devised for the treatment of minor wounds. Powdered sugar, which is aseptic, is recommended by several German surgeons.

We venture to say that it makes little difference in the vast majority of cases which antiseptic or aseptic method is used, provided there be cleanliness, free drainage, and pressure properly applied.

RESECTION OF THE STOMACH AND THE GASTROSCOPE.

PROFESSOR J. MIKULICZ, of Krakaw, has written a series of articles in the *Wiener Medicinische Wochenschrift*, giving an account of a successful case of stomach resection performed by himself, and of the utility of the gastroscope in connection with these operations. There had been, up to July, 32 cases of stomach resection reported. Among these, there were 26 deaths and 8 recov-

eries, giving a per cent. of recoveries of twenty-five. Three of the cases were operated upon for gastric ulcer with stenosis, and of the three, two recovered. There were, therefore, 29 cases of cancer of the stomach, with 5 recoveries, from the operation. Of the 24 fatal cases, the cause of death in 15 was collapse, in 1, inanition, in 5, peritonitis. In the opinion of Mikulicz, the death of the last six by inanition and peritonitis, was due either to deficient skill in operating, or to conditions which, at present, our better knowledge can prevent. As for the deaths by collapse, there is hardly an operation in surgery which has had relatively so many victims from this cause. The explanation lies not only in the length, character, and severity of the operation, but especially in the fact that the patients are generally already weakened by the disease.

There is no operation in surgery which has had its technique and, we might say, indications so well defined in so short a time. It is now generally admitted that the operation is justifiable, but only in the most carefully selected cases. The diagnosis must be exactly made, the growth must be still small, the disease in a comparatively early stage, and the patient not greatly weakened or marasmic.

It is in the hope of its assisting to a more exact diagnosis that Mikulicz recommends the gastroscope. He has examined a number of healthy and carcinomatous stomachs with this instrument. In the healthy stomachs, the pylorus appears like a longitudinal split, or like a star-shaped, oval or circular opening, which is surrounded by a thick wall of red mucous membrane. The muscular wall is constantly in motion. In cases of cancer, the thick protuberance about the pylorus is either entirely absent, or is thrown up in small folds. The powerful muscular action of the pylorus is absent. The gastroscope is evidently not yet a great help in the matter of diagnosis, but further observation and use may make it more so.

THE HOT SPRINGS OF ARKANSAS.

So far as we can learn of the actual facts regarding Hot Springs therapeutics, it is the most empirical of all health-resorts. Very little careful study of their action has been made. At the same time it is a place which is very widely known, and very frequently used.

Hot Springs is a city of five thousand inhabitants, of which nine-tenths is a floating sick population. It lies in a valley between two mountains, along the sides of which there are now seventy-one springs.

The sick population is a heterogeneous one. The patients come from all parts of the country. Those that predominate, says Dr. J. C. McMeehan, in an article upon the Hot Springs published in the *Cincinnati Lancet and Clinic* are those "affected with syphilis, rheumatism, and nervous diseases. All kinds, however, are met with. Women broken down in health from fashionable dissipation, late hours, balls, champagne, and from the effects of sacrificing at the altar of Venus, come here for quietude, rest, pure air, and the benefits derived from bathing. Men broken down from the excessive use of alcoholic drinks and the morphine habit find relief at this place, and under the pleasing and stimulating effect of the waters are able to give up the habits of drinking and opium eating."

An atmosphere of charlatanry seems to hang about the place. This is shown first in the current belief that the waters have great electrical properties. Many of the springs are named after some supposed predominant constituent in them. Thus, there is an Arsenic Spring, which for several years was peculiarly useful in the treatment of skin diseases, until it was found that it contained no arsenic. Another spring, called the Alkaline Spring, is thought of especial value for alopecia, and bald-headed people soak their bare pates for hours in its delusive waters. Another spring is particularly adapted to corns and bunions, while various others have special reputations for the cure of disease. No attempt seems to be made to classify the springs therapeutically upon any other than an imaginative basis.

The water varies in temperature from 93° to 157° F., and the various springs discharge a total of over half a million gallons of water daily.

That this water contains any specially valuable medicinal properties, apart from its heat, seems at present to be improbable. An analysis made by Professor D. D. Owen, as quoted by Dr. McMeehan, gave the following:

	Gramme.
Organic matter combined with some moisture . . .	1.16
Silica with some sulphate of lime, not dissolved by water	1.40
Bicarbonate of lime	2.40
Bicarbonate of magnesia	0.50
Chloride of potassium	0.04
Chloride of sodium	0.218
Oxide of iron and a little alumina	0.133
Sulphate of lime dissolved by water	0.320
Loss. Iodine. Bromine	0.053
Total	6.222

This analysis does not include any of the gaseous or volatile constituents which it is claimed are present; neither does it include the electricity—an agent whose presence always appeals helpfully to the lay mind.

Dr. McMeehan believes, as the result of his experiments, that there is a compound of silicon present. He also asserts that the galvanometer indicates the presence of more electricity than is usually to be found in hot water, and the same observer claims some peculiar physical properties for the water. The experiments are not recorded with sufficient carefulness and detail, however, to warrant any inference from them.

The effects of a continued use of these baths are, says Dr. M., remarkably great alterative action, correcting retrograde metamorphosis; equalizing and moderating nervous excitability; increased action of the absorbent system; increased disintegration of tissue; increase of assimilation and reparation; activity of all the excretory organs, eliminating mineral blood poisons rapidly, such as lead, mercury, and iodine, so rapidly that compounds of the two last named are here frequently prescribed, and are often taken in heroic doses with almost perfect impunity; eliminating also the effete and poisonous products of the disintegration of tissue, by the kidneys and skin, and producing some abatement of the morbid craving for alcohol and tobacco in those who have acquired the habit of the excessive use of these stimulants.

The pathological conditions in which these waters are

contra-indicated, according to the same authority, are : Whenever the pulse is materially accelerated by the disease ; an exalted action of the heart and arteries ; where there is a tendency to active inflammation or any form of acute disease ; where the action of the heart is in any way interfered with, either by structural change or the presence of liquid in the pericardium : where there is a marked increase of the temperature of the body : in hectic fever ; in cancer, or in any form of epithelioma ; where there is a tendency to wasting hemorrhages, and with pregnant females.

There is no doubt whatever that many persons are benefited by a residence at Hot Springs. They seem to be particularly attractive to the venereal. The cause of this is formulated very rationally by the gentleman whom we have quoted. The change in mode of life, the removal from annoying cares to a healthy, well-regulated resort, the powerful stimulating, diaphoretic and diuretic action of the waters are all potent factors. No doubt the high reputation which the springs have got, and the impalpable electrical agencies supposed to exist in the waters also act effectively upon the patients' imagination.

MULTIPLE SMALL ABSCESES OF THE LIVER.

AMONG the greater difficulties with which the diagnostician has to contend, few are more perplexing than irregular pyrexia, more especially when due to an unknown cause, or when the concomitant symptoms simulate those of distinct affections.

So much has been added to our knowledge of abscess of the liver—local parenchymatous hepatitis—by Murchison, Frerichs, Sir Joseph Fayrer, and others, that, as a rule, there is no very great difficulty in establishing a diagnosis, more especially since the introduction of aspiration. The case is somewhat different, however, with multiple small abscesses. The descriptions of cases heretofore noticed have been far from clear, and the negative results which may be gained by aspiration render the diagnosis extremely difficult. The paper by Dr. R. E. Carrington, therefore ("Guy's Hosp. Reports," vol. xli., 1882), in which the clinical histories and post-mortem appearances of thirteen cases are given, is a valuable addition to our knowledge of the subject.

So far as can be judged from the history of the cases after coming under observation, the duration of this affection is extremely variable. Cases may terminate in death in twenty days or less, or they may run on for two or even six months. There is nothing particularly striking in the clinical histories, and it is only by a grouping together of many symptoms that we can diagnose the affection by exclusion. When brought into the presence of a patient suffering with this disease, we immediately notice that he appears to be extremely ill. The eyes are sunken, though they may retain their brightness, the body is more or less emaciated, and the general aspect is that of apathy and drowsiness. Not infrequently the *facies Hippocratica* is seen, and this, with the drawn-up position of the lower limbs and usual dorsal decubitus, indicates the abdominal pain from a local or general peritonitis. The skin, until the fifth or eighth day, is generally hot and dry. After this time, or before in a few cases, profuse diaphoresis comes on, chiefly remarka-

ble for irregularity. The tongue is dry and coated with a brown fur, sometimes creamy at the onset. The dorsum of the tongue may be brown while the edges are pale or red, and sordes collect on the teeth. Abdominal distention, occurring with ascites, a general peritonitis, or local peritonitis about the liver with rigid recti, is an almost constant symptom. The respiration is thoracic, as would be expected, may reach 38 or 44, and the breath is sometimes sweetish. Though not a constant symptom we generally find enlargement of the liver, which progressively increases. With the enlargement of the liver, the thoracic respiration, and the peritonitis, local or general, there is, except in rare cases, abdominal tenderness or positive pain, especially in the hepatic region, auscultation showing the peritoneal rub, evincing inflammation over the hepatic surface. Percussion may cause intense pain over the whole hepatic region. Sometimes there is a throbbing pain across the front of the lower part of the chest, continuing for hours, or the pain may be of the sharp cutting nature common to local peritonitis.

Vomiting is not a constant symptom ; it is present in about one-half of the cases. The vomitæ may consist of blood or blood-stained fluid, giving bile reaction, and are intensely bitter. If the blood comes up in clots we are safe in diagnosing a concomitant gastric or duodenal ulcer. Diarrhea and constipation may be said to be equally frequent and are connected with obvious causes, as dysentery, gastric ulcer, and peritonitis. When diarrhoea with pea-soup stools occurs, it is due to an ulcerative process of the bowel, generally in the region of the cæcum. Rigors may or may not be present ; they are by no means constant. Jaundice is present in about one-third of the cases ; it varies in intensity but is general, the urine containing bile-pigment, and, where the liver substance is extensively involved, contains leucin and tyrosin with diminution of urea (one case, however, is reported in which there was an excess of urea). Albumen and sugar may be entirely absent, or there may be a large amount of one or the other. The specific gravity varies between 1.020 and 1.025, and the color may be described as that of porter or strong tea, though it may be normal. Where there is much bile pigment we should expect acicular or violet-colored crystals. Inability to pass the urine is quite a common symptom. The temperature may be described as irregularly febrile. In the same case it may run as high as 106° or 106.5°, and may then, in a comparatively short space of time, become subnormal. In the cases reported by Dr. Carrington the evening temperature rarely went below that of the morning. At the moment of death the thermometer has noted 111° Fahr. in the rectum. The pulse is weak—very feeble in some cases—and compressible. It not uncommonly runs as high as 125 to 135 and may even reach 175 and higher.

From the above description it is seen how inconstant are the symptoms, and, consequently, how difficult the diagnosis must almost necessarily be. With regard to constancy and importance, the febrile temperature may be placed first. Even this, however, is not an invariable symptom, for Murchison has recorded a case of multiple pyæmic abscess of the liver without pyrexia. But with a febrile temperature, our attention is naturally directed either to the thoracic or abdominal cavity, in these cases more especially to the latter, when we consider the aspect

of the patient, the abdominal pain and tenderness, and the hepatic enlargement, with the peritoneal "rub," the emaciation, the apathy, and the dry brown tongue. These are the most constant and important symptoms. As a matter of course, a previous history of an affection which is recognized as a factor in suppurative hepatitis is an important point, but, unfortunately, it is not always to be had.

The pathology of this affection is interesting. The liver is studded with numerous small abscesses, which, on section, pour forth a quantity of pus mixed with bile. The portal veins are found to be extremely distended throughout in many cases, being in a state of intense suppurative inflammation, and contain pus. Section through the portal vessels shows a purulent fluid running from the vein. The venous walls are thickened and soft, and, in parts, detached from the surrounding hepatic tissue. With the exception of cases commencing in an obstructive inflammation of the hepatic ducts, the pus-point is always in a radicle of the portal vein. In some cases the portal and splenic veins are plugged by pus and emboli. Save the exceptions above noted the hepatic ducts are not the principal or primary seat of the disease, for though the smaller ducts may contain pus the main branches are unaffected, and their walls present no appearance of inflammatory exudation. Although the tubes may contain a yellow tenacious material, they are not all distended, and the distention of the smaller ducts is, therefore, secondary. In parts the suppuration may extend as far as the capillaries and secreting system, and a section shows the lobules distinctly marked out, they being of a dull yellow color, with the hepatic vein visible as a red spot in the centre. We may infer that the inflammation has been primarily in Glisson's capsule and the tubes afterward involved. It is to be regretted that no examination was made in these cases for pyemic micrococci, as their presence or absence might throw much light on the subject.

ABSCESSSES OF THE NECK CAUSING SUDDEN DEATH.

THE last contribution to our literature from the pen of the lamented Lidell is not the least instructive of his many interesting papers. In the *American Journal of the Medical Sciences* for October, 1883, is an article showing that certain abscesses of the neck, apparently of but little surgical importance, may cause sudden death from hemorrhage or asphyxia. While these cases are not common, they do occasionally occur, and, as is seen from Dr. Lidell's paper, are more than likely to cause very troublesome symptoms and death, if not promptly dealt with.

A most important feature of these abscesses, as regards prognosis, is their tendency to burrow in the connective tissue of the neck, especially downward (as in a case reported), causing inflammation or compression of the recurrent laryngeal nerves, inflammation and adhesions at the apex of the lung, even pulmonary engorgement and pneumonia, death taking place from asphyxia. The dyspnoea and subsequent asphyxia may be due to œdema of the glottis, caused by inflammation of the adjacent tissue. This œdema glottidis may manifest itself even one or two days after the discharge of

the abscess. Added to this there is danger from opening of the œsophagus or trachea by the inflammation and erosion, or the abscess may discharge itself into the pleural cavity, or mediastinum.

No less important, from a prognostic point of view, is the tendency, in some cases, to erosion of the cervical blood-vessels, and death from hemorrhage. The walls of vessels may become so softened and weakened by the inflammatory process, that, when the external support is removed by the evacuation of the pus, they immediately give way to the blood-pressure. In cases of hemorrhage from this cause it is difficult to determine its exact source. It may come from a branch of the external carotid or from the trunk of the internal, or several arteries may be involved at the same time. Finally, such an amount of dysphagia may be produced as to lead to death from starvation.

As regards the treatment of these deep-seated abscesses of the neck, it should first be remembered that they rarely tend to spontaneous cure. If left to themselves or treated expectantly, their tendency is to burrow and cause the destructive results already mentioned. They should, therefore, be laid open as early as possible, wheresoever they may form. In opening them, he would be a rash surgeon who would follow the general directions for opening abscesses, and plunge the lancet down to the seat of pus. The cervical structures are too important for any such procedure as this. If convenient or possible, the patient should be anesthetized, and a most careful dissection of the superjacent tissues be made down to the pus. As regards after-dressings, these cases call for drainage-tubes and antiseptics. Where hemorrhage occurs, the bleeding vessel should be found and ligated on either side of the bleeding portion. If the vessel walls are so softened as that the ligature cuts through, the actual cautery should be used, but never styptics. It may be that the abscess cavity cannot be laid open so as to bring the delinquent vessel into view. In these cases the common carotid should be firmly and continuously compressed against the cervical vertebrae so as to allow coagula to form and plug the bleeding point. Should this procedure fail, the external, preferably the common carotid, should be ligated. The latter, because as before stated, cannot always be determined, whether the hemorrhage comes from the internal carotid or from some branch of the external. By the timely performance of this operation considerable reputation may be gained and a life saved.

CHLOROFORM NARCOSIS DURING SLEEP.

FOR some time past considerable discussion has taken place through the columns of *THE RECORD* relative to the possibility of producing chloroform narcosis during sleep. In the article by Dr. John H. Girdner (vol. xxiii., p. 457), he reports five cases, in each of which he found it impossible to induce a chloroform sleep without first causing a prior interval of consciousness, marked by sudden awakening, with resistance, etc. In all of these cases the drug was administered from a towel and at a distance of eight inches from the face; in every instance, also, in the same manner and without the slightest variation. Viewed in this light, possibly the results were

not in the main remarkable. Therefore, perhaps, it is not at all surprising that some of our readers, while submitting certain cases flatly opposed in their results to those of Dr. G., should suggest that the drug be held at a greater distance, that the extreme liability to reflex disturbance be carefully avoided, and the approach made more gradually, instead of maintaining a specified distance of eight inches; also, that a certain variation in its quantity and mode of administration be practised. Still, from "the large experience in the administration of anesthetics" which Dr. G. has had, and from the fact that in his experiments "every possible precaution was taken that no error should creep into the result," a certain amount of presumption would appear to lurk in outside advice; on the contrary, nevertheless, we are glad to note that the gentleman mentioned (in a second article which we publish elsewhere) has availed himself of the suggestions offered, and evidently in the spirit with which they were intended. In the article referred to, eighteen additional cases are recorded, all unsuccessful. Of these latter cases, while some of them undoubtedly show positive results, yet others are open to criticism. It would also be interesting to know in what number of instances, while securing these eighteen, the attempt was attended with success.

Moreover, although it has been stated that the testimony of medical experts is anything but conclusive, yet perhaps we might accredit these gentlemen with a slight amount of judgment and discrimination. And while some of our correspondents have seen fit to take issue with Dr. G., especially relative to the final clause of his paper, still we believe, however broad the assertion referred to may appear at first sight, that the medical profession of America is of sufficient number to leave no doubt as to the plain truth contained in it.

In reviewing the several cases which have come to our notice, a few of which have appeared in previous issues, we give a short *résumé*:

In Dr. Murill's case the desired result was secured, apparently with the greatest ease. He omits, however, to state the method of administration, as well as the distance and approach. Dr. Borcheim, formerly house-physician at Mt. Sinai Hospital, mentions numerous instances in which narcosis from chloroform during sleep has been produced by him, while resident at the above institution, and likewise without the slightest difficulty. In Dr. May's case a similar success followed upon the careful and gradual administration of the drug. In Dr. Morgan's patient the first attempt was quite satisfactory, but on a subsequent occasion this was not so marked. Dr. Nelson found some slight restlessness precede the narcotism. This condition passed off, however, on removing the towel somewhat farther, and then upon gradually bringing it nearer the face complete narcosis followed. Finally, Dr. Halderman mentions three cases, the subjects of which were convicts in the Ohio State Penitentiary. Of these two were completely successful. The patient was then roughly handled and otherwise tested, so as to admit of no doubt as to the result. In these cases the chloroform was given from a handkerchief, and, at first, from a distance of two feet.

With the exception of Dr. Halderman's, all the cases above cited were children.

It would appear, therefore, from the foregoing and from other accumulated evidence, that it is quite possible to bring a sleeping patient profoundly under the influence of chloroform, without first causing a period of consciousness. This is more especially true of children. In adults, chloroform narcosis during sleep is, apparently, not so easy, and in many instances it probably cannot be accomplished at all. But that in certain cases it is possible, particularly where careful judgment and skill is exercised in the administration of the drug, we think there can be no doubt. To be successful, however, it is necessary that the means employed, the quantity used, etc., should be selected with excellent judgment, and the drug given by an experienced physician, with great care and by easy and gradual approaches. But that even this plan faithfully carried out will not succeed in all cases is equally evident. In this light, however, we cannot help thinking that the possibility of this procedure would be more practically conclusive were all the successful attempts recorded side by side with the failures.

THE ELECTION AT THE COUNTY SOCIETY OF NEW YORK, AND WHAT CAME OF IT.

THE result of the recent election of officers of the Medical Society of the County of New York for the ensuing year, is quite significant of the sentiment in the medical profession of this city and county, concerning the New Code. The attendance was unprecedentedly large. Never before in the history of the Society had so many assembled on the occasion of an annual election. The reason was well understood by all present. The issue did not rest on a mere choice of the individual gentlemen nominated, for they were all thoroughly representative and beyond reproach. But each ticket was openly nominated as representing one or other side of the Code question. There was the Old Code ticket, composed of gentlemen committed to a repeal of the recent action of the State Society, and the New Code ticket, supporting such action. Each party selected its strongest men, Thomas heading the ticket of the Old Code advocates, and Van der Poel representing the liberals. In fact, the tickets were so arranged as to leave little, if any, chance for purely personal preferences for candidates. The election was to be an expression of opinion regarding the principles which each ticket advocated. And so it is generally conceded by all who took part in the contest. The New Code ticket was elected by an unquestioned majority in a perfectly fair election, and as the result of the largest vote ever polled in this or any other County Society. It is quite probable that the question will remain settled with the County Society for a long time to come. At least it shows the relative strength of the two parties in a very decided manner.

Now, certainly the time seems to have arrived for dropping the discussion of the Code question. There has been altogether too much acrimony infused in the expression of individual views on both sides. Each gentleman is entitled to his own opinions and beliefs. But that is no good reason why there should be so many volunteer missionaries on both sides who should deem it their duty to preach to the benighted heathen.

We have enough of honest men on both sides to save the profession, no matter how the Code question may

be settled. There are enough of medical men good and true who, acting according to the dictates of their consciences, can take care of the fair fame of scientific medicine whether they govern themselves by Old Code, New Code, or no code. We have more trust in the men themselves than in any laws that can be made for them. There is a common platform upon which all can meet. The well-educated professional gentlemen need not be told where it is. There is no law which, of itself, can make a bad man do right, or a good man do wrong. The triumph of the New Code shows that medical men are growing more liberal as to interpretations of professional conduct, and that of itself is a good sign. But the most liberal man among the New Coders cannot abuse his privileges if he is made of the right material, is and just to himself, to his patients, and his profession. It is the man after all. If the doctor, Old Code, New Code, or no code, is not a man, all the voting, one side or the other, does no good. It is perfectly proper to wish that the right sort of man should be as free as possible to do what he believes to be just. There is certainly no harm in that; and from such a standpoint the result of the election on Monday evening may be viewed with becoming satisfaction.

SANITARY INSPECTION OF SCHOOLS.

WE are glad to learn that the energetic President of the Board of Health is taking the proper steps for a sanitary inspection of the different public school buildings in the metropolitan districts. Such an inspection, which we doubt not will be carried on in a thorough and systematic manner, is very much needed. We shall be prepared for all sorts of developments regarding defective plumbing, bad ventilation, deficient light, and improper heating appliances.

General Shaler, in his communication to Sanitary Superintendent Day, asks as an initiative to his movement that a consolidated report of the school-house inspectors recently made be forwarded, and that the sanitary inspectors be directed to continue such inspections, embracing every school-house, including those of the parochial schools in the city.

As soon as inspections of a district are completed a synopsis of them is to be made, showing which are found in a satisfactory condition and which defective, and the character of the defects.

The sanitary inspectors are also requested to make frequent visits to the school-houses within their respective districts as a part of their regular duties, with a view of detecting any neglect of the sanitary rules in reference to the case of the sinks and closets.

We shall be glad to note the progress of this good work.

ANOTHER PRIZE FOR SCIENTIFIC WORK.—A prize, established in accordance with the wishes of the late Signor Bufalini, Minister of Public Instruction in Italy, of the value of 5,000 francs, and to be known as the Bufalini Prize, has been announced for international competition. The subject for 1883-84 is, "The Application of the Experimental Methods to Science." The essays must be received by the Secretary of the Medical Faculty of Florence before October, 1884.

News of the Week.

SIR WILLIAM MAC CORMAC, the distinguished surgeon to St. Thomas' Hospital, London, during his visit in this city the past week, has been the recipient of many courtesies from the leading men of the profession. Numerous private dinners have been given to him, and altogether he has had the freedom of medical New York. On Thursday evening a brilliant reception was tendered him by Drs. J. Marion and Harry Marion Sims, at which a large number of representative men from this city and elsewhere were present. Nor has he been here merely for sight-seeing. During his short stay with us he has delivered two lectures upon surgical subjects which were models of their sort, and were appreciated accordingly by the large audiences which assembled to hear him. Sir William sails for his home to-day and carries with him the best wishes of his many friends in this city, Philadelphia, Boston, and Washington.

PRIZES AWARDED BY THE INTERNATIONAL COMMITTEE OF THE RED CROSS.—The Society of the Red Cross has awarded, through its Committee, the following prizes:

First.—A prize of 2,000 francs for the best essay on "Improvised Methods of Treating the Wounded and Sick," awarded to Dr. Port, of Munich.

Second.—A prize of 2,000 francs for the best essay on the "Improvising Means of Transporting the Sick and Wounded," awarded to Dr. Port, of Munich. These essays are to be published.

The prize offered for the best essay on the Improvising Isolation Hospitals was not awarded.

GAILLARD'S MEDICAL JOURNAL comes to us in its monthly form again and presents a most attractive appearance.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY at its last business meeting again rejected women candidates for membership.

THE BRAIN OF CAREY, THE INFORMER, has been weighed by the district medical officer, at Port Edward, Dr. Ensor. Its weight was sixty-three ounces, "the mass lying in the cerebellum!"

This is just the weight of Dr. Abercrombie's brain, and it exceeds the average by about fourteen ounces.

BLACK-MAILING A PHYSICIAN.—The papers relate a curious story regarding an attempt to rob Dr. George A. Gordon, a prominent and wealthy physician of Sandusky, O. He was one day last week summoned by telephone to call upon a sick person at a house in the suburbs. The doctor drove at once to the house, and was politely ushered in by a man in his shirt sleeves. The door was quickly closed, and the man instantly seized the doctor by the throat and held a "billy" menacingly above his head and demanded his money. The doctor only had \$10 about him, and offered that to the man, but the latter refused it and compelled the doctor to give him a check for \$500 and an order on Mrs. Gordon for a similar sum. The man then tied the doctor's hands, locked him in the house, took the doctor's horse and buggy, and drove away.

The doctor managed to free his hands, leaped from the window, ran to a store near by and telephoned his wife

not to pay the order, and to summon the police to arrest the man if he presented it. The fellow drove to the doctor's house, but seeing the police hurriedly approaching the residence he turned and drove rapidly into the country. He was subsequently apprehended and found to be a homeopathic physician who had graduated from the Cleveland College about five years ago.

THE HOSPITAL SUNDAY COLLECTIONS.—The Saturday and Sunday Hospital Association of this city held a meeting, last week, at St. Luke's Hospital, preparatory to the annual hospital collection for 1883. A report made by the Executive Committee indicates that the association has made large extension in its field of activity, and that the collection to be taken in the different churches and synagogues of the city on the last Sunday of the present year, on behalf of the city hospitals, will be by far the largest in the history of the association. Last year's collection fell somewhat short of the amount realized the two years previous, and this fact brought to the association a conviction that the work required more systematic efforts than it had previously received. There are about 350 Protestant churches, chapels, and missions in New York, together with about 30 synagogues. Of this number, only 97, most of them being Episcopalian, Presbyterian, and Reformed Dutch, contributed last year. This year nearly every minister in the city has received a call from a gentleman duly authorized to represent the association, and by this method of personal appeal all the denominations have been brought heartily into the work, and the canvass now approaching a close indicates that there is a probability that the number of contributing churches on Hospital Sunday the present year will be nearly trebled, 275 churches being already pledged to make contributions. Besides those given above as fully pledged to a collection, about 25 churches are on the list as having given provisional promises, and as there are still a score of churches whose pastors have not been visited, and hence constitute promising recruiting material, the association seems justified in indulging the hope that it will be able to report at the close of the collection for 1883 that on Hospital Sunday the sick poor of the city were remembered by 300 Christian and Jewish congregations. It was reported that in addition to the churches that sent their contributions to the treasurer of the association, 23 churches sent their collections directly to the treasurers of various hospitals.

THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS met September 17th, 18th, and 19th, at Freiburg. About six hundred members and visitors were present, a smaller number than was expected. The medical work, so far as is yet reported, was not very extensive. Professor Liebermeister delivered a long address upon "Recent Work in and Contributions to Therapeutics." The address was mainly a review. In the Section for Internal Medicine, Weil, of Heidelberg, described a hereditary form of diabetes insipidus. Among ninety-one members of a family, of whom seventy were alive, twenty-three had diabetes insipidus. Rumpf, of Bonn, stated that the narcotics chloral and morphine, as well as to a less extent chloroform, ether, and alcohol, produced lowering of bodily temperature, which he found to be due to a lessened consumption of oxygen.

In the Section for Pædiatry, Demme, of Berne, presented evidence of the infection of children with tuberculosis by cows' milk. In the Section for Military Medicine, a discussion on the best form of dressing for wounds took place. Maas contended for sublimate dressings, Küster for iodoform dressings. Considerable material was presented in the Sections on Surgery, Gynecology, Laryngology, and Psychiatry.

YELLOW FEVER.—The reported appearance of yellow fever at Brewton, Ala., has been investigated by direction of Surgeon-General Hamilton, who ordered Acting-Assistant-Surgeon Stone (stationed at Savannah), to make a report upon the subject after a thorough examination. Dr. Stone telegraphed that the disease prevailing at Brewton is yellow fever and that 34 cases with 18 deaths had occurred up to the 19th inst. An official report in writing will be given in a few days by Dr. Stone.

The Cape Charles Quarantine Station on Fisherman's Island, Chesapeake Bay, was discontinued on the 15th inst. It is contemplated to erect permanent buildings on the island for quarantine purposes, if Congress decides to keep up a Government station at that point.

The cordon at Pensacola navy yard was ordered removed on the 25th inst., as there had been no new cases of yellow fever developed since the 7th inst., and the last case was convalescent on the 11th. The villages of Woster and Warrington have suffered severely from the scourge, and will be glad to have all restrictions removed.

Reports from Havana to include the 13th inst. show that there had been 19 deaths during the week. Surgeon Burgess states that he had inspected and fumigated twelve vessels bound to United States ports, among them the steamer British Empire from Vera Cruz bound to New York.

The disease is gradually disappearing from Vera Cruz, there having been only 11 deaths from yellow fever during the week ending October 4th. Surgeon Mamegra, sanitary inspector, has been ordered to return home at the close of the month: he reports no cases of yellow fever in the shipping for the past two months. The disease at Guaymas, Mexico, is pronounced to be yellow fever by experienced medical men, though it lacks some of the prominent symptoms of that disease, such as acid vomit, suppression of urine, etc. It is now on the decrease, only 7 deaths having occurred during the three days ending October 4th. In Hermosillo the cases have been more numerous but the deaths less frequent.

THE CHOLERA.—Consular reports from China indicate that cholera is gradually dying out, though sporadic cases still continue to occur. In August there were five deaths at Shanghai among foreigners, as against ten in July, while none are reported up to the 11th for September. Among the natives the mortality was in July 127, in August 120.

Quarantine restrictions have been modified at Malta so that vessels from quarantine ports are only detained sufficient time to cover ten or fifteen days from port of departure, the allowance for voyage being included. Twenty-two days are, however, required from Syrian ports, Barbary ports, Tunis, Turkish ports in the Levant, Austro-Hungarian ports, Algeria, and Cyprus.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 10, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

CURIOUS LESION OF FEMUR—POSSIBLE SPINAL ARTHROPATHY WITH HEMATOMA.

DR. WACKERHAGEN presented a specimen with the following history: On September 17th he was called in consultation to see Captain W——, who was suffering from an affection of the left knee-joint. The patient, aged fifty-two years, was born in the State of New York. He was greatly prostrated, emaciated, and anæmic, with loss of appetite; temperature, $102\frac{1}{2}^{\circ}$ F.; pulse, 120 and feeble. The knee was flexed, the joint and surrounding tissues were greatly swollen, and appeared to be distended by some semifluid substance. He did not complain of severe pain unless pressure was made over the joint, or an attempt at motion was made, when his suffering was greatly increased. Upon paracentesis of the joint, only a small quantity of very dark-colored blood was discharged. The patient stated that he had always enjoyed good health until about three months prior to the operation, when he complained of pain at the knee-joint, and was treated for rheumatism. The pain was lancinating in character, and would occasionally disappear for a week at a time. A month later, he first noticed a slight swelling of the joint, which commenced to increase very rapidly three weeks before the operation. There was no family history of cancer or tuberculosis. The diagnosis was osteo sarcoma, and amputation advised.

The patient having consented to the operation, it was performed on September 19th, at the upper third of the thigh, under strict antiseptic precautions. Es-march's bandage was applied and very little blood was lost while ligating the vessels. Present—Drs. Gregory, Rockwell, Anderson, Hallock, and McCary.

The temperature fell after the operation to $100\frac{1}{2}^{\circ}$ F.; pulse, 100, and much improved in quality. The first dressings were not disturbed until the sixth day, when they were changed under the carbolyzed spray. Union by first intention, excepting a slight discharge of a brownish color through the inner drainage-tube, which gradually disappeared. Temperature continued to fall to normal, and did not at any time after the operation go above $99\frac{1}{2}^{\circ}$ F. The patient's appetite returned on the day following, and he is now in excellent health, and ready to return to his home in Ulster County.

The specimen included three inches of the upper end of the tibia and fibula, the lower half of the femur, the muscles and external integuments of the part.

Upon section, immediately after the operation, the muscles, particularly the adductors of the thigh, appeared glazed, flabby, and infiltrated with serum. They were abnormally dark in color, and lacked the characteristics of healthy muscular tissue.

Occupying the cavity left by the rarifying bone was a recent blood-clot, quite firm, of uniform color and consistency throughout; while the absence of pus or other inflammatory products was a marked feature.

The posterior surface of the patella was softened in the centre and eroded at its lower border. The articular surface was roughened and showed evidence of beginning changes.

The usual layer of compact tissue at the head of the tibia was wanting, and the cancellous structure, which was bright yellow from the large amount of infiltrated fat and the absence of the coloring matters of the blood, extended to the articular cartilage. The edges of the semilunar cartilage were ragged, and the articular cartilage covering the head of the tibia was perforated at one point and excavation beginning.

The medullary canal of the femur, from the point of the amputation downward, was enlarged, and toward the lower extremity cancellated tissue encroached upon the compact shaft until this was entirely replaced.

Then the cancellous bone itself disappeared, the space which had been occupied by the bone, except a part of the external condyle, being filled with the clot of blood referred to above.

A thin shell of articular cartilage remained at the seat of the inner condyle.

THE PRESIDENT regarded the case as remarkable and unique. He suggested spinal arthropathy as a possible explanation.

DR. BIRDSALL thought the period from the first development of symptoms was rather short for the joint changes accompanying locomotor ataxy. Again, the change in locomotor arthropathy manifests itself first in the articular cartilages and in the bone subsequently, whereas in Dr. Wackerhagen's specimen the articular cartilages were least affected.

THE PRESIDENT had recently seen two cases of spinal arthropathy in which the joints were in the condition described by Charcot, Buzzard, and others. The cartilages were eroded, the articular ends of the bones absorbed and expanded by pressure, the joint surfaces dry and crepitating, and the ligaments relaxed. In neither case was there pain on pressure, and the patients could walk reasonably well, allowing for the flail-like condition of the joints. In one case the patient was sent to the hospital for supposed tumor of the lower part of the thigh. In Dr. Wackerhagen's case it seemed that the hæmatoma was recent and accidental, and subsequent to the occurrence of the alteration in the osseous tissue.

DR. ELLIOTT asked if it might not be a case of purulent osteitis progressing rapidly.

THE PRESIDENT thought that if such were the condition considerable pus would have been found.

DR. GEORGE R. ELLIOTT presented specimens removed from the body of a man who had been operated upon for

CONGENITAL STRANGULATED HERNIA.

Wilson H——, eighteen years of age, United States, single, clerk by occupation, was admitted into the New York Hospital June 19, 1883, with the following history:

About 6 P.M. on the 17th inst. he began to have severe pain in the lower part of the abdomen, followed by nausea and infrequent vomiting. He was sailing in a yacht, and nothing was done for him till the next day at noon, when, after reaching land, an unsuccessful attempt at reduction of a tumor in the groin by taxis was made.

During the afternoon the vomiting became more frequent, and at night became stercoraceous in character. These symptoms persisted up to time of admission—12 M. of the 19th.

Examination revealed a tumor somewhat pear-shaped about the size of a hen's egg, occupying the right half of the scrotum, and extending to the external abdominal ring. The tumor was non-fluctuating, tender, and doughy to the touch, non-tympanitic on percussion, and there was no impulse on coughing.

Deep pressure over the abdomen gave rise to no pain, and there was no tympanites present. Vomiting was frequent and stercoraceous, the pulse could not be counted at the wrist, extremities were cold; in short, he was in a condition of partial collapse.

Operation was performed at 2.30 P.M. Upon opening the sac two drachms of dark fluid escaped. There was no marked odor present. The stricture was divided, and the contents of the sac, which were omental and intestinal, were not returned into the abdominal cavity, as they were thought to be gangrenous.

The patient did not rally after the operation, but remained unconscious, with a normal temperature, a very rapid and feeble pulse, and died at 2.30 P.M. the next day, forty-eight hours afterward.

At the autopsy, made eighteen hours after death, the lungs were found oedematous and congested.

The peritoneal cavity contained 50 c.c. of clear serum. The intestine in immediate proximity to the inguinal canal on the right side was slightly congested. There were no very marked signs of peritonitis present.

Four inches of the ileum, at a distance of eight inches from the caput coli, were found outside of the abdominal cavity, in immediate contact with the testicle. Omentum was also found in the sac beneath the coil of intestine, and at the point of constriction quite encircled the gut.

The loop of intestine which had been constricted was dark-colored in places, lustreless, coats thickened, and bound to the omentum beneath by recent adhesions. He did not consider the protruded gut gangrenous. The other organs were found normal.

The specimen was interesting, first with reference to the slight amount of peritonitis present. The only evidence of this was found in immediate proximity to the internal ring, where there was only a slight amount of congestion.

Another point of interest was the fact of a congenital inguinal hernia appearing at so late a date. It is not uncommon for a congenital inguinal hernia to become strangulated; but it is rather unusual for this form of hernia to appear for the first time as late as the eighteenth year of age.

An interesting question connected with the operation was, If the intestine was not gangrenous, and had been reduced completely, instead of being left in the sac, would it not have regained its normal condition more readily? The exact cause of death did not seem clear.

DR. W. M. CARPENTER referred to a case of strangulated hernia of the omentum, and a very small knuckle of intestine, in which he was called upon, many years ago, to operate on the fifth day after the strangulation occurred. When the omentum was exposed, it was found of a dark red color, but it was decided that it was admissible to reduce it completely. The general condition of the patient was bad; he did not rally from the influence of the ether and the operation, and died thirty-six hours afterward. At the autopsy there was no evidence of peritonitis, and the strangulated portion of the omentum and intestine had returned considerably toward the normal appearance, the restoration of the intestine being more marked than that of the omentum. He supposed at the time that the patient died of shock.

THE PRESIDENT thought it well, in case of doubt, to leave the contents in the sac rather than to return them to the abdominal cavity. If the constriction is divided completely, there is no special danger from the adoption of this plan, while there may be a great deal of danger from interfering with recent adhesions by attempting to reduce the contents entirely.

DR. J. C. PETERS, Chairman of the Committee, made a partial report on

EQUINE SCARLET FEVER.

It consisted chiefly of a communication from Dr. J. W. Stickler, one of the members of the committee (see p. 421). Dr. Peters referred to the historical fact that the first descriptions of scarlet fever and diphtheria were closely preceded by the occurrence of these diseases in horses.

DR. FERGUSON presented specimens, with the following history:

CARCINOMA OF THE STOMACH, LIVER, AND KIDNEYS,

occurring in a female, aged sixty, a native of Ireland, and single. Excepting rheumatism, from which she suffered thirty years ago, she has been well all her life. She had no family history bearing on her disease. There was no specific nor alcoholic history. She was received for treatment into the New York Hospital, on the 24th of July, 1883. For one year previous to her admission she had been losing flesh and strength, and during the

last six months of that time she suffered from nausea and vomiting after taking food. She complained of pain, not constant, but present the greater part of the time in the region of the stomach. A tumor could be felt in the epigastrium.

On examination, area of liver dulness was extended, and there was an area of dulness in the epigastric region over the tumor above alluded to, and continuous with the dulness over the liver area.

She did not improve on appropriate diet and medication, and after three weeks' stay in the hospital she began to vomit blood (which did not characterize her first vomiting) in large amounts; she also passed blood from her bowels. This was followed by collapse, and she died within twenty-four hours of the first appearance of hemorrhage.

Her temperature, which had been elevated— 100° to 101° —previous to her hemorrhage, became subnormal after it— 97° to 98° .

Her pulse and respiration became accelerated, the former varying from 100 to 120, and the latter superficial and from 30 to 40 per minute.

The cancerous masses in the organs involved are spheroidal in shape, varying in size from a pin-head to a pullet egg. Microscopically they are characterized by an abundance of small cuboidal cells, closely packed together and supported by a small amount of stroma, arranged into alveoli of very variable shape and size.

The Society then went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 22, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

AFTER the reading of the minutes of the last stated meeting,

THE REPORT OF THE COMITIA MINORA

for the year was read, including the recommendation of eighty-one candidates for election to membership.

DR. AUSTIN FLINT, JR., moved to lay the report upon the table until after the election of officers.

THE PRESIDENT decided that the motion was out of order.

The recommendation of the Comitia was adopted.

THE EXPULSION OF DR. H. H. KANE.

The Comitia further reported recommending that H. H. Kane be expelled. The recommendation was unanimously adopted.

The Treasurer, DR. O. B. DOUGLAS read his report, which, together with the report of the Auditing Committee, were accepted and ordered entered upon the minutes.

HONORARY MEMBERSHIP.

On motion, DR. J. P. MILHAU was instructed to cast an affirmative ballot for Brevet-Lieutenant-Colonel Bennett A. Clements, Surgeon U.S.A., for honorary member.

ELECTION OF OFFICERS.

THE PRESIDENT appointed as Tellers, Drs. H. G. Piffard, W. T. White, E. F. Ward, W. T. Alexander, and Geo. F. Carey, who subsequently reported that 599 ballots had been cast, and that of these—

Dr. S. Oakley Van der Poel had received 375 for President; Dr. Andrew H. Smith, 380 for Vice-President; Dr. Wesley M. Carpenter, 385 for Secretary; Dr. Charles H. Avery, 380 for Assistant Secretary; Dr. Orlando B. Douglas, 384 for Treasurer; and Dr. F. R. Sturgis, 385; Dr. David Webster, 383; Dr. Daniel Lewis, 377; Dr. F. R. S. Drake, 373; and Dr. Joseph W. Howe, 378 for Censors.

Dr. T. Gaillard Thomas had received 220 for President; Dr. Charles A. Leale, 215 for Vice-President;

Dr. E. A. Judson, 210 for Secretary; Dr. P. Brynberg Porter, 215 for Assistant Secretary; Dr. H. D. Nicoll, 208 for Treasurer; and Dr. Charles McBurney, 224; Dr. Richard H. Derby, 208; Dr. Charles S. Wood, 210; Dr. Charles Hitchcock, 213; and Dr. Thomas H. Burchard, 215 for Censors.

The President declared that those members who had received the majority of all the ballots cast had been elected to the offices for which they had respectively been nominated.

DR. CHARLES S. WARD, Chairman, submitted the

REPORT OF THE COMMITTEE ON ETHICS,

in which it was stated that only three cases had been brought before the Committee during the year, that one had been settled by arbitration, and the other two had been reported to the Comitia Minora.

REPORT OF THE BOARD OF CENSORS.

DR. H. B. CONRAD, Secretary, read the report in which it appeared that the work of causing compliance with the medical act of 1880, and of punishing offenders against that law, had been successfully continued.

It also appeared that a suit had been successfully carried on against the United States Medical College, which had no legal right to confer the degree of Doctor of Medicine.

Special reference was made to the importance of having some common standard of qualifications, which shall govern the admission of candidates for the privileges of the practice of medicine and of the appointment of some proper board which shall pass upon the fitness of the future practitioners of the State of New York.

The Board, adopting the recommendation of the Counsel, E. C. Ripley, Esq., earnestly recommended that the faculties of the various schools endorse no diplomas in which there is the slightest ground for doubt; that it would be better if all candidates for the practice of medicine holding diplomas requiring endorsement should be compelled to pass an examination before being allowed to register.

The other members of the Board were Dr. Daniel Lewis, Chairman, Drs. J. D. Bryant, F. R. Sturgis, and Walter R. Gillette.

The report was accompanied by a report from the Counsel, giving a detailed account of the legal work which had been done by the society.

DR. A. E. M. PURDY, Chairman, read the

REPORT OF THE COMMITTEE ON PRIZE ESSAYS,

in which it appeared that only one essay had been submitted, and the committee deemed it unworthy of a prize.

THE SECRETARY read the following resolutions received from the Medical Society of the County of Westchester:

Resolved, That the representatives of this County in the State Legislature be requested to urge the passage of an

ACT TO PROHIBIT ALL MEDICAL COLLEGES FROM GRANTING DIPLOMAS,

and requesting all candidates for the degree of Doctor in Medicine to appear before a State Board of Medical Examiners, who shall recommend successful candidates to the Regents of the State University for a diploma.

Resolved, That the Secretary send a copy of this resolution to the members of the Legislature from this County, and to every County Medical Society in the State, and urge them to take the same action.

The communication was referred to the Comitia Minora.

DR. J. C. PETERS made a verbal report on

EQUINE SCARLET FEVER,

and referred especially to communications on that subject already published in THE MEDICAL RECORD by Dr.

Stickler. The Committee was continued, increased to five, with power to fill vacancies, and accept resignations subject to the will of the Society.

On motion, the Treasurer, Dr. O. B. Douglas, 123 East Thirty-sixth Street, was instructed to send by mail a volume of the "Transactions of the State Medical Society for 1883" to any member who requested the same, not to exceed one hundred and twenty volumes, for *one dollar* per volume.

The Society adjourned to meet at the College of Physicians and Surgeons, on November 26th, at 8 P.M.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: It is but two decades that the settlers in Minnesota have held undisputed possession of its soil. The horrors of the great Sioux massacre, which occurred in 1862, are still fresh in the memories of many men. In view of these facts, the rapid growth and development of the former "land of the Dakotahs," and more especially of its twin cities, St. Paul and Minneapolis, must strike us as truly phenomenal. Exactly why these neighboring towns are still called twins it would be difficult to determine, however, for the only Siamese bond that at present links them is the reciprocal spirit of eager rivalry, watchful jealousy, and utmost contempt. Still, it seems quite possible that the very ardor of mutual antipathy has been instrumental in raising both cities far above the level of other towns in the State. So that here again the life of two cities illustrates an old experience, that intense competition may prove an unmixed blessing to both competitors. The universal activity and restless enterprise of these pioneer cities is but faintly reflected in their professional life, in so far, at least, as this relates to medicine.

The stream of practice flows along rather slowly and quite smoothly. But it is the slowness of equanimity, and not of sickly, exhausted lethargy. Of course there are occasional homœopathic and other irregular eddies. But these are utterly impotent to disturb the main current. Such distressing whirlpools and rapids as we Eastern code-contentionists wilfully and wickedly create, are nowhere to be found. Indeed the Western medico generally does not, apparently, envy us the open display of bitter feud and strife within the ranks of a profession that can ill afford to merit public scorn and ridicule.

Our Western *confrère* has perhaps heard of the code. In rare instances he has even "read it some." That is the old one. But he does not hanker after it. Nevertheless, he tries to live the life of a gentleman. He feels satisfied that he can do this through the prompting power of his own impulses; hence he cares very little for the old code, and just about as much for the new one. He upholds regularity, especially in the matter of sending bills. Yet he rarely hesitates to meet his homœopathic brother—openly, as they do most things out there in that benighted West, not on the sly, as they do some things down here. The result is a happy one. Almost universally, in the far West, there exists a feeling of harmony within the profession that sounds to Gotham ears like the strains of sweet music long forgotten, though dearly loved. The evident moral of the matter is this: let the western doctor come East to learn the refinements of differential diagnosis; but by all means let us go West to be taught the refinement of undifferentiated fellowship. Evolution is doubtless a great science, but we have not yet reached that point of mutability which will allow a man born without the instincts of a gentleman, to become metamorphosed into one through the potent agency of a code. And the gentleman-born carries within his breast

a better, brighter, nobler code than human pen or printer's ink can ever devise.

There is no dearth of doctors in St. Paul and Minneapolis; still the profession is not overcrowded, and there is room for good physicians. As for the two years' product of our vast grinding mills, that species of dazzling ignorance would find transplantation to Minnesota soil unprofitable, if not ruinous. It could never take root there and bring forth choice blossoms of bungling stupidity, gross carelessness, and reckless behavior generally.

Some of the Westerners are so pachycephalic and vulgar that they fail utterly to appreciate such dainty delicacies. And what they do not appreciate they sometimes shoot. At least so the writer was credibly informed, although he never saw it done.

Dr. C. H. Boardman, of St. Paul, the medical director of the Northern Pacific Railroad, kindly gave your correspondent a few points about the practice of medicine in that city and Minneapolis. It would appear that the largest incomes, in both towns, are derived by homœopaths. And in neither does it exceed \$15,000. The established physician in good standing earns on an average between four and six thousand dollars. The usual office fee is one dollar, and a visit to the house of the patient two. Consultations pay five dollars. Confinements from ten to twenty-five. There are no dispensaries to lure the willing patients from the office of the doctor. A majority of the people habitually pay their bills. The inevitable blackleg and deadhead is represented by an insignificant minority. The personal relations between the representatives of the two schools are quite good. Quarrels but rarely occur. Consultations between them are infrequent, but entail no far-reaching consequences, and rarely engender even temporary partisan dissensions.

Pure science naturally has few votaries there; but the average practitioner is a busy, intelligent man, fertile in resource, quick to imitate what is new, and eager to advance his art with himself. It should be understood, however, that art precedes self, in this statement, solely by courtesy. But it may be comforting to our Western brethren to be assured that such precedence is not utterly unknown, even in the enlightened East.

As regards lady practitioners, they appear to be fairly successful, and while they can hardly claim to excel the average male physician, they are justly entitled to all the credit that belongs to holding one's own, even when handicapped by natural and artificial disadvantages. The specialties are at present but little developed, although oculists and aurists are beginning to crop up rather numerously.

Dr. Ames, the Mayor of Minneapolis, assured the writer that the professional duties and responsibilities of a large office practice were quite compatible with the faithful and energetic management of municipal affairs. In an eastern city of over one hundred thousand inhabitants a physician elected to the mayoralty would have to give up that office, or his office practice would give up him. They appear to govern less West than East, although they may seem to require more government.

Your correspondent has purposely dwelt at some length on the local aspect of medicine in St. Paul and Minneapolis, for what was said concerning these cities applies to a great extent to all the larger towns of the region visited. As regards the smaller places, a young physician locating there would have to take his chances. If fortunate, the settlement may quickly prosper, and he would then be assured of a rather handsome competence. On the other hand, it might remain stationary, or even retrogress. In that case, unless he could afford to begin anew elsewhere, his life would remain one of toil, anxiety, and hardship, unilluminated by any legitimate hope of future prosperity. There is a great deal of quiet heroism and touching pathos about the weary struggle for existence of many a medical man in the little border-towns of advancing civilization. Life there is a rugged

reality, very apt to quickly dissipate illusions, and, alas, too often to inflict, through shattered hopes and dire disappointments, a wound that rankles but can never heal. Many a promising career has there been wrecked through insufficient equipment, a mistaken sense of power of sustained energy, or a yielding to temptation in the shape of gambling and other vices. Yet the man of conscious strength and integrity may easily walk unscathed through the alluring valley of sin, and avoiding its numerous pitfalls, safely climb the hill of success and eminence.

This little wayside sermon is preached for the benefit of the young eastern graduate, who is uncertain where to settle. Let him not blindly believe that in the New Northwest fame and money will be poured into his lap undeservedly, or with but slight exertion. Let him rather take to heart the words of Dante, and—

"Think not that under the shade of
Canopy reposing, fair fame is won,
Without which, whoso'er consumes his days,
Leaveth no vestige of himself on earth."

The gospel of overwork has latterly been preached into quite a fashion, and with some amount of justice, one may readily concede. But work should not be confounded with overwork. It may often, in individual cases, be difficult to draw the line between the two. Yet, surely, where the general welfare of a village, a town, or any large community is concerned, it is safer to err on the side of overwork than on that of idleness. America owes its proud greatness to American work, call it overwork if you will, but not to transatlantic habits of underwork, or indolence.

A prominent German guest of Mr. Villard on this excursion, a quick observer and close student of the life of various nations, said that if the Teuton laborer and farmer could but be taught to work as the American does, he could make as much of a proverbially poor country as we are making of a proverbially rich one. In a concluding letter the writer hopes to bring to a close these random observations of a trip that, to him at least, was highly entertaining and instructive.

Very truly yours,

EDMUND C. WENDT.

136 WEST THIRTY-FOURTH STREET,
New York, October 18, 1883.

New Instruments.

THE ELECTRO-OSTEOTOME.

A NEW INSTRUMENT FOR THE PERFORMANCE OF THE OPERATION OF OSTEOTOMY.

By MILTON JOSIAH ROBERTS, M.D.,

NEW YORK,

PROFESSOR OF ORTHOPEDIC SURGERY AND MECHANICAL THERAPEUTICS IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; VISITING ORTHOPEDIC SURGEON TO THE CITY HOSPITALS ON RANDALL'S ISLAND, ETC.

GRANTING that surgeons, especially of late, have too frequently resorted to operative procedure for the relief of bony deformities; that they have shown a disinclination to adopt the more judicious, safe, and rational treatment by means of suitably constructed orthopedic apparatus, there is nevertheless a large and diversified class of cases which can only be successfully dealt with by operative interference. Many patients suffering from bony deformities that would have been amenable to mechanical treatment in their early stages come under the observations of the surgeon too late in life to avoid an operation. Again, in general hospitals and amputatory clinics, where we have to do even with young subjects, the expense of orthopedic apparatus and the necessarily long continuance of mechanical treatment to effect a cure, may deprive the patient of therapeutic measures which would be adopted in private practice, thereby relegating his destinies to the domain of osteotomies.

It therefore becomes the subject of legitimate inquiry as to the best means of performing these operations.

It is not the purpose of this communication, however, to review the various operations of Mayer, Annandale, Barton, Adams, Ogston, Boswell, Reeves, Macewen, and other surgeons; nor to discuss in detail the merits and demerits of the tools which have been used by operators other than myself. I wish simply to call attention to an instrument which, in my opinion, in a large range of cases possesses important advantages over any that have hitherto been employed. This conclusion has been reached after a sufficiently extended and varied personal experience from which to make deductions.

The instruments used by the surgeon in the operation of osteotomy¹ may all be classified under the following heads: 1, chisels; 2, cutting forceps or nippers; 3, shears; 4, gimlets; 5, drills; 6, saws.

Of these instruments the saw possesses the superior qualities of rapidity, certainty, and evenness of cut. Furthermore, by its use the concussion and shock incident to the employment of the chisel and mallet, are entirely avoided. Why then do surgeons ever resort to the use of chisels, drills, etc.? The reasons are as follows:

First, as to the use of the long or straight saw. Though admirably adapted to the direct application of hand-power, its to-and-fro movements render it hazardous to the soft parts under many circumstances. This objection, however, has been very successfully overcome in that form of the instrument devised by Dr. George F. Shady, in which the blade is operated through a protecting metallic sheath. His saw is very narrow, and was especially designed for simple subcutaneous transverse section of bone. Another objection to the straight saw is the impossibility of executing the to-and-fro movements in certain situations. Moreover, it is not well adapted to the removal of conical segments from bone deeply embedded in the soft parts. And, finally, it is, for the most part, impracticable to use it in making longitudinal cuts.

I pass in review the objections to the use of the hollow (trephine) and chain saws, which must be patent to all.

The circular saw, though equally well suited in form to the removal of transverse wedges of bone and the making of longitudinal cuts, and not open to the objection of to-and-fro movements, has never been extensively employed by surgeons. The reasons for its disuse lie, then, not in its form, nor in its rotary movement. Carrying our inquiry a little further, however, they become evident. Paramount among these is the impossibility of a direct application of hand-power to the evolution of the rotary motion of the circular saw. If manual power be used at all, some mechanism is necessary in order to develop rotation of the blade.

Two difficulties present themselves in the adaptation of hand-power to driving the circular saw. One of these is the disadvantage with which force is applied at the axis of motion to overcome resistance at the peripheral margin. The other is the rapidity of rotation necessary to effective work. If the problem were the construction of a hand machine to rotate a circular blade meeting with no resistance at its periphery, nothing would be more simple. Or, if power could be applied at the margin of the blade to overcome resistance at the axis of motion, the device of such a machine would still be a very simple mechanical problem. It is, then, the great resistance which the serrated edge meets when in contact with bone, and the necessity of overcoming this by power applied to the arbor of the blade that make the task of construction and propulsion so difficult.

A number of ingenious inventions have been offered, but when put to the test of sawing bone on the living subject have not answered in practice what they promised in speculation. As a rule their blades have been placed at a right angle with the main shaft, and, on this

account, have been difficult to hold in position. They have, without exception, been deficient in power, or speed, or both. Of the hand or foot-motors which have been devised for driving circular saws, that which is ordinarily used for dental purposes is the most complete in its workmanship and satisfactory in its execution. But the blades of these saws are of too small diameter to frequently be of service to the surgeon, and the engines and gearing which drive them are not built of sufficient strength to admit of the employment of larger saws. In concluding the adduction of objections to the circular saw it is necessary to state that surgeons have always experienced great difficulty in protecting the soft parts while using it.

From what has been said it will be seen that in order to produce an osteotome of superior excellence to any we now have, it must be capable of dividing any bone in the human body, from the smallest to the largest, such division to be rapid, smooth, and certain, even though it be of the hardest bone; the blade of the instrument should readily follow the direction given it by the surgeon; it should be adapted to simple, coniform, and longitudinal osteotomies in any situation, of easy manipulation and imparting to the hand of the surgeon all the sensations that could be appreciated with a probe; possessing strength and portability, and not likely to get out of order; and, finally, capable of being used without danger to the soft parts.

Such an instrument is illustrated in Fig. 1, from a photograph. It is here represented as it appears when



Fig. 1.

suspended and grasped by the hand of the surgeon ready for action. It consists of a small electro-motor actuated, through insulated wires, by a powerful battery and carrying a circular saw that revolves in a plane parallel with that of the central shaft. A hollow cylinder with a collar-like base is firmly screwed to the end plate of the motor and forms the handle of the instrument. Upon this a soft-rubber hand-piece, fashioned like that of a carpenter's chisel, is slipped and fastened in position; an arrangement which adds security to the surgeon's grip when operating. The central shaft of the motor is continuous through the hollow hand-piece. At its distal end, a right-angle mitre-gearing connects it with the saw-bearing pivot. A metallic shield guards the proximal aspect of the serrated blade. Shields are provided for each size

¹ The word is here used in its broadest signification.

of saw. The depth of cut which it is possible to make with a given saw of course depends upon the diameter of the blade, being a trifle less than the distance from the centre to the periphery. The direction of the kerf, however, can be so modified as to enable the operator to easily divide a bone having a greater diameter than half that of the saw he is using.

The saws which I now use have been constructed with great care in accordance with my directions. Prior to their adoption I made extended experiments with many forms and sizes of teeth and thicknesses of blade. In order to adapt the saw to the requirements of individual cases, I have thus far found it desirable to have four sizes, viz.: 32 ($1\frac{1}{4}$ inch), 41 ($1\frac{5}{8}$ inch), 51 (2 inches), and 63 ($2\frac{1}{2}$ inches) millimetres in diameter. The teeth are coarse in proportion to the size of the saw, and number 18, 16, 14, and 12, respectively, per linear inch (25 mm.). These saws are so ground as to gradually diminish in thickness from the periphery to the centre. Binding in the kerf, when making deep cuts, is thus prevented. If the blade be made of the same thickness throughout, the side friction will be so great that the motor will be unable to drive the saw with adequate force and speed after it has fairly entered the bone. Provision is still further made for increasing the width of the kerf over that of the saw by giving to the teeth a little "set." This latter procedure is a very delicate operation and requires considerable mechanical skill to do it properly. It is important that the alternate lateral inclination of the teeth should be perfectly regular throughout; otherwise, the smooth and easy cutting of the saw will be interfered with. In form, the serrations are slightly *raked* instead of *hooked*. They are so filed that their cutting edge is at a right angle with the blade, instead of being at an oblique angle, as in most circular saws. The blades are made of the best steel and have a special spring temper. They are not so hard as those used in cutting iron or brass, nor are they so soft as those used in cutting wood. Saws tempered for metal work, are too brittle for sawing bone; they would be apt to snap in the kerf, should the operator permit any lateral deviation of the blade. Tempered for sawing timber, the teeth would soon become dull by contact with hard bone. Lastly, great pains is taken to have the blades of the saws absolutely free from "buckle" or twist. This is necessary in order that they shall run perfectly true and not bind in the kerf.

Upon the plate at the opposite end of the motor from that to which the hand-piece is attached are two binding-posts, which receive the ends of the electrodes connecting the instrument with the battery. Considerable experimenting was necessary in order to determine upon a form of battery having sufficient duration and power without unnecessary bulk. A general idea of the battery which I use can be gained from Fig. 2. It is a *zinc carbon* battery. The cells are of glass and ten in number. Their dimensions are 2 x 7 x 8 inches. Each cell contains one zinc plate 6 x 8 inches, placed between two carbon plates of equal size. The fluid used is a solution of bichromate of potassium, known as red acid, somewhat stronger than that used in the ordinary faradic batteries. The duration of maximum power furnished by this battery is from twenty to twenty-five minutes, sufficient time for the performance of any number of osteotomies which the surgeon will ever be called upon to do at one sitting. The battery is only permitted to be in action during the brief periods required for making sections of bone. The zinc and carbon plates are firmly fastened to a board which is suspended above the glass cells by means of coiled springs, as shown in the cut. A lever at the side of the battery-box furnishes the means of submerging the plates in the fluid at pleasure, by simply depressing it. Upon releasing the lever, the plates are automatically drawn out of the fluid by the action of the springs. Conservation of battery-power is thus made perfectly feasible, for as soon as the surgeon has made a simple or cuneiform section of bone, the lever

can be released and the further working of the battery prevented until he is again ready for action. In transportation the fluid is emptied from the cells. The framework which serves for the suspension of the plates is so constructed that it can be quickly taken apart and laid in the battery-box on top of the board to which the plates are fastened. This arrangement makes the battery very compact and readily transportable.

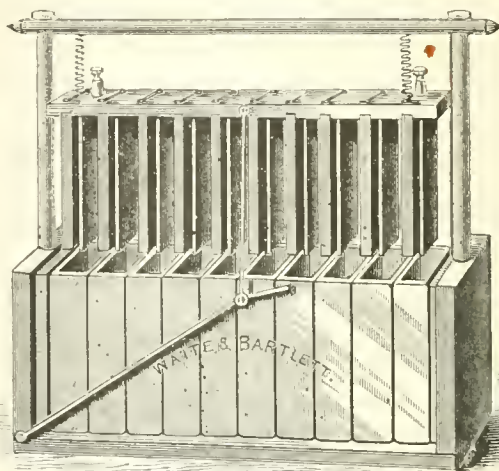


FIG. 2.

"When using the electro-osteotome, it is suspended by a solid rubber cord, six or seven millimeters in diameter, from the cross-bar of an adjustable crane screwed to the edge of the operating-table. In this way all weight is removed from the hand of the surgeon, and leaves the instrument as thoroughly at his command as would be the most delicate probe.

The high rate of speed (about six thousand revolutions per minute) and the great force with which the saw is driven, necessitates skilful manipulations and great vigilance on the part of the operator in using the osteotome. The limb of the patient should be firmly held by an assistant, and the precise direction and extent of the cut determined upon before permitting the first impact of the blade against the bone. The keen eye and sense of touch of a skilful surgeon will readily appreciate whether there is any departure from the predetermined line of incision, or binding of the blade in the kerf.

And now as to the means of protecting the soft parts. Fig. 3 represents one form of protecting retractor, which I use in osteotomy operations. It was made for me by Messrs. Stohlmann, Pfarre & Co., and its form is specially adapted to the supracondyloid operation for genu-

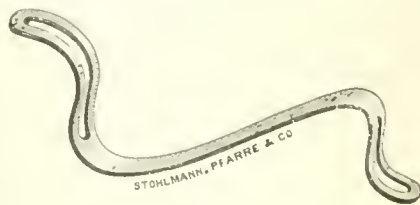


FIG. 3.

valgum. Two such instruments as is here represented form a pair. They are introduced one at a time through the linear incision in the soft parts, carried down to the bone and passed around it, much after the fashion of applying obstetric forceps. When in position they are pressed apart so as to make room for the blade of the osteotome. By their use there is no possibility of injuring any of the soft tissues while operating. The retractors are provided with a double curve at each end, one large, the other small, so as to adapt them to large and small bones.

In conclusion, I may say, in illustration of the labor and time-saving qualities of the electro-osteotome, that in operating for double knock-knee and bow-legs, I have

removed wedges of bone in from thirty seconds to one minute that would require from fifteen to thirty minutes to chisel out. The incision made with the saw is clean, the severed ends of the bone are not comminuted, and the two cut surfaces can be readily and perfectly coaptated.

The mechanical details connected with the perfection of the instruments and battery above described have been very numerous, vexatious, and at times discouraging. In prosecuting this work I have been the recipient of many courtesies at the hands of Mr. Edward P. Suter, of the Electro-Dynamic Co., Messrs. Wait & Bartlet, and the Western Electric Co., all of this city.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 13 to October 20, 1883.

BACHE, DALLAS, Major and Surgeon. Assigned to duty at Willett's Point, New York. S. O. 238, par. 1, A. G. O., October 18, 1883.

HUNTINGTON, DAVID L., Major and Surgeon, by direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army and perform the duties pertaining thereto. S. O. 234, par. 3, A. G. O., October 11, 1883.

STERNBERG, GEORGE M., Major and Surgeon. Granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the Department, and to apply for extension of one month. S. O. 134, par. 3, Department of California, October 4, 1883.

TAYLOR, MORSE K., Major and Surgeon. Assigned to duty at Fort Sill, I. T. S. O. 210, par. 4, Department of the Missouri, October 13, 1883.

HEIZMANN, CHARLES L., Captain and Assistant Surgeon. Granted leave of absence for six months, with permission to go beyond sea. S. O. 235, par. 3, A. G. O., October 15, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 20, 1883.

BROWNE, J. M., Medical Director, ordered as member of the National Board of Health.

CLEBORNE, C. J., Medical Inspector, ordered to the U.S.S. Hartford at Panama, on duty connected with a court martial.

GORGAS, A. C., Medical Inspector, detached from Naval Hospital, Chelsea, Mass., November 10th, and ordered to the Naval Hospital, Mare Island, Cal.

HEFFINGER, A. C., Passed Assistant Surgeon, ordered to temporary duty at Navy Yard, Portsmouth, N. H.

HORD, W. T., Medical Director, ordered to the U.S.S. Hartford at Panama, on duty connected with a court martial.

WHITING, ROBERT, Passed Assistant Surgeon, granted leave of absence for three months.

The orders of W. J. Simon, Surgeon, and M. H. Crawford, Passed Assistant Surgeon, in last week's report, should read U.S.S. Shenandoah, instead of U.S.S. Trenton.

FELICITY AS AN OBJECT OF SANITARY RESEARCH is the novel title of an address delivered recently by Dr. B. W. Richardson before the Sanitary Association of Great Britain. That one should not only have a healthy life and a long life, but a happy one, was the burden of the oration. Felicity based on good plumbing, tight cellars, no cesspools, running water, perfect ventilation, no stimulants, no narcotics, no pastry, no bacteria—this is to be the object of the future rational man's endeavor.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 23, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
October 16, 1883.....	0	59	40	4	17	37	0	0
October 23, 1883.....	0	59	45	1	13	38	0	0
<i>Deaths.</i>								
October 16, 1883.....	0	19	5	3	4	13	0	0
October 23, 1883.....	0	20	12	1	2	20	0	0

THE USES OF HYDROBROMIC ACID.—Dr. Joseph Parrish, of Burlington, N. J., writes, referring to an article by Dr. C. L. Dana (*Journal of Nervous and Mental Diseases*) on hydrobromic acid, that he has recently used it in two cases: "In one, it relieves the insomnia in f3j. doses, taken P.M., say three doses a few hours before retiring. The other is a neurasthenic case, in which there is enlargement and hardening of sciatic nerve and general neuralgia. In this case I have given the bromides in several forms with but little impression, except bromism. Hoping to avoid the bromism, I resorted to 10 per cent. acid, with the effect of bringing out the bromism as distinctly as when she took either of the salts. In direct opposition to this case I have a lady of forty, an epileptic, who has taken bromid. potassium, in doses of from half a drachm to a drachm and a half, three times daily for the last fourteen years without the slightest sign of bromidism."

Dr. Squibb writes of hydrobromic acid in *Ephemeris*: "Its most common and probably most effective use, is as an addition, either constantly or intermittently, to solutions of the bromides when these have to be taken for a long time and in full doses. In this way full bromine doses may be easily maintained, while the effect of the bases is diminished. Full doses of the acid are difficult to administer on account of its intense acidity. It is best given with sugar, or with syrup, or with syrup of acacia, and with lemon syrup it is somewhat like lemonade. Large dilution is always advisable. The dose of the officinal acid is 2 to 4 fluidrachms, which is equal in bromine to 17 to 34 grains of the potassium salt. An equivalent dose of the 34 per cent. acid is about 27 to 54 minims. This acid is very useful in making extemporaneous solutions of many bromides. For example, the very effective bromide of lithium may be very easily made extemporaneously by prescription, by simply saturating, or nearly saturating, the acid with lithium carbonate."

MAD WITNESSES.—The United States Supreme Court has recently decided: "A lunatic or person affected with insanity is admissible as a witness if he has sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters which he has seen or heard with reference to the questions at issue; and whether he has that understanding is a question to be determined by the court upon examination of the party himself, and any competent witnesses who can speak to the nature and extent of his insanity."

THE DISEASE OF THE LATE COMTE DE CHAMBORD.—A recent issue of the *Gazette de Médecine et de Chirurgie* contains a long report upon the malady of the late Comte de Chambord, from the pen of Dr. Vulpian, the

physician so much favored by the deceased prince. Dr. Vulpian gives a detailed account of the post-mortem examination, and makes afterward an important admission. He says: "There can be no doubt that a diagnostic error was committed during the lifetime of the deceased, since we have not found the cancer we expected to meet in the epigastric region. In fine, the malady of the Comte de Chambord has been characterized, from an anatomical point of view, by ulcerations of the mucous membrane of the stomach, and especially of the mucous membrane of the gullet, and, from a clinical point of view, by a collection of symptoms that rendered at least probable the existence of a cancer in the stomach. This is an extremely rare, and, I think, a very interesting fact, for which reason I have published an account of it."

ITALIAN DOCTORS PUZZLED.—For some time past the medical faculty in Italy have been sorely puzzled by a strange disease of a contagious nature, which, although in its clinical features is somewhat like yellow fever, differs in some essential points from that and all other known diseases. The first appearance of the strange malady took place at Torre Annunziata, in June last. Early in that month a man attacked by fever, accompanied by a grave form of jaundice, died. During the interval since then fifteen other cases, followed by death, have occurred, exclusive of those last reported. In all the first symptoms were those of jaundice, followed by high fever, extreme prostration, and stupor. No case was accompanied by vomiting. Professors Semmola and Petronio were unable, in the post-mortem examinations they made, to recognize the pathological signs of any known clinical deaths or the characteristics of yellow fever. They found, however, enlargement with ulceration of the spleen, great fluidity of blood, and other indications of contagion, and describe the malady as a serious form of jaundice caused by infection, and belonging to the infectious typhoid-jaundice group of diseases.

BILLROTH'S LINIMENT AGAINST LUPUS.—

R. Potas. sod. 5. grammes.
Iodin. metallic. 0.10
Glycerin. pur. 50.

M. Apply with cloths to the affected region. Internally, give cod liver oil and depuratives.

A NOVEL METHOD OF BLEEDING.—The *British Medical Journal* of September 15th notes the relief of a case of cerebral congestion through blood-letting by means of a novel device. The patient, a fat, plethoric lady, fifty years of age, came under the charge of Charles Coppinger, F.R.C.S.I., and at the time of the surgeon's visit was in a condition of stupor, out of which she could be roused with some effort, but only to relapse into sleep again. Her breathing was heavy, and she presented all the symptoms characteristic of an overloaded vascular system. The indications for treatment were plain, and leeches not being obtainable, depletion by means of venesection was proposed. The friends of the patient, who were ladies, gave their consent, but were horrified at the suggestion of so barbarous a proceeding, and Mr. Coppinger, anxious to spare them the sight of blood, then and there conceived the idea of substituting the aspirator for the lancet. The patient, who had not long before been treated for hemicrania by hypodermic injections of morphia, was roused up and told that the needle was about to be "inserted into the skin of her neck, to which she at once consented." The needle of the aspirator was then passed into the external jugular vein, which was much distended, and four ounces of blood were withdrawn without difficulty. The result of this trial being satisfactory, the surgeon repeated the operation in the course of a half-hour, abstracting six ounces more of blood. The patient was speedily relieved of her alarming symptoms, and neither she nor her attendants suspected that she had been bled, until the procedure was subsequently explained to them.

A PROMISING SPECIALTY.—The *Canada Medical and Surgical Journal* places the proportion of people in the United States who have corns at one to five, and then asks: "If it costs \$1.30 to effect a cure in each case, what would be the cost of placing every person on a sound footing?" The answer is not difficult, says the *Detroit Medical Age*: 5:50,000,000 :: 1:10,000,000 × 1.30 = \$13,000,000. Here is manifestly a rich field for cultivation. Of all the specialties that of chiropody is, we believe, the least crowded. In our city of 140,000 we have but one, and, as far as we are able to ascertain, a similar distressing dearth is prevalent throughout this country.

SENSATION AND CONSCIOUSNESS NOT SIMULTANEOUS.

—In the *Comptes Rendus*, M. Beaunis has given an account of his interesting investigations to determine the time between the instant of excitation of a sense and the instant at which the person indicates by a signal that he has become conscious of the sensation. In the matter of smell, for instance, he gives a table of the numbers obtained with ten substances, these ranging from thirty-seven hundredths of a second for ammonia and forty-six for acetic acid, to sixty-three for mint, and sixty-seven for carbolic acid; in the case of musk, M. Beaunis was unable, notwithstanding repeated attempts, to fix precisely the moment of the smell sensation. The numbers obtained are said to show that the reaction time for smell is longer than that for touch, sight, and hearing.

THE DRY OR MOIST TREATMENT OF CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR.—Dr. L. S. Oppenheimer discusses the relative value of the dry and moist treatment of middle-ear inflammation, and advocates the former (*Louisville Medical News*). His method is as follows: The ear is first thoroughly cleansed by means of a syringe and warm water; it is then carefully dried and the powder insufflated, or applied on a piece of cotton through the speculum, the cotton being allowed to remain for twenty-four hours. The cotton absorbs the fluids and prevents them from again irritating the external ear. The powder may be insufflated through a goose-quill, care being taken to apply it to all parts of the cavity. The above is repeated daily for a few days, then on alternate days, then once a week for a week or two. The syringe is not required after the first two or three days. The agents which I employ in nearly all cases are iodoform and salicylic acid, the latter being applied daily whenever granulations exist; a few days after iodoform is substituted. It is of importance that absorbent cotton be inserted after each application, and removed the following day. It is also a good practice to use the Politzer air-bag once or twice a week during the treatment, as it helps to dislodge inspissated pus, tenacious mucus, etc. In brief, then, thorough cleansing before each application, insufflation of dry powders, and keeping the parts as dry as possible between the periods of treatment, will, I think, cure nearly if not quite all of these cases in a much shorter time than any other kind of treatment.

THE CONTAGIOUSNESS OF ECZEMA.—A correspondent of the *Boston Medical and Surgical Journal* describes the following case, asking if it was a coincidence. To us it appears more likely to be mistaken diagnosis: A., aged nineteen years, while living in New York, was attacked with acute general eczema. He returned to Boston, and slept a few nights with his brother W., and afterward with another brother, N. In about ten days W. and N. were both seized with this affection, and within a fortnight W.'s lady love also broke out with it. They were all healthy people, and had never before had any skin disease. Only two of the four were surrounded by the same hygienic conditions. Did one catch the disease from the other, or was it a coincidence? Duhring says: "Eczema is not contagious. It cannot be acquired from being in contact with or from handling the patient; nor can it be taken from the discharge."

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Original Lectures.

GUNSHOT WOUNDS.

A LECTURE DELIVERED AT BELLEVUE HOSPITAL MEDICAL COLLEGE, OCTOBER 24, 1883.

By SIR WILLIAM MAC CORMAC,

SURGEON TO ST. THOMAS' HOSPITAL, LONDON.

(Specially Reported for THE MEDICAL RECORD.)

GENTLEMEN: When your Professor of Surgery, Dr. Dennis, invited me to lecture to you, I asked to be excused because I felt that I had nothing ready worthy of your special notice. But he took away my objection by choosing a subject for me, and therefore I ask you to regard my presence here, and also whatever I may say, as being under his responsibility and not mine. The subject which Dr. Dennis chose for me, one which could not possibly be disposed of satisfactorily in a single lecture, is of very great interest, of very wide application, and one which I feel a great hesitation in speaking of at all, because in this country, perhaps more than in any other with which I am acquainted, the experience of surgeons with gunshot wounds has been very large and of an unusual kind. In your great civil war surgeons acquired a knowledge in this matter which is not exceeded by that possessed by surgeons in any other part of the world. Therefore it seems somewhat like, as we call it in our country, carrying coals to Newcastle, for me to speak upon this subject at all. The results of the experience which your surgeons have gained are embodied in those volumes coming from the Surgeon-General's office, which I may say for magnificence, for completeness of detail, and for abundance of illustrations, are equalled nowhere else in the world. The other day I had the pleasure and the advantage of visiting that volume of the war at the Medical Museum under the guidance of your distinguished countryman Dr. Billings, and there I saw abundantly illustrated, with the greatest detail, every form and kind of gunshot injury. There is enough material there to stock a dozen museums. I thought, therefore, that this was neither the time nor the place, altogether fitting, for a general discussion of surgical matters in time of war. Possibly, however, you may be somewhat interested in a few remarks which I may make regarding my personal experience during the time of the war between France and Germany, which took place some twelve years ago.

I speak not my own opinion, but that which has often been expressed by very competent authorities, of the work accomplished by that volunteer organization of which I had the honor to be a member during the Franco-Prussian war. It was superior both in quality and quantity to that done by any other voluntary organization, and there were many from different countries. I need scarcely have said this when I state that at the head of that ambulance corps was placed a man who is known not only in this country, but all over the world, as a surgeon of ingenuity, of device, of fertility of resource equalled by few; a man whose character is loved by every one who knows him—Dr. Marion Sims. One afternoon we received orders at Paris to reach, as soon as possible, the scene of action between the contending armies at a once important place, fortified by one of the

greatest engineers of his day. When we reached the town, the hostile armies not being far distant, it was striking to notice that, although almost within hearing distance of war, there was not in the whole place a single soldier to be seen; not a single man in military uniform. The only doctor whom I found was a fine old French army surgeon, who entreated us to remain where we were, saying we should have plenty of work to do, and the result showed him to be right. But we were bound to push on, and we tried our best to do so. After spending the night on some benches at a railroad station, the next morning we accepted an offer, previously made, of a hospital pavilion containing four hundred beds, and situated on the ramparts of the town, overlooking the whole scene of action as far as the eye could reach. The beds were equipped fairly enough, although the cleanliness might have been a little more perfect. In the morning the battle began, and continued all day, and soon our wounded came in in very large numbers. The beds were full in a short time with the most serious of cases. Not only were the beds filled, but the wounded occupied the stair-steps, the floor, and every possible nook and corner; all the houses in the town and about the town were full of wounded soldiers. There were several thousand wounded men, the result of the day's fight. I scarcely need say that all that we could do was but very little amidst so much suffering. There was work for ten times, yes, a hundred times, as many as we, but all that we could do we tried to do to the best of our abilities. All sorts of operations had to be done continuously by day and by night. We were blessed, fortunately, with a certain amount of equipments, as we had drugs, appliances of various kinds, and we had the advantage of a hospital placed in the front line of battle. All that day, while the battle was raging, we were in the very foremost of it. The shells exploding and whizzing around our heads was not, I assure you, very agreeable when about to perform an operation. Once in a while a shell would explode and strike the pavilion, but it was evident that the fire was not directed purposely against us. Had it been, I think we should have been knocked into a cocked hat without the slightest doubt. Indeed, years later I met in Berlin the officer who had been in charge at this point of action, and he told me that he saw our flag, and avoided as far as possible firing in that direction. This gentleman was a son of that distinguished surgeon, both in military and civil practice, Von Langenbeck.

Well, gentlemen, we had certainly a large number of operations to perform; and operations upon wounds of all kinds. There were fractures of all sorts to treat. Later on we had secondary operations and resections to perform. Opportunities such as these are of course rarely given to any one, and we tried to avail ourselves of the opportunities as far as we could. The operations were performed in accordance with our then recognized best methods, and the results were affected by the demoralized condition of the French troops from defeat in battle. We had, of course, very inadequate nourishment for them, a condition of things which lasted for some time. At first we had an insufficiency of appliances, but this did not last long, for supplies of all kinds soon came pouring in upon us. We had not the advantages of antiseptic surgery, which you at present, and in time of peace possess, and we of course had the sad fortune, in spite of all our efforts, to see patients upon whom we had performed am-

putations, treated compound fractures, or operated even for simple wounds, die one after another, and often from blood-poisoning.

RESECTIONS IN MILITARY SURGERY.

I have said that we came later to perform a certain number of resections, and upon this subject I will make a few remarks. The great Langenbeck, who had greater experience in military surgery than any other surgeon, I believe, says that resections are not satisfactory; that they are very dangerous to life, and certainly the results, so far as function is concerned, are, unfortunately, even less favorable. Many of the resections which I had to perform were upon soldiers sent in later, after the rush, and I may say that very satisfactory results in some instances were obtained. In the second period after the injury, after inflammation has subsided, there are reasons why such operations should be more favorably performed, both as regards use and physiological function. In the first place, in comminuted fracture, we find often, after the second period, that certain of the fragments have recovered themselves; they are not detached sufficiently to lose all vitality, and therefore we are able to ascertain, with greater accuracy than at first, the proper limitation of the operation. We are thus enabled possibly to decide upon a partial operation. I think that the experience of surgeons teaches us that in partial operations we should do just what is sufficient and no more, and that such a course is not only less dangerous to the patient's life, but is also often followed by much more satisfactory results. For at that period the periosteum has become thicker, it has greater vascularity, it is easily detached from the bone, and above all it possesses a greater degree of osteo-genetic function; whilst immediately after the injury the periosteum is exceedingly thin, is very difficult to detach, it tears while detaching it, and in addition it possesses very little osteo-genetic power. So these are reasons, I think, which show that excision after gunshot injury of bones can be more safely and more wisely performed at this period than immediately after the receipt of the injury.

I will not weary you with a recitation of cases, but I wish simply to give you an account of one or two which will illustrate the point in question. I need not dwell upon the fact of the greater risk which attends these operations upon the joints, or the reasons why resections are more applicable to the wrist and shoulder than to the ankle and the knee. The knee and hip are least fitted for an operation of this kind, as is shown by the experience of the civil war in this country, and since then by wars in other countries. In the case of the ankle-joint, showing how complete may be the function after shattering and subsequent excision, I will mention the case of a young German officer of noble rank, under the care of Professor Langenbeck. The result of the operation was not only recovery, but such complete reproduction of the parts excised that apparently the limb on one side was as well formed as that on the other. The function was so perfect that the officer was afterward able to walk to the top of Mount Rosa, one of the highest peaks of the Alps, a peak which the larger proportion of you would not care to ascend.

Another case, which came under my own care, I will mention as it is somewhat unique. Ten or eleven days after the battle of which I have been speaking, a French chasseur was carried to the hospital. The man's wounds were very extensive, and were evidence of his great bravery. The entire shoulder and arm were severely injured, the shoulder-joint was opened into in every direction, the deltoid was torn away, the radius and the ulna were implicated, and I was obliged when I saw the man, which was not until suppuration had set in, to resect a portion of the humerus and also of the radius, and about three inches of the ulna. The patient finally recovered after a very severe attack of septic poisoning. I have heard from him once every year since. There was nearly

complete reproduction of the shaft of the humerus, four inches of the upper and one inch of the lower portion of which had been excised, besides a considerable portion of the remainder being in a necrosed condition. There was such complete reproduction of the lower end that the condyles are quite perfectly formed. The man is now able to dig with the spade, to roll casks, to do all ordinary work, although he is of course unable to raise the arm perfectly because of the injury done the deltoid. The family physician described the appearance of the parts as apparently entirely normal, and his description was perfectly correct, as I afterward had opportunity to verify.

Speaking of injuries to the upper extremity, I would call attention to the triangular pad invented by Stromeier, a man of great experience in military surgery, who considered it more useful than any other one instrument or piece of apparatus. By means of this splint any wound of the upper extremity can be treated with the greatest comfort to the patient, and with the greatest prospects of success. It is carried between the arm and the body, and may be used as a splint to bind the parts together in almost any injury of the upper extremity.

AVOID PROBING GUNSHOT WOUNDS.

Another thing which I think I have learned in my experience with gunshot injuries, and one which I should like also to teach you, is to avoid unnecessary probing, or to avoid probing altogether as far as you may. I see from the manner in which you receive this remark that it requires little emphasis from me, but I think it cannot be too strongly stated that the bullet, or what has become of it, is really of secondary importance in the treatment of gunshot injuries. Usually, the first inquiry of the individual wounded is, what has become of the bullet? If it remain in the body, he asks to be relieved of it, and sometimes the surgeon, in his enthusiasm, makes a very considerable effort to fulfil the patient's desire. One instrument after another is introduced, until the end of the list is reached, which is a long one, for every sort of device and appliance has been invented for this purpose. I know by repeated experience how difficult it is to discriminate between a piece of lead or an exposed surface of bone, or even the edge of fascia or a tendon, and if the surgeon fails with the probe, as he often does, one forceps after another is then introduced, and the limb is almost removed piecemeal in the determined efforts to find the foreign body. Septic matter is necessarily introduced with the instruments and the surgeon's finger, and thus a trivial wound may ultimately result, from septic suppuration, in the death of the patient or loss of function of the member. Experience shows us how constantly bullets become impacted or lodged in parts of the body and remain there for years without causing any damage at all. No doubt it is not particularly desirable to have them remain if they can be easily taken away; but what I wish to insist upon is, that there is infinitely more damage capable of being done by the injudicious efforts of the surgeon in trying to remove the bullet than would be done by the presence of half a dozen bullets. In the museum at Washington, and in all museums, there are specimens of bullets lodged in the brain, in the lungs, in bones, etc., in some cases remaining there for years. In the museum at Washington I saw a specimen in which a bullet, entering near the knee, passed into the cartilage of the joint, penetrating almost entirely through it into the joint. The man, at the time of the receipt of this wound, also sustained a wound of the elbow, and he told the surgeon that a bullet had gone into the knee-joint. The surgeon fortunately did not believe him and let the knee alone, and the man lived for years afterward with perfect use of the limb, and at his death the bullet was found in the position mentioned. I might multiply examples going to show that bullets are often not so damaging if left in the

limb, while great damage may result from injudicious attempts to remove them.

PENETRATING GUNSHOT WOUNDS OF JOINTS.

In the Turko Russian war the advantage of this practice received one of the strongest illustrations possible. A hospital was established in which penetrating wounds of the joints were treated simply by sealing up the wound by some antiseptic method, and by immobilizing the joint completely. I quote from memory, not having the exact statistics at hand, when I say that in twenty-one cases of such wounds there were nineteen which recovered with the use of the limb. These were cases of undoubted penetrating wounds of the joint. If you can give such a series as that as compared with the results of former methods, by which I heard Langenbeck say that he did not believe a single case of penetrating wound of the knee-joint recovered in the whole duration of the Franco-Prussian war, you can see what an amazing stride has been made in the treatment of gunshot wounds. The distinguished surgeon, Stromeyer, states that he never probes or interferes in any way with gunshot fractures of the joint, but does his utmost to treat such cases by rest and antiseptics, and the published results of this method of treating fractures in his hands have been infinitely better than those obtained by any other surgeon. We know how common the opinion had been to consider that gunshot fracture of the femur necessitated amputation; and we now see on the other hand how surprisingly successful have been the results of the later method. I hope, gentlemen, that these remarks may lead you to reflect on the importance of the maxim from which Prof. Esmarch, of Kiel, preaches, which, translated from the Latin, means, do not injure, do not do damage.

GUNSHOT WOUNDS OF THE ABDOMEN.

There is one other subject to which I would like to refer, namely, the question of gunshot wounds of the abdomen. A short time since, my honored friend, Dr. Marion Sims, published some most interesting papers in which he advocated that these injuries should not simply be let alone, but that some effort should be made to save the patients from what would otherwise prove inevitable death. He proposed to open the abdominal cavity, search for the wounded intestine, and either excise or suture it, or treat it in the most appropriate manner, and then to cleanse the cavity and close the wound, and possibly recovery might follow. Now, there is everything in favor of such an attempt, I think. We now make exploratory abdominal operations every day. The abdominal cavity is opened without hesitation, under proper precautions, to see what is the matter inside. I think that almost every viscus of this cavity, except the liver, has been excised more or less successfully, in whole or in part. Part of the stomach, considerable stretches of the intestine, the uterus, etc., have been removed; and you all know with what wonderful success ovarian operations have been performed. Therefore there can be no just cause why such an operation as that suggested should not be performed in these otherwise certainly fatal cases. We know that there are great and various dangers attending the entrance of a bullet into the abdominal cavity; the danger of extravasation of blood, of fecal extravasation, etc., and the cases in which the ball passes through without injuring the intestine can only be very exceptional. Now, when patients have recovered after pouring out of urine into the abdominal cavity, have gone through the dangers of breaking up firm adhesions in the removal of ovarian cysts, etc., should we fold our hands and do nothing in cases of gunshot wounds of the abdomen?

Formerly there were many obstacles in the way of treating gunshot wounds in time of war according to approved antiseptic methods: the clumsiness of the material making it difficult of transportation, the use of the spray being considered a necessity, etc. But now the

spray may be dispensed with. We have antiseptic materials, iodoform, for instance, of small bulk compared with their strength, easy of transportation, and ever at hand. Add to these the fact that many wounds which formerly would have called for amputation are now treated by simply sealing them up with an antiseptic and maintaining rest, and I think, gentlemen, you may feel that you have a great future before you in military surgery. This belief is supported by the results achieved in the late war in Egypt. Although there were not a great many wounded during that campaign, yet on one occasion the number accumulated very rapidly, many of the cases calling for amputation. This expedition had gone out with the best possible equipment that money could purchase or experience devise. Every antiseptic most approved of, and every appliance which could be thought of, were at the disposal of our surgeons. The result was, and I speak again from memory, but I think I am correct in saying that out of four hundred and thirty-six wounded men thrown on the hands of our surgeons in a very brief period, there was not a single instance, throughout the entire campaign, of any form whatever of infectious disease; there was no erysipelas, and not a single case of pyæmia.

Gentlemen, after all, what is surgery? It is work for a man's hands, and the old chirurgien was the tool in the hands of other people. But is that the surgeon of to-day? No. He works with his hands, but he has got to work with his head and with his heart as well. Surgery is a fight with death, in which, unfortunately, the surgeon is often powerless; but never before in the history of surgery have the equipments of the surgeon been more complete, and never before have the victories which he has won been more glorious.

We speak of conservative surgery. I think it is a misapplied term, for is not all surgery conservative? If the surgeon has to amputate a crushed limb or remove a malignant tumor, is not that conservation? Is any surgeon not conservative in surgery? I think the word should be almost banished from our language as applied to this science.

The field of medicine is vast, and our best efforts will prove none too great when devoted to coping with the various human ills to which the different vocations in life expose us. The surgeon who will realize the best results is he who takes on the greater degree of appropriate knowledge and culture. While the field for the future is vast, human intelligence seems capable of growing with the requirements, and I feel assured that, as the surgeon of to-day is better able to grasp with the difficulties which he encounters than the surgeon of the past, so the surgeon of the future will be in advance of his brethren of the present, and his efforts to lessen the amount of human suffering will be crowned with a greater degree of success.

Gentlemen, I have but one word more to say in conclusion, and that is to express how deeply I appreciate the compliment in asking me to address you, and, however unworthily I have fulfilled my part of the undertaking, I thank you for your courtesy in so patiently listening to me. I am now on the point of returning to my own country, and I return carrying with me the happiest recollections. The courtesy and hospitality which have everywhere been shown me I can but regard as a great compliment on the part of the highly cultured portion of this community. In my travels here I have heard expressed but one sentiment toward us, a sentiment of good-will and good feeling, and I assure you that this feeling is reciprocated by us at home.

AN EPIDEMIC OF DIPHTHERIA has appeared in the Blind Asylum at Batavia, N. Y., most of the pupils have been sent away. A large number of deaths from diphtheria have occurred, it is said, in the village, which is wretchedly drained.

Original Articles.

A SIMPLIFIED EVACUATOR FOR THE REMOVAL OF DEBRIS FROM THE BLADDER AFTER LITHOTRITY.

By F. N. OTIS, M.D.,

CLINICAL PROFESSOR GENITO-URINARY DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, ETC., NEW YORK.

THE revolution which has occurred, in the mode of removing stone from the bladder, within the last five years, may now be said to be complete. The new method, first put into practice by Professor Bigelow, of Boston, whereby, as a rule, stones of any size and degree of hardness may be removed at a single sitting, has been formally and explicitly accepted, by the leading authorities, in Europe and America, as an illustrious advance in genito-urinary surgery, and has found successful imitators and enthusiastic advocates in every country. In presenting this new method, at the meeting of the International Medical Congress, held at London, England, in 1881, Dr. Bigelow briefly reviewed the methods previously in use, and as briefly alluded to his own. He said, "From the days of Civiale to the year 1878, there was little change in the operation. The duration of a sitting, was as brief as the skill of the surgeon, stimulated by the fear of producing cystitis, could make it. Three minutes, or less, was the limit inculcated by standard books, and the teaching of specialists, and the use of anaesthesia was exceptional. At present anaesthetics are the rule. The instruments have been already modified, in an important manner, while the sittings often last half an hour, and have been successfully extended to three hours and more." In explaining the manner in which these important changes had been brought about, Professor Bigelow referred to the first instrument devised for the rapid evacuation of stone from the bladder after crushing. This was the invention of Sir Philip Crampton, in 1846. The apparatus consisted of a glass receiver, in form and size like a large soda-water bottle, from which, by means of an exhausting syringe he removed the air, and then applied it to a silver evacuating catheter, previously introduced into the bladder, into the cavity of which some ten or twelve ounces of water had been previously injected. On turning the tap, attached to the receiver, a powerful rush of water and calculous debris, through the catheter, took place. "This," says Sir Henry Thompson, "was found to be dangerously rough in its action and required to be so repeatedly charged that I desisted from its use."

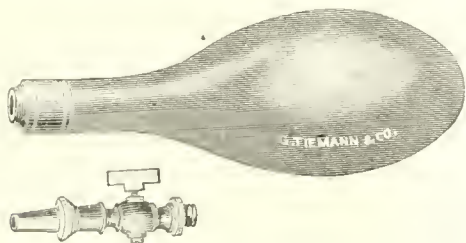


FIG. 1.—Sir Philip Crampton's Evacuator.

This instrument was modified by Mr. Clover, of London, who substituted, for the glass receiver and the exhausting syringe, an india-rubber bottle placed behind a glass receiver. On compression of the elastic bottle, the necessary vacuum was formed, and the debris was deposited gently into the receiver. The first form of the receiver was a simple cylinder of glass, as in the accompanying cut, Fig. 2.

This instrument was subsequently modified by the addition of a vertical glass chamber for the prevention of a return of the debris into the bladder.

Professor Bigelow pays a merited tribute to Mr. Clover, whose instrument for evacuating calculous material from

the bladder, after lithotripsy, was the only one of practical value previous to his own.

He says, "Had Clover, whose catheter had a calibre of only 21 of the French standard (about 12 English), or Mercier, employed larger catheters (between 25 and 31

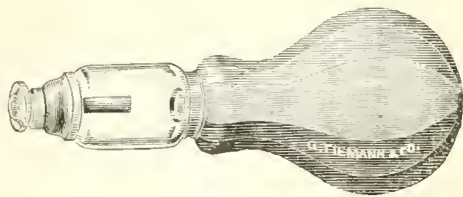


FIG. 2.—Mr. Clover's First Evacuator.

French—15 to 20 English) they might have evacuated the bladder completely! They would have found how little affected it was by a long operation, if no fragments were left behind, and that polished instruments were not injurious, while sharp fragments were. They would have discovered a tolerance, on the part of the bladder, wholly at variance with the traditions of half a century. Upon this tolerance modern lithotripsy is based.

"The new and essential instrument, is the large catheter (25 to 31), whether straight or curved. This is indispensable." Then follows a description of the evacuator of Professor Bigelow. It will at once be seen that there is an important hiatus, between the old, inefficient instrument of Clover, and "the new and essential instrument" of Bigelow, and that is, an explanation of the reason why the larger instrument was not constructed and used by Clover, and thus have secured, at once, the later advantages of modern lithotripsy. In order to complete the history of this important advance in genito-urinary surgery, I may, perhaps, be permitted to state, that it was in consequence of the fact that all anatomical and surgical authorities, previous to the invention of Clover's evacuator, and up to the year 1874, taught that the normal calibre of the urethra did not exceed 21 mm. in circumference. In accordance with that teaching, Mr. Clover could not use an evacuating tube of more than 21 mm. in circumference, hence, its capacity for evacuation of calculous debris, was so limited as to render its use of comparatively little value.

After a careful practical study of the dimensions of the urethra, extending over several years, and finally, through the invention of the urethrametre in 1874, I discovered, and was able publicly to demonstrate, an average normal urethral calibre of at least 32 mm. circumference.

Professor Bigelow, in his earliest monograph on "Litholapaxy, or Rapid Lithotripsy with Evacuation," page 11, says: "Whether or not we adopt the view of Otis, that the average capacity of the normal urethra is about thirty-three of Charrière, there can be no question that it will admit a much larger tube than that commonly attached to either Clover's or the French apparatus."

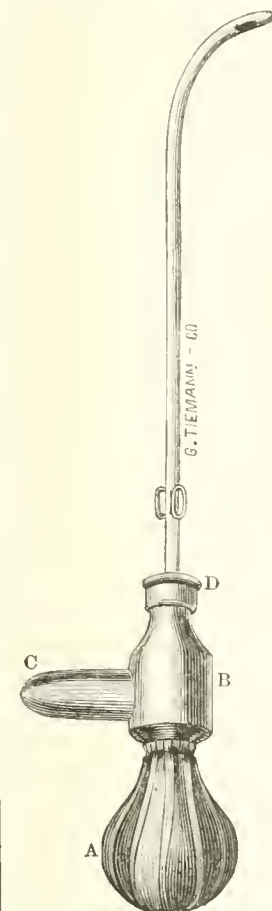


FIG. 3.—Clover's Improved Evacuator. A, india-rubber air-chamber; B, glass receiver; C, tube projecting into receiver; D, junction between evacuating catheter and suction apparatus. Size of evacuating catheter 12—English—equal to 21 mm. in circumference.

While fully accepting the truth of this statement, it seems to me proper to suggest that, it is not a question of "Whether or not we accept the view of Otis," etc. The fact stated, "that there can be no question that the urethra will admit a much larger tube than that commonly attached to either Clover's or the French apparatus, *was not established nor claimed*, prior to my demonstrations in America and Europe in 1874 and 1875."¹

Dr. Bigelow, in his paper before the International Congress, previously alluded to, thus vigorously states the result of a failure to appreciate the true or normal calibre of the male urethra. There he says: "*The small size of the previous evacuating catheters delayed surgical progress for nearly half a century.*"

By thus explaining why the use of an evacuating tube from 25 to 32 mm. in circumference, was not adopted by Clover and Mercier, the hiatus in the history of this important advance in surgery, previously alluded to, is completely filled.

Professor Bigelow, in his report to the International Congress, modestly disclaimed any credit in the operation, except in the use of the large evacuating tube, and assumed that Clover and Mercier, certainly would have discovered the tolerance on the part of the bladder, upon which he claims "modern lithotripsy is based."²

It is true, that Professor Bigelow did not discover the tolerance of the bladder to instrumental interference. This was previously well known. On March 3, 1876, and thus over two years previous to the publication of his brochure on "Litholapaxy," I was called upon by Dr. Fred. P. Mann, of Brooklyn, to remove a calculus from the bladder of a lady sixty-four years of age. With the assistance of my associate Dr. Bangs, and Dr. Mann, the urethra, which easily admitted 30 under ether, was dilated up to 45. A forceps was introduced, the stone (a phosphatic one) was crushed, and the debris washed out with Clover's apparatus attached to a 30 silver, open-end, evacuating tube. On subsequently examining the walls of the bladder with the finger, they were found coated with calculous material, which, by the aid of a scoop, my finger, and repeated washings, I was enabled completely to remove. The time, during which the bladder was subjected to this necessary procedure, was just one hour and ten minutes.

The patient rallied quickly from the anaesthesia; the operation was not followed by the slightest constitutional disturbance, and she made a perfect recovery, and is at the present writing alive and in good health.

November 6, 1877, I was called to Sag Harbor to see a case of supposed urethral stricture with ulceration of the bladder. The patient had been confined to his bed for more than a year. On examination, I found a stone in the bladder, and operating by Dolbeau's method I passed a forceps through the perineal opening, crushed and removed a calculus, the debris of which, filled a large goblet. The calculus was so large, that I was nearly an hour in crushing off the sides of the stone, before it could be brought fairly within the jaws of the forceps. After this, the operation was speedily finished, but, with the necessary instrumental interference within the bladder, and the subsequent manipulations for cleansing it, from the commencement of the crushing, to complete evacuation, the time was an hour and a quarter. No local trouble re-

sulted from this prolonged operative interference within the bladder. The patient made a perfectly satisfactory recovery under the care of Dr. Rodgers, of Sag Harbor.

I am sure that many surgeons have experiences, practically equivalent to the foregoing, antedating the operation of litholapaxy by many years. And thus I claim, that Professor Bigelow did not *discover* the tolerance of the human bladder to prolonged instrumental interference. He did much more—he utilized the knowledge which he in common with other surgeons possessed. He had the inspiration to conceive of its value as a factor in a great life-saving operation. He seized the demonstration of an average urethral calibre of 32 mm. in circumference. He joined it with his knowledge of the toleration of the bladder to legitimate surgical procedures, and *litholapaxy* was born. He had the courage, the surgical knowledge, the skill, the inventive mechanical genius, and the perseverance to carry it, *vi et armis*, to a successful maturity, *thus finally achieving one of the most brilliant surgical triumphs of modern times.*

The size of the evacuating tube has been shown by Professor Bigelow to be the most important factor in the operation of litholapaxy. The smallest calibre to be really efficient and satisfactory may be fixed at 27 F., and the largest affording all desirable facility in evacuating the debris may be fixed at 32 F., which is less than the average normal calibre of the urethra by over one millimetre.

In a normal urethra, that is to say, one free from localized contractions or obstructions, it may be assumed that an evacuating tube of proper shape and corresponding size may, as a rule, be easily and safely passed through it, into the bladder. The normal calibre of any urethra may, in all cases, be safely assumed, from a measurement of the circumference of the penis.

After a careful experience on this point, in many hundred instances, I do not hesitate to claim, that the relation of the size of the urethra to the size of the penis, in any given case, is invariable, and that any variation from it is abnormal. I have never yet met with a single case, where the estimate of the calibre of a urethra, based upon this proportionate relation, has proved excessive.

This relation was formulated by me, in a table presented to the profession in 1875, as follows:

CIRCUMFERENCE MIDWAY OF THE PENIS.		
Of Penis.		Of Urethra.
3 inches, or 75 mm.	.....	30 mm., or more.
3½ " " 81 mm.	.....	32 mm., "
3¾ " " 87 mm.	.....	34 mm., "]
4 " " 93 mm.	.....	36 mm., "
4½ " " 100 mm.	.....	38 mm., "
4¾ to 4½ " 105 to 112 mm.	.....	40 mm., "

Now, while I have seen many cases, where the urethra was larger than that claimed in the foregoing table, I have never seen a single case where it was less. Whenever a full-sized instrument, selected in accordance with the proportionate relation, above claimed, did not easily traverse the urethra, then, the failure was always shown to be due, to localized contractions, either at the meatus, as the result of malformation, or pathological causes, or from easily recognized stricture at some deeper point in the canal. Obstructions resulting from prostatic enlargement should always be respected, and in such cases *the smallest tube which will be efficient in removing the debris* should be used. This, because all forcible interference with the parts thus diseased, is to be avoided as much as is possible. All localized contractions of the urethra, should be removed before the operation of litholapaxy. Contractions at the meatus, should be divided, and allowed to heal, before operation for litholapaxy. The chief dangers of litholapaxy, reside in the injuries to the deep urethra, during the operation—hence the urethra should be put in the best possible condition, throughout, before the operation is attempted. Time should always be allowed for complete healing of the wounds resulting from preliminary division of the meatus,

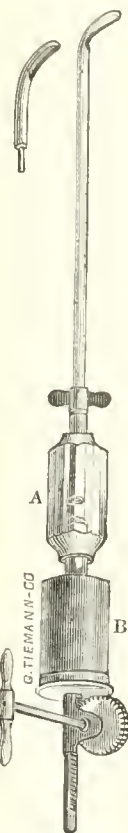


FIG. 4. - The French Evacuator. A, the air-chamber; B, the piston worked by rack and pinion.

¹ See Otis on Stricture of the Male Urethra. Second Edition, pp. 25, 72, 89, 97, 183 et seq. New York: Putnam's Sons, 1880. And a Table of Measurements of One Hundred Supposed Normal Urethrae, p. 200 et seq. 1875.

² Trans. Int. Cong., vol. ii., p. 293.

or of deeper contractions, before the operation of litholapaxy is attempted. In this way any hemorrhage, resulting during the operation, will be referred to its real cause, and the operator will be relieved from the embarrassment of a hemorrhage from the urethra, resulting from division of the meatus, or deeper stricture, at the time of operation, which could not then be quickly differentiated from hemorrhage produced by injury of the bladder, in the process of crushing. Civiale was in the habit of dividing the meatus and allowing the wound to heal, before attempting the operation of crushing the stone. In this way he discovered that many reflex irritations, simulating stone in the bladder, were due to the contraction of the meatus alone. Having, then, thoroughly cleared the urethra from all localized contractions, the operation of litholapaxy may be approached, with the greatest security against embarrassment from mechanical obstruction in the urethra.

The facility, and safety, with which the operation of removing the débris from the bladder, in litholapaxy, depends, in a very important degree, on the size and shape of the evacuating tube or catheter. Professor Bigelow recommends that the size shall not be below 25 mm. in circumference, nor above 31 mm. For my own part I have never yet met with a normal adult urethra of less than 28 mm. in circumference. Whenever, therefore, the urethra will not admit an evacuating tube of 26 or 27 mm. in circumference I do not hesitate to claim that stricture is present, either at the meatus, or at some deeper point, and, after verifying this claim by examination, to recommend restoration of the canal, by removal of the contractions by dilatation or by division, before operating, rather than to use an evacuating tube of a smaller size.

The difference of even 2 or 3 mm. in the size of an evacuating tube, when below 30 mm. in circumference, makes an astonishing difference in its evacuating capacity. For instance, in using the evacuating tube 30 mm. in circumference, twenty pressures of the bulb, at intervals of one and a half second, withdrew from the glass bottle (representing the bladder) and deposited in the receiver, 300 grains of crushed coral, which is almost identical in weight and mode of cleavage with mixed calculi. Whereas, under the same circumstances, with the same number of pressures of the bulb, and in exactly the same time, with an evacuating tube of 27 mm. circumference only 180 grains were deposited in the receiver. It may, I think, be confidently stated that in the absence of stricture, or congenital contraction of the meatus, or of prostatic enlargement, an evacuating tube, two or three sizes smaller than the normal urethra, according to estimate previously stated, may, as a rule, be easily and safely used.

Professor Bigelow uses, and recommends, the straight evacuating tube, in preference to the curved. The calculous débris finds its way through it, much more directly and easily, and while less liable to become clogged, it is more readily cleared. The only objection appears to be, the somewhat greater difficulty of introducing it into the bladder, especially in cases of enlargement of the prostate. I have modified the straight instrument of Professor Bigelow, by adding a small curved projection, which, with all the advantages of the former, I have found more easy of introduction, and preventing, in greater degree, the closure of the opening in the tube, from engagement of mucous membrane in it, during the process of evacuation. (See evacuating tubes in Fig. 12.)

Notwithstanding the statement of Professor Bigelow, already quoted, to the contrary, *something more than a large evacuating tube* was essential to the new operation. This was a more powerful evacuating apparatus than that of either Clover or Mercier. This lack was supplied by Professor Bigelow—thus finally enabling him to perfect his operation of “*rapid lithotripsy with evacuation*.”

His first apparatus consisted, simply, in a large, strong, india-rubber bulb, furnished with a glass receiver for the débris, and a tube at the opposite extremity for attachment to the evacuating tube. (See Fig. 5.)

This instrument was found perfectly efficient and came into general use, although it was open to the objection that fragments and débris, having been once withdrawn from the bladder, were again carried back into it by the return current. There was also the real, or theoretical, complaint, that, during its use, it permitted too free access of air into the bladder.

Sir Henry Thompson, of London, who was quick to recognize the great improvement of Bigelow's method over those previously followed, adopted Bigelow's procedure, and produced, in 1879, an evacuating apparatus differing from that of Professor Bigelow, in that the débris fell from the evacuating tube, directly into the receiver or trap, and that the connection of the tube with the bulb, was rigid and metallic, instead of by rubber tubing, and was filled, previous to use, through a funnel and stop-cock at its apex, instead of through the tubing. (See Fig. 6.) Efficient in Sir Henry's hands, it was exposed to the same objections that had been raised against Professor Bigelow's instrument. In 1880, in the third edition of his work on “*Practical Lith-*

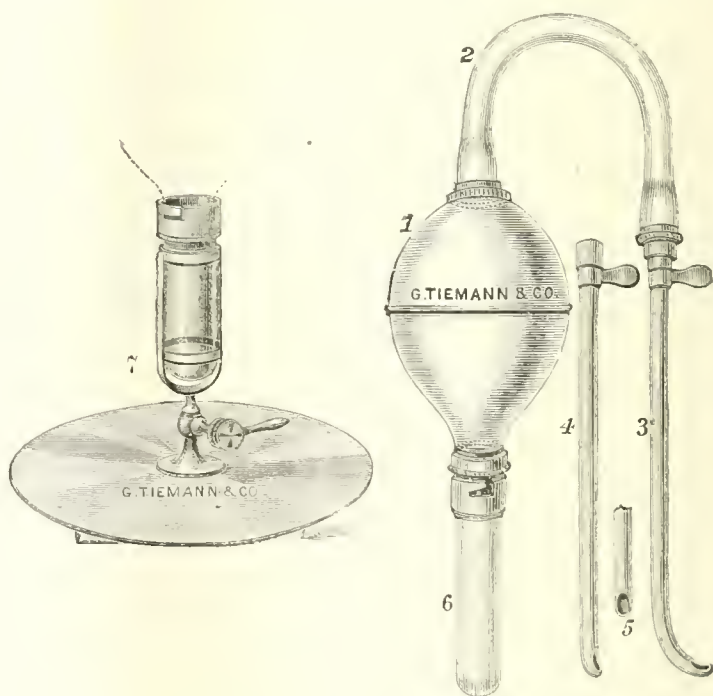


FIG. 5.—Professor Bigelow's Original Evacuator. 1, elastic bulb; 2, curved rubber tube; 3, curved evacuating tube of silver; 4, straight evacuating tube, which is preferable to the curved one; 5, front view of same; 6, glass receptacle with bayonet joint for débris; 7, stand. (Tiemann & Co., New York.)

otomy and Lithotripsy,” page 186 (J. & A. Churchill, London), he presented the following modification of the apparatus (see Fig. 7), the advantages of which he claims are, that “the change in the position of the lower tap shortens the distance for the fragments to traverse, which thus reach the receiver by the shortest possible route. The current having less distance to travel, has thus more powerful action on the fragments, and consequently the aspiration is more perfectly made than it has hitherto been. The fragments enter, fall downward through the tube, and cannot mount again into the apparatus, in consequence of the projection of the tube into the glass receiver.” He also says, “for those who prefer a portion of flexible tube between the aspirator and the evacuating catheter¹ two inches thus interposed will insure freedom from any jar to the bladder in using the instrument, and will only lengthen the route *pro tanto*.” “For myself,” he concludes, “I prefer the absolutely direct and short-

¹ As in Professor Bigelow's original evacuator.

est route, having no more fear of hurting the bladder, with the inflexible evacuating catheter, than I have with the inflexible lithotrite."

Up to this point the evacuator of the great English lithotritist, appeared to possess the advantage over his American rival, in the more direct route for the débris, while the greater freedom from angles on this route (see

says: "I am not disposed to think that the utility of the instrument is thereby seriously impaired."

Professor Bigelow, nevertheless, began a series of experiments, with the view of increasing the excellence of his evacuator, addressed not only to excluding the air from it, during operation, but in preventing the débris from re-entering the bladder by the return current.¹

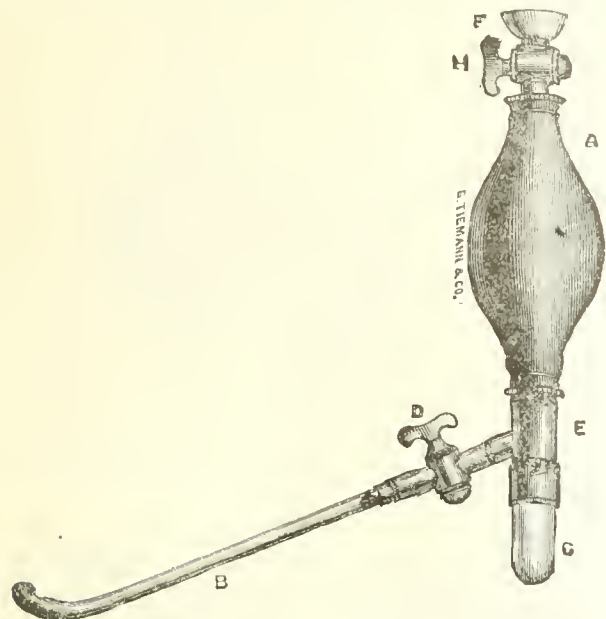


FIG. 6.—Sir Henry Thompson's Original Evacuator.

Fig. 5, page 482) seemed to promise at least equal efficiency for the latter.

Practically I had made use of Professor Bigelow's original instrument from an early date, with complete success in every instance, and without finding anything in its working, which appeared to decrease its efficiency, in any marked degree. Of it, as late as April, 1883, Mr. Harrison, of Liverpool, in his valuable brochure on

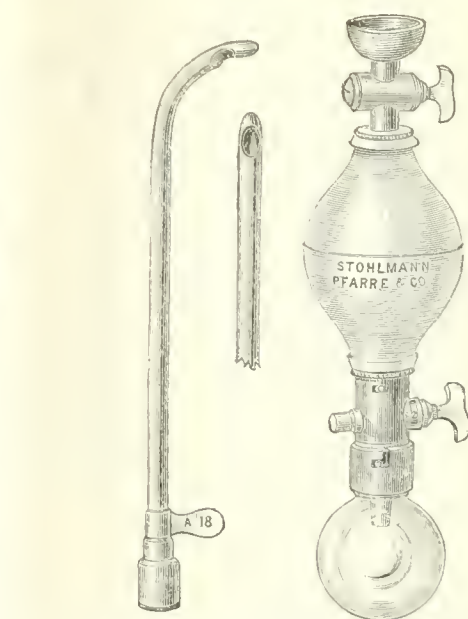


FIG. 7.—Sir Henry Thompson's Improved Evacuator, showing the mechanism of the taps through which the débris passes to the glass receiver.

In the improved instrument (see Fig. 8), heavy stop-cocks at DD, one attached to the evacuating tube and the other to that in connection with the bulb, and subsequently a catheter valve or strainer was interposed between the latter stop-cock and the bulb; also a tube F, guarded by a stop-cock at G, for refilling the bulb, if necessary, without withdrawing the evacuating catheter from the bladder.

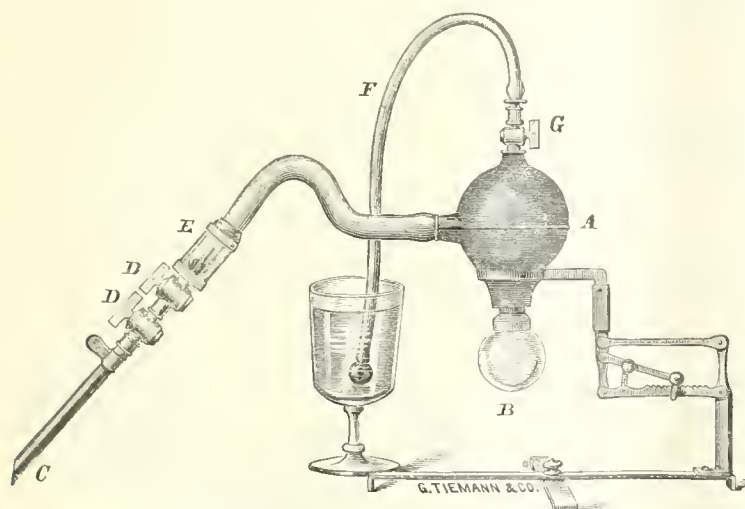


FIG. 8.—Professor Bigelow's Evacuator, complete. Curves in the elastic tube make it less liable to flatten when bent. The hose is attached when it is needed. (From Bigelow, op. cit., page 297.)

lithotomy, lithotripsy, etc., writes of Professor Bigelow's evacuator thus: "After trying several modifications of it, I must express my satisfaction, so far, with the original instrument" (represented at page 482). He further says: "Exception has been taken to it on the grounds (1) that the trapping of the fragments is imperfect, (2) that the apparatus permits air to enter the bladder." Admitting the truth of these objections to some extent, he

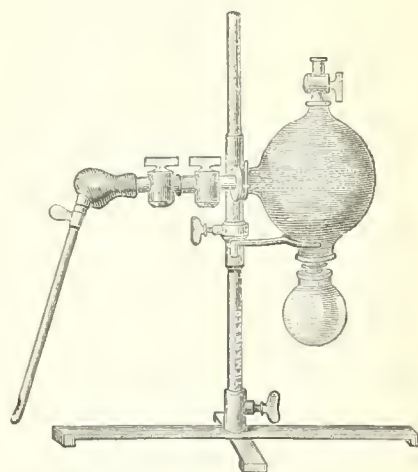


FIG. 9.—The "Simplified Evacuator" and Stand. The catheter is prolonged, by a long tubular strainer, into the bulb. This makes a catheter-valve, though still advantageous, less necessary. An elastic ball or universal joint, with a small tubular strainer, is also substituted at the head of the catheter for the elastic tube, and makes the instrument shorter. The stand is here a retort stand. The bulb hangs firmly in a fork, and can be variously inclined.

This was subsequently modified by transferring the strainer to the body of the bulb and dispensing with the ball valve, as in Fig. 9.

In this, the route for débris is much shortened by the substitution of a universal joint in place of the tubing, and entering the bulb at its centre, instead of at its

¹ Transactions of the International Medical Congress, 1881, vol. ii., p. 293.

apex—on all these points more nearly approaching the evacuator of Sir Henry Thompson. The instrument, however, although more perfect in its working, was more complicated and expensive. Probably for this reason Professor Bigelow continued his efforts for a perfect and

Fig. 4 (Fig. 7, previous page) directly under the bottle, and may be influenced by currents, is removed to the front of it, and is perhaps less disturbed by the current which passes over the mouth of the receiver. . . . In neither Fig. 4 (Fig. 7, previous page) nor Fig. 5

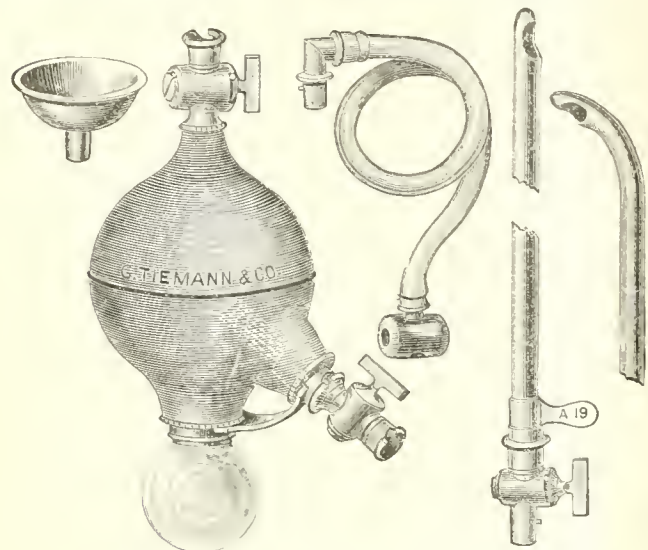


FIG. 10.—Professor Bigelow's Evacuator, improved 1883.

more simple apparatus. These were signally successful, resulting, during the early part of the present year, in the instrument represented in the above sketch. In this the route for the *débris* is again greatly shortened.

(Fig. 11, above shown) is any stand required, and the connection with the bladder, is the shortest and simplest possible." The connection of the aspirator with the bladder, is also cut off in both instruments by the taps "T".

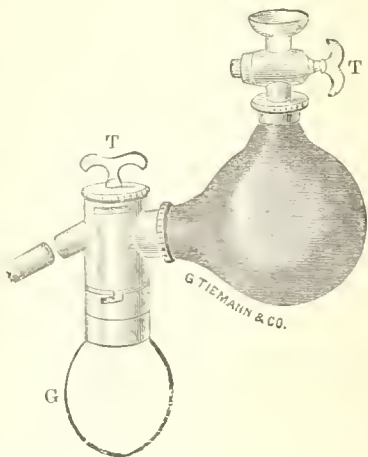


FIG. 11.—Sir Henry Thompson's latest Evacuator, modified by Weiss.

Notwithstanding their excellence in other respects, the weight and size of the different evacuators had often occurred to me as an objection, as well as their necessary expense, a good modern instrument costing about thirty dollars. After a careful experimental study of the matter, bearing in mind the excellent points of all the instruments in use for this purpose, the plan of a new instrument was evolved by me, and elaborated by the surgical cutlers, Messrs. George Tiemann & Co. It consists of a strong annealed glass bulb, A, two inches in diameter, the reservoir, into one side of which a metal tube, B, forty mm. in circumference, curving down to its lowest part, is inserted. This is connected to the evacuating catheter C by the india-rubber tube; attached to the floor of the reservoir by a bayonet-joint, E, is a short, strong, glass bottle, F, the receiver. On the side of the bulb, opposite the tube connecting with

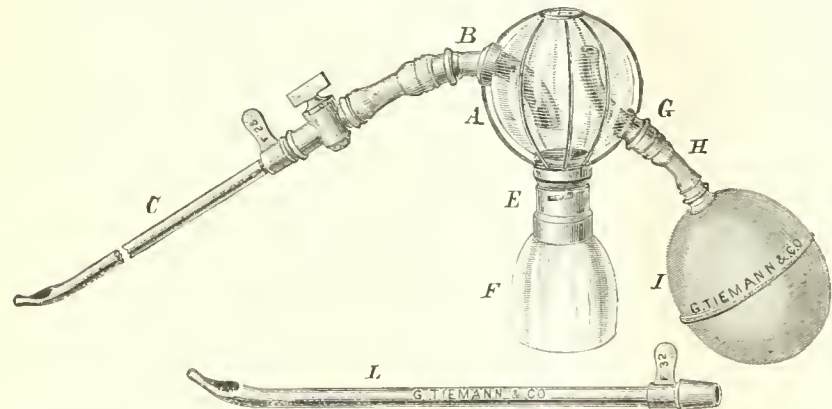


FIG. 12.—The Author's Simplified Evacuator.

The return of *débris* to the bladder, is prevented by the strainer, which is here prolonged into the bulb at an acute angle. The movable joint is dispensed with, and probably, for the reasons given by Sir Henry Thompson on page 482, the connection with the bulb, is without an intervening flexible tube. I have used this on a single occasion, and its operation was perfect. I felt satisfied that for this form of instrument it was the most simple, direct, and efficient in action of any that had been devised. In the meantime, Sir Henry Thompson's improved evacuator, had been modified, at the suggestion of Messrs. Weiss & Son, surgical cutlers, of London, in order to carry out more perfectly one of the conditions for a perfect evacuator previously insisted on by Sir Henry Thompson, viz., to secure the shortest possible route for the passage of *débris* from the bladder to the receiver. This modification is shown in the appended woodcut (Fig. 11). "This," says Sir Henry, "is identical with Fig. 4 (as represented in Fig. 7 on previous page) in every particular, except that the cylindrical receiver which is in

evacuating catheter C by the india-rubber tube; attached to the floor of the reservoir by a bayonet-joint, E, is a short, strong, glass bottle, F, the receiver. On the side of the bulb, opposite the tube connecting with

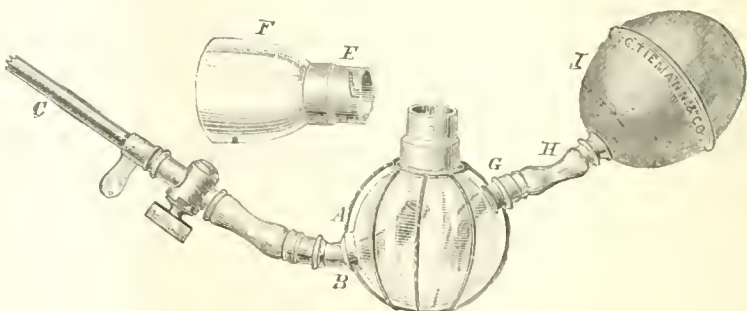


FIG. 13.—The same reversed for filling.

the evacuating catheter, is another metal tube (at G) curving upward to near the top of the bulb A. This is connected by another flexible tube, H, with a strong india-rubber bulb, I, constituting an independent air-chamber. A stop-cock at the extremity of the flexible

tube permits the removal of the catheter without leakage from the reservoir A. The capacity of the reservoir A is just four fluid ounces, that of the receiver F one and one half ounce. To put the instrument in operation it is necessary, first, to shut the stop-cock, then disconnecting the receiver F from the reservoir A, and reversing the latter, so that its opening looks directly upward, with a small pitcher, or cup, fill it with water to the brim, requiring just two ounces.

Then, with the reservoir still in the same position, attach the receiver F (see Fig. 13). Return the instrument to its upright position and it is ready to be attached to the evacuating catheter, previously introduced into the bladder. Or the instrument, in the position shown, may be emptied of the contained air by firm compression of the bulb I, and the evacuating catheter placed in a vessel containing sufficient water, when by removing the pressure the instrument fills instantly and is then ready for use.

Directions for operating, the reservoir having been filled as above shown.—The evacuating catheter having been well oiled and carefully introduced into the bladder, the contained urine is evacuated and six to eight ounces of tepid water are introduced into the bladder. The evacuating catheter is then attached to the evacuator. Gentle pressure of the bulb—sufficient to displace one-third to one-half its contained air—drives a current of water into the bladder and produces the necessary vacuum. The returning current from the bladder brings a portion of its contained water, and with it the calculous debris. This is quietly, quickly, and certainly deposited into the receiver, from which there is no possibility of return into the bladder. Repeating the pressure on the bulb at intervals of two or three seconds, as long as the fragments are seen to fall into the receiver, the catheter, the point of which has been in contact with the most dependent portion of the bladder, is then withdrawn a little and gently moved about, in order that floating or reluctant fragments may find access to it, and the rhythmic pressure of the bulb is continued until no more debris is seen to fall into the receiver.

If, then, there are evidences that calculous material still remains in the bladder after removal of the evacuating catheter the crushing is renewed, after which the same operation for removal of the debris is repeated, and so on until the stone is completely removed.

In order to show how completely the debris is removed from the influence of the current which returns to the bladder, a colored solution may be placed in a bottle, the receiver filled to the brim with pure water or glycerine, and attached to the reservoir. Pressure of the bulb drives the colored solution into the reservoir without materially coloring the water in the receiver, thus showing that the current is between the mouth of the evacuating tube emptying into the reservoir, and that of the independent air-chamber, placing the receiver out of the influence of the current; consequently the debris drops quietly into the receiver and is there retained.

A MEDICAL HERO.—Says Dr. Parvin: How many a surgeon, after performing tracheotomy in a case of diphtheria, has found the tube obstructed, his patient in peril of instant death, and has applied his mouth to the tube and removed the obstruction, saving his patient, it may be, but killing himself! When the Alabama was hopelessly disabled by the well-directed shots of the Kearsarge, the gallant surgeon, Lewellyn, got his wounded men in the only two boats left, but, though urged, refused to enter either of them, lest, by overloading, the safety of his patients might be imperilled, and went down with the ill-fated ship to sudden death, but to an immortal memory.

DIGITALIN causes a decrease in the total work of the heart (of frogs and turtles), according to Messrs. Donaldson and Stevens.

THE ARCHITECTURE AND FUNCTIONS OF THE CEREBELLUM.¹

By AMBROSE L. RANNEY, M.D.,

NEW YORK.

(Continued from p. 452.)

If you study the *fourth ventricle*, the exposed portion of this tract will be seen to constitute the lateral boundary walls of that cavity (*processus e cerebello ad testes*), with the so-called "valve of Vieussens" (*velum medullary anterius*) enclosed between them. The latter formation deserves special notice in this connection.

The *processus cerebelli ad cerebrum* itself is by no means free from admixture of foreign elements during its passage from the cerebrum to the cerebellum, the details of which I have just given. At the level of origin of the fifth cranial nerve (*trigeminus*) fibres from the cerebellum to the greater root of that nerve can be demonstrated as fasciculi which in part cover it and in part traverse it. It is also traversed, at a lower plane, by fasciculi destined to belong to the eighth cranial nerve (*auditory*).

Valve of Vieussens.—In this commissural band (the medullary velum) three different systems of fibres lie interwoven: 1. The great mass of its substance is composed of bundles of fibres derived from the frenulum. 2. The decussating fibres of the fourth cranial nerve (*trochlearis*), which are grouped at the anterior extremity of the valve into bundles of extreme thickness, are inter-twined transversely with the fasciculi of the frenulum. 3. Certain longitudinal fibres may be demonstrated which can be traced to the superior vermiform process of the cerebellum. The course of these fibres is peculiar. They decussate before leaving the superior vermiform process; they then traverse the valve of Vieussens almost to the lower border of the corpus quadrigeminum; at this point, they double upon themselves, describing curves whose convexity looks upward; finally, they join the inferior lamina of the lemniscus at its posterior bundle, and pass onward with the latter, in the posterior division of the pons Varolii, to the spinal cord.

Processus cerebelli ad pontem (middle peduncle of cerebellum).—When the general architecture of the cerebro-spinal axis was under consideration,² the relation of the cerebellum to certain fibres which helped to form the "basis cruris" of Meynert (*crusta cruris*) was touched upon, as an anatomical explanation of the fact that the number of fibres of the middle projection system suffered an apparent decrease during their passage through the pons Varolii. It was then stated that some of the efferent fibres of the corpus striatum probably left the direct tract of the projection system within the region of the pons, and passed to the cerebellum. Some points pertaining to the physiological importance of these fibres were also mentioned in connection with my description of the corpus striatum. It has, moreover, been stated, in previous lectures, that the region of the pons contained certain *transverse fibres* connected with the cerebellum, which interlaced with the fibres of the cerebral projection tracts, and were probably more or less intimately associated with the nodal masses of gray matter found in that region. Some of these fibres are unquestionably commissural in character, serving to unite homologous regions of the cerebellar hemispheres; others probably serve to unite the hemispheres of the cerebellum with the gray matter of the crus of the opposite side. In man the pons is long, because the crusta cruris is developed in proportion to the size of the cerebral lobes; in animals it becomes shorter in proportion to the decrease in size of the cerebellum. The interlacement of the fibres of the projection system with those of the "*processus cerebelli ad pontem*" occupies the region of the pons and the upper half of the medulla (Meynert). It is somewhat curious to observe that the lateral regions of the cerebellum keep pace

¹ A part of a course of lectures delivered before the students of the University of the City of New York.

² See article by the author in the New York Medical Journal, April, 1883.

in their development with the cerebral lobes, and the "*nucleus dentatus*" of the cerebellum is developed in direct proportion to that of the olivary bodies of the medulla oblongata.

Cross sections of the region of the pons reveal the fact that the transverse fibres of the *processus cerebelli ad pontem* may be divided into *three sets*, as follows: 1, a superficial layer; 2, fibres which interlace with longitudinal fibres escaping from the crus; 3, a deep-seated layer. The superficial and deep layers appear to be perfectly independent of any association with the fibres which belong to the middle projection system of the cerebrum (those of the *crusta* and *tegmenum cruris*). Meynert, however, brings forward certain reasons, based upon a minute study of the general relations of these layers, which apparently lend support to the view that the fibres of these strata are in communication with nerve-cells embedded in the pons, that certain crural fibres are likewise joined to these cells, and that the two sets of fibres are thus brought into communication with each other. He states his conclusion as follows:

"Each fasciculus of the *basis cruris cerebri* that terminates in either side of the anterior division of the pons is represented in the *cerebellar hemisphere of the opposite side* by *two fasciculi*, one of which runs with the superficial, the other with the deep stratum of the transverse system of fibres from the point of their connection with the crural fasciculus into the *processus cerebelli ad pontem* of the opposite side."

Processus cerebelli ad medullam (restiform body, inferior peduncle of the cerebellum).—A complete description of this important bundle properly belongs to a subsequent article, which shall treat of the architecture of the medulla oblongata. It is a round and prominent cord, which passes directly into the corresponding hemisphere of the cerebellum. The fibres of the lateral cerebellar tract and the arched fibres of the medulla oblongata can positively be traced from it to the substance of the cerebellum. The distribution of some other bundles found within it is still unsettled. The fibres of the restiform body probably terminate either in the *corpus dentatum* or the cortex of the posterior surface of the hemisphere.

Relations of the cerebellum to cranial nerves.—At various times, articles have appeared which tend to show that the fibres of origin of some of the cranial nerves can be traced to the cerebellum. When a positive demonstration of the statements made by some of the later anatomists can be furnished, much light will be shed upon the functions of this ganglion. There seems to be every reason, at present, to believe that the *auditory nerve* can be traced to the cerebellum after its fibres have passed through the auditory nucleus; and the number of such fibres appears to be in excess of those actually comprised within the nerve itself. In this respect a strong analogy is presented between the auditory fibres and those of the *corona radiata* of the cerebrum, which are themselves more numerous than those of the *crus*, although they appear to be a direct continuation of them (as was stated when the basal ganglia of the cerebrum were under consideration). The opinion advanced by Spitzka, that the fibres of the sensory root of the *trigeminus* can be also traced to the cerebellum, lacks positive confirmation as yet; and the same remark might apply with equal justness to the views of those observers who believe that the *third*, *fourth*, and *tenth cranial nerves* have a direct association with that ganglion. There are physiological experiments on record which seem to sustain all of these views as well as others which combat them. These will be explained later. The proof, however, that fibres of the nerves mentioned can be actually demonstrated within the substance of the cerebellum, cannot, to my mind, be considered as final, although some neurologists are inclining more strongly of late toward that belief.

The functions of the cerebellum.—From the date of Flourens' first experiments upon the cerebellum of ani-

mals down to the present time, neither sensibility nor marked excitability seems to have been demonstrated as attributes of this ganglion. Animals which have suffered extreme mutilation of the cerebellum experience no apparent pain, nor does direct irritation of that ganglion result in pain or convulsive movements. The opinion that the cerebellum is incapable of direct stimulation, which is still held by some physiologists, seems to be confuted, however, by the experiments of Budge, who observed that movements of the testicle and *vas deferens* occurred in the male, and of the horn of the uterus and the Fallopian tubes in the female, when direct irritation of the cerebellum was employed. The same observer produced movements in the stomach and *œsophagus* by means of cerebellar stimulation.

The widest differences in opinion exist among physiologists and neurologists regarding the functions of this ganglion, since the most positive and direct results of experimentation upon animals are apparently contradicted by pathological observations upon the human subject. There is one conclusion, however, in which most physiological observers, since the date of Flourens' original experiments, concur, viz., that the cerebellum, in some way, influences to a marked degree the *co-ordination of muscular movements*. This is very apparent in birds deprived of the cerebellum in whole or in part; since the power of performing definite and regular acts of locomotion is lost, although the animal is not paralyzed. If laid upon the back, the bird cannot recover itself, in spite of exhausting efforts to do so. If placed upon the feet, it executes sudden and disordered movements, and shows an agitation which is in marked contrast to the stupor which follows a removal of the cerebral lobes; it can still see and hear, feel pain, exhibit evidences of volition in its endeavors to avoid a threatening blow, and apparently it possesses normal intellectual faculties. Life is not particularly endangered by these experiments, as some of Flourens' birds lived several months, although severe hemorrhage and injury to the medulla may sometimes occur in performing them. If only portions of the cerebellum are removed, the animal appears to *slowly regain* its power of co-ordination of muscular movement; this fact may tend to explain the absence of marked symptoms in the human subject, in spite of extensive lesions.

When Andral published a collection of ninety-three cases in which well-marked lesions of the cerebellum were found after death, and announced that only one sustained the view that the cerebellum governed co-ordination of movement, physiologists were startled and made to doubt the positiveness of their own conclusions. These cases were, however, carefully analyzed by Flint, who entered into a lengthy argument to prove that the cases cited did not warrant the conclusion of their compiler. Nothnagel published in 1878 the results of his analysis of more than two hundred and fifty cases of cerebellar disease. He is inclined to admit the existence of cerebellar ataxia (which he describes as a perversion of equilibrium resembling alcoholic intoxication) as characteristic of cerebellar disease, but he thinks that the *superior vermiform process* is especially liable to produce it, if extensively affected. In the majority of instances the upper extremities remain free from inco-ordination. Subjects in whom cerebellar ataxia is well marked stand, as a rule, with their feet well apart, in order, as it were, to increase their base of support; they sway from side to side and titubate; the toes are seen to be in active motion if the patient stands barefooted; in walking, the body sways and the heel and ball of the foot are brought into contact with the ground irregularly; the ataxic symptoms may and may not be increased by closing the eyes; in the recumbent posture all these ataxic manifestations entirely disappear.

The *tentorium cerebelli*, which serves to separate the cerebellum from the posterior cerebral lobes, and which in some animals is a portion of bone, appears to have

a clinical bearing upon the development of lesions of the cerebellum, since it seems to favor their growth in a forward and downward direction. It is important for you to bear this in mind when the effects of local destruction of this ganglion are under consideration, as well as the fact that an experimental or pathological lesion seldom, if ever, involves all the numerous nerve-tracts and centres which exist within this ganglion, but have different peripheral connections.

By recalling the important connections of the cerebellum with other parts of the brain and the spinal nerve-tracts, by means of its three crura, and bearing in mind also that the third, fourth, fifth, acoustic, and pneumogastric nerves may possibly have direct sources of origin within its substance (the proof of a relation with all of which, however, is still somewhat unsatisfactory¹), you can readily understand that the symptomatology of cerebellar lesions must, of necessity, be peculiarly involved and complex. The important organs which underlie the cerebellum (the corpora quadrigemina, the tegmentum cruris, and the medulla oblongata) are liable, furthermore, to be simultaneously affected, either by pressure or the extension of the disease to these parts. Within the first of these we probably have centres which govern the movements of the eyeball (Adamuck), and some decussating fibres of the nerve of sight (Charcot); in the second, a vasomotor centre, and possibly one which presides over convulsive movements (?) are believed by some authorities to exist; in the third we find the olivary bodies, which are connected with the cerebellum, and the various nuclei of origin of important cranial nerves.

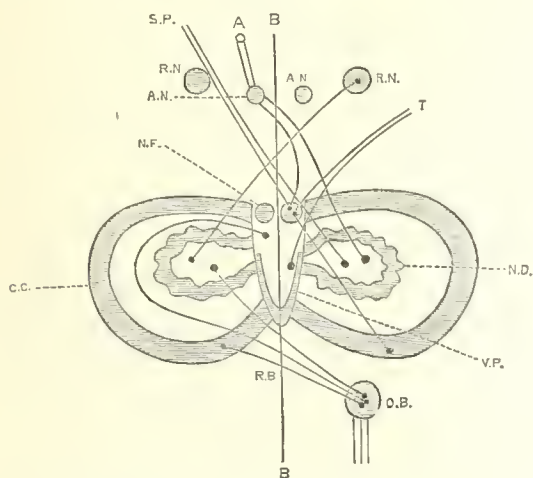


FIG. 3.—A Diagram Designed to Show the Probable Connections of Certain Nerve-Tracts with the Different Portions of the Cerebellum.—B-B, the mesial line of the cerebellum; N.F., nucleus fastigii, situated in the worm N.D., nucleus dentatum, situated in the hemisphere; C.C., cerebellar cortex, covering the peripheral parts of the hemisphere; A.N., auditory nucleus, connected with the auditory nerve (A), and also with fibres which decussate and pass backward to become united with the nucleus fastigii and the nucleus dentatum; R.N., red nucleus of the tegmentum, connected with fibres springing from the dentate nucleus and the cerebellar cortex, and decussating before they reach the region of the red nucleus of the opposite side; V.P., vermiform process (worm), which contains the nucleus fastigii of either side within its substance, and gives origin to fibres of the trapezium from within its white or medullary substance; O.B., olivary body of one side of the medulla, connected with fibres passing to the dentate nucleus and cerebellar cortex; T, fibres of the trapezium, springing from the medulla and connected with the nucleus fastigii and the medullary substance of the worm; R.B., fibres of the restiform body (inferior peduncle of the cerebellum), connected with the olivary body and also with the cerebellar cortex, the dentate nucleus of the opposite side and the worm.

We are apparently justified, on anatomical grounds, in attributing the affections of *sight* which are so often observed in connection with lesions of the cerebellum to pressure upon the geniculate bodies, the corpora quadrigemina, or the fibres or nuclei of origin of the third, fourth, or sixth nerves. On similar grounds, the attacks of *nausea*, *vomiting*, *cardiac disturbances*, and *sudden death* may be attributed to the pressure of cerebellar lesions upon the nuclei of origin of the vagus nerve

within the floor of the fourth ventricle, resulting in either irritation or complete paralysis of that nerve. The *convulsive attacks*, which are occasionally observed in connection with cerebellar lesions, may perhaps be explained by pressure upon the convulsive centre of the tegmentum cruris; and the development of *hemiplegia* of an imperfect type, or of *general paralysis*, both of which have been reported as occurring from cerebellar disease, may be explained by a similar effect upon the direct motor tract of the cerebral projection system.

In direct antagonism to the results of Flourens' experiments, lesions of the cerebellum of the human race seem to be often associated with pain which predominates in the occipital region. In fact, the diagnosis of cerebellar disease is made chiefly on the predominant occipital pain (Brown-Séquard), with titubation and other peculiarities observed during the erect attitude of the patient. Exclusion of disease in adjoining regions must, however, always be made by the absence of symptoms before making a positive diagnosis; because occipital pain and titubation may both be often wanting, and the so-called "ataxic symptoms," when present, do not exist in the marked degree commonly met with in posterior spinal sclerosis. It is uncommon to find true ataxic jerking; and choreic movements and tremor are usually absent. The want of harmony between antagonistic groups of muscles is also wanting.

An attempt has been made to connect the cerebellum with the generative function, but physiological experiment has apparently demonstrated its fallacy. A rooster, in whom the cerebellum had been removed, attempted to mount a hen eight months afterward, and failed apparently only on account of the lack of power to co-ordinate his muscles (Flourens). There seems to be no well-authenticated instance where the sexual instinct has been destroyed in animals by removal of the cerebellum. Leuret found that the cerebellum was even larger in geldings than in stallions or mares. Among the numerous cases of disease of this ganglion to which we have referred, some suffered from a marked excitation of the sexual apparatus, while others had a well-marked atrophy of the genital organs and impotency. There are many physiological as well as pathological facts which tend to refute the idea that the cerebellum is the seat of sexual instinct, and to locate it in the lumbar region of the spinal cord; still it cannot be denied that numerous cases, on the other hand, seem to point to some connection between the cerebellum and that centre, or the organs of generation, in the human subject.

When the corpus striatum was discussed,¹ it was stated that the superior peduncles of the cerebellum could be traced to the so-called "yellow nucleus" of the caudate portion of that ganglion. Luys considers that by means of these fibres the cerebellum is enabled to constantly reinforce the cells of the corpus striatum when they become exhausted, thus enabling them to exert their modifying effects upon all the motor impulses arising in the cerebral cortex which are forced to pass through them, as well as to manifest a peculiar automatism which the cells of the basal ganglia seem to possess. This theory of Luys does not differ markedly from that advanced by Mitchell, viz., that the cerebellum serves as a storehouse of nerve-force, which may be drawn by means of any of its peduncles when emergencies arise to demand it. Some interesting physiological experiments have been made, which seem to point to some intimate association between the cerebellum and the basal ganglia. We know that section of the middle peduncle of the cerebellum almost invariably gives rise to a peculiar "forced movement," the animal rolling rapidly round its own longitudinal axis, the rotation being commonly toward the side operated upon.² This is accompanied by a peculiar dancing and oscillation of the eyeballs, termed "nystagmus."

¹ The connection of the auditory nerve with the cerebellum is now quite generally accepted by neurologists.

² Journal of Nervous and Mental Diseases, January, 1883.

² Bechterew has lately shown that section of the olivary bodies has the same effect.

Now, Purkinje observed long ago that electric currents sent through the head from ear to ear produced the same movements of the eyeballs and a tendency toward the forced movement of rotation. The patient leans toward the anode, and objects spin before the eyes in the direction of the electric current. When the current is broken the objects revolve in an opposite direction, and the patient leans toward the cathode. Hitzig has shown that neither the vertigo nor the movements of the patient's body depend upon the objects perceived by vision, since the same phenomena were witnessed in blind subjects and in those whose eyes were closed. He found also that vertigo could be excited in this way with a current too feeble to excite ocular movements.

These remarkable experiments have been used by different authors as confirmatory evidence of the three following propositions: 1, that the symptoms produced indicated an anelectronic and catelectronic state of the respective auditory nerves; 2, that the cerebellar structures were called into action by the current; 3, that parts of the cerebrum were affected by the current.

The experiments of Cyon afforded ground for the first proposition, since he found that, when the semicircular canals of the ear were divided, peculiar "forced movements" and a loss of co-ordination were produced. The symptoms noticed in auditory vertigo (Menière's disease) are strongly in accord with these experiments, since slight defects in hearing appear to produce in some instances alarming vertigo, vomiting, and unconsciousness.

The second proposition seems improbable, because the seat of the electrodes would appear to be too far removed from the cerebellum to directly affect it.

The third proposition is based upon the situation of the electrodes and the fact that the electric current may be supposed to pass in the most direct line through the cerebral substance. It is possible that the artificial current is sufficiently strong to arrest in its passage the cerebellar current which constantly flows into the cells of the caudate nucleus of the corpus striatum, and that the symptoms of vertigo and inco-ordination are to be thus explained.

From a standpoint of our present knowledge, the cerebellum must be considered as the "terra incognita" of the brain. The clinical evidence is discordant. The anatomical connections of the cerebellum with other parts of the nervous system are remarkable, and their minute structure is, as yet, imperfectly understood. The region overlapped by the cerebellum is interspersed with important collections of gray matter which act as nuclei of origin for important nerve-tracts; so that all experiments made upon the cerebellum itself or its peduncles are liable to cause injury to some of the neighboring parts, and thus to yield results which are puzzling and unreliable. Conjecture inevitably forms an important element in all of the theories advanced respecting the functions of the ganglion itself, or of certain of its parts. Nothnagel claims to have demonstrated that mechanical stimulation of the surface of the cerebellum will give rise to muscular movement without signs of pain being perceived. He found that these movements developed slowly, appearing first on the side operated upon and then ceasing, only to appear upon the opposite side. He states that he has demonstrated that the fifth, facial, and hypoglossal nerves, as well as nerves distributed to the trunk and extremities, can be thus called into action. The same observer concludes that destruction of the *commissural fibres* of the cerebellum alone produces inco-ordination of movement. Hitzig and Ferrier believe that injuries to the lateral lobe produce the same varieties of "forced movements" as are noticed after section of the middle peduncle. Flourens observed that injuries to the anterior or posterior parts of the median process caused animals to fall forward or backward respectively, and his views have been confirmed by others. Ferrier found that stimulation of the cerebellar cortex by the interrupted electric current produced in monkeys, cats, and dogs

movements of the eyeballs, with associated movements of the head, limbs, and pupils. Adamuck produced the same effects, however, by stimulating the corpora quadrigemina. Hitzig refutes the view that Ferrier's results were due to an escape of the current by claiming to have produced similar effects by mechanical irritation of the cortex. Eckhard has brought forward facts which tend to show that in certain parts of the cerebellum lesions tend to produce diabetes or simple hydruria, thus resembling the effects of irritation of the medulla in the region of the floor of the fourth ventricle.

In the face of this conflicting mass of experimental evidence, I mention now one of the most plausible and attractive theories respecting the relation of the cerebellum and cerebrum to muscular contraction, which has been advocated by Spencer and sustained by Hughlings-Jackson, Ross, and others. It is believed by these authors that all *continuous tonic muscular contraction* is governed by the cerebellum, and the *alternate or clonic muscular contractions* by the cerebrum, in so far as they are required to maintain a posture or produce a change in attitude. In all efforts to maintain an attitude (once assumed as the result of some cerebral impression received), the cerebellum holds the muscular apparatus in its proper state of tonicity; but when the attitude is to be changed, for any possible reason of which the cerebrum is conscious, the proper muscles are relaxed and others thrown into a state of contraction by means of the higher ganglion. The body is then entrusted to the influence of the cerebellum if the attitude is to be again

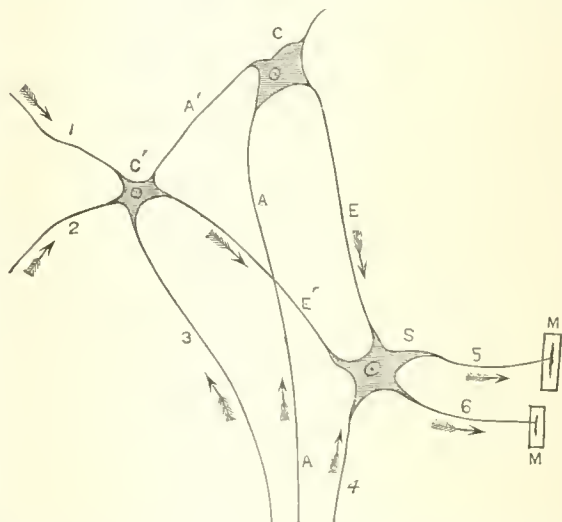


FIG. 4.—A Diagram designed to illustrate the Encephalo-Spinal Action. (Modified from Ross.) C, cerebral cell; C', cerebellar cell; S, spinal cell; 1, fibres connecting the cerebellum with the optic apparatus; 2, fibres connecting the same with the auditory apparatus; 3, fibres connecting the same with the tactile apparatus; A, afferent fibres of the cerebrum; A', fibres connecting the cerebellum with the cerebrum; E, efferent fibres of the cerebrum to the spinal cells; E', efferent fibres of the cerebellum to the spinal cells; 5, 6, motor fibres from the spinal cells to the motor plates of muscles (M); 4, afferent (sensory) fibres from the peripheral parts of the body to the cells of the spinal cord (3 has probably a communication with the spinal cells before reaching the cerebellum). Note that each of these three sets of nerve-cells possesses a group of afferent (sensory) as well as efferent (motor) fibres connected with them; also that each can thus exert an automatic action, when required to do so, or be governed at other times by the cells of the ganglia above.

maintained. Thus it is suggested that the cerebellum be considered as capable of automatic action, but still as a subordinate to the cerebrum, which possesses the power of overcoming it in one of two ways: First, by increasing the supply of nerve-force to certain sets of cells, then under the influence of the cerebellum, and thus altering their action upon muscles; or second, by inhibiting or totally arresting the cerebellar influx to the antagonistic sets of muscles. Both are designed, according to this view, to act either automatically or in unison, but the cerebellum is the servant of the cerebrum to do its bidding when required.

It will be at once perceived that this theory applies to the complex physiological acts of walking; the prolonged maintenance of any given posture; the transfer of the

centre of gravity; the passive state of groups of muscles; and many of the morbid phenomena observed in muscles, as the result of impairment of the higher nerve-centres. It will be impossible to discuss all of these conditions in this connection. Hughlings-Jackson and Ross have covered the more important points in their works. If we form our views of the physiological functions of the cerebellum purely from the standpoint of the anatomical connections which that ganglion is known to possess, we cannot but agree with Bechterew in some of the conclusions which he has lately advanced. This author believes that the cerebellum is intimately connected with three organs, which tend to exert an influence upon equilibrium, as follows: First, the *semicircular canals*, connected with the organ of hearing; second, the *organ of sight*, since the movements of the globe of the eye and possibly the sense of vision may be traced to a relation with the gray matter in the floor of the third ventricle and subsequently with the cerebellum; third, the *olivary gray matter*, which the author thinks is probably connected with the organs of tactile sensibility.

The views of this author have been in part anticipated and sustained by Spitzka, who, in an article published about two years ago, considered the cerebellum as the centre where "impressions of touch and position are associated with those of time and space," and hence the seat of coördination of the most delicate forms of movements; such as are necessary, for instance, to the proper adjustment of the drum-membrane of the ear for the correct appreciation of sounds, the appreciation of time and rhythm, and the finer acts of equilibrium. In filling this position, the latter author believes that the cerebellum is subordinate to the cerebrum, to which it acts as an "informing depot" for coördination, rather than as a distinct centre.

Progress of Medical Science.

RECOVERY AFTER A LARGE DOSE OF DIGITALIS.—Dr. Antonin Martin reports in *L'Union Médicale*, for September 18, 1883, the case of a man, forty years of age, who had taken through mistake an infusion containing six hundred grains of digitalis leaves. He was not seen until twenty-two hours after the accident, at which time he was vomiting incessantly, the skin was cold and dry, the extremities were cold, and he complained of pains in the legs; there was no headache, the pulse was slow, 25 to the minute, strong and regular. Two days after the digitalis had been taken, he began to suffer with intense cephalalgia, located in the left side of the frontal region, and at the same time there were troubles of vision. The patient saw bright specks dancing before his eyes, and even figures of all sorts of animals. Two days after this again he was seized with aphasia, which continued for four days and then ceased. After this the cephalalgia disappeared and the visual disturbances gradually subsided. The recovery, Dr. Martin thinks, was attributable to the poor quality of the digitalis rather than to any remarkable powers of resistance to the poison on the part of the patient.

TREATMENT OF CATARRHAL OTITIS IN INFANTS.—In catarrhal otitis of the new-born, poultices should be applied to the pavilion, and injections made into the auditory canal of a decoction of poppy heads as hot as can be borne. As soon as a discharge is established, a little borax is to be added to the injection. When the pain is severe, a pledget of cotton dipped in an oily solution of morphine may be placed in the ear. When the pain seems to be nearly gone the decoction of poppies may be replaced by a one per cent. solution of chloral, warmed, and injected slowly by means of a small syringe. Finally, when the pain has ceased entirely, an application of alum and glycerine (1 part to 20) is to be made after each injection.—*L'Union Médicale*, September 18, 1883.

ANTISEPTIC SUGAR DRESSINGS FOR WOUNDS.—Dr. Fischer reports in the *Centralblatt für Chirurgie* for August 25, 1883, that he and Professor Lücke have used this application in several instances with satisfactory results. They have used a mixture containing equal parts of sugar and naphthaline, and one of iodoform one part to sugar five parts. The mixture is rubbed into gauze, which is applied over the line of suture, or, where there is a loss of integument, the sugar is strewn directly upon the tissues. Sugar cushions were prepared and used in the same way as peat or sublimate sand cushions. The dressings may be left *in situ* for eight or ten days. The secretions are diffused equally throughout the mass of sugar, except when the layer is too thick it sometimes becomes lumpy. There was never any bad odor about the dressings, even when they had been on a long time. Granulation proceeded finely under the sugar; there was no bleeding, and cicatrization was quickly accomplished.

IRREDUCIBLE PHALANGEAL DISLOCATIONS.—In a patient under the care of Dr. Weinlechner there occurred a dislocation of the thumb from over-extension. Although the thumb could be replaced and the joint surfaces separated for some distance by traction, as soon as this was remitted the phalanx returned to its former place on the dorsum. Even after a resection of the head of the metacarpal bone, the luxation was still irreducible. No cause could be found for this, as neither the palmar portion of the capsule nor the tendon of the long flexor was interposed between the ends of the bones.—*Centralblatt für Chirurgie*, August 25, 1883.

In the following number of the same journal is the report of a case by Dr. Willemer of dislocation of the index finger. Although, as in the former case, it could be easily reduced, it could not be retained in its normal position. An incision was made, when the obstacle to reposition was seen in a small sesamoid bone in the capsule of the joint, which had slipped in between the ends of the bones. This was removed, and the finger was then easily retained in place.

TREATMENT OF RECTO-VAGINAL FISTULÆ.—In cases in which the fistula is situated not more than an inch above the anus, Dr. Monod incises the perineum up to the seat of injury, freshens the edges of the fistula, and then closes the wound by deep sutures passed from the vagina. In order to insure success, he recommends that, prior to the slitting up of the perineum, a stick of nitrate of silver be introduced into the fistula and passed carefully around its entire circumference. By this means the edges are whitened, and can be easily recognized during the operation.—*Centralblatt für Gynäkologie*, September 8, 1883.

URETHRAL CALCULI.—In a recently published monograph upon calculi in the male urethra, Dr. Maximilian Zeissl relates several hitherto unreported cases of this affection. Most frequently the calculi have a renal origin, but sometimes are formed in the urethra itself from particles of mucus which become lodged behind a stricture, in the bulbous portion of the urethra, in the fossa navicularis, or in some diverticulum. They may also be formed from some pieces left behind after an operation for stone in the bladder. The lumen of the urethra is narrowed and sometimes completely closed by the continued growth of a calculus. In other cases stones are formed about foreign bodies introduced from without. Frequently the stones are seen to be channelled out on one of their sides, so as to afford a passage for the urine. The diagnosis of urethral calculi may present great difficulties when they lie in a diverticulum, and also at times when they occupy the prostatic portion. When the urethra is large, it is sometimes possible to push an impacted stone back into the bladder, and then to extract it through a large eyed catheter. If this procedure fails, the calculus is to be removed by an instrument adapted to the purpose, or by direct incision through the wall of the urethra.—*Centralblatt für Chirurgie*, September 8, 1883.

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SECONDARY DEGENERATION OF THE SPINAL CORD—SOME NEW FACTS.

PROF. SCHULTZE, of Heidelberg, successor to Erb in the chair of Nervous Diseases, has recently published (*Arch. f. Psychiatrie*, xiv., 2.) an article upon the pathology of secondary degeneration in the spinal cord, which contains many new facts. His conclusions are based on a study of microscopic sections of the cord at different levels in five cases of compression myelitis. In each of these cases the compression was exerted on different parts of the cord, from the cauda equina to the cervical enlargement. In one of these cases the symptoms, persisting for seven years, were paralysis and anæsthesia in the regions supplied by both sciatic nerves, and the lesion was limited to them near their origin. In the other cases the lesion involved other nerves as well. All the cases were accompanied by ascending degeneration in the cord, limited to the posterior columns and to the direct cerebellar columns.

In regard to the degeneration in the posterior columns, Schultze finds that while the entire posterior columns, except a small zone to be mentioned below, are involved just above the lesion, the area of degeneration diminishes as it ascends, and is limited to the columns of Goll, *i.e.*, the posterior median columns, at the level of the cervical enlargement. In the case in which the sciatics alone were involved, the area of degeneration in the cervical region was limited to the posterior and inner portions of the columns of Goll. Where all the nerves below the eleventh dorsal segment were cut off from the brain, the entire column of Goll was involved. When the lesion was still higher, the columns of Burdach—*i.e.*, the posterior lateral columns, as well as the columns of Goll, were in a state of degeneration. He concludes that the extent of the area of degeneration is in exact proportion to the clinically ascertained disturbance of function, *i.e.*, the more sensory nerves cut off from communication with the brain the greater the area of degeneration in the cord. The tracts connecting the sciatic nerves with the brain lie in the inner and posterior part of the columns of Goll. The tracts connecting the lower extremities with the brain lie wholly in the columns of Goll, and are sufficient to make it up. Hence the columns of Goll in their entire extent are connected functionally with the sensitive nerves of the legs, and not with those of the arms as well. The longest bundles of

centripetal nerves lie in the columns of Goll, just as the longest bundles of centrifugal nerves lie in the pyramidal columns. As nerve after nerve enters the cord as we ascend from below upward, its fibres arrange themselves in succession, laterally and posteriorly, in the posterior columns, taken as a whole, the sciatic nerve-fibres lying farthest back and most nearly to the median fissure, those of the crural nerves next to these and bounding them antero-laterally, those of the dorsal nerves next, and lastly the fibres from the cervical nerves filling up the columns of Burdach.

Since the area of degeneration after a lesion at any point becomes smaller as it ascends, it follows that a part of the fibres which were degenerated near the lesion either stop short, or cease to degenerate as they ascend. The latter is improbable, since it is in the very longest fibres, *viz.*, the sciatics, that degeneration is always found. Hence it is probable that a part of the fibres which enter the cord from the nerve-roots and start upward in the columns of Goll, end without reaching the medulla. Schultze therefore distinguishes long and short nerve-fibres in the posterior columns. He thinks that at first, *i.e.*, opposite any given nerve-root, these are mingled, but higher up the long fibres alone remain, and are collected together in the posterior and inner part of the posterior columns, in the order previously mentioned. A sharp line cannot be drawn at present, however, between the median long and the lateral short tracts at every height.

In the area of degeneration in the posterior columns just *above* the lesion, there is always to be found a small half-moon-shaped zone lying next to the posterior gray roots and free from evidence of change. Just *below* the lesion, however, a similarly situated area is found degenerated, though no other part of the posterior column is here affected. Schultze considers that this is proof of the existence of fibres from the posterior nerve-roots which bend downward after entering the posterior columns. Such fibres are only 2 to 3 ctm. in length, as determined by the extent of degeneration. This confirms the statement of the anatomist Schwalbe. There is, therefore, a small amount of descending degeneration to be found in the posterior columns, as well as a large amount of ascending degeneration after a transverse lesion.

In regard to the ascending degeneration in the direct cerebellar columns, Schultze finds that it occurs only when the lesion is located at a point higher than the last dorsal segment of the cord. The fibres to these columns are known to have their origin in the large gray cells of the postero-internal gray matter of the dorsal region—the columns of Clarke. As long as connection between these cells and the brain remains, the cerebellar tracts do not degenerate. Lesions above the last dorsal segment will break this connection and produce the degeneration. Schultze maintains that these direct cerebellar columns extend further forward than in Flechsig's diagrams, and states that when they are degenerated the zone of degeneration reaches the anterior nerve-roots, without, however, involving them.

In regard to descending degeneration, Schultze also makes an addition to our knowledge. Such degeneration has been supposed to be limited to the direct columns of Türeck, *i.e.*, the anterior median columns; and to the

crossed pyramidal tracts in the lateral columns. Schultze shows that in all his cases there was also a decided degeneration in the anterior and in the lateral columns, extending from 8 to 10 ctm. below the lesion. He considers this evidence of the existence in these columns of short centrifugal fibres connecting adjacent segments of the cord.

The lateral fibres lying just adjacent to the gray matter escaped degeneration in all cases. Hence they will neither degenerate upward nor downward. It has been supposed that these fibres convey impulses in both directions, and thus connect reflex arcs. Schultze prefers to consider them as in connection with gray ganglion-cells at both ends, and thus capable of being nourished from the cell at either end.

As to the nature of the process of secondary degeneration, Schultze declares himself in favor of the theory that the increase of connective tissue is a consequence of the destruction of nerve-fibres, and suggests that the debris of degenerated fibres acts as an irritant and produces the connective-tissue inflammation.

The difference between degeneration in the posterior columns secondary to compression, and the degeneration present in locomotor ataxia, is that in the former the short fibres escape except at the level of the lesion, while in the latter both short and long fibres are involved in the entire cord. Schultze finds a support for his statement that the columns of Goll are made up of fibres from the lower extremities, in the fact that in cases of ataxia where the legs are most implicated, the lesion is most intense in these columns in the cervical region; but where the arms also are involved, the lesion extends beyond them to the columns of Burdach.

Schultze urges a microscopic examination of diseased cords, as these distinctions are impossible from the macroscopic appearance.

AN UNUSUAL ADDRESS.

THE lambent flame of the average London introductory address burst up into something like fireworks a short time ago, beneath the breath of Dr. T. Clifford Allbutt, lecturer in the Leeds School of Medicine. It is plain from reading his address that Dr. Allbutt is not an ordinary orator, nor a commonplace thinker, whatever else we may call him; for in the space of an hour he trod with a perceptible pressure upon each particular toe, so to speak, of the British foot medical.

First of all, the speaker declared that the doctor's profession is not inherently a noble one. We beg our readers to listen to the heresy:

"As to the nobility of our calling, a man may sell fish to the glory of God—that, remember, is as it may please you to make it."

"Essentially speaking, to patch up a man's clay carries to my mind no sense of inherent nobleness as a calling. Skill, knowledge, acuteness, all these it must have, nobility, none necessarily. . . . Like him who made two blades of grass grow where one grew before, the doctor's useful business is to conserve or develop forces for higher ends than his own. If we be driven to such an issue, it is better we should be a free and great-hearted nation

than a healthy one!"—not mentioning the fact that unless you are healthy you are not very likely to be great-hearted. Dr. Allbutt dwells much upon the "ignoble ease" of a too sanitary existence, and recommends his hearers "to die young gloriously" rather than "live ignobly for a century."

The doctor, according to our English orator, is a kind of homoculturist, who prunes, purges, and fertilizes, that fruit may result. His services are personal and private, are rendered to the individual, not to the State. Therefore the doctor does not deserve and should not clamor for State rewards or distinctions (alas for the medical knights and baronets!); his reward is in his work.

But Dr. Allbutt is just enough to say that, although the doctor's life is not essentially a noble one, yet practically it generally is such.

"Do I say, then, that your lives shall be mean lives? God forbid."

"The general practitioner of medicine, as I often witness, even to my shame, devotes his profession, and indeed his life, to the good of others, after a fashion which ennobles any work. Herein, gentlemen, is our true patent of nobility, loftier far than any coronet. The doctor who does, however honestly, only the work that he is paid for is rare in the ranks of general practice; and his life, I repeat, is a useful, but not a noble one. General practitioners obey a far larger and more lovely idea than that.

"Our brethren walk fearlessly, unconscious of heroism, beside the pestilence, snatching men from its breath, and bearing away the stricken to safety. When the typhus epidemic fell upon us in 1865, and our fever hospital was a pest-house, men from general practice stood by me, holding their own lives cheap, at the call of duty and humanity. Mr. Burroughes died at his post; Mr. Swann died at his post; Mr. Libby, happily now living, was smitten heavily, and barely rose again from his bed. Yet I had no lack of volunteers."

In speaking at first of the personal character and secondary value of the doctor's service, slight mention is made of his work in preventive medicine. One must but feel that there is some injustice in sentiment and fallacy in argument here, as well as previously, for, after all, personal service and individual happiness form the ultimate aim of every kind of social work and political endeavor. State services, if we examine them closely, are really only valuable because they increase individual happiness, are in the end personal. Is it better or nobler to pass a tax-law than to prevent an epidemic? Dr. Allbutt makes amends for his first generalizings by the following concreteness:

"Less brilliant, but, in its steadfast unselfishness, perhaps incomparable, is the voluntary sanitary work done by general practitioners before the establishment of sanitary districts. Of these services the careless public is yet scarcely aware. Did the members of any other profession ever seek odium, and even rancorous enmity, by persistent endeavors to cut down their own incomes in the interests of their clients? To speak plainly: enteric fever, for instance, was worth perhaps a steady hundred a year to many a town or country practice—not counting the luck of epidemics. Now, hundreds of doctors—you know many of them yourselves—in human pity,

have striven to suppress this and other such maladies; spoiling their own incomes, and earning, not the thanks, but even the curses of the public; offending not the poor, but the rich—the landlords, the thriving farmers, the Poor-law guardians—the class upon whom the rest of their shrunken practice must depend.”

Perhaps we cannot on the whole complain of Dr. Allbutt's picture of the medical life. It is that doctors are of ordinary human clay, but that most of them find and use the rich opportunities for noble and self-sacrificing acts that a medical career furnishes. He should, Dr. Allbutt thinks, get his pleasure and reward in his work alone; and this is well, but we would add: Why not let him aspire to something further and higher if he wishes? The standing of the profession will be measured by its claims. If it is content to be a drudging, clystering business, it will remain such. Despite Dr. Allbutt, we say, let not the doctor think that a round of noble toil ignobly rewarded is the all that his profession offers. If there be high rewards in science, art, social regard, or governmental recognition let him get them if he can.

THE PRONUNCIATION OF MEDICAL WORDS.

A CORRESPONDENT from Mendon, Mich., writes us as follows:

“I have long noticed that among physicians there is a want of unanimity in the pronunciation of certain medical words, such as the termination ‘itis’ in bronchitis, etc., rôle, quinine, and perineum. Will you please give us the accepted pronunciation of these words and thus oblige.”

It is very unfortunate that there is no absolute standard for the pronunciation of many medical terms. Those that are derived from the Latin and Greek are pronounced by most teachers and lecturers chiefly according to the Continental or Roman methods. Many words, however, would not sound familiar if so pronounced, and consequently a sort of mongrel orthoëpy prevails. But even apart from this mixed and unjustifiable method, which applies chiefly to anatomical nomenclature, there are many commonly used words which are as frequently mispronounced.

We append here a few of them:

Abdomen has its accent on the penult, not the antepenult.

Excretory is accented on the antepenult.

Fibrile has a long *e* and a short *i*, the latter pronounced like *i* in hit, according to most authorities.

Hy- or *Hyd-a-tid* has the accent and division of syllables as indicated.

Maxillary has the accent on the antepenult.

Midwifery is accented as shown.

Phthisis, bronchitis, and all words ending in the inflammatory “itis,” are pronounced with a long *i* like that in mite, according to nearly all lexicographical authorities. The customary pronunciation of these syllables, however, in all parts of the United States (except to some extent in New England) is to give the *i* the sound of long *e*, which it had in its original Greek derivative. A custom so long and universally sanctioned, upheld by etymology, gives authority to this pronuncia-

tion and we believe it to be more justifiable and correct, as it certainly is more euphonious, than the lexicographical one.

Quinine, according to all dictionary authorities, has the first syllable pronounced like “kwi.” The word is variously divided and accented, there being no settled authority either as to this or the length of the vowels. No English or American lexicographer admits the very common pronunciation “kee-neen.” Yet we believe that this last is the more correct. Quinine was originally, and is now as it stands, a French word, and naturally should have the French pronunciation. Custom has given it this, although the dictionaries would take it away. An English equivalent, such as “quinia” might very properly be used and pronounced as an English word.

Secundine has its accent on the antepenult.

Trephine is accented on the last syllable.

Vaginal, according to most authorities, is accented on the antepenult, although the noun vagina is accented on the penult.

Emesis, not *Emé'sis*.

The list of words given in most dictionaries, whose pronunciation differs, according to different authorities, includes nearly fifty medical terms.

It follows that a correct medical pronunciation is not an easy thing to obtain, though a vast improvement might be made on the present practice.

A PRACTITIONER WHO IS NOT BUSY.

WE print below a letter received from a correspondent living in a large city. The author is apparently very much in earnest, and his appeal for advice will doubtless be found interesting to many. He writes:

“Dear Sir: I have a question to propose not very easy to answer. I am a man of two years' practice who has met with a fair measure of success. I have realized each year the income that Dr. Willard Parker, in his article on “Success in the Medical Profession,” names as the limit. I have a comfortable office, an examining room, and another apartment. I have besides my fees about two hundred a year. I am just able to make both ends meet and to have a little pleasure; yet without having any real hardships I am discontented. Now, the great cause of this discontent is idle time. The major portion of the day I have nothing to do. I am not connected with any school, hospital, or dispensary, and don't know how to get at them. I am sick of reading. I must have an object in my pursuits, and it must not be too distant, and I do not think I am alone in this. Now, studying up diseases which one does not see and delving into abstrusities that one can never ventilate is rather tasteless at the end of two years. But what am I to do with my time? Set me some task, tell me what I ought to do, lay out some useful line of study, anything with an end in view which a man with some resources, a fair mind, and an illimitable amount of energy can do. There must be a positive object within reach that is essential to interest in the work. Few of us like work simply for the work's sake. Do not think that I have no interest in my profession. I love it above all other work, but I love it in its practicable rather than in its sci-

entific aspect. There must be something to be accomplished, a test of the work—that is what I desire. Now can you solve the problem? I am but one of many, but am among the worst, as being the most restless. Very respectfully, A Master of Arts and Doctor of Medicine, an idle man with a desire for work."

It is somewhat rare to find a person of illimitable energy who can find nothing to expend it on. Perhaps our correspondent is mistaken about his being so industrious, and that what he thinks is energy is only restlessness and incapacity for systematic application. He has evidently, in reading medicine, been at it in a haphazard way. He should try studying some special line. Does he know German and French? If not he will be sorry later to find himself handicapped in his future struggles, when a busier man. To a person with "illimitable energy" there is no trouble in finding some dispensary-work, even if in the humble capacity of assistant or substitute. There are numerous physicians in the city who would be glad to have the leisure our correspondent deploras for such literary and scientific work as would supplement their practical experience. Our energetic correspondent should find out these and offer his services. Is there no practical work in the societies, clinics, hospitals, or dispensaries which pleases him? If so, let him attend these places and stick on till he finds some one whom he can tender his leisure to, or who will find some work for him.

We fear that our correspondent in reality lacks energy and perseverance.

THE RIGHT TO KILL MONSTROSITIES.

SOME correspondence has appeared in the columns of the *Boston Medical and Surgical Journal*, as to what physicians should do with living monstrosities, which they have just delivered. One correspondent writes that an old physician of high character and standing, had always been in the habit of killing them immediately after they were brought into the world. The writer himself had been content with simply neglecting them, hoping that life would cease if the ordinary precautions were not taken.

The question of what medical conduct should be in these circumstances is one that has often been raised. It appears, on the face of it, more humane both to child and parent to destroy a life which is at once revolting and painful. And it has even been claimed that the physician exhibits a moral weakness and timidity in refraining for personal reasons from "stilling the 'wrongly' spun life."

The same line of argument has been raised also as to the application of euthanasia in cases of painful and fatal disease. An ex-Judge of this city has openly and eloquently argued that it is right and justifiable to end the intolerable agonies of the moribund by medicinal means. In Paris, a fund has even been left for the creation of an institution where euthanasia may be practised.

Despite the strong case which apparently exists for the views thus cited, there is, so far as the medical profession is concerned, no justification in adopting them. Society requires for its own safety that human life in every form should be considered sacred. The physician in his in-

dividual capacity has no right to say that any spark of vitality, however feeble or miserable, shall be extinguished. If, in obeying this principle, he causes some increase of individual suffering, the general results of his conduct will be for the true interests of society. He should not destroy, either by active means or passive non-interference the life of even the most misshapen monsters.

POISONING BY STRYCHNINE—THE TRIAL OF MRS. COATS, OF BULWER, QUEBEC.¹

A RECENT trial for murder in the city of Sherbrooke, Province of Quebec, has caused intense excitement throughout the eastern townships of that Province. The facts, briefly stated, are as follows: On August 26th, ult., a respectable young merchant, of Bulwer, Quebec, suddenly died, with all the symptoms of poisoning by strychnine. Suspicious circumstances pointed to the wife of the deceased as the person who administered the poison. An inquest was held and a post-mortem examination was ordered, the results of which confirmed the suspicions that Coats had died from strychnia given by his wife. The latter was accordingly indicted for murder, and the trial has lately concluded with the acquittal of the accused woman. Such, in brief, are the facts. A more particular statement of certain features of the affair, brought out by the trial, will be of interest to physicians.

Mr. Coats had been in his usual health till within an hour of his death, when, complaining of a little pain from indigestion, his wife prepared for him, in molasses, and gave him what she called a dose of rhubarb powder. Tetanic convulsions in a few minutes supervened, from which Coats soon died, in the presence of two neighbors who were hastily summoned. The limbs were rigid and the jaws were set; the mind remaining clear to the last. The only explanation that the accused could give of this singularly sudden death was that the deceased had a short time previously eaten choke-cherries and drank freely of milk. The autopsy, which was conducted with sufficient care, revealed no choke-cherries and no milk-curd, and nothing apparently which could cause death. The contents of the stomach, however, on being submitted to an expert, were shown to contain a considerable quantity of strychnine, as proved by the bichromate test and by the frog test. Several frogs died in a few minutes from tetanic convulsions by being slightly wounded in their legs and then put into a filtered solution of the contents of the stomach of the deceased.

It was shown by the prosecution that there was a motive for the murder, and that the means—with too little adroitness—had been provided. A guilty correspondence with a paramour had been for some time going on, the prisoner writing to the latter under a fictitious name. It was also proved that the prisoner had been unfaithful to her marriage vows. On August 23d, just three days before the murder (which, with all the evidence before us, we cannot but regard as such), Mrs. Coats had taken from the post-office a letter from a neighboring apothecary, addressed to her care, and containing fifty cents worth of strychnia! This fact was not

¹ Report of trial of Mrs. S. E. Coats, for poisoning her husband by strychnine. Examiner's Office, Sherbrooke, P. Q. J.

denied by the defence, nor was any explanation attempted of the circumstance, or of what use was to be made of it, or of what disposal was finally made of it.

Mrs. Coats (who is said to have been young and good looking) was acquitted, although the judge strongly charged the jury to convict. Three or four circumstances contributed to unsettle and confuse the jury, and these it may be well to state.

It was alleged that the medical men who conducted the autopsy had been negligent in leaving the stomach of the deceased man exposed in an open jar for half an hour in a room to which any one might have had access while they were giving their testimony before the coroner's jury. During that time, said the defence, somebody might have tampered with the stomach, putting in a little strychnine! Foolish as is this plea, it doubtless had some weight with the jury. It is true that physicians conducting an autopsy where such important issues are at stake cannot be too careful to make such strictures and censures impossible. If the stomach is to be examined on the spot let it be done at once and before competent witnesses. If the contents of the stomach are to be removed let it be done immediately before witnesses, and let the jar containing the stomach or its contents be hermetically sealed till the proper time for examination. This is a medico-legal point of great importance, and it is surprising through what a little loophole lawyers for the defence will sometimes contrive to squeeze their client!

The evidence of one of the medical gentlemen summoned by the defence was of a somewhat surprising character. He regarded experiments performed on frogs with a view to determining the physiological action of toxic agents as unreliable. In the particular instance the tetanic convulsions from which the frogs died as a result of the experiments made to determine the nature of the contents of the stomach of the deceased man might have been caused by the incision in the legs of these animals; such wound having been made to facilitate absorption of the poison! Other frogs with similar wounds in their hind legs and placed in plain water did not have convulsions or apparently suffer. As if this specious pretence might not have sufficient weight with an ignorant jury, this same village expert gave as his opinion that septic products of decomposition, generated in the stomach of the dead man during the three days that elapsed between the decease and the examination, caused the convulsions in the frogs, and that Coats died of idiopathic tetanus! It is hardly necessary in a medical journal to comment on such a silly assumption, which was set aside by His Honor the judge as not worthy of serious consideration. There are, however, one or two points in this connection worthy of note. "Truth never can be confirmed enough," says Shakespeare. The analytical chemist should have carried his investigations farther. Having obtained a filtered watery extract of the stomach of the deceased, he should have tested it *by the hypodermic method* on frogs, and on animals higher in the scale; kittens, rabbits, fowls, dogs, etc. Then if he had produced speedy tetanoid convulsions, there would have been no reasonable basis for doubt. If the gentleman who gave such remarkable testimony for the defence had ever performed on animals experiments with the subcu-

taneous injections of septic fluids, he would not have risked his reputation by attributing the results which Dr. Vallie, on the occasion above referred to, obtained with his frogs to septic poisoning.

It is, moreover, always well when performing an autopsy that is likely to be of great medico-legal importance to remove by a catheter some of the urine of the deceased person for chemical examination. If the death had been caused by strychnia, enough would surely have been absorbed to affect the urine in which its presence might have been detected. If the color test be somewhat unreliable, surely as confirming other tests it cannot but have considerable weight; nor has it been shown that any substance except curare produces with bichromate of potash and sulphuric acid precisely the same colors as strychnia. But curare as a medicine or poison is almost unknown in this country.

THE WATERCOURSES IN NEW YORK CITY.

In view of the opinion expressed by many that New York city does not have the conditions (except in a few localities) for engendering malarial diseases, it is interesting to study some of the maps of the city which show the track of old watercourses. It is estimated that the volume of water drainage from the eighteen miles of sluice built above Fifty-ninth Street on the west side exceeds that of the sewage which empties just below it.

In 1871 there were 5,000 acres of undrained land in New York County. In 1873 there were still 2,500 acres of water-saturated land.

Of the watercourses south of Fifty-ninth Street there still remain traces of one, perhaps the largest, which is or was known as Minetta Water. This stream arose from two sources, nearly as high as Twenty-first Street, and drained the back-bone of the island for some distance, finally emptying into the North River.

In the earlier part of the present century, according to a writer in *The Times*, the Minetta, near Eighth Street, was a stream twelve feet wide. There is no reason to believe that its bounds became more circumscribed as it crossed Washington Square on its way to the fresh water pond and the North River. This width represented merely the actual width of the stream, which is said to have been a lovely brook, flowing between low banks. The ground, saturated with its waters, must have extended for some distance on either side, and this marshy territory was greatly increased when the hills were scraped down into the channel, streets graded, and the course of the water dammed. Fed by living springs, Minetta is to-day still an actual stream of water. The diminution in its volume is not due to the cessation of the springs which fed it one hundred years ago and feed it to-day, but to the diversion of at least a portion of the drainage, which formerly found its way into the stream, into the sewerage system of the city.

In 1859, a physician who had practised in New York for many years stated that he could trace the course of the stream by his practice in intermittent fevers.

Later experience has, we believe, shown that malarial fevers were frequent on the course of old streams. As the earth has become saturated with animal matter the types of fevers have changed.

News of the Week.

THE LATE DR. BEVERLEY LIVINGSTON.—At a stated meeting of the New York Pathological Society, held October 24, 1883, the following memorial tribute to the memory of the late Dr. Beverley Livingston was unanimously adopted: The decease of our late colleague, Dr. Beverley Livingston, brings to the Pathological Society an uncommon sorrow. When in the fulness of years one of our number is called from our midst, the knowledge that separation must come at last and the pleasurable recollection of completed labor reconcile us to our loss. But when we are deprived of the counsel of one who gave such promise of useful and invaluable aid, before whom there seemed to be a long and honorable career, and an almost achieved reputation, our sorrow is deep indeed. Dr. Beverley Livingston was distinguished by an earnest zeal, indefatigable industry, by love and devotion to his profession. While he gathered, in the pursuit of practice, some of the fruits which the latter yields, he gave an ample return by aiding, as an active co-worker with us, the advancement of science. Though his career was incomplete the lesson of his life is none the less perfect. To have won the respect and esteem of his colleagues, the admiration of his friends, to have been honored in the full discharge of his duties as a man and physician, is the reward which the memory of our late associate proudly and justly claims. The New York Pathological Society presents this tribute to the worthy family of the deceased, in the hope that in it they may find a better consolation than in words of sympathy.

(Signed)

H. N. HEINEMAN,

F. FERGUSON,

E. L. PARTRIDGE,

Committee.

THE INTERNATIONAL SANITARY CONFERENCE.—According to the Roman papers all the European powers have agreed to the proposition of Italy to send delegates to an international sanitary congress in Rome, in order to draw up an international sanitary code. The conference will meet during the present month of November.

THE SUCCESSOR OF THE LATE PROFESSOR LASÈGUE, M. Jaccoud, has been transferred, at his own request, from the chair of Internal Pathology to that of Clinical Medicine, left vacant by the death of Professor Lasègue.

THE ATTEMPTED MURDER OF DR. ROCHARD, a prominent physician of Paris, has excited much attention. The doctor, while walking along the street, was shot in the chest by a man who turns out to be a remarkable and interesting (except to M. Rochard) case of "Délire des Persécutions."

DR. TOMSA, of Kieu, has been appointed Professor of Physiology at Prague.

SOME IGNORANT CRITICISM.—*The Lancet* ventures to be facetious in an elephantine way over the "American Hay-Fever Association." This it considers an evidence of too great "differentiation of medical function," and suggests the formation of a "Bright's Disease Association," etc., etc. We would inform our insulated and

phlebotomistic contemporary that the association thus scornfully criticised is not a medical or scientific body, but is made up of sufferers from hay fever, who meet annually, in order, we are informed, to compare therapeutics.

THE GERMAN PHARMACOPŒIA.—The German Apothecaries' Society held its annual meeting at Wiesbaden recently, and appointed a commission to revise the *Pharmacopœia Germanica Editio II.*

A DRUGGIST SENTENCED.—A French wholesale druggist, who was accused of fraudulently substituting sulphate of cinchonidine for sulphate of quinine, which he supplied to the hospitals of Paris last autumn, has been sentenced to a year's imprisonment, to pay a fine of fifty francs, and to defray the expense of an advertisement of the judgment in a dozen French journals.

EXTIRPATION OF THE LUNG.—Dr. Domenico Biond has removed one entire lung fifty-seven different times in animals (sheep, dogs, cats, etc.), of which number thirty survived. In five instances, in which only portions of one or both lungs were extirpated, the animals all recovered. The failure, in the thirty cases of death, the experimenter attributed in great part to the neglect of proper antiseptic precautions.—*L'Union Médicale*, September 2, 1883.

THE PRICE OF QUININE.—According to the semi-annual report in *New Remedies*, quinine has within the past six months reached the lowest mark it has had for a long time. The chief cause of the depression was the competition between the European (Continental) and American manufacturers to monopolize the market in the United States, which was thereby overloaded. To realize on stock, sales had to be effected even at a loss and under compulsion, notably at one time the large amount of fifty-six thousand ounces, which were sold at auction in New York, London, and on the Continent at 195 marks per kilo. During June there suddenly appeared signs of a turning, the price advancing within a short time to 220, 240, and 250 marks. The simultaneous turn of the market permits the conclusion that there is an understanding among the manufacturers for the purpose of reducing exports to the United States, to refuse selling to speculators, to enforce higher rates for the article. Increased amounts of the cinchona bark are coming from India and Java.

A CREMATORY FOR THE VICTIMS OF YELLOW FEVER.—A crematory has been ordered built at Jurujaba, Brazil, in which the bodies of all patients dying from yellow fever at the marine hospital of St. Isabel will be cremated. This step is the result of the experiments of Dr. Friere, who has proved the existence of yellow fever germs in earth over the grave of a yellow fever patient who had been buried a year.

A PHYSICIAN TO BE EXPELLED.—At the semi-annual meeting of the New Haven County Medical Association, October 25th, the case of Dr. E. L. R. Thompson, a physician of large practice, who was recently indicted for illegal practice, was brought up. A motion that he be expelled was unanimously carried, subject to the consent of the State Medical Association.

QUARANTINING AGAINST LEPERS.—The quarantine officer of San Francisco is quarantining every vessel arriving in port having a leper on board. The vessel is released only upon the captain's giving a bond undertaking to return such leper.

THE PROPRIETARY RIGHT IN LECTURES.—A case of much interest was decided last week in the Court of Common Pleas of Philadelphia. The case was on a motion to dissolve the injunction recently granted to restrain Dr. Samuel M. Miller from publishing "An Epitome of Medicine, Surgery, and Obstetrics," in three parts, alleged to have been written by Dr. Alfred Stillé, Dr. Hayes Agnew, and Dr. R. A. F. Penrose, of the University of Pennsylvania. The complainants declared that the book was, in substance, a summary of their lectures before the medical classes at the University. Dr. Miller, they asserted, had contributed "nothing save the work of summarization and the errors to be found in the book." They never authorized the publication, and alleged that it deceived the public and tended to their financial and professional injury. Dr. Miller was formerly a student at the University. It was argued on his behalf that the matter, having been delivered at the lectures, became common property. It was urged that the students had never been notified that any right of property had been reserved, but, on the contrary, were directed to take copious notes, and the complainants had, in fact, corrected some of the proofs of their lectures that had been published in periodicals. Counsel for the complainants replied that a man has an absolute right of property in the production of his brain. Dr. Miller, it was held, had no right in law or equity to publish a book purporting to have been written by them, and to enjoy all the profits of the pretence, to the prejudice of the gentlemen whose names were used. The Court concurred in this view, and declined to dissolve the injunction.

The case involved a point somewhat similar to that raised in a suit in this city, a few years ago. A similar decision was made, viz.: that the lecturer had a proprietary right, so far as publishing goes, to his lectures.

WORK IN THE SECTIONS OF THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS.—At the meeting of this Society, of which some account has already been given, considerable sectional work was done.

In the *Section for Pathological Anatomy*, Professor Bollinger reported the results of his experiments in the inoculation of tuberculosis. He found that milk from tuberculous cows, if injected into guinea-pigs, invariably caused tuberculosis. Bollinger declared himself unconditionally in favor of Koch's views of the specific origin of phthisis. Bollinger was warmly opposed by Recklinghausen, who took the occasion, when Friedlander exhibited specimens of the micrococci of pneumonia, to show the dangers of accepting too easily beliefs in the pathogenic powers of micro-organisms. He instanced the numerous forms of bacilli and bacteria which can be found in the dead body after various diseases. He did not think that Bollinger's experiments were conclusive. Professor Weigert, of Leipzig, stated that various inoculated substances will cause a pseudo-tubercle, but that only the tubercular virus itself will cause true tuberculosis.

In the *Section on Surgery*, Professor Küster described

his new method of controlling hemorrhage by the use of antiseptic iodoform tampons. It was especially to be used in wounds of very deep arteries not easily tied, such as the vertebræ. Englisch read a paper upon peri-urethritis tuberculosa, and Maas a paper on the treatment of goitre, giving the technique of his method of operating.

The *Section on Pædiatry* was occupied chiefly with discussions and papers on the subject of tuberculosis among children.

THE SEMI-ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES was held last week at the Fort Hamilton Home. Delegates were present from the New England States, New Jersey, Ohio, and Pennsylvania. The opening address was delivered by Dr. Joseph Parrish, of Burlington, N. J., the president of the association. Papers were read on "The Best Mode of Presenting the Subject of Alcoholic Inebriety to the Public Attention," by Dr. T. L. Wright, of Bellefonte, O.; "The Progress of Psychology," by Dr. Bradner, of Philadelphia, and "Inebriety Increased by Legal Punishment," by Dr. T. D. Crothers, of Hartford, Conn.

YELLOW FEVER IN MEXICO.—Reports from Mexico indicate that yellow fever has prevailed much more extensively in that country than is generally known in the United States. Acting-Assistant-Surgeon Main, in a letter to Surgeon-General Hamilton, dated October 16th, says that "but few Mexican papers reach the frontier, very few people read them, and fewer still reach or are read or understood in the United States." He reports that the disease continues to be quite fatal in the following named towns: Tabasco, Campeche, Progreso, Culiacan, Mazatlan, La Paz, Presidio, Concordia, Coraco, Qualian, Mazanillo, Mazatlan, and towns south and west of the latter places. There were 521 deaths at Mazatlan up to the 8th of October, and 381 deaths out of 3,000 cases in the State of Jalisco in ninety-two days. He says that Matamoras, Tampico, and Luxham are free from the fever, and that these places have modified their quarantine restrictions, requiring only eight days against Vera Cruz, but continue the twenty days' quarantine against Havana. He accounts for the latter cities' escape from yellow fever to be entirely due to their rigid quarantine and careful sanitary regulations. Reports from Havana up to the 20th of October, received by the Marine Hospital Service from Sanitary Inspector Burgess, show a slight decrease of yellow fever at that port, eighteen deaths having occurred during the week. Nine vessels bound for United States ports were inspected, four of which required disinfection. One, the bark *Neuvo Lautaro*, bound for New Orleans, had two cases of yellow fever on board during her stay of forty-five days at Havana, both of which recovered and sailed with their ship. Reports from Vera Cruz, through Sanitary Inspector Mainegra, indicate that the disease is rapidly disappearing from that section. He inspected and fumigated three vessels bound to United States ports during the week ending October 10th, and all sailed in good condition. Sanitary Inspector Chesley, at Benson, Arizona, and Sanitary Inspector Price, at Yuma, Arizona, report no further appearance of yellow fever northward, and they have both been relieved from duty and the quarantine at those places raised.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 5, 1883.

ROBERT F. WEIR, M.D., PRESIDENT, IN THE CHAIR.
DR. A. A. SMITH read the report of a case in which death occurred a week after giving chloroform and apparently as the result of the anæsthetic.

DR. W. T. BULL presented a specimen illustrating
SARCOMA OF THE TERMINAL PHALANX OF THE SECOND TOE.

The patient had suffered from pain in the toe for some time. It was finally amputated by Dr. Bull. The following is the pathological report upon it by Dr. Ferguson :

Amputation of the second toe of the left foot at the phalangio-metatarsal joint ; in a male aged thirty-eight. The toe is surrounded by normal skin and the nail is normal in position and structure. The extremity of the toe is club-shaped, with a circumference of two and one-half inches, while the circumferential measure of the toe at the middle of the second phalanx is only one and three-fourths inch. A section through the toe longitudinally in the median line reveals a tumor occupying the site of the third phalanx, spheroidal in shape, and half an inch in diameter. The joint between the second and third phalangeal bones is normal. There remains at the base of the third phalanx a thin plate of bone covered by normal cartilage. To the dorsal aspect of this plate is attached the extensor tendon in its normal location. On the palmar aspect of the tumor there is a very thin, bony plate to which is attached the tendon of the flexor of the toe. Between the tumor and the nail there is a thin layer of normal tissue about a line in thickness. On the palmar aspect of the toe the skin and subcutaneous tissue are normal, except at the periphery of the tumor, where the subcutaneous tissue is more vascular, the vessels being surrounded by areas of small round cells. Generally the tumor is sharply circumscribed, and by the uniform pressure exerted on the tissues at the periphery of the tumor it seems in places limited by a fibrous capsule. In other places, however, it is not so sharply defined, and areas of considerable size are seen composed of cells not to be differentiated from the tumor structure ; these areas are separated from the tumor by broad bands of fibrous tissue, which exist normally in this location. The tumor is composed of small round cells and a few spindle cells, separated by a very small amount of intercellular substance. There are broad bands of fibrillated tissue, containing spindle cells, radiating from its centre to its periphery. In places there are small areas of fibrin with a few round and spindle cells, possibly the seats of old hemorrhages ; there is no recent hemorrhage. There are fragments of bone throughout the tumor. The vascular channels are abundant, quite large, and everywhere limited by the structure of the tumor, the vessels having no distinct walls of their own. There are no giant cells. Diagnosis, small round-celled sarcoma.

In the discussion THE PRESIDENT said that eighteen months ago he presented at another society two instances of tumors occurring on the terminal phalanx of the toe. One of these was a sarcoma the size of a pea, growing beneath the nail of the second toe and causing great pain. Amputation of the toe was resorted to. The second was an epithelioma which commenced under the nail of the great toe and developed to the size of a quarter of a dollar. Amputation was resorted to. These affections are very rare.

DR. C. S. WARD related a case of

PRURITUS VULVÆ DUE TO ULCER OF THE RECTUM.

About six weeks ago a lady came in from Newport for medical advice. She stated that for a long time she

had suffered from the most intense pruritus of the vulva. This was a source of so much distress at night that she had walked the house for hours. On examining the vulva no evidence of irritation was discovered. She was then anæsthetized and the rectum examined. Just above the sphincter was seen an ulcer about the size of a quarter of a dollar. Nitric acid was thoroughly applied to the spot and she very quickly recovered. The patient had had some pain after defecation, but nothing very noticeable.

DR. JAMES B. HUNTER related a case illustrating the
VALUE OF LEITER'S COILS IN THE TREATMENT OF PERITONITIS.

A young married lady, in perfect health, while bathing in the surf, was thrown with some violence against a post, striking the right arm and side. This was August 1st. The next day she suffered pain in the arm and a little soreness in the right side, but did not keep her bed. When first seen, on the sixth day, she was unable to move in bed without much pain in the right side of the abdomen, and she had extreme tenderness over a distinctly circumscribed space. She said the pain had been increasing every day since the accident. There was not the slightest discoloration or appearance of a bruise on any part of the body except the arm. There was some vomiting, with constipation, and tympanites. The temperature was 103° and the pulse 110. An enema was given to relieve the bowels, and aconite, followed by quinine, the latter drug was given in five-grain doses every two hours, but the temperature continued to rise steadily until it reached 105°, where it remained in spite of quinine, cold-sponging, and ice-bags on the head, for thirty-six hours. The evidences of peritonitis being confined to one side, a Leiter's coil, six inches in diameter, was placed on the side, and firmly bound there by a roller bandage. In four hours after the application of the coil, with a current of ice-water passing through it, the temperature had fallen to 102°, and in eight hours to 100°. The temperature of the water passing through the coil was increased to about 50°, and in twelve hours from its application the patient's temperature had fallen to 99°. The coil was removed, and in three hours the temperature went up to 103°. The coil was replaced, and it again fell to 99°. A second time, after twelve hours, the same experiment was tried, with the same result, the temperature reaching 103½°, and having an evident upward tendency. With these exceptions the coil was in position for two days and nights, after which time its removal was followed by a rise of only a degree, and its use was discontinued, the patient making a good but slow recovery. Ice-bags to the head were used at the same time with the coil. The water passing through the tube was sometimes ice-cold and sometimes only about 50°. The patient found the coil agreeable, and disliked to have it removed. The sensation of cold was decidedly pleasant the greater part of the time. When it was not so, the lump of ice was taken out of the bucket that supplied the coil, and the effect was no longer complained of. A soft handkerchief twice folded was placed between the lead coil and the skin. There was good reason to believe that an attack of general peritonitis was prevented in this case by the method adopted for reducing the temperature. Its use earlier would probably have saved the patient several days of suffering.

DR. C. S. WARD said that he was a great believer in this method of reducing the temperature. It was easily applied, was grateful to the patient, and the symptoms were mitigated, if not cut short. A great deal depended upon using it early.

DR. SAMUEL SEXTON reported some cases showing that there was a

RHEUMATIC ELEMENT IN CERTAIN AURAL TROUBLES.

He had noticed for several years a class of aural cases where the inflammation had not been very great, where

there was some redness of the drumhead, some deafness, and a feeling of stuffiness in the ear, but no pain. These symptoms had always been associated with a very severe "cold" in the head, which seemed to account for them. They had been usually in persons from thirty-five to forty-five years of age. Recently he had had a patient with a history of this kind, also with a history of rheumatism. He remembered that a London physician, Dr. Harvey, had said that rheumatic troubles sometimes affected the ear. By putting his patient under a treatment suitable to his rheumatic condition in addition to the management of the local conditions, which might vary somewhat in each case, there was very rapid improvement.

Dr. Sexton thought that a morbid condition of the ear might very often be noticed in rheumatic patients, but his recollection was that the cases reported by the London physician were chronic manifestations, whereas his own were subacute.

The PRESIDENT said that he had himself observed half a dozen cases of this kind.

Dr. W. T. Lusk related the history of a case illustrating the

VALUE OF THE FORCEPS IN BREECH PRESENTATION.

The patient was seen by Dr. Lusk in consultation with Dr. F. A. Castle. She had been married seven years and was thirty-two years of age. The six years of sterility had been due to antelexion and cervical stenosis. Dr. Castle had treated these conditions by dilatation, and pregnancy had followed. From the beginning the labor-pains were feeble, and the dilatation was dilatory. The child presented by the breech. Both extremities were reflected upward. The failure of all uterine action rendered artificial extraction necessary. Hooking the index fingers into the anterior and posterior thighs, was tried by both Dr. Castle and himself but without practical results. He then suggested forceps. An ordinary pair of the Simpson pattern were applied, with one blade over the sacrum, and with the other over the posterior surface of the opposing thigh. At the time of the application, the dilatation of the cervix was very nearly, but not quite complete, and the breech, though in the cavity, was at some distance from the perineum. The forceps held firmly. Little by little the breech was brought to the perineum and made to dilate the vulva. In the course of fifteen minutes from the beginning of the operation the woman was delivered of an eight-pound living child. An insignificant abrasion of the abdomen, which healed quickly, was the sole lesion inflicted by the forceps. Subsequently Dr. Castle found in the uterine walls, partly accounting for the tardiness of the labor, a number of small imbedded fibroids.

The PRESIDENT related the history of a case illustrating the

DANGER ATTACHED TO THE USE OF THE RED SOFT CATHETER.

During the present week two cases of empyema had been changed from the medical to the surgical side of the New York Hospital, for the purpose of removing fluid from the pleural cavity.

In the first case, a trocar and canula arranged like a tracheotomy tube were driven through an intercostal space in the axillary line. After the trocar had been withdrawn, the canula was attached to a piece of rubber tubing, which was carried into a closed bag partially filled with antiseptic sponges.

It was proposed that the second case should be treated in a somewhat similar manner. After the case was brought in, however, it was found that the second trocar had a sharp end and he was unwilling to leave it in situ. He was therefore obliged to remove the tube after having passed through it a small, red rubber catheter, previously unused, which was passed into the chest and secured by a suture passed through it and the adjacent skin, so that it could not slip in or out. The external

end was confined in a sponge-bag filled with antiseptic fluid. Next morning it was reported that the outer end of the catheter had broken off and that the inner end had slipped into the pleural cavity. He made an incision, opened the chest, and extracted it from alongside the spine.

The catheter that he had used was smaller than he would have otherwise employed, though while in it successfully drained off fifty-eight ounces of pus. The main point of interest was that it was one of the soft red rubber catheters, and these instruments are made red and particularly smooth by using red sulphuret of antimony. It was this which caused the white film that forms on the outside of them, and makes them after a short time hard and brittle by over-vulcanizing them. For this cause the not very rare accident occurs of their breaking in the urethra—though where the softening and swelling of the catheter prior to a break occurs, it is more likely due to an alkaline urine. Dr. Weir thought that the imported catheters were even worse than the domestic in this respect. The patient above referred to was not harmed but perhaps benefited by this free incision forced upon him.

Dr. Bull said that he did not think that catheters need be used at all in these cases, and it was better to discard them altogether. They are not made of durable materials, their walls are soft, and they are liable to be pushed in too far, or in the wrong direction. We have all that is necessary in the drainage-tube.

Dr. Bull related the history of a case in which an aspirator needle was broken off and about three inches of it left in the pleural cavity. Nothing was done and the patient got well.

Dr. G. F. Shradley referred to a similar instance with equally good results from the non-interference.

The Society then adjourned.

Correspondence.

OUR PARIS LETTER.

MIGUEL ON THE ASEPTIC ACTION OF CERTAIN CHEMICAL SUBSTANCES ON THE INFERIOR ORGANISMS.

PARIS, October 12, 1883.

In a work published last year by Dr. S. Miguel entitled "*Les Organismes vivants de l'Atmosphère.*" the author gives an account of the aseptic action of certain chemical substances on the inferior organisms termed bacteria. Dr. Miguel has since directed his attention to the study of other disinfectants, among which are included several powerful microbicides, and he has recently published the following table of the substances he experimented with, giving the weight in grammes, or fractions of grammes, of each substance capable of rendering imputrescible one litre of "bouillon," or beef-tea: Biniodide of mercury, 0.025; iodide of silver, 0.03; oxygenated water, 0.05; bichloride of mercury, 0.07; nitrate of silver, 0.08; osmic acid, 0.15; chromic acid, 0.20; iodine, 0.25; chlorine, 0.25; hydrocyanic acid, 0.40; bromine, 0.60; chloroform, 0.80; sulphate of copper, 0.90; salicylic acid, 1.00; benzoic acid, 1.10; chromate of potassium, 1.30; picric acid, 1.30; ammoniacal gas, 1.40; thymic acid, 2.00; chlorides of lead, cobalt, and nickel, 2.10; mineral acids, 2.00 to 3.00; binitrobenzine, 2.60; essence of bitter almonds, 3.00; carbolic acid, 3.20; permanganate of potassium, 3.50; aniline, 4.00; divers alums, 4.50; tannin, 4.80; sulphate of sodium, 5.00; arsenious acid, 6.00; boric acid, 7.50; hydrate of chloral, 9.50; salicylate of soda, 10.00; sulphate of the protoxide of iron, 11.00; amyl alcohol, 14.00; sulphuric ether, 22.00; butylic alcohol, 35.00; propylic alcohol, 60.00; borate of soda (borax), 70.00; ethylic alcohol, 95.00; sulphocyanide of potassium,

120.00; iodide of potassium, 140.00; prussiate of potash, 185.00; glycerine (official), 225.00; urea (natural), 260.00; hyposulphite of soda, 275.00; chlorate of soda, 400.00.

From the above list it may be seen that the biniodide of mercury takes the lead, and is capable of arresting the putrefaction of beef-tea at a strength of $\frac{1}{400,000}$; that is to say, one thousand times less than that of crystallized carbolic acid. The latter, which is reported to possess such powerful antiseptic properties, occupies a rather low position in the list, thymic acid being a great deal stronger. This being the case thymic acid might with advantage supplant the use of carbolic acid, which, besides its disagreeable odor, is so eminently toxic. A great number of the substances named have had aseptic properties attributed to them to a much higher degree than they were entitled to, but the above list gives them their proper place. Such, for instance, are chloral hydrate, salicylate of soda, the alcohols, borax, and the hyposulphite of soda. With regard to the last named substance, Dr. Miguel remarks that when mixed with some of the compound metallic disinfectants it has the curious faculty of considerably attenuating their microbicide properties. The antiputrescent properties of some of the essential oils have also been greatly exaggerated, the most popular of which are turpentine, lavender, aniseed, lemon, wintergreen, which, when added to animal fluids, do not stop putrefaction. Camphor and the mineral oils are in the same case, and Dr. Miguel explains this deficiency of the aseptic power of the substances of this class to their little solubility in water, the usual vehicle of putrescible matters.

The fatty alcohols and the hydrocarburets of the aromatic series are also, for the same reason, but poor disinfectants, although theoretically one would be led to suppose that they possessed highly antiputrid qualities. Certain perfumes, extracts of flowers, eau de cologne, etc., have little effect upon the microbes unless the liquids with which they are mixed contain a minimum of one-tenth of absolute alcohol. Aromatic and other vinegars possess, on the contrary, aseptic properties more precious in the sense that they prevent the development of bacteria in the media where pure acetic acid is not diluted to more than one-three-hundredth.

The proportions given in the above table represent the minimum quantities, which by experiment have been proved to be sufficient to prevent or suspend putrefaction, but for greater security Dr. Miguel recommends the dose to be doubled. From its high position as an antiseptic and in an economical point of view, corrosive sublimate certainly deserves more extensive application than it at present obtains, as a solution of $\frac{1}{100,000}$ is sufficient for ordinary prophylactic purposes, such as the washing of the hands before and after dissections, operations, and in most cases where such substances as borax or carbolic acid would be employed.

The substances referred to up till now act by paralyzing the evolution of the microbic germs and by destroying the adult bacteria, but they have no effect on the germs of the bacteria. Certain substances, however, have, by their chemical action, the power of completely destroying the germs of the bacteria, and to this class Dr. Miguel has applied the term "sporicides." The principal among these are the preparations of mercury and the salts of silver which in a solution of $\frac{1}{100,000}$ destroy in a few days the germs of microbes as surely as a dry temperature of 150° C. prolonged during several hours. Iodine, chlorine, and bromine, and the mineral acids come next. Sulphate of copper, so much vaunted as a microbicide, possesses this property only to a very limited extent, that is, it prevents the development of the microbes, but has no effect whatever on the germs themselves. But the microbicide "par excellence" is heat, which, raised to 110° C. for liquids, and to above 150° C. for solids, has been found sufficient effectually to destroy the germs of the microbes.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: Northern Dakota might be aptly called a cereal paradise. Yet partial nature has smiled upon its rolling prairies in a rather one-sided way. For miles and miles, stretching out endlessly to the far horizon the eye rests upon nothing but fertile plains. But there is a dead-level sameness about the scene that presently palls upon the sight. It is true, at first the astonished gaze receives a pleasant shock of newness in the boundless expanse of undulating golden wheat-fields. But it is all unrelieved by hill-top, tree, or river, so that the very vastness of this seeming ocean soon wearies through perpetual monotony. But while there is a lack of changeful romance in the scene, and picturesqueness too, is only conspicuous by absence, the thought rises imperative, that bounteous nature has here bestowed a gift of soil and climate that even now is a great blessing to thousands, and may, if judiciously managed, prove the same to untold thousands more. The unsurpassed fertility of the soil in this region appears to be due to a large deposit of vegetable mould over its surface. This invaluable accumulation varies in depth from two to six feet. A recognized authority in agricultural affairs has written the following, which seems no exaggeration of facts: "In view of the formation, extent, richness, and importance of the vegetable mould of our Northwestern prairies, it is established to a certainty that the United States is in possession of one of the greatest treasures in existence, which is not surpassed in value and importance by all the precious metals in the bowels of the earth."

An easily understood experience, but one not free from dangerous tendencies, is the brilliant success that has already attended the monopolist efforts of the so-called bonanza farms. The grand scale upon which wheat-growing is there conducted by a few enterprising men, threatens to speedily place the independent small farmer without the pale of possible competition. Before the surpassing agricultural interest of Dakota all other topics sink into comparative insignificance. Thus purely medical matters wear no specific features that might serve to distinguish the professional life of this vast territory from that of the new Northwest generally.

Fargo bustling with life and activity, where the electric light and horse-car have already entered and look as though they meant to stay; Jamestown, bright, cheerful, growing and spreading almost as you look upon it; Bismarck, the newly chosen capital of the territory, pleasantly and advantageously situated on the eastern bank of the Missouri, more substantial and sedate in appearance, as becomes its recently acquired dignity and importance; then Mandan, just beyond the great Missouri River bridge—Mandan which two years ago was but an Indian settlement, and is proud to-day of a white population numbering two thousand aspiring, ambitious, pushing heads—all these places, and many smaller ones, too numerous for mention, offer the competent practitioner of some experience a rather liberal reward for steady professional work. He must be quite familiar, however, with the various affections that a sturdy race of hard-working men are liable to, in spite of unusually healthful surroundings. Surgical skill is likewise requisite in some degree. The obstetrical forceps, guided by a steady hand, must find the right path and lock quickly.

At any rate it must not be too boldly employed as an effective perineal scythe. Moreover, the new doctor must be able to distinguish the sex of a catheter almost at the first glance. He must know how to examine a delicate, shrinking girl's tongue, without spoiling her prospects of language. He must not say an infant is "only teething," when it is only just dying of meningitis. Nor must he gravely speak of an affection of the lungs after a prolonged and painstaking auscultation of the liver. In a word, in addition to certain indispensable prerequisites, such as the ability to write at least three prescriptions

for one cough, he must be master of various minor accomplishments that your recent biannual graduate notoriously does not possess.

But quite seriously, as regards many of the filth-engendered pestilences of the metropolis, a sound ignorance of such maladies would seem to be, if not an aid, at least no hindrance to practice. From all of which it is apparent that while a man need not necessarily be a runner or racer in his profession, he must nevertheless be enough of a pedestrian to enable him to walk securely. But, by all means, let him first learn to stand on his own feet; for those intellectual appendages are not to be borrowed for love or money in the frontier towns of the new Northwest.

Before reaching Montana, an excellent view was had of a very remarkable region known as the Bad Lands. The peculiarity and grotesqueness of the many colored mounds and fanciful buttes that are there tumbled about haphazard for a distance of many miles, baffle all description. It is a scene that, following so closely upon the picture of abundance above alluded to, impresses one with a somewhat oppressive sense of waste and sterility. Nevertheless, the soil between the weird formations of the Bad Lands is said to possess excellent fertilizing purposes. Of course, the medical mind detects in these corrugated projections and bulging irregular formations, only multiple neoplasms on suffering nature's fair integument. One can easily fancy, scampering through these strange hills and valleys, herds of buffalo with the screaming red man in wild pursuit. However, all such fancies remain but pictures of the bewildered mind. For the buffalo has been recklessly slaughtered or driven away, and the Indian following, is compelled to live in reservations. So that at present the traveller feels constrained to lament the absence of both. They seem positively to belong there to complete the picture.

Into the formation of the territory of Montana there enters mountain, lake, and prairie, thus interesting the eye by a changeful scenery that has many elements of beauty. The average elevation very nearly approaches four thousand feet, and the climate possesses health-giving qualities. Severe winters are the rule, but the people apparently suffer less, and certainly complain much less of the cold, than is the rule with us.

If Dakota was styled a cereal paradise, Montana may justly claim the title of the Paradise of Miners. Glendive, Miles City, Billings, Livingston, Bozeman, Helena, and Missoula all make the impression of thriving places that mean to become still more prosperous in the near future. In most of these towns the cowboy is a feature, an institution, or an ever-present entity that may not be ignored. The first specimen of this numerous class elicits awe and admiration from the tenderfoot. Yes, the first cowboy is a decidedly imposing spectacle. After a while, however, he seems less grand, less picturesque, more human, and more dirty.

His physique is certainly good; powerful muscles, with plenty of solid bone to support them; a rather picturesque attire; a well-browned complexion; a reliable knife and pistol, under control of an unreliable temper, and often beyond it; a hardy horse or pony; finally, an antecedent history of whiskey, cards, and illiteracy. Such is the cowboy as he appears to the prejudices, perhaps, of an eastern observer. At any rate he scarcely improves upon more intimate acquaintance. He habitually chews vile tobacco, smells of viler liquor, and uses the vilest language.

Altogether he would seem to possess those delightful qualities that grace the successful metropolitan alderman, or some similarly accomplished politician. And now for the Indian. West of St. Paul, representatives of many different tribes begin to appear with rather startling frequency. The unpractised eye detects few differences amid a general similarity of shabby pride, deceitful cunning, stolid indifference except to bargains, and unwashed redness. Yet the knowing scout or grasping agent will promptly inform you that there exist among the various tribes and nations, differences in language, or at least

dialect, manners, habits, and beliefs, as well marked and deep seated as any that characterize the civilized peoples of the globe.

Sitting Bull, of infamous fame, when interviewed by your correspondent, was suffering from cephalalgia and an acute exacerbation of a chronic naso-pharyngeal catarrh. The choice Sioux in which this interesting information was conveyed to the admiring writer was interrupted by hideous grimaces, snorts, and sniffings quite touching to contemplate. Once a dangerous brigand, in whose restless, wandering eye fierce hatred of the white man still lurks, as if in ambush, his present occupation seems to be that of an innocent, peace-loving, autograph-writing society-lion. A strangely suggestive spectacle, nevertheless, to see the scion of European nobility hand-shaking with the chieftain of a dying race of savages. In that momentary grasp both may be dimly conscious of the levelling tendencies of our modern civilization, which pauses not in its destructive march onward and upward, till a plateau is reached where no prerogative exists, and only those fit to survive may rule themselves, their own sovereigns.

At Graycliff, a spot about midway between Billings and Livingston, the Crow Indians had turned out in great force to the number of about two thousand. Here a weird scene of wild excitement was enacted. It was a war-dance of the braves. Impossible to do justice to the fantastic costumes, the exultant whoops and shouts, the spasmodic gesticulations of gaudily painted nakedness that constituted the acute delirium of this extraordinary recurrent dance. It may sound incredible, but it is yet quite true, that the picturesque brokers at our stock exchanges are not much more noisy, and apparently demented, in their hyperbolic frenzy of speculative transaction than these poor uncivilized, down-trodden savages in the gyrations of a war-dance.

Ample opportunity was here afforded your correspondent to note some strictly professional matters. To begin with, the average Crow Indian is taller and more slim than the pale-face. Robust types of perfect physical manhood are rare. Womanhood is represented by spare squaws and sparer maidens. Not a single example of comfortably helpless obesity was discoverable. In fact, your mean Indian apparently glides through life without any adipose tissue at all. Consequently he never dies of a fatty heart.

The Indian bones are thin, not clumsy; the muscles have a wiry look and feel. They impart a sense of great power of resistance to fatigue. The absolute force of the Indian buck seems comparatively small, but the possibility of continuous steady effort is implied in his make-up. He could scarcely perform very trying labor; and yet where moderate strength is required he would not easily give out, outlasting probably the Caucasian and Chinaman.

A rather large proportion of Indians are pock-marked. Indeed, the notorious ravages of small-pox among these unvaccinated people constitutes an unanswerable argument in favor of compulsory vaccination. Syphilis appears to be no rarity among them. The writer saw numerous instances where this scourge had left indelible imprints on the bodies of its victims. Scrofula is apparently of equal frequency. Suppurating cervical glands, blear-eyes, and other characteristic signs are seen on many a fretful papoose and moping adolescent. Altogether, look at these Indians from what point of view you will, the conviction forces itself upon you that they are a degenerate and degenerating race which must needs suffer extermination at the hands of inexorably progressive civilization. Whatever else manifest destiny may signify, for the Indian it means the doom of inevitable extinction. Soon they will live nowhere on earth save in the traditions of the poet, or the colder remembrance of the historian. And let us own that fate is no more cruel to them than to inferiority generally, in a world where superiority alone escapes dripping through the narrowing sieve of competitive life. This letter has already exceeded the limit intended for it. Your corre-

spondent is, therefore, constrained to reserve for a final one a few remarks about Washington and Oregon, and the Yellowstone National Park.

Very respectfully yours,

EDMUND C. WENDT,

126 WEST THIRTY-FOURTH STREET, NEW YORK, October 29, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 20 to October 27, 1883.

MOORE, JOHN, Lieutenant-Colonel and Assistant Medical Purveyor. To be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, Cal., and assume charge of the medical purveying depot in that city. S. O. 243, par. 10, A. G. O., October 24, 1883.

HORTON, S. M., Major and Surgeon. Leave of absence for one month, with permission to apply for an extension of three months. S. O. 216, par. 6, Department of the Missouri, October 20, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Granted leave of absence for one month. S. O. 201, par. 6, Department of the East, October 24, 1883.

BARNETT, RICHARDS, Captain and Assistant-Surgeon. Assigned to duty at Columbus Barracks, Columbus, O. S. O. 240, par. 1, A. G. O., October 20, 1883.

MERRILL, J. C., Captain and Assistant-Surgeon. Granted leave of absence for one month. S. O. 201, par. 7, Department of the East, October 24, 1883.

MAUS, LOUIS M., Captain and Assistant-Surgeon. Assigned to duty at Fort A. Lincoln, D. T. S. O. 180, par. 4, Department of Dakota, October 15, 1883.

Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, from July 1, 1883, to September 30, 1883.

BAILHACHE, P. H., Surgeon. Detailed as member of board to examine candidates for promotion, August 23, 1883. Detailed as Surgeon-in-charge, Cape Charles Quarantine Station, September 5, 1883.

MILLER, T. W., Surgeon. Granted leave of absence for twenty-five days, August 31, 1883.

WYMAN, WALTER, Surgeon. Detailed as member of board to examine candidates for promotion, Aug. 23, 1883.

LONG, W. H., Surgeon. Granted leave of absence for twenty days, September 25, 1883.

SMITH, HENRY, Surgeon. Directed to take charge of quarantine service at the Capes, July 29, 1883.

STONER, G. W., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 24, 1883. To inspect the relief stations along the coast of Maine, September 29, 1883.

GOLDSBOROUGH, C. B., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 29, 1883.

BANKS, C. E., Assistant Surgeon. Relieved from duty at Portland, Or., and to report to the Surgeon-General at Washington, July 10, 1883.

CARMICHAEL, D. A., Assistant Surgeon. Granted leave of absence for ten days, August 31, 1883.

PECKHAM, C. T., Assistant Surgeon. To proceed to Portland, Me., for temporary duty, August 25, 1883.

DEVAN, S. C., Assistant Surgeon. To proceed to Portland, Or., and assume charge of the service, September 11, 1883.

KALLOCH, P. C., Assistant Surgeon. To proceed to Philadelphia, Pa., for temporary duty, July 25, 1883. To rejoin his station (New York), July 31, 1883.

YEMANS, H. W., Assistant Surgeon. Relieved from duty at Sitka, Alaska, and to proceed to Portland, Or., for temporary duty, July 10, 1883. To proceed to San Francisco, California, reporting for duty to Surgeon Vansant, September 11, 1883.

GLENNAN, A. H., Assistant Surgeon. To remain at Norfolk, Va., until further orders, July 29, 1883.

WASDIN, EUGENE, Assistant Surgeon. To proceed to New Orleans, La., for temporary duty, August 2, 1883. To proceed to Mobile, Ala., for temporary duty, August 27, 1883. To rejoin his station (New Orleans) as soon as practicable, September 25, 1883.

GUITÉRAS, JOHN, Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury, from September 1, 1883; August 31, 1883.

WHEELER, W. A., Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury, from September 1, 1883; August 31, 1883.

O'CONNOR, F. J., Assistant Surgeon. Resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883; August 2, 1883.

WASDIN, EUGENE, M.D., of South Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, August 2, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 27, 1883.

VAN REYPEN, W. K., Surgeon. Detached from the Naval Hospital, New York, and ordered to the U. S. Ship Powhatan.

WELLS, H. M., Surgeon. Detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

GORGAS, A. C., Medical Inspector. Orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass., on December 10th, instead of November 10th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 30, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
October 23, 1883.....	0	59	45	1	13	38	0	0
October 30, 1883.....	1	61	55	6	29	43	0	0
<i>Deaths.</i>								
October 23, 1883.....	0	20	12	1	2	20	0	0
October 30, 1883.....	0	22	9	5	7	28	0	0

THE VERMONT STATE MEDICAL SOCIETY held its annual session at Montpelier, October 11th and 12th, about fifty physicians being present. Papers were read by Dr. O. W. Sherwin, on "Jaundice;" by Dr. L. M. Bingham, "Dilatation of the Oesophagus;" Dr. E. R. Campbell, on "Hernia;" Dr. S. J. Allen, on "A New Method of Localizing Bullets;" Dr. S. T. Brooks, on "Duties and Rights of Experts;" Dr. O. W. Sherwin, on "Physicians' Testimonials;" Dr. John B. Wheeler, on "Venesection." The following officers were elected for the ensuing year: *President*—S. S. Clark, St. Albans; *Vice-President*—C. M. Rugg, Hartland; *Secretary*—J. S. Richmond, Woodstock; *Treasurer*—Sumner Putnam, Montpelier; *Auditor*—C. M. Chandler, Montpelier; *Delegates appointed to attend American Association*—Drs. C. M. Chandler, Montpelier; C. L. Allen, Rutland; L. M. Bingham, Burlington; E. F. Upham, Randolph.

THE EPIDEMICS AT THE NEW YORK INFANT ASYLUM AND THE REPORT OF THE MEDICAL BOARD.

IN view of the frequent sensational newspaper reports of the recent epidemics at the Mount Vernon branch of the New York Infant Asylum, and on account of certain partial statements in the medical press, the following report is made public :

To the Board of Managers of the New York Infant Asylum :

Pursuant to the request of the Medical Board, we, the visiting physicians of the Mount Vernon Branch, respectfully submit the following report of the history and management of the epidemics of measles, whooping-cough, and diphtheria recently prevailing there :

Whooping-cough existed during July and August. Up to this time there have been 83 cases of that disease, and 17 deaths from it. Every one of these 17, however, also had measles. Measles appeared early in August, and the following is the tabular statement of our experience with that disease :

Children in the institution August 1st	224
Received subsequently	12
	236
Number of individuals who had measles	203
Number of children who escaped	33
The recurrences of the rash, with all the accompanying symptoms of the disease, was a marked feature.	
124 had measles twice	248 cases.
34 had measles thrice	102 "
1 had measles five times	5 "
44 had measles once	44 "
3 (adults) had measles once	3 "
Total measles	402 "
Whooping-cough	83 "
Diphtheria	10 "
Entero-colitis	70 "
Total in asylum	565 "

Deaths.

Measles alone	none.
Diphtheria, complicated and convalescent from measles	6
Measles, complicated with whooping-cough, pneumonia, entero-colitis, etc.	48
Total	54

Since August 1st there have also been 18 deaths in children, showing no symptoms of either measles, whooping-cough, or diphtheria, as follows: Pyæmia, 1; dysentery, 4; phthisis, 2; marasmus, 1; bronchitis and inanition, 1; capillary bronchitis, with catarrhal enteritis, 1; acute meningitis, 2; cholera infantum, 6

Total	72
Per cent. of inmates (children)	30.51
Per cent. of cases of all diseases	12.75
Per cent. of complicated measles cases	11.93

The average mortality, according to the best authorities is, of

Measles	12 per cent.
Diphtheria	31 "
Diphtheria, complicated with whooping-cough	95 "

Rilliet and Barthez report an epidemic of measles occurring in an hospital where the mortality was over sixty-seven per cent.

The complications causing death were as follows: Broncho-pneumonia, croupous pneumonia, capillary bronchitis, bronchitis, acute meningitis, whooping-cough, diphtheria, entero-colitis.

In view of the severity of the diseases with which the Home has been afflicted, and on account of the harsh and unscientific criticism to which the general management has been subjected, a somewhat detailed statement may not be out of place.

While there appear to be several sources from which the diseases were introduced to the asylum, there is no certainty respecting any of them. It is sufficient for us to remember that it is a common experience in similar institutions, and that when one of these contagious affections prevails, the others are pretty sure soon to appear. It is a recognized fact among authorities, with respect to whooping-cough, measles, and diphtheria, that, given an epidemic of one of them, the others will ensue and complicate the results. The rule is for whooping-cough to appear first, this to be followed by measles, and finally, toward the decline of the first two, diphtheria comes in a relatively small proportion of cases. This sequence is exactly what we have experienced at Mount Vernon.

The Home at Mount Vernon is attractively situated upon an elevated site on the White Plains turnpike. It consists of a large main building and five outlying cottages, besides an old residence. The main building is three stories high, and is used for the quarters of the resident officers (matrons and physicians), drug store, parlors, etc. It contains also four wards, three large, about 75x20 feet, and one smaller. The cottages, with one exception, are two stories high; one is three. There is also a "Sanitarium," or play-room; a one-story cottage inclosed with glass. In every instance except one there is only one room on a floor, constituting a ward, and accommodating from ten to thirty children.

The regularly appointed visiting physicians were Drs. Ripley and Conant. The former found it inconvenient to officiate, and resigned. The latter made several visits to the asylum during this epidemic, when he was called out of town to attend a sick relative; he subsequently resigned. At the request of the President of the Board of Managers, Dr. E. A. Goodridge, of Flushing, one of the managers, kindly consented to act *ad interim*. In the meantime, Dr. Caroline Marr, the resident physician, had had frequent and timely aid and counsel, we learn, from Drs. Joel Foster, Blakeman, and Burrall, members of the Executive Committee of the Board of Managers. Dr. F. M. Warner, formerly resident physician at the Nursery and Child's Hospital, was appointed attending physician about September 25th, and since October 3d has been making daily visits.

At the request of the Medical Board, Dr. Fowler, who is attached only to the Sixty-first Street branch, co-operated with Dr. Warner, and has visited the asylum with him almost every day since October 5th.

On October 10th Dr. Edward Bradley, having been appointed visiting physician to fill the remaining vacancy, began his visits, and up to the present time the asylum has been regularly and faithfully attended by these three, working in perfect accord.

The conditions to overcome which we met were those growing out of the most severe epidemic of measles, whooping-cough, and diphtheria, and, above all, the practical difficulties in the way of successful isolation. That is to say, there were twelve classes of children to be kept separate: (1) Measles; (2) measles with whooping-cough; (3) whooping-cough; (4) convalescent measles; (5) doubtful whooping-cough; (6) doubtful measles; (7) those who had been exposed to measles; (8) those who had been exposed to whooping-cough; (9) diphtheria; (10) doubtful diphtheria; (11) whooping-cough and diphtheria; (12) healthy children.

Now, although we had about thirteen wards, we could in only a few instances utilize both wards of a cottage,

because occupancy of either floor would infect the other, having at one time over one hundred cases of measles on hand. Sad experience from the beginning taught us this. Then, again, one cottage was generally empty undergoing thorough disinfection. In the emergency, therefore, we erected three tents, capable of accommodating four patients each. These tents had tight board floors raised four inches from the ground, and were warmed by stoves. A thermometer was hung in each, and the temperature easily maintained at about 68° F. Into two of these tents we put our diphtheria cases. Into another the measles which cropped out among the cases afflicted with other diseases. The third tent was used as a quarantine for the physician and nurse attendant upon the diphtheria. No outside communication was allowed except that which might arise from a specially detailed attendant who delivered the meals and medicines. The sight of the tents excited the indignation of the local Board of Health, who came one night and ordered our patients removed to a cottage occupied by the farmer's family. This procedure we reversed two days afterward. Hence a conflict of authority and unfriendly reports.

At present there are six cases of acute disease in the asylum: three diphtheria, two capillary bronchitis, one measles. *No case of scarlet fever has occurred in the institution.*

Dr. A. N. Bell, the regularly appointed sanitarian, has been in constance attendance since September 29th, and has perseveringly superintended in detail all matters pertaining to isolation, disinfection, ventilation, heating, water supply, drainage, etc.

We have had four trained nurses constantly on duty, besides those regularly employed.

The house physician, Dr. Caroline G. Marr, and her assistant, Dr. Otis, merit high praise for their untiring zeal and perseverance under circumstances the most trying. So far as we have been able to judge, Dr. Marr has shown herself competent to fill her position, for which she was examined and recommended by Dr. J. Lewis Smith.

Those familiar with the statistics of similar epidemics will see that our mortality has been under the average.

In our opinion, the total mortality is not excessive when we consider the following points: The epidemic was in an asylum; measles of a severe type supervened in children already debilitated and still crippled by the lung complications of whooping-cough, the remarkably frequent repetition of the measles, and, finally, the advent of malignant diphtheria.

We may be permitted to add the regret that our work, arduous though it has been, does not seem to meet the approval of the local Health Board or the coroner, all of whom persist in attempts to question our diagnosis, treatment, and general management.

Very respectfully,	
GEO. B. FOWLER, M.D.,	} <i>Attending</i> <i>Physicians.</i>
A. N. BELL, M.D.,	
E. BRADLEY, M.D.,	
F. M. WARNER, M.D.	

OCTOBER 25, 1883.

We, the undersigned, members of the Medical Board of the New York Infant Asylum, approve of the above report. Oren D. Pomeroy, M.D., Henry G. Piffard, M.D., J. Clarke Thomas, M.D., C. L. Dana, M.D., William J. Morton, M.D., F. H. Bosworth, M.D., J. Lewis Smith, M.D., W. R. Birdsall, M.D., H. Marion Sims, M.D., W. F. Mittendorf, M.D.

DANGER FROM FLIES.—Dr. Grassi is said (*British Medical Journal*) to have made an important, and by no means pleasant, discovery in regard to flies. It was always recognized that these insects might carry the germs of infection on their wings or feet, but it was not known that they are capable of taking in at the mouth such objects as the ova of various worms, and of discharging them again unchanged in their feces. This point has

now been established, and several striking experiments illustrate it. Dr. Grassi exposed in his laboratory a plate containing a great number of the eggs of a human parasite, the *trichocephalus dispar*. Some sheets of white paper were placed in the kitchen, which stands about ten metres from the laboratory. After some hours, the usual little spots produced by the feces of flies were found on the paper. These spots, when examined by the microscope, were found to contain some of the eggs of the *trichocephalus*. Some of the flies themselves were then caught, and their intestines presented large numbers of the ova. Similar experiments with the ova of the *oxyuris vermicularis* and of the *tenia solium* afforded corresponding results. Shortly after the flies had some mouldy cream, the *oidium lactis* was found in their feces. Dr. Grassi mentions an innocuous and yet conclusive experiment that every one can try. Sprinkle a little lycopodium on sweetened water, and afterward examine the feces and intestines of the flies; numerous spores will be found. As flies are by no means particular in choosing either a place to feed or a place to defecate, often selecting meat or food for the purpose, a somewhat alarming vision of possible consequences is raised. Dr. Grassi invites the attention of naturalists to the subject, and hopes that some effectual means of destroying flies may be discovered.

TANNATE OF SODIUM IN CHRONIC NEPHRITIS.—Tannate of sodium has been recommended by Lewin instead of tannin in albuminuria, in order to lessen the excretion of albumen. It has been tried by Ribbert on animals. Ribbert ligatured the renal artery in rabbits for an hour and a half and produced albuminuria. He then injected a one-half per cent. solution of tannin into the jugular vein, extirpated the kidney, and examined it microscopically. He found that much less albumen occurred in the glomeruli when tannin was employed, showing that it had lessened the excretion of albumen. A similar result was obtained with tannate of sodium, and in his experiments with this substance the albumen was generally completely absent from the glomeruli. Dr. Briese has tried the tannate of sodium upon patients suffering from chronic albuminuria. He finds that some patients bear it well, and can take it for a month without any disagreeable consequences, while others vomit after every dose, and in others again the stomach and intestine are affected in two or three days. In the four carefully observed cases which he records the tannate of sodium was of no use whatever. It did not lessen the quantity of albumen excreted, nor did it alter the course of the disease.—*Deut. Arch. f. klin. Med.*, vol. xxxiii., p. 220.

TREATMENT OF PREMATURE BALDNESS.—Dr. Lassar contends (*Berliner klin. Wochenschrift*) that premature baldness is the result of contagion, and not of any general condition of the health. The method of treatment recommended is as follows: The scalp is to be washed every day with tar soap, or soft glycerine soap, or with soap containing sodium iodide; the soap is to be thoroughly applied, and rubbed into the scalp for fifteen minutes. Following this, a warm douche is used; then after the application of a corrosive sublimate solution (two parts in one thousand) the hair is dried, and a half per cent. spirit solution of naphthalin is rubbed into the affected parts. Carbolic or salicylic acid may also be employed. If this treatment be adopted in the early stage, when the hair is just beginning to fall, it usually proves successful, but it must be kept up for eight weeks or more. The fact that this disease is due to a communicable morbid principle suggests that it may be conveyed by the comb and brush of the barber.

RESORCIN AS AN ANTIPYRETIC is not so good as quinine of salicylate of soda, says Dr. Sarbeck, on account of the nervous symptoms which it produces. It quickly reduces temperature and causes perspiration. It is given in fifteen-grain doses.

ACTION OF MINERAL WATERS AND OF HOT WATER UPON THE BILE.—Lewaschew and Klikowitch, from experiments upon dogs, conclude that the use of ordinary alkaline mineral waters was to increase the quantity of bile and to make it more fluid and watery. This increased flow is beneficial in clearing out any bile stagnating in the gall-bladder. A subsequent increase in the quantity of bile indicates a greater flow of bile into the gall-bladder, and this also is of service in emptying out any stagnant bile, and restoring the normal condition when this is disturbed. Artificial solutions of alkaline salts were found to have a similar action to the natural mineral waters, and, as with them, the action varies according to the concentration of the solution. Bicarbonate of sodium has a quicker, more powerful, and more lasting effect on the composition of the bile than the sulphate of sodium, and weak solutions than strong ones. Vichy was more efficacious than Carlsbad water. Hot water was found to have an effect on the bile much like that of the mineral waters.

THAT MANY ANEURISMS are the result of nervous influence is the conclusion of Dr. Lewaschew. This observer found that after constant irritation of a nerve, the middle coat of the arteries in its area of distribution became sclerosed and united to the intima, a condition exactly like that found in the development of aneurismal dilatations.

THE New York Planet of October 15th comes to us in a new dress, and is much improved in appearance. Its page is enlarged and the general size of the journal increased. It contains six original articles, a good report of the recent meeting of the New York Academy of Medicine, editorials, and miscellaneous news. Its editor, Dr. C. E. Nelson, has our best wishes for the success of his enterprise. The journal contains twelve double-column pages, RECORD size, and is published monthly at one dollar per year.

SUICIDE OF A NEW YORK PHYSICIAN.—Dr. Walter L. Foley, of this city, committed suicide on October 20th by taking morphine. He was only twenty-seven years of age, and graduated from Bellevue Hospital Medical College in 1877. He practised in California for two years, and then came to this city. Although a bright student and clever practitioner, he did not succeed in his profession, as his habits were shiftless and thriftless, and he quickly lost the patients that it had taken him a long time to secure. Finally he became addicted to the opium habit, and this entirely ruined him and his prospects. It is only about two years since another young physician living near the city ended his career in a very similar manner.

DR. H. S. TANNER, of fasting fame, was arrested last week at Jamestown, N. Y., on a charge of not being properly registered in the County Clerk's Office. He had a diploma from the Eclectic Medical Institute dated February 2, 1859, indorsed by the United States Medical College, of New York, which is not a legal institution. Dr. Tanner is the third eclectic physician who has been arrested there recently on information lodged by the Secretary of the Chautauqua Board of Censors. He claims it is an effort of the regulars to suppress the eclectics and intends to make this a test case.

THE ORIGIN OF THE EGYPTIAN CHOLERA is still a matter of dispute, according to a correspondent of the *Medical Press and Circular*. The English continue stoutly to maintain that it originated *de novo* in Damietta. Some of the French have also taken that view. Dr. Grant Bey and many others, however, believe it to have been imported from Asia.

DIGITAL DIVULSION IN GASTRIC STENOSIS.—Professor Loveta has recently performed for the fourth time the operation of digital divulsion of the pylorus for stenosis. The patient was cured.

THE NATIONAL WHOLESALE DRUG ASSOCIATION met last week in this city. At one of the sessions Mr. Meyers, of Cleveland, read a report of the Committee on Proprietary Articles. He spoke of the importance of this branch of the trade, more than one-third of the entire sales in the drug market consisting of patent medicines. Mr. C. B. Allaire, of Peoria, read the report of the Committee on Adulterations, in which, and in the course of the discussion which followed, were developed many tricks of the trade, such as mixing castor-oil with oil of lemon, and corn meal and wheat flour and buckwheat flour with powdered drugs. The committee deplored the increased adulteration of wines and brandies, and urged members of the association to sell none but pure drugs. A dinner was given in the evening at Delmonico's.

HONORS TO MR. LISTER.—Professor Lister has been visiting the city of Buda-Pesth, and has been received with great honor by the profession and students there. A banquet and torch-light ovation were tendered him, accompanied with addresses of welcome, cheers, and congratulation.

WOMEN AS DRUGGISTS.—Six ladies have distinguished themselves, says the *London News*, as students in the South London College of Chemistry, where they have been studying with a view to pass the examinations of the Pharmaceutical Society. They mean to begin life as druggists, and we believe they are the first women who have been trained in a public school for the business of pharmacy. They will assuredly deserve credit for their enterprise, for if they succeed they will have done good service in widening the area of possible employment for women. It has often been matter for surprise that ladies did not select pharmacy as a fair field for the exercise of their talents in winning an honorable livelihood. The trade is a profitable one; in fact, the old saying in the country used to be that the druggist's shop was the only one in the village where every shilling taken in the till earned 11d. for the master. The work of preparing and compounding medicines is also neat and delicate—indeed, the Americans have almost elevated pharmacy to the dignity of a fine art in these later days. It is light, and cannot by any pretence be termed “unwomanly”—so that there ought to be no social prejudice against it. The only possible objection to women as pharmacists would rest on their implied inability to acquire the scientific knowledge necessary for safe practice. But that objection the six lady students who have stood so well in their classes at the South London School of Chemistry have personally disproved; besides, it is not necessary to license any woman as a druggist unless she has the requisite scientific qualifications. In these days, when people suffer as much anxiety about the employment of their girls as of their boys, the discoverer of a new occupation for women is a public benefactor.

CLINICS AT THE SCHOOL OF OPHTHALMOLOGY, OTOLGY, AND LARYNGOLOGY OF THE NEW YORK EYE AND EAR INFIRMARY.—A “subscriber” writes: “Please correct what is doubtless an unintentional error in your published ‘Schedule of the Various Clinics to be held in New York City the coming Season,’ in regard to the clinics held at the School of Ophthalmology, Otolgy, and Laryngology of the New York Eye and Ear Infirmary. You announce one clinic only at that institution, where there are three or four held daily, as follows: Eye clinics at 2 P.M. on Monday, 1.30 P.M. on Tuesday, 2 P.M. on Wednesday, 1.30 P.M. on Thursday, 2 P.M. and 3 P.M. on Friday, 1.30 P.M., 2.30 P.M., and 3.30 P.M. on Saturday. Ear clinics at 3 P.M. and 4 P.M. on Monday, 3.30 P.M. on Tuesday, 4 P.M. on Wednesday, 3 P.M. and 4 P.M. on Thursday. Throat clinics: 1.30 P.M. on Tuesday and at 3 P.M. on Wednesday. By inserting the above it is hoped that many who have read the advertisement of this school in the widely-circulated pages of THE RECORD may not be misled.”

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MALARIA AS AN ETIOLOGICAL FACTOR IN NEW YORK CITY.

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NEW YORK.

THE day of system-building in medicine has passed away. The hammer of skepticism has dealt sturdy and effective blows to the pretentious systems which have from time to time been erected by self-constituted authorities.

The history of medicine reveals the fact that in days of yore medicine represented a vast empire, ruled by the great monarchs, whose thrones rested upon university chairs and whose dicta were promulgated by satraps and underlings with reverence, and followed by the masses with pious zeal.

To-day medicine represents a great republic, in which "the people rule." Under this regime there exists no authority whose leadership is recognized with unquestioning obedience. No learned professors weave ingenious theories to serve as unerring guides to the masses. But there is a silent and no less potent influence "leading" the minds of the profession, especially in this section of our country; fashion finds zealous votaries in our ranks and exacts unquestioning obedience among a large following.

The discussion of a potent therapeutic fashion of the day and its bearings upon physician and patient forms the theme of this paper.

Sixty years ago the renowned Hufeland¹ wrote, "It is really remarkable that, just as we have escaped from the *opomania*, a real *hematomania* has risen among us. A veritable thirst for blood has overpowered some physicians, and of many it may be said, as of the ancient gods, they cannot be propitiated except by the sight of blood. The loss of blood is no longer reckoned by ounces but by pounds; every headache, every indigestion, is sufficient ground for abstraction of blood." In France an esteemed author, Audin-Rouvière² re-echoed Hufeland's philippics against blood-letting. "The leech fury," he says, "is carried so far that every mild headache, every slight palpitation, the slightest indisposition demands the presence of the physician, who at once orders leeches," etc. "*Chaque siècle a son goût particulier et sa mode*," says this brilliant writer. And he says truly.

To-day the taste and fashion have changed indeed, although not a century has passed over our heads. The "phlogozelotismus" of Hufeland's day has been succeeded, in our country at least, by a *malario zelotismus*, and the *hematomania* which was the baneful offspring of the former has been succeeded by a *quinomania*, which happily does not equal its predecessor in pernicious effect.

To-day quinine rivals the blood-letting of a former period in its universality of application in the treatment of disease.

Among purely medicinal articles this drug exceeds all others in the quantity manufactured and imported into this country. Quinine is to-day the greatest "staple article" among medicines in the commercial world. Every large drug house presents special claims for its

own preparations of the cinchona alkaloids. In the show-windows of the retail druggist quinine is heralded as a panacea, in various seductive forms. Pills, capsules, compressed powders, tablets, elixirs, syrups of quinine are regularly sold to the anxious seeker after health without a physician's prescription. A schedule of prices may be seen prominently displayed in the windows of many druggists, offering quinine pills as the grocer offers eggs. The jaded pleasure-seeker, the wearied merchant, the excited speculator, the hard-worked literary man, the pallid clerk, the nerveless seamstress; men and women in all conditions of life resort to quinine when suffering any of those undefined and undefinable ailments due to their vicious modes of life. Few cases come under the observation of the physician which have not been dosed with quinine.

A credulous public seeks in this agent an unfailing remedy for a large catalogue of diseases. Malaria is supposed to be the omnipotent, ubiquitous enemy lurking in every household. In the luxurious dwellings of the rich as well as in the humble tenements of the poor, in the crowded schoolhouses, in the prisons and court-rooms, in the railway stations, in the beautiful parks of this great city, and even in its snow-clad streets, at every point "where people do congregate," malaria is believed to contaminate the air with its noxious elements, and quinine is trusted to exorcise this potent yet hidden terror! *This popular idea has originated in the reckless diagnosis of malarial fever by many physicians, and the facile resort to quinine in all diseases characterized by an elevation of temperature.*

The comparison of a notable "Compend of Medicine," written by Professor Nathaniel Chapman fifty years ago, with a similar work published a short time ago, offers an illustration of therapeutic fashion. In Dr. Chapman's book, the stereotyped recommendation under the head of treatment was, bleeding, leeches, mercury; the modern compend bears the stereotyped legend, quinine, food, stimulants. The lay as well as the professional mind is now so thoroughly imbued with the omnipotence of malaria as an etiological factor that we are rapidly approaching the adoption of the views of Macculloch, a vigorous malaria maniac, who wrote a work¹ of considerable merit, but which failed to leave an impression by reason of his extreme views. This author delineates the prevalence of the "typhus fashion," against which he delivers himself as follows (p. 26): "From an unfortunate blindness as to the existence or presence of malaria or its causes, added to the want of reflection among the mass of routine practitioners and perhaps not a little aided by the now popular and vulgar use of the term typhus, it is almost the invariable usage, not merely of the people, but of the generality of practitioners, to give this term to every continuous marsh fever; and not only so, but more inexcusably to apply it even where the most ordinary discernment and reflection would indicate a true remittent." How nearly the views "of the people and the generality of practitioners" of the present time, in this country, and especially of this city, approximate to those of Macculloch, will be evident from a few quotations from his work. On page 50 he says: "Remittent fever may be found with scarcely any marked symptoms, as muscular weakness, at times not even the appetite seems affected." On page 31 he refers to con-

¹ Journal der practischen Heilkunde, p. 5. Berlin, 1824.

² Audin-Rouvière: Plus de Sangsues! Paris, 1827.

¹ Essay on Remittent and Intermittent Diseases. London, 1828.

stipation (!) as follows: "In the whole catalogue of ordinary practical errors I know few indeed more common than that which views a sluggish state of the bowels as a primary disease, sometimes also as a consequence of theoretic disorders of the liver, instead of considering it what it really often is, the produce of a febrile state, belonging either to the fever or some other initiative and similar cause" (malaria). He dwells with equal emphasis on malaria as the chief cause of a formidable catalogue of maladies, among which he enumerates delirium (p. 61), hectic (p. 41), debility, rheumatism (p. 370), diarrhoea (p. 390), hay fever, catarrh (p. 344), palpitation of the heart (p. 359), palsy of the heart (p. 359), hysteria (p. 85), climacteric diseases (p. 304), lethargy and drowsiness (p. 76), mental diseases (p. 331), suicidal mania, etc. "Were I to pursue the illustrations of every disease which occurs as a symptom in the anomalous and obscure fever arising from malaria, I should write a universal treatise on physics," he says on page 87. Does not the tendency of "the people and generality of practitioners" seem to be in the direction of these views to-day? Are not many of the disorders which Macculloch classes as malarial to-day ascribed to malaria by the people and, unhappily, also by some members of the profession? Lest the picture should appear overdrawn, I will mention that only a few weeks ago a case of suicide, reported in the newspapers, was gravely charged to malaria as the cause! Still more recently a prominent physician of this city was treated for malaria, when it was discovered that he was really suffering from the initiatory symptoms of general paresis.

Witness, also, the five to six hundred *deaths* annually ascribed to malarial fever in New York, a city far remote from the tropics.

Witness, also, the immense consumption of quinine and its preparations, as an antidote to the malarial poison. The typhus mitior, synocha and synochus of Cullen, were the fashion of Macculloch's day. He endeavored to convert the "blind followers" of Cullen to his more fanatical universal malaria doctrine, but he failed at that time. Are the seeds sown by Macculloch germinating to-day?

It would be a quixotic enterprise to attempt to win the profession over from the dominant malarial idea of many cases of fever to any other *universal* etiological view. Far be it from me. It is my aim to "hold the mirror up" to my confrères, to sound a note of warning, and chiefly to *urge most earnestly a more careful diagnosis of febrile disorders, especially as they prevail in populous districts and cities.* It would be profitable to subdue somewhat that spirit of self-satisfaction and overweening confidence with which the vast improvements in physical diagnosis, aided by chemical and mechanical discoveries, have imbued the modern professional mind. *The symptomatology of disease requires a more attentive study.* The example of the old masters in medicine may be profitably emulated to-day. When we read the correct delineations of many diseases to be found in the writings of Hippocrates, Galen, Aëtius (who was so freely followed by Shoenlein and his scholars, Eisenmann, Buzonini, Canstadt, and others of a later day), and of Prosper Alpinus (who is justly called the father of semeiology), of Boerhaave, Van Swieten, Sydenham, Fr. Hoffman, and Gaubius, we trace the master hand in every touch of the picture drawn from nature. Relying upon their own personal observations, they scanned with scrutinizing eye the history, critical periods, the temperature, pulse, respiration, tongue, facies, and secretions. Following their example and aided by the modern methods of precision, how vast would be the vantage-ground of the physician of the present time in facility of attaining a correct diagnosis and consequently a more successful therapeutics! The fevers of our country have been carefully and conscientiously studied by Drake, Bartlett, Mitchell, Wood, and others. These authors have furnished us a complete semeiology of malarial fevers, which it will be profitable

to study at the present time. The dissemination of the idea that malaria is a predominant element in the etiology of a large number of diseases in our cities (and the abuse of quinine as a remedy as a result thereof) is due to two causes, viz.: errors of diagnosis, resulting from an imperfect appreciation of the manifestations of true malarial fevers, and, secondly, the erroneous recognition of typho-malarial fever as a true malarial disease. It is the object of this paper to contribute to a more correct appreciation of malarial fevers by pointing out the errors of diagnosis, as illustrated in the "Records of the Board of Health" of New York City, and in a subsequent portion to devote attention to the differential diagnosis of true malarial fever from diseases simulating them.

The conclusions of this essay are based upon observations made during a public and private practice of twenty-one years. The first three years of this period were passed in active service as a military surgeon in the camps of Virginia; the succeeding fifteen years were spent in an extensive practice at Camden, S. C., and upon the plantations on the banks of the Wateree River, where I had medical charge of many hundreds of laborers and planters; the latter portion of this period has been spent in this city, residing during the summer months at Carmansville, and pursuing the practice of medicine in those so-called malarious suburbs, Washington Heights and Fort Washington, where I had under my medical charge three institutions, which contain about fifteen hundred children, teachers, and other employés. These conclusions have been confirmed by oral communications from experienced practitioners in this city, and are sustained, as will be shown, by ample statistical data.

From the days of Lancisi, malaria has been recognized as a peculiar influence existing in paludal localities, and emanating from the combined action of heat, moisture, and vegetable matter. This view, somewhat modified but not essentially altered, is to-day held by a large majority of medical men in all countries, but especially in tropical and semi-tropical regions, where malarial diseases are more frequently observed. Recently, however, a number of able gentlemen in the New England States and elsewhere in this country, claim to have discovered facts, which lead them to controvert the established opinion. A late convert¹ to the anti-Lancisian doctrine of the etiology of malarial fevers, writes: "Lancisi's investigations were extensive and searching and his conclusions seemed so irresistible that they were adopted by scientific men at once, and have since maintained, until within a very brief period, an assured place as truths in professional literature. Those who subsequently published medical works, which needed to include diseases of a miasmatic character, accepted without question or further investigation the opinions inherited, so to speak, from the learned author. Thus they passed from hand to hand, and finally reached our period, bearing such emblems of authority as to challenge and disarm criticism."

The history and literature of medicine do not sustain this author in the opinion that the men, great and small, who have written and lectured upon malarial diseases during the past one hundred and seventy-five years have "accepted without question or further investigation the opinion, so to speak, inherited from the learned Roman author."

The fact that two-thirds of the mortality of many thickly populated portions of the globe is due to malarial diseases has stimulated investigation to the utmost. The array of writings on this subject contained in the library of the Surgeon-General's office, U. S. Army, bears abundant testimony to the constant agitation of this subject during the past one hundred and seventy-five years. The last volume of the "Index Catalogue" devotes one hundred and forty closely printed columns to the enumeration of the titles of works on malarial diseases, the great majority of which have been published since Lancisi's

¹ New York Medical Record, August 18, 1883.

day. The Lancisian theory has, in fact, often been subjected to criticism. Dr. Wm. Fergusson in his paper "On the Nature and History of Marsh Poison" in the *Edinburgh Philosophical Transactions* endeavors to show that vegetation is not necessary to the development of malaria. Sir Gilbert Blanc offers similar arguments in his description of the Walcheren fever.

Deputy-Surgeon-General Munro¹ takes strong ground against the Lancisian doctrine, arguing in favor of "certain electrical conditions." Dr. Oldham's "chill theory" of the causation of malaria has also attracted much attention. The views of these writers were ably controverted by two papers,² by Dr. Maclean of Netley—which gave rise to an animated discussion in the *British Medical Journal*. These references will suffice to demonstrate that the Lancisian theory has not only *not remained unquestioned* but has been vigorously assailed. It would indeed be remarkable, were this not so. The theory and practice of medicine have passed through great changes during the past one hundred and fifty years; disease has been studied with more accuracy; new disorders have been recognized which were formerly regarded as symptoms only, and a complete revolution has taken place in therapeutics. But amid all this upheaval the Lancisian theory of the etiology of malarial fever stands unshaken, and is accepted by the larger majority of the profession in every part of the inhabited globe. To-day this theory is again assailed. Not in the malaria-ridden regions, not in India, Africa, South America, and the Southern United States, where malarial diseases have scourged the people from time immemorial, where their irrepressible malignancy has aroused the strongest efforts of government and people, but in the New England States, where their prevalence appears to be of recent date, is the iconoclastic hammer heard. Far be it from me to impugn the candor and ability of the authorities who have investigated these diseases in New England. I have been deeply interested in their writings and especially in following the recent trials of the Mill-dam question, in which the polemic talent of several gentlemen, supported by their scientific attainments, shone with brilliancy. As this question is the subject of the Fiske Fund (?) Prize Essay for 1884, I refrain from entering here upon its discussion and await anxiously the developments of the future.

In the meantime I would affirm that my own observations, made during the past quarter century, in the vicinity of Southern rivers, whose banks are frequently overflowed, and amid the swamps along their course, sustain me in the following points.

First.—A combination of solar heat (above 60° F.), moisture (below the saturating point), and vegetable matter (not living) is necessary for the production of *true malarial fevers*.

Second.—Any influence which withdraws one of these elements, renders the remaining incapable of generating true malaria. A "black frost," which term implies a temperature which completely destroys all vegetation not perennial, followed by a continuous temperature below 60° F. invariably checks malarial emanations. Fevers which have scourged plantations during the entire summer cease to furnish new victims after such a frost, and the planter often congratulates himself upon an accession to his working forces, while he deplores the loss of his "top crop" of cotton. I will cite only one illustration from my observation. The Wateree River, in South Carolina, is subject to frequent overflows, by which the alluvial lands on its borders are inundated. After the summer or August freshet numerous cases of malarial fevers invariably spring up among the laborers residing near the banks of the river; after the winter or February freshet, on the contrary, no new cases are observed, unless the temperature reaches 60° F. and re-

mains above this point for a considerable period. Again, perfect drainage, by withdrawing the element of moisture entirely, inhibits malarial emanations. This has been so often demonstrated that it has become an axiom in agricultural and sanitary engineering. Thoroughness is a *sine qua non* in this as in every other sanitary procedure. Partial drainage will, as Dr. Russell justly observes (*MEDICAL RECORD*, August 18, 1883, p. 179), be succeeded by a positive increase rather than by a subsidence of miasmatic troubles. The reason is obvious.

Third.—It has been long regarded as an established fact that malarial disorders prevail chiefly in rural or suburban localities. Hence the term swamp fever, paludal fever, country fever (used in the South). Experience has taught that the crowded cities of the temperate zone offer an uncongenial soil for their development, the diseases disappearing under the improved drainage and with increase of buildings upon sites which formerly furnished all the elements for the development of malaria.

Fourth.—Malarial fevers are very amenable to treatment in temperate climates. Ordinary remittent fevers have been very rarely fatal, in my experience; ordinary intermittent, of all types, have never proved fatal, within my recollection.

Impressed with these views by personal observation, by intercourse with physicians laboring in the same field, and by careful study of the literature pertaining to malarial diseases (these forming fifty per cent. of my aggregate of cases), I received with some surprise and not a little scepticism the information that malarial diseases prevail extensively in New York City, and that a large mortality is ascribed to them.

I have investigated this subject during the past three years, and now offer the result of my studies, not in the spirit of criticism, but prompted by a desire to direct attention to certain errors, which I hope to render clear to the unprejudiced reader.

I.—New York does not furnish the combination of elements necessary for the production of *true* malarial fevers, except to a limited extent, and in certain circumscribed localities.

In the summer of 1880 I asked the advice of medical and lay friends with reference to removing my family to that beautiful suburb, Washington Heights, for the summer. I was informed that this section of the city would prove an insalubrious summer resort; that, in fact, it is one of the most malaria-ridden parts of the island, on account of its proximity to the Harlem and Hudson Rivers.

Being attracted by the location of the "Heights," and feeling somewhat reassured by the fact that my family had become thoroughly inured to a malarial climate, I ventured to disregard the advice of friends, and took up my residence at Carmansville on June 18, 1880. I spent the entire summer in this beautiful suburban village, and became so impressed by its salubrity that I decided to again adopt it as a summer home. Having passed three summers at this place, I am convinced that it enjoys as much immunity from malarial diseases as any portion of the world not specially favored by altitude or remoteness from water-courses. The malarial cases which came under my observation were due to local causes acting in circumscribed localities, and removable by the most simple sanitary measures. Until the past summer I had not kept a record of malarial cases, but the idea impressed itself on my mind that genuine malarial fever was not often seen outside of the circumscribed localities to be presently mentioned. The fact is, that this portion of the island which stands in bad repute as a malarial section represents a rocky bluff, averaging one hundred and fifty-nine feet above the Hudson and Harlem Rivers.¹ On the eastern side it rises abruptly from the Harlem flats (which, by the way, furnish a perfect specimen of malaria-producing soil). But the bluff

¹ Remarks on Malarious Fevers and Cholera, Army Medical Department Report, 1872. London, 1874.

² British Medical Journal, 1874, vol. ii., 766 and 806.

¹ Measurements obtained from Matthew Cox, C.E.

is protected against malarial invasion from this side by a magnificent growth of trees, whose deep verdure not only graces the rocky promontory, but whose abundant foliage offers an effective barrier to effluvia arising from the flats. Four cases occurred during the past summer, in a house which stands on the extreme eastern point of One Hundred and Fiftieth Street, immediately overlooking the flats. An open vista to the latter is formed by the more sparse growth of foliage at this point. Another case occurred near the Aqueduct at One Hundred and Fifty-eighth Street, where a depression exists, which receives the garbage and filth from many wagons. A sixth case was seen on the brow of the slope at One Hundred and Ninetieth Street. These six cases are the only true malarial (intermittent quotidian) fever which I saw on the whole eastern border of the bluff from One Hundred and Forty-fifth Street to the upper point of the island. The remaining cases which I have noted during the past summer were observed in the following localities: Four on One Hundred and Fiftieth Street, and two on One Hundred and Fifty-first Street, between St. Nicholas and Tenth Avenues. These streets are partially occupied by buildings, all of which are wooden tenements. There is neither drain nor sewer, and filth accumulates in heaps until it reeks in the noonday sun. Here is every element for the production of malarial fever, which prevails every summer, and which may be effectually banished by draining and scavenging. One case was treated on One Hundred and Sixty-first Street, another on One Hundred and Sixty-second Street, between Tenth and Eleventh Avenues, near a point through which a blind sewer passes, but not a single, even superficial drain. Another case was seen on One Hundred and Sixty-third Street, near the Kingsbridge Road, in the midst of a market garden, which was cultivated near a basin where water could not readily drain away. At this point I observed two years ago the only cases of true remittent fever which I have seen since my departure from the South. One, a child, accompanied by convulsions in the cold stage, recovered; the other, a young girl, who was seen only a few hours before death, had been treated for malarial fever by a colleague. The last case of the season was observed on One Hundred and Forty-third Street, in a building standing on the edge of a stagnant pond, near Eighth Avenue. I may also mention two cases at the Colored Orphan Asylum.

All these cases occurred among the poorer classes, who occupy wooden tenements located in undrained localities. One case which was seen in a family residing in Audubon Park, near the bank of the Hudson, had contracted malarial fever during the previous summer at Hastings and had recently returned from a visit to Staten Island.

In the public institutions, which contained last summer over fifteen hundred inmates, I observed only two cases of true malarial fever, despite the fact that two of these, sheltering one thousand children and officers, are located in close proximity to points where some of the cases of malarial fever occurred. The small number of cases and the entire absence of fatality among so large a clientèle, afford unimpeachable testimony that malarial fevers are not endemic in this suburb, and that the prejudice existing in the minds of the people and the profession is unfounded. As an illustration of this prejudice I may cite the fact that an eminent surgeon of this city declined an invitation to send his child to Fort Washington (near the railway station) for recuperation, because he feared malaria. I have not seen one case of malaria within a considerable distance of this point during the past three summers. Several years ago another noted physician advised a family to remove to Washington Heights in order to restore to one of its members the health which had been shattered by malaria. Last spring a relative of this family sought an opinion from the same gentleman with reference to the

salubrity of Washington Heights and received an earnest injunction to leave it severely alone, "*because it is full of malaria.*" The truth is that no portion of this city or its suburbs offers such beautiful and healthful localities for residences, as does this garden spot of New York City. Elevated one hundred and fifty-nine feet above tide water, its rocky soil presents the most perfect foundation for buildings, and opportunity for draining with ample "fall." Its wide streets, St. Nicholas Avenue, Tenth Avenue, and Boulevard, Kingsbridge Road, 145th, 155th, and 175th Streets, will ere long be thronged by residences of people whose good sense will teach them the advantage of pure air within easy access of the busy marts of the metropolis. The sanitary authorities appear to be preparing for this event, by the construction of large sewers and drains, and by the filling up of the flats from 145th to 155th Street.

During the spring, fall, and winter months I have observed malarial cases only in a few localities, and chiefly in persons who traced the malarial infection to a period long antecedent to the attack.

That true malarial fevers do occur in this city cannot be denied. There are many localities which furnish all the elements for malarial emanations, as unoccupied lots, receiving surface drainage, and points where excavations are made for buildings or sewers. Here, however, the disease is found circumscribed by and traceable to the local causes.

It follows, from my *personal observation*, therefore, that there is no ground for the popular idea that New York City is a vast laboratory for the production of malaria.

11. The temperature of New York City in midwinter is not favorable for the development of true malarial fevers, especially of a serious type. If there is one point that has been recognized by practitioners in the Southern United States and in tropical countries, it is the fact that frosts and low temperature destroy "malaria," and check at once epidemics of diseases due to the latter. Referring to malaria, Bishop Heber in his "Narrative of a Journey through the Upper Provinces of India," relates that not monkeys only, but everything which has the breath of life instinctively deserts them (the woods) from the beginning of April to October.¹ "It is in the extreme heat, and immediately after the rains have ceased, in May, the latter end of August, and the early part of September, that it is most deadly. In October the animals return." "From the middle of November to March troops pass and repass, and with common precaution no risk is usually apprehended." "The period of the year during which malaria is most active is summer and fall, from June to November—for at this period only has the sun sufficient power" (Bartholow).²

"It is furthermore well known that the development of the disease usually takes place during the summer months, and that it disappears, or *at least no new cases arise during the winter unless the latter is mild.* We know, too, that the form, type, and intensity of the fever are usually in pretty direct relation to the temperature of the atmosphere. This is not only established by the testimony of writers from warm climates, etc." (Hertz).³

"In the more temperate and colder climates the winters are usually free from the disease" (Hertz).⁴

It would indeed be an act of supererogation to cite additional authorities in affirmation of the proposition that malarial diseases of serious types do not prevail in any city of the temperate zone during the winter. And yet the reports of the Board of Health of New York City (for which I am indebted to Dr. W. Delf. Day and to manuscript from Dr. John T. Nagle) furnish the following statistics which I have compiled from the records:

¹ Watson's Practice.

² Pract. Med., p. 775.

³ Ziemssen's Cyclopedia, vol. ii., 568.

⁴ Op. cit., vol. ii., 564.

AVERAGE TEMPERATURES AND DEATHS FROM MALARIAL FEVERS IN NEW YORK CITY FOR 1877, 1878, 1879, 1880, 1881, AND 1882.

PERIOD.	Average Temperature.	Number of Deaths.
January to April	33.98°	586
April to July	60.06°	684
July to October	72.37°	954
October to January	46.14°	812

With an average temperature barely above the freezing point we are expected to believe that New York furnishes 586 deaths in three years, or nearly one hundred deaths from malarial fevers in three months. This is a startling record, the comparison of which with the statistics of any other city of the temperate zone will demonstrate that a serious error is hidden within it.

In Dr. Chaille's¹ able statistical papers it is shown that the total mortality from malarial fevers in New Orleans from 1856 to 1860 was 1,315, and of this number 1,047 were reported from May to October (inclusive), and 268 from November to April (inclusive), affording evidence of the fact that even in semi-tropical New Orleans the winter mortality from malarial fever is as one to about four of summer mortality, *while in New York City the summer and winter mortality from the same diseases are nearly equal.*

III. The recorded fatality of malarial fevers in New York City adds another proof that the diagnosis of these diseases is inexact. Deaths from malarial fevers in New York from 1876 to 1878 were as follows:

Remittent fever	1,083
Intermittent fever	984
Typho-malarial fever	709
Congestive malignant intermittent fever,	79
Congestive chill	4

This table demonstrates that *the preponderance of mortality is not in cases of congestive and malignant fevers, but in the remittent and intermittent types.*

Is this large mortality in accordance with the accepted view of the prognosis of remittent and intermittent fevers?

"In the uncomplicated form of intermittent fever, without malignant tendency, the prognosis is almost always favorable. I have never seen such a case terminate fatally" (Wood).²

"The prognosis [of remittent fever] is generally favorable. The milder forms of the disease almost always end in recovery, unless mismanaged, and the severest often yield to prompt and suitable treatment, etc." (Wood).³

"In cold countries, such as ours, it [prognosis of intermittent fever] is almost always favorable. To persons of tolerable health and strength we may confidently promise a cure. Even the more strongly marked inflammatory form of the fever seldom terminates fatally" (Watson).

"The direct mortality from ague [syn. of intermittent fever], at all events among the European races, is small. Remittent fever is usually seen in its gravest forms in hot climates" (McLean).⁴

"Ordinary simple intermittent fever, as regards immediate danger, is not a grave affection. Whenever the disease involves immediate danger, it is to be considered pernicious and not, therefore, belonging to the head of ordinary or simple intermittent fever" (Flint).⁵ "Simple remittent fever in itself does not involve danger to life; as a rule, it is apt to be more severe in tropical than in temperate climates" (Flint).⁶ "The prognosis in simple intermittent fever is good" (Loomis).⁷ Death should rarely occur. Even cases of the severest types

of this fever should terminate in recovery—the type of the fever varies very much according to locality. The *remittent fever which we see in this city is of a mild type*" (Loomis¹), *italics mine.*

But why quote authorities on this subject? Every tyro in medicine knows that the prognosis of intermittent and remittent fevers of temperate climates is favorable, since the recognition of the specific anti-malarial properties of quinine. In the South a practitioner who would lose even a small proportion of his cases of intermittent and remittent fever would be forced to seek other fields, so seriously would his reputation suffer. Even the algid and pernicious fevers are no longer fatal if seen in the early stage, when the patient's system may be saturated with quinine.

If further proof is required to demonstrate that many physicians in this city diagnose malarial fever with extreme recklessness, it is furnished by the Report² of Dr. Charles P. Russell, Sanitary Inspector of the Board of Health. He says: "Two hundred and thirty-one deaths from malarial diseases were recorded within the year [1876]. All such cases were assigned to sanitary inspectors for investigation, with the main object of ascertaining definitely, if possible, the locations where said diseases had originated. In order to arrive at a satisfactory conclusion in any instance, the inspector was obliged to see personally, or communicate with the attending physicians, and frequently, also, to make an inspection of the place where the death had occurred. Many physicians refused or neglected to afford any information on the subject. *Quite a number of cases were excluded on account of uncertainty as to the actual cause of death, or as to its complication with a malarial element* [italics mine]. Ninety-six cases, however, were fully investigated."

Out of 238 cases, 142 were excluded on account of "uncertainty," or refusal and neglect of physicians to aid in establishing the correctness of their diagnosis! and out of the 96 cases fully investigated 10 are recorded as "malarial disease," a very obscure diagnostic designation of a fatal malady.

It follows, therefore, that only about one-third of the mortality ascribed to malarial fevers in New York city in 1876, may be indisputably attributed to the true forms of these fevers.

This result of a careful investigation by a gentleman who is an expert in sanitary inspection lends unimpeachable confirmation to the evidence above adduced, to establish the fact that the errors which are constantly committed in the diagnosis of malarial fevers have conferred upon New York a reputation as a malarial city which is as unenviable as it is unmerited.

158 WEST FIFTY-FOURTH STREET.

A LITHOPÆDION.—At a recent sitting of the Académie des Sciences, Dr. Sappey exhibited a foetus which had died at the end of six months' extra-uterine gestation, and had afterward been retained in the mother's abdomen for fifty-six years. The mother became pregnant at the age of twenty-eight, but labor did not come on at term nor afterward. At the age of eighty-four she went into the infirmary at Quimperlé, where she died three weeks after admission. At the necropsy a large hard cyst, with calcified walls, was discovered adjoining the uterus. This was divided by a saw, and found to contain a foetus in a state of almost perfect preservation. The skin, lungs, muscles, and other parts had preserved their normal softness and appearance. M. Sappey explains the preservation of the foetus by means of Pasteur's theory concerning the exclusion of air and aerial germs. It is a noteworthy fact, that these cases of lithopædions have been in the most authenticated instances of extra-uterine origin.

¹ N. O. Medical and Surgical Journal, 1870, xxiii.

² Pract. Med., vol. i., 285.

³ Op. cit., 315.

⁴ Quain's Dict. Med., 734.

⁵ Pract. Med., 1001.

⁶ Op. cit., 1015.

⁷ Lect. on Fevers, 126.

¹ Op. cit., 143.

² New York Medical Record, February 10, 1877.

LICHEN RUBER OF HEBRA AND LICHEN PLANUS OF WILSON.

By A. R. ROBINSON, M.B., L.R.C.P. & S.,

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(Continued from p. 429.)

Lichen planus.—This form of eruption was first described by Erasmus Wilson, and consists of papules remarkable for their color, shape, tendency to arrangement in groups, situation, local and chronic character, and the pigmentation they leave when they subside.

Color.—The color of the papule is a dull red, more or less vivid and suffused with a lilac tinge, which is most characteristic in recently formed and discrete papules; while in aggregated papules and in those of long standing it is of a dusky hue. A slight hyperæmic areola is present at the base of recent papules.

Shape.—When very small the papules are roundish in shape, but when fully developed they are generally angular in outline and rise abruptly from the normal skin. They range in size from one to three or four lines in diameter, are but slightly elevated above the general level of the skin, and have a flat, smooth, shining surface, which is frequently depressed in the centre—umbilicated. The papules are covered on their surface by a thin layer of horny, transparent cuticle, which is not a scale, and neither separates or exfoliates (Wilson). When the papule subsides this layer disappears without exfoliation. If the eruption is diffuse and aggregated there is some desquamation and scaling, especially if the part has been irritated, and appearances somewhat resembling a small diffuse patch of lichen ruber or of chronic, dry, scaly eczema or psoriasis. Upon the removal of the thick adherent scales in these cases the skin beneath may present an excoriated surface.

Arrangement of the papules.—The papules are either discrete or aggregated, but generally show a tendency to form larger or smaller groups. Occasionally they are arranged as broader or narrower, longer or shorter bands. In the discrete form of eruption the papules arise successively, and after a time variously sized patches are formed, consisting of aggregated and discrete papules united by an inflamed and infiltrated base. The inflammation and infiltration cause a blending of the papules and interpapular skin, and the formation of a raised, thickened, scaling patch. The eruption spreads peripherally by the formation of new papules at the same time that the older papules disappear, leaving behind a dark pigmentation. A single papule may spread by peripheral growth until it has reached, say, the size of a split pea; but a large patch is never formed by peripheral growth of a single papule, as occurs, for instance, in psoriasis. Sometimes a patch is large enough to show a raised border and depressed centre, or a ring is formed by the formation of a chain of papules at the periphery of a patch. If neighboring rings coalesce the eruption at that place will assume a gyrate form. A patch may consist of a depressed and pigmented centre; external to this large, well-developed papules, and a periphery formed of small developing papules.

Situation.—The eruption is generally symmetrical, and appears especially upon the anterior surface of the forearms, just above the wrists; it may, however, appear upon any other part of the body, and especially upon the lower part of the abdomen, the calves of the legs, and around the knee. It has been observed upon the palms of the hands and soles of the feet, upon the penis and on the mucous membrane of the mouth and fauces.

Course.—The course of the eruption is very chronic, and the individual papules may remain unchanged for many months before undergoing a retrograde process. When they disappear they leave behind deep pigmentation and occasionally a slight atrophy. When removed by treatment, it has been observed that old papules leave behind more pigmentation than recent ones. The erup-

tion never appears in the form of vesicles or pustules. The hairs and nails remain unaffected in this disease. There is generally very little itching attending the eruption, but sometimes it is intense. The general nutrition of the body is never affected; no matter how long the eruption lasts, it does not produce any of the grave conditions observed in lichen ruber, owing probably to its not becoming general over the whole body.

Histology.—The changes occurring in the skin in lichen planus have been studied by Neumann, Tolcott Fox, and Crocker.

According to Neumann (*Ibid.*, p. 310), the principal changes occur in the upper layers of the skin, the hair-follicles and sebaceous glands not being affected. He found the corneous and rete layers hypertrophied, the nucleus of the rete cells granular and swollen; the papillæ broader, conical in shape, and containing much granulation tissue; the papillary blood-vessels dilated, and their walls infiltrated with cells; the cell infiltration extending also in the form of bands around the blood-vessels and sweat-glands in the cutis. The unstriped muscles were hypertrophied. The orifices of the sweat-ducts were dilated from an increase in the number of epithelial cells; the sweat-duct was also dilated from the same cause, and on the gland itself numerous colloid degenerated cells were present. From these observations, Neumann concludes that lichen planus is a circumscribed inflammation of the upper part of the cutis and sweat apparatus, the latter being the primary seat of the disease. In judging of these conclusions of Neumann, it must be remembered that his description of lichen planus does not correspond in some respects with that which I have given, and which corresponds to the description of English and American writers. Neumann describes an increase in size of the papules to about an inch in diameter by growth of the periphery as a normal occurrence—a statement at variance with all other observers. This fact leaves us in doubt as to the value of his observations in lichen planus.

Talcott Fox (*British Medical Journal*, 1880, p. 398) thinks it should not be classed among the inflammatory affections of the skin, as he considers no true inflammatory action is present. According to him, the papules owe their origin to persistent neuro-paralytic hyperæmia and its results—namely, dilatation of the blood-vessels and engorgement of the tissues with blood, emigration of leucocytes, oedema, hypertrophy of the various structures, and slight desquamation. This view of the cause of the papule formation will be referred to after the structure of the papule is described.

Crocker (*Lancet*, 1881, p. 284), judging from his description of the eruption on the patients from whom he removed portions of skin, undoubtedly examined sections of lichen planus papules only, and not any of lichen ruber. As, however, he regards the two forms of papules as belonging to the same disease, he concluded that as his observations differed from those of Neumann and Biesiadecki on lichen ruber, the views of these observers were wrong, or else they had examined only papules of long standing. In quoting Crocker's views, therefore, it is to be remembered that he believes his description applies to both lichen ruber and lichen planus, although he had only examined sections of papules of lichen planus.

My own observations will be found to agree very closely with those of Dr. Crocker. In the more acute cases he finds the papule formed almost entirely by a cell effusion from one of the vessels of the superficial plexus pushing up the superimposed epidermis. This cell effusion is sharply limited at the sides, and involves several papillæ. The papillæ are flattened out, the rete is slightly hypertrophied, and there is some loosening of the upper layers of the horny cells over the centre of the papule.

In the more chronic forms, the papule is mostly formed from proliferation of the rete mucosum, the lower layers of the rete cells being flattened, and the upper layers, in-

cluding the stratum lucidum and granular layer, very distinct. The horny layers are only thickened over the centre of the papules. There is no change in the hair-follicles, unless it be that the orifices are funnel-shaped and packed with cells.

From the foregoing observations his conclusions are :

First.—The process at the commencement is entirely superficial.

Second.—That it consists of an inflammatory effusion from the superficial plexus of vessels, the cells from the horizontal vessels coming only from the upper surface.

Third.—That all the vessels of the plexus are notably dilated, and the papillæ are enlarged by downward growth of the interpapillary processes.

Fourth.—That all the epithelial layers undergo proliferation, the rete taking most part in the formation of the papule.

Fifth.—Involvement of the hair-follicles is not essential to the main process.

Sixth.—The sweat-ducts often have an influence in determining the situation of the papule and in producing the umbilication, as they were frequently present in the centre of the papules.

Through the kindness of Dr. Bronson and Dr. Morrow, of this city, I have been enabled to obtain both recent and old papules of lichen planus for microscopical examination. The papules were first hardened in Miller's liquid and afterward in alcohol, and sections examined both before and after staining with different agents. Microscopical examination of sections of a recent papule showed the following condition.

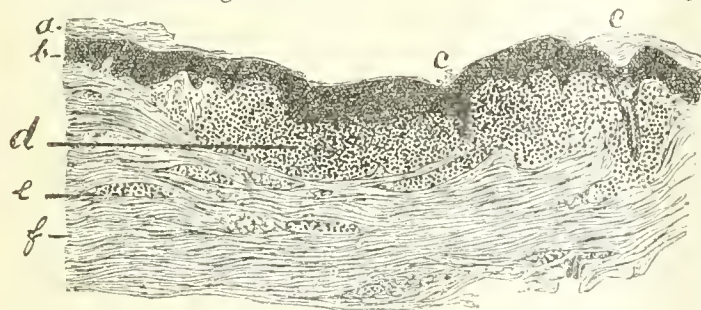


FIG. 3.—Complete Section of a Recent Papule of Lichen Planus under a Low Magnifying Power. The section includes normal skin at both sides, but most at left side : *a*, corneous layer ; *b*, rete mucosum ; *c*, orifice of sweat-duct ; *d*, round cell infiltration ; *e*, blood-vessel ; *f*, corium.

In Fig. 3 is represented a vertical section of a recent papule of lichen planus, together with normal skin at both sides. The papule corresponds to the region occupied by the dense round cell collection in the papillary region and upper part of the corium (*d*). The corneous layer in the region of the papule is almost entirely absent, consisting only of one or two layers of dried flat horny cells. The absence of the corneous layer in this situation was observed in all the sections of both recent and old papules examined, and consequently was not an artificial condition from cutting or manipulation of the sections. Outside the papule region the corneous layer is of normal appearance and thickness, as seen in Fig. 3, *a*. The rete mucosum is thickened in some places, especially in the central portion of the papule area. Papillæ are not recognizable in the central part of the papule. The papillæ and upper part of the corium are occupied by a sharply limited dense collection of round cells (*d*). At the periphery of this collection the blood-vessels are dilated and crowded with corpuscles, while a considerable number of emigrated white blood-corpuscles are present directly around the vessels. The deeper portion of the corium appears normal, except that some of the blood-vessels are dilated and surrounded by a few emigrated corpuscles. Examining such a section with higher powers, the rete is found to be hypertrophied in the central portion of the papule, and especially in the region of the sweat-ducts. The cells of all the layers over the dense round cell collection in the corium are flattened in a horizontal direc-

tion, the amount depending upon the amount of pressure from below, as shown by the almost normal condition of the cells toward the periphery of the papule. The granular layer is much thicker than usual, consisting sometimes of five or more layers of cells where the rete is thickest. This hypertrophy of the rete is very variable

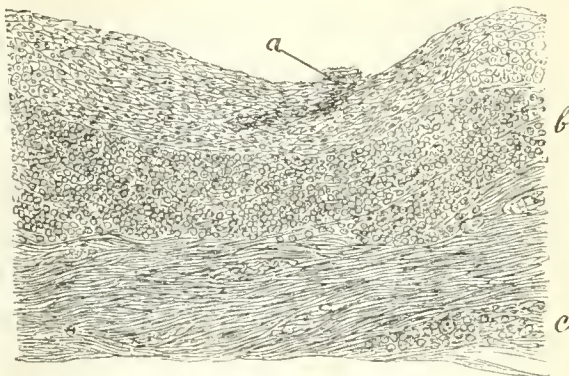


FIG. 4.—Vertical Section of the Central Portion of a Recent Papule of Lichen Planus. *a*, orifice of sweat-duct ; *b*, round cell collection ; *c*, region of a blood-vessel.

as to situation and extent. Generally it is greatest in the centre of the papule and in the region of the sweat-duct orifices, but may occur in the latter situation only. In many places within the area of the papule there is no appreciable hypertrophy, and in the earliest stage of the eruption it is entirely absent.

The cutis papillæ in the central portions of the papule are so infiltrated with cells and the rete so flattened that in some cases the line of separation between the rete and cutis is not recognizable, as is the case in Figs. 3 and 4. If the cell collection is not very dense the papilla will be observed to contain dilated blood-vessels. At the outer portions of the papule the papillæ contain a more or less dense collection of round cells and dilated blood-vessels. The cell infiltration into the papillæ and upper part of the corium consists of embryonic corpuscles (white blood corpuscles), which take the place of the connective tissue to a greater or less extent. At the outer portions of the papule connective-tissue bundles are still present, but in the central part ; when the collection is very dense, all trace of connective tissue is lost. In the deeper parts of the corium there is nothing abnormal except the presence of a few dilated blood-vessels, some of which are surrounded by emigrated corpuscles.

The hair-follicles and sweat-glands are normal, except that around the sweat-ducts the cell infiltration generally extends deeper than in other parts. In all of the papules examined a sweat-duct was found near its centre, and seemed to be the principal cause of the umbilicated appearance of the papules, as its presence prevented the pushing upward of the epidermis by the round-cell collection. This umbilicated appearance was also partly owing to the absence of so much of the corneous layer from the central portion of the papule. The hair-follicles had no influence in determining the situation of the papules.

From the foregoing observations the papules of lichen planus examined by me owed their origin to an inflammatory process occurring in the papillæ and upper part of the corium, as shown by the round-cell infiltration and the changes in the tissues of the part. The cell infiltration from the horizontal plexus did not come from the upper surface of the vessels alone ; in fact, I know of no condition, nor can I imagine one, in which only one-half a capillary wall will undergo such nutritive changes as to permit of emigration of white blood corpuscles through it while the other half remains normal. The changes observed in the rete and corneous layer are

variable in amount and extent, and can be safely regarded as secondary conditions depending upon the changed nutrition condition in the cutis. If the papule is of long standing there may be considerable hypertrophy of the rete and corneous layer, as shown by the observations of Dr. Crocker, and further substantiated by the scaly appearance of some patches of the eruption. The dense cell infiltration, by its pressure upon the papillary blood-vessels and interference with their circulation and nutrition, allows of the passing out of red blood-corpuscles, as occurs in the dense cell infiltration in connection with syphilitic papules. As a result of this extravasation we have the dark red color, and the pigmentation remaining after disappearance of the papules. In the return to the normal condition the changes are such as usually occur in inflammatory states, the round-cell collection disappears by fatty degeneration of the corpuscles and the epidermis regains its normal activity. I have not had the opportunity of examining skin where a papule had previously existed, but I have seen the fatty degeneration of the round cells.

According to the above description, lichen planus papules are the result of a circumscribed inflammation of the papillæ and upper part of the corium, and any changes in the epidermis are secondary to the changed nutrition, the result of this localized inflammation.

Prognosis.—The prognosis is always favorable, the disease having a tendency to spontaneous recovery after weeks or months of existence, and never leads to the low marasmic condition observed in untreated cases of lichen ruber.

Treatment.—In many of the subjects of lichen planus the general nutrition of the body is below a normal physiological standard, and tonics with appropriate diet are indicated. In other cases the eruption seems to be the only pathological condition present. Alkalies, especially the acetate or citrate of potash with tonics have been found to be of service in some cases. In one case reported by Dr. R. W. Taylor (*Archiv. of Derm.*, 1874) immediate benefit followed the administration of twenty grains of chlorate of potash dissolved in four ounces of water, given fifteen minutes after meals, and followed fifteen minutes later by twenty drops of dilute nitric acid in a wineglassful of water. Arsenic does not seem to have any special effect in this form of eruption. Locally the itching can be treated in the same manner as the same condition in lichen ruber, or in other skin diseases. Beyond preventing itching, local applications do not seem to influence the eruption.

Relationship between lichen ruber and lichen planus.—From a comparison of the symptoms, histology, prognosis, and treatment of the two forms of eruption, as given above, we find that, as regards the symptoms; in lichen ruber the papules generally commence on the trunk and tend to extend over the entire body, and in lichen planus they generally commence on the forearms and legs, and very rarely spread over a large area. In lichen ruber the papules are round, acuminated, covered with thin scales, and only show a depressed centre when situated around a hair-follicle or undergoing a retrograde process; in lichen planus the papules are of irregular outline, generally umbilicated, and never scaly at the commencement. In lichen ruber the eruption is not symmetrical, and the papules do not increase in size by growth at the periphery; in lichen planus the eruption is generally symmetrical, and many of the papules increase in size to a certain extent by spreading peripherically. Lichen ruber, if not treated, leads to marasmus and death; lichen planus has no special effect upon the general condition of the system.

Hence, as regards the symptoms, course, and prognosis of the two forms of eruption, they are widely different from each other.

Histology.—From microscopical observation we find that lichen ruber is an atypical keratosis, and lichen

planus an inflammatory affection of the papillæ and upper portion of the corium, with subsequent changes in the epidermis. In lichen ruber the corneous layer is hypertrophied, the rete also slightly thickened, whilst there are few or no changes in the cutis; in lichen planus the corneous layer is often absent, the rete is thickened, and there is a dense round-cell collection in the papillæ and upper part of the corium. Lichen ruber is, therefore, an anomaly of growth of the corneous layer, and lichen planus an inflammatory affection of the vascular portion of the skin. As regards the pathological histology they are thus widely different.

As regards the treatment, we find that arsenic, which may be regarded as a specific for lichen ruber, has little or no effect on the eruption of lichen planus, and alkalies and tonics, which are frequently of much service in the latter, are of no benefit in the former.

The symptoms, course, histology, and treatment are therefore entirely different, and the question arises as to whether eruptions with such differences in these respects can still represent two forms of the same disease. The polymorphous eruptions of the skin are *par excellence* syphilis and eczema, and with reference to the former a macular syphilide bears no resemblance either in symptoms or treatment to a gummatous tumor, although both are but different forms of the same disease. A study of the natural history of syphilis teaches, however, that the macular eruption corresponds to an early stage, and the gummatous formation to a late stage of the syphilitic infection, and that both are an invariable sequelæ of the syphilitic poison; in other words, a study of these two forms of syphilis in any given case will show that both are but forms of the same disease. In eczema the eruption may be papular, vesicular, pustular, or squamous in character; but generally there is a combination of these different forms, and all can be regarded as a superficial catarrhal inflammation of the skin, the intensity of the inflammation or chronicity of the process accounting for the difference in the appearances presented. In the case of lichen ruber and lichen planus, the latter has been regarded as a mild form of the former, the difference in character being attributed to the climate and mode of living in England and America, where lichen planus is frequently met with, as compared with Germany, where lichen ruber is more frequent. It is true that these conditions as regards climate and mode of living do have an influence upon certain skin-diseases, although not to the extent generally believed. Those who have seen lupus vulgaris in Vienna and in America have observed the milder character of the disease in this country, depending probably upon the better diet of the laboring classes here as compared with that of Germany, but the difference is only one of degree; the situation, symptoms to a great extent, the pathological histology and treatment are the same, and even some of the cases observed here are as severe as any observed in other countries. In lichen ruber and lichen planus we have found that it cannot be a question of intensity of the pathological process, as the histology of the two forms of eruption is entirely different. Neither can they represent stages of the same disease, as no one has yet observed a case of lichen ruber develop into one of lichen planus, or *vice versa*. Here in New York a very considerable number of cases of lichen planus have been observed by the different members of the New York Dermatological Society, and although every member is conversant with the characters of the eruption in both lichen ruber and lichen planus, and consequently would be quick to recognize any transition from the one to the other, no case has been observed or reported in which this has occurred. The papules of lichen planus never change to those of lichen ruber, and *vice versa*; and no similarity has been shown to exist between the two forms of eruption, except that of slight resemblance in color and the papular form of the eruption. From a consideration of all the above observations, we feel justified in con-

cluding that lichen ruber and lichen planus are two entirely distinct diseases of the skin, and that the grounds for regarding them as but two forms of the same disease are altogether untenable.

356 WEST FORTY-SECOND STREET.

OXYGEN AND SOME OF ITS COMPOUNDS AS THERAPEUTIC AGENTS.¹

By SAMUEL S. WALLIAN, A.M., M.D.,

BLOOMINGDALE, N. Y.

(Continued from p. 457.)

It is an every-day fact in chemistry that substances identical in ultimate composition, as far as our yet imperfect art can discover, are strikingly different in a physiologic or therapeutic sense. Whether this difference consists in varying modes of atomic and molecular arrangement, or in different, but as yet indistinguishable, states of the oxygen base, is yet beyond our scientific ken.

Hence it does not follow that oxygen as found in common air, and the same element in doubtless a nascent and hyper-active state, as artificially generated—liberated would be a more accurate term—are either physiologically or therapeutically identical.

Again, the *physiological* relations of oxygen are definite and limited, while its *nature and potency as a therapeutic agent is, as yet, not generally understood, is entirely unlimited and as different from the former as though it were in reality another element.*

While all physio-chemists assert that it is an active eliminator, depurent, disintegrant, solvent, and perhaps, sorbent, and alterative, very few have taken the pains to investigate it in the light of a *materia alimentaria*, and hence a direct invigorator and renewer of the whole vital organism. Nor do we yet practically realize the evidently demonstrable fact that *there is no antiseptic known of equal potency with pure oxygen*; or that there is no known antiseptic compound which does not contain this vital element. It may yet transpire that all antiseptics depend for their special properties, directly or indirectly, on the free or feebly combined oxygen they contain. Should this presumption prove to be well founded it devolves on this micro-chemic age to devise methods for the convenient and successful use of the real and safe factor, to the exclusion of the noxious carbonized elements at present so largely composing antiseptic mixtures, and thus forever do away with carbolic, salicylic, and all other "antiseptic" septæmia!

Thus, Pasteur has demonstrated that by cultivating the disease-germ of chicken cholera for several generations in fluids having free access to the oxygen of the air it is gradually robbed of its virulence and eventually becomes inert; and Buchner succeeded in transforming the dreaded *bacillus anthracis* into the harmless *bacillus subtilis*—the hay bacillus—and *vice versa*, by repeated cultures in fluids freely supplied with oxygen or wholly deprived of the same, according to the results desired.

Prof. Law's² experiments with the virus of hog cholera fully confirm the foregoing results. The virus attains its maximum of virulence after cultivation in fluids occluded from free contact with the oxygen of the air, and is gradually, but surely, robbed of all malignancy by culture in fluids freely supplied with that element.

The same principle holds with regard to the propagation of yellow fever, typhoid fever, Asiatic cholera, diphtheria, croup, and the pleuro-pneumonia or lung-plague of cattle.

Another idea, not quite foreign to the subject, suggests itself: Has any chemical or physiological investigator queried whether the fundamental difference in the toxic tendencies of the two anæsthetics, ether and chlor-

oform, is to be found by a comparison of their chemical composition? CHCl_3 = chloroform; $\text{C}_4\text{H}_{10}\text{O}$ = sulphuric ether. In the latter one equivalent of oxygen does duty, while in the former none of the elementary constituents would sustain animal life for a moment.

The question of ventilation in crowded cities, public buildings, and even in private dwellings, will eventually resolve itself into improved methods for supplying and distributing, in suitable quantities, artificial oxygen, and *if the bacillus tuberculosis prove to be a veritable entity—the essential factor in the induction and propagation of phthisis—then must we find in pure oxygen, by one mode or another of administration, its one efficient germicide and antidote!*

If Koch be right, then is mountain air and the air of new countries, in phthisis, but a removal from germ-fostering to germ-discouraging atmospheres. And whether he be right or wrong, bad air is the culture-fluid of all zymotic and germ-engendered diseases the world over.

The field of profitable investigation suggested is fairly exhaustless, but space forbids its further exploration in this connection.

Recurring to the practical side of the subject, I have personally used oxygen in only its simple gaseous form, and exclusively by inhalation. As to proportions and combinations, I have exhibited the gas, first, pure or undiluted; second, diluted with common air; and, third, admixed with nitrogen monoxide in various proportions.

In asphyxia from drowning or the inhalation of noxious gases, in threatened fatal syncope, suspended animation, and some other emergencies, as uræmic coma, chloroform or ether narcosis, opium-poisoning, etc., the first form of administration is indicated. For general use in chronic diseases the undiluted gas is seldom appropriate; but is to be modified by proper dilution, or associated with nitrogen monoxide in various proportions, according to the exigencies of each case.

The various methods of exhibition of this agent may be briefly adverted to:

1. *Direct inhalation* will probably always stand at the head of all methods.
2. *Cutaneous absorption* has been resorted to in Europe, and may be found advantageous in certain cases.
3. *Oxygenated water* is a feasible and pleasant medium for stomachal administration. It is prepared by saturating steam with the gas, at high pressure, and afterward condensing the steam.
4. *Oxygenated bread* has been used to some extent in England, and there is no reason why the "aërated bread" of our cities should not be easily transformed into oxygenated bread at will.

Of this bread Dr. Birch (*op. cit.*, p. 18 *et seq.*) says: "Its relative effect on the appetite is singular. Thus on the one hand (as might be expected) it stimulates the appetite when absent or capricious, while, on the other hand, it tends to produce such a feeling of epigastric fulness, when sufficient food has been taken, as to effectually suspend (if not satisfy) some morbidly craving appetites. . . .

"In some cases it will be found advantageously to supersede artificial pepsin, pancreatin, and even quinine and the mineral acids. . . . It is particularly indicated in cases of delicate children with continually recurring ascariæ, functional derangement of the stomach and bowels, and mesenteric weakness."

In the matter of proportions and combinations, and as respects the quantity to be exhibited in a given case, there is as wide latitude for the exercise of professional discretion as in the compounding and selection of ordinary drugs.

That the use of oxygen in medical practice requires considerable time and care in its manipulation, and the exercise of much judgment and discrimination in its exhibition, and that impatient, over-sanguine, or careless practitioners will fail of satisfactory results in attempting it, is very true; but it may be made to add so largely to

¹ Read before the Franklin County (N. Y.) Medical Society, June 5, 1883.

² "Malignancy of Disease Germs Mitigated by Oxygen," THE MEDICAL RECORD, vol. xix., p. 673.

our therapeutic resources, is a desideratum in so many contingencies, and *the necessity for it increases so exactly in proportion to the increase of artificialness in the social and physical habits of modern society*, that the conscientious and painstaking physician of the future will undoubtedly avail himself of its aid in all appropriate conditions and emergencies.

The following cases are selected as representing the range of adaptability rather than any special features of the treatment. It will be noted in all of them that prompt and permanent aid to digestion and assimilation is a decidedly prominent if not the principal result.

CASE I.—Mrs. J. S.—, aged thirty-nine, married, two children, the youngest several years old. By profession a singer and teacher of music. Family history includes phthisis, of which she lives in great fear. Each winter has severe bronchial and laryngeal troubles, with persistent cough. Anæmic, extremities habitually cold; pulse, 102 to 108; constant subclavicular pain; dyspnoea and fatigue on slight exertion; weak digestion with bowels habitually constipated. She expectorates rather copiously; sputa muco-purulent; and there is circumscribed dulness over the apex of the left lung. She is very despondent, and has no faith that any treatment will avail.

March 25th.—She presents for treatment and is placed on daily inhalations for thirty minutes at a sitting—R. Oxygen, 25 volumes; nitrogen monoxide, 50 volumes; common air, 25 volumes. At a forced effort she can inspire 150 cubic inches of the mixture.

April 10th.—Improvement has been manifest from the first. The nitrogen monoxide acts as a wonderful calmative to the nervous system. She is no longer despondent; appetite much improved, coughs less, sputa reduced in quantity and less purulent. *Constipation effectually relieved.* Lung capacity, 190 cubic inches.

April 25th.—Resumed her music classes soon after last record. Improvement has been rapid and constant. Says she is "better than for many years;" eats, works, and sings with gusto. Considers herself "well," and treatment suspended.

(Observed this patient eight months later, no untoward symptoms reappearing.)

CASE II.—Mrs. C. L. W.—, aged twenty-nine, married, one child aged five. Family history says father died of cancer of stomach; mother of cardiac disease. She has "weak lungs," and lives in perpetual dread of "consumption." Sense of constriction in left lung; circumscribed "sore spot" under the left clavicle; severe cough for several years past, and there is now some dulness on percussion over the left apex. Has been treated by eminent physicians without appreciable benefit; very anæmic; voice weak; no appetite; amenorrhœic for three years past; menstrual discharge, when present at all, is either profuse, acrid, and colorless, or greenish in color, scanty, and offensive. Has been subject to repeated attacks of severe nephralgia. Urine not examined.

May 23d.—This patient was placed on a mixture of—R. Oxygen, nitrogen monoxide, $\bar{a}\bar{a}$ 2 volumes; common air, 1 volume, of which she inhales, twice daily, three gallons at a sitting. Shows a lung capacity of 130 cubic inches.

June 1st.—Improvement already manifest. Feels "rested;" eats better; says the "soreness" has nearly left her. Can now inspire 165 cubic inches at an effort. Treatment continued twice daily.

June 15th.—Acute nephritis suddenly developed, or at least the chronic condition of those organs assumes a subacute form. Temperature, 102°; pulse, 122. Urine scanty, specific gravity 1.030; some albumen and casts. Oxygen suspended and hot hip-baths ordered, with demulcent drinks, to be followed by hot fomentations over the region of the kidneys.

June 25th.—The acute symptoms, which were somewhat alarming at last record, soon subsided, and general improvement is very evident. Lung capacity, 200 cubic inches. Oxygen was resumed 20th.

July 1st.—Improvement continues. Menses appear naturally and without unusual disturbance. Appetite excellent; walks two miles a day without fatigue, sleeps well, and gains flesh rapidly.

July 10th.—Patient continues to improve. Treatment reduced one-half and conjoined with chalybeates. Lung capacity increased to 225 cubic inches.

July 25th.—Treatment suspended. Patient returns to her friends very much rejoiced at her progress.

(Two years later this patient reported no return of former symptoms.)

CASE III.—Miss A. B.—, nineteen years of age. Family history good, except that mother died young. Father, Judge —, quite robust at sixty-eight. She has suffered from spasmodic asthma since childhood, the paroxysms occurring daily and on the slightest exposure. She is very delicate, anæmic, and fatigued on slight exertion. Has constant dyspnoea and marked cyanotic appearance. Appetite weak and capricious.

May 25th.—Placed patient on—R. Oxygen, 1 volume; nitrogen monoxide, 4 volumes, of which she inhales five gallons, once daily, with the result of immediately relieving the dyspnoea. Her lung capacity is but 75 cubic inches.

June 4th.—Improvement has been steady. No more cyanosis; does not suffer from paroxysms; appetite fairly good. She inflates her lungs much better than at first; capacity, 100 cubic inches.

June 20th.—Proportion of oxygen increased to forty per cent. No return of paroxysms. General health greatly improved.

July 1st.—General improvement continues. From being caught in a storm has had one mild asthmatic paroxysm.

July 10th.—Patient can now endure active exercise without fatigue. Treatment continued every other day. Inspires 140 cubic inches.

July 25th.—Treatment has been irregular since last record, but patient's general health continues to improve; breathes, sleeps, and eats well. Exposes herself to changes of weather and temperature with impunity.

August 10th.—There has been no recurrence of the asthma, although patient asserts that she has repeatedly exposed herself to the same influences which invariably induced paroxysms previous to treatment. She is advised to continue the treatment at intervals, but as the family are about to remove from the city no further observations are practicable.

(November 30th.—This patient writes that she continues to enjoy excellent health, and has had but one asthmatic paroxysm since leaving the city—this from being drenched to the skin in a sudden rain-storm.)

CASE IV.—Miss E. L. C.—, sixteen years of age. For three years past subject to epileptic convulsions. Family history shows the malady to be hereditary. Patient tall, slender, with stooping, awkward gait, languid attitude, flabby muscles, sallow complexion, feeble pulse, morbid appetite, and poor digestion. Complains of constant cephalalgia, and, in short is decidedly chlorotic. Has never menstruated, and her mother associates her malady with this fact.

August 13th.—Patient placed on—R. Oxygen, 1 volume; atmospheric air, 2 volumes; four gallons at each daily sitting. Inhales but 60 cubic inches at an inspiration.

August 20th.—Mother reports that she sleeps better and does not have her nightly "fit." Can inspire 90 cubic inches at an effort. Ordered chalybeates and nutritious diet, for the latter of which she begins to show a natural desire.

August 30th.—Still no return of the paroxysms. Cephalalgia has disappeared; appetite, digestion, and general health much improved. Lung capacity, 100 cubic inches.

September 14th.—Proportion of free oxygen increased to fifty per cent; five gallons each sitting every other

day. Patient resumes her classes in school, walking several miles daily without fatigue. Inspires 105 cubic inches.

October 10th.—Slight convulsion after severe exposure, attending an evening political demonstration. Daily treatment resumed; same formula as at last record. Lung capacity increased to 115 cubic inches.

November 1st.—Improvement has been constant; appetite fairly insatiable; digestion excellent, and is one of the most boisterous of her class on the playground.

November 10th.—Treatment continued every other day. Catamenia appear, naturally and without disturbance.

November 25th.—Patient decidedly robust, and apparently, as she asserts herself, "perfectly well." Treatment suspended.

(Six months later there had been no return of the epilepsy; general health of the patient continuing excellent.)

CASE V.—A. S.—, aged fifty-one, married, several grown-up children; occupation, commission merchant. Has been twenty years an invalid; a confirmed dyspeptic, and suffers from constant and extreme nervous irritability and prostration (neurasthenia?). Constant frontal headache and frequently recurring paroxysms of a dull, benumbing pain referred to the medulla and base of the brain. Appetite wanting; constipation habitual, alternating occasionally with diarrhoea; extremities cold, is very despondent, and has suffered for years from a masked or "dumb" ague. Liver and spleen somewhat enlarged; urine turbid, specific gravity 1.030, abounds in alkaline phosphates, but deficient in urea and uric acid.

September 20th.—Daily treatment instituted, using—R. Oxygen, nitrogen monoxide, aa four gallons at each sitting. Lung capacity, 160 cubic inches.

September 29th.—The evidence of retention of urea in the system corroborated, and the value of oxygen as an eliminator well illustrated. Crowding the treatment from day to day, patient last night inhaled eight gallons of the mixed gases. Urine now loaded with urea; specific gravity, 1.035. Treatment continued, the dosage diminished.

October 11th.—The disturbances noted after first week of treatment have nearly subsided. Urine nearly normal as to quantity, but still shows excess of urea; specific gravity, 1.028.

Mixture changed to—R. Oxygen, 1 volume; nitrogen monoxide, 2 volumes; eight gallons at each daily sitting. Lung capacity increased to 200 cubic inches. Patient is less irritable, sleeps better, and feels greatly encouraged.

October 18th.—Improvement has been gradual but constant since last record. Cephalalgia is becoming a much less frequent symptom, and when present is less severe. Specific gravity of urine, 1.025.

November 11th.—Has steadily improved since last record, in spite of the drawback of constant business worry and overwork. Urine normal; lung capacity, 220 cubic inches.

November 20th.—Digestion good; sleeps well; no longer despondent or irritable; no headache; extremities in a comfortable glow; all his functions well performed. Treatment discontinued.

(Four months later this patient reported himself in active business and feeling strong and well.)

A PLEA FOR A HOMŒOPATHIC TEST.—The sum of \$25,000 has been offered to St. George's Hospital on condition that the money be devoted to a fair trial of homœopathy in the wards of that institution. The offer has been declined, at which the *Lancet* expresses great satisfaction. The only good reason for declining is that it has been often submitted to a fair test before, and unnecessary repetitions are dangerous.

TWO CASES OF CHOLO-CYSTOTOMY, WITH RECOVERY.

By MARTIN BURKE, M.D.,

NEW YORK.

THE cases of successful incision of the gall-bladder are not, I believe, so numerous that the report of two cases would be without interest.

James W—, eighteen years of age, came to my office in the month of October, 1881. He entered almost crouchingly, and said he had a severe pain in his belly whenever he stood erect. I examined his abdomen, and found that almost under but to the right of the ensiform cartilage there was a small fluctuating tumor, painful upon pressure, and of the size of a duck's egg. The boy was jaundiced, but not markedly so, and his bowels appeared to move, although constipation had immediately preceded this attack of pain. His fever—and he had some fever—was not pronounced. The abdomen, save where the tumor existed, was free from pain upon pressure, and I diagnosed an abscess of either liver or gall-bladder. The boy's pulse, however, being strong, I felt inclined to think it was a suppurating gall-bladder, and this afterward was found to be the case. I ordered the boy home, told him to go to bed, to poultice the tumor, and prescribed quinine and opium. As I was leaving town the next day, I directed my friend, Dr. Kearny, to see the boy and to do what his judgment dictated. He agreed with my diagnosis and resolved to cut immediately, which he did during my absence, and reported that a large quantity of bile and pus came from the incision. About a week after this, I was astonished one morning to see the boy come into my office, and upon examining the fistula left by the knife, I found I could pass in a probe for about three inches, but as it then commenced to bleed I desisted. I saw the boy once again after this, and his fistula was entirely healed.

Mrs. K—, aged fifty, was seized about a year and a half ago with a violent pain in the right hypochondriac region. The pain was severe, and this region was terribly sensitive to the touch, but rest, opium, and poultices relieved the pain until it was bearable. Yet sensitiveness upon pressure was marked, and this continued until blistering and leeching had been tried repeatedly.

At length, indeed, Mrs. K— was convalescing, but her health was not entirely restored. In May, 1883, she was taken with a similar attack, when I was again asked to see her.

This time leeching, blistering, and poulticing failed to reduce the sensitive spot, and indeed it appeared slowly to enlarge its limits and to become more painful. Continued applications of cantharidal collodion and poulticing were now regularly applied, and my father and myself resolved to open this enlarged and tender spot when we thought it safe to do so. Accordingly about eight weeks after the beginning of the second attack we opened an abscess from which were discharged fifty gallstones, whose combined weight was one hundred and thirty grains. The poulticing was continued, and the wound washed out thoroughly every six hours. Our patient had some fever following the operation, but none to occasion alarm. A drainage-tube was kept in for three days only, when I removed it. I may remark that after about a week of continued convalescence the patient lost all appetite; this was restored by the use of the wine of Mariani, which I believe contains coca.

Henceforward all went well, and Mrs. K— is now entirely well. At no time was she jaundiced. At no time did she lose courage, and her abiding faith in her medical attendants during the long, weary course of her illness made her case entirely free from the usual small anxieties which attend such cases. Such, then, are these two histories. One in a young male, one in a middle-aged woman. Severe pain noticed in both. In neither did a distinct chill occur, although in both pus occurred in large amount. In neither case was

jaundice noticed to any extent. The first case had a good history. In Mrs. K—— a rheumatic diathesis existed.

As regards differential diagnosis between abscess of liver and abscess of gall-bladder, I find the following characteristics. In this climate abscess of the liver follows, I think, either typhus fever or exhaustion consequent upon prolonged hard drinking. The tenderness in abscess of the liver is much further from the median line in the hypochondriac space than is the case in abscess of the gall-bladder. A prolonged chill or chills, very marked, usher in abscess of the liver; this was not the case in these two examples of the other disease. The constitutional disturbance is more marked in liver trouble. In both cases I should advise early incisions. I have the records of three cases of liver abscess, all fatal, in two of which I was so strongly advised by the consultant to aspirate that I did so, and delaying free incision until some days after, had occasion to regret it most bitterly.

Progress of Medical Science.

OTORRHOEA, WITH PERFORATION OF THE MEMBRANA TYMPANI.—Dr. Read J. McKay, of Wilmington, Del., having treated, during the past eleven years, two hundred and thirty cases of otorrhœa, or, more technically, chronic otitis media with purulent discharge, presents for consideration in *The American Journal of the Medical Sciences* for October, 1883, some clinical observations upon such cases with old perforations of the membrana tympani, and endeavors to show that they are not the unsatisfactory and irremediable class of aural diseases which they have been regarded, and perhaps still are, by many general practitioners as well as by the public generally. And because of the well-known dangers from caries and necrosis of the temporal bones, meningitis, cerebral abscess, and purulent infection, which sooner or later may, and often do ensue, when they are disregarded or neglected, they should not in the future, as in the past, be permitted by physicians to pass from under their observation without any, or carelessly directed, local and medical treatment. His earlier cases were treated by various caustic applications, and they required usually several months' treatment to relieve or cure them. The later ones were treated with finely powdered boracic acid (the dry method), packed in the ears, usually filling the meati the first few visits, which generally checked the purulent discharge in a few days and only required several weeks (usually about four) to relieve or cure them.

† EXPERIMENTS IN THE USE OF NAPHTHOL FOR THE TREATMENT OF SKIN DISEASES.—Dr. Arthur Van Harlingen, of Philadelphia, reports in *The American Journal of the Medical Sciences* for October, 1883, the results of his experience with the use of this drug, which was first brought to the notice of the profession by Professor Kaposi, of Vienna, about two years ago. He finds it is one of the most efficient and agreeable remedies for *scabies* which has as yet been brought forward. Both in the rapidity of its action and in its beneficial effects upon the inflamed skin it is superior to any of the means ordinarily employed for the cure of this disease. Its exact place in dermatic therapeutics remains to be ascertained, but he is inclined to think that it will not prove an unimportant one. In eczema it has failed in his hands to give the same beneficial results as were obtained by Kaposi. In most cases of vesicular and in acute eczema generally its action is simply that of an irritant. On the other hand, it has a limited field of action in the cure of a certain number of cases of squamous eczema of the scalp. In his opinion it is a valuable addition to our external means of treatment in *psoriasis*. Kaposi speaks well of it in *psoriasis* of the scalp in particular, and his experience would lead him to place it near chrysarobin and pyrogal-

lic acid in effectiveness without the neutralizing disadvantages of either of these drugs. In *seborrhœa* of the scalp naphthol is a decided addition to our means of treatment. While inferior in some respects to sulphur or carbolic acid, it has a certain range of usefulness which further experience will in all probability more exactly demonstrate. Naphthol is highly lauded by Kaposi in the treatment of *hyperidrosis*, but in Dr. Van Harlingen's hands it has failed entirely, although used strictly according to his formulae. He considers it quite valueless in this disease, so far as his experience goes, which leads him to regard its effects in *ringworm* as inferior to almost all of the remedies at present used, and as almost entirely inefficient in most cases of *tinea versicolor*. In *pediculosis* he has had no experience, but in a single case of *pediculosis capitis* its action was favorable.

CARBOLIZED SAWDUST AS AN ANTISEPTIC DRESSING.—Mr. H. P. Symonds speaks favorably of this material in *The Lancet* of September 22, 1883. He soaks a quantity of coarse sawdust in a ten per cent. solution of carbolic acid in spirits of wine, and then allows it to dry slightly, so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used, it is enclosed in a bag made of several layers of gauze, and applied outside the deep dressing, the usual external dressings being put over it. The sawdust thus takes the place of the padding of gauze which is generally used. The advantages claimed for it are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. The writer says that the sawdust should be coarse, as he has found that if it is very fine it passes through the gauze and irritates the skin.

THE ANTAGONISM OF PARALDEHYDE TO STRYCHNIA.—Professor Cervello has recently published an interesting paper in *Archivio per le Scienze mediche*, vol. ii., No. 1, on the antagonistic action of paraldehyde and strychnia. The experiments which led him to regard the two drugs as antagonistic were made in several ways: by administering a large but not fatal dose of paraldehyde, and then a dose of strychnine; by administering fatal doses of strychnine, and then a dose of paraldehyde; and finally, by administering the two drugs at the same time. As a kind of control experiment, the animals were then given doses of one or the other of these agents alone, so that the experimenter could judge of the narcotic effect of the paraldehyde, and of the fatality of the strychnine. In whatever manner administered, it was made clear that paraldehyde antagonized the action of strychnia; nor was it necessary to administer more than a physiological dose of paraldehyde in order to observe this antagonistic effect. Indeed, so small a dose of the narcotic was sufficient as not to produce its physiological effects. Two and a half grammes of paraldehyde completely antagonized four milligrammes of nitrate of strychnia administered to a rabbit, a dose four times greater than that necessary to kill. Curiously enough, the administration of strychnia had no influence on paraldehyde narcosis. Its duration was the same, whether the narcotic was administered alone, or both drugs together; in fact, the narcosis lasted longer in the strychnized animal. The retardation of the respiratory movements is the same, and we may say that the phenomena of paraldehyde always predominate, as if it had been given alone. The antagonism, then, is not reciprocal. This antagonism seems, therefore, to be central: paraldehyde depressing, and strychnia exciting the reflex irritability of the cord.

VARIATIONS OF THE URINARY CHLORIDES.—No one will deny that a more frequent examination of the constituents of the urine might lead to the acquisition of fresh knowledge. Even in our public clinical institutions the systematic estimation of the most important urinary constituents is not regularly carried out. A com-

plete clinical account of the changes in the urine which accompany the active stages of the rachitic process would probably be attended with important additions to medical science. Indeed, the same may be said of most acute diseases. In ordinary medical attainments perhaps the only piece of information with regard to the chlorides of the urine consists in the knowledge of the fact that there is a remarkable diminution of this ingredient in acute pneumonia. M. Burot has done well to draw attention to this unploughed field of clinical medicine. He has devised a simple apparatus for the purpose of estimating the chlorides. A small flask is furnished at its inferior extremity with an ampulla capable of holding just one cubic centimeter of urine. A pipette is obtained, gauged in tenths of a cubic centimetre. Another little flask containing a solution of argentic nitrate is used, from which the pipette may suck up some of its contents by means of a ball of caoutchouc. A cubic centimetre of urine is first treated with a solution of potassic chromate. The solution of nitrate of silver of known strength is then dropped in by means of the pipette. The whole of the chlorides in the urine have been obtained as soon as the *café-au-lait* precipitate of chromate of silver appears. M. Burot found that the normal amount of chlorides in the urine was eleven grammes for every litre, consisting of ten grammes of chloride of sodium and one of chloride of calcium. In tuberculosis it was estimated that seventeen to eighteen grammes of chlorides per litre were discharged. But a diminution of the chlorides is of greater import, especially in acute affections. In pneumonia, when the temperature is much raised, the fall in chlorides is considerable. This diminution was not noted in broncho-pneumonia. But in the pneumonia of typhoid fever at the onset of death the chlorides completely vanished.—*The London Lancet*, September 29, 1883.

ANIMAL ELECTRICITY.—Dr. McKendrick recently delivered a lecture on "Galvani and Animal Electricity," before the Southport meeting of the British Association (*London Lancet*, September 29, 1883). In summing up, the lecturer said that all electrical phenomena were really expressions of the vital changes occurring in living tissues under the action of stimuli. It was no part of the functions of nerves, muscles, or of the retina of the eye to produce electrical currents under the action of their relative stimuli; but such currents indicated chemical changes in the organs or tissues. For example, the contraction of a muscle is a movement following or consequent upon many chemical changes, among the results of which were the production of heat and differences of electrical potentiality. Thus, there was no special production of electricity except in the cases of electrical fishes, and possibly of some other animals. In most animals, including man, the production of currents was an incidental phenomenon, indicating chemical operations and nothing more. Besides, the currents so produced were feeble and evanescent, and bore no relation to the general well-being. Consequently, all attempts to influence the living body by magnets had no rational basis. It need hardly be said that the so-called phenomena of animal magnetism are of an entirely different kind from those discussed. These are of a subjective character, dependent on peculiar states of the nervous system, having nothing whatever to do with electricity or magnetism; but still in a sense they are phenomena as real as those of physical science. Their subjective character, however, renders them specially difficult of investigation, and consequently they are more liable to fall into the hands of the charlatan.

A NEW TUNE ON AN OLD STRING.—The following story is culled from the pages of *The California Medical Journal*, for October, 1883: "An old toper whose sober moments were harassed by a vixenish wife concluded to shuttle off, and loaded up with laudanum for that purpose. In a short time his wife discovered him in a state

of narcotism, and, raising an alarm, sent off every one who came in for a physician. The first one who came was Smith, an old practitioner, who looked him over, pronounced him dead, and went away. Soon after, another old practitioner, Brown, came in, who also gave in the verdict 'dead,' and departed. Shortly the third one, Jones, a young practitioner, arrived, and, proceeding to a vigorous use of the stomach-pump and forced exercise, finally succeeded in bringing the old gentleman to his senses, and left, feeling that there was but one first-class doctor in that vicinity. In a few days he called around and presented his bill. 'What's this for?' inquired the would-be suicide. 'For saving your life the other night,' replied Jones. 'Well, I didn't ask you to. I never employed you, and I'll not pay it. You'd no business coming in here and jamming your old pump down my neck. Brown is my family physician, and I'll not pay anybody else,' was answered. Then Jones went away to Brown's office to try and get him to induce the man to pay the bill. 'Jones,' said Brown, looking out over the top of his spectacles, 'I never thought you a bad sort of a fellow, but you've done a very foolish thing, and it serves you right to lose your bill. Didn't I say he was dead?' 'Yes,' says Jones. 'Didn't Smith say he was dead?' 'Yes,' says Jones. 'Well, that settled it. The man was dead to all intents and purposes, and you had no right to say that he was not. When two old experienced doctors like Smith and me say a man is dead, it's unprofessional and discourteous for a young man, a beginner in practice, to dispute their word. We'll forgive you this time, because of your youth and inexperience, and will hush the matter up for you, but be very careful in the future and make no more such mistakes.'"

THE EARLY TREATMENT OF FRACTURES.—Mr. Christopher Heath in the *British Medical Journal*, endeavors to induce surgeons to have more faith in the early treatment of fractures by plaster-of-Paris than appears as yet at all general, and thus to save their patients and themselves an infinity of trouble. In his paper he quotes from the "Aphorisms" of the late Dr. Cowling, of Louisville, the following, which he regards as full of common sense: "Carved and manufactured splints generally fit nobody, and are to be rejected, as not only expensive, but damaging." "The application of the roller-bandage immediately to the skin, whether as a protective or to prevent muscular spasm, has resulted in such disaster that it is one of the curiosities of surgery how it could be repeated at this day. When cotton is placed over such a bandage, it forms an absurdity scarcely credible in a man of ordinary sense." "Continued extension and counter-extension, are, as a rule, not necessary to prevent shortening in fractures. This is best done by removing the causes which lead to muscular spasm: 1st, by early and as complete reposition of the fragments as possible; 2d, by the smooth application of cotton-battling to the limb; 3d, by the equal pressure of a bandage extending from the distal end of the limb to a point beyond the joint above the fracture; 4th, by the accurate fitting of the splints or plastic material for support; 5th, by as little interference afterward as possible."

STEWED FRUIT FOR THE GOUTY AND DYSPEPTIC.—Dr. Milner Fothergill recommends the use of stewed fruits in many instances of gout and dyspepsia. Sugar is undoubtedly objectionable to many, but it is by no means necessary to add sugar to stewed fruit. If the acidity be neutralized by an alkali, little or no sugar is required. Thrifty housewives have long been familiar with the fact that the addition of a small quantity of bicarbonate of soda to stewed fruit reduces the acidity, so as to save the necessity for much sugar. If about as much bicarbonate of potash as will lie on a shilling (English) be added to each pound of fruit, it will be found sufficient to neutralize the acidity, and to bring out the natural sweetness. Milk puddings and stewed fruits are excellent for the dyspeptic, the bilious, and the gouty.

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FRANCIS GALTON AND PROGRESS BY HEREDITY.

FRANCIS GALTON, in a recent remarkable work, has brought out many curious facts not in accord with common opinion. The qualities of men, according to him, are usually hereditary, not accidental, and life is a prolonged viriculture in which progress depends more upon marriage customs and birth-rates than on the institutions on which we are wont to plume ourselves. Our culture has gotten ahead of our brain capacity, so that only a small minority has the mental ability to profit by the advances which the leaders of thought have made. Two things, according to Galton, are necessary in order that civilization may move steadily forward: there must be a selection of the best, and a transmission of their qualities to their descendants. Where selection works, as it often does at this day, to attract the most vigorous to the cities, and reward them with success, accompanied with desires, cares, and vices which delay their marriage, and prevent their having children, it is positively injurious to the community. There is some immediate gain—more money made, or more books written; but the next generation is drawn from poorer sources, and if this process goes far enough, decay must set in. We must remember how often great nations have begun to rot in the height of their prosperity. We see Athens full of men of marvellous genius; but they do not marry, and at last their places are filled by slaves, retaining the Pyrrhic dance without the Pyrrhic phalanx. We see Rome, with a greater vitality, rising to be mistress of the world, but after a time her close family ties are sapped by luxury, and the same decay sets in. Her farms are depopulated and her fields are untilled. She calls in barbarians to fill her ranks, and falls before them from sheer exhaustion. The Ottoman Empire has gone through the same changes, and the danger is a threatening one to us to-day. In Australia and our own great West, the English race multiplies apace, but in New England the old families are dying out, and it is plainly falling back before the more prolific Celt; and in the South the blacks are multiplying nearly twice as fast as the whites; so that in another century, instead of being only half as numerous, they will have become two to one.

The only remedy which Mr. Galton points out is *stirpiculture*. The object of the better part of the community must be the elevation of their own family and race. Attempts must be made, and will be made when

a broader and more intelligent philanthropy prevails, to insure the fertility of the better portion, and the comparative sterility of the meaner portion of the community. If, he says, we are convinced that the only way of upraising a race is by securing the success of its best elements in the remorseless contest in which the strongest shall prosper, and hand down their traits to the next generation, while the weaker perish without leaving a trace, then the birth-rate becomes the most important test of progress, the pulse-beat of national life. The primitive passions for kindred and race are exalted again to the highest dignity; and thus we call to our aid two powerful emotions which the last century frowned upon, but which are yet among the most potent that sway mankind—family pride and patriotism. The man of health and ability who does not become a father is little better than a wrong-doer, from Galton's point of view, and the whole burden of his scheme is against the American ideal of home life, with its independent members so slightly bound to each other.

With regard to the treatment of paupers and criminals he is somewhat severe. The criminal class is generally infertile, but such instances as the Jakes family, with its five generations of criminals and paupers, show the danger. Imprisonment for life, or exile to a penal colony, where there is no intermixture of the sexes, would often be necessary, for crime becomes a disease to be stamped out, like the cattle plague. Pauperism would have much of the same character, and indiscriminate charity would acquire a new degree of wrongfulness. Indeed, the whole field of private charity and out-door relief would be much restricted, with a corresponding extension of the poor-house system. The reception of paupers and criminals from abroad becomes a wrong to the next generation, whose patrimony is squandered. The Chinese may increase our wealth, but wealth is not the object of living.

Galton's conclusions, in short, would kill out the Indian and the negro, and would make the extermination of the inferior races generally a virtue, if not a duty; and being opposed, as Mr. Holland admits, to our most cherished instincts, our purest aspirations, it is doubtful if, for some centuries to come, the race shall have become evolved to the point where the social science of this powerful thinker shall be law.

CEREBRAL MOTOR LOCALIZATIONS.

MM. CHARCOT and PITRES have just finished a series of articles (*Revue de Médecine*) in which they have analyzed one hundred and eighty-five cases illustrating motor localization in the cerebral cortex. The cases are all of comparatively recent date, and have been carefully reported. The conclusions which these observers draw are more definite and positive than any yet made. After analyzing in detail the cases supposed to oppose the doctrine of cortical motor localization, some defective point is found in all, and it is emphatically stated "That there does not exist a single rigorous observation of a destructive lesion outside the cortical motor zone which has caused permanent paralysis. That there does not exist a single rigorous observation of a destructive lesion involving these centres which has not caused a permanent paralysis on the opposite side of the body."

More specifically our authors announce the following very interesting and important conclusions :

1. The cortex of the cerebral hemispheres in man may be divided, functionally, into two parts : motor and non-motor, according as destructive lesions do or do not cause permanent paralysis of the opposite side of the body.
2. *The non-motor zone* comprehends : a. All the prefrontal region of the brain (orbital lobe, 1st, 2d, and 3d frontal convolutions). b. All the occipito-parietal region (occipital lobe, superior and inferior parietal lobules). c. All the temporo-sphenoidal lobe.
3. The *motor zone* includes only the ascending frontal and ascending parietal convolutions and the paracentral lobule.
4. The paralysis produced by destructive lesions of the motor zone have different clinical forms according to the location of the lesion. Thus, complete hemiplegias of cortical origin are produced by diffused lesions of the ascending convolutions ; partial paralyses are produced by circumscribed lesions of these same convolutions. The location of the lesion in some of these partial paralyses or monoplegias can be determined. MM. Charcot and Pitres announce the following as data for such determination : a. The brachio-facial monoplegias coincide with lesions in the inferior half of the ascending convolutions. b. The brachio-crural monoplegias coincide with lesions in the upper half of the ascending convolutions. c. The facial and lingual monoplegias depend upon very circumscribed lesions of the lower extremity of the ascending convolutions, particularly of the ascending frontal. d. The brachial monoplegias depend upon a very limited lesion of the motor zone ; particularly of the middle third of the ascending frontal. e. The crural monoplegias depend upon very limited lesions of the paracentral lobule.
5. Whether those paralyses caused by destructive lesions be general or limited, they will in time be followed by secondary contractures of the paralyzed muscles, with descending degenerations of the voluntary pyramidal tracts.
6. Irritative lesions of the cortex can give rise to epileptiform convulsions (partial or Jacksonian epilepsy), which are different from those of true epilepsy. They begin with a motor aura, and may be either generalized or limited.
7. In general the irritative lesions which cause epileptiform convulsions are located at or near those centres which, if destroyed, would cause paralyses in the muscles affected by the convulsion. But these lesions may be even in the non-motor zone, and their relation to the functionally affected centres is not so close as is that of paralyses and destructive lesions.

In conclusion the authors reaffirm their belief that no facts opposed to the doctrine of cerebral motor localizations have been established. Their own observations and studies, as shown above, do not so much add that which is new as they make definite and certain our previous views. They contradict, to some extent, the conclusions of Exner regarding the existence of diffused and overlapping centres. We are inclined to believe, however, that the method employed by Charcot and Pitres is more trustworthy than the unusual one adopted by Exner.

REV. DR. BUCKLEY AND NEWTON THE HEALER.

THE Rev. Dr. J. M. Buckley, the projector of the Methodist Hospital of Brooklyn, and the trenchant editor of *The Christian Advocate*, is doing a good work in making clear and definite the dividing line between the medical and clerical domain. He sharply supervises his advertising columns, much to the disgust of the omnipresent quack and the enterprising patent-medicine proprietor. In all our strictures upon the alliance between the religious newspaper and the healers who play upon the credulity of the gullible, we gladly except *The Christian Advocate*. The very few advertisements which to the profession may be "off color," and which appear at intervals in the weekly mentioned, are probably in fulfilment of old contracts over which the present editor had no control. In a recent letter having the deceased "Dr." J. R. Newton for its subject, Dr. Buckley states that he "had been acquainted with him for the past eighteen years, and had various conversations with him concerning his healing powers, and that he believed him to have been fully equal, as a healer, if not superior, to Dr. Cullis, Mrs. Mix, Miss Moseman, the Rev. Mr. Simpson, George O. Barnes, and vastly superior to the impostor, 'Dr.' Monck." He also says that "in 1865 there came to the city of Detroit, where the writer then resided, a pupil of Dr. Newton, 'Dr.' Bryant, who had an extraordinary career there, and performed cures apparently as well as Newton himself. In company with the Rev. J. P. Scott, a noted Presbyterian minister of that city, he visited him, saw him operate upon half a score or more of persons, and was operated upon himself."

A retarded voyage upon the Mississippi gave the editor, during the four days so spent, an opportunity of long conversations with "Dr." Newton concerning his career and principles of cure. He says that his conviction was that he believed in himself, and that he would use every possible means to accomplish the ends that he had in view. He saw that he could glide from fanaticism into hypocrisy, and from hypocrisy back into fanaticism, and from either into common sense and simplicity, with the rapidity of thought.

Newton told him that he was under the control of spirits, who impressed him what to do in every case. He saw him operate on a wen of small size, which had not visibly increased for the space of five years, on the head of a passenger with whom he was acquainted. He placed his thumb upon it, and pressing with all his power, and moving it sideways, he said, "I am impressed to paralyze that duct." This showed that he had some knowledge of the course of the growth of wens. (He learned afterward that the wen remained *in statu quo* for about two years, when it began to increase rapidly in size, and was removed by the knife of the surgeon.)

In the course of his narrative, Dr. Buckley says that he happened to mention having seen Dr. Bryant, when instantly Dr. Newton denounced Dr. Bryant as an "unmitigated fraud." "He has no genuine healing power." He claimed that he himself had cured Bryant of a malignant disease with which he had found him suffering in a hospital ; that the said Bryant had acted as his amanuensis for some time, and had then left him, and ever since acted in opposition to him. Knowing that the manipulations of Bryant had been followed by some

extraordinary results in Detroit, our editor said to Dr. Newton:

"Doctor, if Bryant is an 'unmitigated fraud,' how do you account for the cures he made?"

"Oh," said the doctor, "it is all accomplished by the faith of the people, and the concentration of their minds upon his operations with the expectation of being cured. Now," said he, "nobody would go to see Bryant, unless they had some faith that he might cure them, and the moment he begins his operations with great positiveness of manner, and when they see the crutches he has there, and hear other people testify that they have been cured, it produces a tremendous influence upon them. Then he gets them started in the way of exercising, and they do a good many things that they thought they could not do, their appetites and spirits revive, and, if toning them up can possibly overcome the diseased tendency, they improve, and many of them get well."

"Doctor, pardon me," continued the clergyman, "is not that a correct account of the manner in which you perform cures which are connected with your wonderful works?"

"Oh, no," said he, "the difference between a genuine healer and a quack like Bryant is as wide as the poles."

The inadvertent admission of "the healer" to his interrogator brings out the following remarks:

"His (Newton's) theory about the spirits suggesting things is simply a mystical description of the operation of the laws of association. Those laws furnish the Indians, the Turks, the Hindus, and the old Scotch poets of Ossian's (?) time with their poetry, the harpers of Ireland with their music, Patrick Henry with his eloquence, the spiritualists with their nonsense, and exhorters and extemporaneous preachers and orators with their language, though a belief in either spirits or supernatural aid is a wonderful stimulant to their action.

"As Christians we believe that the Holy Spirit has constant access to our hearts and minds, moving upon us by arousing our emotions and stimulating and guiding our thoughts through the natural laws of mind. Thus we expect and rely upon His aid. To expect Him to give ideas *ab extra*, as these spiritists claim, and as Newton told me, is, as Wesley and all rational Christians have shown, fanaticism, ending in Antinomian debauchery or insanity."

Against this logic, we have naught to say—it has a Baconian ring about it. Were all our clerical brethren less ready to endorse "faith cures" as such, there would be no room for certain extravagant devices on the part of those who seek to unite the functions of both professions. We therefore congratulate the Rev. Dr. Buckley as being a pioneer in an almost unexplored territory.

THE DISEASE OF THE POTATO DIGGERS.

DR. W. ZENKER, of Stettin, has recently given a description (*Berliner Med. Wochenschrift*) of a "new disease" which affects farm-laborers, particularly those engaged in digging and gathering potatoes. Dr. Zenker calls it a "new disease" in the sense that it has not before been described. He believes, however, that it must have existed for a long time among the peasantry of Germany and all agricultural regions. The disease is

thought to be a neurosis of the locomotor apparatus of the feet and legs, the thighs and trunk not being affected. It is caused by the peculiar strained position into which the legs and feet are thrown while digging and gathering potatoes. The laborer, says Zenker, stoops down and supports himself upon the knees and feet. He moves about in this position with the knees strongly bent and feet strongly extended, and he keeps at this for hour after hour for many successive days. The position is not a natural or easy one, and any beginner who attempts it will soon feel a weariness and numbness in the limbs.

The result of this kind of labor is that in some cases one or both feet and legs become paretic, the paresis affecting both motion and sensation. The patient finds that one extremity feels heavy, cold, numb, and sometimes painful, and the foot drags in walking. The physician on examining it finds that the movements of flexion and extension are slow and weak, lateral motion is limited. The affected leg feels colder to the touch than the healthy one. Tests show a loss of pathic and tactile sensation almost complete. In some cases electric currents are but slightly felt, while both faradic and galvanic reactions, though present, are feebler than normal. The leg does not atrophy.

A case of this kind may rapidly improve, or it may continue almost in *statu quo* for several years; the patient still walks about, though with a limping gait. The treatment has, so far, consisted in foot-baths, massage, and electricity. It has not always proved successful.

Dr. Zenker reports in detail only five cases, but he believes that the disease cannot be a very rare one in the autumn months, and begs that other physicians practicing in the country will report the results of their observations.

We are unable to say whether any such affection as Zenker describes exists in this country. It has not been described as yet in any American text-book. It would be a matter of interest to know whether any of our readers have come across the disease.

THE GROUND FOR STATE INTERFERENCE IN REGULATING MEDICAL PRACTICE.

PROFESSOR HUXLEY, whose great scientific attainments have not evolved any false modesty as to the value of his own opinions, has set our English brethren by the ears in the matter of medical reform. In an address delivered recently at the London Hospital he speaks kindly of the Medical Council; he advises a preliminary technical rather than general training, and urges a greater specialization of teaching and of the profession. All of this is badly received by the medical journals, and the address is mildly censured as a "vacation effort."

But apart from these particular points, which have no great interest here, Professor Huxley touched upon another subject, which is of very great moment. This was the subject of the relation of the State to the medical profession. Upon what ground has the doctor a right to ask the State to interfere in the matter of regulating medical practice? is the question which he puts to his hearers.

Now, in many of the States at present efforts are making to secure the intervention of Government and the regulation of medical practice. It is important that

the reasons for making this demand be distinctly understood.

The ground for State intervention, according to Huxley, is not the protection of the public against incompetency or quackery. If such protection were advisable, he says, it is not practicable, as it would be impossible to prevent any one from buying drugs or seeking advice of whom he pleased. The right of the State to intervene is based on the fact, first, that it is of great importance to the community that no man shall die without the cause of his death being formally certified; second, that the law shall be able to appeal to recognized experts in civil and criminal cases; and, third, that the Government shall have a guarantee of the competence of persons appointed to the numerous medical appointments at its disposal. It is no interference with the freedom of medical practice if the Government says to the medical practitioner, "We will not accept your certificate of death; we will not regard your evidence as that of a medical expert; and we will not take you into our service unless you produce evidence which satisfies us of your medical competency."

The reasons thus expressed are, we believe, legitimate and unanswerable; but it follows that in order to make the people feel the need and justice of regulating medical practice, they must also appreciate the value of a registration of vital statistics. The further statement of Professor Huxley that a government cannot and should not attempt legally to protect itself against quacks is somewhat too strong. Not long ago a well-advertised quack in this city killed a man with an overdose of mandrake. Why should not Government apply preventive medicine to ignorant charlatans such as this man as well as to typhus fever?

THE MURIATE OF LIME IN THE TREATMENT OF SO-CALLED SCROFULOUS TUMORS.

OLD, but good remedies are often forgotten in the pursuit of the new. In Dr. James Sanders' treatise on scrofula and consumption, page 112, we read: "I think I have ascertained that the muriate of lime has a more powerful effect in removing indolent scrofulous tumors than any other substance used as remedy; but that when they become open sores it is almost useless. It is a very manageable substance, the dose of which may be gradually increased from five or six grains three or four times a day to two drachms in the twenty-four hours. And I have never observed it produce any disagreeable effects, except of the slightest kind, and then only after its use had been long continued and the quantity of the dose had become very great." Dr. Sanders' book was published in 1808, and he was one of the presidents of the Royal Medical and Royal Physical Societies of Edinburgh. He continues: "Six years ago I observed with admiration its effects in a young lady, who was so disfigured by these swellings that the apex of her head was that of a cone resting on her shoulders. During the use of the muriate for six months her neck resumed its proper shape, and there scarcely remained an unusual enlargement of any gland; and since that time I have never seen it administered in similar circumstances without producing beneficial effects. I have tried it frequently and

think it has always proved useful, sometimes eminently so. A young gentleman, aged nineteen, had the glands of his neck very much enlarged from his infancy; his skin was rough, fissured and oozing [with eczema], and he had all the pulmonary signs of incipient phthisis, with frequent attacks of hæmoptysis. During the use of the muriate for several months, the skin healed, the glands diminished in size, the pectoral complaints were removed, and the strength of his body was improved. A girl of nine years had the glands of her neck somewhat, but the parotid and tonsillary glands enormously enlarged, so that the latter seemed almost entirely to fill the fauces. She had occasional attacks of dyspnoea, teasing cough, copious expectoration of transparent, clammy, or frothy matter, when she began to take five grains of the muriate in solution, twice a day, and gradually increased the dose. The swellings soon diminished, and the pectoral complaints were much mitigated. At the end of six months she was taking nearly two drachms of the medicine a day, and seemed nearly well; three drachms seemed to cause squeamishness at the stomach, and the quantity was therefore lessened. She continued to take small doses for a year, when the visible tumors had almost disappeared, while the signs of the internal affection had significantly decreased."

MEDICINE IN MISSISSIPPI.

SOME time ago we called attention to some of the peculiar features in the practice of medicine in Missouri, as depicted with an honest and unsparing hand by the President of the State Medical Society. Our editorial received wide notice, and we have reason to believe that it produced much good, more especially in awakening other States to a little introspective study.

There has appeared in the *Mississippi Valley Medical Monthly* an article from the pen of Dr. G. S. Holmes, of Benton, Miss., entitled "The Medical Profession in Mississippi," from which we gather that medical practice in that State is in a not much happier condition than it is or was in Missouri. Dr. Holmes writes with much more than ordinary eloquence and force, and the picture which he draws, if in any way a true one, certainly deserves earnest attention.

There are in Mississippi about 1,800 doctors in a population of 1,200,000. This gives a ratio of 1 to 666, which shows that the doctors are quite numerous for a State which is not wealthy, and which has not a large population. Last year the Legislature passed a bill "to regulate the practice of medicine," and some congratulations have been extended upon the fact. Dr. Holmes, however, deplors it. The peculiar legal verbiage, he says, of the section calling for a license, made it *compulsory* upon the State Board of Health to issue a *license to every applicant* without regard to qualification, provided that "such application was duly sworn to, and accompanied, honored and substantiated, dignified and glorified by the paltry sum of ten cents." Under this section, therefore, nearly all of the one thousand eight hundred practitioners have obtained a license and are regularly constituted physicians, while, in Dr. Holmes's opinion, "two out of every five of this number are totally unworthy of the privilege." "We know," he says, "of no less than a half dozen M.D.'s in a radius of ten miles,

who, having failed generally at their former trades, have taken up the less honorable one of Mississippi medical practice."

"In the good old ante-bellum days," he continues, "of wealth, independence, and luxury in the South, the medical practitioner was regarded as possessing something of more than ordinary social status; not because his pocket jingled with the dross by which now a gentleman's principles and virtues are estimated, but from the less adulterated worth which attaches itself to moral and intellectual culture. The title of M.D. commanded respect from its significance alone, because it was but exceptionally deserving of it. But alas! the change 'twixt then and now. It is true that we are as yet in the wake of a terrible revolution, but can that explain the retrogradation of the poor commercial *trade* of to-day, which once characterized the intellectual, moral, social, and professional dignity of Mississippi? Ignored by the civil laws and unprotected from imposition, it is a compliment to the medical practice in this State to be admitted a respectable trade. There is not practised in the Union to-day an avocation of more subjection, servitude, and dependence than that of medicine in Mississippi. Under the civil laws of the State, a doctor is expected to do his practice for almost less than gratitude, and to place his claim for services upon the charity of the ungrateful, while he is ostracized and abused for exorbitance in his price, and taxed beyond his capacity to pay on the profits (?) of his profession. Ignored in all things else, he is never forgotten when needed in the *harangues* of petty courts for that professional opinion which he has made valuable to himself by years of laborious toil and study, to say nothing of the outlay of money."

We trust that our eloquent author looks too much upon the dark side. If he does not, there is need, as he says, that the profession organize for its own protection.

FATAL CATHETER FEVER.

At the opening meeting of the Clinical Society of London, Sir Andrew Clark made a communication of much interest upon the subject of what might be called "Fatal Catheter Fever."

He said that in 1870 a man, who was otherwise in good health, consulted him for slight incontinence of urine. He consulted a specialist, who found his prostate enlarged and his bladder unable to empty itself, and advised him to use a catheter. Four days later he was taken ill; the urine contained a little pus; pulse, 120; temperature 100°. After two days the temperature rose higher, the pulse became more frequent, and in eight or nine days he died; the bladder was inflamed, and the kidneys were reported to be healthy. Since 1870 Dr. Clark had seen four or five such cases every year. He had not been able to gather sufficient information on this malady, which was not very uncommon. He was not alluding, of course, to the slight rigors after catheterism, but to a fever which generally ended fatally.

In commenting on this class of cases the *Lancet* states that they do not occur in men who have been previously free from disease of the urinary organs. There is a history of chronic stricture, enlarged prostate, and vesical atony. The suggestion is made that there is, with this,

a chronic interstitial nephritis affecting especially the cortex. The slight irritant effect of catheterization sets up an acute nephritis, which ends in suppuration and causes death.

The "fatal catheter fever" is not, according to Dr. Clark, very uncommon.

News of the Week.

A SCOTTISH WEEKLY MEDICAL JOURNAL.—A weekly medical journal, called the *Edinburgh Clinical and Pathological Journal*, has been issued in Scotland, Drs. Graham Brown, Cathcart, and D. Bery Hart, being editors.

THE GERMAN CHOLERA COMMISSION.—Dr. Koch has applied for permission to continue his researches into the nature of cholera in India. This permission has been granted him by Bismarck, and he will start for Bombay when his work in Egypt is finished.

WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.—Dr. William O. Moore has been appointed Professor of Eye and Ear Diseases, in place of Dr. Charles Stedman Bull, resigned.

FLIGHT OF A BOGUS PHYSICIAN.—The daily papers state that W. H. Coney, who for three years past has been running a bogus medical college in Milwaukee, Wis., despite all efforts of the authorities to suppress the concern, has decamped, deserting his family. He was a hostler to a surgeon in the British Army, and gained some slight knowledge of medicine. He secured a bogus diploma, and soon after his arrival in Milwaukee began practising medicine. He opened a medical college, and turned out about sixty graduates, the most of whom are practising illegally in Wisconsin and Minnesota. Coney's bogus concern, through some hocus-pocus legislation, secured a charter from the Legislature, and all efforts to suppress it proved futile.

SURGEON-GENERAL JOHN B. HAMILTON, U. S. Marine Hospital Service, has been tendered the Chair of Surgery in the Georgetown Medical College, and signified his acceptance of the same, having resigned a similar position in the Medical Department of Columbia University which he was temporarily filling during the absence of Prof. J. Ford Thompson in Europe.

DR. JAMES R. LEWIS, the oldest physician of Luzerne County, died at his home in Trucksville, Pa., on November 3d. He had been in continuous practice since 1832.

MEDICAL STUDENTS IN THE LONDON SCHOOLS.—The lists show the matriculation of six hundred and ninety-three new students in thirteen medical schools, St. Bartholomew's and University leading.

EDINBURGH UNIVERSITY has nearly reached its three hundredth anniversary. In 1883 its students numbered three thousand three hundred and forty, and when its new buildings are completed it will be the largest university in the world.

ANOTHER SUCCESSFUL RESECTION OF THE PYLORUS.—Dr. Viktor V. Hacker, of Vienna, reports in the *Wiener Medicinische Wochenschrift* another successful

case of resection of the pylorus. The patient was a woman forty-six years of age, who had suffered from symptoms of pyloric disease for only a year. In June, 1883, the diagnosis was easily made of cancer, a tumor being felt. Billroth operated. The woman recovered, and is now (October) well.

PROFESSOR ACLAND, of Oxford University, has been made a Companion of the Order of the Bath. This has nothing to do with Professor Acland's contributions to hydrotherapy.

THE PHILADELPHIA MEDICAL CLUB is the title of a new Society recently organized in Philadelphia.

A CONGRESS FOR THE DISCUSSION OF CHOLERA QUESTIONS was held in St. Petersburg last month.

THE HEALTH OF THE ARMY; THE ARMY MEDICAL MUSEUM AND LIBRARY.—The report of the Surgeon-General of the Army for the fiscal year ended June 30, 1883, prepared by the late Surgeon-General Crane, has been made public. In a chapter on the health of the army during the fiscal year, the report says: "Among the white troops the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1,802 per 1,000 of mean strength, an increase of 123 cases per 1,000 over the number reported for the previous year, and 68 per 1,000 over the average decennial rate of admission. The total number of deaths from all causes reported among the white troops was 214, or 10 per 1,000 of mean strength. The total number of white soldiers reported to have been discharged from the service for disability was 879. Among the colored troops the total number of cases of all kinds reported was 4,689. The total number of deaths of colored soldiers reported from all causes was 26. The total number of colored soldiers reported to have been discharged for disability was 101. The total number of cases reported among the Indian scouts was 44, and the total number of deaths was 2. Diseases of the respiratory organs stand first in numerical importance, of which about sixty-four per cent. are catarrhs of the upper air-passages. Extremes of variation in temperature will account in part for the frequency of these diseases, but to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible. Wounds, injuries, and accidents stand second on the list of causes impairing the effectiveness of the army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments, which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per 1,000 higher than those reported for the German army, and 142 per 1,000 higher than the decennial rate of the British army. It is interesting to note that the colored troops make a particularly favorable showing in the small number of admissions for alcoholism and its results, exhibiting, as they do, a rate of only 4 per 1,000 to a rate of 76 per 1,000 of mean strength among the whites. On the other hand, in diseases of the nervous system they have an unexplained preponderance. The number of recruits reported to have been examined by army

medical officers and private physicians during the year is 5,964 white, 426 black, and 247 Indian scouts. The total number of rejections was for white 2,063, or 346 per 1,000 of the number examined, and for black 131, or 307 per 1,000; Indian scouts, none.

The additions to the library during the past year include 3,912 volumes and about 5,000 pamphlets, making the total number in the collection about 60,000 volumes and 68,700 pamphlets. Six hundred and thirty-eight specimens were added during the last fiscal year to the collection of the Army Medical Museum. Ninety-four of these were purchased, and 544 were contributions either by medical officers of the army or by civil practitioners and other citizens.

A DEPARTURE IN FRENCH JOURNALISM.—It is very rare that French journals take any notice of medical events in other countries than France. In a recent issue of *Le Progrès Médical*, however, appeared a very good account of the meeting of one of the sections of the "Association Médicale Américain," at Cleveland last June.

THE NEW CZECHISH UNIVERSITY at Prague is already in trouble. The students of the Bohemian and German schools are at odds and frequently quarrel. Lately the ill-feeling has extended to the Bohemian and German midwives, who are quarrelling over their teachers. Facts seem to justify the fear that the establishment of the new University would injure the peace and harmony of medical Prague.

THE YELLOW FEVER has about disappeared from the United States, but continues to hold sway among the Pacific coast States of Mexico. Assistant Surgeon Main, U.S.M.H.S., reports that the following Mexican cities and towns are suffering with the disease: Guaymas, Bazos, Jalisco, Manzanillo, Ixcatlan, Atar, Yuki, Altata, Acapulco, San Blas, La Paz, Culiacan, Mazatlan, and a number of the villages near the mountains. It has been particularly fatal among miners. In one camp of a hundred miners only nine are reported to have escaped death. In La Paz five thousand cases were reported up to October 28th, but the mortality was not given. The Governors of the infected States are taking the matter in hand and have issued very stringent orders against exhuming those who have died of yellow fever, and are doing everything possible to alleviate the suffering of their people by ordering free burials, paying the expenses of the sick poor, etc.

Sanitary Inspector Mainegra reports from Vera Cruz the inspection of the following named vessels bound to United States ports, up to October 28th: steamer City of Alexandria for New York, bark St. Cloud for New York, steamer California for New Orleans, bark Chapman for Galveston, bark Keewarden for Mobile, steamer City of Mexico for New Orleans, schooner Seguin for New Orleans, schooner Forest Home for Pascagoula, steamer Whiting for New Orleans, steamer City of Washington for New York—all in good sanitary condition.

Sanitary Inspector Burgess reports from Havana the inspection of the following named vessels bound to United States ports, up to October 27th: American schooner Nonpareil for Key West, Spanish brig Vilasar for Charleston—seventy days in port, twenty-five at a suspicious wharf, vessel disinfected; Spanish brig Maria Teresa for

New Orleans—fifty-four days in port, thirty at suspicious wharf, disinfected; Spanish brig Guadalquivir for Doboy, Ga.—thirty days in port, twenty-one at suspicious wharf, disinfected; American steamer Niagara for New York, American steamer City of Alexandria for New York, and schooner Grover G. King for Key West; Spanish steamer Pedro for Charleston, disinfected; Spanish steamer Apolo for Savannah, disinfected—these last two vessels were not at dock in Havana, but were from infected ports of Cuba previously, and were disinfected at request of their masters. There were twenty deaths from yellow fever at Havana during the week ending October 26th.

A NATIONAL HYGIENIC CONGRESS was held in the City of Mexico on October 10th, at which a petition was prepared for presentation to Congress, asking that the Constitution be amended by the addition of an article placing all sanitary regulations under the jurisdiction of the general Government. The proceedings of the Congress have not yet been received.

The State Department is in receipt of letters from the consuls at La Paz and Mazatlan, Mexico, dated October 18th, giving brief statements of the epidemic of yellow fever in their respective consulates. At La Paz the disease was very malignant during the month of September, there being 114 deaths from yellow fever, out of 122 from all causes. The Board of Health deserted the city for the mountains, and all communication with the outside world was cut off, so that exact facts are difficult to obtain, but it is known the disease was wide-spread through that section. The yellow fever at Mazatlan had about disappeared, and clean bills of health are furnished vessels sailing from that port.

Gibraltar has modified its quarantine restrictions, and now allows vessels sailing from the Brazils to coal under certain regulations. All vessels sailing from Gibraltar are required to provide themselves with a bill of health in such form as shall from time to time be ordered by the Board of Health, and as the circumstances in each case may seem to require.

Bermuda has had new quarantine regulations "made by his Excellency the Governor," under date of October 19, 1883. The islands are divided into two districts—Eastern and Western—and a health officer is placed in control of each. The gist of the regulations is contained in the sixth section: "Any health officer visiting any vessel arriving from a proclaimed port, and finding that there is no contagious or infectious disease on board, and that there has not been any such disease on board for one calendar month previous to her arrival, and that such vessel has not during that period held communication with any vessel on board which there was any such disease, or with any port or place at which such disease prevailed, may grant her *pratique* at once if satisfied it may be granted with safety to the health of these Islands, but if not so satisfied shall place such vessel in quarantine of observation for such time as may be necessary to enable him to determine whether she shall be kept in quarantine, or may be released with safety to the health of these Islands."

PERSIA AS A HEALTH RESORT.—Consul Benjamin, of Teheran, Persia, sends to the State Department an interesting account of the climate of Persia. He states

that during the past summer that country has been healthy and free from any but sporadic cases of the plague.

As regards the climate of Persia, he writes: "It may be called, beyond question, one that is generally conducive to a high average of health. The rice-growing provinces of Mayanderan and Gilan, north of the mountains and bordering on the Caspian Sea, are full of malaria and fevers of a malignant type. The natives, however, do not seem to be affected by it, except in the matter of chills and fever.

"In the neighborhood of the Persian Gulf, the intense heat, rivalling that of India, while tempered by the trade winds, is very relaxing, although not necessarily fatal to foreigners. But for the most part the kingdom is one of remarkable salubriousness. Persia consists of an immense plateau elevated an average of four thousand feet above the sea. This is intersected by numerous lofty, rugged, and barren ranges, soaring sometimes to sixteen thousand feet above the sea level. Eternal snow exists on their summits. The vast plains are generally covered with dense verdure, and are fed by the artificial currents brought from the mountain springs. The winter is short but characterized by high winds, and in many of the northern parts by violent snow-storms. The spring and autumn are mild and delightful. The summer is indeed hot, but the nights are always tempered by cool mountain breezes. By August 20th, the cooler weather of autumn commences. At Teheran, during this summer, the thermometer has ranged from 90° to 110° F. in the shade, but the air has been excessively, and uniformly dry. In the cluster of villages, nine miles from the city and thirteen hundred feet higher, at the foot of the mountains, called the Shiniran, or Light of Persia, the mercury has ranged from 75° to 90° F. in the shade at midday, rarely going above 85°, and falling to 70° at sunset.

After once becoming acclimated by the assistance of quinine, and the exercise of common sense in general habits, Europeans find such a climate healthful and agreeable. It is evident that with only ordinary knowledge and prudence, the average length of life of the native population could be greatly increased. There is a steady, although slow growth of the population. Phthisis is exceedingly rare. Small-pox exists, but determined efforts are made to increase the advantages of vaccination. The greatest mortality is among young children, resulting from uncleanness and carelessness in diet. Venereal diseases are widely spread and tend to perpetuate chronic and hereditary disease, especially affections of the eye. Notwithstanding this, however, the people are handsome, finely formed, and capable of great endurance. With mere regard to sanitary precautions, Persia might be regarded as one of the healthiest countries on the globe.

With the exception of the provinces above mentioned, it offers no dangers to the health of Europeans who do not indulge in dissipation, or who take ordinary care of themselves. It can be especially recommended to those afflicted with pulmonary complaints, provided they do not delay coming until the overland journey is too severe for their strength, a precaution too often disregarded by invalids as well as by their medical advisers.

CHOLERA IN CHINA.—It is reported that cholera has appeared in epidemic form in Peking.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 1, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. JOHN G. ADAMS, after the reading of the minutes, read a protest against the ruling of the President at the last stated meeting on the motion to rescind the resolutions adopted by the Academy in April, 1883. The minutes as read by the Secretary were adopted with the protest. The protest, on separate motion, was laid upon the table.

DR. ADAMS, Corresponding Secretary, announced the death of Frederick D. Lente, M.D., a corresponding Fellow.

THE PRESIDENT paid a touching tribute to the memory of Drs. Lente and Charles Wright, both of whom had prepared papers, to be read before the Academy within the coming winter, having a strikingly similar title. The paper prepared by Dr. Wright was on "The Duration of Life after the Appearance of Albumen or Sugar in the Urine," and that prepared by Dr. Lente on "The Duration of Life as Affected by Climatic Influences in Consumption."

DR. T. HERRING BURCHARD then read a

MEMOIR OF THE LATE FREDERICK D. LENTE, M.D.,

which was an appropriate tribute to the untiring energy, the scholarly acquirements, the sterling integrity, and the stable friendship of the deceased.

DR. F. N. OTIS then read a paper (see p. 480) on

THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING, WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

THE SECRETARY read a letter from Dr. James L. Little, whom the President had invited to participate in the discussion of the paper, but who had been unavoidably detained by professional engagements. Dr. Little referred to the great value of rapid lithotripsy and his success in its performance on old men who had suffered from urinary calculus for several years.

DR. E. L. KEYES opened the discussion, and said he thought the instrument devised by Dr. Otis was an admirable piece of apparatus, although he had not had an opportunity to test its practical working.

With reference to tolerance of the bladder to instruments he thought that was most satisfactorily demonstrated by Heurteloup, Civiale, Le Roy, d'Etiolle, and others. Civiale finally reduced the time to three minutes, and Sir Henry Thompson, using Civiale's data, had made the length of time of a single sitting not more than three minutes, and had shortened the intervals between operations. Up to Clover's time the instruments devised were designed for use in atonic bladders. The use of the large tube was due to Professor Otis. But the size of the tube is not at all essential, and he did not regard it as the key-note of the advantage of rapid lithotripsy. He did not regard any single thing as the essential in the operation. It was the crystallization of all the ideas in the brain of Professor Bigelow that made the operation distinct in itself. Bigelow thinks that the large tube is essential, but Dr. Keyes regarded many things as essential in order to make the operation successful. Dr. Keyes believed the operation can be performed with a No. 12 perfectly well, and was unable to see any particular advantage in using a larger tube to save a little time. The element of time has been thrown out by Professor Bigelow. According to Dr. Keyes' experience the use of a large tube had sometimes been followed by cystitis, and in cases in which cystitis did not follow the use of a smaller tube.

He thought it best not unnecessarily to distend the urethra. He took the point of second constriction of the urethra, about two and one-half inches from the meatus, as a guide for the size of the tube. One which will go easily through this portion of the urethra he regarded as the more appropriate size.

He was charmed with the efficiency and simplicity of the design of the apparatus exhibited by Dr. Otis, and should use it when the next opportunity presented itself. The instrument he used entirely was that with a strainer, and he had not been obliged to change the strainer during the operation. He thought it possible that the quantity of air which Dr. Otis' apparatus contained might be an objection, and suggested that if it could be used upside down the air in the tube could be gotten rid of.

DR. OTIS—It can be used in that way, and indeed it is the way in which I usually use it.

DR. KEYES then described Thompson's manner of using his instrument, and also his own method. Bigelow, Otis, and Reginald Harrison, of Liverpool, he thought were the only operators who used a large tube. If the tube is introduced into the bladder at once, of course a quantity of air may be carried in, and to avoid this he carries it down into the prostatic urethra only, then makes gentle pressure upon the bulb, which forces the air out, and, while this pressure is maintained, pushes the tube on into the bladder. As it enters the resistance offered at the end of the tube is quickly removed, the pressure causes the bulb to collapse completely and send a full stream of water into the bladder. Then make short washings; that is, squeeze the bulb lightly, and not give it a full grasp, which completely empties it. The bulb of Dr. Otis' instrument was small, and perhaps it would prove to be one of its greatest advantages.

It sometimes occurs that water escapes by the side of the tube, and as Dr. Otis' instrument then stood it might be that it did not contain sufficient water, and for replenishing could not be so well managed as Bigelow's. However, these objections could be very readily overcome, and doubtless had been anticipated already. But for cheapness, portability, transparency, and simplicity it excelled any which had yet been devised. Whether or not fine phosphatic dust would be thrown back again he could not say; but after all, if it was, it would not make any special difference as it readily passes out with the urine.

DR. OTIS thought that Sir Henry Thompson might be regarded as one who uses a large tube, because he employs as high as 28 or 30, certainly as large as the average of what he had just recommended. He agreed with Dr. Keyes concerning the disturbances liable to be set up by using a large tube in cases in which the prostate is enlarged; but, at the same time, he was unable to see why we should not have the advantage of the full size of the normal urethra when the prostate is not diseased. He believed division of the meatus was important in a majority of cases, and it should be performed beforehand, for the reason already given and for another, namely—that many of the irritations which have previously existed, and which simulate stone in the bladder, pass away after division of the orifice of the urethra.

With reference to the size of the bulb, he thought the smaller one desirable for the sake of portability, and besides it was least liable to get broken. Dr. Otis then demonstrated how the evacuator could be manipulated so as to meet the suggestions made by Dr. Keyes.

THE PRESIDENT then declared Drs. R. W. Taylor, C. H. Judson, R. W. Amidon, M. Josiah Roberts, and L. Emmet Holt elected as resident Fellows, after which the Academy adjourned.

THE MEMBERS OF THE PASTEUR MISSION TO EGYPT have returned.

Correspondence.

OUR LONDON LETTER.

(From our own Correspondent.)

OPENING OF THE WINTER SESSION AT THE LONDON HOSPITALS.—RELATION OF MEDICINE AND OF SCIENCE TO RELIGION—TONE OF THE INTRODUCTORIES—STATEMENTS ON RELIGION BY PROFESSOR ACLAND, DR. HANDFIELD JONES, F.R.S., MR. LE GROS CLARK, AND MR. GOULD—PROFESSOR FLOWER AND MR. CLARK AT THE CHURCH CONGRESS.

LONDON, October 10, 1883.

THE new session has opened with, perhaps, unusual success. The dissecting rooms are well supplied with subjects, and the schools are—at least the majority are—rejoicing over full entries. The opening day was this year remarkable for the tone of the introductory lectures. It has long been the custom at each school to open with an introductory lecture, professedly addressed to the freshmen, but inasmuch as the occasion brought together a large number of former students at the school, it was generally seized to speak to them also, and therefore the lecture was looked forward to as the event of the *annus medicus*.

A few years ago the daily papers began to report these annual lectures, and to this is perhaps partly due the fact that they have taken a wider and wider range of interest and importance. The public regards them as the exposition of medical opinion for the time being, so that if the lecturers were some year to meet beforehand and all agree to demand some right or the redress of some grievance, their united voice would perhaps be regarded as necessitating the change. At present variety characterizes the lectures, all subjects being deemed to come within their cognizance, on the principle, I suppose, of *nihil humani alienum puto*.

This year the introductions are remarkable from the fact that several lecturers have ventured to touch on the topic of religion, and show that true science is not in opposition. Considering the bold assertions which materialists have of late years made, it is refreshing to hear the other side from men of high standing in our profession. At King's College this seemed natural enough, as it was founded as a defence of orthodox views, to be carried on as a Church of England institution in contradistinction to unsectarian colleges.

Professor Acland, of Oxford, came up to deliver this lecture, and as he is President of the Medical Council, this official position, as well as his own learning and influence, would lend weight to his utterances. Admitting that the arguments of materialists were intricate as well as voluminous, and that often in the past the faith of religionists had rested on ignorance or superstition, he held that the progress of science had not in the least shaken religion, and pronounced the controversies respecting the relations between the two as the most fruitless of all except possibly purely metaphysical speculations. There spoke the physicist, will no doubt cry the philosophers. Dr. Acland quoted a beautiful passage from Dr. Latham (whom he pronounced one of the greatest clinical teachers this metropolis ever saw) to show the spirit in which students should master their work and stand related to their fellow-men. Latham said that when humanity warms the skill of the consummate practitioner, the interest, excitement, and intellectual pleasure of helping the sick, is "exalted into a principle and invested with a moral motive, and passes into the heart." Then asking, "What if religion should animate it?" he answered, "Why, then, happy indeed is that man whose mind, whose moral nature, and whose spiritual being are all harmoniously engaged in the daily business of his life; with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God."

Reminding his hearers that as Latham spoke, so he lived, and so he died, Dr. Acland proceeded to urge that too often, unhappily for mankind, the human element is permitted to overshadow the divine and the form allowed to seem more important than the substance. And yet, he said, the "essentials of spiritual life are simple enough. They may be and are hard to teach and hard to attain. They are taught chiefly by example, which implies individual attainment. They are acquired by practice, which means individual self-sacrifice." Then making his climax in Greek, as well became the Oxford professor, but might be, to a large extent, lost on a modern medical audience, he added: "They are summed up in those weighty words, *μετάνοια, πίστις, ἀγάπη*. These gifts, we are told, are not self originated—having life, they are born of other life, *ὁ καρπὸς τοῦ πνεύματος*." Then he said any education which has not brought before the student considerations of this spiritual life has been faulty and inadequate for him. "Any scheme of the universe condemns itself which leaves out of sight all that can be learnt of the character of a Heavenly Father from the study of the moral nature of man."

Dr. Acland was not alone—not even perhaps the most outspoken in raising the standard of orthodoxy which has this year been waved triumphantly at several of these introductory lectures. Thus, at St. Mary's Hospital, the veteran senior physician, Dr. Handfield Jones, F.R.S., devoted a considerable portion of his lecture to warning the students against prevalent forms of skepticism, and showing the evidences which he thought sufficient to establish the truth of Christianity and the historical truth of its great central miracle—the resurrection of Jesus Christ.

Again, at St. Thomas' Hospital, another venerable F.R.S., Mr. Le Gros Clark, delivered similar testimony to his confidence in a causative, intelligent law-giver, "beneficent and omnipotent, 'too wise to err, too good to be unkind.'"

To these examples I may add that one of the later generation—one of the young surgeons who may be regarded as a rising man, also gave no uncertain sound; for having dwelt at length on Nature, he commends her to the diligent study and to the imitation of his hearers, adding as a conclusion: "You will find that however secret her plans may be, when they are discovered and brought to light, they are such as only to excite our admiration as worthy of a God. Imitate her in this, too, and the pure in heart shall see God."

Many other topics were touched upon by the several lecturers, but the one I have considered has perhaps excited the most remark, as indeed it could not fail to do, as its interest is wider, deeper, larger altogether, affecting in fact all the race of mankind.

The lecture at the London Hospital was this year postponed to the 9th instant. Professor Huxley was the lecturer, and it was thought by some that, having thus nine days' notice, so to say, of the drift of medical opinion, he might attempt something in the nature of reply, or, at any rate, what might be so construed. Those who went in the hope of such a polemical display were, however, disappointed, for he used the opportunity to state his views on medical reform—and clear views he has on the subject, and you may be sure they were clearly stated, and the statement will serve to keep medical questions before the public.

As a pendant to what I have reported, I may mention another fact illustrating the present aspect of science toward religion. At the Church Congress which has just been held, Professor Flower, of the College of Surgeons, and Mr. Le Gros Clark gave the assembled clergy an account of the most recent scientific investigations and their bearing on questions of faith. They were listened to with much interest and their statements widely reported. Surely after this, and the stand made at the introductions, we shall hear no more the assertion that has often been rashly made, that the profession sympathizes with skepticism.

THE TREATMENT OF SCIENCE BY THE MILITARY METHOD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: IN THE MEDICAL RECORD of September 29th—prompted, confessedly, by Dr. Shufeldt's article on "The U. S. Medical Service," in the same journal under date of August 25th—Prof. Elliott Coues lets "drive" at the "Great Confederacy of Dunces," rather briskly, and with rifled guns.

We suspect something of the sort all along, but for fear of mistake we are told so in just so many words at the end. From the start the "great Confederacy" gets its share of the cannonading, but throughout it is the "second examination" that makes the thunders of the biggest guns. There is no denying the fact, the second examination gets well pounded.

Doubtless believing that he, like Dr. Shufeldt, has a "good case" and a "working vein"—however the two go together—Prof. Coues sets himself the task of showing that the "examination business" is "dangerous," "dubious," "futile," "superfluous," and "occasionally amusing." Whatever others may see, I, for one, fail to perceive the showing. I am unable to catch even the amusing feature. The picture which Prof. Coues draws of his experience at the "second examination" does not appear to me the least bit amusing, but it does appear to be saturated with "an audacious candor," eclipsing that of Dr. Shufeldt as the streaming radiance of the full moon does the feeble light of the glow-worm. Anyway, we know now just how *he* was examined. Knowing it, and assuming that the members of the Army Board are gentlemen favoring even-handed justice, should we believe that Prof. Coues' examination is a sample of second examinations generally? Such can hardly be possible. If so, who would mind them? Where would be the danger of hurting, of wounding the spirit of those delicate ones "worth the rest of the regiment?" Why, the super-sensitive soul of the fragile Keats could have stood the ordeal easily. Had Lord Brougham's criticism of the "Hours of Idleness" been as light, we would never have had the "English Bards and Scotch Reviewers." Had Dr. Shufeldt been assured of the same sort of an examination, it is reasonable to presume that he would not have indulged in so much of that anxiety which he quite graphically depicts. That he got cast the first time proves the difference.

Basing our inference on Prof. Coues' statements, it is found that the Army Board conducts examinations with varying degrees of rigidity—what the professor would call applying the rules best adapted to individuals. I say this because in one case a medical officer of "enviable reputation, respected by his associates, and faithful in the discharge of his medical and military duties," is "thrown" at an examination admitted to be "fair and just"; while another, with neither "fancy nor ambition for medicine," with his "head full of other things," who "cut off legs, made reports, obeyed orders, always in an automatic and perfunctory way," who "does not expect to be thrown," goes forward and is not thrown. Why, do you ask? The reason is supplied: "The examination was a nullity in my case, and properly so." Yet, strange to say, the subject of this examination tells us that "the report was wisely, justly, and courteously based on what I was." Granting the truth of this for argument's sake, one naturally wishes to know why that other officer, who was "wounded where he lived, in his very marrow," was not given the benefit of a little examinative "nullity," instead of throwing him by means confessedly so fair that they left him "not even the vantage-ground of complaint."

Prof. Coues tells us that in his own case no "forbearance" was shown; that the case "was simply decided on its merits." Admitting this, as one of the "brave boys" I beg leave to say that if no forbearance was shown in his case, then great injustice was shown in the

other, and the injustice lay not with the examination as a system, but with the members of the board.

Let me hurry up to add, however, that there isn't one of us dunces that believes the members of the Army Medical Board capable of inflicting an intentional injustice upon any member of the medical profession. Furthermore, speaking for one, I believe the members of the board *can* find out things "about a candidate that everybody did not know before, excepting his ability to pass an examination under every possible disadvantage." Referring *solely* to medical attainments, and taking Professor Coues' estimate of his own as absolute evidence, I believe everybody in Duncedom—and out of it—will concur that the board in finding him "qualified for promotion was either dazzled by his acquirements as a naturalist, or found it out, as he says, by "rising superior to it." If so, why did not the board apply the "scientific method" in the other cases and "rise superior" to them also? Dr. Shufeldt would probably have been willing—that is, if the thing was to be general, for I do not think he is the kind of man to ask for exceptional treatment.

In sober truth, Professor Coues makes a not altogether flattering showing for the Examining Board of the Army Medical Corps. To be sure, he lays it all on the "system;" but the evidence abstracted from his own statements shows that the board does not always follow the same system; and that, may be, is where the shoe pinches. Sometimes, according to him, the candidate "kicks the system out of court," and sometimes, both board and candidate get rid of the system by "rising superior to it;" and this, in special cases, is termed the "correct," that is, the "scientific method." Now, even a dunce can see that the doing of this requires "discrimination"—just what the board is claimed to have had in Professor Coues' case—and the exercise of discrimination presupposes both discriminative capacity and freedom of action. There isn't, then, so much the matter with the "system" after all, since one of the "correct" methods of applying it is to "kick it out of court."

The power to do this is vested in the board. If the board can do it once, it can do it as often as necessary. Then why not do it every time a good man comes up? Dr. Shufeldt is a good man—that I know personally—he is likewise a scientist of considerable attainments. Why not have given him a "nullity," too, especially as this would have been the "scientific method" as applied to men of his kind?

When boards work under a system which permits them the discrimination of rising superior to it, if needs be, one must expect the "Great Confederacy" to rise to a man and ask, why the medical officer that was "wounded where he lived, in his very marrow," is pronounced the victim of a "cast-iron system, too hard and military to be applicable to the requirements of his case?"

The second examination system may be cast-iron, but as long as it can be treated as a "nullity," can be "kicked out of court, be risen superior to"—while such convenient alternatives are usable what difference does its hardness make? One might add, however, that the alternatives just referred to, although "scientific," and therefore unmilitary, suggest, as applied to the "system," not so much cast-iron as elasticity.

In regard to examinations, everybody admits that there are many bad ones. Are there not also some good ones? It is possible to fluster a highly sensitive nature under "strain and stress," and it is possible to so shape questions as to cause the rejection of perfectly competent candidates. But do boards set out to do this? I think not. Let us suppose a candidate before the board—one of the highly sensitive sort. Let us suppose *him* like one of those described by Professor Coues. "Hundreds of his brother officers," "a thousand soldiers" know him by his work. "Not a clerk in the Surgeon-General's office but knows how that officer stands." Examining boards are supposed to be composed of men of intelligence and information. Army boards certainly are.

What, then, hinders the board from knowing what soldiers and clerks know so well? Go to! it does know.

But even if it do not, and refusing to avail itself of any of the alternatives referred to above, why can it not truly find out a candidate's qualification for promotion and report accordingly, instead of turning him adrift to be consumed by his Greek fire? This cannot always be done in an hour, nor in two hours, but it can be done, nevertheless. Presumptively, the board's object is to get at the facts; the board has been shown to have considerable discriminative power, backed by three powerful alternatives, defying all the cast-iron in any system; is it not fair, then, to suppose that it can take as much time as it chooses? Speaking for one dunce, I believe the language of the board toward such a candidate would be substantially this: "Doctor, hundreds of your brother officers know you, a thousand soldiers know you, the clerks in the Surgeon-General's office know you, and this board thinks it knows you as well as they. We propose fair-dealing. Professor Coues says you know your proficiencies and deficiencies better than we can find out. He says, moreover, that if called to give an account of yourself you will *do it*, fairly and squarely. You are now called to that account; give it fairly and squarely, and you will be treated according to your deserts." This may be cast-iron, but it savors so much of fair play that if the candidate flunked under it, it would be just as well to let him go and fight it out with his Greek fire.

It is not entirely irrelevant to ask, if the second examination is superfluous, why also is not the first? Professor Coues asserts: "Depend upon it, no board is going to find out anything about a candidate that everybody did not know before." Everybody, includes, of course, the faculty of his *alma mater*, supposing his *alma mater* to be one of the real nice, hard school, under whose eye he has been for twenty months, or more, and from whom he has finally obtained credentials of fitness. There is a chance here to chop some logic about competitive examination and survival of the fittest, before the first board, but the same will apply quite as well to the second.

It may be peculiar to a "brave boy" to believe that an examination conducted by a board seriously in quest of the true standing of a candidate is a fair test of fitness, if so, the "brave boy" need not be ashamed of it. It was an Oxford professor, I think, who said that the man who stands up pluckiest under a long and searching examination is the one surest to leave his mark behind him. Rough handling used up Keats, but it invigorated Byron and Webster.

Professor Coues tells us that on his theory Dr. Shufeldt does not belong to the army. "On the contrary, the army belongs to him, and nothing the army can give him is too good for him." That "he never ought to know a 'commanding officer,' nor hear sick-call blow, nor see a patient, nor wear a sword." What I make out of this—dunces are liable to err—is that Dr. Shufeldt, on account of the "spark," having special aptitude for scientific work, and the requisite qualifications to become a great naturalist, should be given "the necessary conditions of environment, and have the rules adapted to the individual." It may be this would foster the scientific spirit and encourage the pursuit of science; but it seems to me it would turn out awkwardly, unless the army is ready for two sets of officers, one to attend to duties, the other to cultivate science. If the medical corps of the army is ready to have placed on its roster certain names whose owners are to follow scientific pursuits exclusively, for the glory and benefit of the army, and the rest of the world, well and good. But add this feature, and eliminate the second examination, and it is likely the scientific side of the medical corps will outgrow the other. Nay, it is fair to say, that those "bad rats," a few of which Professor Coues insists are still to be found in the corps, would cover up many absences from sick-call and much ignorance of commanding officers with the engrossing exactions of ornithology and the like,

and not be any too well supplied with the "inner light" either.

So far as I know, there is no branch of the Government that makes a double provision. As Prof. Coues says, "So long as any man is voluntarily a member of an organization, civil or military, certain regulations and restrictions must be enforced in his case; but the greatest good to the greatest member is likely to come when rules are best adapted to the individual." The first half of this declaration is absolutely true; the other depends upon the character of the organization, and the issues involved. To every compact there are two parties. When a medical man enters the medical corps of the army, he makes a compact with the Government to perform certain duties for a *quid pro quo*. This compact has the same stipulations in each case. One cannot enter and say, "I am the graduate of a medical school, but I have the bent of a naturalist, I shall not go to sick-call." The Army Medical Corps is justly entitled to be proud of the rigor of its initial examination; where is the use in the cases of those intending to be naturalists?

Seriously, though, a compact made should be a compact kept; and Dr. Shufeldt is the sort of man to keep his. I don't believe he would hold his position with the exemptions previously enumerated. I may mistake, but I believe that he is willing to subscribe to the following creed, which I am "brave boy" enough to express openly before any audience, to wit: I believe that the man who writes himself "doctor of medicine" owes his first allegiance to medicine. That it is the bounden duty of the physician to prevent disease, and heal the sick to the utmost of his ability. I believe that the responsibilities resting upon him are so weighty that they leave him little time for other pursuits. I believe that medicine, being concerned with human life, cannot be consistently carried on as a "side show" to any other calling; that medical science is so profound, so wide-reaching, so engrossing, that it demands with tyrannous exactitude all the working hours of the most gifted of its followers. I believe, furthermore, that the soldier—the poor devil who seems to have been forgotten by all parties up to this time—who is, as Shylock says, "fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same summer and winter as a Christian is," has the inalienable right to the best knowledge which his medical adviser is capable of acquiring. I believe, too, that he has the imprescriptible right to demand that the surgeon who cuts off his leg shall do it not in an "automatic or perfunctory way"—not "with his head full of other things"—but instead, full of medicine and surgery, in which should be felt at all times a "vivid, resistless, and irrepressible interest."

Finally, whether anyone else subscribes to this creed, which may possibly be fortified by a "halter" and a "club," all the same it is *true*, and therefore not likely to be very unscientific.

JOHN GODFREY, M.D.

NEW ORLEANS, LA.

TRANSFUSION OF BLOOD AND INTRAVENOUS INJECTIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue for October 20th, an editorial gives a *résumé* of the transfusion of blood and intravenous injections of saline solutions. Very favorable reports as to the value of the latter procedure in post-partum hemorrhage are there given. The only method spoken of is that used by Heyden and described in the following words: "A glass funnel was used connected with a simple gutta-percha tube, ending in a metallic canula, which was made to penetrate the median vein, in which it was tied." This method and apparatus seems so very simple and easy of application that many physicians may try it in suitable cases.

For this reason I wish to record a failure of this

method in my hands and some precautions that may be used to prevent failure in the future.

In August of the present year Mrs. M—, a multipara, was taken in labor at 7 A.M., and at 12.30 M. was delivered, without assistance, of a dead-born child. The child had been dead, I judged, some twenty-four hours. In attempting to deliver the placenta I found it adherent throughout nearly its whole extent. Fearing post-partum hemorrhage I procured hot water, tincture of iodine, and a Davidson's syringe, and then, as there was some flowing already present, I proceeded to detach the placenta.

During this procedure some hemorrhage took place, but was speedily controlled by the iodine injections. My patient, however, was extremely blanched and prostrated. Every effort was made to get up reaction, but at the end of an hour she was evidently growing weaker. Assisted by Dr. Ashmead, I then attempted the injection of a saline solution. We attached a piece of rubber tubing two feet in length to a funnel; in the other end of the rubber tube inserted a piece of glass tubing about the calibre of the median vein. Binding the arm at the elbow I cut down upon the median vein and passed two ligatures around it about one inch apart. The one nearest the hand was tied tightly. The vein was then raised, an incision was made into it, the canula inserted while the saline solution was flowing, and the canula tied in the vein. The operation was not at all difficult and I can see no reason why the operation may not be done by the general practitioner whenever it is indicated. Much to my surprise, however, the solution did not enter the circulation and my patient did not rally. Every effort was made to force the fluid into the veins but without avail. By means of artificial respiration the patient's life was prolonged for about one hour, but with the means at our command none of the saline solution could be made to enter the veins.

The cause of the failure in this case I can only attribute to the absence in the apparatus of any means of giving a forcible injection. Had my rubber tube been six feet long instead of two, thus giving a pressure at the point of delivery of 2.7 pounds to the inch, the liquid might perhaps have entered the vein. Still better would have been a rubber tube with a simple bulb in its course by means of which pressure could be made on the column of fluid by compressing the bulb with the hand. Profiting by the failure in the past, I should make the following suggestions as to the operation for intravenous injections of saline solutions:

First.—A glass reservoir with a cubic capacity of one pint at least. The ordinary glass funnel is the most convenient reservoir that can usually be obtained.

Second.—A rubber tube of two or three feet in length, with a valveless bulb somewhere in its course. The bulb should be without valves because there will be less liability of entangling bubbles of air or foreign particles in the tube. The tube should be large in order that bubbles of air may readily rise through the liquid in the tube. If the calibre of the tube be small air may be forced down in front of the column of liquid into the circulation, instead of rising as it would do in a larger tube.

Third.—The canula should be of glass so that air might not be carried through it unobserved; it should be bent upon itself slightly to facilitate its introduction into the vein; and its delivery-point should of course be of about the size of the calibre of the median vein. This glass canula should be larger above than at its point of delivery, in order that bubbles of air that may enter at its point will rise upward easily.

An apparatus so simple and so inexpensive will be all that is necessary to do a successful transfusion with the saline solution. The cost of such an apparatus is not above a dollar and a half.

Without attention to these details in preparing the apparatus the operation will fail in a certain proportion of cases.

W. E. FOREST, M.D.

CAN MEASLES OCCUR FIVE TIMES IN THE SAME PATIENT WITHIN THREE MONTHS?

TO THE EDITOR OF THE THE MEDICAL RECORD.

SIR: The report of the visiting physicians to the Board of Managers of the New York Infant Asylum, as it appeared in *THE RECORD* last week, one could hardly believe was intended for publication. But, since it has been published, and is endorsed by men of well-known medical reputation, it renders it simply a matter of duty for some one to question such apparently unheard-of statements, namely, that in an epidemic of measles of less than ten weeks' duration about sixty per cent. of the cases were afflicted twice, nearly twenty per cent. three times, and one individual five times. I would simply ask the question, "Can this be possible?" I have carefully looked over well-known authors without finding an intimation that any one ever reported an individual suffering five separate attacks of measles. Ziemssen, after repeating the report made by Dyrsen, Bierbaum, Spies, and Home, of a child who had suffered measles three times within three months, says, "These cases, however, do not preclude the possibility of deception." He further states, "against the frequent and even customary recurrence of measles, especially espoused in recent times by Trojanowsky, we possess the strongest evidence of good authority. I mention only the names of Berndt, Thuissink, Schönlein, Mayr, also Schott and Bortscher, with whose experience my own thoroughly coincides." Even Panam, from his immense number of observations upon people of every age, has not been able to report a single case of a second attack of measles. The experience of Rosenstein testifies "that he has for forty-four years, and Willan that he has for more than twenty years devoted the closest attention to eruptive diseases, without meeting with any one who had had for the second time measles accompanied with fever." This is strong testimony even against second attacks. But if we admit that other major exanthemata can attack an individual a second time, we must admit the same of measles. That a second attack of measles is possible but rare is testified by Gregory, Eberle, Dewees, Squire, Ringer, Bartholow, Hartshorne, Niemeyer, Meigs, and Pepper. We all know how easily an error can and will be copied; when it is indorsed by fourteen respectable physicians it is time we found out whether or no it is an error.

While intending in this communication to call attention to and bring out some testimony respecting the recurrence of measles, I take the opportunity to protest against a statement in the report under consideration, which I think the signers will, on reflection, confess to be unfair, the statement, namely, which they have italicized, "No case of scarlet fever has occurred in the institution." On October 4th, a child died, and Drs. Campbell and Carlyle, by order of the coroner, made an autopsy. They reported that the child had died from scarlet fever and diphtheria. This was the first case of diphtheria discovered in the institution, and there is no doubt whatever it had existed for some time previous. Now the gentlemen who make the statement that no scarlet fever has occurred in the institution had not sufficient opportunity to decide whether or not the case cited was or was not that disease. The child, as above stated, died October 4th; Dr. Warner's daily service commenced October 3d; Dr. Fowler's, October 5th; and Dr. Bradley's on October 10th. I ask these gentlemen, seriously, if it is fair in them to dispute *on hearsay* the opinion of two reputable physicians.

During the Infant Asylum troubles some efforts have been made to create dissension among the doctors; equally with any member of the medical profession I deplore the calamity that has befallen the Asylum; but let us, as medical men, discover what scientific facts there are and leave the fighting to others. Respectfully,

E. F. BRUSH, M.D.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: At the annual meeting of the Board of Managers of the New York Infant Asylum, held in January last, the President, Mr. Clark Bell, was authorized to reorganize the medical department. In the discharge of this delegated authority, Mr. Clark Bell offered places upon the medical staff to Drs. Alonzo Clark, T. Gaillard Thomas, Fordyce Barker, Lewis A. Sayre, Wm. T. Lusk, Wm. M. Polk, Wm. M. Chamberlain, Allan McL. Hamilton, Fred. A. Sturgis, Andrew H. Smith, George F. Shrady, Clinton Wagner, Charles S. Ward, Lewis H. Sayre, Ed. L. Partridge, Cyrus Edson, Thomas E. Satterthwaite, G. M. Hammond, J. W. Wright, Benj. F. Dawson.

All of these gentlemen declined to accept the positions offered them, or, having accepted them, resigned, when they learned of the action taken by the Board of Managers in reference to the former medical committee.

Since the completion of the reorganization of the medical department by Mr. Clark Bell, the following named members of the staff have resigned, viz., Drs. George M. Lefferts, J. H. Ripley, George S. Conant, Paul F. Mundé, Wm. H. Welch.

Since July 1st, the Mount Vernon branch of the asylum has filed 82 death certificates of children with the proper town authorities. The number of children has thereby been reduced from 225 to 143, and the income of the asylum has been diminished by about \$18,000.

The scientific work of the medical staff (as distinguished from its practical work), so far as it has come to my knowledge, is comprised in the original and marvelous contribution upon the subject of measles contained in the report upon the "Epidemics at the New York Infant Asylum," etc., published in your issue for November 3d.

I quote from this report, as follows: "Number of individuals who had measles, 203; of these 124 had measles twice, 248 cases; 34 had measles thrice, 102 cases; 1 five times, 5 cases."

To appreciate fully the scientific value of these statistics, one must bear in mind the following facts, which are found in the report: "The measles appeared early in August." The report was made up on "October 25th." Consequently, all of the above-cited cases of measles and the recurrences must have taken place within a period of three months. But, who vouches for the correctness of these hitherto unheard-of observations? I search the report in vain for an answer. The four physicians who sign the report state that their duties were begun upon September 29th, October 3d, 5th, and 10th, *i.e.*, during the ninth and tenth weeks of the prevalence of the epidemic, and within three weeks of the date at which the report ends. Surely, these gentlemen do not mean to have us believe that all of these cases of measles occurred under their observation during these three weeks? On the other hand, if any of them were observed before September 29th, what right have these gentlemen to publish this as a portion of their "experience?" Why does not that portion of the medical board on duty from "early in August" to "September 29th," make public its statistics?

I trust that the full details of this epidemic, which doubtless will become historic, may be given to the profession. Yours, etc.,

HENRY D. NICOLL, M.D.

7 WEST THIRTY-NINTH STREET, November 6, 1883.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In our communications to the medical press concerning affairs in the New York Infant Asylum, we have directed our attention mainly to what we considered as great mismanagement on the part of the president. Our action concerned physicians generally, and all managing boards of charitable institutions, and we did not wish that it should be diverted from the main issue by professional

scuffles, in the excitement of which attention should be drawn from the main cause of the disturbance.

But in the interests of literary and medical exactness, we are obliged to notice the communication in your issue of November 3d, regarding "The Epidemic at the New York Infant Asylum and the Report of the Medical Board."

The report is so general in its terms that we do not feel quite sure whether the "certain partial statements in the medical press" refer to what we have written; yet we think we may assume this to be the case, since our communications concerning the Asylum have, from the nature of the circumstances, been prominent. We can say without hesitation that we have facts and figures behind all statements made, as well as more facts and more figures to be used if the occasion requires.

The physicians who sign the report of "The Epidemics" give what they term a tabular statement of *our* experience with measles. Yet if we examine the text we shall see that most important medical events are subscribed to by physicians who have seen little of them, and the report is approved by other physicians who have seen less.

Reports from hospitals and public medical institutions are supposed to furnish valuable medical experience for general professional use. It is expected that such experience will have been the fruit of close and careful observation, and go to make up material for reference and medical history. But Dr. Fowler has only been making daily visits since October 5th, Dr. Bradley since October 10th, and Dr. Warner, who was appointed about September 25th, has been making daily visits only since October 3d. The report, however, refers to cases of measles which occurred from the first of August to the last of September, before these gentlemen had commenced their visits. How can the tables then be designated as "*our* experience with that disease." Would they themselves receive such testimony concerning any debateable incidents of disease? As to our proceedings at Mount Vernon, since they are mentioned in the report, we would refer to the *New York Medical Journal* of October 27th for further particulars. We were not members of the medical board, and when we offered our services the epidemic was under full headway.

It was stated that there were 203 cases of measles from August 1st to October 25th, the date of the report; 124 patients had measles twice, 34 had it once, and one patient had measles five times. These are statements of unusual interest, and naturally lead to an examination of the literature concerning recurring attacks of rubeola. Such recurrence has greatly interested those who have studied contagious diseases. Says Dr. Louis Thomas, Professor of the Polyclinic in Leipzig ("*Ziemssen*," vol. ii., p. 42): "Second attacks of measles are, according to the experience of most observers, exceedingly rare, as much so as second attacks of variola, scarlet fever, varicella, etc." Nor can we regard as incontestable all the cases of second attacks which are recorded. Against the frequent and even customary recurrence of measles, especially espoused in recent times by Trojanowsky, we possess the strongest evidence of good authorities. I mention only the names of Berndt, Thuessink, Schönlein, Mayr, also Schott and Bartscher, with whose experience my own thoroughly coincides. Even Panum, from his immense number of observations upon people of every age, has not been able to report a single case of a second attack of measles. The experienced Rosenstein testifies that he has for forty-four years, and Willan, that he has for more than twenty years, directed the closest attention to eruptive diseases without ever meeting with any one who had had for the second time measles accompanied by fever. Dr. Eberle witnessed but one unequivocal example, Rayen mentions three instances, Dr. Hare one, Dr. Condie several, Dr. Downs is doubtful, except where the first attack may have been the rubcola *sine catarrho*, and Guersent and Blache have seen infants with measles twice in the same year. Further

on Louis gives the names of a number of those who believe in a second attack, and basing his further remarks upon this, says that cases of a second attack may be divided into such as appear a long time after the first attack—that is, at least a quarter or half a year, or generally much later, even from twelve to eighteen years afterward—and into such as occur as early as even a few days after the first attack, or, at most, from three to four weeks afterward.” He then gives the names of various authors who report such cases. “Here, if the diagnosis was correct, there is no doubt of a second infection. On the other hand, a subsequent infection in cases of the second sort is less certain, they should rather be regarded as mere relapses, and be estimated in the same way as the well-known relapses of typhoid fever.”

As is evident, the recurrence of measles even once is considered doubtful by many, and we may therefore well apply the words of Mr. Clark Bell, which he used concerning the healthfulness of the Mount Vernon Home in 1882, to the one patient who had measles five times in less than three months, and say that it is “really phenomenal as compared with other institutions.” It would seem most accurate to place this case in the second class of Louis.

The report says: “While there appears to be several sources from which the diseases were introduced to the Asylum, there is no certainty respecting any of them. Until the present time the New York Infant Asylum has been remarkably free from contagious diseases, and they have not spread. In 1882 there was one case of diphtheria and one of röteln. In 1881 there were two cases of diphtheria. In 1880 there was one case of diphtheria. At the Sixty-first Street home, in the same year, there were two cases of diphtheria in January, which were quarantined and promptly recovered. It is said there were also a few cases of variola.”

In 1879 whooping-cough had extended in the town of Mount Vernon, where it had been epidemic about a year. It appeared in an epidemic form in the asylum, and about twenty-five cases of variola also showed themselves there in the same year. We have had scarlet fever and diphtheria at different periods in the different branches of our institution, but they have not prevailed. We have attributed this in a considerable degree to the immediate isolation of even doubtful cases.

Our search for the cause of the recent epidemic led to the following facts, which seemed sufficiently to account for its origin:

Maggie —, a child from Sixty-first Street branch of the asylum, aged one year, ten months, and two days, entered Mount Vernon July 30th in the afternoon. This child was in the first pavilion on the front side of the main building. On August 1st an eruption appeared on the child; it had a temperature of 105°. The child was examined and returned to the ward, where it remained until the next morning, when it was placed in a small room at the rear of the same building, immediately adjoining the sewing-room. This child had diarrhoea, coryza, conjunctival congestion, and bronchitis. On the 11th of August Mamie —, aged two years and six months, in the same end of the ward, had coryza, bronchitis, enterocolitis, and a temperature of 105° to 106°. She was sick in the same ward for twenty-four hours, and then transferred to the infirmary. Emma S— was the third case, and was sent to quarantine August 15th, from the same ward, after which the epidemic began to spread more rapidly.

The report states that the average mortality from measles, according to the best authority, is twelve per cent. In these statistics of measles, based on the mortality among a large number of cases, the inference is evident that those cases of measles are included in which death results from some of the complications which not infrequently attend the disease. There were 203 individuals who had measles at the Home, and of these 48 died—6 died of diphtheria when convalescing from mea-

sles. Forty-eight deaths would give a mortality of 23.05 per cent.; but the mortality of measles depends so much upon hygienic conditions and treatment that it is necessary to compare epidemics which occur under similar circumstances to decide whether the mortality be large or small. If by an average mortality is meant the figures obtained by adding the mortality occurring among a given number of cases, part of which were in a crowded hospital and part in isolated dwellings, and drawing deductions from these, it is evident that any conclusions from such a source would be almost useless. Some statistics concerning the mortality of measles might be given as found in books, but all physicians know that they do not expect to lose their cases of measles when the surroundings are of the most desirable character, whereas in “hospitals and barracks, in a word, in too crowded localities, the prognosis of measles is less favorable.” “The mortality of measles in general is as a rule slight.” Taber instances the epidemic at Schorndorff in 1827-1828, and places the mortality at 1.8 per cent. in 2,100 cases; Gaissler 2.1 per cent.; others at 4.5 per cent., 2.4 per cent., and in the restricted accommodation of the Children's Hospital at Stockholm of 131 cases 36 per cent. died.

The Home at Mount Vernon is finely situated on an elevated ridge which slopes east and west, depressing southward. It has a subsoil of gravel and has natural drainage into a running brook. There is a large main building, an old building near, and five cottages, besides a “Sanitarium.” It was not a hospital until made so by the epidemic. Whether the mortality was large or not under these circumstances we leave to further investigation; the fact still remains that the true method of managing epidemics is, if possible, to prevent their development.

We have only considered a few points in the report on “The Epidemics at the New York Infant Asylum,” and we cannot intrude too much upon the space of THE RECORD. We believe it is in the interest of physicians to consider whether the questions now pending concerning the New York Infant Asylum do not interest them closely, particularly those who are connected with charitable institutions.

JOEL FOSTER, M.D.,
WILLIAM N. BLAKEMAN, M.D.,
FRED. A. BURRALL, M.D.,
E. A. GOODRIDGE, M.D.

WHY MUST DISTINGUISHED MEN ACCEPT SMALL FEES?

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In a letter to THE RECORD for October 20th, Dr. E. C. Wendt has criticised the status of the medical profession of Chicago in such a way as to suggest that he is a close observer, for, to our shame be it said, the doctor has struck the key-note of the chief obstacle to professional advancement in this city. There are men of the highest eminence in this city who are in the habit of charging the nominal fee of a dollar for office consultations of all descriptions. Prescriptions for gonorrhoea, syphilis, and everything else, are scratched off indiscriminately by these mentors (?) for a dollar apiece, and set afloat to bob up occasionally as a grim accusation against some of us poor devils whose consciences are sufficiently callous (or better, who have sufficient self-respect) to enable us to charge ten dollars for a prescription for gonorrhoea. There are men in this city who will give ether or chloroform for a fee of two dollars; men too, who occupy good positions. It is not pleasant to be informed that “Prof. So and So only charged me such a fee,” etc. Many physicians make night calls for a couple of dollars. Now, under such circumstances, what is to be done by those who must practise for bread and butter? They must either work for nominal fees, or go to the wall. Not very pleasant, is it? But it is true. Probably the worst ele-

ment of all is the average German physician, who works for the most trivial fees as a rule. Not that I would slur our German *confrères*, but I would most emphatically remind them that their profession has more claims upon them than their nationality. They should not do American practice for German fees. Why they have imported the German fee-bill it would be difficult to say, but practically, that is what they have done in this city, at least. Dr. Wendt's suggestion, that the "doctors charge more," is a good one, but I fear he can never make the "pigs in the clover-patch" see it. Verily, between high-toned (?) and low-priced "professors" (save the mark), and free clinics and dispensaries, the young man with a "small, but growing (?) practice" has a hard road to hoe, and must make gynecological examinations, and treat stricture of the urethra and piles at two dollars the sitting, or purchase Tanner's secret, and learn to live on air and professional "ethics."

ONE OF THOSE

"WITH THE SMALL BUT GROWING, ETC."

CHICAGO, October 23, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 27 to November 3, 1883.

MCKEE, JAMES C., Major and Surgeon. Relieved from duty in the Department of California and assigned to duty as Medical Director, Department of the Columbia. S. O. 249, par. 5, A. G. O., October 31, 1883.

PRICE, CURTIS E., Captain and Assistant Surgeon. Assigned to duty at Fort Custer, M. T. S. O. 187, par. 1, Department of Dakota, October 25, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 6, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
October 30, 1883.....	1	61	55	6	29	43	0	0
November 6, 1883.....	1	36	38	4	19	31	0	0
<i>Deaths.</i>								
October 30, 1883.....	0	22	9	5	7	28	0	0
November 6, 1883.....	0	16	6	4	3	19	0	0

SOME OF THE MEDICAL FATHERS IN NEW YORK.—As an item bearing on the longevity of medical men, it is gratifying to look over a list of medical worthies in this city who have reached their "three score years and ten." The majority are in good health, and not a few are actively engaged in professional pursuits. We append their respective ages as computed from the "Biographic Dictionary of Physicians." Willard Parker, 83; A. C. Post, 77; J. G. Adams, 76; William Detmold, 75; S. G. Hubbard, 75; Isaac E. Taylor, 71; Austin Flint, Sr., 71; Frank H. Hamilton, 70; and J. Martin Sims, 70.

DEAFNESS AMONG SCHOOL CHILDREN.—A second edition of "Causes of Deafness among School Children and its Influence on Education, with Remarks on the Instruction of Pupils with Impaired Hearing and on Aural Hygiene in the Schools," by Samuel Sexton, M.D., has been issued by the Bureau of Education, Washington.

DR. PAUL F. MUNDE has resigned from the New York Infant Asylum.

TRANSACTIONS OF THE MEDICAL SOCIETY OF GEORGIA.—This Society was particularly fortunate, at its session of 1883, in the number and diversity of valuable articles presented for consideration. Many of them exhibit a considerable degree of thought and research on the part of our Southern friends; and all show that the "Empire State of the South" is not behind in the advancement of medical science. The official "Transactions" form a handsome octavo volume which merits more consideration than mere shelf-room. The Society has offered a prize of \$50 to Georgia physicians for the best essay presented before its next annual meeting.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF INDIANA.—The present volume of "Transactions of the State Medical Society of Indiana" contains a number of interesting papers presented at the meeting in May. Sponge-grafting, bacteria, typhoid fever, Bright's disease, injuries to the head, and laceration of the cervix are a few of the variety of subjects ably discussed. Probably the most entertaining is a communication from Dr. Lopp, of Columbus, detailing some of the blunders of quacks in Indiana. In order to prevent a continuance of such blunders the Committee on Legislation recommends State examinations of all who wish to practise medicine.

THE DEATH OF M. THUILLIER.—It is not generally known that M. Thuillier, the young physician who died while serving on the cholera commission in Egypt, had already made some original and valuable discoveries in preventive medicine. It was he who discovered some time ago the microbe which causes the *rouget* or typhus in swine. At the Académie de Médecine M. Bouley recently read a letter from M. Maucuer, a veterinarian at Ballène, to the effect that by cultivating this microbe a vaccine had been found which had proved perfectly efficacious in protecting the swine from typhus.

PROPAGATING CANCER BY SEXUAL INTERCOURSE.—Dr. T. Gaillard Thomas says in answer to a question by one of his clinical class: There is undoubtedly great danger of propagating cancer by sexual intercourse, and repeated instances of cancer of the penis being contracted in this way are on record. The slightest abrasion of the penis may be sufficient for the absorption of virus from the malignant growth, and the husbands of women suffering from cancer of the uterus should, therefore, always be warned against intercourse with their wives. This, as you see, is a matter of very considerable importance, and I am glad that the point has been suggested.—*Medical Review.*

THE HYPODERMIC SYRINGE.—Dr. Frank D. Stevens, of Lynn, Mass., writes:—"I have never had any trouble with my hypodermic syringe since I have adopted the method of adjusting a rubber tip to the lower extremity of the syringe. For this purpose I use the upper two-thirds of a common rubber tip such as is found upon an ordinary medicine dropper. In this way the syringe is kept absolutely tight, and if care is taken to leave a little of the solution in the syringe after using, the packing will remain moist and pliable for a long time."

A FREQUENT MISTAKE.—A writer points out the "verbal pitfall" into which many fall, of speaking of malaria as though it were a disease instead of a cause of disease.

THE DIGESTIBILITY OF LOBSTERS.—Dr. Norton Folsom writes (*Boston Medical and Surgical Journal*) that while in service at the Taunton Lunatic Hospital he had charge of the diet of about four hundred and fifty patients. During the plentiful season, all patients not acutely sick had well-boiled plain lobster once a week. Not a single instance of digestion disturbance occurred in consequence. Dr. Folsom thinks that lobsters, if fresh and well boiled, are a wholesome food for all without a special idiosyncrasy against them.

The Medical Record

A Weekly Journal of Medicine and Surgery

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NEW YORK, NOVEMBER 17, 1883

Whole No. 680

Original Articles.

TYPHOID FEVER IN NEW YORK CITY.

By FRANCIS DELAFIELD, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICAL MEDICINE, NEW YORK.

TYPHOID fever is a disease which seems to be fairly endemic in New York, although it is much more prevalent in some years than in others. If we turn to the records of the Board of Health, we find that the mortality from typhoid fever, since the year 1854, has been as follows:

Year.	Deaths.	Year.	Deaths.	Year.	Deaths.
1854.....	136	1864.....	661	1874.....	275
1855.....	139	1865.....	513	1875.....	348
1856.....	133	1866.....	514	1876.....	283
1857.....	141	1867.....	345	1877.....	275
1858.....	176	1868.....	326	1878.....	245
1859.....	206	1869.....	378	1879.....	178
1860.....	212	1870.....	422	1880.....	241
1861.....	234	1871.....	239	1881.....	446
1862.....	494	1872.....	364	1882.....	362
1863.....	531	1873.....	295	1883 (to Oct. 1st)	274

The disease was most prevalent in the years 1863, 1864, and 1865, the same years during which typhus fever existed as an epidemic in New York.

The time of year during which the disease prevails can be seen from the following table of

CASES REPORTED AT THE SANITARY BUREAU.

	1878.	1879.	1880.	1881.	1882.	1883.	Total.
January.....	43	37	22	42	46	47	237
February.....	27	21	31	23	30	25	157
March.....	16	19	33	58	25	48	199
April.....	29	21	21	82	22	26	201
May.....	24	23	37	50	25	29	188
June.....	25	27	22	31	20	28	153
July.....	36	24	39	63	40	93	293
August.....	98	53	46	115	96	244	652
September.....	89	74	63	132	117	356	833
October.....	105	62	64	138	147	...	...
November.....	62	34	73	129	68	...	...
December.....	44	37	57	102	50	...	...
Total.....	598	432	508	965	686	...	...

It appears that while cases of the disease occur in every month, yet that August, September, and October are characterized by a large increase in the number of patients. In order to obtain a still more accurate idea of the prevalence of the disease, I have had prepared some statistics of the cases which have occurred in the hospitals during the years 1877 to October 1, 1883:

HOSPITALS.	1877.		1878.		1879.		1880.		1881.		1882.		1883 to Oct. 1.		Mortality, per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Riverside.....	8	4	20	8	12	4	9	1	62	6	11	1	13	4	20.7
Bellevue.....	49	17	31	11	11	4	22	10	52	16	105	28	41	15	32.4
Roosevelt.....	16	4	11	3	13	1	14	0	27	11	54	17	12	6	36.8
New York.....	12	2	7	2	12	2	19	7	27	5	11	3	19	2	21.4
St. Luke's.....	5	1	8	2	7	2	8	3	19	3	29	9	9	2	25.8
St. Vincent's.....	14	1	8	2	6	0	9	4	20	6	14	2	17	8	25.9
St. Francis.....	20	7	24	4	17	2	18	6	56	17	71	11	57	9	21.3
Mt. Sinai.....	11	1	15	2	36	8	11	2	56	9	18	4	22	3	17.1
Total.....	135	37	124	34	114	23	110	33	319	73	313	75	190	51	
Percentage of mortality.....	27.4		27.4		20.1		30.0		22.7		23.9		26.8		

Altogether 1,305 cases.

From this table it will be seen that the disease prevailed during the years 1877, 1878, 1879, and 1880 to a moderate extent, and with a varying degree of mortality, the year 1880 being marked by the highest percentage of mortality. In 1881, 1882, and 1883, although the whole number of cases was greater, yet the mortality was not very great.

In determining the age of the patients from the hospital records, it must be remembered that the regular population of these hospitals consists of adults, children being admitted only in small numbers. Allowing for this circumstance, the relative frequency of the disease at different ages has been as follows:

5 to 10.....	49	30 to 40.....	186	60 to 70.....	8
10 to 20.....	336	40 to 50.....	77	70.....	4
20 to 30.....	604	50 to 60.....	16		

Etiology.—The city of New York is not a favorable field for studying the etiology of this disease. The entire city has the same water-supply, and a large part of it the same system of sewerage. A considerable number of the cases originate outside of the city, and are taken sick here. The determination of the local causes in the city will probably be facilitated by the investigations which are now being carried on by the Board of Health.

LESIONS.

Intestinal lesions.—The regular lesions of the solitary and agminated glands of the ileum were in most cases fairly developed. Some of the patients died while these glands were only swollen, some while the sloughs were adherent, some after the ulcers were completely cleaned off. The changes were, however, even in the worst cases confined to the glands, with sometimes a little infiltration of the surrounding tissue. The large infiltrations of the intestinal wall, which occur in some epidemics, have not come under my observation. But in a considerable number of the fatal cases the intestinal lesion was inconsiderable; only a few swollen agminated glands with partial ulceration.

Perforation of the intestine with peritonitis has not been of common occurrence. In one case the perforation was through an ulcer in the wall of the vermiform appendix.

In the colon, enlargement and ulceration of the solitary glands was found only in five cases.

The mesenteric glands were swollen in all the cases, sometimes more sometimes less, generally corresponding to the degree of the intestinal lesion. When the glands were very much swollen there was sometimes a little fibrine on the peritoneum over them; in one case this had extended to a general peritonitis. In two cases these glands had suppurated and produced local peritonitis.

The spleen was soft in all the cases, usually enlarged, but sometimes of normal size or even small. In one case, a boy eight years of age, the spleen was ruptured with large extravasation of blood into the peritoneal cavity.

Croupous inflammation of the colon was present in one case. The lower two-thirds of the colon were coated with a uniform layer of fibrine.

General peritonitis, without perforation of the intestine, or suppuration of the mesenteric glands, was seen in one case.

The parotid glands have not been inflamed in any of the cases which I have seen.

The liver in many of the cases was enlarged, with some parenchymatous degeneration of the hepatic cells.

The kidneys in most of the cases were the seat of more or less severe parenchymatous nephritis; but these lesions of the kidney did not always produce changes in the urine during the life of the patient.

the dependent portion of the lungs was much more marked, and the lung-tissue was at the same time dense and unaërated. A few pus-cells, a little fibrine and granular matter were often to be found in the air-vesicles of the congested portions of lung.

In two cases the posterior portions of the lungs were

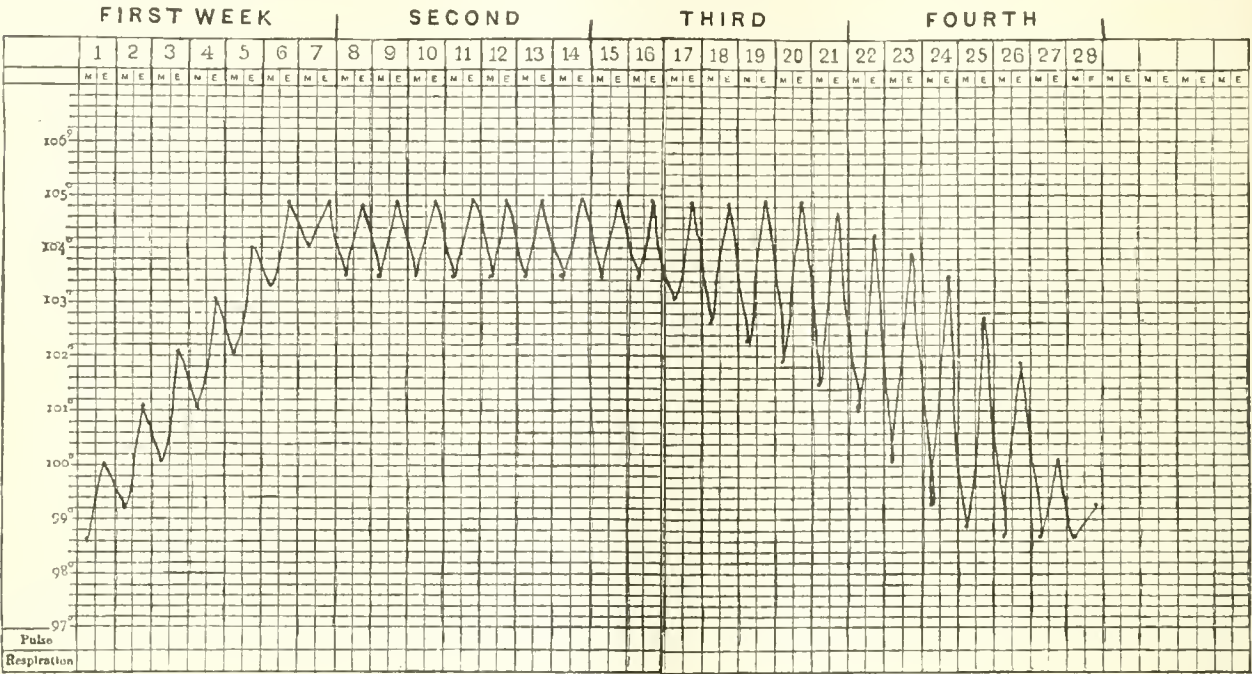


FIG. 1.

The heart, although sometimes soft and flabby with degeneration of the muscular fibres; was yet in many cases firm, strongly contracted, and with perfectly normal muscle.

The lungs have been diseased to some extent in

not only congested, but there were also irregular areas of red hepatization.

In three cases the lungs exhibited the lesions of intense general bronchitis.

In one of these cases the larger bronchi were congested

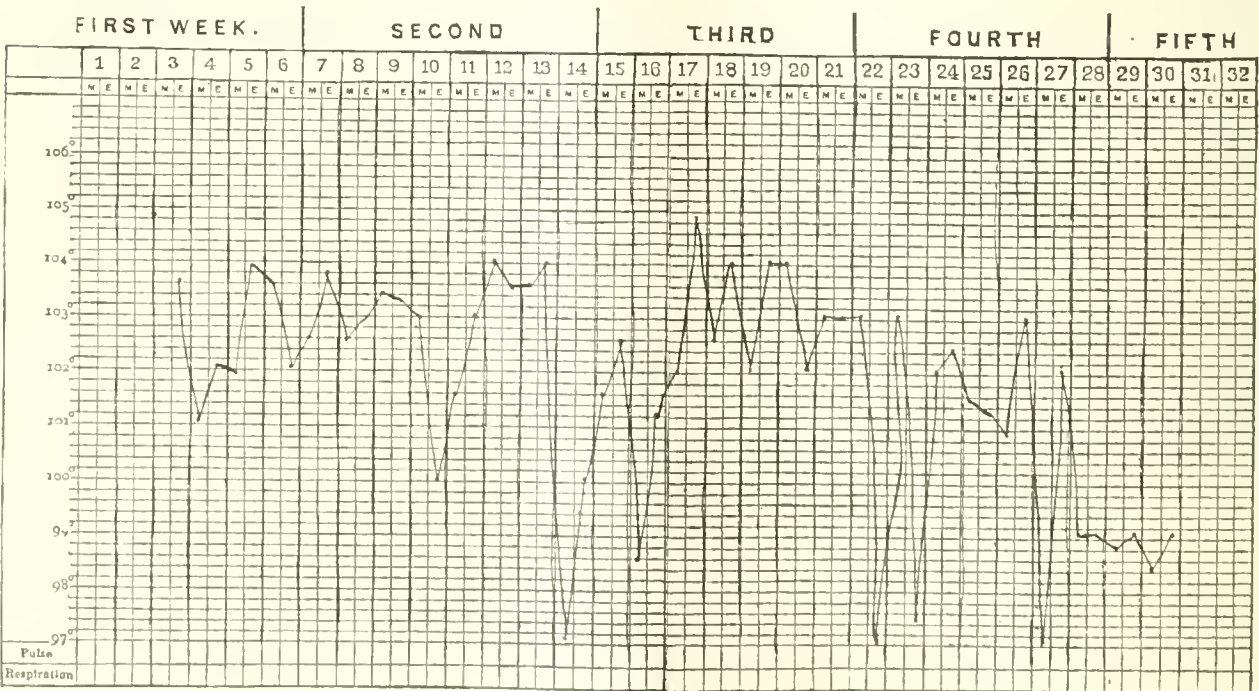


FIG. 2.

many cases. Moderate degrees of bronchitis with congestion of the larger bronchi and an increased production of mucus were often seen.

Some degree of congestion and cedema was present in nearly all the lungs, involving regularly their most dependent portions. Less frequently the congestion of

and coated with mucus. The smaller bronchi were full of pus, their walls were thickened. Throughout both lungs were numerous circumscribed portions of lung, from the size of a walnut to that of a pigeon's egg, which were dense, smooth, unaërated, of a deep, livid color—collapsed lung.

In the second case the lungs were small and congested. The larger bronchi were congested and coated with mucus; the smaller bronchi were full of pus, their walls were thickened and infiltrated with cells, and around them were small zones of intense congestion or of red hepatization.

In the third case the larger bronchi were congested, the smaller bronchi had their walls thickened and infiltrated with cells. Around these small bronchi were small zones of white hepatization, and around these peri-bronchitic zones larger areas of red hepatization.

Lobar pneumonia was found in two patients. In one nearly the whole of both lungs was consolidated, in the other only a single lobe of one lung.

In the brain and its membranes I have found no lesions, except old ones not belonging to the disease.

The voluntary muscles have presented their characteristic granular and waxy degeneration in a moderate number of the more severe cases; in many other cases no change in the muscles was found.

It is evident, therefore, that the anatomical type of the disease, as it has prevailed in New York during the past eight years, has not been a severe one. Neither the characteristic nor the accessory lesions have been more than fairly marked.

In speaking of the lesions of the disease I have drawn from a larger number of cases than that employed for the study of the symptoms, for many of the hospital cases die with hardly any history.

Symptoms.—To illustrate the character of the symptoms I have used the records of 102 cases, all occurring during the past five years. A larger number of cases could have been collated, but I have preferred to confine myself to this number of cases, all of which were well-marked examples of the disease.

Prodromata.—A distinct history of a prodromic period was obtained only in 18 cases. In all the conditions were much the same: languor, headache, indisposition to mental or bodily exertion, loss of appetite, constipation or diarrhoea, irregular chilliness, sometimes bronchitis. The duration of this period varied from four days to five weeks.

Invasion.—The character of the invasion was ascertained in 83 cases. In 37 cases the patients noticed a chill at the very commencement of the disease. This chill was sometimes described as mild, sometimes as severe; it occurred only once, or was repeated for several days. The chill was always followed by a febrile movement, often accompanied with headache, sometimes with vomiting, sometimes with nose-bleed, and in 19 cases with diarrhoea.

In 25 cases the first symptom was diarrhoea, accompanied with fever, sometimes with headache, sometimes with nose-bleed. There were, therefore, altogether 44 cases in which diarrhoea was one of the first symptoms, and in 3 of these blood was mixed with the passages during the first few days.

In 15 cases headache and fever, sometimes with nose-bleed, marked the onset of the disease.

In 6 cases a marked bronchitis, with cough, expectoration, and physical signs, was the most prominent feature during the first week.

Altogether nose-bleed was mentioned by 14 of the patients. Pain in the right iliac fossa or abdomen was often complained of.

In the other cases it could not be ascertained exactly when or how the disease began. This seemed to be due sometimes to want of intelligence on the part of the patient, sometimes to the existence of accidental conditions to which attention was directed rather than to the real disease.

Temperature.—Complete records of the temperature embracing the first days of the disease were not obtained in any cases. Many of the patients did not come under observation until the disease had existed for some time, in others the temperature was not taken until the disease became very manifest.

The schematic curve for the regular four weeks of typhoid fever is that given in Fig. 1.

We may compare with this some of the temperature charts obtained from different patients: Fig. 2 is from a patient who came into the hospital on the third day of the disease and became convalescent on the thirtieth day. For two days he had creeping chills, general malaise, pharyngitis, and came into the hospital on the third day and went to bed. On the ninth day moderate diarrhoea. On the fourteenth day hemorrhage from the bowels attended with a fall of temperature to 97° . On the sixteenth day two more hemorrhages were followed by a fall of temperature to 98.6° .

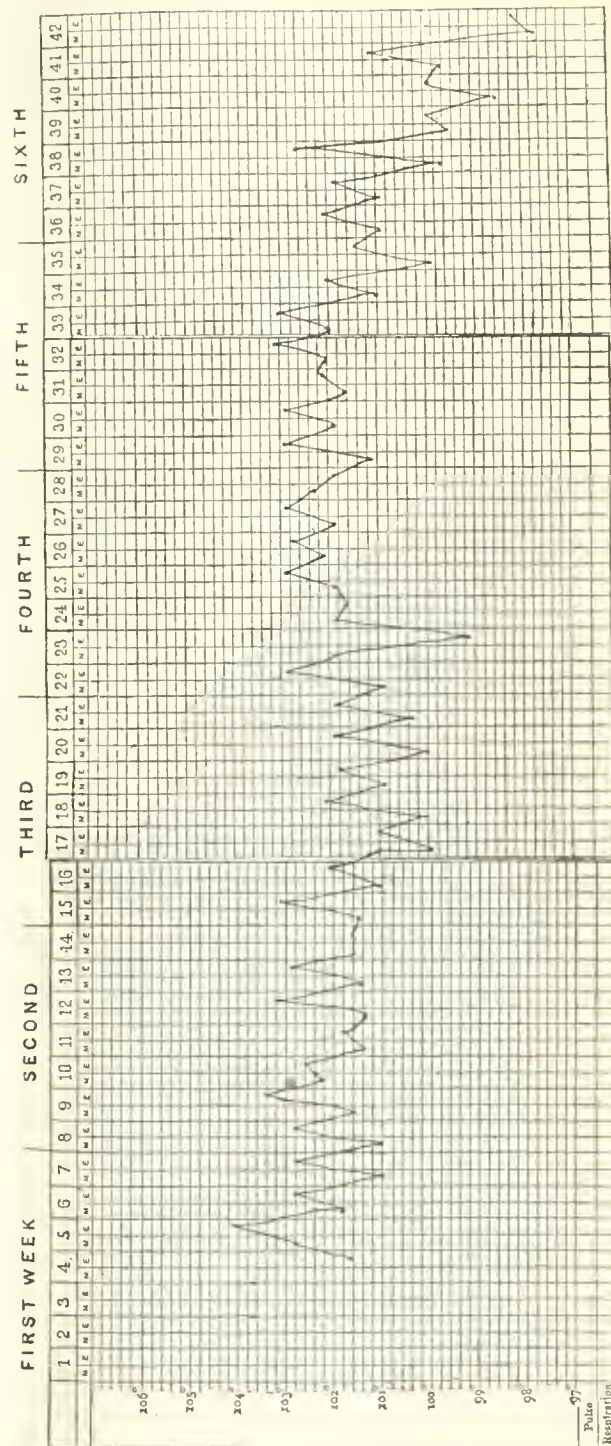


FIG. 3.

The temperature curve in Fig. 3 was taken from a regular case without complications. All the symptoms were well marked and the convalescence was uninterupted.

A study of all the temperature curves shows that we must not expect too close a correspondence with the schematic curve.

During the first week the temperature regularly rises, but there is a great difference in the rapidity of the rise and the number of days required for it to reach its maximum. In hospital patients the transfer to the hospital seems often to produce a temporary rise of temperature. In some patients morning chills followed by afternoon fever may be repeated several times during the first week. There may be sudden falls of temperature for six, four, or twenty-four hours during the first week.

In the second week the temperature approaches the continuous type with moderate morning remissions; but sometimes the morning remissions are very marked. Sometimes the morning temperature is the highest; sometimes the temperature falls permanently to the normal by the fifteenth day; or after beginning to fall by morning remissions the temperature may go up again and continue to the end of the third, fourth, or fifth week; or, in fatal cases, the temperature may reach its highest point just before death, or fall to 101° or 100° .

In the third week the temperature may continue as in the second, or it may fall more or less regularly with normal remissions.

In the fourth week the temperature usually falls by morning remissions, but this fall is often interrupted and irregular. The morning remissions may be followed by sweating. Or, after beginning to fall, the temperature will rise again and continue till the end of the fifth, sixth, seventh, or eighth week.

In the cases without relapses convalescence was most common at the end of the fourth week; it was not uncommon in the third week, and it was sometimes delayed till the end of the fifth, sixth, seventh, or eighth weeks. When there were relapses the disease might be still further prolonged.

The height of the temperature was usually in proportion to the disease, but to this rule there were many exceptions: mild cases with high temperatures, and severe cases with low temperatures. There was also a good deal of difference in the cases as to their ability to bear the temperature. Some patients would be much more affected by a temperature of 102° than others, by a temperature of 105° .

The pulse usually followed the curve of temperature, becoming more rapid as the temperature was higher. During the first week of the disease the pulse was strong, from 80 to 100. In the second and third weeks it was more rapid and feeble, often dicrotic. As a rule the pulse became more rapid as it was more feeble, but sometimes it was both feeble and slow. Generally speaking, a rapid pulse was an unfavorable symptom, but sometimes the pulse continued rapid while the temperature was falling and convalescence approaching. In the cases that died with a lower temperature, the pulse was feeble and rapid. Some cases ran their entire course with a pulse of from 60 to 80; when this was joined with marked cerebral symptoms, the cases closely resembled cerebro-spinal meningitis.

The appearance of the patients was characteristic. A dull, apathetic expression, the skin of the face dusky-colored, the cheeks often flushed, the mind dull and sluggish—all these conditions were well marked. In only one case were these symptoms notably absent, in a patient who for the first two weeks had a bright face and an active mind.

The tongue was usually at first coated with a thick white fur, afterward dry and brown; sometimes it remained clean, but became gradually dry, glazed, and fissured.

Nose-bleed occurred in many of the cases, not only in the invasion of the disease, but later in its course. In only one case did it reach such a degree as to become alarming.

Headache and sleeplessness were most common in the

prodromic period and during the first week of the disease.

Delirium of an active and well-marked type was present in forty-one cases; it marked a severe form of the disease. Lower degrees of delirium, occurring especially at night, were much more common.

Complete unconsciousness was usually a fatal symptom, although apathy verging on stupor was seen in many of the cases which recovered.

Vomiting not only marked the invasion of the disease, but sometimes continued throughout its course, and was then a most annoying symptom, interfering with the administration of food and medicine.

Diarrhœa was present in 82 cases, and in 44 of these it began during the first days of the disease. In 11 cases, after beginning during the first days of the disease, it only lasted a few days and then stopped. In 51 cases it lasted through nearly the whole of the disease, and in 20 cases it only lasted for a few days in the second week.

Constipation throughout the whole course of the disease was observed in eighteen cases. It was almost the rule to have some degree of constipation during convalescence.

The eruption is recorded as being fairly marked in forty-four cases, but in only a few of these was it very abundant. It seemed to be more constant in the cases which have occurred during the last year. It was usually seen during the second week, sometimes appearing in successive crops, especially with the relapses.

Tympanitis to a greater or less degree was often present; it was most marked in the patients who were constipated.

Pain over the abdomen certainly existed in a number of the cases, but the records on this point were somewhat uncertain.

The urine contained albumen in twenty-three cases; it was never present in large amount. Casts were found in the same cases in small numbers. It contained blood in two cases.

Hemorrhage from the bowels occurred in twenty-three cases, and in six of these cases it proved fatal. In three cases there was moderate bleeding during the first weeks of the disease. In the other cases it occurred at the following periods: On the eighth day, one case; on the tenth day, one case; on the eleventh day, one case; on the twelfth day, one case; on the thirteenth day, three cases. In the second week, three cases; in the third week, two cases; in the fourth week, four cases; in the fifth week, one case; in the sixth week, one case; in the seventh week, one case. Throughout the disease, one case. Most of these hemorrhages were considerable in amount and repeated several times.

Hemorrhages in the skin were only seen in one case.

Complications.—A pustular eruption of the skin, the pustules situated all over the body and reaching the dimensions of small abscesses, was seen in three cases.

Suppurative inflammation of the middle ear, with discharge of pus, occurred in five cases.

Croupous pharyngitis existed in one case during the first week of the disease.

Bronchitis of a severe type, or broncho-pneumonia, existed in twenty-four cases, and in sixteen of these cases occurred early in the disease. In many other cases slight forms of bronchitis were present. When bronchitis occurred early in the disease its symptoms were sometimes so marked as to obscure those of the typhoid fever. Only three of the cases of bronchitis proved fatal.

Lobar pneumonia occurred in two cases, and both of these caused the death of the patient.

Repeated attacks of feeble heart-action, the radial pulse becoming imperceptible, were observed in one patient. She finally died in such an attack.

Peritonitis occurred in only four cases. In two of these it was due to perforation of an ulcer of the ileum, in one to perforation of the appendix vermiformis, and

in one to inflammation of the mesenteric glands. In all the four cases the peritonitis was fatal.

Thrombosis of the femoral vein occurred in one case.

Dysentery was observed in five cases. It was developed during convalescence, in the fifth, sixth, and eighth weeks. In one of the cases it proved fatal, and was then found to be of the croupous variety.

The course of the disease.—In the cases which recovered, excluding the cases with relapses, the duration could be ascertained in sixty-one. In these convalescence commenced at the following periods: On the sixteenth day, one case; on the eighteenth day, four cases; at the end of the third week, six cases; at the end of the fourth week, nineteen cases; at the end of the fifth week, twelve cases; at the end of the sixth week, four cases; at the end of the seventh week, four cases; at the end of the eighth week, one case; at the end of the ninth week, nine cases; at the end of the tenth week, one case. In the cases which lasted longer than three weeks there were often periods of from twelve to twenty-four hours during which the temperature fell, and it seemed as if convalescence was commencing; but then the temperature rose again and the disease went on.

Relapses were observed only in seven cases, all of which recovered. The relapses occurred as follows: In the fourth week cessation of all the symptoms for ten days, then a relapse of fourteen days, then convalescence. In the fourth week cessation of all the symptoms for five days, then a relapse for ten days, then another cessation for fourteen days, then a second relapse for eight days, and then convalescence. In the fourth week cessation of the symptoms for seven days, then a relapse for two weeks. In the sixth week a cessation of the symptoms for four days, then a relapse for seven days. In the sixth week a cessation for thirteen days, then a relapse for two weeks. In the sixth week a cessation for thirteen days, then a relapse for one week. In the tenth week a cessation for five days, then a relapse for one week. All of these cases were very seriously ill, and yet recovered in spite of the long continuance of the disease.

The thirty-four fatal cases died at the following periods: On the eighth day, two cases; on the tenth day, one case; on the eleventh day, one case; on the twelfth day, one case; on the thirteenth day, five cases; on the fourteenth day, one case; on the sixteenth day, two cases; on the seventeenth day, one case; on the eighteenth day, one case; on the nineteenth day, one case; at the end of three weeks, two cases; at the end of four weeks, four cases; at the end of five weeks, four cases; at the end of six weeks, five cases; at the end of ten weeks, one case.

The manner of death was as follows: In fifteen cases the patients seemed to die from the direct effect of the disease. In most of these cases the temperature was high and the pulse rapid and feeble. Death took place from the eighth day to the end of the sixth week. In three cases the immediate cause of death appeared to be severe broncho-pneumonia, death taking place on the eighth day, at the end of three weeks, and at the end of five weeks. In six cases death followed soon after large hemorrhages from the bowels; two cases on the thirteenth day, one on the fourteenth day, one on the thirty-second day, and two at the end of six weeks. Four cases died with acute general peritonitis. In three of these the peritonitis was due to perforation and proved fatal on the eleventh, thirteenth, and twenty-eighth days. In one case it was due to inflammation of the mesenteric glands, the patient dying at the end of six weeks.

One case died of dysentery at the end of ten weeks; one case died of syncope at the end of four weeks; one case died in collapse, with a temperature of 95° in the rectum after sponging with ice-water; one case died from rupture of the spleen at the end of four weeks; two cases died with lobar pneumonia, one on the eighth and one on the eleventh day.

It may be instructive to recite in detail a few of the irregular cases.

CASE I.—A male, aged twenty-four; on August 18th and 19th had diarrhœa, but did not feel ill. On August 21st he was seized, after dinner, with an attack of vertigo and partial unconsciousness. Similar attacks have been repeated and have been accompanied by constant headache, pain in the back, and a general tired, weak feeling. He was admitted to the hospital on August 25th. He then had the appearance of a patient suffering from typhoid fever; high temperature, tongue brown and dry, face flushed, mind dull. On August 29th the eruption appeared on the abdomen and chest. On August 31st he passed blood and mucus from the bowels; before this there was no diarrhœa. On September 1st he was a little delirious at night. On September 4th he felt so well that he wished to sit up. On September 5th he became delirious, his pulse was rapid and feeble, his tongue again became brown and dry, and on September 6th he died. The table shows the temperature and pulse.

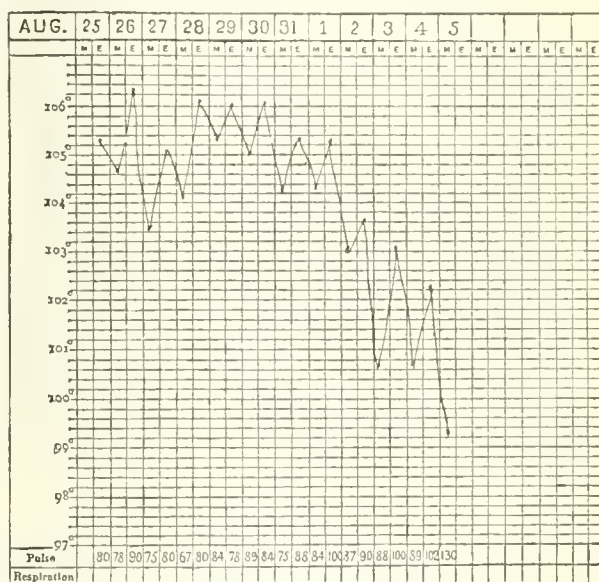


FIG. 4.

In the intestine only four of the agminated glands were found swollen, but not ulcerated. The mesenteric glands were swollen. In the left ventricle of the heart was an old ante-mortem clot the size of a chestnut. In the enlarged spleen were three infarctions.

This was a case in which, from the clinical history, one would have expected to find the intestinal lesions developed in proportion to the severity of the constitutional symptoms.

CASE II. is a contrast to the preceding one. A man, twenty-two years of age, began on August 1st to have diarrhœa. Some of the passages were fecal, some were streaked with blood. He had no other symptoms and did not feel ill. On August 6th, for the first time, he remained in bed; his pulse was 100, his temperature 99° ; he had pain in the abdomen and diarrhœa. On August 7th, pulse 100 to 110; temperature 100° to $101\frac{1}{2}^{\circ}$; tongue dry; the diarrhœa has stopped. On August 10th, pulse 100 to 110; temperature 101° to 102° . August 11th, large passages of blood from the bowels; pulse 110 to 125; temperature 101° to 102° ; he became delirious. August 12th, died.

For nearly the whole length of the ileum the solitary and agminated glands were very much swollen and ulcerated. In the colon for its entire length the solitary glands were swollen and ulcerated. In the stomach were a number of small round ulcers. In this case the characteristic lesions were developed to an unusual degree, and yet the fever and other constitutional symptoms were not at all marked.

CASE III.—A man, aged twenty-five; said that he had not been feeling well for two weeks; that on October 6th,

after working in an ice-house, he caught cold and had cough and headache, fever and sweating. October 10th his face was flushed, his tongue dry and brown, his bowels loose, his mind dull and apathetic; his urine contained a little albumen. There was a good deal of dyspnoea, and coarse and subcrepitant râles could be heard over the whole of both lungs. The evidences of bronchitis continued. On October 13th he became delirious; on October 17th he had a number of large bloody passages from the bowels, his skin became cold and livid, his pulse rapid and very feeble, and he died on October 18th. The temperature and pulse can be seen in the table.

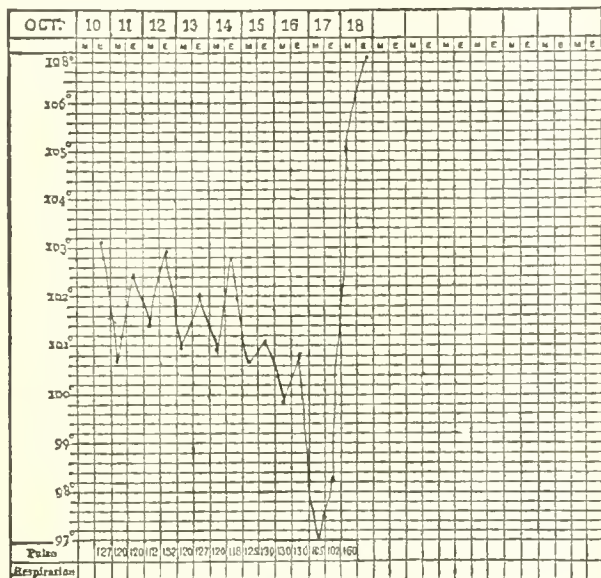


FIG. 5.

After death the lungs exhibited the lesions of intense general bronchitis. In the small intestine the solitary and agminated glands were very much swollen, and formed large ulcers from which the sloughs had cleaned off.

In this case the bronchitis seemed sufficient to account for all the patient's symptoms until he began to have the hemorrhages from the bowels.

CASE IV.—A man, aged forty-five; said that he had not been feeling well for several weeks. On November 25th he felt worse, but went on a journey and returned on November 28th. On November 29th, in the evening, he had a severe chill and remained in bed the next day. His bowels had been constipated, and on this day were acted on by medicine. On November 30th his temperature was taken for the first time and found to be 105°. From this time till December 5th the patient was in bed with a temperature of from 101° to 102°. His tongue was clean and moist, his mind clear, his bowels constipated; no eruptions, but several attacks of nose-bleed. On December 5th he began to cough and expectorate muco-purulent matter. On December 8th there were dulness on percussion and loss of breathing over the lower part of both lungs. On December 9th, pulse, 114 to 140; temperature, 103° to 99½°; respiration, 34 to 40. On December 10th, pulse, 114; temperature, 102°. On December 11th, pulse, 114 to 120; temperature, 102½° to 102°. The patient now began to look worse, although his tongue was still clean and his mind clear. The constipation had continued, and now tympanites was developed. December 12th, pulse, 120; temperature, 102° to 101½°. December 13th, pulse, 120 to 128; temperature, 100½°. December 14th, pulse, 120 to 128; temperature, 100° to 101°. The tympanites continued, became worse, and distressed the patient extremely. The bowels only moved with medicine. The patient died with feeble heart on December 15th.

At the autopsy the bronchi were found congested and coated with muco-pus; both lower lobes of the lungs were congested and unaerated. In the small intestine a number of the agminated glands were changed into clean, smooth ulcers extending down to the muscular coat.

This case was as obscure as need be during the patient's life.

Treatment.—A fair idea of the manner in which typhoid fever is treated in New York may be gathered from the routine of the different hospitals.

In the New York Hospital many patients are simply put on a milk diet, with the addition of a moderate amount of whiskey, and no other treatment is used. Peptonized milk instead of ordinary milk is thought to be of service. For high temperatures the body is sponged with equal parts of alcohol and water, and sometimes the fluid extract of eucalyptus is given in fifteen-minim doses. Quinine is not much used. Tympanites is treated with turpentine internally, and in stupes over the abdomen. Opium is given when there is hemorrhage from the bowels or excessive diarrhoea.

At St. Luke's Hospital the treatment is the same, except that quinine is sometimes employed to reduce the temperature, and ergotine hypodermically for intestinal hemorrhage. Either opium or chloral are used to control restlessness and sleeplessness.

At St. Francis' Hospital, if the cases are seen early in the disease, large doses of calomel are given, with the idea of aborting the disease. Quinine in large doses is given to most of the patients. The salicylate of soda or the benzoate of soda are given by some of the physicians throughout the disease. Cold water in any form, to reduce the temperature, is but very little used. A solution of the acetate of alumina is given to nearly all the patients to prevent or control the diarrhoea.

At St. Vincent's Hospital quinine in doses of two grains every two hours is given to control the temperature. Cold water is not employed. Opium is used with diarrhoea and intestinal hemorrhage.

At the Mount Sinai Hospital quinine in large doses is given to nearly all the patients. Cold water is not much used, but sometimes the patients are sponged off.

At Bellevue Hospital the treatment varies in the different divisions.

In one division the peptonized milk is much used. Quinine, in large doses, is given when the temperature reaches 103°, and sponging is also sometimes used. Opium, the bromides, and cold to the head are used for the restlessness.

In another division quinine in moderate doses is given to most of the patients. For temperatures over 103° sponging with cold water or the Kibbee cot and sprinkling with cold water are used. Opium is given when needed.

In another division carbolic acid gtt. j. and tincture iodine gtt. ij. every two hours are given early in the disease. Quinine in ten-grain doses every half hour is given to reduce the temperature. Sponging with cold water is sometimes used. Opium is employed for severe diarrhoea.

In another division occasional sponging, and whiskey and opium when required are the only treatment.

At the Roosevelt Hospital full bathing has been tried in many cases but now cold sponging is more used. Bismuth and pepsin are given to many of the patients.

In all the hospitals milk, either simple or peptonized, is the regular diet of the patients.

THE DOCTRINE OF SPONTANEOUS GENERATION REVIVED.—At a recent meeting of the Academy of Medicine of Paris, M. Bouchardat maintained that in the genesis of phthisis, certain portions of the lung were not expanded sufficiently, there occurred local stasis, and at these points the lymph-corpuscles are metamorphosed into the bacilli of tuberculosis. This is a revival of the doctrine of heterogenesis upheld by Bastian. M. Bouchardat does not believe in the contagiousness of phthisis.

FUNCTIONAL DISEASES OF THE HEART.

BY E. P. HURD, M.D.,

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(Continued from page 425.)

PART II.—PATHOLOGICAL.

FUNCTIONAL diseases are said to coexist with integrity of the structure whose physiological action is disturbed. While it is admitted that there may be morbid alterations of texture, these are too subtle to be detected by the senses of the observer. The stomach of the dyspeptic has been examined after death, and blood-vessels and peptic glands have been pronounced sound. The arhythmic heart, whose disorderly action long gave so much trouble, has been found normal at the autopsy. Facts of this kind are doubtless sufficiently abundant to justify the distinction which has been made between functional and organic diseases. At the same time it must be understood that the distinction is only a relative one. It is from the nature of things impossible that disease of any kind can exist without impairment of structure. If the function is deranged, it is because the interstitial movements of waste and repair which are going on in the organ are disturbed, for the function of a part is in the closest correlation with its nutrition. To say that there is disturbance of interstitial processes is to say that there is molecular disease; hence disease of structure. It is, however, sufficient for the purpose, if, while admitting that the line of separation between functional and structural diseases is becoming more and more indistinct (and this is especially true in regard to the stomach affections), we content ourselves with defining functional diseases as diseases in which there is marked deviation from the standard of health, such deviation being a change in innervation and in the degree of activity of the organ and its capacity for effective work, and the expression of molecular alterations which are inappreciable to the senses.

Under the head of functional diseases of the heart we have to consider disorders of motility and disorders of sensibility.

The heart of the adult person beats between seventy and eighty times a minute. Its action is remarkable for its rhythmical character; so strong is the tendency to rhythmical contraction that in cold-blooded animals not only does the entire heart continue to act after removal from the body, but even separated portions will contract and relax with great regularity for a long time.¹ Each beating of the heart is composed of several factors; there is first the systole, followed after a brief pause by the diastole, and the cardiac revolution terminates by another pause longer than the first; then comes a new succession of similar systolic and diastolic impulses and pauses. It is moreover essential to the normal action of the heart that its function shall be accomplished without pain. This rhythmical succession of pulsations may be accelerated, or may be broken or become intermittent; the heart, instead of performing its work painlessly, may "suffer in every fibre," and it may give expression to an exhausted or anæmic condition by asystolia and syncope.

The heart's action ought not to be easily excited by trivial and varying causes, such as moderate exercise, change of posture, and taking food and stimulants. If liable to excitement by trifling circumstances it is, as Broadbent has pointed out, an unfavorable sign.²

It is apparent that in describing functional heart derangements we cannot present any clear-cut nosological demarcations, as it is in our power to do when describing the organic affections. Though there are doubtless pathological modifications of muscle, nerve, or ganglia, as the substrata of these derangements, we are unable at present to define them; we can only recognize certain

manifestations, which, arising from a variety of causes, are common to a variety of pathological conditions. In treating these manifestations as diseases, rather than as symptoms, some writers have introduced confusion into their treatises. Arrhythmia, for instance, is not a disease, it is simply a symptom and has widely different etiological antecedents, the proximate cause probably being the same in all cases. The same may be said of palpitations.

The heart may be deranged in its *power*, in its *rhythm*, and in its *sensibility*; hence the three fundamental divisions of functional heart-troubles, *asthenia*, *disordered rhythm*, *cardiodynia*. By this I mean that in all functional derangements there is predominance of some one of these characteristics, though all may co-exist, or any two may be intimately associated, as *asthenia* and *arrhythmia*. It is moreover worthy of note that all the valvular diseases and the degenerations of the myocardium are attended with one or more of these semeiological phenomena, so that in describing functional manifestations we are continually obliged to make incursions into the territory of admittedly organic diseases.

This is not all. Every prostrating lesion or ailment of the organism—a traumatism, a fever—produces some marked modification of the heart's innervation and nutrition, which expresses itself in deviations from the normal force and rhythm of the heart's action.

This explains why we cannot separate by a sharp line the functional disorders from the disorders occasioned by profound perturbations of the economy. The exaggerated, rapid action of the heart in certain pyrexial states cannot generically be separated from that quick, vehement action which characterizes palpitations, and can only be differentiated by arbitrarily classifying palpitations as *appyrexial*, or by insisting on the tumultuousness of palpitations (ordinarily so called), or the element of distress which so often characterizes these excited throbbings.

I.—ASTHENIC FORMS OF HEART DISEASE.

An asthenic condition, in which the heart, in its laboring mechanism, is overcome by fatigue, malnutrition (or both), is at the basis of all the functional troubles of this organ. If integrity of myocardium and ganglia persist, the heart will grapple effectively with its tasks, and if augmenting difficulties must be met by hypertrophy, hypertrophy will ensue. There will be increased action, with a pulse varying according to the occasion, but all will be within physiological limits. Excessive muscular exertion, hindering as it does respiration and the free passage of blood through the lungs, entailing thus undue fulness of the venous system and overloading the right heart, makes it difficult for the left ventricle to fill the systemic arteries; if nutrition be maintained at a high mark, the cardiac muscle may continue to do its work well, but if nutrition be inadequate, and especially if the heart be whipped into increased activity by alcoholic stimulants, muscular contractility is exhausted, the cardiac ganglia become anæmic and irritable, passive dilatation with disorderly action takes place, and all the symptoms included under the name of the forced heart.

The temporary perturbations of the heart's action, which occur under the influence of hard work, are too familiar to everybody to require insisting on here. That, moreover, sudden or prolonged distention of the fatigued right ventricle may cause passive dilatation of that side of the heart, with the necessary cortège of symptoms, is admitted by all authorities. The following fact, related by Clifford Allbutt, *à propos* of himself, is an example to the point. During a journey in Switzerland, after several days of fatigue, in which he was climbing mountains difficult of ascent, he was seized with strange shortness of breath, accompanied by very painful sensations of oppression and beating in the epigastric region, and percussion revealed an increase of precordial dulness. These troubles as well as the precordial dulness disappeared after a season of repose, but returned as soon as he again un-

¹ Carpenter's Human Physiology, Am. ed., page 241.² Broadbent in Braithwaite's Retrospect, part liv., p. 237.

dertook to climb the Alps. In the night-time he was awakened by an intense dyspnoea and painful palpitations; the precordial dulness was greater than it was before; full inspirations from the open window calmed this oppression.¹

If, then, it be admitted that there exists a primitive dilatation of the heart, as a result of overtaking that organ, and if anything which impedes the free return of venous blood to the right heart, may favor such overtaking of the heart with consequent dilatation, it is plain that pulmonary lesions which are attended with venous stasis in the respiratory organs, and which also affect the chemical constitution of the blood, must powerfully modify the heart's action, and may give rise to all the symptoms of the forced heart. In pulmonary emphysema, chronic bronchitis, and in congested states of the lungs generally, you have all the conditions of such dilatation from forcing of that organ.

Germain Sée, in an interesting chapter in his book on "Diseases of the Heart," shows clearly how renal affections may give rise to various cardiac troubles, and especially to the phenomena of the forced heart. The mechanism of these pathological manifestations has been alluded to in Part I. of this series. "You will," says Prof. Sée, "hear patients complain of shortness of breath, of being oppressed after the least exertion, of having a continual sensation of weight in the precordial region, of the occurrence of sudden violent attacks of palpitation; the pulse is sharp and vibrating, the heart voluminous, the shock of the apex very low down and very strong. You would naturally suspect the existence of some disease of the orifices and cavities, and yet auscultation reveals no abnormal bruit. Under these circumstances you may inquire if you have not here to do with cardiopathy of renal origin, and the existence of polyuria, the presence of a light opalescent cloud of albumen in the urine, the detection at a given moment of Potain's sign, the *bruit de galop*, will help you to a correct diagnosis."²

If pulmonary and renal disease may give rise to such symptoms, it is equally true that hepatic and intestinal diseases, attended with capillary-venous stasis may occasion the same pathological condition of the heart, and by the same mechanism as above described.

Nor should the stomach be omitted in this category of causes. I am at present attending a lady who has all the symptoms of the exhausted heart from chronic gastric catarrh. The heart of this patient has long been disturbed in its innervation and nutrition by gastric derangements, and has manifested its suffering by palpitations and decided rhythmical irregularities. There is at present marked passive dilatation of this organ.

Whether all these etiological conditions—overwork, pulmonary, renal, hepatic, gastro-intestinal lesions—may cause not only curable dilatations, but also permanent disorders, such as hypertrophy with endocardial inflammations, followed by valvular incompetency and degenerations of the myocardium; in short, the whole train of symptoms usually referred to primitive valvular disease, is a question which is not yet definitely settled, but to which an affirmative answer seems justified by the observations of Peacock, pertaining to Cornish miners; of Thun and Fraentzel, in the German army; of Myers, in the English army, and of Da Costa, in the American army.³

II.—DISORDERED RHYTHM.

As a result of asthenia of the heart's muscle, or impairment of some portion of its nervous mechanism, we have certain disorders of rhythm known as arrhythmia, intermissions, and palpitations. There is irregularity in the succession of pulsations, or in the duration of certain elements

of the cardiac cycle (the *arrhythmia* of authors); or the action of the heart is regular with now and then an interruption of its pulsations (*intermittences*); or the heart beats tumultuously and rapidly yet with a certain regularity of rhythm (*palpitations*). In palpitations the characteristic feature is *ataxia* rather than *arrhythmia*, yet they are no less a deviation from the normal rhythm than are the other irregular manifestations of the irritable myocardium.

1. *Arrhythmia*.—In the normal state the cardiac cycle is composed of the following elements in the following proportions: (a) the systole which comprehends the first part of the cycle; (b) a brief silence which with the diastole comprehends the second third; (c) a pause (the long silence) which occupies the remaining third of the cycle.

Instead of this normal succession with the respective time which belongs to each element of the cycle, the systole may be prolonged so as to occupy one-half instead of one-third of the entire revolution, the diastole and the pauses are then cut short; or it may be abridged in its duration and the diastole may be prolonged, moreover, the length of either of the pauses may be increased or diminished.

In other instances the want of rhythm may pertain to the *succession* of pulsations, which present great irregularity, being broken by pauses or intermissions of greater or less length. The beats may be now slow, now rapid and tumultuous, but their marked feature is irregularity.

The elements of the cardiac pulsation may be increased, the cycle being represented by a double systole or a double diastole, without any other interruption of rhythm. This is called *numerical arrhythmia*. There is a species of arrhythmia described by Guttman ("Handbook of Physical Diagnosis," p. 183) as "intermission of the pulse." In observing the pulse, it is noticed that after several regular strokes, one, or sometimes two, are omitted. This is due either to periodical interruption of the heart's action, or to want of power in the heart to send its pulsating throb into the radial arteries. Such an intermittent pulse is doubtless compatible with integrity of the heart and its valves, but it is often the result of mitral stenosis or insufficiency.

Pathogeny of arrhythmia.—It is when the heart is not in condition to respond to the demand for increase of labor that we note the arrhythmic pulse. All forms of arrhythmia are met with in connection with mitral insufficiency, especially that form which is characterized by reduplication of one of the heart sounds, or suppression of the first pause and the diastole. The left ventricle, unable as it were to fill the arteries by one systole, makes two or three partially successful attempts which infringe on the time of the diastole. Heidenhain, who has made an exhaustive study of the arrhythmias, and who has actually produced arrhythmia in animals by the action of certain toxic agents which disturb arterial tension, considers these irregularities as generated by the intermediation of the nervous system, and as generally depending on irritation of the spinal cord. This irritation modifies arterial tension by affecting the vaso-motors, and embarrasses the heart whose pulsations become disorderly. The first phenomenon is augmentation of tension, which coincides with acceleration of the pulsations, then arrhythmia ensues, but this does not always appear; in fact, for arrhythmia to develop, the augmentation of tension must exceed two hundred millimetres by the manometer.

This was shown by some very curious experiments of Heidenhain on curarized animals. This experimenter also observed that in electrizing the divided peripheral ends of the vagus, arrhythmia was produced.

If an excitation of the spinal cord exceeding a certain intensity may produce arrhythmia it is easy to understand that the causes which produce such excitation may be multiple, and that they may be toxic, acting through the blood, as when arrhythmia is produced by tobacco; or they

¹ Clifford Allbutt, cited by G. Sée (*vide* Boston Med. and Surg. Jour., January 4, 1883).

² G. Sée: *Maladies du Cœur*, etc., p. 277.

³ Croonian Lectures, Lancet, 1865. Myers: *Diseases of the Heart among Soldiers*, 1870. Da Costa: *Irritable Heart*, Am. Jour. of Med. Sc., 1871. (See also a complete bibliography cited by Osler in a pamphlet on *Over Strain of the Heart*, Montreal, 1878.)

may be of reflex order, originating in some disturbance of the gastro-hepatic system, or the uterus; or of the blood-vessels, owing to augmentation of the peripheral resistance. Arrhythmia is not seldom seen in connection with nephritic disease, with or without hypertrophy of the heart. Lastly mental emotion, by its perturbation of the cardiac intra-cranial and spinal ganglia, may produce arrhythmia.

2. *Intermittences.*—The action of the heart is regular, except that now and then, and with more or less periodicity, there is a brief suspension. The heart beats normally, only after every four, eight, ten pulsations there is a momentary arrest, when the series of beats is resumed in an orderly manner. After the pause the first pulsation is generally stronger than those that follow, as determined by the finger on the pulse at the wrist and by the sphygmograph. Marey has explained this fact in the following way. By reason of the arrest of the heart the tension augments in the blood-vessels, to overcome which there must be either augmentation in the frequency or the force of the succeeding pulsations. Onimus, by electrizing the pneumogastric nerve with currents much interrupted, succeeded in producing intermittences followed by exaggeration of the force of the pulsations. The causes of intermittence are obscure; when not symptomatic of lesions of the heart they are reflex and are due to gastric or ovarian irritation, etc., or toxic, the result of the abuse of tea, coffee, alcohol, tobacco.¹

3. *Palpitations; accelerated rhythm.*—It is now generally agreed that palpitations are an evidence of want of power, not of excess of action. They indicate, as J. Milner Fothergill many years ago pointed out, that the heart is laboriously striving to meet the demand made upon it, and that compensation is incomplete.²

Germain Sée³ in his treatise on the anomalous forms of heart disease, defines palpitation as an increase of the activity and not of the energy of the heart. The idea intended to be conveyed is essentially the same as that of Fothergill in his lucid description first published in the *Lancet* in 1870: "The heart, when its integrity is impaired or it is exhausted by effort, *palpitates*, i.e., a laborious evident effort takes the place of the steady normal contraction." A balance has been struck between the weak heart and the systemic forces, the latter having been levelled down to meet the working capacity of the former. Any demand made on the heart for more effort causes palpitations, or even syncope, which are an expression of disturbance of the balance.

In palpitation we have acceleration of the pulsations of the heart which frequently seem diffused over an unusually wide area, without augmentation of its contractile force, as determined by the finger on the pulse and the sphygmograph.

How are we to explain the diffusion of the heart-shock in palpitations? In hypertrophy the heart opposes a larger extent of surface to the chest-walls during systole, and the impulse is strong and heaving and is felt in the arteries, which are distended. But hypertrophy is not commonly associated with palpitations, which are on the contrary a marked symptom of dilatation, whether organic or functional in its origin.⁴ In dilatation the heart

labors with diminished strength; there is perhaps more vehemence and excitement than in ordinary calm work, but less effective action. Now it seems more than probable that over-distention is an accompaniment of a large part of the cases of palpitation met with in practice.¹ But over-distention is only the precursor of dilatation, and these are but stages in the downward series of degenerative changes which have asthenia for their source.

It may be said that whenever the heart laboriously struggles against an obstacle which it is powerless to overcome, then we have palpitations. Many cases of palpitations in hysteria, with spasm of the systemic vasomotors, are of this kind.

Palpitations are often connected with displacements which embarrass the heart in its function and overtax its powers. Pleuritic effusions may displace the heart, so may tympanic distentions of the stomach or colon, by pressing upward the diaphragm and diminishing the working area of the heart. Sée accounts for many of the cases of palpitation of gastric or intestinal origin, whether in dyspeptics or hysterical patients, by such flatulent distention. The tympanic stomach encroaches on the heart and interferes with its movements. Polysarcoma may have the same effect.

Severe hemorrhages, by weakening and anæmiating the heart's muscle, may produce palpitations. I see no explanation of these palpitations but that of impaired tone and nutrition in the heart and its motor-energizing ganglia.

That the fundamental condition of palpitations is impairment of tone is apparent from the good effects generally attending the administration of digitalis, convallaria, and other powerful heart tonics—an argument, by the way, on which Fothergill insists.

All causes which anæmiate the heart—insufficient food and exercise, mal-aëration, depressing passions and vices, the abuse of intoxicants, and even tobacco, which interfere with healthful digestion and nutrition, and all other debilitating influences, such as continued fevers and traumatisms, which affect the circulatory system conjointly with the economy generally—are etiologically associated with palpitations. Therefore it is not a matter of surprise that palpitations should be common to the anæmic and chlorotic, to the convalescent who too soon attempts labor, to the emaciated needle-woman whose scanty wages enable her to eke out only a miserable existence, to the inveterate smoker whose dyspeptic stomach digests little food, and even to many tea-drinkers whose meagre slice of toast is washed down by many cups of their favorite beverage.

In these cases of anæmic palpitations there is generally much excitement of the heart's action with a systolic blood-murmur at the base, propagated in the direction of the large arteries. The *bruit de diable* in the jugulars is often very marked. These patients are easily put out of breath. The pathological condition is deficiency of red globules and the nutrition of all the tissues is below par.

But there is another standpoint from which to view the subject—that of the nervous system. There are powerful co-operative factors in states of the intra-cardiac or extra-cardiac ganglia or nerves. As to conditions of the intra-cardiac ganglia in their relation to palpitations, we know nothing.

The vagus, besides being the inhibitory nerve of the heart, contains the vaso-motor and trophic nerves of that organ.² While recent investigations have proved that the

functional, and its presence in cases of organic palpitation" (John Cockle, in *Lancet*, December 24, 1859, p. 636).

¹ I have qualified the above statement, which does not always hold good. There is evidence that some cases of palpitation are dependent on *too great irritability* of the heart-fibre, from loss of blood, inanition, or even toxic agents. The heart beats rapidly and impetuously, though feebly; its action is like the hobbling trot of the jaded horse: it does not even wait for a good diastole before it empties itself of the little blood that its ventricles contain.

It is, moreover, a fact, which Professor Sée has pointed out, that palpitations do not *per se* lead to hypertrophy, as would be the case were they constantly and invariably the concomitant of dilatation. Cases of so-called essential chronic palpitations have been noted where the heart for a series of years has maintained a remarkably accelerated rhythm; the autopsy has disclosed no valvular lesion, no dilatation, no hypertrophy (G. Sée, loc. cit., p. 572).

² Brown-Séquard, in maintaining that the par vagum is the true vaso-motor

¹ M. Decaisne, in a communication addressed to the Académie des Sciences, states that in the course of three years he has met among eighty-eight inveterate smokers twenty-one instances of marked intermittence of the pulse, occurring in men from twenty-seven to forty-two years of age, and not to be explained by organic lesion of the heart. The absence of such lesion or other condition of health capable of inducing intermission of the action of the heart, and the fact that in many of those instances in which the use of tobacco was abandoned the normal action of the organ was restored, M. Decaisne believes will justify him in concluding that in certain subjects the abuse of tobacco may give rise to a condition which may be termed *narcotism of the heart*, characterized by intermission in the movements of that organ and in the pulsations of the radial artery; and that in some cases a suspension or diminution of the practice of smoking is sufficient to cause an entire disappearance of this irregularity.

² Palpitation, Its Diagnostic Value. London *Lancet*, Aug. 6 and 20, 1870.

³ G. Sée: *Diagnostic et Traitement des Maladies du Cœur*. Second Edition. Paris, 1882. Also *MEDICAL RECORD*, vol. xxiv., p. 286.

⁴ "Slightly dilated hearts are, as is well known, much more prone to attacks of palpitation than those in the opposite condition of simple hypertrophy. I would here allude to the distinction between palpitation of organic and of inorganic origin, and observe that now and then, perhaps, the surest diagnostic sign between the two conditions is the absence of marked dyspnoea during the paroxysm of

vagus contains certain accelerator fibres, moderate and careful stimulation of which increases the frequency of the pulsations, it is certain that the ordinary effect of excitation of that nerve is to slow or arrest the heart, and there is no reason to doubt that this is the usual physiological action. By galvanization of the cardiac end of the vagus, then, you may produce arrhythmia, but you will not be likely to produce palpitations. If, however, you cut this nerve, then something very much resembling palpitations ensues. There is great acceleration of the heart's pulsations, which become tremulous, unequal, and less energetic than in the normal state.¹ Another phenomenon resembling palpitations is noted when in animals this nerve is divided. They become anxious and distressed, and this is strikingly like what we observe in the human subject when suffering from palpitations.

It would seem, then, that experimentally palpitations may be produced by section of the pneumogastric, and this makes it appear probable that the so-called "nervous" palpitations in man may have their origin in paralysis of the vagus. Sée has even gone so far as to account for nearly all palpitations in this way. If powerful emotion may cause palpitations, it is through a paralyzing action on the vagus centre. He appeals to the instance of fear, which causes pallor of the face and coldness of the extremities, by excitation of the vaso-motors; in the same way, he says, the emotion has caused anæmia (by vaso-constriction) of the bulb, and the vagus centre. If tobacco causes palpitations, it is through paralysis by nicotine of the cardiac ganglia of the medulla oblongata. So with tea and coffee. In anæmia and chlorosis the vagus-ganglia are often at fault, and neglect properly to rein up the heart, and the so-called reflex palpitations are distant irritations becoming paralyzing lesions of the pneumogastric.

All this is in the present state of our knowledge largely speculative. What we do know is that palpitation is a phenomenon of asthenia; that it accompanies states of debility, and is often reflex or irritative in its origin,² and seems to be dependent on a withholding of the special trophic and energizing influence of the vagus centres. It is certain that no mere irritative or paralyzing lesion of the spinal or sympathetic cardiac centres can *per se* produce palpitations. Von Bezold, Ludwig, and Thiry have indeed proved that excitation of the spinal cord at different heights produces acceleration of the heart's action, but it also increases the energy of the heart; the heart beats faster, but more efficiently. It seems to be almost certain, moreover, that this augmentation of the cardiac contractions is secondary to contraction of the systemic arteries, brought about by stimulation of the vaso-motor centre in the spinal cord.

Increasing knowledge of the causes of palpitations is showing that they are often caused by morbid states of the blood. If the poison of nicotine may produce palpitations by its depressing action on the vagus-centres, perhaps also on the myocardium, so may blood poisoned by bile, or lithic acid. When we know more about lithæmia, now becoming a prominent study among medical men, we shall know more about certain obscure palpitations which have been regarded as "gastric," "nervous," or hypochondriacal in their origin.

III.—CARDIODYNIA.

The heart, though "the most sensitive of the organs of the vegetative life," seldom expresses by pain the difficulties which it experiences in accomplishing its tasks.

nerve of the coronary arteries, affirms that its irritation causes contraction of these vessels, and thus, by preventing the passage of blood into the cardiac tissue, diminishes the frequency of and ultimately suspends the heart's beat, while on the other hand the section of this nerve, by allowing the coronary arteries to become overfilled with blood, excites the heart to preternatural pulsation. This explanation, simple and plausible as it may seem to be, does not cover the cases of palpitation from anæmia.

¹ G. Sée: loc. cit., p. 156.

² The heart may often be remarkably slowed in its action (pulsus tardus). This may be due to intrinsic causes (fatty degeneration, atheroma of the aorta), when it is presumed that there is mechanical irritation of the cardiac branches of the vagus (Guttman). It is, however, often due to extrinsic causes, as in grave disease of the higher nerve-centres, and results from disturbance of the vagus—innervation.

Any considerable degree of cardiodynia, then, should justify the apprehension that actual gross structural disease exists.

There is now a general consent among pathologists that angina pectoris is an organic, and not a functional disease. The latest researches seem to have established this beyond any reasonable doubt. Dr. Henri Huchard has lately published a series of articles in the *Revue de Médecine* (April, June, August, and September, 1883), in which he shows by an exhaustive *résumé* of the evidence that *true angina pectoris* (Heberden's disease) is due to ischæmia of the heart-muscle, the result of obstruction by calcification or atheroma of the coronary arteries. Other forms of cardiodynia are nervous, reflex, toxic, or diathetic, and are curable—these he calls *false angina pectoris*. The nervous form is that condition of the cardiac mechanism which has its origin in the state of the nervous system accompanying hysteria, neurasthenia, hypochondria, exophthalmic goitre,¹ etc. The reflex form takes its point of departure in some distant irritation, as of the stomach, uterus, etc., which is reflected on the intra-cardiac sensory fibres of the pneumogastric. The toxic form is perhaps oftener caused by tobacco than by any other agent, though cases have been referred to tea, coffee, and alcohol. The diathetic form accompanies rheumatism, gout, syphilis, and diabetes.

Huchard cites the following examples, which show the necessity of a proper diagnosis of these two forms of *angina pectoris*: "In gout we may have thoracic angor under three conditions—(a) either it is a true angina pectoris, arising from an arterial lesion (arterio-sclerosis, atheroma of the coronary arteries, lesions of the aorta, etc.), to which gouty persons are always predisposed; or, (b) gastric troubles, frequent in gouty patients, may provoke attacks of false angina pectoris, which is likely to terminate in cure; or (c) the angina pectoris may be a neuralgic paroxysm, such as gouty neurasthenic invalids are prone to."

In the case of tobacco-poisoning, the same clinical distinction ought to be observed. Tobacco may produce (though rarely) true angina pectoris, by spasm of the coronary arteries, or by favoring real arterial lesions, or, as is oftener the case, false angina by the neuralgic or dyspeptic troubles which it provokes.

These views correspond essentially with those of Professor Sée in the work to which I have so frequently referred.

In a third and final paper I shall take up the clinical aspects of the subject of functional heart diseases.

THE VALUE OF A CAUL.—The following advertisement appeared in one of the daily papers of this city recently: "Wanted—Any person to buy an infant's caul. Call at—Gouverneur Street, second floor." A reporter of the *Times*, calling at the place, found that the caul was priced at \$100! The owners informed him that there was a great demand for cauls among sailors and sea-captains, as it was firmly believed that no one with a caul was ever drowned. A party of interested ladies present informed the inquirer that cauls are more efficacious as remedies for the various ills that flesh is heir to than all the medicines in the drug shops, and declared "if any doctor had a lot of 'em to give people to hold or carry when sick there wouldn't so many die." Several marvellous cures were paraded. One cited a case of paralysis of thirty years' standing, another mentioned a case of inflammatory rheumatism, still another the case of a frightful attack of lockjaw, and, finally, hydrophobia and cholera were added to the list. The reporter heard enough to excite in him the gravest apprehensions for the future welfare of the regular medical profession, especially in view of the incentive to be born with cauls now held out to infants by the present high rates.

¹ Forms and Treatment of Angina Pectoris. Medical News, October 20, 1883.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

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I.—THE EXTERNAL EAR.

GENERAL CONSIDERATIONS.

The external ear.—Inasmuch as the auricle and external auditory canal comprise the external ear in man, they may best be considered together as a whole, both in the study of their functions and in the treatment of the diseases to which they are subject. The auricle and its affections will, however, be more particularly noticed before taking cognizance of the external auditory canal and its diseases, and in certain instances it will be necessary to devote attention to these parts as a whole, their intimate relationship rendering them liable to be attacked by disease at the same time.

The traumatic lesions of the auricle are among those which seldom extend to the cartilaginous portion of the canal of the ear, and in regard to the pinna, or wing of the ear, it may be said topographically to be entirely unlike any other structure of the body; and consisting, as it does, of a delicate cartilaginous framework, occupying a prominently outstanding position, it is very much exposed to injuries from blows, either delivered accidentally, as in boxing and at play, or from falls upon the organ—even lying upon a hard pillow may, especially under favorable conditions to be alluded to further on, set up inflammatory action in the auricle; the injury in either case resulting from the auricle's being more or less forcibly pressed against the hard and unyielding temporal bone.

That the auricle is not more frequently the seat of disease from these causes may create surprise, when it is considered that the perichondrial envelope which everywhere lies in contact with the cartilaginous framework is thus so frequently liable to traumatic lesions, and its consequent separation from the cartilage through inflammatory effusion so sure to immediately follow, as will be seen under *othematoma*.

Cutaneous affections.—Injuries, however, by no means constitute the principal part of auricular affections, since the common integument, of which the outermost covering of the external ear consists, is liable to nearly all of the cutaneous affections to which the skin is elsewhere subject. But before proceeding to consider the various affections constituting these two principal divisions, it will be well to first take notice of some general characteristics of the external ear which have a special bearing on diseases of the auricle and its acoustic functions.

FUNCTIONS OF THE EXTERNAL EAR—ITS TOPOGRAPHY, PHYSICAL AND ACOUSTIC FUNCTIONS, COMPARATIVE ANATOMY.

Topographical description.—The pavilion of the ear, as the external ear is sometimes called, varies in size and shape in different individuals; the pinna, or wing, in its general contour is hollowed out like a shell, the *conque* proper being the deepest part and constituting the expansion with which the external auditory canal commences. The inequalities of the auricle's surface, depending on the foldings of the cartilage, while presenting a pretty uniform appearance to the casual observer, are, on close inspection, found to be differently moulded in almost every subject. So characteristically distinct, indeed, has this variation been found to be in individuals, that the remark is said to have been made by an eminent jurist that a photographic view of the ear would better serve for the identification of persons than a picture of the face even—the former not being in the same degree subject to the mutations of time or other changes to which the latter is liable.

The acoustic value of this portion of the ear in man

has not been as yet satisfactorily determined; this, however, is not because discussion of the subject has been wanting, and the assertion has been frequently made that excellent hearing may remain after the entire loss of the auricle. It is not strange, therefore, that some writers have considered the auricle as of but little, if any, use whatever as a collector of sound. Thus Itard (1821), in confirmation of this view, relates an instance where a soldier had both of his ears cut off without impairment of hearing, and Hennon (1830), in his work on "Military Surgery," says, "I have met a case where the external ear was completely removed by a cannon-ball, and yet the sense of hearing is as acute as ever." Inferences based on data afforded by cases like the two above cited are, however, by no means to be accepted without question, since there is reason to believe that inadequate tests were employed to ascertain the hearing-power; at least if the voice-test was carefully made the fact is not stated.

Notwithstanding the fact, however, that the loss of the ears does not entail very marked deafness on the sufferer, unless it be in the impairment of the hearing sense in regard to orientation, yet one cannot doubt that the more amply developed, though less becoming, pinna is the more serviceable acoustically, inasmuch as its larger receiving surface favors considerably the collection of sound, and probably also the appreciation of its source. In civilized society, however, the beauty of the ear is considered to depend very much on its small size, and, moreover, the possessors of such enviable adornments are not usually found to be defective in hearing on that account; but many persons moving in the better stations of life are embarrassed by the deformity of illy formed and unsightly ears, and the writer's attention has often been directed to this subject by patients and others; the feasibility of adopting operative procedures for correcting these deformities has been proposed even.

As has been stated above, writers have differed respecting the acoustic functions of the outer ear. Prominent among the older writers who have attached no little importance to the organ may be cited Du Verney (1683), and later Williams (1842) and Pilcher (1842). The observations of the former are of sufficient interest, after the lapse of two hundred years even, to introduce here. He considers the external ear as a natural trumpet, well adapted, from its neat and smooth concavity, to condense sound and consequently render its impressions stronger on the deeper parts of the organ of hearing. This is, he believes, confirmed by the experience of those from whom the external ears have been removed, for they do not hear so well, and use the palm of the hand or a trumpet to remedy the defect. He also adduces the habits of animals, as the deer and hare, as likewise significant—their habit being to turn the ears in the direction from which sound comes in order to hear better. Some persons, he says, believe that sound is reflected from the folds of the auricle before arriving at the concha and that thus intensified their impressions on the transmitting mechanism are increased, "just as in a half circular arch the rays of sound reflecting themselves at equal angles, the length of the circumference of the vault, pass finally from one end to the other by several great and small reflections."

Williams, and subsequently Pilcher, elaborated the previous literature of this subject, and their observations on the size, shape, mobility, and probable use of the auricle in man and in the lower animals, are of considerable interest. Charles H. Burnett (1877) and Rouis (1877) have both of them made researches respecting the acoustic functions of the external ear in man. Burnett concludes that the auricle and external auditory canal constitute a resonator for high notes.

But whatever the sound-condensing or resonating functions of the auricle and external auditory canal may be, these parts exert an important influence on audition in quite another manner. I allude to the direct mechanical

dominance through which elasticity in the drum-head is maintained, in the first place, by means of the cartilaginous framework which is firmly attached to the temporal bone, and, in the second place, through muscular action. Referring to these influences it is readily conceivable that the former aids in retaining the cutaneous layer, which envelops it and constitutes also the outer coating of the drum-head, in a state of proper tension, while its elasticity permits of varying degrees of tension in the drum-head without rupture whenever extra tympanal pressure occurs from either barometrical pressure or from the impact of loud sounds. In respect to the muscular dominance referred to in the second place, it may be said that the aural group of muscles exert a great influence on the transmitting structures, for while the outer integument, lining the external ear, is made to maintain the normal state of tension in the membrana tympani, the underlying fascia of the canal and contiguous parts is, when acted upon by these muscles, capable of increasing its usual tension. Besides the muscles known as aural, there are also certain muscles of the head which may be regarded as auxiliary aural muscles; but of these a fuller account will presently be given.

Impairment of the normal tension of these parts during the progress of inflammatory affections affecting them is quite frequent, and in availing ourselves of the acoustical knowledge to be derived from a study of the above facts, the presence of symptoms otherwise perplexing may be accounted for: thus deafness, tinnitus aurium, and autophanous phenomena, all of which are common in middle-ear affections, may be explained differentially when the outer ear only is the seat of disease. In this connection, let it be borne in mind that in consequence of old age, or from any cause whatever whereby general tone is lessened, the cutaneous layer of the outer ear may suffer relaxation, and that impairment of hearing, tinnitus, etc., may result. Patients thus affected frequently acquire the habit, seemingly almost involuntarily sometimes, of placing the open hand behind the auricle when in the act of listening attentively, and drawing it forward, thereby very much increasing the sound-collecting capacity of the organ, and also putting the parts upon the stretch—conditions which aid hearing considerably. Other patients obtain favorable results by placing the end of a finger in the conque and drawing it outwardly.

Comparative anatomy.—A study of the outer appendages of the hearing organ of some of the lower animals might add to our knowledge of the functions of the human ear. In venturing to offer a most superficial review of the subject, it would be well to state that some of the observations from which the following remarks were drawn were made more for the writer's own amusement and instruction than with any intention of presenting them as the result of strictly scientific enquiry; yet it is to be hoped that suggestions so unimportant as these even may stimulate further research in a department of science where our knowledge, considerable though it be, is still incomplete.

I am led at the outset to institute a comparison in this regard between animals inhabiting aerial and aqueous elements respectively. Thus it will be found that nearly all of the former have an outstanding sound-condensing auricle, while in marine animals this is usually absent. When a transmitting apparatus is found to exist in the latter even, no trumpet-shaped outward collector of sound seems to be required, since the momentum of aqueous undulatory movements is much greater than aerial. In marine animals which make excursions of greater or less duration into the atmospheric air, and are capable of existence in either element, as the whale, alligator, and the like, provisions exist apparently adapted to both aerial and aqueous transmission of sound.

In some crustaceans, however, there seems to be no membranous motor analogous to the drum-head, such as is required in aerial transmission of sound, and hear-

ing, therefore, is probably only complete when the animal is submerged. Scarpa (1795) and Weber (1820), who made researches respecting the hearing sense in these animals, held views differing from the above; they delineate, for example, an osseous and membranous vestibule in the fresh-water crayfish, supplied with an auditory nerve, and in this manner endeavor to explain the perception of sound. I have myself repeatedly dissected the sea-lobster, an animal similar to the river-lobster, with the view of substantiating the theory of the authors above mentioned, and have indeed found a minute nervous filament distributed to the part as described by them, but can scarcely believe it adequate for the needs of this animal, since the optic nerve is of much greater proportions than the so-called auditory nerve, and as regards the vestibules described, I have been unable to demonstrate them satisfactorily. It has occurred to the writer that perhaps the larger antennæ of the lobster are sound-perceivers; they seem well adapted to this purpose, since from their construction they may readily be thrown into vibratory movements. They have a wide range of motion and are easily moved by their own muscles. I have observed the action of this animal while at rest upon the bottom of the sea in shallow water, when the fluid surrounding him was suddenly thrown into vibrations by the blow of an oar upon the bottom of my boat: the larger antennæ were then immediately thrown upward, the better to ascertain, as it seemed, the source of sound. There is still further reason for believing that sound is perceived in this manner, for these antennæ are supplied with nerves of very considerable size, which are given off from the ganglionic centre near the origin of the optic nerves. If these views are correct the hearing sense is but a more highly specialized state of the kindred sense of touch, and much more primitive than in the sound-receiving and transmitting organs which are adapted to respond to the force of the aerial undulations which constitute sound; yet they are sufficient where a highly specialized hearing sense is probably not required.

If attention be now directed to the ears of aerial animals below man in the scale, it will be found on comparison that there exists a striking resemblance, although a very marked difference prevails in the relative size of the external muscles, those of the former being more fully developed. In man, owing to long disuse, they are comparatively rudimentary and useless, since he cannot employ them to move his ears in the same degree enjoyed by such animals, for example, as the horse and dog. In these animals the auricle is loosely attached to the head, and may therefore be more effectively employed in gathering sound in the act of listening, since the largely developed aural muscles can be brought into use in presenting the concavity of the ear in different directions. Having discovered the source of sound the concave surface of the auricle may, on observing the animal, be seen to be offered to it and kept in a more erect state—a position probably most favorable for the collection of sound. In the dog the entire scalp glides freely over the skull, thus facilitating the voluntary movements of the ear.

An opportunity was offered the writer by a friend to examine the ears of his dogs, and in availing himself of this privilege he found that in setters and other dogs where a strain of spaniel prevails, that the drooping ears seemed to afford a natural shield to the deeper and more delicate parts of the organ, which are much exposed in these frequenters of the water and rovers of the field. The cartilage of the pinna, however, is no larger than in breeds carrying their ears erect, being absent in the most pendant part, and that portion composing the commencement of the external auditory canal is much dilated, forming a very large concha, which, when the external ear is in repose, is folded up, thus protecting the ear from the entrance of foreign bodies, etc. When the pendant portion of the auricle is lifted up, so as to afford a better

view of the entrance to the external auditory canal, there are to be seen a number of operculæ, formed from the outer margin of the collapsed walls; one of these, larger than the rest, seems to correspond to the tragus in the human ear. When the animal is on the alert in listening the drooping auricle is lifted up and expanded and the pliant cartilage unfolded, the act being performed by the *retrahens aurem* and *attollens aurem*, which muscles together lift the auricle backward and upward with much energy, thus bringing a most efficient sound-collecting trumpet into use. The hearing is possibly further improved in fielding by the constant motion of the dog's head, his ears being thus frequently thrown up, the act giving greater exposure to the concha.

The act of expanding the auricle would seem to also render the drum-head more tense, and per contra, the dog is observed to droop his ears to loud and disagreeable sounds, the drum-head being probably relaxed in this way, while at the same time sound is more completely excluded by the collapse of the cartilage and the overlying and pendant auricle. In this manner more or less complete muffling of the sound-transmitting mechanism takes place, without which the sensitive hearing organ which these animals possess would be liable to injury from loud sounds.

Examples of the peculiar functions of the ear in animals could be multiplied here, for their suggestiveness has undoubtedly a value to the otologist, but I shall allude to but one: It is a well-known fact that the horse when viciously inclined throws his ears far back, an act analogous to that of a desperately angered person who shuts his eyes to the consequences of his own inconsiderate passion, and may be said to blindly rush on to his own destruction; so might one fancy that the horse, by means of this position of the ears, excludes sound to some extent and thus dulls one of the senses through which his submission might be brought about.

The rudimentary state in which the muscles of the ear in man are found has been already alluded to above; the ability to voluntarily move the auricle by them, however, sometimes exists to so great a degree as to be startlingly suggestive of his evolutionary existence; and while the limited muscular movements possessed by him would be totally inadequate for the ear-movements requisite in lower animals, yet the phenomenal accomplishments he is thus sometimes endowed with would seem to point to a not altogether inutile function. I have frequently observed patients draw the ear forward, and more rarely backward or upward, on the introduction of the aural speculum, or a probe or other instrument into the ear; sometimes this wincing is accompanied by tightly closing the eyes and is sufficient to materially impede the introduction of these instruments. Instances of moderate ear-wagging are too frequently observed to be of particular interest; the following, taken from among a large number recorded in my note-books, will, however, serve as an example on which to offer an explanation of the *modus operandi* of the phenomena and their significance.

CASE I.—Joseph C—, aged fourteen, came to the New York Ear Dispensary, in November, 1878, on account of defective hearing arising from chronic purulent inflammation of the middle-ear. During his examination it was observed that he readily pricked up his ears while listening, the auricle presenting well forward. The act seemed to be performed as if to aid the defective sense of hearing, and he was apparently unconscious of the movements made. When requested to move his ears, however, they were moved forward and backward with great ease. The power of moving the ears in the above related case was doubtlessly increased by the constant efforts made in listening.

A much greater amount of ear-movement undoubtedly exists than most persons are themselves conscious of. I have myself often observed the ears of different individuals, when unaware of any observations being made

upon them, and have seen the ear elevated by the action of the occipito-frontalis while employed in giving expression to the speaker's emotions; the ear dropping down again to its normal position without voluntary aid.

The following experiment, which was made in my office recently, is of interest in this connection: I observed that a friend with whom I was conversing elevated his eyebrows while listening, by contracting the occipito-frontalis muscle. He stated that the act was usually unconsciously done, but that he fancied it increased the acuteness of his hearing. In order to ascertain if hearing was thus increased, I placed a large vibrating tuning-fork just out of the range of his hearing; if he now promptly elevated the brows the sound of the fork could again be heard, and when the brows were again relaxed he again ceased to hear it; repeated contractions and relaxations of the muscle caused the sound to reach his ears in an interrupted manner, some object seeming to be now and then interposed. The weaker vibrations answered best in the above experiment. My friend, Dr. George B. Pomeroy, of Ohio, informs me that a person known to him always elevates his eyebrows in listening, a habit that often gives offence, since the expression gives the person a supercilious and overbearing expression, as if he doubted what was being said to him. My own observation has been that many persons contract the *orbicularis oris* when listening intently.

On inquiring into the *modus operandi* of ear-wagging, as it has somewhat facetiously been termed, it would seem that the power is not alone dependent on the action of the illy-developed muscles of the ear, namely, the *attollens aurem* and *retrahens aurem*, but that the *orbicularis-oris* and *occipito-frontalis* muscles, acting conjointly, exert a powerful auxillary force in this direction. In most persons the ability exists to bring the last-named muscles sufficiently into action to render tense the fascia in front of and just above the tragus, the motion being perceptible to the touch of one's finger if placed in front of the ear, and when this force is exerted, as it would frequently seem to be, upon that portion of the deep temporal fascia extending down along the anterior margin of the osseous meatus until lost in the anterior ligament of the auricle, the drum-head itself would then be made more tense, especially the more distensible portion, which is directly continuous with the integument of the external auditory canal, and which is known as the *membrana flaccida*. The writer made a dissection of the ear in a recent subject, in order to determine the extent of the motion thus transmissible through the deep temporal fascia to the motor (drum-head) of the transmitting mechanism of the ear. First the deep temporal fascia was dissected up to where it is blended with the anterior ligament of the auricle. At this stage of the proceeding it was found that traction on the deep temporal fascia moved the auricle freely. The anterior attachment of the auricle was then divided, and a section of the petrous bone was made by sawing down through the tympanum from above, separating the incus from the stapes and bisecting the tensor-tympani muscle in its bony canal, leaving the rest of the mechanism of the middle ear intact, with the exception of a slight laceration of the drum-head at its inferior segment. It was now found that if that portion of the tensor tympani left attached to the manubrium mallei was made taut and so retained in the grasp of forceps while traction was made as before on the temporal fascia, which had been dissected up, the transmitting mechanism responded promptly and became more tense than before. When alternate tension and relaxation was practised on the fascia the drum-head tightened and relaxed likewise, the motion being perceptible to the eye.¹ These apparently demonstrable influences of muscular action in the middle ear mechan-

¹ The above dissection and experiments were made with the aid of Dr. S. H. Pinkerton, Assistant to the Chair of Surgery, Bellevue Hospital Medical College, who has promised to make further researches in this direction.

ism in man are similar to those which in a more perfect manner are obtained in the horse, dog, and other animals by means of the voluntary action of their more efficient muscles.

On a previous page allusion has been made to the effect on hearing of alterations in tympanal tension, either through atmospheric pressure from without or within; it can now be seen in this connection that the membrana tympani may have its tension very greatly disturbed by alterations in the tone of the cutaneous lining of the ear, or of the fascia and muscles which have just been mentioned. In this manner an explanation may be found for the variation in hearing experienced by persons who alternately pass their time in the cold, bracing outdoor air, and in warm apartments. When the parts are toned up out of doors hearing is much better, usually, than when they are relaxed by indoor warmth.

With a knowledge of the significance of the relations between the different parts of the external ear and the middle ear mechanism, which I have above attempted to outline, one will certainly find it more easy to establish a differential diagnosis in diseases of any of the parts mentioned.

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OPHTHALMIA NEONATORUM.—Credé, in the *Archiv. für Gynäkologie*, vol. xxi., 2, continues his articles on "The Prophylaxis of Purulent Ophthalmia in the New-born." He recommends to adopt the following immediately after birth: As soon as the child has been washed, wash the eyes with clean water simply, and then put in a single drop of a two per cent. solution of nitrate of silver. He says he has not seen any unpleasant results from this plan of treatment, and has been able with it to reduce the percentage of cases in hospital practice to as low as 0.2 per cent. Slight congestion of the conjunctiva with moderate swelling occur frequently, but these soon disappear without special treatment within forty-eight hours.

PERIBERI, OR KAKKE.—In the *Louisville Medical News*, Dr. F. H. Enders reports the occurrence of sixty cases of this affection on a Japanese man-of-war that visited the Sandwich Islands. The patients examined after admission to Queen's Hospital, Honolulu, suffered from pain resembling cramp in the calves, œdema of the extremities, marked dyspnoea, had a quick, rapid pulse, high-colored urine scanty in quantity, and constipation. Dr. Trousseau, House Surgeon, put them on a diet of potatoes, fresh meat, lard, and fruit, administered squills and digitalis, and nearly all recovered who were taken to the hospital. As soon as the action of the kidneys was well established by the diuretics, tonics were given.

Of the whole number of cases there were thirteen deaths. Dr. Trousseau regards the diet as the cause, it being almost entirely of rice.

HOT VAGINAL INJECTIONS.—Dr. T. Naylor Bradfield, in the *New York Medical Journal*, directs attention to a possible consequence following the long, persistent use of hot-water vaginal injections. He relates a case, that of a girl twenty-three years of age, who had a very large hæmatocele, for which hot carbolized-water injections were repeated two or three times a day, not above 100° F., nor below 90° F., and continued for an hour at each time. Six weeks subsequently the patient complained of increasing numbness on the inner side of the lower extremities, with pain in the knees, constant tingling of the toes, with complete loss of power to stand or walk alone.

EARLY SYMPTOMS OF GENERAL PARALYSIS OF THE INSANE.—In a paper read at the annual meeting of the Massachusetts Medical Society, Dr. W. B. Goldsmith analyzed the initial symptoms recorded in the histories of one hundred cases of general paralysis of the insane, in which he points out the exceptional occurrence at an early stage of the disease of any well-marked characteristics; that physical and mental symptoms usually appear nearly synchronously, the most frequent and characteristic being defective articulation. He also concludes that changes in the pupils and disorders of the gait are less frequent, and have less value in diagnosis, than is usually ascribed to them. He found the patellar tendon reflex to be markedly supra-normal in nearly twenty-five per cent. of general paralytics, the presence of this symptom being of much value in corroborating diagnosis, its absence having, however, no significance. Hallucination, or impaired function of the special senses, is very rare as an early symptom; nor had he noticed in any case the diminution in the sense of smell, thought by Voisin to be very frequent in the early stages. In twenty of his cases the first "motor" symptom consisted in convulsions or loss of consciousness, and he urges the importance of careful inquiry on this head. Among mental symptoms the marked exhilaration, with delusions of wealth and greatness, usually considered to be characteristic, was present early in less than one-fourth of the cases; the more frequent change is simple failure of mental capacity and activity, and mental depression.

PHOSPHATE OF CODEIN.—The *Wiener Med. Blätter* for August 16th contains the mention of a new drug, the phosphate of codein, which has been prepared by Merck, of Darmstadt, under the direction of Professor Hegar, of Freiburg. It is intended for hypodermic injection, for which neither the sulphate nor the chlorate are suitable, being nearly insoluble in water. The new salt is soluble in four parts of water, and contains seventy per cent. of codein. It crystallizes in four-sided columns, and is similar to morphia in action, with the advantage of having less tendency to excite toxic symptoms. It is particularly suitable for sensitive patients.

THE RISKS OF MASSAGE.—Dr. Althaus, in the *British Medical Journal*, says that it is now time to cry "Hands off!" with regard to the indiscriminate manner in which the "Weir-Mitchell treatment" more especially is being applied to all cerebral and spinal cases. Many cases which would be benefited by rest are being treated by means of massage and exercises, so that more harm than good is done to the patient. Dr. Playfair also writes to defend himself from being included among those who carry on the massage treatment in an indiscriminate manner, and points out that massage is only a part, and by no means the most important part, of true treatment, the results of which, in well-selected cases, are so remarkable that it is not surprising that it should run the risk of being at times injudiciously and indiscriminately applied.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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FRENCH MEDICAL JOURNALS.

WE sometimes have inquiries as to what foreign medical journals an American who wished to keep up his knowledge of European medicine had best take. At the present time, with the great excellence of English and American medical journals, it is hardly necessary for a general practitioner to understand French and German in order to keep abreast of the times. If, however, he is especially interested in some branch of medical science, or if he aspires to be well informed as to the progress of medical science, it is very important that he see French and German literature in the original. For it is probable that in about eighty per cent. of cases translations are emasculating processes.

In beauty of style and clearness of expression French medical writers retain pre-eminence. But this pre-eminence is least strikingly shown in the periodical literature. We venture to say that French medical journals, as a whole, are the worst that are published in any of the leading civilized countries, ranking after those of England, Germany, and America; and hardly, on an average, exceeding in quality those of Italy and Scandinavia.

This poor quality is partly due, no doubt, to their great number. Exchange lists are flooded with a mass of cheap weaklies and monthlies. They have also, as a rule, very little individuality. Most of them are made up of reports of the great Parisian medical societies: Académie de Médecine, Académie des Sciences, Société de Biologie, Société de Chirurgie, Société des Hôpitaux, etc. The last half of all French medical journals is consequently almost precisely alike.

The French journals do not, like those of America, keep *en rapport* with the profession at large. One finds in them no "correspondence," and very few original communications. The original matter consists largely of lectures delivered in some course at the Paris hospitals, or of communications read before a learned society. The young doctor, or the general practitioner, who holds no professorship, and who is a member of no city society, is rarely heard from in the journals. In fact, most of the literary work is done by a few eminent individuals and their pupils, whom we, in this country, would soon learn to look upon as monopolists.

One peculiar and sometimes attractive feature of French medical journalism is the *feuilleton*. This is a department where gossip, anecdote, and light criticism

are to be found. The *feuilleton*, however, needs to be well done or it becomes very stupid. In the palmy days of *L'Union Médicale*, under Latour, its *feuilleton* became quite famous, and was frequently quoted. Our French confrères have a fondness for anecdote and *bon-mots*, and several journals devote a space to collecting and presenting literature of this sort—not always of the cleanest kind. It has been said that a French surgeon or physician must make his *mot* in order to make his mark. At any rate French medical writers generally show some evidence of this kind of ambition. Locke has asserted that a man of wit cannot be a man of the best judgment, *ergo* witty men will not make great doctors. This law evidently does apply to France; while as for England and America there has not enough wit appeared for some years to spoil a single doctor.

The French journals have few editorials, and these are not of a powerful character, being generally composed of comments upon the last session of the Académie.

The leading journals of a prominent character are: *Le Progrès Médical*, which is published once a week, *L'Union Médicale*, *Gazette des Hôpitaux*, and *La France Médicale*. There are several weeklies devoted chiefly to giving reviews of medical progress, together with the usual instalment of society work. Among these are: the *Revue Médicale* and the *Journal de Médecine*. Some of the best of French journals are published monthly *e.g.*, the *Revue de Médecine*, *Revue de Chirurgie*, and the *Archives Generales de Médecine*. There are journals which minister to every possible specialty, but mineral waters and hydrotherapy appear to be particularly rich in journalistic organs. More attention is paid also to therapeutics both in journals and in society work than is done in other countries.

French journals are decidedly narrow in tone, and unenterprising in everything but local matters. Comparatively little attention is paid to other work than that which takes place in Paris. In fine, when contrasted with the modern idea of medical journalism which knows no nation or language, but takes contributions to science from every quarter, French medical journalism is narrow and provincial, and not too scrupulous about advertising proprietary medicines.

PSEUDO-MENINGITIS FROM TEETHING.

To a group of cerebral symptoms, appearing especially in weakly or rachitic children during difficult dentition and subsiding upon the eruption of the teeth, Dr. Guaita gives the name of pseudo-meningitis dentalis. As an example of this affection, he relates the case of a child, twenty-one months of age, who was taken ill with fever, constipation, slight bronchial catarrh, and a single attack of emesis. To these symptoms were soon added somnolence, grinding of the teeth at night, hyperæsthesia, slight strabismus, irregular pulse, the tache cérébrale, but no convulsions. All these symptoms disappeared after eight days, as soon as two upper molar teeth had pierced the reddened and swollen gums. The author regards this disease as of much more frequent occurrence than is generally supposed. During the years 1880 and 1881, 194 children under two years of age were reported to have died of meningitis in Milan. He

thinks that in many of these cases the actual cause of death was the above-described pseudo-meningitis. In the treatment of this disease, which may end fatally in bad or neglected cases, Dr. Guaita advises the relief of constipation by calomel, and the employment of active antiphlogistic and revulsive measures, such as ice-bags, leeches, and blisters.

OPIUM IN COMA.

DR. E. H. HALE, in his treatise on an epidemic fever, commonly called "spotted fever," which prevailed in Maine in 1814, says, page 227: "This was a disease of debility, and of very great debility. The congestions (page 231), including the coma, were produced by debility, as appears from their being effectually removed by stimulants (page 232). Evacuations of every kind invariably increased the tendency to coma, while opium, tonics, and stimulants, cautiously administered, as constantly diminished it (page 143). Opium was by far the most liberally used in cases of coma. Whatever may be the explanation of its mode of action, it is certain that this was a powerful agent in removing the deepest comas, which were not absolutely irrecoverable. For this purpose it was sometimes given in large quantities, both by mouth and by injections (page 121). As the coma came on, the tincture of opium, with some of the strongest volatile oils, such as peppermint or lavender, was given in small doses, frequently repeated (page 122). If these and other measures were not speedily efficacious, enemata, composed of yeast, brandy, and tincture of opium, were thrown up, and the quantity of these articles given by the mouth was rapidly and largely increased. Indeed, the only circumstance by which the exhibition of these articles could be regulated was the effect they produced. No quantity was considered to be large enough, until the coma began to be subdued. When that remitted these medicines were given more sparingly and with greater caution. This effect was uniformly produced by this course of remedies, unless the previous state of exhaustion had been extreme, or some unusual circumstance prevented the requisite quantity from being given."

GLYCERIN DIET IN THE TREATMENT OF FEVERS.

PROFESSOR SEMMOLA, of Naples, has recently made a contribution to the *Bulletin Général de Thérapeutique*, upon the subject of the use of a glycerin diet in acute fevers. Discussing first the subject of *aliments d'épargne*, or those substances which lessen tissue waste, the distinguished professor makes quite a furious onslaught upon the popular practice of prescribing alcohol in fevers. He does not have much faith in the antipyretic action of this remedy. On the other hand he does believe that alcohol always has some toxic action on the bodily tissues, "a toxic action common to it with all the other famous antipyretics, veratrum, digitalis, carbolic acid, etc." Although admitting that alcohol has some claim to belong to the *aliments d'épargne*, he believes that it is likely to cause cerebral, cardiac, and gastric irritation. He has, therefore, abandoned its use as a food ration in the treatment of severe fevers.

Professor Semmola states that for many years he has been casting about for some satisfactory *aliment*

d'épargne which does not have the disadvantages of alcohol. He thinks that it has been found at last, glycerin being the substance desired. This he has employed in the following formula:

R. Glycerin. pur. 30 grammes
Acid citric *vel* tartaric 2 "
Aquæ 500 "

M.

About an ounce of this is taken every hour, the whole being consumed in the twenty-four hours. Semmola finds it grateful to his patients, and believes that a lower temperature and an amelioration of symptoms occur.

As to its effect upon tissue metamorphosis, his statements are very positive. The amount of urea daily excreted diminishes under the glycerin diet from 6 to 7 grammes on the average (*i.e.*, from 38 to 31 or 32 grammes). Sometimes it falls as much as 10 grammes.

The effect upon the carbonic acid excretion is not stated. Still Semmola asserts that the evidence is positive that glycerin in fevers lessens tissue waste, and is therefore an *aliment d'épargne*.

His views do not correspond entirely with those of several previous observers who have studied the effects of glycerin upon non-febrile subjects.

Lewin and Munk state that glycerin has no effect upon the nutrition of the body or the elimination of urea. Cattillon and Tschirwinsky found that it first diminished and then increased the urea elimination.

A NEW TREATMENT FOR THE CURE OF GLAUCOMA.]

A THESIS recently submitted by Dr. A. Trousseau, late hospital interne, presents in a very confident way the claims for a new method of treating glaucoma. This method, which was first conceived by M. Badal, of Bordeaux, consists simply in exposing and stretching the external nasal nerve. This nerve, one of the terminal divisions of the nasal branch of the ophthalmic, contains vaso-motor and reflex-secretory as well as sensory fibres. The nasal or naso-ciliary nerve itself is intimately connected with the visual organ by a branch to the ciliary ganglion and by branches to the ciliary muscle.

Dr. Trousseau admits that the ordinary method of treating glaucoma by iridectomy is a valuable one, and submits the following list of advantages and objections: It often gives excellent results, but sometimes is utterly powerless.

Its chief value is in acute glaucoma, practised early. In the more chronic forms it is useful but not curative. In simple chronic glaucoma it sometimes checks the disease, but often aggravates it. It is dangerous in hemorrhagic glaucoma. The operation has been known to excite a glaucomatous attack in the opposite eye. The operation is not a simple one and is liable to accidents.

Our author sums up also the advantages and disadvantages of sclerotomy in the treatment of glaucoma. It does not, he says, give such constantly good results as iridectomy even, and though beneficial for the relief of the prodromata of glaucoma, its effects are not lasting.

The especial advantages of stretching the external nasal nerve are then enumerated by Dr. Trousseau, who has applied the method in ten cases. He finds that it

at once relieves the terrible pain, diminishes intraocular tension, and increases the acuteness of vision. The operation is a simple one, is liable to no accidents, and if it fails iridectomy can at once be performed. It may prevent the necessity of enucleation or of optic neurotomy.

It is evident that Dr. Trousseau has obtained some good results from his novel operation. If it is really of value, the profession will welcome the fact, since it places a remedy in the hands of the general practitioner and those not especially skilled in ophthalmological surgery.

Glaucoma, however, is a disease that requires prompt action, and cannot be trifled with, and it may well be questioned whether so simple an operation as nerve-stretching will have a permanent effect upon the disease.

THE WORK OF THE GERMAN AND FRENCH CHOLERA COMMISSIONS IN EGYPT.

DR. KOCH has made a report to the Home Secretary of the German Government regarding the work of the commission sent to Egypt to study the cholera. The commission had been in Egypt for about two months when this report, dated September 17th, was made. Its headquarters were at Alexandria, and the investigations were carried out at the Greek Hospital, in that city. Twelve cases of cholera were observed and ten post-mortems made. This is not a very large record, but sufficient opportunity was afforded to make the pathological experiments desired. The blood, the vomit, the dejections, and the viscera were carefully examined. Few micro-organisms were observed, except in the dejections and in the intestinal wall. Cultivations of the organisms found here were made, by the gelatine method; and mice, fowls, dogs, and monkeys were inoculated with them. These animals were also fed with specimens of blood, vomit, secretions, etc. In no case was anything resembling true cholera produced.

The organisms found in the dejecta were of the kind previously observed by other investigators, viz., micrococci, bacteria of putrefaction, etc. They did not seem to possess any special pathogenic or anatomical peculiarities. In the intestinal wall, however, there was found in great abundance a bacillus which claimed more attention. It existed in great abundance, and was found in every case examined except one, that of a man who had died from one of the sequelæ of cholera after having survived the direct attack. In cases where the intestine showed gross anatomical changes the bacilli had penetrated the follicles of Lieberkühn, and caused evident irritation. In some places they had accumulated between the glandular epithelium and the basement membrane. In the very severe cases they even penetrated into the submucous tissues. The lower part of the small intestine was particularly affected by the bacilli. They are described as being rod-shaped and resembling the bacilli of glanders. Koch was particularly interested in these organisms, because he had already a year before seen similar ones in specimens of intestine from four cases of cholera occurring in India. These specimens had been sent him for examination; but he had not, at the time, been able to draw any conclusions regarding them. Having found them again, however, he proceeded

at once to make cultivations and inoculations. His results were, however, as we have said, entirely negative. In a word, therefore, the investigations of Koch and his party have as yet thrown no new light upon the pathology of cholera. The germs described are much like those occurring in ordinary conditions of putrefaction. It has been suggested that since the intestinal wall, in the latter stages of cholera, becomes greatly reduced in vitality the bacteria might easily pass into it at that time, just as organisms of putrefaction usually pass into dead tissue.

On the other hand, Dr. Koch thinks that the research is not yet ended. The cases of cholera from which he obtained his specimens, occurred toward the latter end of the epidemic, when the specific virus, and presumably the bacillus, had lost much of its virulence. Hence the failure of the inoculations. Again, this failure may have been due to the fact that the lower animals experimented upon are not susceptible to cholera affection at all. In order to clear up these and other points, Koch has asked permission to be sent to India, where he can continue his studies. This permission, we are glad to say, has been granted.

Cholera is a disease which, from analogy, one could easily believe was due to the presence of a pathogenic organism. Science is to be congratulated that so competent an investigator as Dr. Koch is enabled to continue his search for it.

The French cholera commission has not yet, so far as we can learn, made its official report. According to unofficial statements, however, this commission has also found an organism, and has cultivated and inoculated it. The results, however, like those of Koch, have been negative.

CAN CANCER OF THE PENIS BE ACQUIRED BY INOCULATION FROM CANCER OF THE CERVIX UTERI?

CONSIDERABLE comment has been aroused, and naturally, by the statement of Dr. T. G. Thomas, in a clinical lecture recently delivered, that there was a serious danger of contracting cancer of the penis by sexual intercourse with women suffering from uterine cancer. Dr. Thomas asserted that "repeated instances of cancer being contracted in this way were on record." And he always warned the husbands of women suffering from this disease against the danger to which they might subject themselves.

In a subsequent letter to the *Weekly Medical Review*, Dr. Thomas modifies his first statements very much. He writes: "If in the heat of a clinical lecture I should have stated the matter so strongly, I desire to modify my assertions, for I cannot sustain them, either from personal experience or a knowledge of the experience of others. I have met with but one case of cancer of the penis which I thought had this origin and I have not at my disposal evidence of the frequency of this disease after such exposure in the practice of others. I always guard husbands from exposing themselves to the danger of sexual intercourse where uterine cancer exists, and from *a priori* reasoning should look upon the danger of infection where an abrasion existed near the frenum as one which should be always guarded against."

Meanwhile Dr. Paul F. Mundé has been investigating this subject, and presents the results in the *New York*

Medical Journal of October 27th. This gentleman, never having met a case of this kind himself, wrote letters of inquiry to Drs. T. E. Satterthwaite, W. H. Welch, and R. F. Weir, of this city, also to Dr. Zerny, of Heidelberg, and Th. Billroth, of Vienna. From all these gentlemen the answers were that in their experience they had met with no case of cancer of the penis which had been acquired by local contagion in sexual intercourse. The opinion was general that cancer, in all probability, was not transmitted in that way, although the *possibility* of the occurrence could not be entirely denied. Experiments made to test the question of the inoculability of cancer have almost always been failures. Langenbeck injected fresh cancerous material into the femoral vein of a dog, and, a few months later, found some small cancerous nodules in the lungs. But Dr. Welch quotes Virchow as saying that these nodules resembled primary cancer. Dr. D'Outrelepoint made experiments which were entirely negative, while Nowinsky claims to have produced two small growths out of forty-two otherwise unsuccessful inoculations. Demarquay, in an analysis of one hundred and thirty-four cases of cancer of the penis, found one in which the cause given was a local contagion. This author does not believe, however, that cancer of the penis is ever really contracted in this way. Dr. Welch quotes Langenbeck as saying that he had seen three or four cases caused by local contagion.

Both Zerny and Dr. Mundé refer to the fact that cancer of the finger has never been contracted, so far as is known, by physicians or nurses whose work obliges them to make frequent digital examinations of cancerous cervixes.

The interesting evidence thus collected by Dr. Mundé tends to show that there is very little if any danger of contracting cancer by sexual intercourse. No case indisputably illustrating this mode of origin appears yet to have been reported—unless Langenbeck has recently published those that he claims to have seen.

The evidence is by no means all in, however, and as few deny the *possibility* of local contagion, it is to be hoped that clinical researches regarding this important matter will continue.

News of the Week.

THE DEATH OF PROFESSOR DEPAUL, of Paris, is announced. Professor Depaul was well known for his contributions to obstetrical science, and to pædiatrics. He was a member, and at one time president, of the Académie de Médecine.

LARYNGEAL CHOREA.—This is so rare an affection that a writer in an English medical journal recently expressed doubt of its existence. Curiously enough, three cases have recently been reported almost simultaneously: two by M. Blachez to the Académie de Médecine, and one by Dr. H. D. Chapin, to the Neurological Society in this city.

SUICIDES BY TWO MEDICAL MEN.—The profession of London have been shocked by the suicide of two medical men, both committed under very sad circumstances. The first was that of a native of Afghanistan,

Mahomet Ismal Khan by name, who came to England some few years ago, and, after studying for the usual period at University College Hospital, qualified as member of the Royal College of Surgeons of England, and Licentiate of the Royal College of Physicians of London. Having qualified, his troubles began. He had spent all his capital in obtaining his qualifications, and it was necessary that he should do something for a livelihood; but his extraction and color were against him, and, to his intense disappointment, he found that he could not obtain employment in the profession he had adopted without descending to practices both degrading and illegal; and, in a fit of despair, he committed suicide by swallowing a large dose of prussic acid.

The other case of suicide was equally sad. It was that of Dr. Dalton A. Haffenden, of Kensington, who was charged at the Hammersmith Police Court with being concerned in procuring abortion. At an adjourned hearing, it was announced that the doctor had committed suicide that morning by swallowing poison. He left behind him a letter, in which he declared his innocence of the charge.

THE STUDENTS MEDICAL UNION CLUB, of London, seems to be a failure.

THE PITTSBURGH MEDICAL JOURNAL will suspend publication for the present, after its next issue. The senior editor, Dr. T. J. Gallaher, contemplates a trip to Europe. This journal has been edited with more than usual ability.

SYPHILITIC INOCULATION OF MONKEYS.—At a recent meeting of the Société Médicale des Hôpitaux, Dr. Martineau announced that the monkey he inoculated on November 16, 1882, with syphilitic matter from a patient of his, after having presented the characteristic lesions—hard chancre, followed by the various syphilides (papulo-erosive)—became affected ten months after inoculation with ulcerous syphilide of the mucous membrane of the palate, which has healed. This case is interesting in so far as it proves that the evolution of syphilis in this monkey is following the usual course observed in man, and will tend to affect the theories in vogue respecting the natural history and origin of syphilis.

CONVICTED OF GRAVE-ROBBERY.—Last spring the grave of Edwin R. Harmon, formerly a prominent resident of Camillus, N. Y., was found to have been opened and the body stolen. The body was subsequently discovered in the dissecting-room of the Syracuse Medical College. Henry Thomson, formerly a medical student and a graduate of Syracuse University, was arrested for robbing the grave. His trial was concluded November 10th, and, after remaining out all night, the jury rendered a verdict of guilty.

DR. JOHN MCNEIL, an old and respected citizen of Jersey City, and one of the Commissioners of the County Board of Health, died at his home in that city on November 9th. During the war he was Surgeon of the Twenty-first New Jersey Volunteers.

THE END OF A CURIOUS CAREER.—Edward Borke, a well-known figure in connection with the Morgue in this city, died at Bellevue Hospital last week. Borke was a person who had probably handled more corpses than any

man in the world. The number of corpses in the Morgue each year approximates 5,000, and Borke handled every one entering or leaving it when he was on duty—in short, since his connection with the hospital he has moved at least 50,000 dead bodies. He had never followed any other calling but brick-making. The circumstances which led to his uncanny occupation arose in 1870. In that year he was brought to the hospital as a patient, and, although he improved rapidly, he never fully recovered. Being without home or friends he was allowed to remain at the hospital, and since has been in attendance at the Morgue and assisted at thousands of post-mortem examinations. Borke was not a man of tender susceptibilities, but he did his work faithfully, and had no bad vices. He was a very quiet man, and had little to say to strangers. His pet and most particular abhorrence was a newspaper reporter. For this portion of the community he held the most profound contempt, and could not disguise his wonder that any one in Bellevue Hospital should condescend to give them any information whatever. This dislike blossomed out, so the attendants at the Morgue say, after a reporter, who is now dead, had made Borke the central figure in a newspaper article, and compared him with Dickens's worthy, Jeremiah Crutcher. Borke read the article the following morning, and although he was ignorant of who Jeremiah was, he understood that he had been caricatured. He was wild with rage, and swore eternal enmity to the entire tribe of reporters, and kept it up.

THE CITY SCHOOL-HOUSES.—The Sanitary Inspectors of the city report that in many school-houses in this city the air is poisoned by bad drainage, defective plumbing, and insufficient ventilation. At a recent meeting of the Medico-Legal Society, it was stated that in two years 3,000 school children have lost their lives because of the foul and poisonous air which they have been compelled to breathe. The facts discovered by inspection are known to the Commissioners of Education, and there should be no delay in applying the proper remedy.

A DAILY MEDICAL JOURNAL.—Some enterprising parties in Paris have started a daily medical journal. It is called *Journal Medical Quotidien*. There are already two tri-weekly medical journals in that city; most of the journals, however, issue bi-weekly.

ARTIFICIALLY COLORED MEAT.—Several persons in Berlin were recently attacked with symptoms of poisoning after eating some beef which had a beautiful red color. It was discovered that the man from whom the meat was bought had colored it with aniline.

IMPROVEMENTS IN MOUNT SINAI HOSPITAL.—During the past eighteen months several improvements have been made in this hospital. There have been erected eye and ear infirmaries and an isolated building for cases of contagious disease. The inner walls of the main building have been renewed to guard against danger from the absorption of contagion by the walls. The cost of these improvements is about sixty thousand dollars.

A SECOND CLINICAL CHAIR IN OPHTHALMOLOGY has been organized in connection with the Vienna University and General Hospital. Dr. Ed. Ritter Gäger v. Jaxtthal has been appointed ordinary professor.

THE CHAIR OF ANATOMY IN DUBLIN UNIVERSITY has recently been filled by the appointment of Dr. Cunningham.

THE ELEVENTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION met in Detroit, Mich., November 13, 14, and 15, 1883. Dr. Ezra M. Hunt, of Trenton, N. J., was in the chair. A large number of new members were elected. Dr. D. E. Salmon, of Washington, read a paper on "Texas Cattle Fever." He gave a history of the disease. The malady does not spread from herd to herd, but is taken by those cattle which cross the trail of the infected ones. He felt sure that climate changes had little to do with the spread of the disease. Contagion always comes from infected pasturage, not from actual contact. The disease is never seen at the North, except where cattle from infected districts in the South have been put in the pastures. Dr. Hillare Ryan, of Caldwell, Tex., said he had lived in and near the infected district in that State nearly all his life. He had noticed that shrewd cattle-buyers would never purchase yearlings from the portion of the State referred to by Dr. Salmon.

Dr. J. M. Partridge, of South Bend, Ind., read a paper on the swine plague. This disease, generally known as the hog-cholera, first appeared in 1860, and its ravages were so frightful that the loss among the swine was greater than among all other classes of animals, being largest among the great corn and pork producing regions of the Northwest. The disease was the same wherever found. Some rather successful experiments with inoculation had been made, but it was thought best that the disease should be perpetuated instead of being exterminated. He recommended giving ten drops of carbolic acid for every one hundred pounds weight of the animal three times a day, and thorough disinfection of the pens with the same acid. Healthy animals should be separated from those diseased and removed to fresh pastures.

Surgeon George M. Sternberg, United States Army, read a paper on the "Etiology of Malaria." He doubted very much whether malarial disease was caused by the presence of parasites called bacteria in the blood. He thought it well established, however, that living micro-organisms were intimately connected with the presence of malaria. Tables were presented showing the number of cases of malarial disease at line posts along the Atlantic sea-board and at another line along the Mississippi and Missouri Rivers. Heat, moisture, and vegetable decomposition were essential features of malaria. Dr. Sternberg agreed with this proposition quite generally, but he also stated that the low state of the system was often, if not always, necessary for malaria to take effect. On the question of heat attention was called to the tables, which showed that the percentage of malarial diseases was much greater in Southern latitudes than at the North.

Following in the same line was a paper prepared by A. L. Woodhull, Surgeon, United States Army, on "Etiological Association of Organic Matter with Malaria." He thought it probable that the decomposition of organic matter—mainly vegetable—was the root of the evil. More directly he thought the causes were impure air and water and personal neglect of hygienic laws. Thorough drainage, he said, often prevented the spread

of periodic fevers. Dr. Clark Bell, of New York, said his experience had been that stagnant water, containing decomposed vegetable matter, was sure to produce malaria. He believed that malarial poison never crossed a very broad stream of water or a very wide expanse of sea. The theory he advanced for this was that water absorbed poison. Dr. George H. Rohe, of Baltimore, said malaria was not so dangerous in stagnant water as after the water had partially dried up.

Surgeon Charles Smart, United States Army, read a paper on the prevention of malarial diseases. With others he attributed the cause chiefly to impure drinking-water containing decaying vegetable matter.

At the evening session Governor Begole made an address of welcome on behalf of the State to the Association; Dr. William Brodie, of Detroit, on behalf of the city, and Dr. John Avery, President of the State Board of Health, on behalf of that body. The annual address by the President of the Association followed, consisting of a review of the work of the Association for the past eleven years. Social festivities followed.

Reviews and Notices.

A GUIDE TO AMERICAN MEDICAL STUDENTS IN EUROPE.
By HENRY HUN, M.D. New York: Wm. Wood & Co. 1883.

THE object of this book is "to furnish information about the different universities of Europe, and about the way in which medicine is taught abroad." After an introduction, containing a number of useful suggestions about methods of travel, and the manner and expense of living, the writer takes up the subject of medical study in Austria, Germany, France, and England, giving some space to each university in these countries. His preference for Vienna will be shared by all who have studied abroad recently. The well-known professors there, the numerous private courses given by their assistants in every branch of medicine, and the admirable facilities for the observation of patients in the great General Hospital are described in a way which indicates that the writer is a careful observer as well as a keen student. Several changes have occurred in Vienna of late which are not noticed, but as a whole this chapter will be found by the student full of valuable suggestions. The advantage to the student of obstetrics of arriving in Vienna during a vacation, when he can practice in the wards constantly without being disturbed by a crowd, should have been mentioned. The excellence of Heidelberg and Strasbourg as places for pathological work is noticed; but the writer hardly does justice to Berlin and Leipzig, which are really the great medical centres of Germany, and in which laboratory work in physiology, histology, and pathology can be done to great advantage. Paris has lost the place of pre-eminence which she held thirty years ago, when the present Nestors of American medicine were students. In one respect she is still in the front rank, viz., in anatomy, and the perfect facilities for work in the *École Pratique*, under M. Farabœuf and his numerous assistants, deserves a more extended notice than is given by Dr. Hun. The possibility of doing much satisfactory clinical study in neurology with Charcot, Magnan, and Legendre du Saulle, if one can secure an introduction to these gentlemen, is also passed by. The list of hospitals, with their location and hours of clinics will be of great service to the stranger. The chapter on England is simply a reprint of the student's number of the *London Medical Record*. It is undoubtedly a fact that Americans can study to better advantage on the Continent, where the

chief end of hospitals is medical instruction. But the opportunities for special work in London are very great. In gynecology or in surgery, for example, one can employ every hour in the week by attending the various hospitals and dispensaries, and is sure to receive a kind reception and some personal attention.

If a little more space had been given to a description of the methods of some of the prominent teachers; to pen-pictures of the great clinics of Nothnagel, Leyden, G. Sée, or Charcot, and to some details regarding the peculiar facilities for hospital work on the Continent, the book would have gained in general interest. No medical student starting for Europe should omit to take a copy. A thicker volume, somewhat smaller and of square shape, would have been more convenient to carry in the pocket.

THE INTERNATIONAL ENCYCLOPEDIA OF SURGERY.
Edited by JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery in the University of Pennsylvania.
Illustrated with chromo-lithographs and woodcuts.
Vol. III. New York: W. Wood & Co. 1883.

IN the preface of this, the third volume of the *Encyclopædia*, its able editor expresses his confidence that it will fully sustain the high reputation already earned by its predecessors. That Dr. Ashhurst has not misplaced his confidence a careful examination of the book before us shows. Nor, in thus proclaiming his own faith regarding the value of his labors and that of his colleagues, has he, in our opinion, set aside any of that modesty which should always distinguish the editor of a large and important work.

With so little room for fault-finding, the task of the reviewer is naturally reduced to the simple one of presenting a brief analysis of the contents of the volume before him. Dr. Conner is the author of the first article, which is devoted to a consideration of the comparatively rare injuries and diseases of the muscles, tendons, and fasciæ. He writes in a terse way, and has happily omitted all superfluous details that sometimes mar the more elaborate chapters. The injuries and surgical diseases of the lymphatics are very ably treated by Dr. Bellamy, of the Charing Cross Hospital, London. In the third article, from the pen of the late Dr. John A. Lidell, we find an exhaustive and, at the same time, thoroughly practical account of the various injuries of the blood-vessels. This is followed by Dr. Wyeth's essay on "Surgical Diseases of the Vascular System." It is always pleasant to have to record the originality of an author's work; yet, perhaps, in a standard international work like the present the results of personal labors and individual convictions might have received rather less prominence than is here accorded them. The detailed enunciation of certain matters, more particularly some relating to histological changes, would more fittingly be found in some current medical periodical. Barring this slight fault, however, which one is the more ready to excuse on account of the intrinsic merit of his observations, Dr. Wyeth's article must be classed as among the best in the book.

Aneurism is next considered, and a better exposition of an important and difficult subject it has rarely been our pleasure to read. Dr. Richard Barwell, the author of this article, may well be congratulated upon the masterly manner in which he has acquitted himself of no easy charge.

Dr. Nicaise, of Paris, gives us a good account of the injuries and diseases of nerves. It leaves nothing to be desired in point of completeness and as regards the practical manner with which the subject is handled.

The concluding article is on the injuries of the joints, including dislocation, sprains, contusions, and the various kinds of articular wounds. It is by Dr. Andrews, of Chicago, and very aptly closes an excellent volume. The success of the *Encyclopædia* is now assured.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, NEW YORK.

SURGICAL SERVICE OF DR. GEORGE F. SHRADY.

(Reported by H. E. McCARROLL, M.D., House Surgeon.)

REPORTS OF PRACTICE AND PECULIARITIES OF TREATMENT.

IN a large metropolitan hospital with an active ambulance service the cases of acute surgery are quite numerous and varied, and are proportionately interesting and instructive. The Presbyterian Hospital has during the past few months been no exception to this rule. In fact, during this period the surgical wards have been crowded to overflowing with patients presenting almost every variety of injury. Reference is made to a few of these in a cursory manner for the purpose of illustrating the methods of treatment for some common forms of accident.

THE TREATMENT OF TRAUMATIC HEMORRHAGE.

As a rule, in all cases of traumatic hemorrhage the vessels are tied in the wound. There is an exception to this in scalp wounds, the bleeding from which is almost always controlled by firm compression. In securing vessels in an incised wound it is always considered wise, unless a vessel is only partly cut across, to limit operative procedures to mere ligation of visible bleeding points. In punctured wounds the contrary holds good, for when compression fails it is imperative either to enlarge the opening, tying both ends of the divided vessel in the wound, or to ligate the vessel higher up. In cases of hemorrhage attending compound fracture, where a main artery is not wounded, well graduated compression suffices. It has not been found necessary to depart from this rule in any of the cases of compound fracture treated during the present term of service. The most troublesome hemorrhages have been those due to incised wounds of the palmar arch. In all it has been found necessary to ligate the vessels in the wound. The manner of doing this may be illustrated by the following case:

G. V—, a milkman, aged twenty-two, while serving his customers fell forward, striking the palm of his left hand upon a broken bottle. The wound was situated about an inch and a half in front of the flexure of the wrist, and extended across that part of the palm, severing all the soft parts. The bleeding was at once very profuse. He ran to the neighboring police station, and the hospital ambulance was summoned. Bleeding was temporarily controlled by firm pressure and bandage. Soon after his admission Dr. Shradly applied an elastic bandage up the arm and an elastic tourniquet to brachial. The dressings were then removed. The main sources of the hemorrhage were, however, hidden in the deeper portions of the cut. The tourniquet was then loosened and the bleeding points seized in the following manner: A tenaculum was passed under a bleeding mass. Through the substance of this mass, behind the curve of the tenaculum and at right angles with it, was inserted a double ligature which was made to secure both halves of the included portion. By this method there is less danger of the slipping of the ligatures. As both palmar arches were involved it was necessary to apply three or four such ligatures. The wound was dressed as an open one, with carbolyzed oil, and is fast closing up.

LIGATION OF BRACHIAL ARTERY FOR TRAUMATIC INTERSTITIAL HEMORRHAGE.

Two cases were treated in the hospital recently which illustrate still another method of arresting traumatic hemorrhage. In both of these the respective arteries were punctured, and the blood escaped in the deeper tissues of the limb, forming an interstitial aneurism.

George K—, aged thirty-five, was welding steel by a

steam hammer, when a small shivered piece of the steel struck him on the inner side of the left arm at the bend of the elbow. A profuse hemorrhage which spurted through this small wound was temporarily controlled by a physician who saw the patient immediately after the injury. The patient had repeated seizures of hemorrhage at intervals of every two or three days for a week. At the end of that period he sought admission to the hospital in an almost exsanguinated condition.

Within a few hours after admission the blood found its way through the compresses. The dressings were promptly renewed, and the alarming hemorrhage which showed itself was promptly controlled by renewed pressure. Dr. Shradly was then summoned to the hospital, when it was decided to expose the bleeding point and ligate. The patient was etherized, an elastic bandage applied on hand, forearm, and arm up to the middle of the latter, where an elastic tourniquet controlled the brachial artery. After the removal of the bandage a free longitudinal incision was made at the bend of the elbow, opening up a large cavity filled with a clot and exposing the inner margin of the tendon of the biceps and the triangular space between the supinator longus and pronator radii teres muscles. The parts were already extensively dissected by the effused blood. After careful search an opening was discovered across and half way through the brachial artery at the flexure of the elbow. The vessel was tied on both sides of this wound with carbolyzed silk, and the intervening portion divided. The hemorrhage was then found to have been arrested, and the wound was dressed by the open method. The patient made a prompt and satisfactory recovery.

LIGATION OF ANTERIOR INTEROSSEOUS ARTERY FOR CIRCUMSCRIBED INTERSTITIAL HEMORRHAGE.

The following is the history of a second case of traumatic hemorrhage illustrating the same general plan of treatment:

E. M—, a lad aged sixteen years, was brought to the hospital by Dr. Curtis, of Hawley, Pa., with a swelling of the middle of the left forearm following a punctured wound accidentally inflicted by the blade of a pocket-knife. The injury was received two months before and was followed at the time by quite profuse bleeding. Dr. Curtis enlarged the opening and secured what appeared to be the bleeding point. At all events the hemorrhage was thereby arrested and the parts in time nearly healed. Two weeks before admission and during a convalescence from measles an interstitial hemorrhage declared itself in the shape of a pronounced circumscribed swelling, the size of an orange, in the site of the original puncture.

On admission to the hospital the left forearm was found considerably swollen, and the thumb and fingers semiflexed. The latter condition was thought to be due partly to pressure upon the median nerve by the clot and partly by surrounding inflammatory processes.

After the usual precautions the parts were exposed by a free longitudinal incision over the swelling and the clots were turned out. In the layer of the deep flexors and in the sulcus between the flexor longus pollicis and flexor profundus digitorum muscles was a matted cord of tissue including the median nerve and the wounded vessel. The anatomical relations of the parts were somewhat disturbed by the dissecting blood-clot, but the artery ligated was believed to be, from its situation, the anterior interosseous. The wound was dressed by the open method, and passive motion applied to the fingers. In three weeks the boy returned to his home in Hawley, Pa., with the wound healed and with good use of his fingers.

CONCERNING THE ELASTIC TOURNIQUET.

The elastic tourniquet and bandage are used almost exclusively in this hospital for the purpose of controlling hemorrhage of the extremities, and entirely replaces

Petit's tourniquet, even where amputation is to be performed.

HOT WATER AS A HÆMOSTATIC.

In cases of persistent venous oozing from the surface of wounds, hot water, 120° F., is quite frequently employed, with very satisfactory results. This is generally applied by means of saturated sponges held against the part.

Reports of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of October 12, 1883.

WILLIAM J. MORTON, M.D., PRESIDENT, IN THE CHAIR.

DR. LEONARD WEBER read a paper on

THE NEUROTIC ORIGIN OF PROGRESSIVE ARTHRITIS DEFORMANS.

Having briefly recapitulated the symptomatology and etiology of arthritis deformans, the reader proceeded to develop his personal views concerning the nature of the disease in question.

He said that among the comparatively large number of cases of arthritis deformans which he had seen in the course of the last twenty years, he could not but recognize in sorrow and grief, fright, irritation and exhaustion of nerve centres by sexual indulgence, and the leading of a dissolute life, factors just as potent in producing the disease as rheumatic influences, if not more so. Again, remembering the symmetrical appearance and progress of the disease in most cases, no more plausible explanation seemed possible than the supposition of causes located in the central nervous system. The neuralgic and tropho-neurotic symptoms also supported this view, though it was not to be forgotten that in a spine stiff and deformed by arthritis there might easily occur changes of innervation, producing neuralgias and tropho-neurotic changes secondary in character. Finally, the negative results which he had had in treating polyarthritis deformans after the usual anti-rheumatic method, with iodides, colchicum, etc., and on the other hand, the very positive results obtained in similar cases by the galvanic treatment of the central nervous system, combined with a generous diet and the persistent administration of cod-liver oil and iron, led him to believe in the neurotic origin of the disease in many cases. It was through the failure of the old method that he first became convinced of the erroneousness of the conventional opinion of the rheumatic or gouty origin of this formidable malady. Up to the present no autopsies had been made with reference to the condition of the nerve-centres in this disease, and it would be a fit subject for future research to find changes in the cord, presumably in the anterior horns, which might induce certain forms of arthritis deformans.

With regard to the main features of the disease, he had this to say: as a rule, it began and developed very slowly, without any other symptoms at first but pains in one or more joints, which came and went either spontaneously or after exertion. Not infrequently the patient complained at this early stage of an unusually tired feeling in the joints. The pains were neuralgic in character, circumscribed or diffused through the limb. In the peripheral form the joints of both hands and feet, in the central variety the hip, knee, and spine, were the parts affected. In the course of time a great deal of stiffness and discomfort was experienced. The joints enlarged and became unshapely by the proliferation of hard, osseous protuberances on the outer surface of the swollen epiphyses, and creaking or cracking in moving or palpating the joints was perceptible to the patient as

well as the physician. The adjacent soft parts, particularly the muscles, showed in a comparatively early stage of the disease a degree of atrophy not at all commensurate with their passive condition alone, but much more due to peculiar nutritive changes of neurotic or myotic origin.

In the peripheral form the disease affected the joints almost symmetrically on both sides; in the central form the advance was irregular. In one case he had seen it remain stationary in the hip-joint for many years, but attacking some joints of the fingers and toes at last. In another case, a female patient, about thirty-five years of age, the upper part of the body only was affected. He has now a case under observation where nearly all the joints on the body were badly affected when he first saw the patient, who had been a helpless cripple for many months. The disorganization of the shoulder, knee, and particularly the hip-joint, lead often to a considerable shortening. In one of his cases, still under observation, the shortening of the one lower limb amounted to nearly three inches.

In the spinal vertebræ ankylosis was more quickly developed by the disease than in other parts of the body. One of his patients could neither bend nor turn her head when he first saw her, the entire spine being stiff, but there were no symptoms of compression or even remarkable irritation of the cord. The disease was slowly but steadily progressive; while it might remain stationary for a length of time, exacerbations were sure to follow. Fever or other great constitutional disturbances he had not noticed in its course. In a female patient, aged thirty-seven, he found the urine to have a specific gravity of 1.026, containing some sugar, and phosphates in abundance. Her mother had diabetes and was a sufferer from arthritis deformans at the same time.

The following cases were selected from his records as illustrative of the points he wished to bring out:

CASE I.—Mrs. M—, aged forty-seven; American; no syphilitic or hereditary taint, but a sister is reported to be sufferer from chronic rheumatism. Married early in life, went on the stage, and as a somewhat prominent actress led an active and varied life, experienced many changes of fortune, travelled a good deal, and never hesitated to expose herself to wind and weather, yet always enjoyed good health until two and a half years ago, when, after a premonitory period of worry and depression of spirits by the loss of the last piece of property she owned, she experienced pains in both wrists and elbow-joints, followed by swelling and distortion of the same. Hands and feet soon followed, and when I saw her first on February 27, 1883, she had not a joint that did not creak or crack or was not out of shape, except those of the clavicle and the lower jaw. The knees and spinal vertebræ were in the worst condition and the most painful. Standing or walking, even with support, was out of the question. Her urine contained phosphorus, no albumen. Sleep and general nutrition bad; bowels irregular. No treatment had so far done any good, but the disease had made rapid and steady progress. Ordered to take of propylamin (trimethylamin) 3 j., aqu. 3 viij., oleosacch. citr. 3 j., a tablespoonful ter in die before, and two pills ferr. sulph. and potass. carbon. after each meal; good food, and a tablespoonful of cod-liver oil three or four times a day. Galvanism to spine and the cervical ganglia of the sympathetic three times a week. The local and general improvement has been so satisfactory that she is now able to get up and around with the help of a cane, and to do light work with her hands. The pain and swelling and distortion of joints are much less; sleep and nutrition greatly improved.

CASE II.—Mrs. K—, aged thirty-four; German; married twice, had two still-births and two abortions; second husband had syphilis and died of phthisis. Patient presents no signs of either disease; no hereditary influences. In 1877-78 severe attack of bronchitis that

troubled her the whole winter, but eventually got well without any apparent damage to the lungs. After some years of trouble, anxiety, want and exposure, arthritis deformans broke out two years ago with pain and swelling of small joints of hands and feet, soon spreading to one knee, shoulder, and hip-joint. The disease was preceded by severe headaches, from which she suffers yet occasionally, but less violently. Some of the joints present a gelatinous feel, and several nodules of the above description can be felt beneath the integuments of her arms. No pain on pressure over sternum, clavicle, or tibia. Neither specific nor anti-rheumatic treatment, so-called, were of any service, but the disease has been very tardy in its progress, and the disfigurements of the joints are not to be compared to those of Case I. She has always been able to walk, though not without pain, and from time to time has been confined to her room. Appetite and general nutrition not good. The treatment described in Case I. was commenced in January, 1883, and carried out pretty regularly up to the present time, except as to the application of electricity. The result thus far has been satisfactory; further progress of the disease has been stopped; pain, swelling, and disabilities of locomotion are much less.

CASE III.—Mrs. K—, aged thirty-five; American; married, multipara. Father in good health; mother suffering from diabetes and arthritis deformans. Patient well built and nourished; living in good circumstances; has been for some years very unhappy in her domestic relations, and been often deprived of rest and sleep, and otherwise maltreated. After a series of premonitory symptoms, such as hemicrania and neuralgias in the upper extremities, she showed the first symptoms of the disease in the joints of fingers, wrists, and shoulders about a year ago. Her urine contains phosphates (largely) and a little sugar. The affection has made no great progress as yet, and the treatment has not been carried out well enough to be of great service, owing to irregular attendance on the part of the patient.

CASE IV.—Mrs. H—, aged fifty-five; multipara. No hereditary taint; no apparent cause other than a good deal of anxiety and grief on account of the persistent ill-behavior of her only son. First symptoms in small joints of fingers and toes five years ago. So far she has not experienced any great inconvenience from her affliction, but as often as she makes up her mind to take the propylamin mixture and cod-liver oil for some time great relief follows as to pain and swelling.

CASE V.—Mrs. S—, aged sixty-five; German; married, multipara. No hereditary taint, but a good deal of exposure to rheumatic influences in her younger days. First attack in her right hip-joint fifteen years ago, which led in the course of time to a shortening of nearly three inches, and now to complete ankylosis. No other joints suffered until recently, when several small joints of the hands and feet became affected and she had to take to her bed. Various sorts of cures were applied to no purpose. For the last three months she takes propylamin and the compound syrup of the hypophosphites, with the result that she is able to be about again and that no other joints have been attacked.

CASE VI.—Mr. G—, sixty years of age; Austrian; clergyman; single. Of good constitution and no hereditary taint. He served as a missionary in his prime, travelled extensively in South and Central America. He was, of course, exposed to the severe effects of unhealthy climates, and suffered many hardships besides. He had severe attacks of rheumatism, of which he got well, but eight years ago it settled in his right hip and left knee, and when I first saw him, five years since, he was in constant agony, confined to his bed for many months, and the above joints presented all the symptoms of advanced arthritis deformans. Some of the joints of his hands and feet had also become recently affected. His urine contained albumen in considerable quantities; there were amblyopia—the ophthalmological examination showing

the affection of the retina often found in Bright's disease—and atheroma.

By the use of the iodides and the other remedies he was but little relieved, but two seasons at the hot springs of Virginia removed the severe recent affections of the joints, relieved his kidney trouble, and considerably improved his eyesight. The old affections of his hip and knee remained as before, but ceased to give him much trouble, so that he was able to be about and attend to his clerical duties.

DR. E. C. WENDT, in opening the discussion, said that he had seen a number of cases of arthritis deformans, mostly in hospital practice, all of which had, under the usual plan of treatment, gone on from bad to worse. He had also seen one of Dr. Weber's cases, in which a marvellous result had been obtained, in a comparatively short time, by an entirely different plan of treatment. He thought the value of Dr. Weber's interesting paper lay mainly in the therapeutic suggestions which it contained; for if other observers corroborated the ideas here advanced a decidedly progressive step would have been taken. He thought it was important to elucidate the causation of the disease; mere symptomatic treatment was quite irrational.

DR. DANA remarked that the few cases seen by him had not illustrated the neurotic origin of the disease. In New York he was of the opinion that the disease was rarely met with in private practice. He had seen only a few cases in hospital and dispensary service; this was even true in the Marine Hospital for sailors, where rheumatism abounded. He recollected having seen one aggravated case; the patient was an old woman, some seventy years of age, who had suffered from the disease for sixteen or seventeen years. It began in the vertebral column, and gradually involved the hips, knees, and toes. She was so helpless that in order to evacuate her bowels it was necessary to place her in the horizontal position over a pail. The patient had Bright's disease, and died of apoplexy. Upon post-mortem examination deposits of urates were found in the joints of the great toes. The patient was poor, and surrounded by all the conditions favorable to the development of the disease.

Dr. Dana said he had seen some women of a neurasthenic type, women who had suffered from functional nervous disturbances, who developed a kind of inflammatory swelling of the fingers, so that in one case the hands became almost useless. He did not know but that later on in life these cases might develop into arthritis deformans, and if so, would illustrate the theory advanced in the paper. In considering neurotic inflammation of joints, Dr. Dana thought the relation of the trophic nerves to them, if there are any trophic nerves, should not be lost sight of. Never, so far as he knew, have we found any articular disease following from functional nervous trouble. The nervous difficulty must be organic. In no experiment upon animals, except where an organic lesion of the spinal cord has been produced, have we been able to produce arthropathies.

DR. WENDT did not know that the author's paper contained any evidence that the disease was developed from an organic lesion of the spinal cord. If there had been such disease of the spinal cord, improvement could not have been so rapid. He thought the neurotic condition was not the ultimate but an intervening cause. If we would go back sufficiently far into the history of these cases he thought we would find that there was at first a disturbance of nutrition, on the basis of which the neurotic condition developed.

DR. BURRALL wished he could add something to our knowledge of this subject. The disease was one we were continually meeting. It seemed to him to be an arthritis resulting from trophic changes. In two cases which he could now call to mind these changes resulted from worry. One case had gouty trouble. There was no uric acid found in the urine of patients suffering from arthritis deformans. As far as therapeutics were concerned, he

knew of only two remedies. The two remedies he would hope to derive beneficial results from the use of were arsenic, which is a nerve-tonic, and eupatorium perfoliatum (boneset).

THE PRESIDENT felt like adding a word in regard to the practical part of the paper. He had not seen many cases of arthritis deformans in private practice; he could only recall five. It was probable that most cases were seen by the general practitioner. In the first four he had met with unsatisfactory results; but in the last, becoming convinced of the fruitlessness of the anti-rheumatic plan of treatment, he had administered cod-liver oil, iron, and static electrization with great benefit to the patient. He was of the opinion that the disease occurred most frequently in the so-called neurasthenic. It was interesting to note that the first advocate of the neurotic origin of the disease was an American, Dr. J. K. Mitchell, the father of Dr. S. Weir Mitchell, now of Philadelphia. At this very early date, 1834, Dr. Mitchell announced it as his theory that acute, subacute, and chronic rheumatism were diseases of the spinal cord. The neurotic theory of the origin of the disease in certain subacute foras was a very attractive one. He was prepared to admit, as an argument in its favor, that the ordinary anti-rheumatic treatment fails to relieve the patient. In the next place, there is a well-understood relationship between the disease in question and well-recognized nervous ailments. We have only to call to mind the arthropathies of the myelites of traumatic neuritis of certain hemiplegias to find a defensible relationship to the changes in the joints characteristic of arthritis deformans.

DR. DANA remarked that as interesting as it might be to claim the theory of the neurotic origin of arthritis deformans for America, it was difficult to see how the information afforded by the President's remarks made it clear that such really was the case. The author of the paper had laid special stress upon the idea that arthritis deformans was an essentially different disease from acute or chronic rheumatism. Hence Dr. Mitchell could not be credited with the origin of this theory, as his claims concerned only acute and chronic rheumatism.

THE PRESIDENT did not think that Dr. Mitchell's claims were thus narrowly restricted. It was doubtless true, however, that these claims should not have covered all forms of rheumatism as known at his day.

DR. BURRALL incidentally called the attention of the members of the Society to the fact that there was at the present time a case of Charcot's disease in the wards of the Presbyterian Hospital of this city. Dr. Charcot claims that Dr. Mitchell was the first to associate joint disease with the central nervous system.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

Motto: Go West, young man!
And if you can't go West,
Go as West as you can.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: Before leaving Montana, it seems well to say a few words concerning its capital, Helena, which is also the acknowledged business centre of the Territory. Helena is nothing, if not queer and peculiar. It represents to-day an imperfectly matured conglomeration of the most opposite elements. Indeed, at present the new city seems all superstructure, which rests, apparently secure, upon the basis of a crude mining camp. Those curiously puzzling types of humanity, which Bret Harte's genius has rendered so familiar to the reading public, may still be encountered in Helena. Not precisely as they appear in the pages of that gifted author, however; for stern reality has robbed them of the poetic halo which there surrounding them, softens harsh truth and wakes our pitying sympathy by gently playing upon the chords of a common

humanity. But the passing stranger detects no redeeming features about most of these sombre, sullen, repulsive-looking fellows. They seem simply odious, nothing more. An involuntary sense of aloofness fastens itself upon you, and as you willingly pass them by you feel relieved.

In addition to these rougher characters, however, and mingling incongruously with them, are found various representatives of the older civilization of the East, and that still older one from across the ocean. Thus hard-faced men, with restless, anxious mien that plainly speaks of gambling, drink, and pistol, jostle the eager youth of slender build and pale complexion, the unmistakable gentleman, and probably a late arrival in this ever moving, busy crowd. Again, the primitive profanity of a waning era may still be heard in answer to the affected British of some Harvard stripling. All are slaves to a devouring ambition—that of getting rich quickly. All have come to try their luck. The very air you breathe seems charged with this strong contagion. Indeed, so intent are they on quick success, that they never dream of possible failure. And it must be admitted they do succeed. No longer as in the past, not yet remote from present, by the single method of gold-mining; but in many of the recognized and legitimate business capacities of the East, or as professional men.

Has vice found a safer abode and more congenial soil there than in the centres of Eastern wealth and fashion? Who shall say yes without some show of hesitancy? Certain it is that they display a touching openness about vicious pursuits and habits. Certain, too, that the refined and subtle hypocrisy of a more complex, because more advanced civilization, has not yet clothed the hideous nakedness of vice in misleading tinsel. But is Western vice, therefore, more disgusting, more sinful, more degrading than her much attired twin-sister of the East? It all depends upon the moral point of view, which is a shifting, changeable thing, half statute and half conscience. Openly, artlessly, without attempted guise, vice walks the streets of Helena in clear, broad day-light. At night it is becomingly illuminated by electric lamps. And the uniformed representatives of law and order calmly smile and pass by. Thus universally sanctioned, protected, and practised, perhaps it ceases to be vice at all, and becomes a mere peculiarity, an innocent pastime. As just stated, it all depends upon the point of view.

A noted divine, seeing what has here been faintly shadowed forth, said that he felt better satisfied with this condition of things than what obtains with us. For, he argued, where I can see the devil so plainly, I can easily fight and conquer him; it is the devil that hides behind a bush who is so hard to catch. Evidently, then, the influx of a few Eastern devil-fighters (and perhaps we could spare a few) would soon make Helena and towns of her stamp models of virtue, sobriety, and refinement—that is to say, from an Eastern standpoint. But enough of this. As George Eliot has it, "whatever benefit there may be in denouncing the evil, it is after all more edifying, and certainly more cheering, to appreciate the good." Hence let us hasten to remember that this city's life at present illustrates but a transition period from a lower to a higher level; that Helena has already achieved a commercial supremacy over many other ambitious towns; that there may be much golden truth in the proud boast of her citizens, to the effect that she is, in proportion to her population, even now the richest city in the world; that pure men and virtuous women have found abiding homes there; and that if we were all born good, it would no longer be meritorious to be so.

Soon after leaving Helena, the main range of the Rocky Mountains is crossed, the road now going over the Mullan Pass. Here a tunnel nearly four thousand feet long is building, and will soon be completed. Mr. E. V. Smalley has recently so well described this interesting region that your correspondent easily yields to the temptation of quoting from his letter:

"Approached from the East," he says, "the Rocky Mountains seem well to deserve their name. Gigantic cliffs and buttresses of granite appear to bar the way, and to forbid the traveller's further progress. There are depressions in the range, however, where ravines run up the slopes, and torrents come leaping down, fed by melting snows. Over one of these depressions Lieutenant John Mullan built a wagon road a score of years ago, to serve the needs of army transportation between the head of navigation at the Great Falls of the Missouri and the posts in Oregon. Mullan's wisdom in selecting the pass, which bears his name, was endorsed when the railroad engineers found it to be the most favorable on the Northern Pacific line. The road is carried up ravines and across the face of foot-hills to a steep wall, where it dives into the mountain side, runs under the crest of the Divide through a tunnel three-fourths of a mile long, and comes out upon smiling green and flowery meadows, to follow a clear trout-stream down to a river whose waters seek the mighty Columbia. The contrast between the western and eastern sides of the Main Divide of the Rockies is remarkable. On the eastern slope the landscapes are magnificently savage and sombre; on the western slope they have a pleasant, pastoral beauty, and one might think himself in the hill country of Western Pennsylvania instead of high upon the side of the great water-shed of the continent. The forest tracts look like groves planted by a landscape gardener in some stately park, and the grassy slopes and valleys, covered with blue and yellow flowers, and traversed by swift, clear brooks, add to the pleasure-ground appearance of the country. What a glorious place this would be for summer camping, trout fishing, and shooting, is the thought of every traveller as he descends from the summit with his hands full of flowers picked close to a snow-bank. Snow Shoe Mountain rises just in front, across a lovely verdant valley. Powell's Peak, a massive, white pyramid, cuts the clear sky with its sharp outlines on the further horizon, and a cool breeze blows straight from the Pacific Ocean."

The Cascade Mountain range divides Washington and Oregon into an eastern and western territory. To do even scant justice to the attractiveness of the varied scenery of either district is quite impossible within the limits of this letter. There seems to be spread out before the entranced view a never-ending series of variegated landscape wonders and surprises. Now you see a panorama of natural parks with all the luxuriant vegetation of the Pacific lands. Then dense, dark, forbidding forests, wooded with mighty firs and pine-trees. Again you are delighted by charming valleys, all smiling sunshine, that invite lingering rambles and long repose. But grander and more imposing far than these gentler pictures, the giant peaks of the Cascades rear their proud heads, clad in the pure white of perpetual snow, high into the clear azure of this Western sky. Before the overpowering presence of these dazzling summits, the memory of Switzerland's fair Alps shrinks into that dark recess of the mind which may be called a willing forgetfulness. It is only when the Cascades too have gradually faded out of sight that comparisons seem at all admissible. And Puget Sound, too, than which no finer inlet has crept landward to form deep harbors, well-sheltered, navigable, and attractive. Finally, that mighty current, the Columbia River, with its banks of unrivalled, ever-changing, richly colored splendor. Surely these Territories have a grander and more manifold natural beauty than may be easily found in the entire Union, perhaps in all America.

As for the climate of Washington and Oregon, two widely different regions must be distinguished, the Cascades separating one from the other. East of this range there is an annual mean temperature not unlike that of Pennsylvania. Short spells of extreme cold occur, but not too often. The air feels dry, so that the heat of summer seems less oppressive than with us. The morn-

ings and evenings are invariably cool, if not positively cold. On the other hand, the western region, lying beyond the Cascades, enjoys an equable climatic mildness, quite peculiar to itself. One great moderator of winter's severity is the Japan current. Snow is a rarity, but there is a prolonged rainy season to replace the frigid winter of the East. And finally, a bright, sunshiny, temperate summer compensates largely for the more or less steady drizzle of a rather dreary fall and winter.

There is little to say about the towns and cities of these vast Territories. With the single exception of Portland, in Oregon, their greatness and importance lie in no past or present. Their future significance, however, seems not too far ahead. It appears not as the rash guess of the enthusiast, but like the exact calculation of the astronomer, to predict for them a near destiny of business thrift, prosperity, and fame. Really one feels that for once the study of the infant justifies the prognosis of the man to come.

With a feeling of reluctance, then, as when parting from some new acquaintance of congenial mien and sympathetic manner, your correspondent turns to other matters.

But not without casting a farewell glance upon Portland, justly called the metropolis of the Pacific Northwest. This rapidly growing city already claims 40,000 inhabitants, and presents the general appearance of a new, enterprising, flourishing business town. In its peculiarly advantageous situation it combines with the facilities of the seaport all the conveniences of an inland town. Deep-going ocean steamers stud its numerous wharves, although the Pacific is nearly one hundred miles away. It is, besides, a distributing centre for a large land traffic, having several railroad depots. And it is quite characteristic of this far Western town to see the thick woodlands of the surrounding wilderness receding, as it were, only step by step as the city limits steadily extend and encroach upon them. Thus, without sensible gradation or intermediate link, primeval forest is here at once transformed into modern city.

The practice of medicine is somewhat peculiar in Portland. Physicians earn but small incomes, compared with the great riches accumulated in trade. The average doctor cannot get much beyond an annual income of from \$2,500 to \$3,000. A very few may receive \$10,000, which would appear to be the maximum limit. Add to this that bills are often difficult of collection, especially for the beginner; that the profession, unlike what obtains in most other towns in Oregon, is already overcrowded; that living, finally, is higher than in New York; and it will be readily perceived that there is no promising field here for the youthful medico. Rheumatic and malarial troubles are the most popular affections in Portland. Acute pulmonary diseases are said to be rare.

The Portland doctors have a Medical College with all the modern professorships, and two hospitals. They feel proud of these institutions. Moreover, they live content and happy in the absence of patient-stealing dispensaries. The *Portland Medical Advance*, however, is a thing of the future. At present they all read *THE RECORD*, and those who do not ought to.

In taking final leave of the new Northwest, this infant stripling of huge dimensions and great pretensions, it may not be amiss to briefly dwell upon a few, a very few, of the most prominent oddities of that region.

It is certainly odd what enormous vegetables they raise there. And it is quite odd to note with what pertinacity they intrude these growths upon the attention of the tourist.

From Fargo on, the attacks of the vegetarian begin. He is no dallying amateur, but a dead-earnest professional. He insists on your sharing the glow of pride that starts through his susceptible constitution while lost in rapt admiration of a huge potato, or an immense cabbage, or a giant pumpkin. Next year, he solemnly declares, they will be much bigger. This was an off-year for crops anyhow. And sure enough, at the next station they have

already attained additional size, although there too they are attended by similar comments. Well, these marvelous products of an extraordinary soil keep right on getting bigger and bigger all the time, partly at the successive stations and partly in the minds of the truthful farmers; until at length you begin to wonder, in a dazed kind of way, why on earth, from sheer stress of accumulated weighty vegetation, the earth does not tip over at that particular point.

It is, further, odd to note what stress is laid on bigness—generally. Quite apart from vegetable bigness, which has just been alluded to, they call everything that may typify or characterize the West, “something big.” It is this one attribute that appeals most directly, emphatically, and eloquently to the Western senses. Out there some few things are great, but everything is big—in the estimation of themselves.

Take the extent of Western territory, for example. It is the “biggest country on the face of the globe.” Of course, as regards this particular point, we of the East are almost as knowing as they of the West; for we also never allow suitable or unsuitable opportunity to pass without proclaiming that remarkable discovery to mankind at large. But what we hardly suspected is, that almost every single Western State or Territory is “bigger than all the rest of the world put together”—with a margin to spare for undiscovered countries.

This deplorable ignorance of geographical details constitutes one of the most serious drawbacks of an Eastern education—as your correspondent was repeatedly called upon to admit; which he always did with commendable alacrity, in deference to the acknowledged power and steady aim of Western arguments.

Again, it is odd to find in what high esteem they hold the surviving pioneers and early settlers. But no. On second thought that is not odd at all, only quite human and deeply touching. That fast-dwindling band of brave-hearted, whole-souled, toiling men, will not live to see their work completed. Pioneers never do. Yet their humble lives, spent amid dreary surroundings and filled with vicissitudes, will not have been lived in vain. Surely they will have served a higher purpose, and have fulfilled a nobler aim than the mere bequeathal to posterity of a sturdy race of honest, cheerful, hopeful workers. For they will once more have taught the world the glorious lesson that unostentatious heroism and patient toil need not be, nay, cannot be futile. Theirs, too, will be the proud victory of persevering energy, invincible determination, and unflagging spirits, against great natural odds and over the many obstacles of human ignorance, prejudice, or pride.

Doubtless the names of all these pioneers will ere long be consigned to oblivion, unmerited though it be. But let us hold the class, at least, in reverential memory. What they may have cherished as some fond dream alone we already see in incipient fulfilment. No prophetic foresight is needed to-day to predict that their early labors and trials will not have been fruitless. And so, with a parting pressure of the horny pioneer hands, we leave the new Northwest, confident that it will work out its own destiny of greatness, and with our God-speed on the journey.

Very truly yours,

EDMUND C. WENDT, M.D.

136 WEST THIRTY-FOURTH STREET,
NEW YORK, November 2, 1883.

CONCERNING THE EPIDEMIC OF MEASLES AT THE INFANT ASYLUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The medical gentlemen connected with the management of the New York Infant Asylum, and Dr. Brush, of Mt. Vernon, occupy considerable space in your last issue in severe criticism of our report upon the epidem-

ics recently prevailing. There is so much misquotation of us, and such a reckless use of quotation marks, that we find it difficult to accept some of their statements as meant in earnest. We deprecate such discussions, and this is our final reply:

Had we been aware of the susceptibility of these gentlemen to measles, our report might have been modified to meet their views. The report in question was made to the Board of Managers, and according to facts and information acquired in a very usual and legitimate manner. It was not intended as a medical essay. The peculiarities of the epidemic we hope to elaborate at some future time, and under fitting circumstances. Yet we may be credited as having appreciated the severity of the diseases, and as noting the unusual number of recurrences of measles. Nor were we oblivious to the fact that such an experience was uncommon, or perhaps unique, but in publishing the statistics we meant no offence.

The declination of certain physicians to serve upon the asylum staff, and the resignation of others, as brought forward by Dr. Nicoll, has no very intimate bearing upon the accuracy of our report, and is but remotely associated with measles in general.

The communication of Dr. Brush, and that signed by Drs. Foster, Blakeman, Burrall, and Goodridge, are quite similar. For they both contain the same partial quotations from Ziemssen's “Cyclopædia,” and the same sentences, transferred from Dr. Louis Thomas' article on measles, without credit. (See sentences in each communication beginning: “Even Panum . . .” Then see Ziemssen, vol. ii., p. 43.)

We think it hardly fair to quote (from p. 42) only the following sentence: “Second attacks of measles are, according to the experience of most observers, exceedingly rare, as much so as second attacks of variola, scarlet fever, varicella, etc.” For, following this, Thomas says: “Third attacks are even less frequent, though their occurrence . . . cannot be doubted.” Then, too, the next sentence contains the account of a child who had measles three times within about three months.

In fact, in this article in Ziemssen over forty names of authors are given as reporting cases and epidemics where frequent individual recurrences of measles have been observed.

It is true that we did not personally witness each and every one of these attacks. Yet, from properly directed inquiries of the mothers, nurses, and resident physician and her assistant, and with the exercise of some judgment on our own parts, we arrived at the conclusions which justified our published report. We were led to accept these facts unaided by an acquaintance with the article in Ziemssen, and in ignorance of Dr. Cheadle's conclusion (*Brit. Med. Jour.*, December 20, 1879), that, from a personal analysis of twelve cases of measles he does not believe a previous attack affords any immunity. And, finally, we were not cognizant of the fact that Dr. Joel Foster had reported to the Executive Committee of the Board of Managers, on September 29th, “that since August 1st last an epidemic of a fatal character had raged, resulting in fifty-one deaths; appearing in measles of a malignant form, different from any known to him in his experience—of an obscure character, recurring twice, thrice, four, and five times in the same patient; the sequelæ of which was most dangerous,” etc., etc. (Printed minutes Ex. Com. Bd. Managers N. Y. Infant Asylum, September 29, 1883.)

Had we known of Dr. Foster's testimony, he being a physician of standing and of large experience, we should not have hesitated so long in accepting the statements of those in charge of the children as to these peculiar features. We now can only wonder why he should sign a protest against the results of his own observations.

GEO. B. FOWLER, M.D.
E. BRADLEY, M.D.
F. M. WARNER, M.D.

ON THE USE OF WARBURG'S TINCTURE IN MIASMATIC FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: For many years, in treating miasmatic fever which would not yield to quinia, I have been accustomed to prescribe Warburg's tincture. According to my experience, it is worth all other succedanea put together.

About six years ago, a medical friend consulted me for intermittent fever, utterly rebellious to the power of the quinia salts. His health had suffered greatly and he was obliged to temporarily give up his practice. I prescribed the tincture of Warburg in half-ounce doses, taken on an empty stomach, early in the morning. It was rapidly and completely successful in its effect. Several months ago he applied to me with a recurrence of his old trouble, saying: "But doctor, don't give me Warburg. I think I'd almost as soon die as take it. Even when I look at the bottle containing it, I become nauseated. It is an awful dose to swallow!"

I begged him to go to his apothecary, have the tincture evaporated in a water-bath to such consistence as would allow it to be put into gelatine capsules, and to take the equivalent of a half fluidounce thus prepared.

It answered the desired end perfectly, without causing discomfort of any kind. Since then many patients have taken "Warburg's Capsules," with a like result. One of them contains the potency of two fluidrachms of the tincture. With some persons, rather too active purgation follows the ordinary dose of two capsules. This can be easily regulated, by leaving out or diminishing the amount of aloes in the original formula.

I have had excellent results, also, follow administration of the capsules made by evaporating the modified Warburg's tincture, in which the alkaloids of cinchona replace the sulphate of quinine.

In cases of intermittent fever which are prone to recur, after having been once broken, I rely much more upon the daily dose of two capsules—taken early in the morning—than on any other remedy known to me.

The evaporated mass becomes hard very soon, unless glycerine be mixed with it before filling the gelatine cups.

Very respectfully yours,

JOHN T. METCALFE, M.D.

Obituary.

JAMES MARION SIMS, M.D.,

NEW YORK.

THE sudden death on Tuesday morning of the distinguished surgeon, J. Marion Sims, was a shock to every one. Although lately he had not been in robust health, no one had reason to believe that his valuable life might not be spared for many years. Reaching the age of three score years and ten, he had a remarkably young appearance, and with a good claim for longevity, he was often heard to say that he expected to see his ninetieth year. Up to the last he was active, ardent, and laborious. Death was the result of heart-failure, attendant upon atheroma of the coronary arteries and fibrous myocarditis.

Dr. Sims was prostrated by a very severe attack of pneumonia three years ago, and he sank so low in that illness that his family and physicians thought for a while that he would die. He rallied, however, and recovered almost entirely, as it seemed, from the attack. The piercing cold weather of fall and winter in this climate was more than he could endure, and he arranged to spend his winters in Italy. He was to have sailed for Europe, with his family to-day, en route for his Italian residence. He had even planned to sail a week ago, but was prevailed upon to stay and perform an important operation. He said on Monday that he had not felt so

well in a year, and was in the best of spirits. In the evening of the same day, with his son, Dr. Henry Marion Sims, he attended a patient, and on his return sat down to write on his autobiography, about one-half of which he had finished. He complained of a little pain over his heart, but continued to write. He retired, but was restless during the night, and shortly before 3 o'clock on Tuesday morning he turned up the gas and wrote for a time in bed. A little later his wife noticed that he was breathing in a peculiar manner and hastened to call his son. When Dr. H. Marion Sims reached the bedside, his father gave one short breath and expired at 3.15 A.M.

Dr. Sims was born in Lancaster District, South Carolina, on January 25, 1813. His education began in the common school, and he was graduated from the South Carolina College in 1832. After studying for a short time at Charleston he entered Jefferson Medical College, Philadelphia, completing the course in 1835. He began practice in the following year at Montgomery, Ala., making a specialty of gynecology, though he also became known for his skill in general surgery. In 1845 he published a series of papers in the *American Journal of the Medical Sciences*, developing an original theory of trismus nascentium. About the same time he began a series of experiments in the treatment of vesico-vaginal fistula, and, after four years, perfected a method of curing a disease that had been thought incurable, by the substitution of sutures of silver for those of silk thread then in use. In 1853 he came to New York, and, in addition to building up a lucrative practice, succeeded in establishing a hospital for women. The institution was at first supported by private contributions, with a grant of \$2,500 from the Common Council, but in 1858 a charter was obtained from the Legislature, and the city gave the land at Fortyninth Street and Lexington Avenue upon which to erect the pavilions, with an appropriation of \$10,000. After a study of hospital architecture in Europe he decided to have the hospital built in pavilions. The first pavilion was ready for the reception of patients in 1866, and, unlike most philanthropists, Dr. Sims lived to see the institution which he founded surpass even his own expectations in importance and usefulness.

Dr. Sims's reception in Europe was of the most cordial and flattering character. By special invitations he operated in several of the great hospitals in Paris, Brussels, London, and Dublin, and his extraordinary success elicited the warmest praise from some of the most eminent practitioners in Europe. He was greeted in many places as one of the greatest surgical discoverers and operators of the age. The French people were especially impressed with him, and the French Government conferred upon him the order of Knight of the Legion of Honor. Honors were also paid to him by the King of the Belgians, and subsequently he was decorated by the Italian, Spanish, and Portuguese Governments. Dr. Sims took his family to Europe in 1862, and he spent a large part of his time there during the next six years. In 1870 he returned to Paris from New York to visit his family, which he had left abroad. When the Franco-Prussian war broke out Dr. Sims was induced to take charge of the Anglo-American Ambulance Corps as surgeon-in-chief. This was the first ambulance corps to arrive at Sedan, where it rendered services of incalculable value, and the fame of Dr. Sims was greatly enhanced by the heroism, energy, and remarkable skill displayed by him. He was the oldest man who left Paris in the ambulance service. Dr. Sims built up a large practice in France and Belgium, where his services were in constant demand among people of wealth and high social standing. His genial manners and magnetic social qualities made him very popular abroad as well as at home.

The subject of this sketch was, during his life-time, elected an honorary member of scores of medical and scientific societies in every part of Europe and in every part of this country. In 1875 he was elected President

of the American Medical Association. He was a member of the County Medical Society, of the Pathological and Surgical Societies, the Academy of Medicine, and the Neurological Society. Dr. Sims' most important literary works are "Trismus Nascentium," "Silver Sutures in Surgery," "Clinical Notes on Uterine Surgery," "The Microscope in the Sterile Condition," a "History of the Discovery of Anæsthesia," "Treatise on Ovariectomy," "Intra-Uterine Fibroid Tumors," and his Centennial address before the American Medical Association in Philadelphia, June 6, 1876.

During the past two years Dr. Sims spent a couple of months of each autumn in this city, the winters in Rome or Nice, and the remainder of the year in Paris and other parts of France. During this time he has written many articles on surgical subjects. The funeral, which was largely attended, took place at 10 o'clock on Friday morning, in the Madison Square Presbyterian Church, of which the dead surgeon was one of the oldest pewholders.

The autopsy was made by Drs. W. H. Welch and G. L. Peabody. Present: Drs. A. L. Loomis, W. H. Welch, J. A. Wyeth, and W. Gill Wylie.

The heart was found to be somewhat enlarged, with adherent pericardium. The valves were competent. The calibre of each coronary artery was markedly narrowed by atheroma, which was partly calcareous. In the muscular tissue, at the upper part of the interventricular septum, there was a patch of fibrous myocarditis as large as a silver quarter of a dollar, with the beginning of an aneurismal pouch. There was a similar fibrous myocarditis in the papillary muscle, which controlled the anterior segment of the mitral valve. Both ventricles were dilated, and the left hypertrophied. The lungs were slightly congested and œdematous. The parietal and visceral pleura on the left side was everywhere adherent. The kidneys and liver showed lesions of chronic congestion. Brain normal. Some atheroma of internal carotid arteries.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 3 to November 10, 1883.

BACHE, DALLAS, Major and Surgeon. S. O. 238, par. 1, A. G. O., October 18, 1883, assigning him to duty at Willett's Point, N. Y., revoked. S. O. 252, par. 2, A. G. O., November 3, 1883.

STEINBERG, GEORGE, Major and Surgeon. Leave of absence granted October 4, 1883, extended one month. S. O. 255, par. 4, A. G. O., November 7, 1883.

VICKERY, R. S., Major and Surgeon. Assigned to duty at Fort Townsend, W. T. S. O. 149, par. 3, Department of the Columbia, October 29, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Granted leave of absence for one month. S. O. 201, par. 6, Department of the East, October 24, 1883.

MERRILL, J. C., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 201, par. 7, Department of the East, October 24, 1883.

PATZKI, J. H., Captain and Assistant Surgeon. Granted leave of absence for three months, on surgeon's certificate of disability. S. O. 254, par. 6, A. G. O., November 6, 1883.

OWEN, W. O., First Lieutenant and Assistant Surgeon. Relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon. S. O. 148, par. 2, Department of the Columbia, October 26, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Townsend, W. T. S. O. 149, par. 2, Department of the Columbia, October 29, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 3, 1883.

GORGAS, A. C., Medical Inspector. Orders to the Naval Hospital, Mare Island, Cal., revoked, and to remain at Naval Hospital, Chelsea, Mass.

ROBINSON, SOMERSET, Medical Inspector. To the Naval Hospital, Mare Island, Cal.

DEARBORNE, F. M., Surgeon. To appear before the Retiring Board, November 5th.

GIHON, A. L., Medical Director. To represent the Navy at the meeting of the American Public Health Association at Detroit, Mich., November 13th.

HUDSON, A., Medical Inspector. To represent the Navy at the meeting of the American Public Health Association, at Detroit, Mich., November 13th.

EDGAR, J. M., Assistant Surgeon. From the Receiving Ship St. Louis, at League Island, Pa., to the Receiving Ship Wabash, at Boston, Mass.

AUSTIN, A. A., Passed Assistant Surgeon. To the Receiving Ship St. Louis, at League Island, Pa.

There were no changes during the week ending November 10th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 13, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
November 6, 1883.....	1	36	38	4	19	31	0	0
November 13, 1883.....	1	50	67	3	22	43	0	0
<i>Deaths.</i>								
November 6, 1883.....	0	16	6	4	3	19	0	0
November 13, 1883.....	1	21	8	1	1	23	0	0

AUTO-TRANSFUSION IN HEMORRHAGE.—Attention has been quite frequently called to the value of auto-transfusion in cases of severe hemorrhage. In the *Wiener Med. Blätter*, of February 23d, Professor Braun relates a case of inversion of the uterus in parturition with severe and almost fatal hemorrhage, in which this method was resorted to. Elastic bandages were wrapped around the legs, with an immediate dissipation of the alarming symptoms. The hips were raised, ether injected, and stimulants administered. The bandages were kept on for nineteen hours. This method is especially applicable to post-partum hemorrhage from any cause, and is easily and quickly applied, much more so than transfusion. Doubtless, so prolonged an application might have its dangers in a few instances, but the advantages would far more than counterbalance the dangers. It may be remarked that the inversion was caused by pulling on the cord of an adherent placenta, a far too frequent error, we fear, in view of the dangerous results which have in many instances followed it.

OÖPHORECTOMY IN A GIRL EIGHT YEARS OF AGE was recently performed successfully, by a French physician, Dr. Duchamp. The left ovary and a large part of the Fallopian tube were removed.

AN EPIDEMIC OF TRICHINOSIS has broken out in Saxony. Over four hundred persons are said to have been attacked. Moreover, it is German, not American pork, which caused the trouble.

The Medical Record

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NEW YORK, NOVEMBER 24, 1883

Whole No. 681

Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

By J. LEWIS SMITH, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

SEVERAL years ago, before New York physicians had any personal experience with cerebro-spinal fever, an outbreak of it of moderate extent occurred at or near Long Branch, and, from its proximity, physicians were apprehensive that it might enter New York. Very interesting discussions consequently took place in the Academy of Medicine concerning the cause and nature of this malady, and theories, crude and unfounded, in consequence of inexperience, were then expressed. Unfortunately the fears of physicians who participated in that discussion have been realized. The disease entered this city in the autumn of 1871, appearing first among the horses of the large stables of the stage and car lines, disabling and destroying many of them. In December, 1871, it commenced among the people, and since that time it has not been absent from the city. Its unknown cause, which in country towns soon dies out or becomes inoperative, from the lack of the conditions which sustain and perpetuate it, finds in this great assemblage of people, and in the state of the streets and domiciles, the conditions favorable for its development and sustenance, so that cerebro-spinal fever is now fully established with us. It has become one of the scourges of childhood, destroying many lives each year, and injuring irreparably, by deafness or in other ways, many who recover. We are now much better prepared, by sad experience, to discuss this disease than were those physicians who participated in the debates alluded to above.

ETIOLOGY.

It is not improbable, from the clinical history of cerebro-spinal fever, and from recent discoveries touching the parasitic origin of several of the common constitutional maladies, that the obscure and mysterious cause of cerebro-spinal fever will yet be discovered by microscopical and clinical research. Leyden, indeed, has published in a recent issue of the *Cent. f. Klin. Med.*, p. 61, a paper on the micrococcus of cerebro-spinal meningitis, and M. Ernest Gandier (*Rev. Medicale*, June 3, 1882, New York MEDICAL RECORD, September 9, 1882) states that he has discovered in the blood and urine of a patient, examined fresh and with "antiseptic precautions," micrococci in great abundance. But proof is lacking that these micrococci sustain a causative relation to the disease.

At the debates in the Academy the question was raised whether the cause might not reside in the cereals or some other agricultural products. This is improbable, for of two adjacent localities, in which the diet of the inhabitants is the same, one escapes and the other is visited by the epidemic. The disease ceases after a time, although the food of the people remains unchanged. Infants at the breast having only the mother's milk are sometimes affected, and likewise certain animals whose food is very different from that of man, and finally the most careful examinations have hitherto failed to discover any dietetic cause of the malady. That the cause does not emanate from the soil, directly at least, is probable from the fact

that many epidemics commence in the winter when the ground is frozen, and that they occur in localities where there is every kind of soil and the most diverse geological formations. Probably, therefore, the cause, whatever its origin and nature, resides in the atmosphere, and enters the system through those channels which receive air. Prof. Wm. H. Welch writes to me on this subject: "Worthy of consideration, though unproven, is the view of Medin, that the infectious material is absorbed by the lymph-spaces of the nasal mucous membrane, which, according to Key and Retzius, communicate on the one side with the atmosphere through openings between the epithelial cells, and on the other side with the subarachnoid spaces at the base of the brain."

Among the conditions which are favorable for the occurrence of cerebro-spinal fever, and may therefore be regarded as predisposing to it, we may mention the winter season. Statistics collected in Europe and the United States show that while 166 epidemics occurred in the six months commencing with December, only 50 were in the remaining six months of the year. According to the statistics of Prof. Hirsch, which were collected mainly from Central Europe, 57 epidemics were in winter or winter and spring, 11 in spring, 5 between spring and autumn, 4 commenced in autumn and extended into winter, or into winter and the ensuing spring, and 6 lasted the entire year. I suspect that the opinion expressed by Prof. Hirsch is correct, that the excess of epidemics in the winter months is due mainly to the greater crowding and less ventilation in the domiciles during the cold than warm months, especially among the European peasantry. In New York City, where the state of the domiciles is about the same the year round, the season appears to exert little influence on the prevalence of the disease.

All observers have remarked the fact that anti-hygienic conditions increase the liability to cerebro-spinal fever; in other words, produce such a state of system that it more readily yields to the morbid influence and contracts the malady. Hence soldiers in barracks and the poor in tenement-houses suffer most severely when the epidemic is prevailing. In New York City the fact is often remarked that multiple cases occur for the most part where obvious unsanitary conditions exist, as in apartments which are unusually crowded and filthy, or in tenement-houses around which refuse matter has collected, or which have defective drainage. The interesting chart prepared under the direction of Dr. Moreau Morris for the Health Board, shows that comparatively few cases occurred in the epidemic of 1872 in those portions of the city where the sanitary conditions were good. Anti-hygienic conditions probably predispose to cerebro-spinal fever in the same way that they do to other grave epidemic disease, as for example, to Asiatic cholera, whose ravages are chiefly where hygienic requirements are most neglected. We will presently relate striking examples which show how foul air increases the number and malignancy of cases.

Is cerebro-spinal fever contagious?—It is the almost unanimous opinion of those who are most competent to judge from their observations, that it is either not contagious or is contagious in only a slight degree. It is certain that the vast majority of cases occur without the possibility of personal communication. Thus, in the commencement of an epidemic, the first patients are affected here and there, at a distance from each other, often miles apart, and throughout an epidemic, usually

only one is seized in a family. Children may be around the bedside of the patient, passing in and out of the room without restriction, and yet we can confidently predict that none of them will contract the malady, if there be proper ventilation and cleanliness, and none of the conditions of insalubrity exist within or around the domicile. Moreover, when multiple cases occur in a family, the disease begins at such irregular intervals in the different patients, that there can be little doubt in most instances that it is not communicated from one to the other, but, like the fevers from marsh miasm, is produced by exposure to the same morbid cause, existing outside the individuals, but within or around the premises. Thus in the Brown family treated by the late Dr. John G. Sewall, of New York (New York MEDICAL RECORD, July, 1872), the first child sickened January 30th, and subsequently the remaining five children at intervals respectively of five, seven, eleven, twenty-five, and forty-five days. That so many were affected in one family was attributed by the doctor to the filthy state of the house and the bad plumbing, which allowed the free escape of sewer-gas. In my own practice, in the family which suffered the most severely of all, four patients were seized in succession, and yet I could see no evidence of contagiousness. The family occupied a small plot of ground, not more than thirty feet by one hundred, and their occupation was to prepare for the meat-market what is known as head-cheese. They lived on the second floor of the two-story wooden house in which the work was carried on. At the time of the sickness the shop contained four hundred heads of animals from which the meat for the cheese was obtained, and evidently more or less decaying animal matter was present. The occupation and surroundings of this family afforded sufficient explanation of the fact that so many were attacked. Two workmen contracted the disease within about one week of each other, and were removed from the house. Four weeks after the commencement of the malady in the workman who was first attacked, on January 26th, one child sickened with it, and died on February 1st. Fifteen days subsequently (February 16th) a second child was attacked by it, and after a tedious sickness finally recovered. The long and irregular intervals between these cases indicate that the disease was not contracted by one from the other. The important factor in causing so severe an outbreak of cerebro-spinal fever in this family was probably the miasm produced by such an occupation in the house where the family resided, with neglect of ventilation and cleanliness.

But the strongest evidence that cerebro-spinal fever is either non-contagious, or very feebly contagious, is afforded by the fact that a large majority of the cases occur singly in families, although there is no isolation of the patients. The following are the statistics relating to this point of the cases which I have observed since cerebro-spinal fever commenced in New York, in 1871: Single cases occurred in seventy families; dual cases occurred in nine families; three cases occurred in one family, and four cases in one family. Intercourse with the sick room was unrestricted in all these families, so that children frequently went out and in, and sometimes assisted in the nursing.

The most striking example of apparent contagiousness which has come to my knowledge was related by Hirsch, and is quoted by von Ziemssen. A young man sickened with cerebro-spinal fever on February 8th. The woman who nursed him returned to her home in a neighboring village and there died of the same disease on February 26th. To her funeral mourners came from a neighboring township, and after their return home three of them died with the same disease, one within twenty-four hours, another on March 4th, and a third on the 7th.

In one instance only in my practice did the facts point to contagiousness. A boy of twelve years died of cerebro-spinal fever and was buried on Saturday or Sunday. On Monday the mother washed the linen and bed-

clothes of the boy, which had accumulated and were in a very filthy state. Two days subsequently she was attacked, and her infant soon afterward, both perishing. The state of the bedding and apartments in this house, as seen by myself, was such as would be likely to concentrate and intensify the poison, rendering it peculiarly active, for they were very dirty, and the mother, exhausted by her long and incessant watching and lack of sleep, and depressed by grief, rendered her system more liable to the disease by her self-imposed duties on the day after the funeral. One in her state of mind and body, standing for a considerable part of a day over the bed-clothes and bedding of her child, soiled by the excreta, would certainly be in a condition to contract the disease if it were in any, even the lowest degree, contagious. In the present state of our knowledge, therefore, upon this important subject, the evidence leads us to believe that with proper ventilation and cleanliness, and the suppression of anti-hygienic conditions in an infected domicile, those who are in a good state of body and mind will not contract the disease, but in the opposite conditions it is not improbable that the poison may be so intensified, and the system rendered so liable to receive the prevailing malady, through impairment of the general health and diminished resisting power, that cerebro-spinal fever may, though rarely, be communicated either by the breath of the patient, or by exhalations from his surface, or from the soiled clothing. If so, it of course possesses a low degree of contagiousness.

The occurrence of cerebro-spinal fever in certain of the lower animals is a very interesting fact, especially as the question is sometimes asked whether it may not be communicated from them to man. In the epidemic of 1811 in Vermont, according to Dr. Gallop, even the foxes seemed to be affected, so that they were killed in numbers near the dwellings of the inhabitants. Cerebro-spinal fever, previously unknown in New York City, began, as stated above, in 1871, among the horses in the large stables of the city car and stage lines, disabling many and proving very fatal, while among the people the epidemic did not properly commence till January, 1872, although a few isolated cases occurred in December of 1871. No evidence exists, so far as I am aware, that the disease was, in any instance, communicated by these animals to man. Those who had charge of the infected horses, as the veterinary surgeons and stablemen, did not contract the malady, certainly not more frequently than others who were not so exposed. Although we may admit slight contagiousness, there has probably been no well-established example of the transmission of cerebro-spinal fever from animals to man. If transmission ever do occur it is so rare that practically no account need be made of it.

In some instances we are able to discover an exciting cause. An individual, whose system is affected by the epidemic influence, may perhaps escape by a quiet and regular mode of life, but if there be any unusual excitement, or the normal functional activity of the system be seriously disturbed, an outbreak of the malady may occur. Among the exciting causes we may mention over-work and lack of sleep, fatigue, mental excitement, depressing emotions, prolonged abstinence from food followed by over-eating, and the use of indigestible and improper food. Thus in one instance among my cases, a delicate young woman, at the head of one of the departments in a well-known Broadway store, was anxious and excited, and her energies overtaxed, at the annual reopening. Within a day or two subsequently the disease began. Another patient, a boy, was seized after a day of unusual excitement and exposure, having in the meantime bathed in the Hudson when the weather was quite cool. Those children have seemed to me especially liable to be attacked who were subjected to the severe discipline of the public schools, returning home fatigued and hungry and eating heartily at a late hour. In one instance which I observed, a school girl, ten years of

age, returned from school excited and crying because she had failed in her examination and had not been promoted. In the evening, after she had closely studied her lessons, the fever began with violent headache.

Dr. Frothingham (*Amer. Med. Times*, April 30, 1864) writes as follows of the brigade in which cerebro-spinal fever occurred in the Army of the Potomac: "Under General Butterfield, a stern disciplinarian, . . . the men were drilled to the full extent of their powers, often to exhaustion. I did not at the time recognize this as the cause of the disease in question, but I learnt that in the present epidemic in Pennsylvania the attack generally follows unusual exertion and exposure to cold."

Many observers have noticed that bodily fatigue and mental depression and excitement are important factors in causing an attack of cerebro-spinal fever, when this disease is epidemic. Dr. Gallop, in his history of cerebro-spinal fever, as it occurred in Vermont in 1811, directs attention to the severity of the cases among the troops under General Dearborn, who were fatigued by marches and greatly dispirited on account of a repulse which they had sustained from the British. In one case, which occurred in my practice, a boy, six years and eleven months of age, was punished at school and came home with cheeks flushed from excitement, the excitement continuing during the ensuing night. On the following day cerebro-spinal fever began with vomiting and chilliness, the attack ending fatally on the seventeenth day. In another case, which was related to me by the mother and the physician, the patient, a bright girl, twelve years of age, of nervous temperament, and forward in her studies, had been much excited in competing for a prize in athletic exercises. In the evening of the same day a violent thunder-storm occurred, and after a severe clap she started from bed, pallid and excited, and expressed the belief that she had been struck by lightning. The disease began immediately after this, and terminated fatally on the fifth day.

Sex.—It is stated by certain writers that more males are affected than females. The statistics of hospitals and camps show this; for men subject to lives of hardship are especially liable to be attacked, but in family practice, in which a large proportion of the patients are children, the number of males and females is about equal. Thus in 105 cases, occurring chiefly in my practice but a few of them in the practice of two other physicians of this city, I find that 59 were males and 46 females. Ninety-one of these were children. In New York City, during the epidemic of 1872, 905 cases of cerebro-spinal fever were reported to the Health Board between January 1st and November 1st, and of these 484 were males and 421 females. Dr. Sanderson's statistics of the epidemic in the provinces around the Vistula, the cases being chiefly children, give also but a slight excess of males. Probably, therefore, in the same conditions and occupations of life the sexes are equally liable to contract this malady, and the excess of males is due to the fact that they lead a more irregular life, and are more subject to privations and exposures. That soldiers on duty or in barracks have been attacked while families in the vicinity escape, thus increasing the proportion of male cases, must be due to irregularities, hardships, and perhaps the lack of sanitary regulations in their mode of life.

Age.—Children, as already stated, are much more apt to contract cerebro-spinal fever than adults. The following are the statistics of the N. Y. Health Board relating to the age of the cases during the epidemic of 1872:

Under 1 year	125
From 1 to 5 years	336
From 5 to 10 years	204
From 10 to 15 years	106
From 15 to 20 years	54
From 20 to 30 years	79
Over 30 years	71
Total	975

In the cases which occurred in my own practice, and in a few cases in the practice of other physicians added to mine, I find that the ages were as follows:

Under 1 year	16
From 1 to 3 years	27
From 3 to 5 years	25
From 5 to 10 years	20
From 10 to 15 years	10
Over 15 years	15
Total	113

In my practice, therefore, three-fourths of the cases have been under the age of ten years, and the statistics of epidemics in other localities correspond with mine in giving a large excess of cases in childhood. Thus Dr. Sanderson, in examining the records of deaths in one epidemic, ascertained that two hundred and eighteen had perished under the age of fourteen years, and only seventeen above that age; and although this does not show the exact ratio of children to adults in the entire number of cases, it is evident that the children were greatly in excess.

The more advanced the age after the tenth year, the less the liability to this malady, so that very few who have passed the thirty-fifth year are attacked, and old age possesses nearly an immunity. In New York City, in which, as we have seen, cerebro-spinal fever has been occurring since 1871, only two cases have come to my knowledge which had passed the fortieth year. The age of one was forty-seven, and the other sixty-three years.

(To be continued.)

A CONTRIBUTION TO THE STUDY OF PARKINSON'S DISEASE—ANOMALOUS CASES WITHOUT TREMOR.¹

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A VERY common fault in our text-books and treatises on pathology and the practice of medicine, both general and special, is the tendency to delineate disease by the narration of *typical* cases, often to the complete exclusion of a proper notice and description of the *atypical* cases which form the bulk of one's practice.

An attempt to make all cases conform to a rule results in the parading before the student of "pathognomonic" symptoms, upon the recognition of which the case can be properly *labelled* and diagnosed; and too often, as a result, the diagnosis and not the pathological condition forms the basis of treatment.

This paper is an attempt to call the attention of the profession to anomalous cases of a very common malady, Parkinson's disease. With Charcot,² I think this a more appropriate name than paralysis agitans, for the reason that loss of power is really one of the latest symptoms to appear, and very seldom amounts to true paralysis. Charcot's words on this point are interesting: "It is, in short, strange to give the name of paralysis to an affection in which, for a long time, the muscular force is retained. The use of the word 'paralysis' is unjustifiable, because it annoys patients, and leads them to suppose they have some grave organic lesion which menaces their intellectual faculties."

"The qualifying 'agitans' added to the word 'paralysis' is not absolutely exact—at least applied to certain forms which, notwithstanding their being very striking, and the diagnosis rigorously established, lack the tremor."

Parkinson's³ definition of the disease was "involuntary tremulous motion, with lessened muscular power in

¹ An abstract of this paper was read before the American Neurological Association, June 21, 1883.
² Leçons sur les Maladies du Système Nerveux faites à la Salpêtrière. Tome 1.
³ Troisième édition. Paris, 1877.
⁴ Essay on the Shaking Palsy. London, 1817.

parts not in action, and even when supported, with a propensity to bend the trunk forward, and to pass from a walking to a running pace, the senses and intellect being uninjured."

A well-developed case of Parkinson's disease presents the following symptoms: A bending forward; a rigidity of the articulations, with a tendency to fixation in flexion; tendency to propulsion; motionless attitudes; deliberate movements; slight general weakness; rhythmical tremors, which are made worse by emotions or excitement of any kind, are not made worse by voluntary movements, can generally be temporarily stopped by an effort of the will, and cease during sleep or artificial anæsthesia; an hypertrophy of the muscles affected; a peculiar deformity of the hand, fingers not flexed on themselves, but semiflexed on the hand, and thumb opposed to the index; staring and half-smiling expression; immobility of the face; speech slow and between the teeth; voice apt to be "piping"; a sensation of heat; aching pains; emotional state; fair preservation of intellect.

Diarrhœa is a very common symptom of typhoid fever, nevertheless we see cases that run their course without it, having, however, all the other symptoms of the disease. We do not create a new name for these cases but simply designate them as *atypical* cases.

As there are cases of typhoid fever without diarrhœa, so there are cases of Parkinson's disease without tremor. The first to call attention to this was Charcot, who, in a clinical lecture, November 10, 1876, presented a woman who had had for many years all the symptoms of paralysis agitans, without any tremor. In the course of his remarks on Parkinson's disease, he said: "There is an abortive form in which the tremor is so slight that it exists unnoticed by the patient, or it appears only after the lapse of three or four years, or it is entirely wanting." These remarks inspired Boucher's thesis,² which contains the narration of seven cases of Charcot's "forme fruste," three of which had no tremor at all. Only one of these is reported at length and it is taken bodily from Charcot's work.

The only other case I can find reported is in Buzzard's book.³

The recorded cases are so few I may be pardoned in presenting abstracts of them.

CASE I. (Observation of Charcot.)⁴—Female, about forty, a teacher of gymnastics in an establishment for hydrotherapy. At the age of twenty she had an attack of acute articular rheumatism, a little later a typhoid fever, and still later a pneumonia. Of late she began to have an indefinable malaise, felt stiff, was less active, and felt incapable of making quick motions. One day while mounting a ladder there came a sharp pain in the left leg with a fidgety feeling in the toes. There followed dull pains, accompanied by muscular rigidity, occurring from time to time in the nucha, loins, and shoulders. During the six months preceding her visit to Charcot the patient was annoyed by the collection of vast quantities of saliva in the mouth. (This phenomenon was checked by the administration of .004 to .005 lb. of hyoscyamine a day.) The patient's attitude is particularly stiff, the walk slow and difficult, and there is a tendency to go to the left side. Rising is slow and hesitating. Both while at rest and walking the head is immobile and slightly flexed. The features are immobile, the eyes fixed, the lips pressed. Speech is slow, weak and has a nasal twang. The arms are approximated to the body, a little rigid in semi-flexion. The fingers are slightly flexed, the wrists a little extended, and this attitude cannot be altered without an effort. There is no tremor of the hands.

The writing is free from tremor but is done only with extreme slowness and difficulty; on the execution of some movements, such as taking a handkerchief from the pocket, a few rhythmical jerks of the fingers are noticed.

CASE II. (Observation of Buzzard.)⁵—A male, aged sixty-four; a hard-working upholsterer's foreman. With the exception of typhus fever when young and a slight annoyance from gravel, he had enjoyed good health. Two years before he consulted Buzzard he found difficulty in using his knife and fork and in putting on his clothes. Four months later he began to drag his feet in walking, and gradually power was lost more and more completely in all his limbs. For a year he had been in bed, for nine months his arms and legs had been stiff, and for six months he had noticed that they tended to stay in any position they were put longer than was natural. For six months his speech had been thick. When first seen he was found helpless in bed. He had an aspect of marked mental hebetude. The speech was almost unintelligible. The face is stolid. The tongue is straight, protruded slowly, but is not tremulous. The fingers are flexed, deviate toward the ulnar side, and the distal phalanges are rather over-extended. Flexion and extension of the fingers and forearms is possible but slow. The limbs tend to remain in any position they are put. The upper extremities are emaciated, the lower flabby. The joints of the lower extremities are stiff and movements are very limited. The patella tendon-reflex is small; there is no ankle clonus, but skin reflexes are present. The right pupil is smaller than the left; both react to light.

In commenting on this case Buzzard⁶ says: "These represent the principal symptoms of a condition which is manifestly of an unusual and obscure character. I have been led to conclude that the patient represents an anomalous form of paralysis agitans, partly by the necessity of excluding other explanations, and partly by the resemblance of the patient's state to that which would be produced by an intensification of certain symptoms of shaking palsy." Again,⁷ "It is very probable that such cases as this man's are not so rare as might be thought. Looking back to past experience, I am disposed to think that I have seen several such in work-houses and hospitals, where they have been classed with cases of softening of the brain."

Axenfeld⁸ says: "In certain cases the disease is 'fruste' by the complete absence of one of the important phenomena, the tremor. Sometimes it is the rigidity of the muscles which predominates, and it gives to the body a characteristic attitude. . . . We have observed three cases of atypical paralysis agitans: in one the rigidity of the muscles of the neck was so intense that torticollis or disease of the cervico-dorsal spine was suspected; in the second case the flexion of the trunk was so marked that the body was as if folded up; the third case, aged sixty-nine, had had symptoms of Parkinson's disease for fifteen years. Fixed attitude, 'soldering' of the vertebræ, stooping position, thighs, legs, and forearms semi-flexed. Hands deformed. Expressionless, dull physiognomy. Eyes widely open, haggard, and fixed, giving an expression of constant surprise to the upper part of the face while the lower part looks sad. Saliva almost all the time dropping from the half-open mouth; lower lip pendant; slow walk; slow ideation; speech scarcely intelligible because of the difficult movement of the tongue, the muscles of which seem rigid; some dysphagia from rigidity of muscles of the pharynx and soft palate." Axenfeld adds, however, that this latter patient, when irritated or angered, had, for the time, "a tremor hardly perceptible."

I have seen in the last year four cases which I considered Charcot's "forme fruste" of Parkinson's disease.

¹ Clinical Lectures on Diseases of the Nervous System, by Thomas Buzzard, M.D., p. 320. Philadelphia, 1882.

² De la Maladie de Parkinson et en particulier de la forme fruste. Par A. Boucher. Thèse de Paris, 1877.

³ Leçons sur les Maladies du Système Nerveux. Tome I. Troisième édition, Appendix, p. 329. Paris, 1877.

⁴ Loc. cit., p. 53.

⁵ Loc. cit.

⁶ Loc. cit., p. 336. I have not reported this case in full.—R. W. A.

⁷ Loc. cit., p. 338.

⁸ Loc. cit., p. 343.

⁹ Traité des Névroses, par A. Axenfeld. Deuxième édition, augmentée par Henri Huchard, p. 691. Paris, 1883.

CASE III. (Personal observation.)—A female, aged fifty-three, consulted me June 2, 1883. Her menses had ceased eleven years before. She had always worked hard at washing. Four years ago she had trouble with her daughter-in-law, and as a consequence had a falling-out with her son, of whom she was very fond. This worried her day and night, and she became sleepless over it. At that time a progressive weakness of the legs was first noticed, which is so great at times now that she cannot rise or walk about. Two years ago her voice began to fail, so that at times, now, she can only talk in a whisper. Shortness of breath and palpitation of the heart appeared about the same time. She feels very well at night, but notices that she requires less covering on the bed than formerly. She has a great deal of pain in the left axillary line and some in the right elbow. She is afraid of falling if she turns suddenly. She is annoyed much by a collection of phlegm in the throat, which is very difficult to raise. In the last year her eyesight has failed much, and it is hard work to keep her eyes open. She thinks her memory has failed; her movements are very slow, and instead of turning on the heel she takes three or four steps in reversing her course. Her posture is stooping and rigid. Her face is staring and half smiling; while speaking her lips move very little, especially the upper. Her speech is mumbly and monotonous. The grasp, as tested by the dynamometer, was weak on both sides, but the difference between the two sides was normal. The sensibility was unimpaired. The pulse was 104; vision perfect; her optic nerves were normal. She was ordered .0006 of crystallized hyoscyamine, three times a day.

July 10th.—She is sure the medicine has relieved her. Says if she never gets any better she will be satisfied. Her voice is quite strong, and she takes great pride in showing how quickly she can turn in walking.

August 17th.—Has had no medicine for two weeks. Her voice is almost extinct, and she does not walk as well as before.

She never complained of dryness of the throat or dim vision from the drug, but it invariably overcame her sleepy feeling, strengthened her voice, and improved her walk. After four months' observation the case remains in exactly the same condition; instantly relieved by hyoscyamine. Neither now nor at any previous time has there been any tremor.

CASE IV. (Personal observation.)—Male, aged sixty-two, a glazier by trade, consulted me in November, 1883. He had seen active service through the whole war and used to be of intemperate habits. He was perfectly well up to three years ago, when he lost his wife (as he says, a great shock to him), and about that time became suddenly weak and could talk very little, and sank into an apathetic condition from which he has never been aroused. He has occasional frontal headaches. His eyesight has failed, and he feels sleepy all the time. Still, he does not sleep much except at night. He has a very slow, uncertain walk, during which he stoops. All his movements are slow, particularly sitting down and rising. He has no paralysis or tremor. His face is staring and immobile, hardly expressive of anything except stupid surprise. He seldom volunteers any remarks, but in answer to questions he speaks slowly and through a half-open mouth. The voice is feeble. He has no nystagmus nor optic neuritis.

When I first saw him I considered his apathetic mental state bordering on dementia. Experimentally I ordered him .0006 of crystallized hyoscyamine twice or three times a day. When he returned in two days his whole being was changed; he walked briskly, volunteered information as to his condition in quick, distinct tones. His expression was intelligent. This improvement will be only temporary, of course, but it would hardly be expected to occur in an ordinary case of dementia.

CASE V. (Personal observation.)—A female, aged

sixty, consulted me October 5, 1883. She had always been dyspeptic, had passed the menopause at forty. Eighteen months ago she lost her daughter suddenly, and immediately a tremor set in in the right hand. The right arm and leg were weak and there was a pain about the right shoulder. The tremor was of the greatest intensity at first and gradually vanished. The pain is still sometimes present and the hand and foot remain weak. When excited now a very fine rhythmical tremor can be felt by patient in the hand. The eyesight has failed much in last three years (presbyopia); the voice has become monotonous and weaker. She has a sleepy, heavy feeling in the eyes almost all the time. Her memory is good. She has a staring immobile facies, she walks slowly, leaning forward; all her movements are slow, as is her speech, which is indistinct. The tongue points a little to the right side, the right hand is weak, the optic nerves normal. She also improved under the use of hyoscyamine, is still under observation, and so far I have never seen any tremor.

CASE VI. (Personal observation.)—A male, aged forty-eight, consulted me May 20, 1882. Does not give a clear history, but complains of general debility, nervousness, aching pains, and an inability to keep eyes open. He denied alcoholic excess. His movements were slow, and his walk stiff and stooping. His facies was immobile and dull and his eyes staring. His speech was slow and mumbly. He would sit motionless, and if left to himself his eyelids would droop and remain closed in a tremulous condition. In this state he did not sleep but yielded to an irresistible impulse to close his eyes.

TUBERCULOSIS AS PRODUCED BY SPRAYED SPUTA.¹

By LOUIS D. BROSE, M.D., PH.D.,

PROFESSOR OF ANATOMY IN THE MEDICAL COLLEGE OF EVANSVILLE, IND.; PHYSICIAN TO THE HOME FOR THE FRIENDLESS, ETC.

GENTLEMEN: my object in undertaking these experiments was to convince myself as to the infectiousness of tuberculosis. Were I asked to express my opinion previous to this research, I should have registered against anything specific in its production. This would not have been simply from literature, for I was so associated with Dr. O. C. Robinson while he conducted by inoculation his experimental researches on tuberculosis² in the Pathological Laboratory of the University of Pennsylvania, that I was almost as firm a believer in his results as he himself. The following method may be briefly stated as the manner of procedure in my investigations: Animals known not to be scrofulous or to easily acquire tuberculosis spontaneously, such as the cat and dog, were confined either in a large box, which was then placed in a room, or else they were allowed to run free in the room itself. Sputum was taken from patients known from a thorough physical examination to have phthisis.

Several of these patients have since died and the diagnosis verified by autopsy, so there can be little doubt but that the source of my material was from consumptive persons. The sputa were either placed in the bottle of an ordinary hand-spray, or else first made into a thin emulsion by admixture with an equal portion of water, and the animals sprayed during a period of five minutes for five consecutive days. As a self-protector, I invariably made use of an inhaler of borated cotton, the meshes of which were filled with powdered boric acid.

The spray was directed as far as possible toward the animal's nose. In every instance careful attention was paid to a proper and regular supply of food and water during the period of confinement, and the animals were finally killed at various dates by Scheele's hydrocyanic acid. I was aided in examining the organs macroscopi-

¹ Read before the Medical Society of the Mississippi Valley, at Indianapolis, Ind.

² See abstract Philadelphia Medical Times, vol. xii., p. 130.

cally by Dr. William Folsetter, a veterinary surgeon of much ability and a gentleman highly interested in the research.

For a better understanding, the experiments may be described under three series. The first series will include those animals sprayed with phthisical sputa and then killed before the expiration of ten days since the first spraying. April 25th a large cat was confined in a box, placed in a well-ventilated dissecting-room, and sprayed with three ounces of sputa. On the 26th and 27th sputa was again sprayed into the box. During the afternoon of the 27th she had a litter of five kittens. These were apparently at full term, and cried on my shaking the box. April 28th, besides the spray, a lot of old and very offensive sputa was poured into the box among the kittens. In the afternoon of the 29th all the kittens were found dead in the box, and the mother missing. Next day she was also found dead in the bottom of a stove in the dissecting-room.

Macroscopically and *microscopically* the lungs and other organs of the kittens were normal, well formed, and without evidence of irritation or inflammation. Death apparently occurred from inanition.

The lungs of the mother were emphysematous at the edges, slightly congested, but otherwise healthy. Spleen and liver normal in appearance. The uterus was firmly contracted, and with the exception of a congestion of the ovarian blood-vessels was without evidence of disease. Death probably occurred from septicæmia. A thorough microscopical examination did not reveal sufficient changes in any of the tissues to call them diseased.

In the second series I will place those animals sprayed with sputa, and under observation for a period of from eighteen to twenty-seven days. April 16th a grown English bull-dog bitch was confined in a box placed in a room 9 by 6 feet, and sprayed with sputa made into a thin emulsion by the addition of water. April 17th she had escaped from the box into the room, was replaced and again sprayed with some three ounces of fluid. April 18th she again escaped, and I now permitted her to remain free in the room, into which the spray was directed the three following days, besides scattering much offensive sputa over the floor. May 7th, just twenty-one days since using the first spray, the animal was killed by a hypodermic injection of Scheele's hydrocyanic acid. Death occurred within two minutes.

Autopsy.—The general body considerably emaciated. Left lung throughout is invaded by gray miliary tubercle, most numerous in the apex. The pleura covering the lung is also involved. Right lung and pleura affected in a similar manner, the tubercles being, if anything, more numerous. Bronchial glands at the root of the lungs greatly enlarged, and on section present a pigmented appearance with islets of yellow discoloration. Spleen enlarged and softened. Kidney and liver normal.

May 11th three kittens were placed in a box and kept in a well-ventilated, clean vacant room. They were sprayed on two of the five occasions by fluid exuded from the cut surface of a highly tuberculous and consolidated lung. The animals were fed on milk daily during their confinement. May 30th, after the lapse of eighteen days, one of the kittens was found dead in the box.

Autopsy.—Miliary tubercles in small numbers were present in both lungs, involving also the pleura slightly. Macroscopically the other organs were normal. June 12th the remaining two kittens were killed, and the lungs found to be highly infected. Aggregations existed in many places, forming large tubercular nodules, ready to soften and advance to the stage of cavity formation. The pleura was inflamed over the nodules and adherent to the underlying tissue. Liver softened, otherwise healthy in appearance. Spleen and kidney normal.

May 11th a strong healthy dog was placed in a room 9 by 6 feet and sprayed with the exuded matter from a phthisical lung; sputa was also scattered over the floor.

June 14th, thirty-two days since confinement, the animal was killed by hydrocyanic acid. Both lungs with the pleura contained many disseminated miliary tubercle. The spleen, liver, and kidneys were without traces of inflammation and apparently healthy.

The microscopical appearances of the viscera in this series, showing many points in common, I will describe collectively. Lungs: a lymphoid exudate occupies the lumen of many of the vesicles, and there is a tendency to thickening of the vesicle walls proper. Along with this new formation of granulation-like tissue is observed a catarrhal proliferation of the epithelium lining the air-cells. All the vesicles are not uniformly filled, as in an ordinary croupous pneumonia, but some remain empty and have their lumen encroached upon by the distended adjacent vesicles. In experiment four, the lesions approach nearest a croupous pneumonia, and some of the bronchioles on cross-section are seen filled by this same granulation element, while in the larger tubules a catarrhal proliferation is seen. Few giant-cells were observed. The bronchial glands in experiment one showed granulation tubercle. In sections of the spleen from experiment five, stained by W. D. Babcock according to Gibbe's rapid method, tubercle bacilli were detected, although no tubercular nodules were present. The other organs showed few if any abnormal changes.

The third series embraces seven control experiments. These were undertaken to further convince myself that the lesions produced were not due to simply a mechanical irritation of the inhaled particles suspended in the sputa. Animals were placed under the same conditions as those in the preceding experiments, but instead of spraying them with sputa I used the normal healthy brain of a sheep or cow, rubbed up with water into an emulsion. This, after being kept twenty-four hours, became as offensive as sputum.

June 11th.—Two kittens were confined in a box and then placed in a closed room. They were sprayed on five consecutive days with the brain of a sheep taken some two hours after death. July 5th, twenty-four days since using the first spray, they were anesthetized and killed.

Macroscopically and *microscopically* there were no perceptible changes or signs of irritation in either the lungs, pleura, liver, or kidneys. August 18th five kittens were placed in a room 16 by 12 feet and sprayed with the brain of a cow. They were fed daily upon milk. Besides the spraying, quantities of brain matter were scattered over the floor. August 29th three of the kittens were found dead. A thorough examination did not reveal the presence of tubercle in any of the organs, death resulting probably from heat exhaustion, as the windows were kept closed and the temperature of the room was very high. September 8th, twenty-one days since the first spraying, the two remaining kittens were killed.

Autopsy.—Lungs crepitate, are perfectly healthy and normal in color; spleen and liver normal in size. Microscopically the healthy appearances noted at the autopsy are corroborated.

The first to investigate this disease by experimental observation was Villemain, of France, who in 1867 inoculated rabbits with tubercular matter, and established the fact that in the lower animals morbid changes, constant in their anatomical appearances and development, followed; that these changes were to be regarded as constituting the disease tuberculosis. Then followed Waldenburg in the same year¹ with a paper wherein he states that in some animals, especially the rabbit, the inoculation of finely powdered innocuous substances also gave rise to tuberculosis. Cohnheim and Frankel, in two repetitions of Waldenburg's work,² arrive at a different conclusion. In their first series, conducted in the Pathological Institute in Berlin, they confirmed his results;

¹ Treatise on Tuberculosis, Phthisis, and Scrofulosis.

² Virchow's Archiv, vol. xlv.

while in the second series, conducted in another locality, they could only produce the anatomical changes of tuberculosis by the inoculation of tubercular matter itself. They now regard the disease as infectious, and explain their first result as due not to the inoculation but rather to infection through other tuberculous animals in the same institution. These experiments have since been repeated by a number of observers, and with various results. Those who hold that tuberculosis alone follows the inoculation of tuberculous matter contradict the negative party by calling their experiments unreliable and open to the errors of either the admixture of tubercular with indifferent material or else spontaneously acquired tuberculosis. The first to produce the disease experimentally by inhalation was Tappenier, in 1877. Unfortunately I have not been able to see his original paper, but from an editorial in the *Medical News*, May 5, 1883, learn that his results closely coincide with my own. In his first four experiments he used sputa from fresh tubercular cavities rubbed up with a good deal of water into a thin emulsion, and permitted dogs to inhale it from a steam atomizer, the animals being enclosed in airy cages and protected from dust. The exact method and conditions of the remaining experiments he does not describe, but in all he records 31 inhalation experiments with dogs, of which 18 were true infection experiments with tubercular sputum, 8 control experiments with other substances, and 5 experiments with tubercular sputum with a view to determining the period of incubation. In all the 18 experiments the results were positive. In 17 there was tubercle in both lungs and pleura; 4 times in addition to the tubercles in the lungs there were tubercular nodules in the kidneys, spleen, and liver, and in 3 instances in addition to the tuberculosis of the lungs there were also cheesy foci and small cavities. In one instance only there was typical desquamative pneumonia. Of the 8 control experiments, 2 were made with calves' brain, treated in the same way as the tubercular sputum; 2 with the suppurative expectoration of a chronic bronchitic patient, and 4 with cheesy pus from lymphatic glands. All the 8 control experiments were completely negative, there being no trace either of tubercular nodules or of irritation of the lung by the finely divided particles. In the 5 control experiments, in which sputum from tubercular cavities was inhaled, the animals were killed in from ten to twenty days after the beginning of the inhalation, and none of them showed any trace of tuberculosis or other symptoms of irritation of the lung, although large quantities of sputum had been inhaled.

From these experiments he concludes that the period of incubation cannot be less than twenty days, and since, also, all the dogs killed in more than twenty-four days from the beginning of the experiments, excepting the single one with desquamative pneumonia, were tuberculous, it would appear that the inoculation effects developed themselves within the short period of four days. My own success in five infection experiments fully corroborates his eighteen positive results. Furthermore, my observation is that the more concentrated the spray and the greater the saturation of the inhaled atmosphere, the greater the degree of infection and development of tubercle in the animal under experiment. Our control experiments are wholly in unison; in neither case was there a trace of inflammation or irritation in the viscera of the experimented animals.

Spina,¹ in publishing his studies on tuberculosis, quotes a Dr. Knauff as having obtained true tubercles in the lungs of animals by having them inhale coal-dust; also a Dr. Inis as producing the same lesions by inhalation of stone-dust and lamp-black. That certain morbid appearances may thus be produced in the lung I think will be conceded by all when it is remembered that in granite-masons, coal-miners, knife-grinders, and others exposed to the inhalation of mechanical irritants, bronchial affec-

tions occur, often attended with fibroid induration and disease of the lung itself closely resembling pulmonary consumption. But that such inflammatory nodules are true tubercle is a matter of much doubt. Dr. A. Weichselbaum,² who has lately experimented upon this subject, concludes that the inhalation of other organized though non-tuberculous substances may produce nodules in the lungs, which may, it is true, have the external signs of tubercles, but which cannot positively be identified as tubercles. The inhalation of tuberculous sputum produces in dogs a true miliary tuberculosis of the lungs and frequently of other organs, but which seems to have no progressive character. My friend and former teacher, Dr. Henry F. Formad, of Philadelphia,³ offers to explain the success of all inhalation experiments on the ground that the epithelium lining the air-vesicles approaches very closely in histological character the lining of the serous membranes—in fact it is considered by some to be endothelial. Now, according to his paper true tuberculosis can be produced even in non-scorfulous animals through simple injuries of serous membranes. Hence the spray simply acts in the capacity of setting up an inflammatory irritation, and in consequence of a too rapid absorption of the inflammatory exudate, we have here a blocking up of the lymph spaces of the connective tissue by the fibrin and molecular debris which was suspended in the absorbed serum. From extended researches he announces that the predisposition to tuberculosis in some men and animals, the so-called scorfulous habit, lies in the anatomy of the connective tissue of the individual, the peculiarity being a narrowness of the lymph spaces and their partial obliteration by cellular elements; only beings with such anomalous structure of connective tissue can have primary tuberculosis, and such animals invariably do become tuberculous from any injury resulting in inflammation, or from repeated injuries.

Scorfulous beings can have no other than a tuberculous inflammation, although it may remain local and harmless. Non-scorfulous men or animals may acquire the predisposition to tuberculosis through malnutrition and confinement, the latter bringing on the above-mentioned anatomical peculiarities. No special virus or external etiological influences are necessary to cause tubercular disease other than those which ordinarily produce inflammation, and scorfulous beings will not become tuberculous unless local inflammation is set up.

If these views be correct, why did Tappenier in eighteen consecutive cases, and my own five cases of true infection experiments alone result in positive success?

The same irritation surely existed in the sputum used on those animals killed before the expiration of fifteen days, and yet in not a single instance did inflammation occur with subsequent blocking up of the lymph spaces. Again, the control experiments were certainly not without some irritating influence, and yet in no instance was there discovered a sign of tubercle in the lungs or pleura after death. Under these circumstances I feel justified in presenting the following conclusions:

First.—That tuberculosis may follow the inhalation of air-carrying particles of sputa from phthisical patients.

Second.—The breath and saliva of consumptive persons, being thus contaminated, are liable to originate, either through kissing or by direct inhalation through close contact, the same disease in a healthy person; the greater the concentration of the breath inhaled the greater the danger.

Third.—Since the same sputa in animals killed under ten days produced no disease, and since the healthy brain of other animals produced no disease, in cats even when under observation for a period longer than twenty days, while true tuberculosis always followed (in five of my own cases) the inhalation of tuberculous sputa in animals between eighteen and thirty days after the first spraying, I feel warranted in inferring that, in the last

¹ Studien über Tuberculose, by Arnold Spina. Vienna, 1883.

² Medizinische Jahrbücher. 1883.

³ Philadelphia Medical Times, November 18, 1882.

instance there was something specific in the inhaled spray requiring certain development before originating the infectious disease, tuberculosis. That it was alone the *tubercle bacillus of Koch*, I have not claimed. My own opinion regarding the origin of tuberculosis, formed from this research and a no inconsiderable clinical experience with the disease, is that, like diphtheria, it is ordinarily determined by certain peculiarities and susceptibilities in individuals, together with the presence of a specific principle. Now when a person who has this peculiarity of weak lungs, or in other words one in whom bronchial and catarrhal troubles are easily excited, has superadded the infection of tuberculosis, let it be in a minimum amount, we have arising true consumption running through its various stages. Even healthy persons can thus be infected when the specific matter is inhaled in large quantities, just as the poison in other infectious diseases will certainly produce these same diseases when inoculated in concentrated quantities in persons who would otherwise escape. The reason why we have acute disseminated miliary tuberculosis in one case, and a catarrhal phthisis in another, will depend upon the susceptibility of the individual to catarrhal cell-proliferation and whether the specific principle was superadded to an already existing catarrh, in which case the specific principle would reproduce itself easiest at the seat of tissue necrobiosis. If, on the contrary, there existed a proclivity against catarrhal processes, and the person was infected with a concentrated dose, so to speak, of the specific principle of tubercle, there might arise a disseminated miliary tuberculosis.

GOITRE—EXCISION—CURE.

By JOHN A. WYETH, M.D.,

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SEPTEMBER, 1883.—E. H.—, female, aged sixteen, blonde, born in Virginia; resided there six months, six years in Pennsylvania, four in Washington City, and the last six years in Brooklyn, N. Y. Mother living and in good health. Father living; has had asthma, but for three years past has had no attacks. Three sisters living and healthy; one brother still-born.

Patient is in good health; menstruation, which began at fifteen, regular; great hypertrophy of right thyroid body; had scarlatina four years ago, accompanied with and followed by sore throat. Noticed the tumor at this time, which grew slowly for two years, then more rapidly, and in the last six months its growth became alarming.

October 10th.—Operation before the surgical class of the Polyclinic. Ether; incision over middle of tumor, parallel with and to right of median line; muscles pulled aside; all tissues divided between two of my hæmostatic forceps. Isthmus tied with elastic ligature, then superior and inferior thyroid arteries with antiseptic catgut, and tumor turned out. Operation one hour. Hemorrhage insignificant.

Tumor was about five inches long and twelve inches in transverse circumference. Wound washed out with hydrarg. chlorid. corrosiv., 1 to 2,000, and sewed up with silk. Drainage-tube and end of elastic ligature passed out of the most dependent portion. Carbolyzed gauze and borated cotton dressing.

October 11th.—Temperature, 101.8° F., declined gradually to normal on 21st. Wound healed per primam (excepting drain-hole). Elastic ligature came away on the 18th, and patient discharged cured on October 31st.

In THE RECORD for January 28, 1882, p. 94, I have reported one other operation for goitre by myself, and added several more, to which any one interested in this subject is referred.

RECORD OF THE YELLOW FEVER IN THE UNITED STATES—1668-1883.

In looking up the history of the occurrence of yellow fever in the United States, we find that the annual reports of the Surgeon-General of the U. S. Marine Hospital Service and Public Health Bulletin published by that service contain records covering a period of over two hundred years, the first cases appearing in New York (City) in 1668. Briefly, the record is as follows:

New York (City) in 1668, 1702-32-41-42-43-45-47-48-62-90-91-92-93-94-95-96-97-98-99, 1800-01-02-03-05-06-07-08-09-10-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-32-33-34-35-38-39-43-44-46-47-48-52-53-54-55-72 (in quarantine)-73 (in quarantine and Marine Hospital wards, N. Y., and more or less cases in quarantine or Marine Hospital every year since).

New York (State)—Albany, 1746-98; Bay Ridge, L. I., 1856; Brooklyn, 1809-23-56; Brooklyn Navy Yard, 1878; Catskill, 1743-94 and 1803; Governor's Island, 1856-70; Gowanus, 1856; Greenfield, 1798; Huntington, 1795-98; Queensborough, 1801; Red Hook, 1856; Stapleton, 1848; Yellow Hook, 1856; Tompkinsville, 1848; West Point, 1804, and West Neck, 1795.

Alabama—Mobile, 1705-56-66, 1819-21-22-24-25-27-28-29-37-38-39-41-42-43-44-47-48-49-51-53-54-58-67-70-73-78; Blakely, 1822; Cahawba, 1853; Citronville, 1853; Decatur, 1878; Dog River cotton factory (five miles from Mobile), 1853; Demopolis, 1853; Fort Claiborne, 1819; Fort Morgan, 1867; Fort St. Stephens, 1819; Fulton, 1853; Hollywood, 1853; Leighton, 1878; Montgomery, 1853-54-55-73; Pollard, 1873; Selma, 1853; Spring Hill, 1853.

Arkansas—Columbia, 1853; Fort Smith, 1823; Grand Lake, 1853; Little Rock, 1873; Napoleon, 1853.

Connecticut—Chatham, 1796; Hartford, 1798, 1800; Knowles Landing, 1796; Middletown, 1820; New Haven, 1743-94, 1803-04-05-19; New London, 1798; Norwalk, 1798; Stamford, 1745; Stonington, 1798.

Delaware—Christiana, 1798; Duck Creek, 1798; New Castle, 1798; Wilmington, 1798.

Florida—Pensacola, 1764-65, 1811-22-25-27-34-39-41-42-43-44-45-46-47-48-53-54-58-63-67-73-82; Apalachicola, 1826; Barrancas, 1875; Cedar Key, 1871; Fernandina, 1877; Gainesville, 1871; Jacksonville, 1857; Key West, 1824-29-41-53-54-62-64-65-67-69-75-78; Milton, 1853-55; St. Augustine, 1807-21-38-39-41; St. Joseph, 1841; Suwanee, 1836; Tampa, 1839-53-71; Tortugas, 1862-67.

Georgia—Savannah, 1807-08-19-20-27-52-53-54-58-76; Augusta, 1839-54; Bainbridge, 1873; Brunswick, 1876; St. Mary's, 1808.

Indiana—Indianapolis, 1878 (refugee).

Illinois—Cairo, 1873-78.

Kentucky—Louisville, 1873-78; Hickman, 1878; Covington, 1878 (refugee).

Louisiana—New Orleans, 1769-91-93-94-95-96-97-99, 1800-01-02-04-09-11-12-17-18-19-20-22-23-24-25-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-62-63-64-67-70-71-72-73-75-78 (and more or less cases in quarantine every year since); Alexandria, 1819-22-27-31-37-39-47-53-54-55; Algiers, 1847-53-58; Ascension, 1823; Baton Rouge, 1817-19-22-27-29-37-43-47-58-78; Bay of St. Louis, 1820-30-78; Bayou Sara, 1847-53; Bonsecour, 1878; Burat Settlement, 1854; Carrollton, 1847-55; Centreville, 1853-55; Clinton, 1853-78; Covington, 1847; Clouterville, 1853-54; Delphi, 1878; Delta, 1878; Donaldsonville, 1827-39; Franklin, 1853-54; Fish River, 1878; Gretna, 1858; Greenwood, 1873; Hudson, 1878; Iberville, 1847; Jeanerretts, 1854; Jesuit's Bend, 1854; Lafayette, 1847; Lake Providence, 1853; Maudville, 1847; McDonoughville, 1858; Morgan City, 1878; Natchitoches, 1839; New Iberia, 1867-70; Opelousas, 1829-37-39-42-53-

67; New Orleans (a small settlement below New Orleans proper), 1854; Pattersonville, 1853-54-55; Plaquemine, 1837-39-47-53-58-78; Point a la Hache, 1854; Port Barre, 1870; Port Eads, 1878; Port Hudson, 1839-41-43-73; St. Francisville, 1811; Feliciana Parish, 1817-19-23-27-29-39-43-46-48-53; St. John Baptiste, 1853; St. Martinsville, 1839; St. Mary's Parish, 1854; Shreveport, 1853-73; South Pass, 1878; Southwest Pass, 1878; Thibodeau, 1853-54-56; Trenton, 1853; Vidalia, 1853; Ville Platte, 1870; Washington, 1837-39-52-53-54-67.

Maryland—Baltimore, 1794-95-97-98-99, 1800-01-02-05-19-20-21-22-68-79 (in quarantine); West River, near Annapolis, 1805.

Massachusetts—Boston, 1691-93, 1795-96-98, 1800-02-05-19-58-78 (in Marine Hospital); Holliston, 1741; Nantucket, 1763; New Bedford, 1800-01; Newburyport, 1796; Salem, 1798.

Mississippi—Biloxi, 1702, 1839-47-53-58-78; Bolton, 1878; Brandon, 1853-54; Canton, 1855-78; Clifton, 1853; Cooper's Wells, 1855; Crystal Springs, 1878; Dry Grove, 1878; Friar's Point, 1878; Grand Gulf, 1853; Greenwood, 1853; Jackson, 1853-54-78; Greenville, 1878; Granada, 1878; Handsborough, 1878; Hernando, 1878; Holly Springs, 1878; Lake, 1878; Lebanon Church, 1878; McComb, 1878; Meridian, 1878; Mississippi City, 1878; Moscow, 1878; Natchez, 1817-19-23-25-27-29-37-39-44-48-53-55-58; Ocean Springs, 1878; Pascagoula, 1847-53-78; Pass Christian, 1847-53-55-58-78; Petit Gulf, 1853 (thirty plantations near Petit Gulf); Rodney, 1829-43-47-53; Osyka, 1878; Port Gibson, 1878; Scranton, 1878; Shieldsborough, 1820-29-39; Spring Hill, 1878; Vicksburg, 1839-41-47-58-71-78; Washington, 1825; Water Valley, 1878; Whitzell's Landing, 1817; Woodville, 1844-52-53-55-58; Yazoo City, 1853.

Missouri—St. Louis, 1854-55-78 (refugees); New Design (twenty miles below St. Louis), 1797.

New Hampshire—Portsmouth, 1798.

New Jersey—Bridgeton, 1798; Gloucester, 1805; Perth Amboy, 1811; Port Elizabeth, 1798; Woodbury, 1798.

North Carolina—Beaufort, 1854-64-71; New Berne, 1799, 1864; Smithville, 1862; Washington, 1800; Wilmington, 1796, 1800-21.

Ohio—Cincinnati, 1871-73-78; Gallipolis, 1796, 1878; Dayton, 1878 (refugee).

Pennsylvania—Philadelphia, 1695-99, 1732-41-42-43-44-47-62-91-93-94-96-97-98-99, 1800-01-02-03-05-07-09-10-11-13-14-15-16-19-20-53-54-70-78 (refugee); Pittsburg, 1878 (refugee); Bald Eagle, 1799; Chester, 1798; Chester County, 1805; Kensington, 1793; Lisburn, 1803; Marcus Hook, 1798; Niltany, 1799; Southwark, 1793.

Rhode Island—Block Island, 1801; Bristol, 1795-96-97; Newport, 1806; Providence, 1794-95-97, 1800-05; Westerly, 1798, 1805.

South Carolina—Charleston, 1699, 1703-28-32-34-39-45-48-53-55-61-62-68-70-92-94-95-96-97-98-99, 1800-02-03-04-05-07-12-17-19-22-24-25-27-28-30-34-35-38-39-40-41-43-49-52-54-56-57-58-62-64-71; Beaufort, 1871; Columbia, 1854; Fort Moultrie, 1852-58; Georgetown, 1854; Hilton Head, 1862; Mount Pleasant, 1817-48-52-54-56-57.

Tennessee—Memphis, 1853-55-66-73-78; Brownsville, 1878; Chattanooga, 1878; Germantown, 1878; Grand Junction, 1878; Mason, 1878; Nashville, 1878; Milan, 1878; Paris, 1878.

Texas—Galveston, 1839-44-47-53-54-58-59-64-66-67; Alleytown, 1867; Anderson, 1867; Austin, 1867; Bastrop, 1867; Beaumont, 1863; Belleville, 1855; Brazoria, 1859; Brenham, 1867; Brownsville, 1853-58-62-82; Calvert, 1867-73; Chapel Hill, 1867; Columbus, 1873; Columbia, 1833; Corsicana, 1873; Corpus Christi, 1862-67-73; Cypress City, 1853-59; Danville, 1867; Edinburg, 1859; Goliad, 1867; Harrisburg, 1867;

Hempstead, 1867; Hockley, 1853; Houston, 1839-44-47-48-53-54-58-59-64-70; Huntsville, 1867; Independence, 1867; Indianola, 1852-53-58-59-62-67; La Grange, 1867; Liberty, 1867; Liverpool, 1853; Matagoras, 1862-63; Millican, 1864-67; Navasota, 1867; Oldtown, 1867; Port Lavacca, 1867; Point Isabel, 1882; Richmond, 1853-59; Rio Grande City, 1867; Sabine City, 1863; Saluria, 1853; Sugarland, 1859; Victoria, 1867.

Virginia—Norfolk, 1747-94-95-96-97-98-99, 1800-01-02-03-04-05-21-26-52-54-55; Alexandria, 1803; City Point, 1798; Gosport, 1855; Hampton Roads, 1869; Petersburg, 1708; Portsmouth, 1852-54-55; Richmond, 1806 (78 refugees); Scott's Creek, 1855; Winchester, 1804.

Since the reorganization of the service in 1871-73 (when it was placed under a medical head), a large number of valuable papers on the subject of yellow fever have appeared in the reports. In the Annual Report of 1873, Dr. J. M. Toner, of Washington, D. C., contributed a paper entitled "The Distribution and Natural History of Yellow Fever as it has Occurred at Different Times in the United States." In the same Report may be found yellow fever notes by the late Surgeon-General Woodworth and Surgeons Hebersmith, Orsamus Smith, P. H. Bailhache, Dr. J. S. Mosher, Deputy Health Officer of the port of New York, Dr. G. B. Thornton (at that time in charge of Marine Hospital patients, Memphis, Tenn.), Dr. O. L. Crampton (in charge of Marine Hospital patients, Mobile, Ala.), and Dr. H. Wardner (in charge of Marine Hospital patients, at Cairo, Ill.).

In the Report of 1874 is a paper by Dr. James S. Herron, of Pensacola (Surgeon in charge of Marine Hospital patients at that time), giving the history of yellow fever at Pensacola in 1874, and another by Dr. Frank W. Riley (late Surgeon of the Marine Hospital Service), giving a history of the epidemic in 1873 at Pensacola, New Orleans, Memphis, Shreveport, Mobile, Cairo, Ill., Greenwood, La., Calvert, Tex., Montgomery, Ala., Fort Barrancas and Jefferson, Fla. This Report was prepared under the supervision of the late Surgeon-General Woodworth, by direction of the Secretary of the Treasury, in compliance with the following preamble and resolution of Congress:

Whereas, Yellow fever has again prevailed during the past year as an epidemic of frightful severity in some of the cities and towns of the United States, paralyzing trade and commerce throughout large sections of country by impeding travel and menacing neighboring communities; and

Whereas, Many cities equally exposed with those which suffered most severely escaped with slight mortality, indicating that certain conditions and measures may control or arrest the spread of the epidemic; and

Whereas, The history of the disease tends to show that it is almost uniformly introduced into the United States by seamen already infected with the contagion, or arriving from ports where the disease exists; and

Whereas, The United States Marine Hospital Service, through its medical officers at the ports where the epidemic prevailed, was enabled to become familiar with the course of the disease, the conditions favorable to its introduction and progress, and the measures which were successful in controlling or checking it; therefore

Resolved, That the Secretary of the Treasury be, and hereby is, directed to instruct the Supervising Surgeon of the Marine Hospital Service to prepare or cause to be prepared, from the reports and observations of the Marine Hospital surgeons and from other available sources, a brief and succinct history of the yellow fever epidemic of 1873 as it prevailed at the various ports of the United States, with especial reference to details of prevention and hygiene; and transmit the same to the Senate at the earliest day practicable.

This Report is very complete and is accompanied by an outline map of the epidemic.

The Report of 1875-76 contains a history with map of the disease at Key West in 1875, by Surgeon Murray; at Barrancas, for the same year, by Dr. J. S. Herron (at that time in charge of Marine Hospital patients); in New Orleans and Pascagoula for the same year, by Surgeon Vansant.

The Report of 1876-77 contains a history of the disease in Savannah and Brunswick, Ga., in 1876, by Assistant Surgeon (now Surgeon) Henry Smith; in Savannah for the same year by Assistant Surgeon George H. Stone; in Fernandina, Fla., by Surgeon Murray; and the Marine Hospital at Boston by Surgeon (now Surgeon-General) John B. Hamilton.

The Report of 1878-79 contains a history of the disease of 1878 at Gallipolis, O., on the steamer H. D. Porter and cities and towns at which this infected vessel stopped, by Surgeon W. H. Long; at St. Louis, by Surgeon Wyman; at Cairo, Ill., by Assistant Surgeons Waldo, O'Reilly, and Keyes. The Bulletin of the Public Health, published during this epidemic by the Marine Hospital Service, gives the progress of the disease at New Orleans and Memphis, as well as all other places in the United States, besides containing a record of the devastating plague in Southern Russia, with maps of infected districts; also record of Asiatic cholera in the Eastern hemisphere, and copy of regulations issued by this Government to prevent the introduction of contagious and infectious diseases.

The Reports of 1882 give a portion of the history of the epidemic at Brownsville and Point Isabel, Tex., and Pensacola, Fla., by Surgeon Murray and Acting Assistant Surgeon White, and we understand that the Report for 1883, now in the hands of the printer, will conclude the history of the epidemic of 1882 in Texas and Florida, and give a statement of the epidemic of 1883 up to the date of its appearance in the Naval Reservation near Pensacola and the means employed to prevent its spread during the current season.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, NEW YORK.

SERVICE OF DR. F. A. BURRALL.*

(Reported by ALPHEUS FREEMAN, Jr., M.D., House Physician.)

CASES OF INSOLATION WITH HIGH TEMPERATURES.

THE following histories of three cases of insolation occurring at the Presbyterian Hospital are interesting for the high temperatures exhibited.

CASE I.—On June 13, 1883, an unknown man was brought to the hospital, having become prostrated by the heat while doing laboring work in the upper part of the city. He was admitted at 11 A.M., unconscious, with the radial pulse imperceptible, respirations twenty-eight to the minute and very shallow, and a rectal temperature of 113.5° F. There was marked pallor of the face, and the eyes were turned up, with the pupils equal, contracted, and not responsive to light. No further examination was made, but he was immediately placed on a Kibbee cot and wrapped in a sheet, while ice was applied to the head, mustard to precordial region, and hot bottles to the feet. This cot is so constructed that the patient lies upon a support of netting, with a trough placed beneath it. After wetting the sheet with water at about 65° F., ice-water was poured over the surface of the body and a hypodermic of ℥ xxx. of equal parts of whiskey and ether was administered at intervals of five minutes.

At 11.30 A.M. a very thready pulse at the wrist could be felt, beating at the rate of 188 to the minute, and after this treatment had been continued for an hour longer, it was found that the temperature had fallen to 106°. He was then rubbed dry and wrapped in blankets. Hypodermics of whiskey, ℥ xxx., were given

every ten minutes, and one ℥ xx. dose of tinct. digitalis was administered. Soon after this the pulse became stronger, the respirations deeper, the pallor disappeared, and the pupils dilated. The temperature continued to fall, and at 1 P.M. was 103.5°, with pulse 155 and respiration 28. At this time he had a loose fecal movement, and soon after vomited a thick yellowish material. Whiskey, 5 i., was introduced by the rectum, and retained. The condition of the pupils frequently changed; sometimes they were unequal, or contracted, or widely dilated. At 1.30 P.M. the temperature was 99.5°. Soon after this slight convulsive movements began to appear in the upper and lower extremities, and the patient occasionally would utter loud inarticulate sounds. The convulsions increased in severity, and the pulse grew weaker, while the pupils dilated widely. Dry cups were applied along the spine, but in a short time he became so violent that restraint was necessary. The breathing becoming very shallow, inhalation of oxygen was resorted to for fifteen minutes, and appeared to deepen the respirations. The patient also swallowed whiskey, 3 ij., but did not retain it. At 4 P.M., the temperature having risen to 105°, water was again poured over the body, but in ten minutes it rose to 106°, after which it began to fall, and in half an hour stood at 103°, when he was removed from the cot and wrapped in blankets. Violent general tonic and clonic spasms occurred every few seconds, and the radial pulse, rapid and feeble, finally became inappreciable. Whiskey, 3 ij., was given by enema, and retained, and the inhalation of oxygen was again resorted to, and improved the breathing slightly. At 5 P.M. a very small, soft, rapid pulse could be felt. The pupils were dilated and distinctly oval in shape vertically, but did not respond to light. The superficial reflexes were absent. All this time the convulsions continued and followed each other more rapidly and with undiminished violence, while during the intervals between the clonic spasms the muscles remained in a state of rigidity. Finally, the pulse disappeared and the face became cyanosed. By a convulsive movement the body was thrown forward, immediately after which he fell back and died at 6 P.M.

Autopsy twenty-two hours after death.—The muscle of the heart was unusually dark, red, and firm. Both lungs were very dark in color, almost black. When cut open they were found to be intensely congested and slightly oedematous. Both kidneys were moderately congested. The cut section of the liver showed numerous light-colored anæmic spots, as if the blood had suddenly been sucked from the liver and abdominal viscera to fill the lungs. The meninges of the spinal cord and brain were slightly congested; the brain itself was moderately congested.

The primary cause of death was the heat; the secondary or immediate, congestion of the lungs, with heart-failure.

CASE II.—P. Mc—, aged twenty; single; Ireland; laborer; was admitted on June 7, 1883, at 5.30 P.M., unconscious, and having general convulsions and frequent attacks of vomiting. The pulse was 166 and feeble, respiration 36, and temperature 109° in the rectum. Both pupils were contracted, but otherwise normal. He was placed on the Kibbee cot, with an ice-cap applied to the head, and ℥ lx. of equal parts of whiskey and ether were administered hypodermically. Ice-water was applied to the surface of the body, but in half an hour the temperature had risen to 109.5°, after which it began to fall and in an hour had reached 106.3°, when the convulsions ceased. This treatment being continued for forty minutes longer, the temperature had fallen to 101° and the cold-water applications were discontinued. He still remained unconscious, and in about five minutes the convulsive movements began to reappear. Chloral hydrate, gr. x., and tinct. digitalis, ℥ xxx., were given hypodermically, but had no apparent effect upon the convulsions. An hour later the temperature had risen to 106.8°, and

the cold-water treatment was again resorted to. Whiskey, ℥ xxx. hypodermically, was given every twenty minutes, and in one hour the temperature fell to 101.2°. He continued to improve steadily after this, and consciousness gradually returned. The urine showed a trace of albumen, but was otherwise normal. During the next four days the temperature never rose above 101.5°, and on the fifth day he sat up. From this time he continued up and about, only complaining of occasional vertigo, which lasted for two weeks, at which time his general health was excellent and he had no complaint whatever.

CASE III.—T. M—, aged fifty-six; married; Ireland; laborer; was admitted to the hospital on July 17, 1883, at 12.50 P.M., in an unconscious state. The pulse was 128, full and soft, respiration 28 and stertorous, and the rectal temperature 109°. Whiskey, ℥ lx., and tinct. digitalis, ℥ xxx., were administered, and by the use of ice-water the temperature was reduced in fifty minutes to 101°. Soon after, slight twitchings were noticed in the upper and lower extremities and he began to groan loudly with each respiration; vomiting of a greenish matter occurred twice, and the temperature slowly rose to 102.2°. Improvement followed after this, and in four and a half hours from the time of admission he became conscious. From this time no rise of temperature took place, but his intellect was considerably impaired. On the second day a diarrhoea set in. The tongue became brown and dry, and delirium came on at night. The next day he became so violent that restraint was necessary, but no rise of temperature occurred. The urine presented the same characters as in the previous case. He slowly improved after this, and by August 1st was in excellent condition, both mentally and physically.

These thermometrical observations were made by an accurate instrument. In all the cases of sunstroke treated here during this summer, the temperature has readily responded to the application of cold, but showed a tendency to rise again for a time. The convulsions have not easily yielded to treatment, and seemed to favor heart-failure by producing exhaustion. Medication by the mouth has appeared useless, owing to the intolerance of the stomach.

With few exceptions the patients were natives of Ireland, who had only been a few weeks in this city.

Progress of Medical Science.

ADULTERATIONS OF LARD.—The recent investigation before the Chicago Board of Trade as to the purity of certain specimens of lard has developed several facts which are of interest to the general public as well as to scientists. The present position of science, chemical and microscopical, on the subject of lard adulteration has been defined and demonstrated by an array of experts such as has rarely if ever been equalled in this country either as to number or quality. First, it has been demonstrated incontestably that chemistry is at present unable to distinguish the fat of the hog from that of the ox, and is therefore impotent to detect an adulteration of lard when that adulteration consists of beef tallow. Second, it has been demonstrated that with the microscope a competent observer can readily distinguish beef fat from hog fat, and can accordingly detect an adulteration of lard with tallow. This fact is, to the best of the writer's knowledge, entirely new to science. Third, it has been shown that in the attempt to detect cotton-seed oil when mixed with lard, the chemist and the microscopist exchange their former rôles; for chemistry has an infallible method for recognizing and detecting cotton-seed oil even when mixed with other fats, while the microscope cannot distinguish this substance from pure lard.

Several facts of interest to the public were incidentally developed in the course of the investigation. Thus it is acknowledged by manufacturers that while the article

called "prime steam lard" is what it purports to be—pure hog fat—yet several other brands of lard are regularly adulterated; for example, the substance which is by a refinement of irony designated "refined lard" is confessedly a mixture of lard with other fats, animal or vegetable. The occasion which led to this memorable investigation was a charge that a certain quantity of lard which had been sold upon the Board of Trade as "prime steam lard"—that is, as pure hog fat—was adulterated with tallow and with cotton-seed oil. The purchaser of this lard—amounting to some five hundred thousand tierces—sought to recover damages before the directors of the Board of Trade.

The evidence in support of the complaint consisted of two parts: First, the testimony of certain discharged employes of the firm accused of the adulteration (Fowler Bros.). These men, who, as was shown during the trial, were paid for their evidence, swore to the intentional admixture of foreign substances with the lard during the process of manufacture. The second part of the evidence for the prosecution—the only portion of scientific interest—consisted in the testimony of four chemists, to the effect that they had detected (1) tallow and (2) cotton-seed oil in the lard manufactured and sold by Fowler Bros. Their test for detecting tallow in lard is the so-called stearine test, and is based upon the hypothesis that tallow (beef fat) contains a larger percentage of stearine than lard does. According to these chemists pure lard contains one to two per cent. of stearine, while tallow has a much larger percentage. The chemists for the defence, Professors Remsen, of the Johns Hopkins University, Baltimore; Doremus, Witthaus, and Habirshaw, of New York; Sharples, of Boston; Haines, Rose, Hayes, and Tilley, of Chicago, all agreed, as the result of their personal experience, that the stearine test was utterly unreliable in distinguishing tallow from lard. This unreliability is due to the fact that it is impossible to determine the average quantity of stearine in either lard or tallow, so as to detect a constant difference. Profs. Doremus, Sharples, and Haines, in examining different specimens of pure lard, obtained results in the quantity of stearine varying as much as eight hundred per cent. These gentlemen testify that they weighed out at the same time two samples of pure lard from the same can, placed them in two flasks of equal size, and treated them in exactly the same manner, and yet obtained from the one about eight times as much stearine as from the other. They further found that while pure lard yields on an average (by the process of the chemists for the prosecution) about *three and four-tenths* per cent. of stearine, yet a mixture containing ninety per cent. of that same lard with ten per cent. of tallow gives only *two and one-half* per cent. of stearine. Profs. Remsen and Witthaus demonstrated by an elaborate series of experiments that the addition of even forty per cent. of tallow to pure lard, instead of increasing the amount of stearine extracted from it by this process, actually diminished this amount very materially. Even in their own hands the processes used by the chemists for the prosecution yield results so discordant as to prove their absolute unreliability. Thus from the same sample of the suspected lard one of these chemists obtained three per cent. of stearine, another five per cent., and a third eighteen per cent.

The case stood, therefore, as follows: five chemists, only one of whom enjoyed even a local reputation, claimed the ability to detect tallow in lard by chemical tests, and asserted that they had by these tests found that the samples in dispute were adulterated with tallow. Nine other chemists, including five of national reputation, asserted the impossibility of detecting tallow adulterations by the methods used by the prosecution; and they accordingly maintained that the analyses based upon these methods were utterly unreliable, and that the results obtained did not, therefore, cast the least suspicion upon the purity of the lard in question. The directors of the Board of Trade, sitting as a jury, devised a plan for

satisfying themselves upon the disputed point. They prepared five samples of lard, pure and adulterated, and submitted a portion of each sample to each of five chemists for examination. These gentlemen were, first, the most prominent chemist on the side of the prosecution, Mr. Delafontaine, upon whose testimony indeed the charge of adulteration was chiefly based, and who had asserted that the suspected lard contained at least twenty or thirty per cent. of tallow; second, the private chemist employed by the defence in their packing house, Dr. Rose, who had denied the possibility of detecting tallow adulteration by chemical means. The three other gentlemen selected were outsiders who had not been engaged upon the trial, and who were without exception inexperienced in the examination of fats. It seems somewhat strange that the board employed these inexperienced gentlemen rather than three of the numerous experts who had been engaged for months upon the subject in dispute. The results might have been more satisfactory had the latter plan been pursued. Yet it was abundantly demonstrated that no one of these five gentlemen was able to do what the chemists for the prosecution had claimed for themselves. Every one of them either failed to detect adulterations where they actually existed or found them where they did not exist. The analysis of Mr. Delafontaine had, of course, especial interest, since he had by his evidence during the trial endeavored to impeach the commercial honor, and to ruin the business of the defendants. By this analysis, however, he demonstrated most clearly the utter unreliability of his statements in evidence. The first two of the five specimens submitted to him were absolutely pure lard; yet in these he detected both tallow and cotton-seed oil. In fact, in only one of the five were his results even approximately correct. The results of the analyses made by the other gentlemen supported perfectly the position taken by the chemists for the defence, namely, that chemistry is impotent to detect the presence of tallow when mixed with lard.

The use of the microscope for the detection of the adulteration of lard is a point entirely new in science, upon which there is no literature to consult. The unanimous result obtained by all the microscopists engaged upon the work is that there is at present no means for detecting an adulteration of lard with cotton-seed oil by means of the microscope. This is a matter of minor importance, since chemistry has now, thanks to the skill and industry of Prof. S. B. Sharpley, of Boston, a test whereby cotton-seed oil can be detected in the presence of lard even when it constitutes but five per cent. of the mixture. This test consists in the difference in the shades of color produced upon the addition of sulphuric acid to the fat. This color test is quite independent of impurities in the oil, since it gives perfectly characteristic results with the bleached oil or even with cotton-seed stearine. Yet a new and brilliant field was opened for and by the microscope in the detection of tallow in lard. This discovery is the more valuable since chemistry is at the present time—as has been demonstrated in this investigation—quite unable to detect such adulteration. The possibility of distinguishing tallow from lard rests upon the fact that crystals characteristic of these substances respectively can be obtained by dissolving the fats in certain liquids and permitting them to crystallize. This fact, first made public during this trial, was discovered some two years ago by Dr. P. B. Rose, of Chicago. Dr. Rose's method consisted in dissolving the tallow and the lard in turpentine, and permitting the solutions to stand until crystals were formed; these crystals were then examined under the microscope in turpentine. Several of the gentlemen who were engaged for the defence repeated Dr. Rose's experiments, with varying results. All but one of them adopted his method or some modification of it. Dr. W. T. Belfield devised a somewhat different plan, which he demonstrated to be superior to that

employed by Dr. Rose; its superiority consisted mainly in the fact that the characteristic crystals of both lard and tallow were clearly brought out even in small adulterations. This method has been adopted by two of the gentlemen who had previously employed that of Dr. Rose.

The method as devised by Dr. Belfield is essentially as follows: ten grains of the fat are dissolved in two drachms of Squibb's ether in a test-tube, which is allowed to stand uncorked for twenty-four hours (this time is usually sufficient to permit crystals to form at the bottom and sides of the tube in warm weather). If extreme accuracy is required certain details must be observed which it is unnecessary to describe here.

Treated in this way it will be found that the crystals deposited from the solution of lard are long, thin rhomboidal plates with bevelled ends (Fig. 1); these vary ex-



FIG. 1.

remely in size according to the rapidity with which the evaporation has taken place. They are often arranged in rosettes, though not necessarily so.

The crystals from the solution of tallow, on the other hand, when treated in this way never show the rhomboidal plates characteristic of lard; these tallow crystals are found in masses resembling somewhat the letter "S" in shape, though the curves are not so pronounced (Fig. 2). These masses are found to consist of numerous small crystals, each of which is shaped somewhat like an italic "F." The size, shape, and arrangement of these small crystals vary under different circumstances; yet if the method introduced by Dr. Belfield be accurately followed, these crystals of tallow are always distinguishable from the rhomboidal plates of the lard. After this fact had been definitely ascertained and established, it remained to be seen whether these crystals, which are so characteristic of the lard and tallow respectively in the pure state, were to be found when the two are mixed as in adulterations. In order to decide this point, mixtures of the two fats in known proportions were examined. Each of the gentlemen engaged for the defence found that these crystals were present in the admixtures in which the tallow formed a considerable percentage. They differed somewhat in their experience as to the delicacy of this test. This difference in their ability to recognize minute adulterations seemed to depend upon the time and experience which they had gained as well as upon the method used; thus one of the gentlemen, Prof. Stuart, limited his ability to the detection of a twenty-five per cent. admixture of tallow. Dr. Belfield, on the other hand, demonstrated that by his method even a five per cent. adulteration could be detected in the following test: a series of

nine samples of lard was prepared by one of the chemists and submitted to Dr. Belfield for examination; these samples were lettered A, B, C, etc., and further than that the examiner had absolutely no knowledge as to their composition. As the result of careful microscopical examination, Dr. Belfield reported in writing that five of the nine samples contained tallow, while in the remaining four he was unable to detect any signs of this substance—that is, he could find none of the characteristic curved crys-

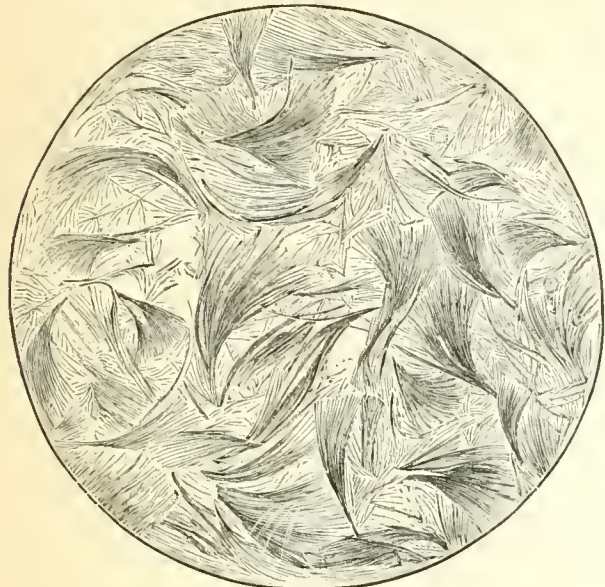


FIG. 2.

tals. A comparison of his report with the memorandum made by the gentleman who had prepared the samples showed that Dr. Belfield's results were accurate in every particular, and that he had detected the tallow in one of the samples where it formed only *five per cent.* of the weight, the remainder being pure lard. Three of the four samples in which no tallow was detected proved to be three of the samples whose purity was under dispute.

Micro-photographs were prepared by Dr. Belfield exhibiting to the board of directors the characteristic crystals of lard and tallow respectively, both in the pure state and when mixed in the form of adulterations. These have since been reproduced by the artotype process, and have been widely circulated in the official report of the Board of Trade as well as in the printed argument submitted to the board by the defendants.

Although the board of directors were perhaps not wholly impartial jurors, since most of them were pecuniarily interested in the result of the trial, and one member was even a subordinate in the business employ of the accuser, yet their verdict is interesting as well as valuable. They declare that the charges "have not been sustained," and are therefore dismissed. They further say: "The board of directors would embrace this occasion to express their gratification that as the result of this investigation this question of ascertaining the truth as to adulterations in lard by scientific examination, which has hitherto, to say the least, been one of extreme difficulty, seems now to give promise of a satisfactory solution. The board feels great encouragement to believe that even small adulterations with cotton-seed oil can be detected by some of the methods detailed in the evidence submitted in this case by scientific gentlemen, and that the microscope in the hands of an experienced operator can be successfully employed in detecting adulteration by beef product where it exists to the extent of ten, and probably even a much less percentage."

FLOATING KIDNEY.—Professor Senator's conclusions concerning floating kidney, based upon the records of thirty-two cases (*British Medical Journal*, September 29, 1883), agree in almost every particular with those

to be found in Landau's *Wanderniere der Frauen*. Senator terms the affection "ectopia renis." He found one in every 139 sick women to be subject to floating kidney, independently of age or social station. Disappearance of the fat around the capsule of the kidney can hardly be a cause of this condition, for there is little or no such fat in children, among whom floating kidney is very rare, and men are as liable to emaciation as women, yet floating kidney is much less frequent among men than in women. The absence of fat, as Senator most pertinently observes, does not cause floating kidney, but facilitates diagnosis. The causes are more probably to be found in the condition of the generative organs and defects of attire. Repeated pregnancy causing pendulous abdomen is a very probable cause; and uterine displacements are considered by Landau to influence the position of the kidney; the same authority attributes displacement of the kidney to tumors and hydronephrosis, but Senator has never observed these pathological conditions in any of his cases. Tight-lacing is considered as a highly probable cause of floating kidney, as Mr. Clement Lucas observed in a recent paper on surgical diseases of the kidney, and would account for the greater frequency of displacement of the right kidney, which, in a tight-lacing woman, is subject to prolonged pressure by a large solid body, the liver. The greater length of the right renal artery favors displacement of the right kidney. To make diagnosis as certain as possible, the patient should first be placed on her back; the abdominal walls must then be thoroughly relaxed by passive elevation of the lower extremities. In examining the right lumbar region, the surgeon or physician should stand on the same side, and place the left hand on the loin posteriorly and the right on the abdomen; in examining the opposite side, these tactics must be reversed. Professor Senator appears to prefer this method to Landau's, for if the medical attendant stand on the opposite side of the patient, with the position of the hands reversed, Senator believes that the displaced organ is more likely to be pushed aside, and thus elude detection.

HOT-WATER ENEMATA IN DELIVERY.—Dr. D. S. Beckingsale writes, in the *British Medical Journal*, that "The value of hot-water enemata as a means of hastening delivery, apart from its use in the removal of fecal accumulation, in such cases of tedious labor in which either ergot or the forceps are admissible, has been hitherto unaccountably ignored in practice, as far as my experience extends. I formerly had warm-water enemata given with the usual object of removing fecal obstruction from the rectum. In most cases an increased rate of dilatation of the os followed. Latterly I have had enemata of hot (not merely warm) water administered, whether there were any appreciable collection of feces or not, and always with the result of an accelerated rate in the progress of labor. The fact of the os dilating under the influence of the enema, whether there was an appreciable quantity of feces or not in the rectum, proves that their presence does not prevent dilatation by causing spasm; at least, not in the majority of cases. It follows that the hot enema must act as a direct and powerful stimulant to the uterine muscle, and I feel convinced, I may add as a result of close observation, also to the voluntary muscles engaged in the act of parturition. Judging from the sense of relief which follows its administration, it has at the same time a relaxing and soothing effect on these same parts—analogue, in short, to the effect of hot water applied in the familiar form of a fomentation to an inflamed and painful swelling. I believe I am justified in adding that there is less atony of the uterus after delivery, when a hot enema has been given, and consequently less tendency to post-partum hemorrhage. On this account it has not the after-relapsing effect of chloroform on the uterus it otherwise commonly has. I submit that it would be as well to give so simple a means of treatment as hot-water enemata a trial in cases in which either ergot or the forceps would be used, as it possesses obvious advantages over both."

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THE DISCUSSION ON TYPHOID FEVER AT THE ACADEMY OF MEDICINE.

It is a good thing occasionally to take up some well-worn theme and discuss it in the light of recent experiences. And this is especially true in the matter of typhoid fever, which, after having passed through the able hands of Louis, Murchison, and Liebermeister successively, seems hardly to offer the clinician of the present day much opportunity for adding anything new.

But we are apt to forget that there is always something in one's especial surroundings that modifies the type that we have agreed to accept as our standard under the dominating power of distinguished teachers, and it is therefore well sometimes to stop and consider certain other groups of symptoms than those that are classical. For otherwise the physician might justly inquire of himself, as in this case, whether or not it is the typhoid of Louis, or if the deviations from the acknowledged type are not so striking as to warrant us in devising a new classification for the continued fevers.

Probably, however, in the present instance, there is no modification necessary; indeed, one of our very best authorities affirms that the typhoid of to-day is certainly the typhoid of Louis. And yet we have come to look with uncommon interest lately upon the atypical cases that occasionally find their way into print, and which have been especially noted by Dr. Alonzo Clark, of this city, and Hoffmann, of Germany. But the author of the evening's paper touched the root of the whole discussion when he pointed out that atypical cases characterize every infectious disease, depending, in large measure, upon the date and locality of the epidemic. Indeed, we may go further and reaffirm that no known disease has a greater number of complications. But while the clinical train of symptoms vary so greatly, it is surprising what uniformity exists in the pathological lesions, which involve the follicular structures of the intestines in a manner that is peculiar to the affection, and is probably shared by only one other—the much-discussed and well-abused typho-malarial.

Perhaps it was unfortunate that the paper of the evening embraced so few pathological data, comparatively, for room was thereby left for objecting that the conclusions were mainly based upon clinical records, which naturally carry less weight. But turning to another point, it is not an agreeable matter for us to face the mortality figures of the tables of the hospital cases—a topic that

was justly alluded to by the chairman. A percentage of deaths that from 1877 to 1882 has never fallen lower than 20.1 and has reached 30, may well give force to the inquiry whether the methods of treatment have been all they should have been. An explanation suggests itself in the fact that the field of study was too narrow, and that a more comprehensive arraignment of the city statistics might have improved the quality of the returns. Indeed, it was noted in the discussion that, as the history of the disease in children is different from that in adults, we may well be entitled to the returns from the hospitals or asylums where they are specially cared for. It will be in order, therefore, to hear from some of these institutions that were not enumerated in the printed tables. At any rate, this part of the subject is one of the most pressing interest, and cannot be allowed to pass by without a disagreeable contrast of its results with those of Liebermeister, whose personal experience, it will be remembered, covered over fifteen hundred cases. When this distinguished physician undertook his famous apyretic treatment he had been confronted with a mortality of about twenty-seven per cent., a figure that is not far from the average of the printed table; this percentage of mortality was reduced to sixteen per cent. under incomplete apyretic measures, and to eight per cent. under systematized apyrexia (quinine and application of cold).

On the other hand, we have no need to be alarmed at the somewhat increasing annual mortality from the disease in our midst. We should remember that, on the whole, the ratio of mortality has not kept pace with the increase of our population. And when, in 1881, we found an undue proportion of deaths, it may justly be assumed that we had other causes at work—causes that always will be associated with the large floating population of a metropolis. Foremost among them are the well-known facts that hospital accommodation in New York is excellent and often luxurious, while the cheapness and ease of transportation offer special inducements to the sick scattered in the country districts round about. Certainly, the greatest absolute mortality has been during the years 1863–66, the highest figure, 661, being reached in 1864.

It was a curious fact, noticeable in the discussion, that the speakers approached the etiology of the disease with a respectful reserve, and neither Liebermeister's drinking-water-sewer-gas-privy-vault hypothesis nor the later English milk-contamination theory offered attractions that made any one feel willing to risk breaking a lance in its favor.

ACONITINE POISONING.

THE valuable paper by Dr. Thomas Stevenson ("Guy's Hosp. Rep.," vol. xli., 1882) on "Aconite Poisoning," in the case of Reg. vs. G. H. Lamson, is of double interest both to the general and medico-legal practitioner, as accurately detailing the symptoms which we may expect to find in such cases, and the chemical methods by which aconitine can be best recognized.

The length of time after which the symptoms manifested themselves in this case, thirty minutes, may be partially accounted for by the fact that the poison was administered in a gelatine capsule. The first symptom

complained of was heart-burn. When, however, the alkaloid is taken in powder, the first symptoms are referable to the mouth and throat. A burning sensation in the mouth and throat is usually felt in about half an hour after the poison is taken, and becoming more intense every minute. Within three-quarters of an hour intense pains in the stomach come on, the skin feels drawn, violent convulsions, in which the patient rolls from side to side, rapidly ensue, and dysphagia generally, though not always, appears. In some cases vomiting may be a prominent symptom so early as half an hour after the ingestion of the poison. The character of the vomiting is peculiar. As described by Dr. Stevenson it is a kind of spasm, during which the sufferer turns convulsively on his abdomen, with intense contraction of the abdominal muscles, and the contents of the stomach are jerked out with a loud shout caused by the spasmodic contraction of the diaphragm. Peculiar also are the pupillary phenomena. The pupils are, as a rule, dilated, during which time consciousness is not lost, but in some cases they alternately dilate and contract, the patient becoming unconscious simultaneous with the contraction. The respirations are short, irregular, and superficial, and the skin, while feeling drawn, is covered with a cold, clammy perspiration. The violent muscular spasms may extend to the heart; the pulse fails and death seems imminent. This is succeeded by muscular relaxation which lasts for a few minutes, only to be followed by other convulsions, in which the facial muscles participate; the pulse fails, the patient becomes unconscious, and death usually ensues from asphyxia.

In the special case under consideration death occurred within four hours and five minutes after the ingestion of the capsule—containing probably two grains of Morson's aconitine. This preparation (Morson's) is prepared only from the cultivated *aconitum napellus* and is terribly potent, one-twentieth of a grain having caused death; so small a quantity as one two-thousandth of a grain causes the unmistakable physiological effect upon the tongue, and is invariably fatal to mice. Morson's crystalline aconitine is still more powerful, and the crystalline preparation of Petit, of Paris, is said to be even more powerful than Morson's.

With regard to the pathological changes caused by aconitine, its detection in the fluids and solids of the body and in the vomited matters, and the subsequent proof of its nature by physiological experiment, Dr. Stevenson has added much to our knowledge. The pupils dilated during life, with the exception of intermittent contractions occurring simultaneously with unconsciousness, are dilated post mortem. The membranes of the brain are slightly congested, while the lips are pale and the tongue so pale as to look bleached. There is no fluid in the ventricles of the brain or under the meninges. The heart is flaccid, appears stained with blood-pigment, and its cavities are empty. The other organs of the body, save the lungs, are usually intensely hyperæmic. The extent of the congestion of the intestinal tract seems to depend somewhat upon the duration of the case. Where death occurs quickly—within four or five hours—the congestion is more limited to the stomach and duodenum, with patches of congestion in other portions of the intestine. The stomach usually contains a variable amount

of a dark or greenish fluid similar to that vomited during life. The bladder generally contains a few ounces of urine. As might be expected from the violent convulsions, the membranes of the cord are greatly congested.

It is unnecessary to detail the method by which the alkaloidal extracts were obtained from the viscera, vomited matters, and urine. Those who might have occasion to perform a similar analysis would do well to consult Dr. Stevenson's paper. The amount of alkaloidal extracts recovered was one-half grain. It was now necessary to determine their nature; they were tested by taste, with phospho-molybdic acid for alkaloids, and with iodic acid and starch for morphia. It should be remembered that the analysts were entirely in the dark as to the nature of the poisons. Indeed, they first suggested their nature after their experiments had been begun. Lastly, a portion of the extracts was injected into the cellular tissue of mice. Fortunately, the taste of aconite and its derivatives is so peculiar, and the effect on the tongue and mouth so striking, and, we may add, the physiological effect so marked should the experimenter taste too much, that it cannot be confounded with any other known substance.

The effect of the extracts upon the tongue was similar to that produced by aconitine. The effect on the tongue of the three aconite alkaloids, aconitine, pseudaconitine, and japaconitine, are precisely alike. They differ, however, in that aconitine has a physiological action upon the nerves of sensation, and is uniformly fatal, in very small doses, to animals. Dr. Stevenson describes the effects of a solution containing $\frac{1}{1000}$ th grain to the drop as at first a scarcely perceptible bitterness similar to that of all alkaloids, and transient. In about three minutes after the sensation of bitterness has disappeared an intense burning, somewhat benumbing pain, is felt at the spot to which the drop was applied, and radiating in all directions. Immediately after the commencement of this, moderate salivation comes on, with a peculiar feeling of dryness and faucial constriction. The burning, numbing feeling is felt in the lips, especially on the inner surface of the lower lip. These sensations continue generally for hours, according to the quantity applied, and after passing away leave a painful sensation on that part of the tongue to which the alkaloid was applied. The feeling is very properly described as one of "searedness," as though a hot body had been applied to the part, just stopping short of raising a blister. Extreme caution is necessary in making this "taste experiment," and it should be regarded as dangerous to apply more than $\frac{1}{600}$ th to $\frac{1}{300}$ th of a grain. A larger quantity, by the very pronounced physiological effects on the heart, brings up serious thoughts of a last will and testament.

The phospho-molybdic acid test is, of course, only valuable for ascertaining the presence of an alkaloid. The physiological effect of aconitine ($\frac{1}{4000}$ th to $\frac{1}{3000}$ th grain of Morson's, hypodermatically) upon mice is almost as unmistakable as the "taste-test." Within six to ten minutes violent retching comes on. Sensation is rapidly abolished, the retching still continuing; partial or complete paralysis of the posterior extremity appears about ten to thirteen minutes after the injection. Frothing at the mouth appears about a minute afterward, and in from

one to three minutes thereafter the animal rolls or jerks itself over on one side in a violent convulsion, which ordinarily continues until death takes place, about fifteen or twenty minutes after the injection.

THE CHANCES OF THE YOUNG PRACTITIONER AS AFFECTED BY THE "ADVICE GRATIS" AND SMALL FEE SYSTEMS.

IT is pretty generally conceded that the young practitioner has a long and hard struggle to get into a bread-and-butter practice. The time required is variously estimated at from three to five years, according to locality. During this period he must be ready for anything, night or day, and accept any fee, however small or disproportionate to the services rendered. If there are no dispensaries in his neighborhood, or college clinics, he has the ordinary show for a young, hard-working doctor.

Away from so-called educational centres he may get the usual reward by learning to labor and to wait. But how few such places are! The aspiring youngster generally looks toward a large city as a legitimate field for his ambition. Generally this is the worst place he can select. If he wishes to begin at the bottom, the college clinics, dispensaries, and free hospitals stand in his way. Such as should be his patrons know it, and are not willing to pay even small fees when they can get services for nothing. And such services! Real professors, men who, of course, must know more than the ordinary rank and file, are ever ready and willing to gather the sick ones from the highways and by-ways that they may not want for skilled advice and treatment. Clinical material is needed and it must be had. It is a business in itself, and has to be cultivated after the usual fashion. Fences are placarded showing where free advice may be obtained, where obstetric services can be secured by skilled men, where operations can be performed without money and without price, where every diseased organ can be properly cared for by distinguished specialists. Only the really poor are invited, but the more of the others who do come the more interesting and profitable is the clinic. Teachers seldom object to an unique case, rich or poor. It is the case, nothing more or less. Who can blame an honest, struggling mechanic with a rapidly growing family for stretching his conscience to get for nothing what would otherwise involve pecuniary outlay? The temptation to contribute to the advancement of science is, of course, too strong for him to resist. If "no questions are asked" he is under no obligations to answer. He gets first-class advice and treatment. What better can he desire? The young doctor around the corner is the only one who suffers. It is the survival of the fittest, after all. Which is which? The man who must have clinical material, or the man who must have bread-and-butter? But then the professor is not expected to be his brother's keeper, and the mechanic can lay up something more for a rainy day.

We confess to some pity for the young man who wishes to work and is left with nothing to do. He has some right to a decent show. It is the old story, of course, about the clinics taking away his patients. But it is getting truer every day. In old times, when there was fishing with hook and line, there was room for all who wished to take their chances. Now stock companies drive their

stakes in the channel and stretch their drift-nets almost from shore to shore. Is it any wonder that those who are compelled to troll behind the net have, figuratively speaking, the usual luck of hopeful but foolish fishermen? How many there are of these! Men whose baits are washed away by long waiting, who seldom experience the delusive excitement of a promising nibble.

But we are told that the poor should not be allowed to suffer. They never would, even if there were no dispensaries or clinics. Each physician would gladly take his share, and could thus discriminatively dispense his charity. It is done quietly and effectively in all localities where dispensaries and free clinics do not abound. In fact, the deserving poor are liable to be better treated in such places than when under dispensary patronage. There is not a young practitioner in any large city who would not be willing to give his services gratuitously to half of such as called upon him and deserved the same. He could at least be satisfied that he was trying to do his best and to get what money he could. As it is, the small fee patients are thoroughly demoralized. Poverty is only a relative term. Some sneaking frauds, no matter how rich they are, can always make themselves believe they are too poor to pay any fee when not compelled to do so. There is no question of conscience with them when it comes to cheating a poor doctor. What account have our clinical teachers to render on the same score who do not seem to know or to care how many of the patients they treat for nothing should pay a fee to some young doctor! The question will by-and-by be between the college and dispensary clinics and the rank and file of the profession. The latter will be forced to seek their own protection by new methods. The clinics are their enemies and they must be fought in some way or other. Practitioners, for mere self-protection, may be forced to set apart spare hours in their offices for the free treatment of the poor, and thus leave the dispensaries out in the cold. What is right for any body of men to do in advertising to give advice gratis to the poor is right for a single individual. This would certainly be one way out of the difficulty.

Again, young men are content with small fees; why not throw them in their way? The distinguished professor can afford to do this and narrow his work to a more profitable sphere of usefulness and emolument.

A MAN TO BE REMEMBERED.

THERE are not many who have the opportunity and ability to create an enduring monument of their passage through life. Dr. Jonathan Letterman, however, was one of these, and his memory has been faithfully and tastefully commemorated in a memoir recently written by Dr. Bennett A. Clements, U.S.A.

Dr. Letterman was born in 1824, and graduated from Jefferson Medical College in 1849. In the same year he entered the medical service of the army. He served in Florida during the Seminole War, and then was for several years on the frontier. At the breaking out of the war he accompanied troops from California to the East.

It was in June, 1862, that Dr. Letterman received his appointment as Medical Director of the Army of the

Potomac, in which position he accomplished a work which makes his name historic.

At that time the organization of the medical corps, especially as regards the work during active service, was very imperfect. The arrangements for removing the wounded at once from the field, and for furnishing immediate surgical and medical relief, were of the most unsatisfactory kind. Furthermore, there were no good precedents or models to follow in the medical organizations of European armies. At the time of Dr. Letterman's appointment, also, the army was exhausted by its conflicts and the malarious atmosphere of the Peninsula, and needed the utmost skill to secure its reorganization. Dr. Letterman was selected as the man best qualified to meet these emergencies, and was given large discretionary powers by Surgeon-General Hammond.

The result of his labors was the organization of an Ambulance Corps and of the Field Hospital System. By the practical application of these schemes the medical service of the army in the field was made incredibly more effective. In a short time its merits were recognized by the whole army, and it served as a model in all the other departments. It is not easy to compute the number of lives saved and the amount of suffering prevented by the system thus introduced. Dr. McNulty, referring to its working, writes:

"It is with extreme satisfaction that I can assure you that it enabled me to remove the wounded from the field, shelter, feed them, and dress their wounds within six hours after the battle ended, and to have every capital operation performed within twenty-four hours after the injury was received."

"Dr. Letterman's claims to the grateful remembrance of his profession and of his countrymen," writes Dr. Clements, "rest mainly upon the great services he rendered to his Government in the Army of the Potomac. To him is justly due the praise of originating a system of medical administration which alleviated the sufferings and preserved the lives of thousands of his countrymen, added to the vigor and effective fighting strength of the principal army of the Republic, and materially aided in perfecting and maintaining its discipline; and which has had no equal in the armies of modern times for simplicity and effectiveness."

Dr. Letterman left the army in 1864 and spent the remainder of his life in California, where he died in 1872. He was a man of simple and straightforward character, direct and plain in speech, genial and modest in disposition.

It is a pleasure and a duty to recall to our readers the record of a life so honorable, a work so noble and beneficent, as was that of the Medical Director of the Army of the Potomac.

THE ALLEGHENY COUNTY MEDICAL SOCIETY FROM AN INSIDE VIEW.

WE are glad to have received from Dr. W. H. Daly, of Pittsburgh, Pa., a letter concerning the condition of the Allegheny County Medical Society, referred to editorially some weeks ago. Dr. Daly was recording secretary of the society for ten consecutive years, and later its president; he denies very emphatically the exist-

ence of any such state of affairs as was pictured at that time. His letter is too long to publish in full, but we take pleasure in giving the essential features of it. Dr. Daly explicitly denies the statement made by our correspondent that "one of the popular members" of the society had advertised for a year in the daily papers, and had lately announced that he gave special attention to diseases of the eye, ear, etc. He also denies that a member who had been abroad requested, upon his return, the press to announce the fact with suitable comments. He admits that a physician who had been abroad announced his resumption of practice by an advertisement "of two lines." This is thought to be perfectly proper, however, as the gentleman in question had been away for nearly two years, and it had been rumored that he would remain abroad or would not return to Pittsburgh. As regards the statement that some of the Pittsburgh physicians had called a certain private hospital the "Pittsburgh Abbatoir," Dr. Daly shows that the imputation is discreditable and unjust. In six months there were performed 19 operations with 2 deaths. The charge that certain physicians keep selected formulæ at the druggists is explained by saying that these formulæ are simply the same that have been used by many of the doctors in the public dispensary. They have been printed and widely distributed among doctors and druggists. Dr. Daly challenges proof that any member prescribes such things as "my mixture" or "my application." Dr. Daly does not believe that any physician attends families at ten dollars a year, and asks for proofs of such accusation. To the charge that there are in the County Society men without diplomas, and men with diplomas from eclectic medical colleges, it is said that the constitution of the society admits to membership any regular practitioner of at least fifteen years' standing, and of good moral and professional reputation. While there is a graduate of an eclectic college and a physician without a diploma in the society, they are both good and constitutional members. As regards the signing lunacy certificates with homœopaths, the immorality of this procedure is questioned. The existence of quacks in the society is denied, and it is also asserted that Dr. Jas. King did not point out any when he was alive, and was not, in fact, a very active member of the society. As regards the charge that many of the best practitioners are not members of the society, and that others contemplate resigning, Dr. Daly gives facts showing the prosperity of the society. The charge that a medical college is soon to be started is freely admitted, and we are promised an excellent one. The profession in Pittsburgh is said to be doing very well, most, if not all, of the doctors earning a comfortable living. In conclusion our correspondent says: "The Allegheny County Medical Society comprises a large, if not the largest, portion of the best medical talent in the city. In its ranks are men who are the peers of the best, purest, and most respected citizens in the land. On its rolls are borne the names of physicians who are the trusted medical advisers of men and their families whose intelligence could not be imposed upon by quacks of any profession. Its representatives have been honored associates in the highest and most learned medical bodies of the nation, and from its roll have been selected men who have creditably served in the councils and in the scientific deliberations of the

various foreign medical congresses. In the list of American delegates to the International Medical Congress which met in London last year, and whose scientific labors were a wonder of ability and comprehensiveness, the names of members of the Allegheny County Medical Society are there, side by side with others, alike respected and worthy of the esteem of their countrymen."

A UNIVERSAL MEDICAL REGISTER.

THE erection of the new École de Médecine in Paris, to which we have already referred, includes the erection of a library building. The future library is to be made to include as many as possible of the medical books and pamphlets that have been published. The total number of books which would have to be collected for a complete library is about 122,000, while the number of pamphlets is 250,000. It is evident that no such collection could be made, or indeed is needed.

Another project, more novel and less ambitious, though difficult enough, is to keep a register of all the legally authorized medical practitioners in the civilized world—or at least in America and Europe. The number is supposed to be about as follows: United States, 65,000; France, 26,000; Germany and Austria, 32,000; Great Britain and its Colonies, 35,000; Italy, 10,000; Spain, 5,000.

Such a register, if carefully kept, would certainly be of considerable value, especially to advertisers.

THE LIBERTY OF SPECIALISTS TO ANNOUNCE THEIR SPECIALTY.

THE *Louisville Medical News* calls attention to a fact which we believe has been forgotten by many. It is that the American Medical Association, which has been proudly designated as the guardian of the ethics of the profession, has given a specific consent to allow specialists to designate their specialty upon their professional cards.

In 1874 the Judicial Council, in accordance with a request made by the Association the previous year, made a report upon ethics in which the following quotation occurs:

"The Code of Ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. *As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as oculist, gynecologist, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to diseases of the eye and ear,' or 'to dis-*

eases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privileges beyond this would be to invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession."

The report was adopted and its sentiments have been recently endorsed, we are informed, by the distinguished editor of the *Journal of the American Medical Association*.

The sentiments and views thus expressed certainly appear to be fair and sensible. But it will be conceded that the permission thus granted is one liable to very dangerous abuse. The question when a person can draw the line in the matter of the wording upon his cards, and to what extent he can distribute these cards, would certainly involve some very delicate distinctions. It is creditable to the wisdom and good ethical sense of the profession that so far the permission thus to designate a specialty has not been to any extent taken advantage of. We trust that physicians will continue to show that they are capable of taking loftier views of professional dignity than the Judicial Council of 1874.

THE DIAGNOSIS OF GASTRIC DISEASES.

A NUMBER of new methods have been devised of late for the more exact examination of pathological disturbances of the stomach. The use of substances which are rapidly taken into the blood and reappear in the saliva and other secretions, the washing out of the stomach and examination of the fluid thus obtained, the gastroscope, palpation, percussion, and surface thermometry all combine to make the examination of gastric diseases much more definite than it used to be. Quite recently M. Romelaere has added to the above methods of research another one, viz.: the examination of the urine. His views, first expressed some months ago, have been confirmed by further experience, and he now announces (*Journal de Médecine de Bruxelles*) the following conclusions: A cancerous ulceration of the stomach is attended with diminution in the amount of urea excreted per diem and also of the urinary chlorides. Simple gastric ulcer is associated with normal azoturia (if that expression be allowed), or even hyper-azoturia, and the chlorides are of normal amount or in excess. Spreading gastric ulcer is accompanied by normal or hyper-azoturia, but with decrease in the chlorides of the urine.

This help, which the above formula, if correct, would give in cases where early diagnosis of cancerous disease is desired, will be very apparent.

KAIRIN AND ALBUMINURIA AFTER HEMORRHAGE FROM THE BOWELS IN TYPHOID FEVER.—We have received from Dr. T. A. McBride an article on these topics which would have been well placed had it appeared in the same number containing the discussion on typhoid fever, but it came too late for this week.

News of the Week.

THE MEDICAL FATHERS OF NEW YORK.—Bearing on the question of longevity of medical men who spend active lives in their profession, we are enabled to instance other striking examples. Our friend Dr. Alfred C. Post has very significantly said that a man's age is not counted by years; that some are as young at seventy as others are at forty, and we are happy to say that his present condition proves it. The same principle applies in many particulars to Drs. Alonzo Clark and James Anderson, each eighty years of age, and the active veteran Dr. Jared Linsly, aged seventy-nine. The latter gentleman has been in full practice in this city for over fifty years, and knows more about old New York than any practitioner living. When he commenced practice the greater part of the city was a wild, open country. Many of his present patients are great-grandchildren of his earlier patrons.

THE FIFTEENTH ANNIVERSARY OF THE PRESBYTERIAN HOSPITAL, New York, was held at the Collegiate Dutch Church, Forty-eighth Street and Fifth Avenue, on Sunday evening at eight o'clock, before a large audience. Addresses were made by Rev. John Hall, D.D., of this city; Rev. Dr. Arthur Mitchell, of Cleveland, O.; and Dr. George F. Shrady, one of the visiting surgeons of the hospital. Mr. George W. Lane, president of the Board of Managers, presided.

Dr. Hall referred to the loss which the hospital had sustained during the year in the death of ex-Governor Edwin D. Morgan, William E. Dodge, and Robert L. Stuart, all members of the Board of Managers and warm friends of the enterprise from its inception. He eulogized Mr. Stuart, saying that few men he had known "had paid as little regard to popularity." He referred to the gifts of an ambulance and an elevator which the hospital has received during the past year, and also to the kindly efforts of Christian women to make the wards attractive and the inmates comfortable. Criticisms of the name of the institution as indicative of narrowness were, he said, disposed of by the annual report, which showed that of every 100 patients 50 were Protestants of various denominations and the other 50 Roman Catholics.

Dr. Shrady, after alluding to the general increase of usefulness of the hospital, presented some of the more striking incidents occurring during a day's visit to the wards.

Dr. Mitchell, of Cleveland, O., concluded with an address on the magnitude of the work done at the hospital and its growth, and gave an account of the Presbyterian hospitals in Asia. A benediction by the Rev. Dr. Talbot Chambers closed the services.

The report for the last year shows that 1,223 patients have been admitted during the year, and, including those in the hospital at last report, 1,297 have been treated. The rapid increase of benevolent work is most clearly evidenced by the fact that one-half of all the patients treated since the hospital was opened have been cared for in the past three years. Forty-three per cent. of all admissions during the year have been brought by the ambulance in response to calls from the Twenty-third and Twenty-eighth police precincts. Nearly all were acci-

dent cases, and most were working-men, injured while engaged upon the many new buildings in the district east of Central Park. All these patients were in the wards, receiving the best care, within a very few minutes after the call had reached the hospital.

Messrs. McKay, Trowbridge, and Brewster have donated a new ambulance to the hospital, and Mr. Heber R. Bishop has presented an elegant passenger elevator.

The erection of new pavilions is contemplated, to meet the urgent demand for increased accommodation.

DR. S. S. CARTWRIGHT, OF ROXBURY, N. Y., has been elected member of the New York State Assembly for the county of Delaware. We congratulate the profession of the State on securing such a worthy representative.

THE BRAIN OF THE NOVELIST TOURGENIEF is said to have weighed 2,012 grammes, or about 63 ounces. This, if correct, ranks the brain among the half-dozen heaviest that have been reported.

THE FIRST CASE OF SMALL-POX IN THIS CITY since last June was discovered by the sanitary authorities November 17th, in a tenement-house on West Fifty-ninth Street, which is inhabited by ten families. The patient, who arrived from Ireland two weeks ago, was removed to the Riverside Hospital.

MARYLAND STATE SANITARY CONVENTION.—A sanitary convention will be held in Baltimore, Md., November 27th and 28th.

THE BIOLOGICAL LABORATORY of the Johns Hopkins University has been completed.

THE INDIANA STATE BOARD OF HEALTH has distributed circulars and will undertake the task of making a report upon the sanitary condition of all the school-houses in the State. The *Indiana Medical Journal* says: "If the Board succeeds in improving the deplorable hygienic conditions in or around almost every school-house in the State it will have covered up a multitude of sins in the past, and in a measure regained the confidence of the profession and citizens of the State."

EDWARD BURKE THE CHAMPION CORPSE HANDLER.—In THE RECORD for last week we published an item of news, entitled "The End of a Curious Career." Under this heading was given a brief sketch of a "well-known figure in connection with the Morgue, in this city." It was said that "he died last week;" that he "had probably handled more corpses than any man in the world;" and that "his pet and particular abhorrence was a newspaper reporter." The story has some interesting features. In the first place, Burke has not yet furnished "the end of a curious career." He still lives, and can be seen in Ward 19, Bellevue Hospital. Old Charon rowed his boat along close to the shore, and invited Burke to ride across the river, but being "a quiet man and having but little to say to strangers" he declined the invitation. He has not yet entered the crib, and hopes to live to meet "that newspaper reporter" who shuffled him off. It was also said that "Burke was not a man of tender susceptibilities." Admitting this to be true, we are prepared to understand that said reporter, under favorable circumstances, might be added to the "50,000" [yes, many more than that] corpses which Burke has handled. We are pleased to be able to chronicle that

the well-known figure of Burke has not permanently disappeared from the Morgue, and hope he may again be able to assist at "thousands of post-mortem examinations."

MEDICAL DEPARTMENT OF DARTMOUTH COLLEGE.—At the last commencement, November 13th, there were forty graduates. Addresses were made by President S. C. Bartlett and A. P. Richardson, M.D.

UNITED STATES MEDICAL COLLEGE AND ITS LEGAL STATUS.—In answer to a question from a correspondent regarding the legal status of the United States Medical College, we append the following from Dr. D. Webster, President of the Medical Society of the County of New York: "The United States Medical College of New York" is not and never was a legally chartered medical college, and none of its graduates are legally qualified practitioners of medicine. The institution has taken its case up to the Court of Appeals, however, as a last resort, and until the case has been there finally disposed of I think we will do well to refrain from interfering with the 'doctors' who graduated from that college in good faith. The New York County Medical Society has as yet brought no action against any of them."

THE NUMERICAL STATUS OF THE CODE QUESTION.—We have received from "The Central Organization of the New York State Medical Association to Uphold the National Code of Ethics" a pamphlet showing the vote or non-vote of the members of the medical profession in this State on the Code of Ethics. The figures given are: National Code, 2,424; New Code, 943; no code, 210; unclassified, 31; uncommitted, 1,611; total, 5,219. In New York County, out of about 1,800 names 764 are placed among the National Code party. We recognize here, however, many names of those who voted for Dr. Vander Poel at the County Society. Despite all efforts, a majority for the National Code has not been secured. Many of those who have given their names would, we believe, prefer to be among the uncommitted. We ask, now, will a minority of the profession continue to try and force upon the majority the enactment of a disciplinary by-law which accomplished nothing but to lower the physician in public esteem?

SUIT AGAINST THE SECRETARY OF THE ILLINOIS STATE BOARD OF HEALTH.—A Dr. Frank B. Smith, of Detroit, Mich., has begun a suit for fifty thousand dollars in the United States District Court against Dr. John H. Rauch, Secretary of the Illinois Board of Health, whose name, he alleges, was signed to a circular revoking his (Dr. Smith's) license for unprofessional and dishonorable conduct. This conduct, the plaintiff adds, consisted in his advertising his presence when he was a delegate to a health convention at Peoria.

THE SATURDAY AND SUNDAY HOSPITAL COLLECTIONS.—At a meeting of the Saturday and Sunday Hospital Association, November 20th, a report of the Executive Committee was read. This showed that 293 churches and synagogues had promised to take a collection on next Hospital Sunday. The various hospitals represented in the Saturday and Sunday Association have submitted their annual statements as a basis to guide the action of

the distributing committee in allotting the undesignated portion of the forthcoming collection. These statements possess a general interest, moreover, and when compared with the exhibit of the first published statement of 1881, give evidence of a vigorous growth in hospital work in this city. It is thus seen—1, that during the past three years \$201,651.44 were expended on the enlargement of accommodations among the hospitals thus associated; 2, that there has been an increase in the income from the invested funds of \$9,780.12; 3, that there has been an increase of income from paying patients aggregating \$43,036.72; 4, that the increase of income from contributions toward current expenses other than derived from the Saturday and Sunday collection is \$22,774.84; 5, that the total number of patients has increased from 8,688 to 10,023; 6, that the total number of free patients has increased from 6,698 to 7,188, these last having been maintained at a cost of \$307,790.81. This exhibit is claimed to be a sufficient answer to the statement to which publicity has recently been given in some quarters (said to be based on London experiences), that the method of general collection fostered by the Saturday and Sunday movement is inimical to the real interests of hospitals, in that it has a tendency to divert from them special gifts and bequests, because of the impression falsely conveyed that the one general collection is ample for the maintenance of all the hospitals benefited by it. It must be admitted that the London hospitals have been in great financial straits of late years.

TROUBLE AMONG PHILADELPHIA MEDICAL STUDENTS.—The daily papers give accounts of much unhappiness between the students of Jefferson Medical College, Philadelphia. It appears that the senior students thought that they were crowded out by the juniors from the best seats at the clinical lectures. They therefore called a meeting, organized, and addressed a petition to the Faculty setting forth their grievances. The juniors then called a meeting also, and circulated a counter-petition. During this meeting some of the senior students came in, and after a free interchange of paper wads the gas was extinguished. A general mêlée in the dark followed, with the result of producing some interesting cases of minor surgery. Next morning, when the two classes assembled, the row began again, and there seems to have been something in the nature of a free bruising matinée.

We regret to learn of such incidents as the above, and venture to express the wonder that some of the more pacific sections of the National Code of Ethics were not read to these violators of order.

THE STATE BOARD OF HEALTH held a meeting at Albany on November 21st. Various reports showing the progress of sanitary work were made.

FIRST AID FOR THE INJURED.—The Society for Instruction in First Aid to the Injured held its annual meeting in its rooms, in East Fourteenth Street, November 21st, and the old board of officers was elected, with the Hon. John Jay as President and Dr. Henry B. Sands as Medical Director. Plans were discussed for further disseminating among all classes practical information on preliminary treatment of the injured, and for establishing branch societies in smaller towns.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 15, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Statistical Secretary, DR. F. V. WHITE, announced the death of J. Marion Sims, M.D.

THE PRESIDENT spoke as follows: By the death of Dr. Marion Sims the Academy of Medicine, the profession of this city, and, I may well add, the profession of this country, has lost its most original and most brilliant genius in the department of surgical gynecology. This will be conceded by all. Had circumstances forced him to equal activity in other branches of surgery, his promptness and fertility in practical suggestion, his intuitive power of conception of new means to secure any desired result, his endowment of invention and wonderful mechanical adroitness, would undoubtedly have secured for him equal eminence in all of its departments. No one can be compared with him in his own sphere, in which he achieved such great distinction, except the late Sir James Y. Simpson. An intimate acquaintance with both for many years will perhaps justify me in saying that there were many points as to their intellectual and moral qualities which were strikingly characteristic of both. These resemblances were much more numerous than the points of contrast. In the future, the greatest fame of one will rest on his courage, and I may even say audacity, in successfully introducing anæsthetics to relieve the agonies of parturition; of the other, by his genius in devising new methods of physical exploration and new surgical procedures which effect cures of lesions which before could neither be correctly diagnosed nor successfully treated.

In thus alluding to the greatest achievements of the two, I should also add that both were incessant, zealous workers who for many years were constantly making positive contributions to our science and our art, many of which would alone establish their claim to be regarded as great men in our profession, the former adding more to our scientific literature and the latter more to the advancement of our art. Neither of them were reluctant to have their good work appreciated.

To-morrow morning I doubt not every Fellow whose engagements will permit will be present at the funeral services of our late eminent associate.

The Chair, in accordance with our By-Laws, will designate Dr. Thomas Addis Emmet to read a memoir at the first meeting of the Academy in January.

DR. FRANCIS DELAFIELD then read a paper on

TYPHOID FEVER IN NEW YORK (see p. 531).

THE PRESIDENT regarded the paper as one of the most analytical contributions to our positive knowledge of this disease which had been made since the writings of Murchison. He also suggested the following points, which he thought worthy of discussion. First, with regard to the percentage of mortality. It should be remembered that the paper was based upon hospital statistics alone, and doubtless many of the patients had not been placed in a hospital until they had reached an advanced stage of the disease. For twelve years, in the fever hospital in London, Murchison states that the mortality was fifteen per cent. In private practice Dr. Barker thought that fifteen per cent. was a rather high rate of mortality.

Another point which struck him with some surprise was the small proportion of cases in which there were prodromic symptoms. Perhaps this also was due to the fact that the patients were hospital patients, and yet it might be the fact that prodromic symptoms are absent in a larger proportion of cases than we have been accustomed to suppose.

Another point, and one which had attracted his attention for several years, was that the temperature did not seem to be a measure of the severity or the mortality of the disease. In some of the most dangerous cases the temperature does not rise above 101° to 103° F., and in others in which the patients recover the temperature rises as high as 105° F., or even considerably higher, but they do not have other symptoms of a severity corresponding with the temperature. Again, the large proportion of cases in which diarrhœa occurred as a symptom in the first week of the disease was noticeable; much more frequently than he had observed it. He also observed that twenty-five per cent. of the deaths were apparently due to hemorrhage from the bowels, and Dr. Barker thought this would accord with the experience of almost all.

DR. ALFRED L. LOOMIS said he was interested to be present, first, because Dr. Delafield was to read the paper, and, second, because he wished to know how the author of the paper would define typhoid fever. A very carefully prepared analysis of the cases of this disease, as it has appeared in our hospitals during the last five years, had been given, embracing the symptoms which mark the development and the course, together with the morbid anatomy of ordinary continued fever; but there did not appear in the record a history of the characteristic symptoms of typhoid fever as we have been led to believe it exists in other countries. For example, if we take the description of the disease given by Liebermeister, it does not accord at all, in its main features, with the record given by Dr. Delafield, and the question comes back to us, What is typhoid fever? Is it a specific form of fever, due to a specific cause, characterized by symptoms always present, and attended by pathological lesions always the same? Liebermeister says it is a specific fever; that it has a specific and characteristic history; that it is due to a specific poison; and that it requires a specific treatment. The characteristic symptoms described in the writings of European observers are, first, a typical range of temperature, a gradual rise during the first week, an even line during the second week, a remittent range during the third week, and an intermittent temperature during the fourth week of the disease. Such a range of temperature did not appear in the cases reported by Dr. Delafield, nor had it been present in any of the cases of typhoid fever which he [Dr. L.] had seen in New York, if it may be called typhoid fever.

The second characteristic symptom is the eruption, appearing between the sixth and tenth day of the fever, each spot remaining visible for three days and then disappearing, one crop to be followed by another until the end of the eruptive period, which may continue for two weeks, or only a single crop of spots may appear. According to the record given by Dr. Delafield, the eruption was present in scarcely one-half of the cases. According to his own observations in hospital and private practice, the eruption has been the exception, and when present it appeared late and was not the characteristic rose-colored eruption lasting three days and then disappearing to be replaced by another crop. It resembled the characteristic eruption in that the spots disappeared upon pressure, but each spot remained an indefinite period varying from three to six days.

The third characteristic symptom is diarrhœa, the pea-soup discharges which appear during some period of the fever. The diarrhœa which had been spoken of had been mentioned as "characteristic discharges," but according to the definition heretofore given they were not characteristic, but simply such diarrhœa as occurs in most cases of fever.

Dr. Delafield had avoided one difficult point by saying the etiology of the disease is obscure, for the reason that investigation was exceedingly difficult, perhaps impossible, in very many cases. That brought us back again to the question, Is the fever which is prevailing in New York a disease of spontaneous origin, or does it depend

upon a poison which must be developed in a living body, must be discharged from that body, and must undergo certain changes in decomposing excrement before it is infectious? In other words, can true typhoid fever occur without a typhoid germ? Of course this is one of the most difficult parts of the history of the disease to investigate, and there is a great difference of opinion with reference to it. That cases of typhoid fever had developed in some of our hospitals there could be no question, and some of the wards in our hospitals are in a condition favorable to the development of typhoid fever if it is of spontaneous origin.

Dr. Loomis then gave a brief analysis of the cases which he had seen in his wards at Bellevue Hospital since the last week in September—Dr. Weldon, House Physician. The number of patients was 17; of these 13 recovered and 4 died. Of those who died the average length of time in the hospital was three days; of those who recovered thirty days, the longest fifty days and the shortest fifteen days. The highest elevation of temperature was $105\frac{3}{4}^{\circ}$ F.; the average elevation was $101\frac{1}{4}^{\circ}$ F. Eruption was present in 4 cases, diarrhoea in 4 cases, and constipation throughout the disease in 13 cases. Hemorrhage from the bowels occurred in 2 cases, and both patients recovered. Autopsies were made in 2 cases, and there were found ulcers in the small and also in the large intestine, and in one case the ulceration in the large intestine was much more extensive than in the small. Dysentery occurred in one case during the period of convalescence.

These cases led him to believe that he was to regard the fever now prevailing in New York either as a continued fever with typhoid symptoms, or else abandon the idea that there is anything characteristic of typhoid fever; that it is simply a continued fever, which may or not be spontaneous in origin, possibly may be contracted under certain circumstances, a fever without regular history, and that we have not in New York a specific typhoid fever with characteristic cause and history, and which is never to be produced except by contingent contagion. We must either take that position or conclude that the majority of cases reported by Dr. Delafield were not cases of true typhoid fever. That is, we are not having true typhoid fever in New York, unless it be in a few cases accidentally brought to us from without the city and from where, perhaps, typhoid fever may be endemic or indigenous. Certainly the disease, as it now presents itself, does not correspond with Liebermeister's description, nor does it correspond to the history of the old New England typhoid fever.

THE PRESIDENT asked Dr. Loomis whether or not it had been his practice to endeavor to overcome constipation when present.

DR. LOOMIS replied that he allowed the constipation to continue; but what he meant by constipation here was absence of diarrhoea, the patients having occasional evacuations from the bowels.

DR. F. P. KINNICUTT said: Sir William Jenner has suggested that a potent and not uncommon cause of constipation in typhoid fever is to be found in a *deep* ulceration of one or more of Peyer's patches. Large superficial ulcerations favor a catarrhal inflammation of the intestinal mucous membrane and consequently diarrhoea; a single *deep* ulcer can produce a partial or complete paralysis of the bowel and hence give rise to constipation. Other causes of constipation are a torpidity of the large intestine with rapid absorption of its fluid contents, or diminished secretion from the mucous membrane of the bowel. With the view of ascertaining the relative frequency of constipation, its association with a mild or severe type of the disease, and, if possible, its causes, he had carefully studied the histories of all the cases of typhoid fever treated in St. Luke's Hospital during the years 1882 and 1883. The cases admitted during the summer and autumn of the former year were almost without exception of a very severe type, as is indicated

by the death-rate. Twenty six cases were treated, with 17 recoveries and 9 deaths. There was constipation throughout the stay of the patients in hospital in 13 cases, constipation for a week previous to death in 2 cases. In 4 of the 9 cases of death there was diarrhoea throughout the attack, in 2 constipation, in 1 alternating diarrhoea and constipation. In the remaining 4 cases which recovered there was diarrhoea throughout.

There were autopsies in two cases in which there was diarrhoea, in two cases in which there was constipation. In the former, in one case there was perforation of the small intestine; in the second Peyer's patches were elevated but not ulcerated; the solitary follicles of the lower portion of the ileum showed very superficial ulceration. In this case the diarrhoea was *very profuse*. In one case of constipation there were several perforations in the lower portion of the ileum; in the second, numerous ulcers and one large, almost gangrenous, Peyer's patch.

During the corresponding months of 1883, 18 cases of typhoid fever were treated, with 14 recoveries and 4 deaths. There was constipation in 7 cases, no diarrhoea in 2 cases, diarrhoea in 9 cases. In 2 of the fatal cases there was constipation, in 2 diarrhoea. In the only autopsy, which was in a case in which constipation was well marked, there were several perforations in the lower portion of the ileum. So far as the above observations go, they would indicate that constipation in typhoid fever is always a positive evil; and he believed often of dangerous import to the patient. This fact has a practical bearing in our treatment. In his own judgment, laxatives, however mild, are contraindicated after the first few days of the disease. Small enemata are far safer, and will answer every purpose. Small enemata, frequently repeated if necessary, are safer than larger ones given at longer intervals.

He was convinced that *true* relapses are wholly independent of any error of diet or other imprudence. He was disposed to believe that in these cases we see a form of *relapsing* typhoid. May we not believe, as Da Costa has suggested, that a portion of the poison remains latent, to reappear later and produce its legitimate effects, as is observed in cases of malarial fever? The indications for the use of alcohol are often misleading. In certain cases its use diminishes the frequency and increases the force of the heart's action, lowers the temperature, quiets the restlessness, the tremor, and delirium, and produces sleep. In other apparently equally favorable cases for its employment, all the symptoms become distinctly worse during its use. Personally, he was disposed to withhold alcohol until the third week, unless especially indicated.

His belief is that a large proportion of cases of typhoid fever are most advantageously treated by simple rest in bed, quietude, abundance of fresh air, and a carefully regulated fluid diet. Medicinal agents, as a rule, are needed only for combating special symptoms.

DR. E. G. JANEWAY said it had been supposed and so stated that typhoid fever is more prevalent in New York than it was formerly. He believed, however, that such a conclusion was incorrect, because mortuary statistics obtained at the Board of Health, and extending over a number of years, showed that according to the population the mortality from typhoid fever had markedly diminished. In 1848 there were 223 deaths from typhoid fever; in 1855, 139, and with a population less than one-half of what it is now; in 1870, 422; in 1872, 264; in 1874, 275; in 1875, 347; in 1880, 241. Besides, many cases of typhus were mistaken for typhoid fever during some of these years. He therefore thought that the real mortality from typhoid fever was not increasing in New York, when the increase of population was considered.

Another point which had been made was that the typhoid fever seen here at the present time is not the disease as it exists abroad. Yet the lesions, as seen by observers who have witnessed autopsies in both coun-

tries, are identical. It seemed to him, therefore, that if the lesions were identical we must look for the cause of the discrepancy, if there be any, in some other direction. The treatment, to some extent, furnishes one cause of the apparent discrepancy between the descriptions given by foreign writers and the histories of cases seen in our public institutions in New York. The influence of the quinine which patients almost invariably either take of their own accord or have prescribed for them early in the disease, must be taken into consideration in studying the subsequent progress of the affection. More than that, both Liebermeister and Murchison admit that there are atypical as well as typical cases. Dr. Janeway had seen typhoid fever in institutions in New York where a large number of patients were attacked at about the same time, and he had noticed, and the same thing has been observed in London, that the course of typhoid fever varies according as it occurs in children or in adults. At the Deaf and Dumb Asylum four outbreaks had occurred, the number of cases varying from fifty to seventy. At the Catholic Half-Orphan Asylum seventy of the inmates were attacked with typhoid fever within one month. In these two places the symptoms differed materially, and yet at autopsies made at both places the lesions were those of true typhoid fever. In the Deaf and Dumb Asylum the symptoms were those most commonly present in typhoid fever, such as nose-bleed, diarrhoea, etc.; while in the Catholic Asylum out of seventy cases diarrhoea occurred in only eight; only four patients had the eruption, and it appeared early in the disease.

The outbreaks in both of these institutions were of short duration. Dr. Janeway wished to direct special attention to this fact, namely, that typhoid fever is not necessarily a disease of three, five, or six weeks' duration, but a disease due to a poison which may produce symptoms lasting from three days to six or more weeks. In each instance, whether of short or long duration, the existence of the disease had been proved by autopsies. During the present autumn he did not recall a single case, occurring in an adult, in which the eruption was not present, and he thought that if the abdomen, the chest, and the back were closely inspected the eruption would in most cases be found within the first ten days of the disease. He had seen a number of cases in which the disease was contracted in the country, but had not seen that the lesions differed essentially from those found in cases having their origin in the city. It seemed to him that the typhoid fever in New York was like that which occurred in other localities and other countries.

It is difficult and sometimes impossible to determine the etiology of the disease in a certain case or group of cases. Dr. Janeway cited a case, that of a pedlar, who for a week had a diarrhoea, during which time he was at work, and when he wished to have a movement from the bowels used the privy vault of the nearest tenement-house. The case simply illustrated the possibilities concerning the propagation of the disease.

With regard to transmission by milk, the work in that direction in New York had been extremely unsatisfactory. Defective sewerage has also been found in localities where typhoid fever developed, but it is difficult to prove that the disease was caused by such imperfection, although it might give rise to a very strong suspicion.

DR. T. A. McBRIDE limited his remarks to cases seen at the Out-patient Department of New York Hospital, and to certain points in the treatment of typhoid fever. When a patient presents himself at the Out-patient Department with a diarrhoea he always takes his temperature, and almost invariably finds it elevated. He also has him stripped and finds an enlarged spleen, often some enlargement of the liver, and nearly always spots of the eruption of typhoid fever. Some of these patients are sent to the hospital and remain there for a long time, but many of them are not sick longer than from seven to ten or, at most, fourteen days. He had regarded such as mild cases of typhoid fever. They seemed to be

very common, especially among people who go to dispensaries.

Recently he had had a patient who had a number of hemorrhages from the bowels, and he would ask Dr. Delafield how soon albumen appears in the urine and how long it continues. According to his observation in such cases, Dr. McBride believed that when excessive hemorrhage occurred from the intestines albumen almost invariably existed in the urine, unassociated with tubercasts or other elements of the kidney. What he wished to direct especial attention to was a point in the treatment of typhoid fever. It was with reference to the use of *kairin*, a remedy which he first employed in May last. During this autumn he had had several opportunities to use it. In one case the patient was unable to take quinine, whether in capsule, compounded with agents to prevent head symptoms, or otherwise, and with very satisfactory results. In this particular case fifty or sixty grains of kairin were administered in twenty-four hours.

The rule he had adopted, however, concerning its use was the following: When the temperature has reached 103° or 104° F., give *seven* grains of kairin every hour until the temperature falls to 101° F. If the temperature is 102° F., give only three and a half grains every hour until the temperature falls to 101° F. In every case the seven grains had reduced the temperature from three-fourths to one degree, and it had been seldom necessary to use it more than two hours in succession. Almost invariably the remedy produces profuse perspiration. Kairin simply reduces temperature, but it does not remain so and will rise again in the latter part of the day in a case of typhoid fever as soon as the use of the drug is discontinued. Therefore having lowered the temperature to 101° F., have the record made every hour, and on the slightest elevation above that point administer three and a half grains every two hours. He limited the reduction to 101° F., because if carried beyond that degree the patient is very liable to have a chill. When the rule given had been observed he had not seen a case in which a chill occurred, nor had he observed any depressing effect produced on the heart. The mode of administration had been by either capsule or pill. The urine assumes a greenish color while the patient is taking kairin, and contains a small quantity of albumen but none of the elements of the kidney.

DR. JANEWAY remarked that kairin had been recommended in much larger doses than those mentioned by Dr. McBride.

DR. McBRIDE said he had employed fifteen-grain doses, but the temperature was brought down too quickly, and fearing that a chill might be produced he had used it in smaller doses and with equally satisfactory results.

DR. KINNICUTT said that in some cases recently observed he had found it necessary to continue the drug from seven to ten hours to keep the temperature down.

DR. McBRIDE remarked that he had not seen any ill results follow the use of kairin for several days in succession.

DR. H. PINKNEY recalled a paper written by a physician in Milan twenty-three years ago, who made a number of experiments by introducing poison into animals, and succeeded in producing all the results of typhoid fever; and by using the sulphite of soda, either mixing it with the matter introduced or giving it internally, he was able to counteract the effects of the poison. For fifteen years he had used sulphurous acid successfully, apparently so at least, in typhoid fever.

DR. J. H. FRUITNIGHT had during six months met with thirty cases of typhoid fever. In twelve the disease pursued a very regular course, and two of these were especially interesting. One occurred in a woman advanced three months in pregnancy, and terminated fatally. The other in a woman who had just been confined, but the patient recovered. Among the twelve there were three in which relapses occurred, but all the patients recovered. Four patients had hemorrhage from

the bowels. Two cases terminated fatally; one on the fifth day with active delirium and a temperature at 105° F., and the other in the third week from exhaustion.

DR. A. C. POST asked if in the cases attended with constipation or absence of diarrhœa there was pain, tenderness, or gurgling in the right iliac fossa.

THE PRESIDENT remarked, concerning the use of laxatives in cases with constipation, that it had been his custom never to disturb the bowels by any medicinal treatment unless the patients complained of discomfort, and in such cases he had given a single dose of *five* grains of calomel with fifteen or twenty grains of carbonate of soda, which produces free evacuation without pain, and he had always felt that it was of great benefit.

DR. DELAFIELD, in closing the discussion, said that Dr. Loomis had spoken somewhat forcibly of the atypical character of the typhoid fever in New York, so atypical that he feels disposed to deny it even the name of typhoid fever. The fact that a disease does not always present its regular symptoms is something which is well known. And the fact that this disease does present itself in a somewhat atypical form was one reason why he thought it worth while to bring together the symptoms of a certain number of cases.

After all, this behavior of typhoid fever is the same as the behavior of many other infectious diseases, and as they occur in different places and at different times they present themselves with different degrees of development, both with regard to lesions and symptoms. Typhoid fever, as it has existed in New York during the last few years, has not been strongly developed as regards the morbid anatomy, but when the lesions are compared with those developed in other epidemics it is easy to see that they are the same in kind, although they may differ very much in degree. The same is true of the symptoms, although they have not been nearly as pronounced as they have been in some other epidemics. But if this is true of typhoid fever, it is equally true of many other infectious diseases, and Liebermeister, the author to whom Dr. Loomis had referred, was a writer who had misled a great many people. The article written by him and published in Ziemssen's "Cyclopedia" Dr. Delafield translated, and at the time became convinced that it was evidently made up of descriptions more definite and more decided than any descriptions can be possibly which are taken from nature. The author has evidently suppressed the truth to some extent in his desire to be positive, decisive, and clear.

Dr. Kinnicutt had spoken of the existence of constipation. Constipation unquestionably does exist in a fair proportion of cases, and by the word Dr. Delafield meant not only the absence of diarrhœa but real constipation. The condition apparently does not have anything to do with either the size or the number of the ulcers in the small intestines. This also is analogous to what is found in phthisis, where very often tubercular ulcers are developed in the small intestines, sometimes accompanied by diarrhœa, sometimes not, and the size and number of these tubercular ulcers do not have any direct relation to the amount of diarrhœa the patient has. In fact, he thought it was doubtful whether lesions of the small intestines produce diarrhœa; whether we do not have to look for other causes than these lesions.

It seemed to him that constipation is a real evil, and during the first week he saw no reason why a moderate laxative could not be given with safety and benefit, and he regarded it better to give a mild laxative than allow the colon to become filled with fecal matter. Later in the disease enemata are preferable.

Dr. Delafield agreed with Dr. Kinnicutt in the view that relapses are due to the disease itself rather than to any accidental circumstances.

With reference to the fact to which Dr. Janeway had called attention, namely, that when in any large institution a number of persons are attacked there will be some of whom it cannot be said that they have typhoid

fever at all, this is a fact which cannot be questioned. It has been observed a great many times in other infectious diseases, as well as in typhoid fever, that the poison of a disease, whatever it may be, is capable of producing the characteristic disease, and also other disorders more or less like the real disease.

As regards the eruption, Dr. Janeway's experience seemed to be like his own—namely, that it is more constant in patients this fall than it has been before, and especially within the last six weeks.

With regard to the coincidence of albumen in the urine and hemorrhage mentioned by Dr. McBride, he had had no experience. Changes in the kidney are the rule in typhoid fever, and albumen in small quantity, as the result of these changes, exist in the urine in some cases, but not all. The kidney lesion can exist without albumen being present in the urine. The quantity of albumen in all the cases which he had seen had been small, ranging from a trace to five or ten per cent.

In some cases casts were found, in many there were none, and yet the lesion had been fresh parenchymatous nephritis.

In answer to Dr. Post's question, Dr. Delafield said he thought there was gurgling and tenderness over the caput coli in cases of constipation. Although he had no statistics on that point he could at once recall several cases in which the two conditions were associated.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 24, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. CHARLES HEITZMAN presented a specimen of

MELANOTIC MYELOMA OF THE CHOROID,

for which he was indebted to Dr. H. O. Farnham. It came from a Boston gentleman, sixty years of age, whose left eyeball was enucleated on account of a tumor of the choroid, diagnosed by the ophthalmoscope. A few months after the operation the liver began to swell, obstinate coughing set in, and the patient died with symptoms of exhaustion. At the post-mortem melanotic tumors were found in the lungs, the liver, and the spleen.

On microscopic examination the primary tumor proved to be a melanotic myeloma of the choroid, the size of a sugar-pea, having at its periphery destroyed the retina, and invading the vitreous body. It was a combination of so-called "large round and spindle celled sarcoma," all elements being crowded with dark red-brown pigment granules.

The point of interest lay at the peripheral portion of the tumor, which was ensheathed, toward the vitreous body, by a delicate, though distinctly marked capsule of fibrous connective tissue. The zone of the vitreous body nearest to the capsule was crowded with yellowish, globular, highly refracting corpuscles, greatly varying in size, but nowhere reaching the diameter of red blood-corpuscles. These corpuscles proved to be juvenile forms of living matter, which the speaker, in 1872, and Hayem, of Paris, several years later, termed "hæmato-blasts." All stages of development toward pigmented large elements of myeloma were traceable, the same as the formation of clusters of pigment from the hæmato-blasts. From the fact that such gradual changes of forms were seen in the vitreous body, from the small homogeneous globule, not endowed with properties of amoeboid change or locomotion, up to the fully developed reticular and pigmented myeloma element, the conclusion must be drawn that these elements have originated in situ, in the vitreous body itself, from the living matter therein concealed. This is a strong proof of the assertion that the vitreous body is not a mere mass of mucus, but a regular living tissue, of the myxomatous variety of the connective tissue.

DR. A. JACOBI asked, Is it a tumor by itself?

DR. HEITZMAN said that it was independent so far as migration of cells were concerned, such spread being prevented by the capsule, which was unaffected.

DR. JACOBI asked, Is there lymph connection between the choroid and the interior of the eye in the direction of the vitreous body? If so, it is not necessary that there should be an independent sarcoma. For it was easy to imagine that sarcomatous cells might pass through lymphducts, which are apt to be open, and that might explain the apparent independence of the growth, while in reality it belonged to an original body.

DR. HEITZMAN said that but little was known as to the lymphatics of a sarcomatous growth, and to be sure the lymph-passages in this specimen, as well as toward the vitreous body, were scanty, the same as were the blood-vessels. But that was not the main point in his argument, as within the vitreous body itself could be seen bodies which illustrated all the different stages in the transition from a simple globule to the red blood-globule.

DR. HOWE thought there were small cells in the fibrous tissue.

DR. HEITZMAN regarded them as upon the fibrous tissue, having been drawn there by the razor when the section was made. Besides, it is known that red blood-globules are solid and never migrate. The capacity for motion manifests itself with the development of the reticulum of living matter.

EXTIRPATION OF THE KIDNEY.

DR. W. GILL WYLIE presented a kidney removed by abdominal section in August last. The patient was sent to him by Dr. Winters, of Phœnicia, and gave the following history: She was thirty-four years of age, the mother of four children, and had had one miscarriage. So far as she knew, all the members of the family had been regarded as healthy. At the age of fourteen she had what was said to be pneumonia, but further than that there was no evidence of pulmonary disease. During the last eighteen months she had been treated for supposed uterine disease. There was no evidence, however, from either physical examination or clinical history, that she was then suffering from either ovarian or uterine disease or disease of the Fallopian tubes. The chief symptom was pain in the right side, and sometimes painful menstruation. The pain during the last eighteen months had been very severe at times, especially after walking or other exercise, and finally became spasmodic and so intense that morphine at first, and later chloroform, were required to relieve the suffering, which was confined to the right side. The patient was examined while lying upon her back, and nothing could be made out by palpation except that the abdominal walls were lax, but as she sat up and twisted her body he felt a tumor just below the liver, and it seemed to be the kidney with its long axis at right angles with the long axis of the body. Dr. Wylie diagnosticated movable kidney, believed that the probabilities were in favor of its becoming strangulated, and recommended that it be removed. For a long time there had been steadily pus and albumen in the urine, and Dr. Winters had reached the conclusion, several months before Dr. Wylie saw the patient, that it was a case of loose kidney. About one week subsequently Dr. Wylie operated for its removal by making an incision through the abdominal walls, just to the right of the umbilicus, sufficiently large to admit the ends of the fingers, with which he was able to determine that the ovaries and uterus were normal, the intestines, the liver, and the gall-bladder also were apparently normal, and the left kidney was in its normal position.

The right kidney was not readily found, but that was accounted for by the position of the incision, for when the patient was placed in the upright position the organ twisted upon its attachments, so that its long axis was at right angles with the long axis of the body and it was

at once detected. By having the edges of the wound held apart by tractors, Dr. Wylie was able to get one finger above and another below in such a manner as to push the kidney forward without much trouble, and then toward the right side. An incision two or three inches long was then made in the peritoneum, the upper end of the kidney was pushed through, and the entire organ followed without difficulty. The ureter was tied, leaving behind a portion about two inches long; the arteries were ligated and then the two were tied together and the whole mass cut off. The stump was dropped back. The abdominal wound was closed with sutures and dressed, and the patient was left in the care of Dr. Winters. No bad symptoms occurred for nine days, and during that time the average daily discharge of urine was twenty-four ounces. Dr. Winters removed the stitches on the eighth day but did not put on any supporting adhesive straps; the patient burst the wound open and lost sufficient blood to place her in a rather unpleasant condition. An abscess subsequently formed in the abdominal walls at the site of the incision. At the present time thirty-six ounces of urine are discharged daily, and the patient is dressed and about her room some. There is yet pus in the urine, and for the first time the patient has complained of considerable pain in the left side. Dr. Wylie thought the chances were that the left kidney was not perfectly healthy. The kidney removed had been examined by Dr. W. H. Welch, who reported that it was tuberculous and that he found the tubercle bacillus. His diagnosis was primary urino-genital tuberculosis.

DR. A. JACOBI said, to avoid any mistake, he would like to have Dr. Wylie state that he does not consider the existence of floating kidney by itself an indication for its removal.

DR. WYLIE said certainly he would not regard it as proper to remove a kidney simply because it was a floating kidney; but in this case he was inclined to regard it as a dislocated kidney, for the peritoneal tissues are not so lax normally as he found them.

DR. JACOBI said he requested Dr. Wylie to make that statement, and wished to have it put on record, as certainly he should not wish to be understood as favoring any such therapeutical indication. Surely the existence of floating kidneys is no indication whatsoever for their removal. In Dr. Wylie's case there was more than a probability that the kidney was diseased. Floating kidney is not rare. Vollet has published a large number of cases, almost exclusively in women and upon the right side, and many of them in children.

DR. JACOBI had seen at least thirty cases of floating kidney, chiefly in women who have borne children: a few in children, and also in the adult male.

DR. WYLIE thought that not much could be done in cases of floating kidney by the use of bandages or pads. If pus is found in the urine, even if there is not much discomfort the case should be carefully watched, and if it increase and there was a probability of the occurrence of anything like an abscess, we should operate at once.

DR. HEITZMAN said that he had made three hundred post-mortems in which he found tuberculous kidneys, and in only four was there croupous nephritis and necessarily casts in the urine, whereas in all the other cases there was interstitial or catarrhal nephritis. Tuberculosis of the kidney as a primary lesion is extremely rare. He thought there need be no difficulty in deciding whether or not the other kidney is involved, because as soon as renal epithelium appear in the urine the fact is established that the organ is in an inflamed condition.

STRANGULATED HERNIA—GANGRENE OF THE INTESTINE—ENTEROTOMY.

DR. JOSEPH W. HOWE presented a specimen of gangrenous intestine, removed from a patient in St. Francis' Hospital, who gave the following history:

Adam G—, aged forty-three; occupation, baker;

has had a hernia for thirty years. It gave him little or no trouble until Friday, October 19th, when, during an attack of coughing, he felt a sudden pain in the region of the hernia, which at once became painful and increased in size. Soon afterward he became sick at the stomach, vomited, and was unable to have a movement from the bowels. He was admitted to the hospital on Tuesday, October 23d, in a state of collapse. He complained of pain over the whole abdomen, and vomited small quantities of stercoraceous material. The swelling in the groin was red, tympanitic, and very painful to the touch. Stimulants and morphia were administered, and at 8 P.M. Dr. Howe operated. When the sac was opened the principal portion of the intestine forming the hernial protrusion was found to be gangrenous, and on the inner side of the hernia there was a rupture, which had evidently been made during attempts at reduction. The gangrenous intestine was cut away and the edges of the gut stitched to the integument, making an artificial anus, which Dr. Howe stated would probably never be used, as the patient was then in a dying condition.

The case was presented as an addition to the already large number of cases of strangulated hernia so frequently sent in a dying state to our hospitals by men who seemed to be ignorant of the affection.

DR. VAN SANTVOORD presented a specimen of

STENOSIS OF THE PULMONARY ARTERY,

due to contraction and thickening of the semilunar valves. It was taken from the body of an infant that died at Randall's Island Asylum twenty days after birth. The child was fairly well developed, but had rapid respiration and pulse. Physical examination revealed a loud blowing murmur over the entire chest, loudest to the left of the sternum, at the junction of the third and fourth ribs. At that time the child was not cyanotic, but cyanosis developed gradually, and in the course of a few days it died of cardiac failure.

At the autopsy the semilunar valves of the pulmonary artery were found markedly thickened and contracted, and he thought the tricuspid valve was also somewhat affected. The ductus arteriosus was widely open and lined with a deposit of fibrine. There was also marked hypertrophy of the right ventricle, its wall being nearly as thick as that of the left ventricle. The other organs were normal, except the kidneys, which were slightly congested. The inter-ventricular septum was perfect, and the foramen ovale was patulous to the same extent as is usual in a child of this age.

DR. A. JACOB thought the nearly equal thickness of the walls of the ventricles was about normal at that period of life. The fact that there was contraction of the valves and not stenosis of the pulmonary opening would indicate that an inflammatory process had existed, and especially as the tricuspid valve was also somewhat involved. He thought it quite probable that endocarditis had occurred during the latter part of pregnancy.

DR. VAN SANTVOORD thought endocarditis was the probable genesis of the case, for the most part at least. He was not quite certain concerning the condition of the tricuspid valve. The hypertrophy of the right ventricle was certainly marked, and he thought that, at the age of twenty days, there is a notable difference, normally, in the development of the two ventricles.

DR. F. FERGUSON presented two specimens of

RUPTURE OF THE HEART.

A male, about fifty years of age, a native of Germany, died suddenly at his own residence, in Brooklyn, the first week in October, 1883. He was well up to within a few hours of his death, when he suffered from an attack of dyspnoea which lasted a short time. Two hours after his dyspnoea subsided he had occasion to use the water-closet, where he was found dead.

The post-mortem examination was made by A. H. P. Leaf, Pathologist to St. Mary's Hospital, in Brooklyn,

through whose kindness he received the specimen. The body was well nourished; no marks of violence, and no cedema was present. The peritoneum was normal. The stomach and intestines were normal. The spleen was larger than normal and pigmented. The kidneys were markedly atrophied, their surfaces very granular; cortices were pervaded by numerous small cysts. The tubes of the cortex contained considerable fat and hyaline casts. There were numerous hyaline and granular casts in the tubes of the pyramids, more especially near the apices. The interstitial tissue was markedly increased, many of the glomerules being converted into solid globes of fibrous tissue. The renal vessels were everywhere thickened. The lungs were congested and cedematous. The pericardium was distended with blood. The heart was normal in size. Its muscular tissue was brownish, and its valves were competent. The endocardium was everywhere thickened. There was a linear rupture in the anterior wall of the left ventricle, beginning at a point one and one-half inch above the apex, and extending upward three-fourths of an inch. At the site of the rupture the ventricular wall was about one centimetre in thickness. There was increase in the fibrous tissue and fat in the muscular wall of the ventricle, and the muscle-cells were deeply pigmented.

Dr. Ferguson also presented a specimen of

RUPTURE OF THE HEART IN TETANUS.

A male, forty-four years of age, married, a native of Ireland, and a glazier by occupation. On September 7th last he sustained an injury to his left hand, tearing away the soft parts from its dorsal aspect and exposing the extensor tendons. His injury was dressed antiseptically, and for three weeks he did well; at the end of that time, however, he experienced stiffness and rigidity of the muscles of the face and neck, giving rise to retraction of the head; soon after he was seized with convulsions, which became more frequent and more severe in character until October 13th, when during a convulsion he suddenly died. He had opisthotonos during his convulsions, and suffered greatly from dyspnoea. He was in the hospital only five days, and during that time he could not separate his jaws more than one-fourth of an inch. His pulse was full, strong, and regular, varying from 80 to 90 beats a minute. His temperature ranged from 99° to 101.6° F., and his respiration 40 to 50 a minute. He was treated with fluid extract of physostigma.

On autopsy the brain and cord were found intensely congested. The organs in the abdominal cavity were normal. The lungs were congested and cedematous. The pericardium contained 100 cubic centimetres of pure blood. The cavities of the heart were dilated. The ventricular walls were thin, and the muscular tissue was brownish. The valves were competent; there were a few small patches of atheroma in the segments of the mitral valve. In the anterior border of the heart, one inch to the right of the apex, was a circular opening which admitted a probe one-eighth of an inch in diameter. The right ventricular wall surrounding this opening was about a line in thickness. The muscle-cells of the heart were normal.

DR. H. D. CHAPIN presented a specimen of

PERI-ESOPHAGEAL ABSCESS—CARIES OF THE SPINE, accompanied by the following history:

Mary D—, aged two years and eleven months, was brought to him at the Out-door Department, Bellevue Hospital, September 5th. She had pertussis five months ago, and the mother said she had had bronchitis ever since. On examination she was found to have a slight difficulty in breathing, but not amounting to dyspnoea. On auscultation nothing was heard but tracheal and laryngeal râles. Temperature normal. Nothing was visible in the throat. The child was well nourished and had no rachitic appearance, although she was eleven months old before getting

her first tooth. She came once a week for the following month, and seemed to improve under tonic treatment. The peculiar sounds on inspiration and expiration continued present. The temperature never rose above the normal. There was never any dysphagia. The voice was not at all affected. In the evening of October 10th, after eating a hearty supper, she began playing with her mother, laughing frequently. She was suddenly attacked by a fit of coughing, which was followed by intense dyspnoea, lividity of the face, and death.

Autopsy.—Body well nourished. A large abscess was found back of the œsophagus, within and in front of the first and second dorsal vertebrae, which were deeply carious. The trachea was injected and covered by muco-pus, and had small miliary tubercles in it. Miliary tubercles were also found in the lungs. A large cheesy bronchial gland was found, between which and the sac of the abscess the right pneumogastric nerve was apparently pressed upon just where the cardiac nerves were given off. Just above this point the right vagus seemed somewhat swollen.

DR. W. M. CARPENTER, in behalf of Dr. J. W. Stickler, presented a specimen of

SCIRRHOUS CARCINOMA OF STOMACH, INVOLVING THE LIVER, INTESTINE, AND SPLEEN.

Adam S—, aged fifty-two, native of Germany. No history of cancer in family. Patient was perfectly well up to fifteen months ago. At that time he complained of quite severe pain in the left hypochondrium, but had no fever or organic disease that could be discovered. Palpation revealed no tumor in abdomen. Bowels were somewhat costive; micturition normal. Under the influence of anodynes and counter-irritants he improved somewhat, but was never entirely free from pain, which gradually extended to the right hypochondrium. He rapidly emaciated, having but little appetite, and repeatedly vomited the food taken. There was, however, no vomiting of either pure blood or chocolate-colored matter. This condition would last about one week, to be followed by nausea; then the vomiting would recur, and in this manner the alternation was maintained till death. The bowels became very constipated and urination very frequent, painful, and scanty. Chemical and microscopic examination at that time revealed nothing abnormal. Retention of a very small quantity of urine, beginning about six weeks before death, necessitated the frequent use of the catheter. The severe pain had now extended to every region of the abdomen and the emaciation became extreme. There was also a very manifest cachexia. Physical examination disclosed a tumor, hard and irregular in outline, in the region of the pyloric end of the stomach, although nothing positive could be ascertained with reference to the other abdominal organs. Death from exhaustion finally supervened, fifteen months from the date of the first attack of abdominal pain. At the post-mortem I discovered the following condition: The cæcum was bound to the inner surface of the abdomen by strong fibrous bands, and so much constricted that it seemed improbable that any fecal matter had passed through it prior to death. The transverse colon was drawn down and attached to the ascending colon, and it was also attached to the gall-bladder and spleen. The liver was small and quite firm in consistence, and attached to the spleen by broad fibrous bands. The œsophagus apparently lay between these two organs, and was firmly adherent to them. The stomach was below and behind the liver, and much smaller than normal. Its anterior wall was greatly thickened, especially that portion of it nearest the pyloric end of the organ. The interior of the viscus presents fibrous bands connecting opposing surfaces, also various sacculations. The kidneys presented nothing abnormal macroscopically, except quite intense congestion. A microscopic examination of a portion of the morbid growth revealed many of the characteristic features of a scirrhus carcinoma.

DR. J. C. PETERS made a verbal supplementary report on

EQUINE SCARLET FEVER,

after which the Society went into executive session.

Correspondence.

TYPHOID FEVER AND MILK.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There have been here during the past two or three weeks, in one locality comprising three or four blocks, ten cases of continued fever—three adults, the rest children under ten years of age. Four of the cases (two of adults) assumed a typhoid character.

Investigation showed that all of the families received their milk from one milkman, in whose house had been one of the typhoid cases for four or five weeks. The milk was stopped in all cases; all are recovering. In one of the typhoid cases there was marked improvement within forty-eight hours after stopping the milk. It was noted that several other children in the neighborhood not supplied by this milkman remained well. It seemed settled in the community that the disease was propagated through the milk.

But now, on the other hand: 1. The patient in the house of the milkman was in an upper room of an adjoining wing to the house, and had been free from fever for ten days or more previous to inception of the disease by some of the others. 2. The milk was not brought into the house proper at all, but into the cellar, where it was at once measured and sent out by a man who had no contact with the patient. Consequently the milk was not on the premises but a very short time. 3. The cellar was perfectly clean and well ventilated, and had no interior communication with the house. Is entered from outside only. 4. The cows were all healthy, in good condition, and fed only on the best of food. No slops of any kind. 5. I examined the well-water in which the milk vessels were washed, chemically and microscopically, and could detect nothing abnormal. Besides, the well was cleaned a few weeks ago.

There is no cesspool on the premises, and the out-house is far away from the well. In addition, some of the sick children had never drank the milk, but had used a little on oatmeal or hominy. Again, the number sick was only a portion, a small percentage, of those supplied by the same milkman who have remained well while still continuing use of the milk. And finally, the disease prevails more or less throughout the town in other localities where this milk was never used. In the adjoining street there were nearly as many cases as those cited.

The one patient whose improvement was coincident with stopping the milk had reached the fourteenth day, the period when most of the cases began to convalesce. From all which I find myself unable to establish any connection between these cases and the milk-supply, *unless possibly* in the fact that the woman who gave care in part to the patient in the house also washed the milk vessels, using *hot* water first, then cold.

My own judgment is against the conclusion. May I beg the favor of the Editor's opinion in the matter, which has interested our entire community, and oblige,

Respectfully,

D. A. BALDWIN, M.D.

ENGLEWOOD, N. J., November 13, 1883.

[We fail to see any direct connection between the milk-supply and the cases of fever.—ED.]

OIL OF BIRCH AND OIL OF WINTERGREEN.—According to Mr. G. W. Kennedy (*New Remedies*), the oil of wintergreen of the shops is really in large part oil of birch. Chemically and physically the two oils are very nearly identical, so that the adulteration is harmless.

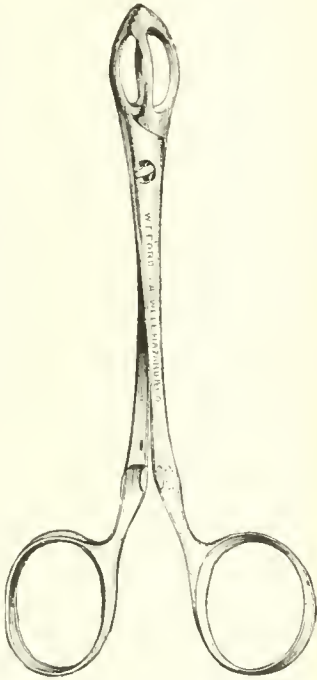
New Instruments.

A NEW STYLE OF FORCI-PRESSURE FORCEPS OR ARTERY CLAMPS.

By JAMES L. LITTLE, M.D.,
NEW YORK.

THE accompanying cut shows a new style of artery clamp which has been made for me by Mr. Ford, of Caswell, Hazard & Co.

I do not doubt that of late years all surgeons have been in the habit of using some style of clamp to control the hemorrhage from small vessels during the progress of an operation, thus saving themselves the delay of tying. I have been in the habit of thus controlling hemorrhage for some years past, but owing to the narrow blades and slim points of the clamps now in use, have never been able to find one that would allow of the tying of the vessel without first removing the clamp and seizing the bleeding point again with an ordinary pair of "bull-dog" forceps. I found that there was always more or less blood lost in this way, which I concluded could be saved by combining both clamp and artery forceps in one instrument, and I have been so well satisfied with the result of the experiment that I have thought it worthy of presentation to the profession.



Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 10 to November 17, 1883.

BACHE, DALLAS, Major and Surgeon. Ordered to report in person to the commanding general Department of the East for assignment to duty. S. O. 259, par. 10, A. G. O., November 12, 1883.

GARDINER, J. DE B. W., Captain and Assistant Surgeon. Relieved from duty at Fort Huachuca and assigned to duty as Post Surgeon at Fort Bowie, A. T. S. O. 104, par. 1, Department of Arizona, November 8, 1883.

EGAN, PETER R., First Lieutenant and Assistant Surgeon. Upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca and report to the commanding officer at that post for duty. O. 104, par. 1, Department of Arizona, November 8, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 17, 1883.

HALL, C. H. H., Passed Assistant Surgeon. Ordered to the Naval Academy, Annapolis, Md.

HOW TO TAKE TINCTURE OF IRON.—To disguise the taste of tincture of iron, Dr. Haner recommends that tincture of the sesquichloride of iron be mixed with simple syrup, and then with milk. This mixture will not affect the teeth, nor will the styptic taste be apparent.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 20, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
November 13, 1883.....	1	50	67	3	22	43	0	0
November 20, 1883.....	0	32	44	1	51	39	1	0
<i>Deaths.</i>								
November 13, 1883.....	1	21	8	1	1	23	0	0
November 20, 1883.....	0	13	9	1	6	22	0	0

A FORMULA FOR IRREGULAR HEART-ACTION.—In a discussion upon heart disease before the Boston Society for Medical Improvement, Professor Bowditch said that he had found the following formula of great service in relieving even serious cardiac affections: Pulv. digitalis, gr. x.; pulv. colchici sem., gr. xx.; sodi bicarbonatis, gr. xxx. M. et div. in pil. no. xx. These are to be taken three or four times daily at first, subsequently to be reduced until only one is taken at bedtime. The treatment to be continued for three to nine months.

AN EASILY ADJUSTABLE HANDLE FOR THE LARYNGOSCOPIC AND RHINOSCOPIC MIRROR, as well as laryngeal probe, is the ordinary automatic pencil-holder made by the Eagle Pencil Co., and sold by stationers generally. The handle of the mirror is held in place in the same manner as the lead, and can be lengthened or shortened by pressure on the spring at the end of the holder. After several months' trial it has been found most satisfactory, from its smoothness and the short time required to adjust it.—*Philadelphia Polyclinic.*

FRAUDULENT ADVERTISEMENTS.—The Denver *Inter-Ocean* discourses with emphasis upon the subject of patent medicine and other advertisements. The editor says: "We like to fill our columns with good advertising, and we believe that we give our patrons dollar for dollar. We have no desire for fraudulent advertisements, or for advertisements that discuss queer diseases. We threw out Lydia Pinkham's chromo because the agents unjustly claimed nine fowls in twenty-five insertions. We do not stand that sort of discount. . . . We are not advertising piles! piles! piledrivers, lost manhood, or lewd shows; and we are not booming torpid livers in our fashion column. We are not giving the nostrum quacks cheap advertising. They must pay us what home advertisers pay. To charge home advertisers full rates, and then to give space to Eastern patent medicines for less money, isn't our idea of honesty."

MATRIMONIAL ENGAGEMENTS AND UTERINE POLYPI.—The defendant in a recent breach of promise case in Mercer County, O., based his defence on the fact of the development of a fibrous polypous tumor in the uterus of his betrothed. This would seem to be a valid excuse for a man's not marrying a woman, but the plaintiff claimed that the growth was produced by and resulted from the protracted courtship, causing her to brood upon the prospects of entry into married life. It was proved by experts that prolonged courtship is harmful, superinducing a condition of erethism, and the jury awarded the plaintiff a verdict of \$3,000 as a balm for her wounded feelings and polypoid uterus.—*Medical Age.*

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Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

By J. LEWIS SMITH, M.D.

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Continued from p. 561.)

Symptoms.—During the prevalence of cerebro-spinal fever cases now and then occur in which the symptoms are mild and transient, and the health is soon fully restored. It seems proper to regard some, at least, of these as genuine but aborted forms of the disease. The following cases which occurred in my practice may be cited as examples :

A boy, eight years of age, previously well, was taken with headache, vomiting, and moderate febrile movement, on April 2, 1872. The evacuations were regular and no local cause of the attack could be discovered. On the following day the symptoms continued, except the vomiting, but he seemed somewhat better. On April 4th the febrile movement was more pronounced, and in the afternoon he was drowsy and had a slight convulsion. The forward movement of the head was apparently somewhat restrained. On the 6th the symptoms had begun to abate, and in about one week from the commencement of the attack his health was fully restored.

A boy, aged six, was well till the second week in May, 1872, when he became feverish and complained of headache. At my first visit, on May 14th, he still had headache, with a pulse of 112. The pupils were sensitive to light, but the right pupil was larger than the left. The bromide and iodide of potassium were prescribed, with moderate counter-irritation behind the ears. The headache and febrile movement in a few days abated, the equality of the pupils was restored, and within a little more than one week from the commencement of the disease he fully recovered.

These cases occurred when the epidemic of 1872 was at its height ; but if the symptoms are so mild, and the duration of the disease short, as in these two cases, the diagnosis must sometimes be doubtful. Observers in different epidemics report similar cases, and as the symptoms, so far as they appeared in my patients, seemed characteristic, I have not hesitated to regard them as genuine but aborted cases. On such patients the epidemic influence acts so feebly, or their ability to resist it is so great, that they escape with a short and trivial ailment.

Occasionally, also, during the progress of an epidemic we meet patients who present more or fewer of the characteristic symptoms, but in so mild a form that they are never seriously sick, and never entirely lose the appetite, but the disease, instead of aborting, continues about the usual time.

Thus, on January 4, 1873, I was called to a girl aged thirteen, who had been seized with headache followed by vomiting in the last week in December. During a period of six to eight weeks, or till nearly March 1st, she had the following symptoms : Daily paroxysmal headache, often most severe in the forenoon ; neuralgic pain in the left hypochondrium, and sometimes in the epigastric region ; pulse and temperature sometimes

nearly normal, and at other times accelerated and elevated, both with daily variations ; inequality of the pupils, the right being larger than the left during a portion of the sickness. The patient was never so ill as to keep the bed, usually sitting quietly during the day in a chair or reclining on a lounge, and she never fully lost her appetite. Quinine had no appreciable effect on the fever or paroxysms of pain. There can, in my opinion, be little doubt that this girl was affected by the epidemic, but so mildly that there was, for a considerable time, much uncertainty in the diagnosis.

Cases like these, in which the disease is so feebly developed that the patient is never seriously sick, though unimportant pathologically, must be recognized in a treatise on cerebro-spinal fever.

Mode of commencement.—Cerebro-spinal fever rarely begins in the forenoon after a night of quiet and sound sleep. In the cases which I observed in the severe and fatal epidemic of 1872, and in the thirty-six cases to be tabulated in the next RECORD, the commencement was almost without exception between mid-day and midnight. The fact that this disease does not commence after the repose of night, till several hours of the day have passed, shows the propriety and need of enjoining a quiet and regular mode of life, free from excitement, and with sufficient hours of sleep, during the time in which the epidemic is prevailing.

The commencement is usually without premonitory stage, and sudden ; unlike, therefore, the beginning of other forms of meningitis, which come on gradually and are preceded by symptoms which, if rightly interpreted, direct attention to the cerebro-spinal system. Exceptionally certain premonitions occur for a few hours or days before the advent of the disease, such as languor, chilliness, etc. Mild cases more frequently begin gradually, and with certain premonitions, than severe cases. The ordinary mode of commencement is as follows : The patient is seized with vomiting, headache, and perhaps a chill or chilliness, so that there is a sudden change from perfect health to a state of serious sickness. Rigor or chilliness is a common initial symptom, especially in adult patients. One patient, an adult female, had three or four chills of considerable severity in the commencement of the attack. Children often have clonic convulsions in place of the chill, or immediately after it, partial or general, slight or severe. Stupor more or less profound, or less frequently delirium succeeds. In the gravest cases semi-coma occurs within the first few hours, in which patients are with difficulty aroused, or profound coma, which, in spite of prompt and appropriate treatment, is speedily fatal. Those thus stricken down by the violent onset of the disease, if aroused to consciousness, complain of severe headache, with or without, or alternating with equally severe neuralgic pains in some part of the trunk, or in one of the extremities. The pain frequently shifts from one part to another. Among the early symptoms of cerebro-spinal fever are those which pertain to the eye. The pupils are dilated, or less frequently contracted, and they respond feebly, or not at all, to light if the attack be severe and dangerous ; often they oscillate, and occasionally one is larger than the other. Vomiting, with little apparent nausea, and often projectile, is common in the commencement of cerebro-spinal fever. It occurred as an early symptom in fifty-one of fifty-six cases observed by Dr. Sanderson. In ninety-seven cases occurring in

New York, most of them observed by myself, but a few of them related to me by the late Dr. John G. Sewall, vomiting occurred as an early symptom in sixty-eight cases. Its absence on the first day was recorded in only three cases, while in the remaining twenty-seven patients the records of the first day make no mention of its presence or absence. It was probably present in most of these twenty-seven cases as one of the first symptoms.

Since the epidemic of 1872, in examining patients now numbering thirty-six, as has been already stated, I have made careful enquiry in regard to the mode of commencement, and with only two or three exceptions the previous health had either been good, or if symptoms of ill-health antedated the cerebro-spinal fever, they were due to some ailment entirely distinct from this disease. In a boy four and a half years of age, living in Broadway, it was stated to me that the cerebro-spinal fever came on gradually, with pains in the head and elsewhere; this case was mild throughout, and the patient was never in imminent danger. In nearly all the cases, if the patients were at home and under observation, the exact moment of the beginning of the disease could be stated. Thus a man aged twenty-eight returned from his work at mid-day, April 23, 1883, in good health and cheerful, ate a hearty meal at 12 M. and at 1 P.M. had a chill, with intense headache and severe vomiting. Minute red points appeared in his face after the vomiting, from capillary extravasations. In this case the interesting fact was observed of a cessation of the symptoms, so that on the 24th and 25th, being free from pain, he went to Brooklyn. On the 26th, however, the symptoms returned. He had pains in the head, back, and extremities, and was seriously sick. Occasional remissions, so that very grave symptoms become mild for a time, and then return in full severity, as well as distinct intermissions as in this case, have been frequently noticed by observers in different epidemics. A little girl, previously entirely well, was slightly punished on June 11, 1882; immediately she vomited, and seemed quite sick; by kind nursing on the part of the mother she became better, so that on the 12th she had some appetite and went out. On the 13th, cerebro-spinal fever began, with a temperature of 103° , and its course was tedious. A robust girl, aged thirteen, vivacious and cheerful, went as usual in the morning to one of the public schools, entirely well. Before the school was dismissed she returned home crying, on account of dizziness and violent pain on the top of her head, in her knees, and calves of the legs. The case was attended by Professors Alonzo Clark, Knapp, and myself, and was fatal after four and a half weeks. A boy, aged ten, returned from another public school in a similar manner, having gone to it in the morning in apparent perfect health.

We may, therefore, summarize as follows the symptoms which commonly attend the commencement of cerebro-spinal fever: violent pain in some part of the head, and sometimes also in the trunk or limbs, vomiting, a chill or chilliness, clonic convulsions, dizziness, dilated, sluggish, or altered pupils, fever of greater or less intensity according to the severity of the attack, heat of head, and in most patients of the surface generally. If the disease be of a severe and dangerous type, these symptoms are apt to be followed within a few hours by delirium, semi-coma, or coma.

SYMPTOMS.

Nervous system.—Since in cerebro-spinal fever extensive and intense inflammation occurs of the cerebral and spinal meninges, with more or less congestion of the brain and spinal cord, lesions, which we will consider hereafter, we would expect that this disease would be attended by severe and dangerous symptoms, inasmuch as the cerebro-spinal axis exerts such a controlling influence upon the functions of the body. Also we would expect that the symptoms would vary according to the portion of the meninges which happens to be most se-

verely inflamed. There is, indeed, variation in symptoms according to the extent and intensity of the meningitis, and the degree in which the cerebro-spinal axis is congested or implicated, but certain symptoms occur in all or nearly all cases, and as they are characteristic they render diagnosis easy.

Pain, already described as an initial symptom, continues during the acute period of the malady. It is ordinarily severe, eliciting moans from the sufferer, but its intensity varies in different patients. Its most frequent seat is the head, and the location of the cephalalgia varies in different patients and in the same patient at different times. One refers it to the top of the head, another to the occiput, and another to the frontal region, and the same patient at different times may complain of all these parts. The pain is described as sharp, lancinating, or boring. It is also common in the neck, especially in the nucha, the epigastrium, umbilical, and lumbar regions, along the spine (rachialgia), and in the extremities, where it shifts from one part to another. It is more common and persistent in the head and along the spine than elsewhere. The patient, if old enough to speak, and not delirious or too stupid, often exclaims, "Oh! my head," from the intensity of his suffering, but after some moments complains equally of pain in some other part, while perhaps the headache has ceased or is milder. In a few instances the headache is absent, or is slight and transient, while the pain is severe elsewhere. After some days the pain begins to abate, and by the close of the second week is much less pronounced than previously. Vertigo occurs with the headache, so that the patient reels in attempting to stand or walk. I have stated above that vertigo may be a prominent initial symptom, as in the girl of thirteen years, who suddenly became sick in the public school where she was attending, and reached her home with difficulty on account of the headache and dizziness. Contributing to the unsteadiness of the muscular movements is a notable loss of flesh and strength, which occurs early and increases.

The state of the patient's mind is interesting. It is well expressed in ordinary cases by the term apathy or indifference, and between this mental state and coma on the one hand, and acute delirium on the other, there is every grade of mental disturbance. Some patients seem totally unconscious of the words or presence of those around them, when it subsequently appears that they understood what was said or done. Delirium is not infrequent, especially in the older children and adults. Its form is various, most frequently quiet or passive, but occasionally maniacal, so that forcible restraint is required. It sometimes resembles intoxication or hysteria, or it may appear as a simple delusion in regard to certain subjects. Thus one of my patients, a boy of five years, appeared for the most part rational, protruding his tongue when requested, and ordinarily answering questions correctly, but he constantly mistook his mother—who was always at his bed-side—for another person. Severe active delirium is commonly preceded by intense headache. In favorable cases the delirium is usually short, but in the unfavorable it is apt to continue with little abatement till coma supervenes.

On account of the pain and the disordered state of the mind, patients seldom remain quiet in bed unless they are comatose, or the disease be mild or so far advanced that muscular movements are difficult from weakness. In severe cases they are ordinarily quiet for a few moments, as if slumbering, and then, aroused by the pain, they roll or toss from one part of the bed to another. One of my patients, a boy of five years, repeatedly made the entire circuit of the bed during the spells of restlessness. In mild cases, or cases attended by less headache or mental disturbance, patients are quiet, usually with their eyes closed, unless when disturbed.

Hyperæsthesia of the surface is another common symptom. Few patients, not comatose, are free from it during the first weeks, and it materially increases the suffer-

ing. Friction upon the surface, and even slight pressure with the fingers upon certain parts extort cries. Gently separating the eyelids for the purpose of inspecting the eyes, and moving the limbs, or changing the position of the head, evidently increase the suffering, and are resisted. I have sometimes heard such expressions of suffering from slowly introducing the thermometer into the rectum that I was led to believe that the anal and perhaps rectal surfaces were hypersensitive. The hyperæsthesia has diagnostic value, for there is no disease with which cerebro-spinal fever is likely to be confounded in which it is so great. It is due to the spinal meningitis, and is appreciable even in a state of semi-coma. The headache and hyperæsthesia fluctuate greatly in the course of the disease, and the former sometimes recurs at times, especially from mental excitement, or from an afflux of blood to the brain from physical exertion, for months after the health is otherwise fully restored.

Some contraction of certain muscles or groups of muscles is present in all typical cases. In a small proportion of patients it is absent or is not a prominent symptom, namely, in those in whom the encephalon is mainly involved, the spinal cord and meninges being but slightly affected or not at all. This contraction is most marked in the muscles of the nucha, causing retraction of the head, but it is also common in the posterior muscles of the trunk, causing opisthotonos, and in less degree in those of the abdomen and lower extremities, and hence the flexed position of the thighs and legs, in which patients obtain most relief. The muscular contraction is not an initial symptom. I have ordinarily first observed it about the close of the second day, but sometimes as early as the close of the first day, and in other instances not till the close of the third day. Attempts to overcome the rigidity, as by bringing forward the head, are very painful, and cause the patient to resist. In young children having a mild form of the fever, with little retraction of the head, the rigidity is sometimes not easily detected. I have been able in such cases to satisfy myself and the friends of its presence, by placing the child in an upright position, as on the lap of the mother, and observing the difficulty with which the head is brought forward on presenting to the patient a tumblerful of cold water, which is craved on account of the thirst. The usual position of the patient in bed, in a typical or marked case, is with the head thrown back, the thighs and legs flexed, with or without forward arching of the spine. The muscular contraction and rigidity continue from three to five weeks, more or less, and abate gradually; occasionally they continue much longer. Through the kindness of Dr. Henry Griswold I was allowed to see an infant of seven months in the tenth week of the disease. It was still very fretful, and exhibited decided prominence of the anterior fontanelle, probably from intra-cranial serous effusion and marked rigidity of the muscles of the nucha, with retraction of the head.

Paralysis is another occasional symptom, but complete paralysis of any muscle or group of muscles is less frequent than one would suppose from the nature of the malady. It may occur early, but is sometimes a late symptom. It may be limited to one or two of the limbs, as the legs, or an arm and a leg, or it may be more general. In a case occurring in Roosevelt Hospital, and published in the *NEW YORK MEDICAL RECORD* for October 10, 1878, the patient, a boy of ten years, was unable to move his legs one hour after the commencement of the disease. This sudden development of paraplegia in the commencement of cerebro-spinal fever resembled that of infantile paralysis, and was probably due to the same cause, to wit, active inflammatory congestion of the anterior cornua of the spinal column. The sudden and complete loss of speech which occurs in certain cases, when consciousness is retained and the vocal organs are in their normal state, seems to be due to the fact that the portion of the brain which controls the function of speech is acutely congested, or is the seat of effusion. Thus, in

June, 1882, a girl of three years, whom I attended, lost her speech on the second day of cerebro-spinal fever, and she was unable to articulate even the simplest word for two and a half months. Finally she began to utter slowly and with difficulty the easiest monosyllables, and now, after a lapse of more than a year, her speech is slow and lisping, while her hands are tremulous and unsteady. She is easily fatigued and cries often from over-sensitiveness. During the long period of speechlessness she daily made efforts to talk, but without uttering a sound. Strabismus, to which we will allude hereafter in treating of the eye, is a common symptom, either transient or protracted, due to paralysis of certain of the motor muscles of the eye.

Paralysis of more or fewer muscles has been noticed and recorded by many observers in this country and in Europe. Dr. Law observed a patient in the epidemic of 1865, in Dublin, who could move neither arms nor legs, and Wunderlich saw one who had paralysis of both lower extremities and a considerable part of the trunk. As this symptom is due to the inflammatory process in the cerebro-spinal axis, it usually disappears in a few weeks as the inflammation abates and absorption of the inflammatory products occurs, but it may be more protracted. In Wunderlich's case there was only partial recovery from the paralysis after the lapse of five months.

Clonic convulsions have already been alluded to among the early symptoms of the attack. They indicate a grave form of the disease, and are not infrequent in young children, in whom they appear to occur in place of the chill which is common in those of a more advanced age. The eclamptic attack may be short and not repeated, or it may be protracted, or return again and again when the medicines which control it are suspended. Under such circumstances it is apt to end in profound coma, and is, of course, a symptom of great gravity. Thus an infant of seven months had unilateral eclamptic attacks daily during the first week of the attack. The mother informed me that the convulsions seldom lasted longer than three minutes, and that the intervals between them were short. The child recovered with loss of sight from the cerebro-spinal fever, but still after the lapse of a year, when I examined him, had symptoms which were apparently due to hydrocephalus. Another infant of eleven months had clonic convulsions nearly constantly during the first twenty-four hours, but with occasional brief intermissions. On the following day he was in profound coma, and apparently dying, with a temperature of 105°. To my astonishment he gradually emerged from the state of unconsciousness, and after a week was able to sit in his cradle long enough to take drinks.

Occasionally eclampsia does not occur in the first days, but in the second or third week, when it is usually accompanied by an increase of other symptoms, due to a recrudescence of the disease. A female infant, aged eleven months, treated by me in 1882, had been sick one week, when, during an increase in the febrile movement, she had one eclamptic seizure. Her recovery though slow was complete. A boy, aged eleven and one-half years, whose attack began with a chill, violent headache, and a febrile movement, and whom I visited frequently, died on the fourth day. Clonic convulsions did not occur in his case until within twenty-four hours of his death, when he had six seizures, which ended in coma.

Though adult patients are much less liable to eclampsia than children, they are not entirely exempt. A male patient, aged twenty-eight years, whom I saw in consultation, had a single clonic convulsion lasting ten to fifteen minutes on the third day of his illness. In five weeks he had fully recovered, except that his headache returned upon any excitement. Even drinking a cup of beer caused it. Clonic convulsions are, however, much less common than tonic muscular contraction and rigidity already alluded to. This occurs to a greater or less extent in nearly all cases, and is a symptom of diagnostic value, the rigidity often extending to the muscles of the

extremities. Thus in a child, aged three years, who had no eclampsia, the tonic contraction of the muscles of the extremities did not relax till after the twelfth day.

Choreic or choreiform movements are occasionally observed. I do not allude to the tremulousness which sometimes occurs from weakness, or as a premonition of eclampsia, but a movement which has the character of true chorea. An infant, aged ten months, began to have choreic movements during the acute stage of the disease, most marked in the upper extremities, and ceasing in sleep. They continued during the remainder of the life of the child, death occurring ten months subsequently of diphtheria. Rarely a choreiform movement of the eyes is also observed, a lateral movement from right to left and left to right. I have seen from recollection two such cases.

Drowsiness, already alluded to, is a common symptom, and it exists in all grades, from slight stupor to profound coma. In some patients it is present from the first hour, while in others it occurs after a period of restlessness or delirium, or it alternates with it. Stupor more or less profound is common after the attack of eclampsia or the chill. That it is a frequent symptom in severe cases receives ready explanation from the state of the brain and its meninges, for the exudation which occurs upon the surface of the brain and the serous effusion within the ventricles are sufficient to cause it, by compressing the cerebral substance. It is surprising in some cases how profound the stupor may be, a state indeed of coma, and yet the patient gradually emerges from it and recovers. In the epidemic of 1872, in New York City, when the malady was new to us, many physicians predicted certain death, and employed remedies without expectation of any benefit, on account of the apparently hopeless state of patients, who seemed to be in profound coma, and yet not a few of them gradually and fully recovered.

Digestive system.—Vomiting, which is the most prominent symptom referable to the digestive system, has already been alluded to. Occurring early in the disease, it may cease in a few hours, or not till after several days, and often it returns during the periods of recrudescence, which are common in the progress of the fever. It occurs with little effort, and without previous nausea, or with little nausea, as is usual when it has a cerebral origin. It does not differ as a symptom from the vomiting which is so common in other forms of meningitis. The substance vomited consists of the ingesta and the secretions, as mucus and bile. Having a similar origin is a sensation of faintness or depression referred to the epigastrium.

The appetite is usually impaired or lost during the active period of the attack, and it is not fully restored till convalescence is well advanced. Occasionally considerable nutriment is taken, and with apparent relish, as by one of my patients, twenty-eight years of age, who always had some appetite. Ordinarily, on account of repeated vomitings, constant febrile movement, impaired appetite and digestion, patients progressively lose flesh and strength, so that in protracted cases emaciation is always a prominent symptom, and is often extreme. Great emaciation and loss of strength, which attend many cases after the lapse of several weeks, greatly diminish the chances of a favorable termination. Thirst, already alluded to, and constipation are common in this as in other forms of meningitis, but retraction of the abdomen is not a notable symptom, except in protracted and greatly wasted cases. The diarrhoea which is occasionally present in cerebro-spinal fever in the summer months must be regarded as a distinct disease and a complication. The tongue, buccal, and faucial surfaces present nothing unusual in their appearance. It is seldom that the sordes and dry and brownish fur occur, which are so common in typhus and typhoid fevers, even in the most protracted and emaciated cases. The tongue is usually moist and but slightly furred.

I have seen in consultation two patients that perished

early with inability to swallow as the prominent symptom, attended in both by an abundant secretion upon the faucial surface, without any redness, swelling, or other evidence of inflammation. The early death of these young children, whose ages were ten months and two years, rendered the diagnosis less certain than in most other patients, but the attending physicians as well as myself diagnosed cerebro-spinal fever with suddenly developed paralysis of the muscles of deglutition, so that no nutriment could be taken. If our understanding of these interesting cases were correct, the paralysis was caused by lesion of that portion of the medulla oblongata which controls the function of deglutition, or else from injury of the intra-cranial portions of the nerves which supply the muscles concerned in this act. The following were the cases alluded to:

O—, male, two years of age, became feverish and dull, but without vomiting, on October 22, 1882; axillary temperature, 102°. On the following day the inability to swallow occurred, and the muscles of deglutition appeared totally inactive. Death occurred on the third day, suddenly, and apparently easily, as if from arrested function of important nerves, especially the pneumogastric. The abundant secretion of thin mucus or transudation of serum covering the faucial surface, and reaccumulating as soon as removed, without any notable change in the appearance of the fauces, was remarkable. The physician in attendance, who for more than thirty years had had a large city practice, had seen no similar case, nor had I at the time.

Soon afterward the second case occurred. An infant of ten months, without cough or embarrassment of respiration, or faucial redness or swelling, lost the power of deglutition soon after the commencement of the supposed cerebro-spinal fever, so that in the attempts to swallow the drinks entered the larynx, and the secretion or exudation was abundant as in the other case. Death occurred in forty-eight hours. The rectal temperature was only 101°.

In another case, ultimately fatal, and in which the diagnosis of cerebro-spinal fever was certain, a robust girl, aged twelve, suddenly lost the power of deglutition at one time during her sickness, although she was entirely conscious and repeatedly endeavored to swallow. The ability to swallow returned in a few days.

(To be continued.)

IMMEDIATE OPERATION FOR LACERATION OF THE PERINEUM.¹

By R. C. M. PAGE, M.D.,

NEW YORK.

It has been, and is now a question, in cases of laceration of the perineum during parturition, whether the immediate or the secondary operation should be performed.

In cases of slight rupture no operation may be absolutely necessary, as the parts may, and frequently do, heal sufficiently to render the perineum nearly as good as it was originally.

In cases of extensive rupture, however, all authors agree that one or the other operation must be performed, since it is the rare exception for such lacerations to heal by first intention when left to themselves. I do not remember ever to have seen one. Lusk, in his work entitled "The Science and Art of Midwifery," page 576 (New York: D. Appleton & Co., 1882), says: "Only a very credulous person really believes that he has witnessed union by first intention in extensive ruptures as the result of tying the knees together and enjoining rest upon the side."

Playfair, of London, recommends the immediate operation, even in the severer forms of rupture extending back to, or even through, the sphincter ani. He also recommends the immediate operation in slight cases, in

¹ Read before the Northwestern Medical and Surgical Society, November 21, 1883.

order to make sure of union by first intention, and for this purpose he uses one or two interrupted sutures of silver wire or carbolized catgut at once. Edis, of London, is of the opinion that where the sphincter ani, or recto-vaginal septum, is not seriously involved so as to make the operation a serious or lengthy one, the immediate operation should be performed; but that the laceration may be so extensive, or from special causes the primary operation may not be deemed expedient, and the secondary operation will then have to be performed later on.

Lusk (*op. cit.*, page 576) says: "To the immediate operation there can be no valid objection. It is not difficult, it is not extremely painful, and its performance, as a rule, diminishes the risks of infection and shortens the puerperal period. In private practice failure is the exception."

Hospital statistics regarding the immediate operation for lacerated perineum appear to be for the most part wanting. From inquiries made, however, at the various lying-in hospitals in this city, I learned that it was always performed when necessary, and that the result has been usually successful. Dr. H. Frankenburg, of Bellevue Hospital, reports 18 cases recorded at the Emergency Hospital; of these, 11 were cured and 7 were failures. Dr. Kate Parker, of the Infant Asylum, reports 4 cases as recorded at that institution; of these 2 were cured and 2 failed. Dr. C. Remsen, of the Nursery and Child's Hospital, reports 2 cases, both cured, and Dr. Stanton Allen, of the Lying-in Asylum, 85 Marion Street, reports 1 case; it was operated on a short time ago by the attending physician, Dr. Henry D. Nicoll, and union was perfect.

Of a total number of 25 recorded hospital cases, therefore, 16 were cured and 9 were failures.

These few statistics are insufficient to warrant any decision on the subject, but they go to show that even in hospital practice the immediate operation is frequently successful; more so now, perhaps, than it was eight or ten years ago. Dr. W. R. Gillette, in the "Report of the Lying-in Service of the New York Charity Hospital, 1875," states under head of Forceps Deliveries: "The perineum was lacerated to the second degree in two cases. The rents were sewed up in each case by silver wire, but with generally unsatisfactory results. It is the practice of our service to sew up all rents of the perineum immediately upon their occurrence. The results are hardly such as to encourage us in the continuance of the practice, for we never get complete union when the perineum is entirely torn through. In rents of the second degree we occasionally succeed. The superficial rents of the perineum seem to unite just as well when we treat them by the postural method of tying the legs together." The results in cases of the secondary operation, as recorded at the Woman's Hospital in this city, are, I believe, much more favorable than those obtained by the immediate operation in the various charitable lying-in hospitals. It must be remembered, however, that patients at the Woman's Hospital are usually from the better classes, and have surroundings and conveniences equal, if not superior, to those that can be obtained at any hotel or private residence. They should, therefore, be properly classified among those in private practice.

The total number of cases of lacerated perineum admitted to the Woman's Hospital since its opening in April, 1855, up to September 15th of the present year, is 809, of which 26 were not treated or the result was not stated. Of the remaining 783 cases in which the secondary operation was performed, 364 have been recorded as "laceration of the perineum and cervix uteri." They must, therefore, be omitted, since of those reported improved it is not stated whether the perineum or cervix uteri is meant. Of the remaining 419 cases, 313 were cured, 83 were improved, 21 were not improved, and there were two deaths—one from rapid septicemia, with metastatic parotitis following the operation, and one from a supervening attack of pneumonia.

Whatever be the result in hospitals, failure of the immediate operation in private practice is the rare exception. Of a collection of 100 cases, including all degrees of rupture, 90 were cured, 9 improved, and 1 was not improved. The latter was due to hemorrhage from the wound. In the 9 improved cases union was incomplete, and in each case a small fistulous opening into the vagina remained. This was doubtless due to the cutting out of sutures.

So far as regards these two operations, therefore, I believe that, other things being equal, the immediate operation in private practice, at least, is as uniformly successful as the secondary. This being true, there are numerous evident reasons why the immediate operation should be performed. It can but fail, and in that case the secondary operation can be performed afterward.

In slight cases there is no necessity for anesthetics, but where the laceration is extensive they may be required. The wound should be thoroughly cleansed with a three per cent. carbolic or other antiseptic lotion before closing it, and, as an additional precaution, a sponge wrung out of the same material may be placed against the os uteri during the operation. In cases of extensive rupture, extending into the rectum and high up in the vagina, these parts may be closed first with carbolized catgut sutures, after Simon's method. The rest should then be closed by means of the interrupted suture. Giving opium for the purpose of constipating the bowels is bad practice. If the patient can pass her urine let her do so; it does not in the least interfere with the operation, and the use of the catheter is not only inconvenient to all parties, but almost certain to cause cystitis. During the after-treatment the vagina should be carefully syringed out about twice daily with a tepid three per cent. carbolic or other antiseptic lotion.

The sutures should be made to embrace an abundance of tissue—half an inch or more on each side of the line of rupture—otherwise they do not bring the parts together properly, and are likely to cut out. They should be removed on the seventh or eighth day, and not before. Want of attention to these points, as well as to antiseptic precautions and a lack of proper care and intelligence during the after-treatment, are the chief causes of failure in this, as in the secondary operation. In my opinion, atmospheric conditions have but little influence on the result.

In regard to the kind of suture used, I have had little experience with any but the ordinary interrupted suture, such as is generally used at present. I do not think that there is any particular advantage in the *serres fines* of Vidal, as recommended by Mann and Garrigues, even in slight cases; and the quill suture is both clumsy and untrustworthy, inasmuch as it does not go entirely around the wound.

Regarding materials for sutures, there are only three that I shall consider necessary to mention in connection with this operation. They are silver wire, silk, and catgut.

In operations for vesico-vaginal fistula and the like, it is often difficult, if not sometimes impossible, to tie a suture with the proper degree of tension in so confined a space. In such operations silver wire has no substitute worthy of mention. The degree of tension can be perfectly regulated by simply twisting or untwisting the wire, whereas, if silk or catgut be used, the knot when once tied has to remain so, or else a new suture must be introduced. It was for such cases that silver was originally intended by its great inventor, as every one knows, but in time it came into general use, as being more aseptic than silk and less liable to cut the tissues. This was undoubtedly true. With the present methods of rendering silk aseptic, however, I believe that for general use, as in perineal operations, it is equal in these respects to silver wire, besides possessing the additional advantage of giving the patient no inconvenience while *in situ*, does not interfere with cleansing the parts, and causes no pain

in removing it. Catgut had the objection to it of being too quickly absorbed. Kocher, of Berne, however, appears to have overcome this difficulty by placing it in oil of juniper for twenty-four hours, and then in alcohol (ninety-five per cent. strength) for preservation. At the time of immediate use it may be dipped in a five per cent. solution of carbolic acid. (Pilcher, "Treatment of Wounds," p. 112. New York: W. Wood & Co. 1883).

When the immediate operation has not been performed, or has failed, the secondary operation should not be deferred any longer than is necessary to get the patient in proper condition—two months or so from the date of delivery. For this purpose tonics should be given, if necessary, and the general health attended to.

31 WEST THIRTY-THIRD STREET.
November 24, 1883.

ON THE USE OF PEPTONES IN DISEASE.

By J. W. FRANKL, M.D.,

(NEW YORK.)

WHEN the immortal Stokes requested that his epitaph should symbolize the lesson of his life in the memorable words, "He fed fevers," he pointed out clearly and unmistakably the direction that the therapeusis of the future should take.

Gradually our faith in specifics has been rudely shaken; slowly pathology has demonstrated that disease is, in many instances, self-limited, and must run a definite course. But while we may have lost that confiding faith in some of our remedies, this very fact has directed more decided attention to those conditions, in health and in disease, which tend toward the conservation of the vital forces.

The physiology of digestion has naturally received marked and distinguished attention, and although the process of digestion with all its inherent difficulties still, and probably always will present unexplained phenomena, the progress of the past score of years has added mightily to our former crude notions. From the simple idea that albuminous substances were all alike, their number has multiplied, each presenting attributes sufficiently marked to make them separately recognizable, and similarly, in contrast to the former opinion, that this one albumen when changed into albuminose, as it was formerly called, constituted the great assimilable albuminoid body, we now know many which, under the generic title of peptones, constitute quite a group of absorbable substances.

It is well established that the gastric, the pancreatic, and intestinal juices, each in succession from above downward, act upon the food (the function of the bile we will not here consider). Each in turn has an action which results in the conversion of albuminous compounds into different peptones—the latter juices giving rise to the simultaneous production of certain products of decomposition (skatol, indol, tyrosin, leucin, etc.). At one time it was thought that the peptones were themselves products of decomposition, but this view has been proven erroneous, and still further, it has fully been shown by Poehl, Henniger, and others, that they are easily reconvertible into albumen.

The convincing and excellent monograph of Dr. Poehl, of St. Petersburg (quoted in an editorial of THE MEDICAL RECORD of July 21, 1883, p. 72), helped to establish the fact that the peptonization of albumen is a hydration simply, and not a product of decomposition. Further, that peptone can be reconverted readily into albumen, and that chemical analysis reveals no characteristic difference between albumen and peptone, and that the optical properties of the two bodies are also entirely alike. This latter Poehl correctly thinks could not be true if the two bodies possessed any real chemical difference.

Acting upon the proposition that peptone is a modification, not a decomposition product of albumen, Ploss

and Gyergyoi, some ten years ago, and subsequently Maly, Adam Kiewiez, and others, undertook a series of experiments upon animals, and later upon man, by substituting peptone for albumen in their food. Their anticipated results were fully realized by seeing the subjects of these experiments not only remain alive but very markedly gain in weight. It was these investigations which furnished the basis for the use of peptonized foods in practice. In Germany they soon established a place for themselves, later in England, and later still in the United States. But in this, as in all matters of progressive scientific thought, the great body of the profession fail to realize their importance. There has ever been an antagonism, though unspoken, between the demonstrable facts of the physiologist and pathologist and the application of remedies based upon these by the practicing physician. Accustomed to the use of beef-teas and meat extracts, he clings to them with unwarrantable tenacity.

No one better understood the shortcomings of beef extracts as an article of nutrition than did Liebig himself. In *The Lancet* of November 11, 1865, he himself admits how much more preferable would be a preparation of meat containing its albuminous portion, instead of beef extracts, if only it could be brought within the means of our patients. The force of these remarks is still better appreciated when we consider, first, that the albuminous constituents of meat coagulate at a temperature far below the boiling-point of water, and that soups and broths therefore must necessarily contain but little albumen. They contain only the extractive matters—namely, the flavoring constituents, some of the organic and some of the inorganic salts, and a small percentage of gelatine. As nutritive substances these must manifestly be inadequate. Cold infusions of meat, especially with an addition of diluted muriatic acid, give better results as to the percentage of albumen, but even this does not contain, according to Voit,¹ more than 1.15 per cent. of albumen, so that six ounces do not contain more than half a drachm of albumen.

That such preparations have a value as stimulants, as tonics and appetizers in those suffering from debilitated stomachs, cannot be questioned. But the problem that we must still seek to solve is, cannot we maintain the general nutrition at a higher standard, and prevent the marked loss of tissue in prolonged febrile movements and in other conditions in which digestion is prevented? If the tissues require albumen in health, surely the same requisite exists in diseased states. But if the digestion is so at fault, as is the case, that the administration of ordinary albuminous food is out of the question, then is it not possible to peptonize the albumen as to make it sufficiently assimilable in these conditions? To peptonize by the use of pancreatic emulsions appears to us to permit the possibility and probability of inaugurating, coincidentally with peptonization, some of the decomposition already spoken of which takes place in the intestine as one of the actions of pancreatic juice. Peptones, for this reason, seem eminently more desirable for this purpose. *Still further, is it not reversing the order of digestion to begin in the stomach with pancreatic digestion?*

Seeking to place my theoretical deductions upon the basis of practical application, I began the use of one of the preparations of peptonized beef, using for this purpose "Rudisch's" preparation of the "sarco"-peptones.

The careful analysis of Dr. Endemann, of this city, informed me that it contained over thirty-six per cent. of peptones. Further, it was not objectionable in its flavor. My experience has enabled me to collate the following facts, and I am much pleased to state that the results have in many instances exceeded my most sanguine expectations. First, as to the age at which sarco-peptones are admissible: I have used them for four weeks in an infant eighteen months old. Children bear them equally

¹ Herrmann: See *Handbuch der Physiologie*, vol. vi., part 1., p. 448.

well with adults. Secondly, as to the diseases in which they have been used. Among many cases in which they have been faithfully tried, I refer to the following, not as specially selected, but simply as typical cases: In three cases of typhoid fever; in one the patient was fed exclusively on sarco-peptones for two weeks, and in two cases for six weeks; in two cases of chronic pneumonia, in both cases for four weeks; in one case of acute pneumonia, for eight days exclusively, milk being vomited; in one case of fracture in an aged person, for a week exclusively; in one case of icterus catarrhalis; in two cases of rheumatism, one complicated with Bright's disease, in one used exclusively for four weeks; in four cases of vomiting—one of pregnancy, one of anæmia after parturition, one of gastric catarrh after diphtheria, and one of cancer of the stomach, it was used with excellent results; in one case of pelvic peritonitis it was well borne; in one case of post-partum hemorrhage; also in a case of diabetes and gangrene.

The above cases sufficiently well illustrate, first, that the sarco-peptones are borne by the stomach when milk is not retained; secondly, that their nutritive value is beyond that of milk, judging from the better condition of my patients, and of beef broths; thirdly, from its readily assimilable form, even infants can be nourished by it, when milk is rejected. I have caused diligent inquiry to be made among my friends and acquaintances in the profession as to their success in the use of the sarco-peptones. The replies were uniform with my experience. I feel certain, however, that I cannot do more wisely than to quote from a letter from one whose dictum always receives the attention and marked consideration which, coming as it does from such eminent authority, it certainly deserves. Dr. A. Jacobi says: "I commenced the use of peptonized beef a very short time after Leube taught the preparation and indications of his 'meat solution.' For many years I employed it, both by mouth and by rectum; by mouth, either undiluted, by the teaspoonful or dessertspoonful, or diluted in beef broth, or with tomato sauce, etc.; in the rectum, diluted with warm water in different proportions. There are some facts which need not be proven, but which merely require application. Such a fact appears to me the great usefulness of a substance which has already been peptonized, *i. e.*, digested, over one whose claims on the functions of the stomach begin as soon as they enter the stomach. Thus, without going into specifications, I remember a few cases of cancer of the pylorus, in which the violent vomiting stopped entirely for some time, and immediately, when nothing but Leube's solution was introduced. These cases occurred even at a time when there was but a single place in New York City where the 'meat solution' was for sale, and when the preparation, in regard to uniformity and reliability, left much to be desired sometimes. This latter circumstance has often deterred me from using it when I might have derived great benefit from its use, but the sad fact will always remain, that the main necessities of the human species in regard to food and medicines are not also the main objects of the individual manufacturer and tradesman.

"I have also used it in cases of thorough hydræmia, slow convalescence, and all those conditions in which the stomach does not prepare its own solvent and digesting fluids. Wherever there is a mucous membrane and lymphatics, a genuine peptone ought to be, and is absorbed. Atrophy of the glands of the stomach, with its absolute apepsia, is one of the best indications for its use. A certain degree of gastric catarrh does not form a contra-indication, least of all, intestinal catarrh.

"Here I desire to direct your attention to the difference in the effects of peptones and 'beef-tea.' In cases of intestinal catarrh with diarrhoea, the latter—so frequently resorted to in general practice—is apt to be injurious by the concentration of salts in it, perhaps also for some other reason; peptone, however, is not only easily tolerated, but is beneficial, for the reason that it

is absorbed before it reaches the diseased surface. On the condition of the latter when in contact with peptone or anything else everything depends. An inflamed mucous membrane does not absorb, and therefore to administer peptones in a serious form of gastritis, or to inject it into an inflamed rectum, is worse than letting them alone.

"I believe it took years after Professor Lenbe's publications before the manufacturing interest became aware that there was 'money' in the preparation of peptones. The meat solution has a very strong aromatic taste and flavor. It is true that some patients take it well and long, but some object to both those properties from the beginning, or get tired of the preparation very soon. These objections have been the reason for many attempts at producing other preparations of similar nature.

"I have no doubt there are a great many good and reliable ones among them, and the fickleness of the individual taste must often direct the selection of the required article by the physician. I, for my part, have for a long time preferred Rudisch's preparations, particularly his 'Sarco-Peptones.' I have been told that you have experimented a great deal with the same. My reason for preferring it has been, the absolute uniformity and equality of the specimens, and the fact that patients, as a rule, have been willing to take it for a long period in succession. I give it unmixed in teaspoonful or half-teaspoonful doses every half-hour, hour, or two hours, or dilute it with broth, or spread it on stale bread or toast, or mix it with water for rectal injections. For months I have used no other preparation, being satisfied with having at least one which was reliable. I do not mean to say that there are not just as good and palatable ones besides, but I am guided in my selection of that preparation simply by the fact that I have done well with it and cannot expect to do better. I have acted on the same principle which teaches me to demand in many of my prescriptions the drugs of Squibb, knowing that those articles are pure, uniform, and reliable, without meaning to say that his competitors could not furnish the required article just as pure, uniform, and reliable.

"Taking it for granted that you desired to hear from me neither reports of cases nor elaborate communications, I submit to you, dear doctor, the above remarks, brief and fragmentary though they may be, as the general result of my personal observations and experience.

"I know that many of my cases of hydræmia, slow convalescence, chronic disease of the stomach, many cases of gastric dyspepsia, inanition brought about by rachitis and scrofula, and infectious fevers, have been greatly benefited, to say the least, by peptone. Very respectfully yours, A. JACOBI."

CAN INSANITY BE PHILOSOPHICALLY DEFINED?

By J. LEONARD CORNING, M.D.,

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BEFORE proceeding to the specific discussion of the subject of this enquiry, let us first ask *what is a definition?* "The simplest and most correct notion of a definition is," according to John Stuart Mill, "*a proposition declaratory of the meaning of a word.*" And in concluding his chapter on "Definition," this able writer further says: "In giving a distinct connotation to the general name, the philosopher will endeavor to fix upon such attributes as, while they are common to all the things usually denoted by the name, are also of greatest importance in themselves, either directly, or from the number, the conspicuousness, or the interesting character, of the consequence to which they lead."

In order to select such attributes as are common to all the things denoted by a name, it is first necessary to have an accurate register of all such things.

Now, in reviewing the various definitions which have been proposed for insanity, there is evident one defect

common to them all: They include only such attributes as the formulator of the definition in question considered rightfully belonged to the "disorder." The result of all this has been that there is not to-day a single solitary definition of that which, by some, is considered a disease but which in reality is a *complex of psychical manifestations* traceable to a variety of causes, all of which, to be sure, *result* in interference with the normal functions of the brain. But not only have the definitions themselves been formed by those whose conceptions of mental impairment have been more or less subjective and narrow, but the criticisms of such definitions have been pronounced from a standpoint not one whit more objective. Thus we read that Mr. A. objects to the definition of insanity promulgated by Mr. B., because it would include the abnormal mental manifestations of "alcoholism," or those occurring as the result of cerebral hemorrhage. Or, again we learn that the definition of Mr. C. is incorrect because it would include the mental condition of a man who has received a blow upon the head with a club. And yet such cases are surely not instances of mental sanity!

There was a time when the term insanity—meaning an unsound mind—was applied to only such as exhibited the symptoms of raving mania; and the definitions of the day, if there were any, must have been in accordance with that conception. Since then the range of phenomena included in the term has progressively increased, notably of late years. Consequently the definitions appearing from time to time during the last hundred years have represented in the main connotations of the forms of mental derangement *known at the time*. Whenever, therefore, these *soi disant* experts were asked to give an opinion respecting the mental health of an individual, they calmly ransacked such "forms" of insanity as their often obtuse perspicuity had served to register; and even though there might be *bona fide* evidences of mental unsoundness, refused to recognize it unless the same were found to correspond with some previously recorded "form" of mental aberration.

Imagine this method of procedure applied to the investigation of bodily ailments. What should we think of the clinician who, finding an individual utterly prostrated by disease, should yet refuse to recognize him as ill, simply because he was unable to identify his sickness with any form of malady previously met with by himself, or recorded in the books of others!

But if all the *forms* of mental derangement are not yet described, how are we to enumerate their common attributes in one comprehensive definition? In order to answer this question a simple retrospective glance at the evolution of mental science is all that is necessary. If all the various forms of insanity which have ever been described are placed side by side, and if we seek for one paramount attribute which is characteristic of each and every one of them, it will be found to consist in this: That they are all psychic manifestations of direct or indirect impairment of brain-function. And if it is desired to be still more explicit we can say that: *Insanity is the psychic manifestation of impaired brain-function*, consequent upon causes resident in the brain, or upon extraneous causes acting upon it (the brain). This definition will be seen to include not only all "forms" of mental disease already recognized; but also those forms of mental impairment, which, owing to flagrant inconsistency, as I believe, are not generally recognized as insanity. Of this, however, more hereafter.

Beside the known forms of insanity, this definition also includes all forms that ever can be recognized, provided it be conceded that the brain is the seat of mind. It is evident that this definition includes the case of the man who has received a blow upon the head, causing confusion of ideas or unconsciousness. Moreover, it also includes the case of a man insensible from the effects of cerebral hemorrhage. But such persons are certainly sufferers from mental ill-health; they are not

mentally sane, therefore they must be insane. An intermediate stage is philosophically unthinkable. Moreover, a term designed to connote morbid mental manifestations, should include more than one or several kinds of such manifestation. What, for example, would be thought of the clinician who should declare that a person with gastritis was unsound, whereas another suffering from pneumonia should be pronounced sound (or perchance neither well nor unwell!).

The pathology of corporeal disease is co-extensive with the limits of the entire body; the pathology of mind is as broad as the mind itself. Consequently any generic appellation designed to express bodily unsoundness should include within its scope *all* manifestations of bodily ill-health; consequently, also, any generic name designed to express mental unsoundness should include *all* manifestations of mental ill-health.

Scientifically, therefore, there is no "border line" between health and sickness; between mental sanity and mental insanity. An individual must be healthy or unhealthy; sane or insane. There is no "border land," except such a one as can be produced by an argument which, followed to its legitimate sequences, can only end in the most complete *reductio ad absurdum*. A subject cannot sit astride of the "border line," with one leg dangling in sanity and the other in insanity.

If, however, alienists, both practical and theoretical, still persist in calling certain groups of morbid mental phenomena insanity, and with equal persistency denominate other equally morbid phenomena *not insanity* (nor sanity!), how can a philosophical definition of mental impairment—of insanity—ever be anticipated?

The time has surely arrived to discard such absurd inconsistency, whether the same be the outgrowth of medico-legal, professional, or popular short-sightedness.

Legislation must indeed decide, even where the definition of insanity is strictly scientific, as to the degree of mental illness which renders an individual irresponsible *before the law*. But it does that now, in spite of the many clumsy and purely subjective efforts to designate *only certain* groups of mental disorder as insanity.

Things certainly cannot be worse than they are at present, and a broader and more scientific conception and definition of insanity is certainly a consummation "most devoutly to be wished."

THE THERAPEUTICS OF TYPHOID FEVER.

By VARIOUS AUTHORITIES.

TEMPERATURE.

AUSTIN FLINT.—1. By the employment of cold water externally in cases of typhoid fever, the temperature of the body may, after a variable time of the continuance of the employment, be reduced to 102° or lower.

2. After a period varying very much in different cases, and, also, at different times in the same case, the temperature, as a rule, again rises as high as, or higher than, before the reduction.

3. Repeating the employment of cold as often as the axillary temperature exceeds 103°, the number of repetitions required in different cases is extremely variable.

4. The sponge-bath and the wet sheet with sprinkling may be employed to the exclusion of the bath-tub in the antipyretic treatment in cases of typhoid fever, as well as of other febrile diseases.

5. These modes of employing cold water may be continued sufficiently long for the reduction of temperature to 101° or lower, and repeated as often as may be required, without risk of any immediate injury, and the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased.

6. Reductions of temperature by these modes as often as it rises, in the axilla, above 103°, improves the condition of the patient. The cases he has studied do not

afford proof either that the fatality of typhoid fever or that its duration is thereby diminished. The study of these cases, however, renders it impossible that this proof would be afforded by a larger collection of cases.

7. The results of the analysis of these cases, although not sustaining the statements of Liebermeister and others respecting the controlling influence of the employment of cold externally in cases of typhoid fever, yet not only show this method of antipyretic treatment to be safe, but afford encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life.

ALFRED STILLÉ.—It was formerly the practice—for years at least—to bleed and purge; but the exhaustion produced more than outweighed the advantage of the reduction of temperature. Experience has shown that mild diaphoretics, such as effervescing and neutral mixtures, sweet spirit of nitre, aromatic spirit of ammonia, and muriatic acid, are preferable to active cathartics. Another mode of treating the fever now fashionable is by cold water. This method has been adopted on the supposition that temperature is the sole evil. The method consists in immersing the body in water (68° F.) for five to fifteen minutes (according to the age and strength of patient), then wrapping him in dry blankets and giving a glass of wine. He is allowed to remain in the blankets some time. The bath is to be repeated when the temperature rises, say to 102°. In active cases in adults the baths are repeated at intervals of two hours. Persistent repetition is the essential part of the treatment. Cases are recorded in which two hundred such baths have been given. Ordinary cases require thirty or forty. It is claimed that all the typhoid symptoms are abated and the mortality reduced. If this were so, the method would become popular; but the fact remains that baths are not now favored outside of Germany, and by no means generally there. The high temperature is considered the evil, while in reality it is only a symptom of the disease, and never rises so high as, of itself, to necessitate active cold baths. The value of cold baths lies not in the reduction of temperature, but in the diaphoresis which they produce, eliminating the poison. The cold bath, with quinia and digitalis, has been said to reduce the mortality from twenty-seven per cent. to eighty per cent. But this boasted result shows only the advantage of this treatment over the old heroic treatment of venesection and purgation. It makes but a poor showing beside the result of the supporting treatment with no drugs whatever, the mortality of which in London, Paris, and this country is less than five per cent. The treatment by cold water, quinia, and digitalis has been abandoned in the Vienna hospitals, where its mortality was nineteen per cent. to twenty-five per cent. Liebermeister announced that by it the proportion of relapses and the mortality are increased. Others attribute to cold water the increase of hemorrhage, neuralgia, and pain in the limbs. But Liebermeister now admits that the nervous and all other symptoms are relieved, and ulcers prevented, by cold water. The treatment by cold water is probably of value when employed persistently. The method of using quinia is to give fifteen to forty-five grains in the evening, and its effect then is to reduce the temperature and keep it down for twenty-four to forty-eight hours. It is to be repeated when the fever rises. It will be seen that the direct antipyretic effect of quinia is greater than that of cold water. Binz holds the theory that quinia reduces temperature by weakening the power of the zymotic poison. He does not deny that quinia may kill by paralyzing the heart. Peacock, of London, and Niemeyer have both given up the use of large doses of quinia. Quinia in large doses is unnecessary, useless, and often dangerous. Sodium salicylate reduces temperature, but does not improve the typhoid state.

WILLIAM PEPPER.—Temperature is to be kept down by preventive measures rather than by the cold bath,

which is regarded as a *dernier ressort*. When temperature runs up in spite of drugs, the whole body is sponged every two hours—the sponges being squeezed out of a mixture of water and bay rum at a temperature of from 60° to 80°. If the patient's temperature still runs up he is wrapped in sheets wrung out of cold water. The only case in which the cold bath is used is in the first ten days, where the temperature rises above 103° and is not to be controlled by milder measures.

ALONZO CLARK.—When the temperature of the body runs very high, quinia is given in decided doses, or cold water is employed. In young persons the cold bath is the most convenient and efficient means of reducing temperature. The temperature of the bath used is just 10° below the temperature of the patient's body. The patient is allowed to remain in the bath for twenty minutes. If the temperature rises again, another bath is given.

ALFRED L. LOOMIS does not believe in the efficacy of cold baths or of large doses of quinia in arresting the development of typhoid fever. He maintains the temperature of the room in which the patient lies below 60° F. Frequent sponging of the body with cold water has been of service in his hands. As soon as the axillary temperature in the evening rises above 103° F. he places his patients in a bath of a temperature of from 70° to 80° F., and then gradually lowers that temperature until the patient's temperature begins to fall. When the patient's temperature reaches 103° he is to be taken out and put to bed. When his patients are too weak to be put in the bath he employs the wet pack. He regards cold baths as contraindicated by feebleness of the heart's action.

As an antipyretic he gives gr. xxx. of quinia in one dose, or gr. x. every half hour until gr. xxx. or xl. have been administered. He is in the habit of administering an antipyretic dose of quinia when the temperature has been reduced by the baths.

BELLEVUE HOSPITAL.—The treatment at present in vogue is that of quinine and baths. This was begun four or five years ago, and has received such favor that it is quite the routine now. The quinine is given differently. Perhaps the most popular way has been ten grains two or three times a day, the evening dose being doubled if the temperature rises above a particular height, say 105°. It sometimes causes gastric irritation, being given in powder form. If it is vomited pills are tried, and finally double doses by rectum. Quinia was used for a short time, and it reduced temperature like quinine, but irritated the stomach more. Baths in every shape are used, but the sponge-bath is the form most adopted. The patient's temperature is taken; if found above a certain height, he is stripped either entirely naked or perhaps only the upper half of the body. He is then sponged over with water at a temperature of from 60° to 80°. If only half the body is uncovered at a time, that part is allowed to dry, and it is then covered, and the rest of the surface sponged. This process is kept up for fifteen minutes. If that is insufficient to reduce the temperature, it is prolonged to half an hour. It is repeated every one, two, or three hours, according to the result obtained. At the end of the bath a little whiskey is generally given.

The effect of the quinine on the temperature is to reduce it slightly in a considerable number of cases. Its effect on the patient is to produce nausea and vomiting in a small number of cases.

The sponge-baths are almost always pleasant to the patient, if not too frequently repeated. If given every hour, or two hours even, they seem to weary and annoy him. They certainly reduce the temperature in most of the cases. In a small number of these the reduction seems to last for many hours. Sometimes two or three baths given in the afternoon and evening reduce the fever two or three degrees, and it keeps down for twelve hours. But it is not very rare that the baths are given every hour even, without producing very marked effect. The

sponge-bath is a much more efficient antipyretic than quinine. The wet pack is hardly used now. In one case where it was employed pneumonia complicated the disease. The plan of placing the patient in water at a temperature of 98°, and then gradually lowering it, has been tried a number of times, and so far no deaths can be traced to it. But these gradually cooled baths are uniformly annoying and depressing to the patients. They don't like them. Neither have they been proved to reduce temperature permanently any better than the sponge-baths do.

Several cases have been treated upon the Kibbee bed. Its action and effectiveness were similar to immersion in the bath-tub. It did not eliminate the fever from the disease.

The results of the treatment of typhoid fever patients at Bellevue Hospital within the past ten years have shown that large doses of quinia and that the antipyretic treatment by cold baths are unnecessary, and that the employment of mineral acids and of symptomatic remedies is sufficient.

STIMULANTS.

ALFRED STILLÉ.—When the skin is dusky, tongue dry and dark, and patient delirious, use superficial blisters to back of neck, sinapisms on the limbs and over the heart, mustard foot-baths, friction of chest and limbs with stimulating lotions containing turpentine or ammonia. Coffee is better than alcohol. Wine-whey, eggs, egg-nog. Beef essence. Cracker soup. Arrowroot. Alcoholics are not so early or so long needed nor in such quantities as in typhus. Hold alcohol in reserve for use when all else fails. Comparatively few cases require it. Oil of turpentine acts as a cardiac, vascular, and nervous stimulant, and is to be given when there is tympanites. It probably acts also locally on the ulcers. Give five to fifteen drops in emulsion or capsules every three or four hours. It accompanies the blood to all parts of the system and stimulates the capillaries to expel their stagnant contents; it also stimulates the respiratory mucous membrane, causing expulsion of mucus. With the exception of this last action, alcohol answers the same purpose as a stimulant. Hence, in mere prostration, give alcohol; if lung symptoms require treatment, prefer oil of turpentine.

ALFRED L. LOOMIS lays down the following rules with regard to the use of stimulants:

1. They are never to be administered indiscriminately—that is, they are never to be given simply because a patient has typhoid fever.

2. When there is a reasonable doubt as to the propriety of giving or withholding stimulants, it is safer to withhold them, at least until the signs which indicate their use become more marked.

3. In giving stimulants the effects of the first few doses are to be very carefully watched.

4. Stimulants are contraindicated by dry tongue, restlessness, increasing delirium, pulse, and temperature.

BELLEVUE HOSPITAL.—In the latter weeks of the disease in all cases, and during its whole course in many asthenic patients, an important indication is to sustain the heart-power. This is done by a free use of alcohol, whiskey being the form most used at present. The quantity is determined by the needs of the case, but where there is necessity it is not spared, one case being allowed twenty ounces daily for three days with good result. Some use ammonia as well as whiskey, but its action is considered less certain. When it is used the liq. ammon. acet. and the spts. ammon. aromat. are combined. Other symptoms are met by appropriate measures as they arise.

WILLIAM PEPPER.—Stimulants are not administered to patients under the age of puberty, as a general thing. They are only thought to be demanded by some one or more of the following indications, viz.: (1.) Ataxic nervous disturbances. (2.) Profound asthenia. (3.) Circulat-

ory disturbances. (4.) Dry and brown tongue with sordes. The milder forms of stimulus, such as wine-whey, are always used at first. When demanded, whiskey is given with lime-water—the latter being added to prevent coagulation—in the proportion of f ̄ ss. each of whiskey and lime-water to every f ̄ iij. of milk.

ALONZO CLARK.—Two-thirds of his patients have been found to do better without stimulants than with them. A good general rule is the following: *When alcoholics diminish the frequency and increase the force of the pulse, they do good.* In such cases they are given in a quantity sufficient to increase the force of the pulse, and to diminish the restlessness and suffering of the patient.

NERVOUS SYMPTOMS.

ALFRED LOOMIS.—*Headache.*—Warm fomentations are applied to the forehead. Among the anodynes the best for the treatment of this symptom are the bromides and chloral.

Delirium is generally relieved by chloral and opium. In some cases the best results follow the use of stimulants.

ALFRED STILLÉ.—There are two modes of expression of nervous symptoms—the ataxic and the adynamic. The ataxic condition lasts all through the course and denotes an active struggle. Delirium and subsultus belong to the ataxic. They are less dangerous than coma and exhaustion, which belong to the adynamic, and indicate that the typhoid poison has overcome nature. In dynamic the capillaries alternately contract, excluding the poison, and dilate, admitting it; while in adynamic they are continually dilated, admitting it. When the symptoms are ataxic, relieve them by superficial blisters to the nape of the neck, warm pediluvia, cold to the head, and heart stimulants. Give two grains of quinia every two hours as a stimulant. Wine of opium, the equivalent of one grain, as a stimulant to the system, and as adynamia comes on, supplement these by alcohol as a heart stimulant. Do not be over-hasty in giving quinia and alcohol.

ALONZO CLARK.—*Cough*, when it is the result of a catarrh, is treated either by the comp. tr. of benzoin, in ten-drop doses every three or four hours, or by means of the following combination:

R. Mist. guaici f ̄ j.—f ̄ ss.

Tr. balsam. tolu. gtt. vj.—x.

M. Sig.—Every two to four hours.

Occasionally, good has been accomplished by the inhalation of the vapor of warm water for an hour or two every day.

Restlessness is soothed by sponging the surface of the body with warm or cold water. In some cases a Dover's powder is required.

DA COSTA gives a one-grain suppository of opium three times a day. It quiets the bowels if there is any tendency to diarrhoea, and has a good influence over the disturbed action of the nerves. When the opium does not act speedily by the bowels, he gives one-sixth of a grain hypodermically. He finds a combination of digitalis and opium a good one—best suited to cases where there is also rapidity of the heart's action. To calm the nervous system the bromides are given in twenty-grain doses. When this fails, fifteen-grain doses of alcohol usually are effective. In these cases cold applications to the head are also indicated. Putting the patient into a warm bath will generally be found to relieve the delirium and wakefulness and produce sleep.

DIET AND HYGIENE.

ALONZO CLARK, regarding *diet*, believes in the steady and persevering administration of such food as can be absorbed by the stomach. Milk, beef-tea, raw eggs beaten up with water and made of such consistency that they can be eaten with a spoon, and expressed beef-juice, are all of value. Where one disagrees, another is

substituted. The expressed juice of beef is obtained by cooking a piece of steak so as just to crust the surfaces, and then squeezing out the juice with a lemon-squeezer. As the disease advances, the food administered is more and more sustaining. When the stomach fails to retain food, nutritious enemata are employed.

He considers plenty of *fresh air* as of prime importance to typhoid fever patients. He always insists that a window on the side of the room opposite the patient be dropped a certain distance from the top, even in the winter season, and that the patient be protected from the draft by the use of a screen.

The *alvine discharges* are always disinfected at once. The way in which this is done is by placing in the bed-pan or vessel a half pint or a pint of a solution of the sulphate of iron, just before it is to be used.

The *bed-clothes*, as soon as they are soiled, are removed from the bed and plunged into a tub of water, which is sufficiently impregnated with carbolic acid to secure effectual disinfection.

WILLIAM PEPPER.—Milk is regarded as the best diet during the stage of catarrhal inflammation. The milk is diluted with lime-water if the curd appears in the stools. Two pints of milk and lime-water, mixed, are given in the course of the twenty-four hours.

BELLEVUE HOSPITAL.—For the nourishment of patients milk is used exclusively, and as much is allowed as the patient can take. Usually a full glass of milk is taken every hour, lime-water being added in the few cases where the milk alone seems to disagree. The proposal of Sir Wm. Jenner to substitute beef-tea for milk does not find much favor in hospital practice, but among private patients where beef-tea can be properly prepared it is often employed. The demand is now so great that two of the New York restaurants prepare it daily for the use of the sick, and are able to dispose of large quantities.

ALFRED L. LOOMIS.—As diet he allows at first only milk diluted with lime-water, and later cream and the yolk of eggs in milk.

During convalescence he regulates the patient's diet with the utmost care, allowing no indigestible article of food.

GASTRIC AND INTESTINAL SYMPTOMS.

ALFRED STILLÉ.—For *flatus*.—Flatus may mechanically interfere with respiration and so with aëration of the blood. It may also interfere with digestion. Flatus is chiefly in the colon. It is not a secretion. Neither is it caused by increased decomposition of food, for but little food may be in the intestine. It is caused by the expansion of the gas on removal of the normal pressure caused by the tonicity of the muscular coat of the intestines, they in common with all other muscles being weakened. Mineral acids—muriatic, phosphoric, aromatic, sulphuric—every four hours. When the typhoid state is accompanied by a dry skin and a high temperature, sponge with cool or tepid water (this has no connection with the cold-water treatment). If the skin is wet with sweat, keep well dried and wrap in warm blankets.

For *tympanites*.—Endeavor to stimulate the intestines by oil of turpentine externally. Paint the abdomen with oil of turpentine, and apply to it a flannel cloth wrung out of hot water. Give enemata containing oil of turpentine. Put a teaspoonful of oil of turpentine into an emulsion and inject repeatedly. In nine cases out of ten enemata do not pass the sigmoid flexure. The action is by absorption and through the blood. Enemata or suppositories of assafoetida may be given. Use frictions with lotions. If turpentine fails, and the patient is suffering from flatus, do not fail to use the ice-bladder. When pain exists from other causes than flatus, use warm fomentations.

For *intestinal hemorrhage*.—Place the patient on his back, with his head raised and his knees drawn up. Apply the ice-poultice, chiefly to the iliac region, where the

hemorrhage probably originates. Give internally lead acetate, copper sulphate, tannic or gallic acid, or, which is probably the best, gallic acid with lead acetate. Ergot by the mouth or hypodermically.

For *pain*, give morphia or opium.

For *perforation*.—Absolute rest and opium (one grain) or morphia ($\frac{1}{4}$ grain hypodermically) hourly till the patient is tranquil. Give turpentine internally. Give no food for twenty-four hours. Give a little ice-water.

ALONZO CLARK.—*Hemorrhage from the bowels* is controlled, if possible, by absolute rest and doses of the fluid extract of ergot.

In *perforation of the bowels*, the patient is placed thoroughly under the influence of opium.

Tympanites.—Cold compresses are applied to the abdomen, and covered with oiled silk. Where this fails a stimulating injection is given, consisting of one-half pint of a solution composed of Labarraque's solution, 1 part, and water 16 parts. In other cases, from 8 to 10 drops of the spirits of turpentine are given in mucilage.

Diarrhœa he manages by the following :

R. Bismuth subnit. 3j.

Morphiæ sulph. gr. j.

M. Et. in chart No. xii. div. Sig. One to four a day.

Other astringents which he has found to be of service are tr. kino, tr. catechu, and decoction of blackberry root.

PEPPER regards the specific follicular catarrh of the intestines as of great importance in the determination of the treatment. He holds that there are a number of remedies which exert a powerful influence upon this catarrh. The first of these is the nitrate of silver, which reduces the size of the enlarged follicles, relieves the inflammatory engorgement, and allays the hyperæsthesia of the nerves. So too do carbolic acid and the sub-nitrate of bismuth. He prefers the nitrate of silver, and only substitutes carbolic acid in its place when some putrid element is present. The nitrate of silver is given in quarter-grain doses four times daily. Opium in pill form is combined with the silver when the diarrhœa is excessive. From one-quarter of a grain all the way up to one grain of opium is given three or four times daily. If the bowels are constipated, belladonna is substituted in the place of opium.

BARTHOLOW, for diarrhœa, recommends tr. iodine, gtt. v., well diluted with water, in the treatment of typhoid fever. Under this—one of the German (so-called specific) plans of treatment—he says, “with proper diet and nursing, the mortality is much diminished.” The same writer, for the diarrhœa of that disease, prefers the following :

Liq. pot. arsen. gtt. ij.

Tr. opii. gr. iv.

Repeat as often as required.

ALFRED L. LOOMIS.—*Diarrhœa* as occurring early in the course of the disease, he allows to go untreated. When it comes on in the third or fourth week he controls it by means of opium.

Tympanites he relieves by the application of turpentine stupes to the abdomen.

Hemorrhage is treated by absolute rest, opium internally, and ice-bags applied over the abdomen.

DACOSTA.—*Intestinal hemorrhage in typhoid fever*.—Ergot by the mouth with hypodermic injections of whiskey, with a little ammonia, constitute Dr. DaCosta's main reliance. The dose of ergot is 20 minims every three hours. The injection is composed of from 3 to 5 drops of aqua ammonia with 30 minims of whiskey.

LARYNGEAL AND PULMONARY SYMPTOMS.

ALFRED L. LOOMIS.—*Bronchitis* he has found amenable to dry cupping and the internal administration of the carbonate of ammonium.

Laryngitis.—A small blister is applied on either side

of the angle of the jaw, and the whole neck enveloped in a poultice.

ALFRED STILLÉ.—For *bronchial trouble* use expectorants, stimulants, as ammonium carbonate. Be careful not to disorder the stomach by cough-mixture. Probably the best method of medication is by inhalation. Use in this way oil of turpentine, balsams, ammonium carbonate of chloride, and carbolic acid. In *gangrene of the lung* use free inhalations of carbolic acid; give quinia in tonic and alcohol in stimulant doses. The food throughout typhoid fever should be unirritating. Avoid all solids as long as possible, even after convalescence. When you commence to give solids, give pepsin immediately afterward, for the stomach is not used to supply sufficient gastric juice, and must be assisted. Avoid all muscular efforts.

DaCOSTA.—For *pneumonia*, turpentine internally, with morphia enough to keep the turpentine from irritating the bowels and bladder. His local treatment of the chest consists in the use of dry cups and turpentine stupes. Twelve grains of quinia are given daily. Dr. DaCosta is a strong believer in the value of turpentine in the pulmonary complications of typhoid fever. In the vast majority of such cases stimulus is needed, about eight ounces of whiskey and four ounces of wine being given in the twenty-four hours.

For *parotitis* ice is steadily applied to the swollen gland. If suppuration takes place in spite of the ice, poultices are at once applied, and the pus released by an early incision. Dr. DaCosta's internal treatment consists in gtt. xx. of the tincture of the chloride of iron every three hours, and gr. xij. of quinia, and f ̄ iv. of whiskey daily.

GENERAL POINTS.

ALFRED STILLÉ.—Typhoid fever must and will run its course under any treatment. No treatment can abridge it; but bad treatment may prolong it, or convert a favorable case into a fatal one. Many cases need no active treatment. Mild ones need only quiet, rest, ventilation, and good nursing. Support the system. Diluent drinks, soups, farinaceous food. In more severe cases several elements require treatment. First, the *diarrhœa* requires attention. Some say to cautiously encourage it, regarding it as nature's effort to throw off the poison. It is highly probable that mild purgatives in the first stage are often advantageous. My impression is very decided that this practice has both reason and experience to support it. First, use calomel, and then mild salines or oil. Use no laxatives at all after the first week. When there is constipation, use enemata. Do not use them unless the indication is evident. If an accumulation occur, remember that the colon and rectum are healthy. For excessive *diarrhœa*, use chalk mixture, bismuth grains xx. to coat the intestinal ulcers, catechu, logwood, kino, rhatany, blackberry root. Lead acetate and silver nitrate are less safe. Astringent enemata may be given, containing small portions of opium.

For *debility* in the latter stage, from nervous strain, intestinal lesions and *diarrhœa*, cinchona and its preparations are at the head as tonics. This debility may follow any severe disease, but is greatest in typhoid fever. It is not the typhoid state, but usually follows it, but may coexist with it. Stimulants, too, must be judiciously employed until food can be assimilated. They are required when the pulse is feeble, skin cold, features sunken, and patient muttering, listless, and weak.

ALONZO CLARK is in the habit of administering some mineral acid in all cases of typhoid fever—hydrochloric is that generally employed—but does not think much of the German treatment by iodine or calomel.

Bed-sores.—Nothing has been found so effectual for their prevention and treatment as a water-bed. Where this cannot be obtained, the best substitute is the padded ring, or a rubber ring filled with air.

ALFRED L. LOOMIS.—*Bed sores* are prevented by fre-

quently bathing the parts with camphor. If the sores penetrate the integument they are washed with a weak solution of carbolic acid and afterward covered with lint smeared over with vaseline.

WILLIAM PEPPER.—The poisoned state of the blood is controlled by means of quinia and salicylic acid. The latter has been found to be very valuable in this condition as a disinfectant. Quinia is given to the amount of not more than twelve grains in twenty-four hours.

Relapses are treated as first attacks. Hemorrhage is managed by absolute rest in bed for twenty-four hours, and by the administration of opium to produce absolute rest for the alimentary canal. Acetate of lead is sometimes combined with the opium in the shape of suppositories. Ergot is also very useful. The food allowed is small in quantity, and liquid.

DR. COHEN finds that large doses of quinia rather increase the *diarrhœa* and headache. His patients are sponged with vinegar and water, and abundant ice is given them to suck. Oil of turpentine in 20 gtt. doses every hour or two, in mucilage, he has found to act most beneficially. Morphia is given hypodermically in half-grain doses where the delirium is active.

DR. WILLIAM H. BENNETT reduces the temperature and strengthens the heart by 10 gtt. doses of digitalis thrice daily.

DR. LOUIS STARR controls *diarrhœa* by starch and laudanum enemata.

TYPHOID FEVER IN CHILDREN.

DR. A. JACOBI considers typhoid fever in childhood as a very manageable disease, if taken in time.

High temperature he reduces by means of the cold bath, and if reaction is not at once established he plunges the child into a hot bath, which has the effect of restoring the circulation on the surface of the body and thus enabling the blood to throw off a part of its heat. Where the child will not bear a cold bath, he bathes the surface of the body with cold water as far down as the thighs.

He regards *cold packing* of the trunk and abdomen as of great service. The child is retained in the pack until both pack and surface become slightly warm.

When the temperature is high he gives quinia—from eight to fifteen grains daily in one or two doses. If the temperature is very high, from twelve to sixteen grains are given at a dose. He always administers it in solution, and in the form of the muriate or neutral tannate.

He does not hesitate to recommend salicylic acid and salicylate of sodium in the reduction of high temperatures. He gives salicylate of sodium to a child in doses of three to six grains, three, four, or five times in the course of twenty-four hours. He has sometimes succeeded in reducing temperature by a combination of quinia and salicylic acid where both remedies failed to do so when employed separately.

Now and then he uses digitalis, in small doses, to invigorate the heart's action. Veratrum viride he does not recommend, by reason of its occasional irritant effects upon the mucous membrane of the stomach and intestines.

He believes stimulants to be especially indicated, and gives a baby one year of age an ounce of brandy or whiskey in the course of twenty-four hours. He always gives them in milk, water, or barley-water, and never alone.

Camphor he regards as an excellent stimulant, and gives from two to ten grains of camphor, in the course of a day, to a child from two to four years of age. Musk, also, he regards as a valuable stimulant. The dose for a child two years of age, is two grains, to be repeated every hour. With it he has obtained admirable results when nothing else seemed to be of any avail whatsoever. When a speedy effect is desired, he does not rely alone upon the internal use of stimulants, but proceeds at once to inject, hypodermically, ether, brandy, alcohol, or camphor dissolved in ether, oil, or brandy. He is very

careful that the solution of camphor thus obtained is not too strong, in which case the menstruum is absorbed very rapidly and the camphor is left remaining in the subcutaneous tissue.

Hemorrhage from the bowels Dr. Jacobi treats by opium and alum. In some cases he has had excellent results from the steady application of an ice-bag over the ileo-cæcal valve.

Progress of Medical Science.

MASTOPHOBIA.—Dr. Luis Suñé y Molist relates the following case in the *Revista de Ciencias Médicas* for September 25, 1883: A child, apparently healthy and of healthy parentage, was put out to nurse, and for a time seemed to thrive; but after about a week it was taken with colic, and in order to quiet it, the parents made a little bag filled with a sort of sweet biscuit and put it in its mouth. This would quiet the child and induce sleep. In a short time it began to manifest an aversion to the breast, and would refuse to nurse, although it was hungry and would take milk with avidity when fed with a spoon. There was nothing abnormal about the nipples, nor was there any stomatitis on the part of the child. Various nurses, with variously shaped nipples, were tried, but all to no purpose, for the child absolutely refused to nurse. Recourse was finally had to bottle-feeding, but the child died at the expiration of two weeks, of enterocolitis. The writer stated that he could find no explanation of this mastophobia either in labial hyperæsthesia, paralysis of the muscles concerned in suction, anorexia, change in the quality of the milk, or deformity of the nipples. He thought that the repugnance to nursing was a sort of monomania induced in the first instance by the too frequent exhibition of the *muñecas*, or sugar-teats.

THE WARM BATH AS AN AID TO PHYSICAL EXAMINATION OF THE ABDOMEN.—In cases in which an obstacle to palpation of the abdomen is offered by the hard and tense condition of its parietes and by the contractions caused by the contact of the hand, Dr. Mai places the patient in a warm bath. In a few minutes the abdominal walls become relaxed, and the examination is conducted with ease.—*Rivista Clinica*, September, 1883.

CONGENITAL TUBERCULOSIS.—Dr. Berti relates two instances in which he found advanced caseous processes in very young infants (*Rivista Clinica*, September, 1883). The first case was that of a child born before term and living nine days. It belonged to a phthisical family. At the necropsy two cavities were found in the lower lobe of the right lung; there was caseation of the bronchial and mesenteric glands, and the pleura was infiltrated with round cells. The second case was of a child born by the breech. There was very extensive gangrene of the presenting part, and a large abscess formed in the right sacro-gluteal region. The infant failed gradually, and died after twenty-six days. The autopsy revealed tubercular peritonitis and enlarged and partially caseous mesenteric and mediastinal glands.

REMOVAL OF IMPACTED CERUMEN FROM THE AUDITORY CANAL.—In cases in which a plug of cerumen cannot readily be dislodged by syringing, Dr. Baratoux advises the employment of one of the following means: 1. Pour a spoonful of warm water into the meatus twice a day, retaining it there for about fifteen minutes. 2. Drop a little warm oil or glycerine into the ear; or, 3. Put fifteen drops of a warmed solution of bicarbonate of soda (six grains to a drachm each of water and glycerine) into the ear twice a day. In this way the plug is softened and is easily removed by the syringe. The pavilion of the ear should be held upward and backward, and the nozzle of the syringe passed along the upper wall of the auditory canal.—*Lyon Médical*, No. 31, 1883.

THE TENDON REFLEXES IN TYPHOID FEVER.—An exaggeration of the tendon reflexes in patients ill with typhoid fever has been noted by Strümpell and Ballet. Dr. Pluyand, in a recent brochure on this subject, cites a number of cases in which he found an exaggerated excito-motor power present in the spinal cord. As a rule, the disorder was manifested in the tendon reflexes. But in some this condition was slight or was masked by some other phenomenon (epileptoid movements or contractions). In still others the excitability of the cord found expression in a chorea appearing with the typhoid fever and ceasing with it. There are cases, however, in which the tendon reflexes seem to be diminished. M. Petit-Clerc, in a thesis published in 1880, even regarded this as the ordinary condition in typhoid. Notwithstanding these divergences, more apparent than real, as they are due often to the methods employed in the study of the reflexes, M. Pluyand thinks it undeniable that there is a condition of increased excitability in the cord in the greater number of cases of typhoid fever. Of 100 cases, the tendon reflex was exaggerated in 58, moderate in 25, and diminished in 17 cases.—*Le Progrès Médical*, September 1, 1883.

MEDICATED TRACHEAL INJECTIONS.—At the recent session of the Association Française pour l'Avancement des Sciences, held in Rouen, Dr. Bergeron presented a memoir on the subject of the injection of medicated substances into the trachea (*Lyon Médical*, October 7, 1883.) The injection of medicated liquids into the respiratory passages below the larynx is, he asserted, very well borne by cows, horses, and dogs, and determines very slight functional trouble. It is possible to inject in this way, in man, a solution of citrate of morphia, if the needle be protected during its introduction by a trochar, so that the canula shall not become plugged up in traversing the tissues. The little operation should be practised while the patient is lying down, so as to avoid syncope. M. Bergeron has, under these precautions, made twenty-five injections in thirty-five days, with calming effect, in a patient suffering from pulmonary phthisis.

THE USE OF SULPHATE OF STRYCHNIA IN LABOR.—Dr. Emile Déghilage employs strychnine instead of ergot in dystocia due to uterine inertia. He considers that it is more efficacious in these cases than ergot. Granules are employed containing each about $\frac{1}{100}$ grain, one of which is given every ten minutes.—*Lyon Médical*, October 7, 1883.

NON-SPECIFIC VAGINITIS IN OLD WOMEN.—A form of vaginitis, occurring in women advanced in years and free from any suspicion of sexual relationships, is described by Dr. Després (*Centralblatt für Gynäkologie*, September 29, 1883.) It is dependent upon an incomplete incontinence of urine. The muscular walls of the bladder being atonic the organ is never completely emptied, and the residual urine excites a vesical catarrh. This leads to incontinence, and during sleep, particularly when the patient lies on her back, the urine trickles down into the vagina. There its presence sets up an inflammatory process, the more readily as the urine itself in these cases always contains a large quantity of pathological products.

PRIMARY ACUTE OR SUBACUTE SYNOVITIS OF THE TENDONS OF THE HAND.—Dr. Riedell calls attention to a hitherto apparently unobserved affection of the sheaths of the tendons in the hand, which he had seen several times, but whose true nature he recognized only after opening the sheaths. There is a painful inflammation in the neighborhood of the metacarpo-phalangeal articulation, speedily followed by a complete stiffness of the finger as far as the terminal phalanx. It never proceeds to suppuration. Dr. Riedel ascertained by an incision that the trouble lay in every case in a swelling of the vincula tendinum, or in a fibrinous exudation into the sheath of the tendon.—*Deutsche Medicinische Wochenschrift*, No. 34, 1883.

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BICHAT AND THE DOCTRINE OF VITAL PROPERTIES OF THE TISSUES.

THE problem of the nature and cause of life still defies solution, although the conditions of vital phenomena are well known. Men have endeavored to throw light on the question by certain hypotheses, and these hypotheses have deeply affected the theory and practice of medicine. In fact, at the present day, one large and influential school of medicine finds justification for its name and its practice by an appeal to the supposed reciprocal relations between certain dynamical agents (attenuated medicaments) and the hypothetical vital force under conditions of derangement.¹ Stahl, who was born about the middle of the seventeenth century, may be regarded as the founder of the iatro-spiritualist system. The *anima*, according to Stahl, is a power that opposes the tendency of the material organized compounds to putrefaction. It is the *vita* which, during its active administration, successfully resists the chemical and physical forces which would otherwise pull the organism to pieces. It is the *phusis* of Hippocrates, and the *archæus* of Van Helmont. The *anima*, by negligence or want of knowledge, may originate disease. When disease exists the *anima* is the agency by which health is restored. The whole art of therapeutics then must consist in an endeavor to repress the *anima* when outrageous and arouse its powers when languid, and to assist the efforts of this principle to bring about restorative and evacuant crises. It must be admitted that the system of Stahl was barren of progressive results. It was the old notion of the essential passivity of matter which only acts as an outside hypothetical force, nature, or *anima*, moves it. This, we may remark, is a notion which modern experimental science is demolishing every day. We are learning to emphasize more and more the essential activity of all matter, a truth forced upon us by considerations drawn from physics and from chemistry.

When Glisson, two centuries ago, pronounced the words "irritability of fibre," claiming that irritability is a property inherent in the tissue, and not a principle distinct from the body, he struck the key-note of modern physiology. This irritability is called into activity by divers external influences, which Glisson called irritant causes. These latter make the properties of organic bodies manifest. The *microcosm* is in relations of equilib-

rium with the *macrocosm*, but it is continually adjusting itself to disturbing causes. The surrounding cosmos is forever acting on the organism and the organism reacts on the cosmos by movements which Glisson called contractions. No more pregnant thought was ever presented to the human mind than this, of a moving force, organic and vital, inherent in the organism, viz., irritability, which is aroused to action by excitants. According to this conception living matter is a wonderful mechanism whose movements always originate in irritant causes outside of itself.

Haller in the eighteenth century developed with rare talent the ideas of Glisson concerning irritability, and maintained that this property is dependent on the primordial constitution of the muscular fibre. He endowed the nerves with a special property which he called sensibility. Subsequent workers in biology showed that irritability and sensibility are properties, not merely of muscular and nervous tissue, but of every part of living matter. Every unit of structure, and every congeries of units is being continually acted upon by disturbing agencies in the cosmos, and is undergoing change, of which movement is an expression. Irritants may be normal, or they may be pathological. Here is the datum on which Broussais built his general pathology. Certain medicines diminish irritability and thus restore normal physiological function when deranged, others increase irritability, and hence are indicated when this is deficient.

The doctrine of the vital properties of organs—which was destined in the progress of science to replace the "faculties" of the system of Galen, the "archæus" of Van Helmont, the "anima" of Stahl—received a powerful reinforcement from Bichat in the beginning of this century. Before Bichat there had been no exact classification of the tissues and their functions. This greatest originating mind of the century divided the corporeal mechanism into its elementary tissues, and became the founder of general anatomy. His classification has been the point of departure of all subsequent classifications. He designates twenty-one tissues, but Leydig, bringing to the investigation the aid of the microscope, has reduced them all to four, which are the fundamental tissue-elements, viz.: the nervous element, the muscular element, the connective tissue element, and the cell element (*i.e.*, epithelium, blood-globules, glands).

What gave scientific character to the work of Bichat is the careful study which he gave to the properties of each of these tissues, and the fact of his having localized there an elementary vital phenomenon. Each elementary tissue represents a particular function. All the vital properties were relegated by him to tissues; the organs of the old physiology were superseded by more elementary parts, which account for the constitution and the phenomena of living bodies, as the simple elements of chemistry explain the phenomena of inorganic bodies. Bichat in the introduction to his "General Anatomy" clearly defines his stand-point: "The general doctrine of this work is to analyze with precision the properties of living bodies; to show that every physiological phenomenon is referable in the last analysis to those properties considered in their natural state; that every pathological phenomenon proceeds from their augmentation, from their diminution, or from their alteration; that every

¹ Vide Bayard's article on Homeopathy and Science in the Popular Science Monthly for October, 1883.

therapeutical phenomenon has for its principle the restoration of those properties to the natural standard from which they have departed."

The doctrine of Bichat, so grand and so simple, opened the way to new researches, to new investigations—in a word, to progress. The single idea, vital properties, properties of tissue, provoked minute investigation into organs, and gave a powerful impetus to experimental physiology. Speculations about mysterious causal entities were abandoned as fruitless and as useless, and as calculated to put a check on investigation, and the secrets of life were sought in observation of phenomena and in experimentation. Therapeutics derived an important stimulus from the new teaching; the aim and art of medication being now summed up in a few words, viz.: the restoration of the altered vital properties of the part affected. In calling the attention of physicians to the seat of the ailment, in insisting on the material alterations which characterize disease, and the necessity of restoring deranged function, and in creating the science of morbid anatomy, Bichat, though he died at the youthful age of thirty-one, has earned for himself the gratitude of the present and all future time. It was now possible to localize morbid lesions in special tissues, and the autopsy, for the first time in the history of man, became fruitful in useful results. We can now complete the natural history of disease (founded by the school of Hippocrates) by the pathological lesions.

Bichat's fundamental classification of the functions of the human body into functions of organic or vegetative and functions of animal life, has been adopted by most physiologists, and expresses an important truth. The larger part of our physiological processes are unconscious and involuntary; the animal life, or the sensory, conscious, voluntary life, is something as it were super-added to the organic or vegetative. And yet these are not *two* natures which have taken possession of us, but only *one*. The conscious mental life is only a higher development of the unconscious bodily life. The unconscious organic life is continually obtruding itself into the sphere of the conscious, and what was once conscious and voluntary, becomes organized as habit, and takes its place among the profundities of our organic unconscious nature. Bichat, moreover, erred in treating nutrition as a *function* of organic life. Nutrition is not a *function* of living matter, it is *living*. "*Se nourrir c'est vivre*," says Claude Bernard. The opposition or contrariety between life and death which Bichat predicates in his celebrated definition—"Life is the sum of all the functions which resist death"—does not exist, for in every living substance destructive processes are simultaneous with constructive, or organizing. It is a sort of elemental strife to which a whirlpool offers a faint analogy. Flourens did in fact apply the term "vital whirlpool" to the fundamental process whose two sides are organization or nutrition, and disorganization or denutrition. An acute and philosophical thinker in recent numbers of the *American Naturalist* (February and March, 1883) has shown how absolutely dependent are all the vital processes on oxygenation. Life forever swings between limits of chemical analysis and synthesis. Oxygen eats into and breaks down the complex molecules of protoplasm; nutrition rebuilds those molecules

(nutrition, according to this writer, is simply organic chemical affinity). Nutrition locks up energy in the molecules produced. By oxygenation the stored-up energies of the body are set free and used as animal activity.¹ This is doubtless the highest view of the fundamental fact of life which inductive science yet offers, and has been concisely expressed in the definition of De Blainville, which is essentially the same as that of Letourneau—"Life is a double internal movement of composition and decomposition, at the same time general and continuous."

What Bichat lacked was a knowledge of the elementary principles of biology, a science which has undergone great development in our own times, and a knowledge of which is so essential as the ground-work of physiology and medicine.

If the study of morbid anatomy received an immense impetus from the labors of Bichat, the science of histology has been almost created since his day. If diseases must be studied in alterations effected in the tissues and fluids, then let us resolve these substances into their elementary parts and ascertain how the individual units are affected. The simple rude lens of Lenwenhoeck and Malpighi has been gradually evolved into the compound microscope, which has in our day revealed the cellular structure of all organic animal and vegetable tissue.

The next step was the development of histology on the basis of the cellular doctrine, and the cellular pathology, for which we are so much indebted to Virchow.

The field of vision has been extended to the infinitely little. To fix the disease in a cell, or in a group of cells, is, as Jacobi has said in this journal, "the finest localization possible."²

It is plain, then, that if we would understand disease we must understand the vital properties of the tissues in health, and under conditions of derangement, and the art of the therapist must be to restore those altered vital properties; and this will be the aim of every rational system of medicine.

THE BACILLUS WAR IN PARIS AND VIENNA.

A MOST animated discussion upon the subject of micro-organisms took place recently in the leading medical societies of two great European cities, Paris and Vienna. The opinions announced are of especial interest as showing the earnest skepticism that still exists among many prominent medical scientists as to the real significance of micrococci, bacilli, and the like.

In the Academy of Medicine, on October 30th, M. Bouley made a report of a commission, consisting of himself and M. Vulpian, upon the experiments of MM. Bouchard, Capitan, and Charrins, with the supposed germ of glanders.

M. Bouley's report completely confirmed, he said, the claims to the discovery of the microbe of this disease. It had been captured, cultivated to the fifteenth generation in flasks of bouillon, then inoculated again, with the production of glanders.

After M. Bouley had finished, M. Colin arose and in

¹ Organic Physics, by Charles Morris.

² THE MEDICAL RECORD, September 23, 1882.

the most emphatic manner denied the validity of the conclusions announced. There was no proof, he said, that a specific organism had been isolated and cultivated. The virus of glanders is not easily destroyed; and Bouchard's experiments only showed that it could be carried through fifteen dilutions of beef-tea! He did not deny that possibly bacteria might *carry* it.

M. Colin then proceeded to attack other alleged discoveries of specific organisms. "It is not true," he said, "that any bacteria exist in the blood of living horses suffering from typhoid. They simply develop a few hours after death, and their appearance is the result of decomposition. M. Pasteur has announced to the Académie that typhoid fever is inoculable. This too is an error."

He concluded by saying: "Is virulence attached to bacteria? Yes, probably. Is it attached to other formed elements in virulent matter? Yes, just as probably. Further: virulence exists in liquids where there are no formed elements. Where, then, does the special virus necessarily reside? We do not know!"

M. Bouley here interrupted the speaker, saying that M. Colin used phrases, while he invoked facts. He had seen the experiments of Bouchard and their results.

"You invoke facts," replied Colin, "which are only fictions. Your fifteen cultivations, for example, are myths. I have never been able to obtain from M. Pasteur any except liquids of the first and second culture, and I have always found in these other formed elements than the special microbes. Besides, M. Pasteur has always kept secret the methods of manipulation which he practises. Only his intimates know them. I have recently met savants who came all the way from Russia to learn his methods, and had been refused. This is the procedure of quacks, not of scientific physicians! I have heard much of the bacillus of tuberculosis and the preparations of M. Cornil. They show nothing as regards the specificity of the tuberculosis. These organisms have been found in the non-tuberculous."

M. Bouley here interrupted the speaker again, and a fierce altercation ensued, which compelled the President to interfere.

Turning now to Vienna, we find here also a sharp warfare of words occurring at a meeting of the Society of Physicians of that city. In this case the bacillus tuberculosis was the subject of controversy, and that blue-tinted organism sustained the attacks upon it rather better than did its bouillon-cultivated congeners of Paris. Dr. Heitler presented a paper upon the diagnostic and prognostic significance of the bacillus tuberculosis. He stated that in a very wide series of examinations he had found the bacillus always present in the sputa of the tuberculous, and never present in that of the non-tuberculous. He had also found a certain relation between the number of bacilli and the intensity of the morbid process. Dr. Heitler attacked Spina's views and experiments, and defended those of Koch.

Dr. Jakisch reported the result of some experiments in harmony with those of Heitler.

Prof. Kundrat defended Spina, and asserted that the tubercle bacillus had undoubtedly been found in cases of bronchitis, pneumonia, etc. He recalled to mind a case occurring in Nothnagel's clinic last spring, where

the bacilli were found in the sputa. Upon a subsequent post-mortem examination there was found only bronchial catarrh with bronchiectasis. A second case occurred in Schrötter's clinic. In the patient's sputum were found the most beautiful bacilli, but on post-mortem there was only bronchitis and emphysema.

Dr. Jakisch intimated that in these few individual cases there might have been errors of observation, or that sputa might have got mixed, a suggestion which Kundrat sharply repudiated.

Dr. Weichselbaum thought from his numerous examinations that the presence of bacilli was an evidence of tuberculosis. He had never found the bacilli in the secretions of non-tuberculous persons. He admitted the accuracy of Kundrat's reported cases, and said that some bacilli have such a similarity to those of Koch, that additional tests may be needed.

Thus the matter stands. The accuracy of Pasteur's cultivation method is strongly questioned, and the validity of many of his results made a matter of serious doubt.

The bacillus tuberculosis of Koch has congeners so like it that staining methods alone seem insufficient in all cases positively to distinguish it. There appear to be non-tuberculous diseases in which this bacillus may sometimes be found. Though always discoverable in genuine tuberculosis, the number of bacilli is not always a test of the intensity of the disease.

Such seems to be the condition of the bacillus problem at present. Doubtless before long, new evidence will be furnished that will change the aspect of affairs.

We ought to add that the theories of Dr. Gregg, who regards micro-organisms as fibrinous products of decomposition, are unworthy of serious attention.

THE HEALTH OF CHINA AND ITS RELATION TO THE QUESTION OF FILTH.

FROM the medical reports of the Imperial Maritime Customs for the half-year ending September 30, 1882, some very interesting statistics are obtained relative to the prevalence, etc., of epidemic diseases among foreigners and natives in China. The local peculiarities of disease, and diseases rarely or never encountered in China, are also commented upon. A meteorological table also accompanies each of the several reports.

At Chefoo several cases of fever resembling in character that of typhus, although differing from it in some particulars, occurred, chiefly confined to the Chinese, only one foreigner having been affected.

In Ichang, although nature has endeavored to compensate by the surrounding country, yet the absence of the most simple sanitary precautions on the part of the natives is a source of the greatest danger. Night-soil is carried through the streets in open baskets at all hours of the day, nevertheless the privies never seem emptied, and the odors that emanate from them and from the vegetable gardens are simply sickening. Notwithstanding this, however, with one exception, there have been no serious cases of malarial fever or dysentery among the foreign residents of Ichang, and epidemic diseases, save small-pox, are unknown. As a rule the native population is apparently sturdy and healthy. The plague of parasites and of parasitic diseases, which is universal, is due to their dirty habits rather than to their vices.

At Kiukiang the health of foreign residents has apparently been very good, excepting during the last two months of the period mentioned, when an unusual amount of sickness occurred. This was ascribed to the heavy rainfalls and floods, when cases of intermittent fever and of dysentery were especially prevalent, due, as presumed, to the decaying organic matter left by the flood, as well as to the putridity of the water itself where it was stagnant.

In Ningpo the impending unhealthy condition of the community was happily anticipated by the enforcement of careful sanitary regulations, cleaning out of drains, etc., and the general administration of quinine.

At Amoy the health of the foreign population was fairly good, and epidemic diseases quite absent from the port. Canton also shows a record of general good health, particularly among foreigners. In other portions, however, in Yangchow, Soochow, etc., cholera raged with great violence.

On the whole—that is to say, while remembering the unsanitary condition of the natives, the abundance of filth, in many cases of months' or of years' standing—the prompt measures adopted by the several medical authorities deserve especial commendation, inasmuch as where rigidly enforced the mortality, not only of the foreign, but particularly of the native community, from epidemic diseases has been very materially lessened.

We have presented editorially the general health report of the various ports of China, believing not only that much valuable information may be derived from its account, but that an inferent bearing may also rest upon our own sanitary affairs at home.

THE NEW SURGEON-GENERAL OF THE ARMY.

THE appointment by the President of Colonel Robert Murray as Surgeon-General of the Army will be received with satisfaction, not only by the Medical Corps but by the profession at large. He brings to his responsible office all the requisites of an old and well-tried member of the Army Staff. He has served during his long career in every capacity as surgeon in the army and is practically acquainted with all the details of his department which now fit him for its chief. Aside from this he was in the direct line of promotion and his appointment must be viewed as an indication on the part of the President to honor the claims of those who by long and faithful services work their way to the front.

The best assurances that as Surgeon-General he will discharge the duties of his office faithfully and well are to be found in his previous honorable record as an officer of the army, his high moral character, and his well-acknowledged professional accomplishments.

MEDICAL MISSION TO CENTRAL AFRICA.—The Guild of St. Luke, of London, have undertaken to send a medical missionary to Central Africa to carry on the medical work of the Central African mission. Dr. Petrie has been selected, and guaranteed \$1,000 for three years, by which time he will be pretty certain to be dead, if past experience teaches anything.

News of the Week.

A PROPOSED MONUMENT TO DR. J. MARION SIMS.—Dr. Harvey L. Byrd, of Baltimore, very properly suggests that an enduring memorial, worthy of his name and fame, should be erected to Dr. Sims in the Central Park of New York, the city with which they have been so intimately associated for a quarter of a century or more, and thus known throughout the hemispheres. The plans and details necessary for the accomplishment of the proposed work can be easily arranged hereafter.

THE AMERICAN RHINOLOGICAL ASSOCIATION is the name of an association organized in St. Louis recently, with a membership of twenty, representing six States. Dr. T. F. Rumbold was elected President; Dr. H. Marks, of St. Louis, Secretary.

THE CHOLERA IN BEIRUT, SYRIA.—The United States Consul at Beirut has sent an account of the appearance of cholera in that city during the past summer. It appears that after the breaking out of cholera in Damietta, last June, a quarantine was established against arrivals from Egypt. Persons quarantined were placed in a large lazaretto near the city, where they were subjected to very unfavorable hygienic conditions. Despite this fact only four cases of cholera appeared in the lazaretto, and strangely enough the disease did not spread. A few cases occurred outside the lazaretto, but neither did the disease spread here. It has been asserted that the cases were not true cholera. If they were it is difficult to explain why the disease did not spread.

COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.—Dr. Frank O. Stockton, of Newark, N. J., has been elected to the professorship of Diseases of the Nose and Throat in this College.

DECREASE OF PHYSICIANS IN AUSTRIA.—Commenting upon a newspaper statement that there was an excessive increase in the supply of medical men by the Austrian universities, the *Allgemeine Wiener Medicinische Zeitung* says that the average number of graduates in medicine, yearly, from all the Austrian schools, is about two hundred. The annual number of deaths among physicians in Austria is over three hundred and twenty. It does not appear, therefore, that there is an increase in physicians, but rather the contrary.

THE PRESBYTERIAN HOSPITAL AMBULANCE.—The Presbyterian Hospital has the finest ambulance in the city, and the swiftest ambulance horse.

THE RESPONSIBILITY OF EMPLOYERS FOR THE PAYMENT OF MEDICAL SERVICES TO THEIR EMPLOYEES.—A case of interest to physicians was recently decided in the Baltimore City Court. A lady sent for a physician to attend her nurse, who was sick at the lady's country residence. The nurse failing to pay the bill it was sent to the lady's husband, who also refused to settle it. The doctor then brought suit against the gentleman, and the court held that he was responsible for the payment for medical services rendered his employee, the doctor having been sent for by the wife, who had the right to make her husband responsible for the services rendered.

Reviews and Notices.

MEDICAL EDUCATION AND THE REGULATION OF THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA. Illinois State Board of Health. 1883.

THE industrious energy of Dr. Rauch, secretary of this board, has produced a work of great usefulness to the profession. It consists of a compilation of the laws regarding medical practice in Canada and in all the States of the Union where such laws exist. The number of physicians in each State in proportion to the population is also given. The list of medical colleges not recognized by the board, here published, has already been widely circulated.

By a typographical error on page 175 the total number of physicians in the United States and Canada is made to read 60,410 instead of 90,410.

ELEMENTS OF HISTOLOGY. By E. KLEIN, M.D., F.R.S. Illustrated with one hundred and eighty-one engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS work is intended as a manual for medical students, and is written in a simple and, as far as possible, non-technical style. Although an elementary work, it is by no means a superficial or incomplete one, for the author presents in concise language nearly all the fundamental facts regarding the microscopic structure of tissues.

Regarding the mooted question of "reticulated protoplasm" Klein is rather non-committal, stating that this structure is observed "on very careful examination with good and high powers, and especially with certain reagents, in many instances."

The illustrations in the book are numerous and excellent. We commend Dr. Klein's "Elements" most heartily to the student.

THE MEDICAL STUDENT'S MANUAL OF CHEMISTRY. By R. A. WITTHAUS. Pp. 370. New York: William Wood & Co. 1883.

PROFESSOR WITTHAUS in adding another text-book on chemistry need make no apology for increasing the already long list of works on this subject, although he modestly claims that the book "is intended solely for the use of a class of students whose needs in the study of this science are peculiar," since it is well known that new facts are constantly being contributed to the literature of this branch of science, and that now and then the subject needs the revision of such a fresh and able worker as the author of this book. Moreover, his experience as a teacher in chemistry and its applications to science specially fit him for the work in hand. In the preface the author says: "While the main foundations of chemical science, the philosophy of chemistry, must be taught to and studied by all classes of students alike, the subsequent development of the study in its details must be moulded to suit the purposes to which the student will subsequently put his knowledge. And particularly in the case of medical students, in our present defective methods of medical teaching, should the subject be confined as closely as may be to the general truths of chemistry and its applications to medical science." Professor Witthaus has had exceptional opportunities in the pursuit of his studies in Germany and France, and here in his own country he has established a wide reputation both as a teacher and as an expert in toxicological and physiological chemistry. In the preparation of the manual under review the author has excluded as far as possible, "without detriment to a proper understanding of the subject, those portions which are of purely technological interest," while "chemical physiology and the chemistry of hygiene, therapeutics, and toxicology have been dwelt upon."

In the first part of the work the principles of chemical science are treated of, but an extended study of

chemical physics is purposely avoided, except in so far as is absolutely requisite to a proper understanding of the subject—the more extended study of physics belonging rather within the domain of physiology than of chemistry.

The second part treats of special chemistry, where the author has departed in certain respects from the methods usually followed: thus the elements are classed, not in metals and metalloids, which he regards as arbitrary and unscientific, but into classes and groups according to their *chemical* characters, and "in the text the formula of a substance is used in most instances in place of its name, *after it has been described*, with a view to giving the student that familiarity with the notation which can only be obtained by continual use."

The third part of the work is devoted to those operations and manipulations which will be found to be of utility to the student and physician. Physicians will find in this useful manual practical directions for the examination of calculi, and of simple chemical compounds, and quantitative methods of interest to them are also described. The methods recommended are simple, and the ones best adapted to the limited facilities of the general practitioner. Although no special claims are put forth in respect to the value of the work upon analytical chemistry, the author has "endeavored to bring that branch of the subject rather into the foreground so far as it is applicable to medical chemistry." The metric system has been followed throughout the book; but in deference to those who prefer to retain the old method, troy and apothecaries' weights have been introduced in brackets, and the value of degrees in Fahrenheit have likewise been made to follow the Centigrade. Wherever necessary illustrations have been introduced, and there are a large number of useful formulas and tables contained in part third, which is devoted to laboratory technics. The make-up of the book is good, the type plain, and it is altogether a credit to the publishers.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Sixteenth Annual Meeting, July 17, 1883. Vol. III., part 2. Published by the Society. New Bedford, Mass.: Mercury Publishing Company, printers.

UNDER the efficient management of the Secretary, Dr. J. J. B. Vermyne, the transactions of this society are given to the public within three months from the date of the annual meeting. The volume contains papers read by Drs. Holt, of Portland, Me.; Knapp, of New York; Todd, of St. Louis; Kipp, of Newark, N. J.; Seely, of Cincinnati; Sexton, of New York; Andrews, of New York; McKay, of Wilmington, Del., and Burnett, of Philadelphia, together with thirty pages of discussions which they elicited. The papers and the discussions do credit to the society, and the volume should be in the hands of all who are interested in diseases of the ear.

TABULÆ ANATOMIÆ OSTIOLOGIÆ. Editæ a CAROLO H. VON KLEIN, A.M., M.D. Cincinnati, O. 1883.

THE author of the work before us is, perhaps, somewhat of an enthusiast, but the work itself is very good, and gives evidence of a vast amount of labor. The book comprises thirty-two plates, presenting severally the various groups of bones forming the human skeleton. The various names, etc., are given in Latin only, one of the objects of the work being to present a language which shall, especially in its technical expressions, become universal among the profession. Regarding the execution of the work, we do not think that the drawings, or more particularly the engravings, show as much practical knowledge on the part of the artist of the subject in hand as such plates should exhibit, e.g., in the plates representing the occiput; while for an excellent fine line engraving the work deserves much credit, yet this has been allowed to supersede the object in view, and even in this respect the lights and shades are in many cases met too suddenly for the faithful representation intended. Hence we would suggest far more accurate drawings and less fine execution. Moreover, some of the plates are simply impossi-

bilities anatonically, or strange anomalies, evidently through fault of the engraver.

The adoption of an universal language, however, *i.e.*, the Latin, as is suggested, and which the author would achieve for all the medical world, would, it is feared, hardly be sustained so long as our American medical machines continue so prolific in their grinding. And although we should highly endorse our friend in his esteemed labor, yet we think he should be prepared to find that the accomplishment of his work may be doomed to disappointment.

The work is presented in very handsome form, and will be appreciated by student and practitioner alike.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By OREN D. POMEROY, M.D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to the New York Infant Asylum, etc., etc. With one hundred illustrations. 8vo, pp. 392. New York: Bermingham & Co. 1883.

IN the above volume the author has presented quite a valuable work on the diagnosis and treatment of diseases of the ear. To many this portion of the subject may perhaps appear too thorough, in reading the book—that is to say, to the exclusion of much valuable matter which we think ought justly to have been embodied in a work of this kind, *viz.*, anatomy and physiology, the absence of which, as the author frankly states, is noticeable throughout. The several forms of aural disease are dealt with in a manner exceedingly satisfactory. In some of the subjects the etiology is not so complete as might be wished for, but the symptomatology, diagnosis, and treatment are indeed very well presented. Prognosis is also given. In addition, the various instruments required in the examination of the ear are presented, with cuts, and instructions as to the methods of using them, etc. The author's views on the best means of examining the throat and nares are also given, together with the necessary instruments (illustrated). Various other affections of the ear are included in the work: malignant disease, syphilitic inflammation, and affections dependent on hereditary syphilis, as well as disease of the ear confined to the labyrinth or acoustic nerve. The various instruments for aiding the hearing—trumpets, the audiphone, and Japanese fan—also receive consideration. On the whole, the work is quite exhaustive in its scope, and will represent an authority on this subject which we believe will be duly appreciated by the profession.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. By GEORGE M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Fourth Edition. Revised by A. D. ROCKWELL, M.D. With nearly two hundred illustrations. 8vo, pp. 758. New York: William Wood & Co., 56 and 58 Lafayette Place. 1883.

AGAIN is presented to our notice one of the most useful text-books of the day, of the greater value because it leads in a province of practical medicine hitherto unworked.

The many points of instruction and interest contained in the body of the work have been duly noticed in reviews of preceding editions. Thorough and careful revision adds to its former excellence. The chapter on static electricity is new, and doubtless will excite much attention, as many of the ideas advanced will be made the subject of further investigation. The crowning effort of the work, the treatment of extra-uterine pregnancy, is of inestimable worth. The literature upon this subject, until within a few years, has offered anything but a hopeful issue from this unfortunate condition. Vaginal section, gastrotomy, injection into foetal nest, etc., with attendant dangers and horrors, were to be apprehended. A series of seven successful cases is recorded. The method of treatment is simple in detail, sure in effect, causing little pain and danger, reducing the dread conse-

quences of this unavoidable complication to the minimum. The advantages to be obtained by electrolysis in regional surgery is being more appreciated to-day than ever before, and demands from the general practitioner his closest attention. A careful perusal of this work will open to him a mine of wealth, as it is exhaustive. No department of electro-therapeutics is left untouched.

For years Drs. Beard and Rockwell have labored in this department of medicine with assiduity and success, meriting the approbation of the scientific world. Dr. Beard has gone hence; may his co-worker attain to greater merit than was their privilege when together.

PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. BY FESSENDEN N. OTIS, M.D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons; Surgeon to Charity Hospital, etc., etc. 8vo, pp. 584. New York: Bermingham & Co. 1883.

THE work before us is certainly a very complete one on the subject of which it treats. The volume is divided into two parts. The first includes gonorrhœa, chancroid, and syphilis, the latter of which is minutely dealt with in every detail, including the initial lesion, hereditary transmission, diagnosis, etc. Lesson VI. presents the progress of syphilitic infection, varieties, and complications, and the treatment of the initial lesion. The early constitutional forms of syphilis are then taken up, followed by the treatment of syphilis in the acute stage. Numerous clinical cases are then given, illustrative of the various forms which the initial lesion may present, and of the various lesions associated with and following the same. The mucoid form of the lesion is also spoken of, together with clinical cases showing the results of treatment. Lesson XVII. presents the sequelæ of syphilis, gummy tumors, etc., and the various sequelæ involving the nasal and other bones, and those producing brain symptoms, followed by syphilis of infants, and hereditary syphilis. Chancroid and its nature is then taken up (Lesson XXIV.), together with its diagnosis and treatment. In Part II. gonorrhœa is very thoroughly considered, the nature of gleet and its dependence upon stricture, and the complications of gonorrhœa. Following this (Lesson XLIV.) urinary extravasation, epididymitis, and prostatitis are spoken of. The remainder of the work is almost entirely given up to the consideration of urethral stricture, its examination and treatment, and especially to spasmodic stricture. The author's views are also fully supported by a large number of clinical cases. Finally, a closing chapter is devoted to digital exploration of the bladder, by means of an incision through the perineum, as an aid to diagnosis in obscure cases. The work is very thorough in every detail, and, coming from the pen of one who has been before the professional public for many years as a teacher in this branch of surgery, will no doubt be accepted by both the student and practitioner.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY—AUTHORS AND SUBJECTS. Vol. IV., E-Fizes. 4to, pp. 1033. Washington: Government Printing Office. 1883.

THE very valuable and very complete "Catalogue of the Library of the Surgeon-General's Office" has advanced to its fourth volume, and now includes authors and subjects from E-Fizes. Altogether this volume contains 4,802 author titles, representing 1,926 volumes and 3,885 pamphlets. It also includes 12,361 subject titles of separate books and pamphlets, and 48,977 titles of articles in periodicals. Too much praise cannot be accorded to Surgeon J. S. Billings, U. S. A., the accomplished librarian of the Surgeon-General's Office, for the admirable manner in which he has carried on the work of cataloguing the vast treasures of medical literature under his supervision. ☞

Reports of Societies.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, November 21, 1883.

MARK BLUMENTHAL, M.D., PRESIDENT, *pro tem.*

THE IMMEDIATE OPERATION FOR LACERATION OF THE PERINEUM.

DR. R. C. M. PAGE read a paper on the above subject (see p. 590).

DR. W. T. LUSK was invited to open the discussion, and said he was in full agreement with the author of the paper with regard to the practice advocated, and yet he had been so slowly converted that perhaps it might be interesting to relate his experience, and how it came to pass that he regarded the immediate operation as the proper one to perform under the circumstances indicated in the paper. In 1871 he began his service as obstetric physician in Bellevue Hospital, and at that time a great deal was being written in Germany concerning the immediate operation. He therefore began the use of the method somewhat enthusiastically, but after having failed in quite a number of cases abandoned it entirely. When, a little later, Dr. Noeggerath read a paper before the New York Academy of Medicine on this subject, Dr. Lusk formulated his objections to the immediate operation, and there stated that it rarely succeeded; that it was difficult to estimate the extent of the lesion at the time of delivery, and that many patients were subjected to operations in whom it would not have been found necessary subsequently. He also stated at that time that it seemed to him the cases for immediate operation should be limited to those where the head was born soon after the beginning of the second stage of labor, before it had occupied the pelvic cavity for a long time, and before pathological changes had taken place in the tissues below the child's head.

In estimating the extent of the laceration, Dr. Lusk thought the method of putting one finger into the rectum and the thumb into the vagina, even where the rent was quite extensive, was not very satisfactory. He did not believe that spontaneous union takes place very often to more than a limited extent, but he thought there were many cases in which we fail to recognize the slightness of the injury inflicted.

Continuing his experience, he said that later on, in private practice, he was introducing the sutures into a ruptured perineum about three hours after the birth of the child, and suddenly he was flooded with blood. The patient had a violent hemorrhage, which he regarded as undoubtedly due to the excitement produced by the operation. He therefore reached the conclusion that it was not only unnecessary, often did not succeed, but that it was not entirely devoid of danger. However, later, as he adopted the operation in private practice, he was more favorably impressed with it, and had found that healing had taken place readily, that the patients were up and about on the tenth or twelfth day, and he was encouraged to try the operation once more in hospital practice. At the Emergency Hospital all his operations were entirely successful for a time, but at Bellevue Hospital only about half of the operations were successful, and it was not very satisfactory. He then reached the conclusion that all emergency cases would do well, but not long afterward the operation failed in all the emergency cases. Again reviewing the situation and studying the cases, he reached the conclusion that at times all cases would fail; at other times all cases would succeed, and that the results depended altogether upon atmospheric conditions and the condition of the lochia. If the atmospheric conditions are unfavorable, and the lochial discharge undergoes decomposition quickly and extensively, the operation wounds will not heal.

So far as the operation itself is concerned, he had advocated the use of Peaslee's needle, and thought it the best that could be used in the treatment of cases where the rent does not extend through the sphincter ani nor up the septum. A very prominent reason why he employed Peaslee's needle was because it did not break.

Recently, in looking over his hospital obstetric record, he found that he had operated in twenty-four cases, twenty-three of which were successful, and in one there was partial failure, due to a certain amount of carelessness with which the operation was performed. He thought it not of any special advantage to compare the primary with the secondary operation. The question is not whether the secondary is more dangerous than the primary. The primary has been so successful in a large number of cases, and is so simple in its performance, and does so much to prevent the woman from suffering during child-bed, avoids suffering for weeks or months before the secondary operation is performed, that it seemed to him there could be no doubt with regard to the propriety of the primary operation. He must say, however, that not all cases of slight laceration necessitated the introduction of sutures. He thought it very probable that if in obstetric practice we were a little more careful in the observance of some of these little points much more suffering might be alleviated than is now the case.

DR. W. GILL WYLIE said his experience had been confined almost entirely to the secondary operation, but he agreed with Dr. Page in advocating the immediate operation. There are a certain number of cases where there is only slight tearing, so far as the skin or mucous membrane is concerned. Yet there occurs a subcutaneous rupture or stretching of the deep pelvic fasciæ that are united to or at the perineum, or dilatation and separation of the posterior wall of the vagina takes place, which would not always be relieved by the immediate, and are sometimes difficult to remedy in old cases by the secondary operation. It will soon be a recognized fact that, so far as the position of the uterus is concerned, the perineum can only indirectly affect it; for the perineum is not a support to the normal uterus, but when partially torn through may allow fecal matter to crowd forward the posterior wall of the vagina, and, by distending it, cause the vagina to pull the uterus downward and backward. His experience had been, that displacement, especially retroversion, is much more likely to result from a partial rupture involving the inner or upper angle of the so-called "triangular body" than in those cases where the whole sphincter ani has been completely destroyed. In five out of six cases that he had operated upon in the past year, where the sphincter was destroyed, only one had retroversion, and, although in two of the others there was some general prolapse, yet neither the position nor condition of the uterus made the operation necessary; it was done to restore the sphincter. He knew of one woman, the mother of six children, who had the sphincter and vagina lacerated nearly to the uterus with the first child, and they still remain so, yet the uterus is in nearly the normal position. He believed, therefore, that the most important part of the perineum is that where the vagina joins it and keeps back the fecal matter as it descends the curves of the sacrum, deflects it backward toward the anus, thus preventing it from pushing forward and distending the vagina, and indirectly displacing the uterus downward and backward. In these cases the ordinary operation is only a partial success, and the "clover-leaf shape," where the central part represents the denuded rectocele, and the lateral the two sides of the vulva, will often result in what he called a skin-flap perineum. The most important part to denude and to reunite is the depressed angles on either side between the central and lateral parts of the clover leaf. They are the most difficult to denude and to bring into close apposition, yet when they are together the rectocele is depressed backward and the sphincter ani pulled forward, and thus the fecal matter is deflected backward

out through the anus. He does not sew the depressed angles up separately, as recommended by Dr. Emmet, but brings them into apposition.

As to statistics, many cases reported cured are merely skin-flaps that look well at the time, but soon stretch and yield so much that the patient is left in as bad a condition as before the operation. No one has a right to claim a cure until six months or a year or two has passed, and time and use have tested the result. In his argument for the immediate operation, Dr. Page did not speak of the bad influence of time in bringing about atrophy and degeneration of the torn and disused tissues composing the perineum. This is important, for on this account such cases are more difficult to treat and secure the best results. This atrophy and loss of tone account for the severe cases of procidentia, which so many even to-day consider incurable, yet when carefully operated upon can almost all be cured by denuding deeply and bringing the parts together well up in the vagina.

He would like to ask if Dr. Page recommended constipating the bowels after operations.

DR. PAGE: No, I merely said that it may be done, but I regard it as bad practice.

DR. WYLIE thought if the doctor analyzed his hospital statistics he would find that the failures (immediate failures) were due to the old practice of constipating the bowels. To-day primary union should be secured in nineteen out of twenty of all cases, but to do so the bowels must be moved every day.

DR. McLAURY referred to a case in which union was complete, but a dose of castor-oil swept the results of the operation away completely.

DR. W. R. GILLETTE said that some years ago he went on record as opposed to the immediate operation, and the opinion which he then gave was based on his experience in quite an extensive practice in the Maternity Hospital on Blackwell's Island. Since that time, however, he had been performing this operation invariably in private practice, and must say that he would as soon leave a woman without the ordinary attention which the accoucheur gives her as to omit repairing the perineum at once, if he found that any laceration whatever had occurred, no matter how slight. He believed it necessary to stitch up every rent, and in that respect he disagreed with Dr. Lusk. It was not for the purpose of sustaining the uterus or other pelvic organs, as he had not so much belief in the perineum as a sustaining body, as "the keystone in the arch," as many of his friends seem to have, although it was sometimes a very important factor in results obtained. What occurs as a result of trivial lacerations is an enlargement of the ostium vagina, which is of considerable psychical importance. He preferred silver-wire sutures, because if on examination at the end of the first, second, or third day, it were found that the parts were not closely coaptated, another twist could be given the sutures. Another point which he regarded as of special importance is the introduction of deep sutures, and he made it a rule to go as deep as possible.

DR. JAMES L. LITTLE agreed with the author of the paper concerning the propriety of the primary operation. He had not been in the habit, however, of sewing up every laceration. He did not believe that primiparas could be delivered without a certain amount of laceration taking place, and he did not regard an operation in those cases as necessary. Dr. Page had expressed the opinion that when laceration occurs, it almost always takes place with delivery of the head, but Dr. Little entertained the opinion that the shoulders did the tearing, and cited a case in illustration, in which after the head was born there was sufficient delay to give opportunity to inspect the parts carefully, and no laceration whatever had occurred. But after the shoulders were delivered it was found that laceration to the extent of an inch or more, had taken place. It had been his custom to use silver wire for the deep sutures.

DR. A. M. JACOBUS reported a case in which spontaneous union of the lacerated perineum had taken place. The woman was twenty-six years of age, a primipara, and there was complete rupture with post-partum hemorrhage, but union of the laceration occurred by first intention *without* an operation. A few bleeding vessels were twisted, the parts were cleansed with the utmost care, all clots were removed, and the lacerated edges were carefully approximated, the woman placed upon her back, and the knees tied together. The urine was drawn with the catheter. On inspecting the parts on the second day it was found that union by first intention had taken place throughout.

DR. S. BARUCH thought the paper and remarks made by the gentlemen were of special importance to the general practitioner, because they confirmed the view that the accoucheur is responsible for a large number of ugly deformities which are seen after parturition. He regarded it as criminal for any physician to leave a case of labor without examining the genitals of the woman. Both primiparæ and multiparæ should be examined, the latter by the finger and the former with the eye and a good light. There is no procedure from which he had derived more gratification than the primary operation for lacerated perineum, and he had found but little difficulty in getting the consent of the patient and her friends for the performance of the operation. He believed with Dr. Gillette, that every laceration should be repaired, no matter how slight, and regarded silver sutures as the best. It had been his custom to use a compressed shot to hold the end of the suture and cut it short. He had the urine drawn regularly, and used carbolyzed injections.

DR. EDWIN F. WARD favored the immediate operation, and said that it had been uniformly successful in his hands. He had always employed the silver-wire sutures, except in one case.

DR. W. FRUITNIGHT reported a case, that of a woman twenty-six years of age, whom he delivered with forceps. The parts were œdematous, complete laceration of the perineum occurred up as far as the internal sphincter. Post-partum hemorrhage occurred, and also hemorrhage from the perineum. In this case the condition of the patient was such that he did not think it admissible to undertake to perform the operation. He therefore cleansed the parts thoroughly, kept the patient upon the back for two days, and afterward alternated her position from the side to the back, and syringed the vagina with carbolyzed solution. Sloughing of the vagina upon the lateral walls occurred, and subsequently the temperature rose to an extent which made him believe that there was some decomposing material within the uterine cavity, and he resorted to intra-uterine injections with immediate and permanently beneficial effect. The case then progressed favorably, and on the eighth day it was found that the perineum was completely united. At the end of three and a half weeks the woman was about her room, and experienced no inconvenience whatever from inability to control either the feces or flatus.

DR. CHARLES S. WOOD stated that his experience did not confirm that of most of those who had already spoken. He had had occasion to see a good many cases of labor in the course of thirty-five years, and had not been in the habit of performing the primary operation. In cases of extensive laceration, extending to the rectum, he should perform an operation, but it was questionable whether or not he would perform the primary operation; for he had seen cases in which union had occurred and had been as perfect as could be obtained by any operation. Besides, lacerations to the first or second degree almost invariably recover, leaving the parts in as normal condition as they ever are after childbirth. He had been particularly interested in the remarks made by Dr. Wylie, as he had had occasion to see more injurious effects, more broken-down women, in cases where there was no actual rupture of the perineum than where there was, and was pleased to hear the facts expressed as they had been by Dr.

Wylie. He had seen but few ill results following rupture of the perineum without operation. He believed, if in every instance we should examine the parts, find what might be called rupture of the perineum, let it alone and examine subsequently, it would be found that the apparent laceration had passed away. This condition is not a real laceration, but an apparent laceration due simply to relaxation of the parts.

THE PRESIDENT said that during a practice of thirty years it had been his fortune to see comparatively few cases of laceration of the perineum. He made it a special point to be very careful of the perineum, and remembered only two cases in which complete rupture took place into the rectum. One of these passed from under his observation, but in the other the secondary operation was performed, and successfully. In all the other cases in which laceration had occurred the injury had been slight, and his practice had been to stitch them together at once, whether the rent was a half inch or an inch and a quarter in extent, and as a rule no trouble had followed.

With regard to the chances of over-estimating the damage done, he thought it was not easy to say how much the injury really is, and related a case in illustration, that of a primipara, advanced in years, who was delivered with forceps, and notwithstanding the attention which three attendants could give her, there was a laceration, as it seemed to him into the rectum. No operation was performed, on account of the condition of the patient. The result was that when two weeks afterward a final examination was made he found the wound entirely closed, except, perhaps, for three-quarters of an inch at the posterior end of the vulva, where he introduced a suture more for the purpose of hastening a cure than from necessity. In this case the two gentlemen who were assisting him insisted that the immediate operation should be performed, but he did not approve of it on account of the condition of the patient, and the result was as stated. Of course it went to prove that we might over-estimate immediately after labor the actual damage done. But while he recognized that fact, he was fully convinced of the other fact, that in the majority of cases, where laceration is not so extensive and does not involve the sphincter ani, it is still wise to make the primary operation at once and support the perineum.

DR. MCLAURY believed with Dr. Wood that many of these cases would heal spontaneously.

DR. COLE had found that slight lacerations, those not extending more than half way down, got well by strict observance of cleanliness and position of the patient quite as favorably as with the operation.

DR. PAGE, in closing the discussion, said that he had not, nor did he ever expect to use Peaslee's needle; that he thought there was no necessity for drawing the urine if the woman voided it while upon her hands and knees; that he had not seen a case where he had been obliged to tighten the sutures after one or two hours; that he stated in his paper that medicine to constipate the bowels had been recommended, but he regarded it as bad practice.

DR. GILLETTE said that Dr. Page perhaps had misunderstood him, as he did not expect to tighten the sutures in every case at the end of twenty-four hours or two days, but that he had in a few instances seen shrinking of the parts at the end of twenty-four hours, which made it necessary to tighten the sutures.

The Society then went into executive session.

THE ESSENTIAL ELEMENTS OF HEALTHY RECREATION, according to Sir James Paget, are "uncertainty, wonder, and the exercise of skill." It would be worth while to see how many of these elements enter into the conventional "Sunday excursions," so much praised by the popular press for their health-giving qualities.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual and Stated Meetings, November 26, 1883.

THE adjourned annual meeting was called to order by DR. DAVID WEBSTER, President. After the reading of the minutes of the annual meeting, the

REPORT OF THE COMMITTEE ON HYGIENE

was read by the secretary. It consisted of four parts, the first part was by DR. E. G. JANEWAY, on

MORTALITY STATISTICS AND EPIDEMIC INFLUENCES.

The mortality for the nine months for the year ending September 30th has been less than for the corresponding period for 1881 and 1882. It has, however, been somewhat greater, both absolutely and comparatively, as regards increase of population, than that for the same period in the years 1878-79-80. Then followed figures showing the absolute difference for ten years.

The work of systematic vaccination was begun in 1875 and continues at the present time. The corps at the Board of Health charged with this work has performed 119,856 primary and 430,783 revaccinations. By the labors of the Board of Health the disease has been checked on all the occasions on which it has appeared. The mortality from small-pox is only one-half to one-fourth what it was in the six years preceding 1877. Physicians should urge this work, as, when small-pox has only prevailed to the limited extent that it has done during the six years just ending, the people become careless, and persuasive vaccination by public authority becomes difficult. It is far more essential to keep up thorough vaccination now than to wait for an invitation after the initiation of another outbreak of the disease, which will find its victims among the careless and the obstinate. Dr. Janeway then presented the mortality tables for measles, scarlet fever, diphtheria, etc., for the three-fourths of each year from 1872-83 inclusive. They showed the fluctuating character of mortality for measles, scarlet fever, and diphtheria, from which it seems probable that, owing to the moderate number of deaths from scarlet fever this year we should witness next year a marked increase for this disease; whereas for measles the probability would be that there would be a considerable diminution. Diphtheria is on the decline, and from the previous course of the disease it is possible that this diminished mortality may continue for another year or more. Pneumonia has produced 41 less deaths than last year, 235 more than in 1881, and 634 more than in 1880.

During last summer the mortality from diarrhoeal diseases had been comparatively moderate. From a comparison of the mortality of these affections Dr. Janeway felt that, making all due allowance for all possible error, a considerable number of lives had been saved as a result of the employment of a summer corps of the Board of Health, and of the active charity of New York City.

With regard to typhoid fever, he feared, owing to the defective water supply, a decided increase in the mortality had occurred. But for the efforts of the Board of Health the disease would have spread greatly and extended over a number of years. Physicians should see to it that the Board of Health is properly maintained, aided, and encouraged in its work. At times physicians have neglected or, by concealment, have failed to notify the Board of Health of the existence of contagious diseases, with the effect of producing an epidemic in some cases.

The second part was by DR. O. D. POMEROY,

ON SOME POINTS IN THE HYGIENE OF THE EAR.

Ordinarily the ear is not affected by exposure to the air. All tuberculous subjects, those of a strumous habit, and a considerable number who rank as peculiarly

sensitive to atmospheric influences, are exceptions to the general rule. Damp air is much more apt to act perniciously than dry air. Sea-bathing is often injurious from the direct application of the cold water to the meatus giving rise to otitis media; or, from the violent concussion of a wave upon the meatus, or the entrance of water into the Eustachian tubes. Fill the meatus with cotton and tell the patient not to inhale water or allow it to get into the mouth.

The effect of loud and discordant noises in the ear is often very pernicious. If the patient is removed from the noise before profound deafness results, he may spontaneously recover a good degree of hearing or become wholly convalescent. Riding in railway cars with the windows open, ship-calking, and confinement in the never-ending clicking noise of the telegraph instrument, may act perniciously on the ear. Musical sounds do not seem to do harm to the ears. Monotonous and discordant sounds seem alone to operate injuriously on the ears.

Cannon-firing, or the discharge of firearms, or the concussion of any explosive sounds, especially when occurring unexpectedly, is likely to do great harm to the hearing. It may rupture the drum-head, or at once render the acoustic nerve unfit for functional activity. Hold the mouth open while the gun is being fired, so that the concussion may act simultaneously upon both surfaces of the drum-membrane. The effect of compressed air, as experienced in the ears of divers, caisson-builders, etc., is often very pernicious. The principal mode of obviating such pernicious consequences is to cause a frequent interchange of air between the throat and the tympanum. This is accomplished by catheterization, either with the Eustachian catheter or Pomeroy's faucial catheter, or by Politzer's or Valsalva's operation. Sometimes simply swallowing, either with or without the stoppage of the nostrils, will be sufficient, in going from one compartment of a caisson to another having a different air-pressure.

The ears require to be "changed," as the expression is; that is, induce an interchange of air between the throat and tympanum, so as to equalize the pressure. On the score of violence inflicted on the ear, the common practice of boxing the ears of children is liable to result in serious damage; pulling and pinching the auricles is much to be reprehended. With reference to the prevention of impaction of cerumen in the meatus, disease of the ears for the most part may be predicated when this tendency exists, and no efforts at cleanliness can prevent it. *Sunstroke* occasionally affects the hearing unfavorably.

The third part was by DR. STEPHEN SMITH,

ON SEWER-GASES.

Sewer-gas has been recognized as a powerful factor in the cause of that large class of preventable affections known as "filth diseases." The writer then spoke of the solution of the question of the prevention of the entrance of sewer-gas into dwellings, of the far more important question of ventilating sewers themselves, and of the system adopted by the Department of Public Works for the accomplishment of this purpose. Dr. Smith gave practical illustrations of the evils of the present system of ventilating sewers, that is, by means of perforated covers to the man-holes in the streets. He referred especially to Forty-second Street, which is seldom free from the odor of sewer-gases, and frequently for days and nights together the odor is so intense as to raise the inquiry of the residents as to the possibility of the odor from the gas manufactory miles distant reaching them. In damp, foggy weather the residents have been obliged to close their windows at night to shut out the foul odors. He thought it very evident that this method of ventilating sewers is in every respect objectionable. Practically it is equivalent to having open sewers running through the streets of New York. There can be no effective method

of removing the gases of sewers except by apparatus which is aspirating in its operations. The gases should be drawn out by the action of forces which are constant and altogether independent of atmospheric changes, and delivered into the external air at an altitude which renders it impossible for them to penetrate any room occupied by human beings at any time. The subject above considered ought to receive the attention of the Board of Health. In answer to complaints of citizens, and requests that the nuisances be abated, that body refers to the Department of Public Works. Though the sewers are managed by that department, yet the Board of Health is not thereby exonerated from obligation to protect the public health against the dangers to life or the detriments to health which the Department of Public Works or any other department creates.

The fourth part was by the Chairman of the Committee, DR. S. OAKLEY VANDER POEL, on

THE HYGIENE OF HIGH HOUSES.

The Committee protested against the erection of high buildings from a hygienic point. *First*, with reference to the inmates. Since the inception of this question in building no general epidemic, such as all large communities are liable to, has occurred. Isolation of the sick in all such maladies is a prime factor to prevent spread of the disease. In the buildings constructed having so many families, such isolation would be practically impossible. Either through necessary attendance, contaminated clothing, or currents of air, the epidemic poison would be carried to every occupant, and the persons now eager to secure apartments therein would be as anxious to desert them. The families in the first three stories are to a great degree deprived of sunshine. The importance of this to the thickly denized population can hardly be over-estimated.

So much of the surface of the lot is occupied both for obtaining room and to give solidity to the high walls, that it becomes necessary to resort to every expedient to procure the necessary circulation of air and ventilation. Chief among these are the air-shafts running from the bottom to the top of all such houses. Into these, windows open either from the inside rooms, or these windows may serve as ventilators to water-closets and bath-rooms. While the houses and plumbing are new no unpleasant effects may follow this procedure, but, as experience has too often shown, defective plumbing in any of the lower stories will allow miasm to be wafted to every story above through the open windows upon these shafts.

For economical reasons, most of the closets and bath-rooms are placed upon one line of piping. Should typhoid fever, or possibly cholera, occur in the lower stories, and any defects exist in the traps above, the poison would contaminate the apartments so exposed.

Second.—Their influence is more baneful upon the surrounding property and streets. Opposite and adjoining houses receive no direct rays of sunshine. The streets remain damp, and of necessity more or less filthy. This constant dampness and lack of sunshine is more or less pernicious. All methods of disinfection and destruction of disease germs depend upon the active oxidizing effect of the material employed. In our streets, next to cleanliness the most important factor in oxidation is the sun's rays.

These evils are not confined to the residents of the high buildings, but to those also on the opposite side of the narrow streets. Private houses, before cheerful and healthy, become gloomy and unhealthy. Fictitious currents of air are established which not only make smoking chimneys, but may reverse the currents from the underlying pipe from the roof connecting with the soil pipe. While apartment houses in our crowded population with limited area may be a recognized necessity, a limit of height, regulated by the width of the adjoining street, should be required as a sanitary necessity.

ADDRESS OF THE RETIRING PRESIDENT.

DR. DAVID WEBSTER then addressed the Society, making brief reference to the work which had been done during the past year in the way of prosecuting illegally qualified practitioners. He was also pleased to be able to note that during the year a new interest had been aroused in scientific work. More scientific papers had been offered than the limited number of meetings of the Society could receive, and the average attendance of the meetings had increased. Notwithstanding the large increase of members, there is still room for missionary work in that direction. Since the law of 1880 went into effect it has been the rule of the Comitia Minora to recommend for membership none but legally qualified practitioners. This rule has debarred several excellent physicians who, having graduated at medical colleges *without* the State, and not having joined the County Medical Society before the law went into effect, could not become legally qualified without having their diplomas endorsed by the faculty of some duly chartered medical college within the State. These gentlemen have objected to the trouble and expense of getting their diplomas endorsed, and though they have registered at the County Clerk's Office, are still practising illegally.

DR. WEBSTER then read the names of the members who had died within the year, and referred to their work and the influence which they exerted. In conclusion he thanked the Society for the uniform courtesy extended to him while serving it as president.

THE SECRETARY read the resignations of Drs. J. H. Low, M. B. Dubois, W. Thurman, J. C. Lay, and Austin Flint, Jr., which were accepted.

The adjourned annual meeting then adjourned.

Stated Meeting.

DR. S. OAKLEY VANDER POEL, President, called the Society to order and delivered his

INAUGURAL ADDRESS,

in which, after expressing his high appreciation of the honor conferred in electing him president, and speaking of the general scope of the organization, he said that the Society had reached a period of its growth and intellectual activity when better than mere ephemeral work should be presented. Special reference was made to the "collective investigation of disease," a work which had received especial attention in Great Britain. The fields in which inquiries of this character might be extended are as broad as the domain of medicine. One of the most promising fields of labor for combined observation is in the *self* study of disease by medical men. By taking up some subject and studying it in this manner, limiting the inquiry to few questions, and to the profession in this vicinity, much good might result.

The bent of medical thought and teaching for the present is rather pathological and clinical, and he would not say a word to depreciate labor in these directions, but simply throw out the caution that we should not, in too close absorption in the study of local changes of tissue and their clinical manifestations, lose sight of those broader diathetic manifestations which will, from the same apparent cause, produce different diseases in different persons.

The President said that he considered it a part of his duty to continue the good work of the Society of prosecuting illegal practitioners of medicine.

COMMITTEES FOR THE ENSUING YEAR.

At the close of his address, THE PRESIDENT appointed the following committees:

Committee on Hygiene.—Dr. A. Jacobi, Chairman—Drs. E. H. Janes, W. T. Alexander, R. H. Derby, and R. Van Santvoord.

Committee on Ethics.—Dr. Laurence Johnson, Chair-

man—Drs. W. M. McLaury, J. L. Campbell, Ellsworth Eliot, and E. L. Partridge.

Committee on Prize Essays.—Dr. C. C. Lee, Chairman—Drs. R. F. Weir and T. A. McBride.

Auditing Committee.—Drs. P. A. Morrow and H. P. Farnham.

THE PRESIDENT also referred to the great loss to the profession caused by the death of J. Marion Sims, and appointed Dr. W. Gill Wylie to read a memoir at the meeting in January, 1884.

The paper for the evening was read by Dr. J. LEONARD CORNING,

ON CEREBRAL EXHAUSTION.

We know of an inadequacy of the functional capacity of the motor apparatus dependent upon mal-nutrition of the muscle itself. We are also cognizant of a similar state of things affecting the organ of thought. It is of this impairment—this exhaustion of the functional capacity of the thought mechanism—that I would speak this evening.

Under the designation "cerebral exhaustion" I propose to consider a group of clinical phenomena, the chief feature of which is a morbid limitation of the ratiocinative capacity of the individual consequent upon functional brain disease.

The manifestations of cerebral exhaustion are chiefly comprised under the following headings:

Psychical symptoms: 1, Morbid limitation of the ratiocinative processes; 2, Morbid emotional phenomena; 3, Derangements of memory; 4, Volitional impairment; 5, Evanescent mental confusion; 6, Disorders of sleep—morbid dreams; 7, Lack of mental concentrativeness.

Physical symptoms: 8, Ocular symptoms; 9, Acoustic symptoms; 10, Vaso-motor disturbances and cardiac derangements; 11, Local head pains.

Secondary symptoms, sometimes consecutive to or accompanying the primary exhaustion: 12, Insufficiency of voluntary muscular power; 13, Morbid fears; 14, Lachrymose condition in the male (wrongly designated hysterical); 15, Morbid sexual manifestations.

These were discussed in the order of their clinical occurrence.

DR. PUTZEL said that cerebral hyperæmia and anæmia were rarely found at autopsies, except as produced by some local organic disease, and therefore he could not receive the theory that circulatory disturbances are present in cerebral exhaustion. He also thought ophthalmologists would agree that the condition of the retina could not be called in to sustain the theory. Concerning treatment, he thought no drug had done more harm than bromide of potassium in the condition of neurasthenia. It may allay the symptoms for a while, but it aggravates the cases if continued for a long time. He believed that these factors should not be lost sight of in studying this condition: 1, Hereditary tendency, shown differently in different persons; 2, worry; and 3, general anæmia. Those cases arising from hereditary tendency he doubted if they could ever be cured permanently. He favored the use of arsenic especially.

DR. WEBSTER had examined the retina in several patients suffering from cerebral exhaustion, so called, and had failed to find any marked deviations from the normal.

DR. ROOSA substantially sustained Dr. Webster's experience.

DR. JACOB said the subject was interesting, not mainly because the brain is not well understood, but because the brain cannot be studied as a specialty. Persons suffering from quite a number of other diseases will suffer from cerebral exhaustion, and therefore the brain condition can be removed by the cure of the original affection. The condition might be one of hyperæmia or anæmia, but he thought it would not be correct to speak of disease of the brain the result of overwork or worry or any such cause. He supposed the speaker meant simply functional exhaustion.

DR. CORNING said he meant that the protoplasm of the cells was affected in some way not now known.

DR. JACOBI said that so long as we did not know what the character of the change in the protoplasm is, it should be called functional in character, and that view had a special influence on prognosis and treatment. He did not believe that from the condition of the external blood-vessels we could judge of the internal blood-vessels. On the other hand, hyperæmia might exist at autopsy and during life be the attendant of a general anæmia. He regarded cerebral exhaustion as a condition of disturbed nutrition, and therefore both local and general treatment might be beneficial. Dr. Jacobi favored the use of the galvanic current, arsenic, and digitalis.

DR. A. H. SMITH regarded faulty nutrition as the chief factor in these cases, but behind that there was probably a disturbance in the distribution of the blood from vasomotor influences. He also referred to the beneficial effects produced by digitalis.

DR. E. C. HARWOOD spoke of the good effects produced by rest, recreation, horseback exercise, fresh air, and life in Switzerland.

DR. GARRISH spoke of the importance of treating the general system and the avoidance of all exciting causes, such as the use of tobacco, etc.

DR. CORNING, in closing the discussion, said he regarded the cardiac trouble as secondary to the condition of the brain, and that treatment directed to the brain would relieve the cardiac symptoms. Of course, in studying these cases organic diseases must be eliminated, and he thought that hyperæmia and anæmia could be demonstrated better in the living subject than at the post-mortem table. With regard to digitalis, it was a remedy which he had used successfully and had recommended in a monograph published about one year ago.

THE PRESIDENT presented a certificate of Honorary Membership to Brevet Lieut.-Colonel Bennett A. Clements, Surgeon U. S. Army.

DR. JACOBI moved that a vote of thanks be extended to Dr. Webster for the faithful discharge of his duties as President. Unanimously carried.

DR. E. C. HARWOOD moved that the recommendations contained in the President's inaugural address be referred to the Comitia Minora to report some plan by which they can be carried out. Carried.

The Society then adjourned.

mind which becomes Christian men and women is that of humble recipients of scientific truth."

In reference to evolution, Mr. Le Gros Clark, F.R.S., said, "it must be admitted that evolution has no *present* scientific pretension which can be regarded as admirable, to include man, morally, mentally, or physically, in its vast and varied family. I might even venture further by saying that the early history of man, so far as yet revealed to us by science, might not unnaturally induce in some minds a distrust in a theory which is compelled to rest so much on surmise and possibilities. The failing proof *may* be furnished at some *future* day, and we may await patiently and fearlessly what that future shall unfold." This will suffice for a specimen of statements which were received with satisfaction by the Congress. I quote this speaker as one of our profession whose name will be almost as familiar on your side of the Atlantic as on ours, and I might supplement it by what Prof. Flower, equally well known to you, in his turn said. I refrain from citing the speeches of the clergy in a medical journal, but some of them were characterized by a firm grasp of science.

In other quarters there are indications that the doctrine of Darwin is losing some of its charms for scientists. Some tell us that they accept it as a step to something else. Others find its demands on their credence too great. Your readers know pretty well the opposition it has encountered by such men as St. J. Mivart, Virchow, Wharton Jones, F.R.S., and others. A further indication of uncertainty in scientific minds is afforded by the statements of Prof. Tyndall, who, in the *Popular Science Review*, says that "Evolution belongs to the dim twilight of conjecture. . . . Those who hold the doctrine are by no means ignorant of the uncertainty of their data, and they only yield to it a provisional assent. . . . Long antecedent to his advice I did exactly what Virchow recommends, showing myself as careful as he could be, not to claim for a scientific doctrine a certainty which did not belong to it. . . . I agree with him that the proofs of it are wanting. I hold with Virchow that the failures of proof are lamentable, that the doctrine of spontaneous generation is utterly discredited."

Nevertheless, at the British Association for the Advancement of Science, one of the chairmen spoke of the doctrine as "firmly established," a phrase more easily uttered than justified in the face of the most recent expressions of the most cautious scientists.

Referring to the British Association, I may remind you that next year this great scientific congress is to cross the Atlantic and meet at Montreal under the presidency of Professor Dawson, and this fact again reminds me of a meeting of which you may not have heard, as our newspapers seem to have largely neglected to report it. I allude to an afternoon meeting of members of the Association, convened during the late congress, for the purpose of devotion—in fact, a prayer-meeting called and conducted by scientists of eminence. Four out of six who signed the circular convening this meeting were Fellows of the Royal Society, and the attendance was much larger than might have been anticipated. Principal Dawson himself delivered a memorable address, Dr. Gladstone and Professor Hull took part in the proceedings, and many regard this meeting on the Sunday afternoon as one of the most interesting of the gatherings at Southport. Men of this stamp are, of course, above being scoffed at, and indeed, in this age, few if any of the leading scientists should be classed as scoffers. Most claim to be seekers after truth and the claim is freely admitted.

Dr. Maudsley has attained some repute as an alienist, and his writings have made him more widely known as a materialist of the materialists. His admirers call him "outspoken," others call him flippant, or self-satisfied, or conceited. A recent slip should suffice to moderate his conceit, as it will injure his reputation with scholars. In

Correspondence.

OUR LONDON LETTER.

(From our own Correspondent.)

ANOTHER HONOR TO THE PROFESSION—DR. ACLAND, F.R.S., AND NOW C.B.—MEDICAL MEN AT THE CHURCH CONGRESS—EVOLUTION—BRITISH ASSOCIATION FOR ADVANCEMENT OF SCIENCE—A PRAYER-MEETING OF SCIENTISTS—DR. MAUDSLEY'S LATE BLUNDER.

LONDON, November 10, 1883.

DR. ACLAND has received the—dignity (shall I call it?) of C.B. If a knighthood was lately declined this lesser distinction seems a very poor one to offer the Oxford Professor and President of the Medical Council. As a kind of titular head of the profession, surely he might have had something as much thought of as the titles so freely given by this ministry to brewers. Mr. Gladstone had better repair this blunder by promoting the doctor to the next grade—K.C.B.

If the Church Congress should follow the precedent set this year of inviting eminent scientists to make communications, the proceedings will probably attract more attention than hitherto. At the late meeting the subject was put before the Congress as perhaps few could have anticipated, a bishop observing that "the attitude of

proof of an argument he advanced to show that evolution was true, nay that alongside of it there has been going on a process of degeneration, and that this will in the end get the upper hand and rapidly undo all that has been done, he finds evidence *to satisfy him* that we are already on the way back to nothingness in the "egoistic hyperæsthesia" of this age.

Do your readers ask what that is? It is only our present condition as contrasted with the Homeric age. Then we are assured that there was "deep, calm, restrained, and massive feeling, fusing intelligence and activity into whole and universal unity." Brave words, these! and the contrast, the now—what of that? Only "howling displays of self-consciousness" and "shrill outcries of sentimentality" which constitute the "egoistic hyperæsthesia." In proof of this stupendous proposition the only evidence offered by Dr. Maudsley is a poem on the death of Achilles which he has mistaken for Homer, but which we learn was written from a present-day view, a couple of years ago. The author, the Rev. O. Ogle, probably little dreamed that his effusion would pass as the "Blind Bard's" within so short a period of its publication, and if Dr. Maudsley's speculations are generally as devoid of evidence as this, we may wait with equanimity the results of the process of de-evolution which he dates from Homer, and even bear calmly the "egoistic hyperæsthesia" which, according to his forebodings, will shortly transmute man into a much fiercer monkey than the one from which he dates his ancestry.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 17 to November 24, 1883.

MOORE, JOHN, Lieutenant-Colonel. Relieved from duty as Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

BACHE, DALLAS, Major and Surgeon. Assigned to duty at Fort Adams, R. I. S. O. 215, par. 5, Department of the East, November 19, 1883.

BROOKE, JAMES, Major and Surgeon. Relieved from duty at Angel Island, Cal., and assigned to duty as Post Surgeon, Presidio of San Francisco, Cal. S. O. 162, par. 1, Department of California, November 14, 1883.

HORTON, SAMUEL M., Major and Surgeon. Leave of absence granted October 20, 1883, extended three months. S. O. 266, par. 7, A. G. O., November 20, 1883.

TOWN, F. L., Major and Surgeon. Until further orders, to perform the duties of Medical Director, Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

WILLIAMS, JOHN W., Major and Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department. S. O. 157, par. 5, Department of the Columbia, November 12, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Warren, Mass., and assigned to duty at Madison Barracks, N. Y. S. O. 217, par. 4, Department of the East, November 21, 1883.

COCHRAN, J. J., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Bayard, N. M. S. O. 236, par. 5, Department of the Missouri, November 15, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Adams, R. I. S. O. 216, par. 3, Department of the East, November 20, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. To report in person to Lieutenant Schwatka, Third Cavalry, aide-de-camp, for temporary duty in con-

nection with the completion of report of recent expedition to Alaska. S. O. 156, par. 3, Department of the Columbia, November 9, 1883.

APPEL, D. M., Captain and Assistant Surgeon. Granted two months' leave of absence. S. O. 68, Division of the Atlantic, November 16, 1883.

MUNN, CURTIS E., Captain and Assistant Surgeon. Assigned to duty at Fort Warren, Mass. S. O. 216, par. 4, Department of the East, November 20, 1883.

WINNE, CHARLES K., Captain and Assistant Surgeon. Relieved from duty at Fort Winfield Scott, Cal., and assigned to duty as post surgeon Angel Island, Cal. S. O. 162, par. 1, Department of California, November 14, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 24, 1883.

KENNEDY, STEPHEN D., Medical Inspector. Dismissed the service by sentence of a General Court Martial.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 27, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
November 20, 1883.....	0	32	44	1	51	39	1	0
November 27, 1883.....	0	33	64	2	36	37	0	0
<i>Deaths.</i>								
November 20, 1883.....	0	13	9	1	6	22	0	0
November 27, 1883.....	0	12	7	2	4	16	0	0

THE NEW YORK CATTLE QUARANTINE.—The United States Government has bought forty acres of land at Garfield, N. J., having in view the establishment of a quarantine station to which all foreign cattle arriving in the port of New York are taken. If the animals, however, are found suffering from any fatal contagious disease, as lung plague, rinderpest, or aphthous fever, they must not be admitted to the regular quarantine, but quarantined elsewhere. The cattle seemingly free from all infectious diseases are taken to the Garfield grounds with great care, every precaution being taken to avoid any risks of spreading a disease. Only cattle arriving by the same ship may be quarantined in the same yard, and the rules require that all gates of yards shall be kept locked when cattle are entering or leaving the quarantine grounds. A veterinary inspector has general supervision and reports to the Treasury Cattle Commission the appearance of any contagious disease. As a further precaution the manure is quarantined for three months after the cattle have served their ninety days and then removed from the grounds.

THE USE OF CLEAN AIR IN THE COMPRESSED-AIR CHAMBER.—Dr. Arthur J. Wolff, of Hartford, Conn., writes: "I notice in THE RECORD of October 6th, an extract from a letter of Prof. J. Solis Cohen, of Philadelphia, which is certainly very unfair, to say the least. Does it become us to rest satisfied because our patient is breathing impure air in his environments, to force the same and dirtier air down his throat? Let the doctor well understand me before he shoots in his pseudo-overwhelming criticism. I claim from my observations on this matter, that the chamber, as at present used, concentrates all the matters contained in the air into a

small space; it removes all the living particles from currents (a very important consideration), supplies them with moisture and the necessary pabulum for their nutrition and increase; in other words, it makes contaminated air more contaminated. The limited area contains in it every favorable circumstance for the proper development and multiplication of any disease-germs contained in the atmospheric air, which, if used unsterilized from the consulting-room, will, after the lapse of a few hours, be found to contain a far greater number of microbes than could be formerly demonstrated by the microscope. Had the doctor thought a moment, he would not have condemned the sterilizing of the air, if for no other purpose than that of cleanliness. If his mode of reasoning is correct we may as well advocate the use of unclean instruments when we are going to operate on an unclean individual, because, forsooth, cleanliness around and about him 'is superfluous;' or because a patient is breathing infected air, and is in contact with septic matter, antiseptic precautions in the treatment of his wounds are superfluous. A reference to the doctor's very valuable work on 'Throat Affections,' will show the pathological importance to which attaches the inhalation of certain disease-germs, and yet he asserts that the use of absolutely clean air is unnecessary, because the individual is surrounded by and breathing in an impure atmosphere. Now, sir, I hold that there is a vast difference between breathing this air, and forcing the same down the throat and into the lungs of a patient suffering already with inflammatory trouble, and when, as I have found, the same is much dirtier than ordinary air, I am not surprised that the spray has often led to an increase of the throat disease. Let me ask Dr. Cohen if he has ever found strict precautions as regards cleanliness a 'superfluity?' and if he answers in the affirmative (as his letter would imply), we will then grant the justice of his criticism. If the use of clean air in the compressed air-chamber 'be superfluous,' we may as well cancel all the advances and improvements made by modern medical and surgical science in that direction as being also superfluous."

TYPHOID FEVER IN ALLEGHENY CITY.—Dr. D. N. Rankin gives, in the *Pittsburg Medical Journal* for October, 1883, an account of the origin of an epidemic of typhoid fever recently prevalent in Allegheny City. There were in all forty cases scattered through three different wards. The physicians were at first disposed to attribute the cause of the disease to foul emanations from dumping-grounds in the vicinity, but it was finally suggested that every family in which typhoid fever had occurred was supplied by the same milkman. When this fact was made known to the physician of the Board of Health of the city, he at once inspected the premises of the milkman, and found the following state of affairs: The dwelling and stable were on the side of a hill, the well from which the water for his family as well as for the cows was obtained being about fifty feet from the privy vault, which is higher up the hill than the well. The privy vault was full. There was at the time of the investigation, and had been for several weeks, a case of typhoid fever in the house. Examination of the well water showed that it was contaminated with organic matter of animal origin and many living organisms. There would seem to be little doubt, therefore, that the typhoid infection was spread by the milk.

SUCCESSFUL CASE OF CHLOROFORM NARCOSIS DURING SLEEP.—Dr. A. W. Hurd, house physician to the Alms-House Hospital, Blackwell's Island, sends the following: "The recent adverse testimony in the 'chloroform narcosis during sleep' question leads me to report a case under my observation. As one affirmative case has much more weight than a number of negative ones, I think this will prove of interest, especially as there can be no doubt of the completeness of the anæsthesia in this instance. October 5th, a man, seventy years of age, a coalheaver by occupation, was admitted to the hospital with severe con-

tusion of left forearm and elbow, and a subclavicular dislocation of humerus. He appeared partially demented, gave a very indefinite history of his injury, and resented vigorously any attempts either at examination or reduction. So violent was he that it was decided to induce anæsthesia during sleep if possible, and attempt reduction. About two hours after falling asleep in the evening, chloroform was administered on a handkerchief held about ten inches from his face at first. He breathed quietly, and made not the slightest sign of disturbance. The handkerchief was brought gradually nearer, and when he seemed fairly unconscious ether was substituted for the chloroform. The change did not disturb him, except to cause a slight alteration in the rhythm of his breathing for a moment. With the assistance of Drs. Herrick and Winstock the dislocation was then reduced, but with difficulty, the examination revealing the presence of numerous adhesions. The dislocation was evidently of older date than the contusion, while we thought it probable that they were both acquired at the same time. The manipulation required at least fifteen minutes, and rotation was resorted to, to break up the adhesions—the dislocation finally being reduced. The patient came out from the influence of the ether in about ten minutes. The completeness of the anæsthesia is unquestionable, as the manipulations were such as would be very painful to a conscious person. The ease with which the anæsthesia was obtained, and the thoroughness of the test of its genuineness seem worthy of note as opposed to the number of unsuccessful cases recently published, accompanied by a criticism that the tests ordinarily employed were insufficient."

THE LILY OF THE VALLEY IN HOMŒOPATHY.—"Some Western homœopaths," says *THE MEDICAL RECORD*, "have got hold of *convallaria*, and having read all that scientific medicine has to say about it, are quietly appropriating the drug themselves." The first knowledge we obtained of this drug was from Dr. John F. Gray, who used it for many years in heart troubles, and we believe was the first to introduce it to the profession. The new school has a habit of reading all that scientific medicine has to say of a drug, and quietly appropriating the facts. We are glad that some of the old school are following their example.—*New York Medical Times*.

CONCERNING CRAMMING FOR EXAMINATION.—A correspondent from the Navy writes: "The question of 'cramming' and frequent examinations which have occupied the attention of Dr. Shufeldt, Professor Coues, and others, excites no little interest among our English cousins. The testimony of Mr. Walter Wren, 'the eminent crammer,' and of numerous correspondents of the *Times*, has shown up these matters in a true light, and it is evident that we have not a monopoly of 'superficial education.' There is a very general belief in England that there is too much 'cramming' in the public and private schools, and at the universities; and that knowledge will be found in inverse ratio to the cost of education. As with us, too much is attempted in too short a time, and a mere 'smattering' is the result. This is the history of our private and public schools, Annapolis and West Point. A writer in the *London Times* states that he crammed his son on subjects of which he knew literally nothing, 'and so stuffed him that he passed easily' a rigorous examination. He tried him again shortly after, and found 'his mind had returned to its original vacuity.' In the United States Navy, examinations are carried to a ridiculous extent, one for each grade (except in the engineer corps, where it would appear the most important) and the result by no means justifies the loss of time, vexation, and expense incurred. The profession of physic no doubt needs students better prepared academically, and professional examination made by or under the supervision of a supreme medical council. Diplomas and licences should be granted by this body, and not by interested college faculties. In Government

departments a very *rigorous* entrance examination should be required, and a second examination at the end of five or ten years may be needed to determine the advance or improvement of an officer in his professional studies, or better still, a post-graduate or polyclinical course should be insisted upon; but as a man is 'either a fool or a physician at forty,' it is absurd to examine men at fifty or sixty years of age, to test their *practical* skill or ability."

DOCTORS ON MARRIAGE.—Dr. Clifford Allbutt, in a recent address, says: "In matters of wider bearing—in the larger social and political questions—we shall do well, as Bacon says, 'not to usurp a kind of dictature in sciences, nor with over-confidence to pass censure upon matters in doubt, nor to give way to peremptory fits of asseveration.' All professions, not one only, tend to put on the priesthood, if not checked by conflicting authority; to give themselves airs, in short. A doctor's one idea being very properly a sound body, he proclaims that, if he were king, no members of a family tainted with consumption or insanity should marry; as if the frail tenements which held the spirits of Keats, or of Elia, or Arthur Hallam, or of W. K. Clifford, bore not freights more precious than a wilderness of cricketers. To come nearer home: Addison was one of the ablest teachers the art of medicine ever knew; now Addison was bred of insane blood, and died by his own hand. Who are we who pretend that we can lose such lives as these, or who deny that their genius drew any quality from the instability of their blood? Our answer to questions of this kind is to point out the dangers clearly, and wherein they lie, or increase; but not to claim alone to bind or loosen, nor to measure all things with our own foot-rule. Even in lower matters, where we see more clearly, as in sanitary questions, we cannot drag people blindfold."

A FRENCH SURGEON'S VIEWS OF AMERICAN WOMEN.—M. Poncet, a surgeon of Lyons, France, has been travelling in this country and has recorded some of his impressions in the feuilleton of the *Lyon Médicale*. His observations upon the anatomy of American women possess some novelty. He is quoted by the *Boston Medical and Surgical Journal* as follows: M. Poncet "is struck by a certain similarity of conformation between the women of the 'New World' and those of 'blonde Albion,' both are deficient in '*pectus*,' the mammary glands are but little developed, or there is at least a want of harmony between the size of those organs and the general figure. The upper part of the body, apart from the head, which is often very expressive, sometimes extremely beautiful, is disappointing in volume. The pelvis and the lower limbs, on the other hand, he finds well developed. This disproportion frequently struck the writer at the hospitals. He concludes that the German transplanted to the United States will become less productive, and in this respect more and more like the native American."

We would like to ask Dr. Poncet how about the *pectus* of the French women? According to statistics, the French birth-rate is the lowest of any nation. Therefore, if the French women have a gratifying mammary development, it is not a result or evidence of fecundity.

THE USE OF CARBOLIZED SAWDUST as an antiseptic surgical dressing is advocated by Mr. H. P. Symonds in *The Lancet*. He says: "One of the drawbacks of the usual antiseptic dressing is the rapidity with which the discharges come through on the first day or two after operation, often necessitating the redressing of the case within a few hours. To prevent this, and yet not to interfere with the aseptic condition of the wound is a distinct advantage both to the patient and the surgeon. The material I have used recently in a considerable number of cases is coarse sawdust, soaked in (one in ten) solution of absolute phenol and spirits of wine, then allowed to dry slightly so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When

used it is enclosed in a bag made of several layers of gauze, and applied outside of the deep dressing, the usual external dressing being put over it. The sawdust thus takes the place of the padding of loose gauze which is generally used. Its absorbent power is very great, and it has the additional advantage of keeping up an equable pressure on the divided tissues. Fourteen ounces of sawdust will readily absorb about one pint of fluid. He reports five cases, taken without any selection, in all of which complete primary union took place without any formation of pus. The three points in its favor are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. The sawdust should be coarse, as it passes through the gauze when very fine and irritates the skin."

THE STUDY OF INSANITY AS PART OF THE MEDICAL CURRICULUM.—The obligation of medical men to be examined in the treatment of insanity has been a subject of discussion in the German Legislature, and the question has been decided in favor of the omission of the proposed test. Certain sections of the medical press in Germany have, however, expressed the opinion that the connection between mental and corporeal disease is in some instances so close that the physician would gain by having at his command a special knowledge of the subject in question. The hope is expressed, says *The Lancet*, that in the interest of their professional skill young doctors will not avail themselves of the step which the government has taken, but will devote attention to mental diseases and their treatment.

M. PONCET ON THE AMERICAN METHOD OF LIVING.—Dr. Poncet, of Lyons, France, gives the following Gallic account of the way we live: "If there is any truth in the proverb, 'Tell me what you eat, and I will tell you what you are,' it is amply illustrated in the New World. The American does not eat, he simply fills himself; his sole desire is to satisfy hunger, and if he can secure quantity, quality is of little importance; hence one frequently sees him ingest a lot of food standing up, or scarcely seated, at a counter. There are fixed hours between which meals may be had, and food must be taken at those times whether one be hungry or not. A despotic, all-powerful public opinion, which no one dares defy, decrees the hours for eating. The meals are always begun with a square block of rancid butter, having an odor of margarine. A pause of fifteen to twenty minutes gives time to attempt the digestion of this compound, and then you find yourself surrounded by a variety of little dishes which you expressed an intention to eat. It matters not that they become cold, for do you not see around you 'des misses, des ladies, des gentlemens' eating watermelon with chicken, and currant jelly with cutlets and salad! Behind your chair is one negro who fans you, and another who puts ice in your glass." The writer apparently was not struck with the number of our religions, but it does not escape him that we have but one sauce, and that like glue, by which otherwise good meats are ruined. Our eggs have a queer, stale, animal flavor, which is supposed to result from the hens being fed upon meat that they may lay more. Corn is a favorite article of food, and though eaten in various ways, is most often boiled on the cob. Three or four of these cylinders are not too much for a lover of this cereal, who will gnaw off the grains with his teeth, and presently leave nothing but "*la carcasse*."

A PEOPLE WITHOUT CONSUMPTION.—A paper was read recently before the Tennessee Medical Society with the title, "A People without Consumption, and some Account of their Country." The country in question is the Cumberland plateau. The writer, Dr. Wright, has practised in the region throughout a generation, and in his assertion of fact touching the entire absence of consumption he is supported by the testimony of about twenty other physicians of standing.—*Medical and Surgical Reporter*.

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CEREBRO-SPINAL FEVER.

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(Continued from p. 590.)

CASES seen by the writer, chiefly during the last five years. Those in the epidemic of 1872 not in the list. The symptoms commonly present, as vomiting, headache, neuralgic pain in trunk and limbs, retraction of head, rigidity of posterior cervical and other muscles, the temperature and pulse, though recorded in my notes, are omitted in the table, unless they presented unusual features. The duration is reckoned, in those who recovered, to the time when they could stand or walk, though with difficulty.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
1	Male.	10 months.	Sudden; no prodromes.	Eclampsia on first days; retraction of head and muscular rigidity 4 weeks.	6 months.	Recovery.
2	Male.	3 years.	" " "	Internal strabismus of right eye; dangerously sick 7 weeks.	9 weeks.	Recovered, except strabismus which is permanent.
3	Female.	2 years.	" " "	Eclampsia; coma.	9 days.	Died.
4	Male.	30 years.	" " "	Delirium; coma.	5 days.	Died.
5	Male.	22 years.	" " "	Herpes around mouth.	8 weeks.	Recovered.
6	Female.	4 years.	" " "	Chilliness; great pallor at first; delirium, great restlessness, convulsions, and coma.	6 days.	Died.
7	Male.	2 years, 2 months.	" " "	Vomiting at intervals for 7 weeks; head so retracted that finger could with difficulty be pressed to nucha; had constipation and strabismus; usually lay with eyes shut and screamed when disturbed; feet and legs usually cool from the second to the tenth week; much emaciated.	Temporary abatement of symptoms in the third week so that he played for a few hours, followed by a full relapse. Began to stand and walk with a tottering gait on the sixteenth week.	Recovered.
8	Male.	20 months.	Rather languid on previous day, but played.	Began with clonic convulsions and high febrile movement at night; convulsions at 5 A.M., 12 M., and 3 P.M.; appeared dying, and deglutition impossible on the first day; deglutition again impossible during the three days before death.	25 days.	Died comatose.
9	Female.	3 years.	Vomited and seemed sick after a slight punishment on June 11, 1882, on the 12th was better, had some appetite and went out. On the 13th cerebro-spinal fever began with a temperature of 103°.	The muscular rigidity became less after the twelfth day; lost speech on the second day, and was unable to articulate for 2½ months; strabismus; <i>tache cerebrale</i> .	Was in bed 2½ months, unable to stand or walk; when recovering and fully conscious, made frequent attempts to speak, but without any sound. Finally articulated slowly, and the easiest monosyllables.	Recovered, but after 1 year speech slow and lisping; gait unsteady and hands tremulous; easily fatigued; is very sensitive and cries often.
10	Male.	28 years.	Ate heartily at 12 M. on April 23, 1883, and at 1 P.M. had a chill; vomited severely, and had intense headache; minute red points in face after vomiting, from capillary extravasations. On April 24th, vomiting and headache ceased and he remained well till the 26th. Went to Brooklyn on the 25th. On the 26th pains commenced in head, back, and limbs, with febrile movement.	Had general convulsions on April 30th, lasting 10 or 15 minutes; could walk in the sickness, but with tottering gait, and always had some appetite.	Left the house in five weeks, but a glass of beer or other stimulant caused renewal of headache, which during the sickness had been oftenest in the occiput, though it was frequent in other parts of the head.	Recovered.
11	Male.	6 years.	Previously well and the day before very cheerful.	Head retracted two weeks.	Began to walk in the fourth week, and progressively improved.	Recovered.
12	Male.	3 years, 8 months.	Was punished, though not severely, and soon after cerebro-spinal fever began with febrile movement and convulsions.	Opisthotonos, and retraction of head 10 weeks; greatly emaciated; could not speak for three months; apparently could not hear at first or was too unconscious to notice sounds.	3 to 3½ months.	Recovered.
13	Male.	10 years.	Sudden, in school.	Muscular rigidity with retraction of head; great emaciation; ulceration of cornea.	9½ weeks.	Recovered.
14	Female.	9 years.	Sudden; no premonition.	Vomiting; marked opisthotonos.	10 weeks, but fainted on slight exertion for months afterward.	Recovered.
15	Female.	11 months.	" " "	Eclampsia; apparently did not notice objects during the first month.	9 weeks.	Recovered.
16	Female.	12 years.	" " "	Great emaciation; had occasional neuralgic pains for eighteen months after convalescence.	6 weeks.	Recovered.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
17		10 months.	Sudden; no premonition.	Inability to swallow; drinks passing into the larynx; abundant secretion on faucial surface without redness.	2 days.	Died.
18	Male.	2 years.		No vomiting.	3 days.	Died.
19	Male.	6 months.	Bottle-fed; had been fretful, but immediately before disease began seemed well.	Had convulsions, the mother says as many as fifty.	10 days.	Died.
20	Male.	11 years, 5 months.	Had diarrhoea two days previously, but otherwise in usual health; attended school on day when sickness began, and returned home in the afternoon with a chill with which disease began.	Eclampsia on the fourth day; pulse 169, temperature 105°; pupils widely dilated and not responsive to light.	4 days.	Died.
21	Female.	2 years, 3 months.	Sudden.	Had paresis of all the limbs; when convalescing, inability to support the head and shoulders erect; rests them often upon the sofa or the mother's lap.	Began to stand in 4 weeks.	Recovered.
22	Male.	10 months.	Sudden.	Left pupil larger than the right; partial paralysis of left leg, complete of right.	.....	.....
23	Female.	12 years.	Came from school crying with pain in top of head, in knees and calves of legs and with dizziness.	On second day intense frontal headache; left pupil larger than the right, numerous spots over entire body; mild conjunctivitis of right eye; third, right pupil larger than left, the reverse of yesterday; fourth day, dysphagia, left pupil much contracted, right pupil dilated; eighth day, right eye hyperæmic, as if from general inflammation; ninth, delirious; tenth, sees indistinctly with right eye, and objects yellow. Improved for a time and then became worse, the mother thinks from imprudence in her diet; right eye totally destroyed and its parts indistinguishable; no headache in last five days of life.	4½ weeks.	Died.
24	Male.	10 months.	Began suddenly with vomiting.	Eclampsia in second week; very fretful; eyelids usually closed; when aroused only partly raises upper eyelids; oscillation of pupils; finally no response to light and total blindness, although the appearance of the eyes was good; fingers firmly flexed at times; after abatement of the fever almost constant choreic movements of arms except in sleep. Four months after disease began, temperature 99¼°, pulse 136; eyes prominent and bright, though sightless till death.	Never able to stand but lived 10 months.	Died of diphtheria at age of 20 months.
25	Male.	4½ years.		Head retracted 4½ months, and patient in pain whenever moved during most of this time; greatly emaciated and prostrated.	Was in bed, unable to stand, 5½ months.	Recovered fully.
26	Female.	23 years.	Sudden with great headache.	Symptoms severe from the first; soon lost consciousness; removed to hospital on the sixth day.	11 days.	Died in coma.
27	Female.	4½ years.	Gradual.	No retraction of head; vomited, but not at first.	4 weeks.	Recovered, but with diverging strabismus & imperfection of sight.
28	Male.	4 years.	Sudden.	Pupils widely dilated, insensible.	1 week.	Died.
29	Male.	16 months.	Sudden.	Had pneumonia of the right lung, beginning on the third day with rise of temperature to 103½°.		Recovered.
30	Male.	7 months.	Sudden.	Frequent attacks of eclampsia during first week, unilateral, and usually short. Twice they occurred on the left side, but at other times on the right side; eclampsia followed by paralysis of right extremities and left side of face, it gradually passed off; right pupil larger than left; choreic movement of eyes; strabismus; in the second month temperature sub-normal.	.....	Recovered with loss of sight; and perhaps blunted intelligence.
31	Male.	11 months.	Diarrhoea previously.	Eclampsia nearly constant for 24 hours; during the first four days pulse scarcely appreciable; inability to swallow; total unconsciousness; case apparently hopeless and near death; temperature, 105° to 106°; pupils did not respond; gradually improved after the fourth day.	Taken sick upon the shipping in Hudson River; removed to Jersey City on the eleventh day and lost sight of.	Probable recovery.
32	Male.	5 years, 1 month.	Sudden.	A chill followed by eclampsia on the first day; highest temperature, 106°, was on the first day; moaning and restlessness in the commencement. Great emaciation when a few weeks sick.	At 8 weeks could sit in bed; could stand a few weeks later.	Complete recovery.
33	Male.	10 weeks.		Had eclampsia; fretful; constipation with vomiting; temperature, 100°; head retracted.	9 days.	Died; autopsy.
34	Female; mulatto (Infant Asylum).	23 years.	Delivered of a healthy child August 6, 1881; convalesced satisfactorily; sickened with cerebro-spinal fever August 30th.	Intense headache; delirium, coma, strabismus; paralysis of right side of face.	3 days.	Died.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
35	Male.	32 years.	Had typhoid fever three months previously; cerebro-spinal fever began suddenly after much mental excitement and worryment.	No elevation of temperature in first and second days; great pain in lower part of sacrum.	13 days.	Died.
36	Male.	9 years, 7 months.	Taken sick in school.	Eclampsia four days in the beginning; semi-coma in first weeks of disease; full consciousness and return of appetite in last part of sickness; great emaciation. Through negligence in nursing had three large bed-sores, extending to the bones, and suppurating abundantly.	18 weeks.	Died apparently from the bed-sores, one over the sacrum and one over each hip.

Pulse.—This is usually accelerated, and the more severe and dangerous the attack, the more rapid the heart's action, except occasionally in the comatose state, when probably, in consequence of compression of the brain from an abundant exudation, the pulse may be subnormal. Thus, in one of my patients, an adult, the pulse fell to 40 per minute, and in two others between 60 and 70 per minute. With the exception of these three patients, the pulse in all cases which I have observed, so far as I recollect, has varied from the normal number of beats per minute to such frequency that it was difficult to count it. As death draws near the pulse ordinarily becomes more frequent and feeble. Intermissions in the pulse do not seem to be as common as in other forms of meningitis, but marked variations in its frequency during different hours of the day, and on consecutive days, is a conspicuous symptom. Thus, in a case which was fatal in the fifth week, consecutive enumerations of the pulse, in the acute stage, were as follows, 128, 120, 88, 130, 84, 112.

Temperature.—Some of the older writers, before the days of clinical thermometry, stated that the temperature is not increased. North remarked as follows: "Cases occur, it is true, in which the temperature is increased above the normal standard, but these are rare," and Foot and Gallop make similar statements. Some recent writers have held the same opinion. Thus Lidell wrote as follows in a treatise bearing the date of 1873: ". . . Febrile symptoms do not necessarily belong to epidemic cerebro-spinal meningitis, as a substantive disease, for it may, and not infrequently does occur, without exhibiting any such symptoms." We would naturally expect that meningitis, accompanied as it is by active congestion of the brain and spinal cord, would produce more or less fever, and in eighty-six cases, which I have examined by the thermometer, I have found elevation of temperature in every case during the acute stage, except in the beginning of the attack in two instances. In a young man, aged twenty-eight years, who had severe headache and seemed seriously sick, the thermometer under the tongue showed no rise of temperature on the first and second days, but on the third day it was at 100°, and it remained elevated till his death, on the thirteenth day. The second case was that of a young woman whom I saw in consultation, and who at the time of my visit had decided febrile movement, but who, like the young man, had no rise of temperature on the first and second days, according to the careful observations of the attending physician. In the eighty-six cases which I have examined, the heat of the surface occasionally did not seem above normal to the touch, and now and then the thermometer, applied in the axilla or groin, did not indicate fever, but the rectal temperature was always elevated above that of health after the disease was fully established. The temperature fluctuated from day to day, and in different hours of the same day, but there was no exception after the second day to the rule, that it is supra-normal during the active stage of the malady. Sometimes the elevation of temperature was slight, as in a female patient, forty-seven years of age, whom I was allowed to examine with the family physician. The thermometer showed no elevation of temperature when it

was placed in the mouth and axilla, but on introducing it into the rectum it rose to 99½°.

The highest temperature which I have thus far observed, was 107½°, in a child aged two years. This was in the commencement of the attack. Subsequently it fell a little, but rose again on the third day to 107°, when she died. In two other cases the temperature was 106° on the first day, and it did not afterward reach so high an elevation. One of these died on the ninth day, and the other in the ninth week. The next highest temperature was 105¼°, also on the first day, in an infant aged eight months, who died on the ninth day. The first and last of these cases occurred in an old wooden tenement-house in the suburbs of the city, and upon an elevated outcropping of rock. The highest temperature in any case in New York City which has come to my notice, was observed in a male patient aged twenty-eight years, who had active delirium and died on the fifth day in Roosevelt Hospital. The temperature on the last day, taken four times, was as follows, 102½°, 106¾°, and when the pulse had become imperceptible, 109° and 107¾°. Wunderlich has recorded a temperature of 110° in one or two cases, but so great an elevation must be very rare, and is, of course, prognostic of an unfavorable ending.

The external temperature undergoes still greater fluctuations than the internal, rising above and falling below the normal standard several times in the course of the same day. Similar fluctuations occur in other forms of meningitis, but they are, according to my experience, less pronounced than in cerebro-spinal fever, especially as I observed them in the epidemic of 1872. Perhaps since that epidemic they have been less marked in the cases occurring in this city. The more grave the attack in those not comatose, the greater these variations. The following is a common example, in a patient aged two years. Without any notable change in other symptoms, the internal temperature varied from 101° to 104½° as the extremes, while that of the fingers and hands at the first examination was 99½°, at the second 90°, at the third 103°, and at the fourth 83°. Hence at the third examination the temperature of the extremities had risen 13°, so as nearly to equal that of the blood, and at the fourth examination it had fallen 20°. The patient recovered. These great and sudden variations in the pulse, and the internal and external temperature, have considerable diagnostic value in obscure and doubtful cases.

Respiratory system.—This system is not notably involved in ordinary cases. Intermittent, sighing, or irregular respiration appears to be less frequent than in ordinary meningitis, but it does occur. In most patients the respiration is quiet, but somewhat accelerated, and without any marked disturbance in its rhythm. In thirty-one observations in children who had no complication, I found the average respirations 42 per minute, while the average pulse was 137. Therefore the respiration, as compared with the pulse, was proportionately more frequent than in health, due perhaps to the fact that certain muscles concerned in respiration, as the abdominal, are embarrassed in their movements by tonic contraction.

Various observers, in different epidemics, have recorded an unusual prevalence of croupous pneumonia occurring

simultaneously with the cerebro-spinal fever. Bascome in his history of epidemics stated that "epidemic encephalitis and malignant pneumonias prevailed in Germany in the sixteenth century" (Webber). Webber in his prize essay describes a variety of cerebro-spinal fever, which he designates pneumonic, in which the cerebro-spinal axis is involved but slightly or not at all, and the brunt of the disease falls upon the respiratory organs. According to him, in certain epidemics the pneumonic form has been common and in others infrequent.

In New York City, during the epidemic of cerebro-spinal fever in 1872, pneumonia was also unusually prevalent, affecting many old as well as young people. According to the statistics of the New York Board of Health, seventeen hundred and seven deaths from diseases of the respiratory organs, exclusive of phthisis, occurred during the four months from February 1 to June 1, 1872, when the epidemic of cerebro-spinal fever was at its height, and only thirteen hundred and thirty-six deaths occurred from the same diseases during the remaining eight months of the year; and as phthisis is excluded, the only other disease of the respiratory system besides pneumonia, which causes a large mortality is membranous croup, which did not seem to be unusually prevalent during those four months. It is therefore probable, though not distinctly stated in the annual report of the Health Board for that year, that the great mortality from diseases of the respiratory organs, during that part of 1872 when cerebro-spinal fever was epidemic, was chiefly from pneumonia, and, according to my observations, many cases of pneumonia during that period presented symptoms of greater gravity than usually accompany this form of inflammation. The patients were greatly prostrated from the first, and in some of them febrile movement, muscular pains, restlessness, or delirium preceded for hours or even days the pneumonic symptoms, affording evidence that the lung disease occurred under certain unusual circumstances or conditions which modified its character. It is not improbable therefore that Webber's view is correct, that there are occasional cases of cerebro-spinal meningitis with pneumonia as one of its local manifestations. In the New York epidemic of 1872 a prominent citizen had a severe attack of what was supposed to be cerebro-spinal fever, one of his medical advisers being known throughout the country for his ability in diagnosis. On the sixth day the cerebro-spinal symptoms considerably abated, pneumonia appeared, and subsequently the prominent symptoms were referable to the lungs. He slowly recovered.

Cutaneous surface.—The features may be pallid, of normal appearance, or flushed in the first days of the disease, but in advanced cases they are pallid, as is the skin generally. A circumscribed patch of deep congestion often appears, as in sporadic meningitis, upon some part of them, as the forehead, cheek, or an ear, and after a short time disappears. The hyperæmic streak, the *tache cérébrale* of Trousseau, produced by drawing the finger firmly across the surface, also appears as in other forms of meningitis, if the temperature of the surface be not too much reduced.

The following are the abnormal appearances of the skin most frequently observed: 1. Papilliform elevations, the so-called goose-skin, due to contraction of the muscular fibres of the corium. This is not uncommon in the first weeks. 2. A dusky mottling, also common in the first and second weeks in grave cases, and most marked where the temperature is reduced. 3. Numerous minute red points over a large part of the surface, bluish spots a few lines in diameter, due to extravasation of blood under the cuticle, resembling bruises in appearance, and large patches of the same color, an inch or more in diameter, less common than the others, of irregular shape as well as size, and usually not more than two or three upon a patient. These last resemble bruises, and they may sometimes be such, received during the times of restlessness; but ordinarily extravasations of this kind result

entirely from the altered state of the blood. In New York, in the epidemic of 1872, they were common, but since this epidemic, in the thirty-six cases which I have observed, I have rarely seen either the reddish points or the extravasations of blood. They were probably common in the epidemics in the first part of this century in this country, since the disease was designated by the name spotted fever by the American physicians who wrote upon it at that time. That they are unusual in the European epidemics at the present time, we infer from the fact that Von Ziemssen expresses surprise that the disease should ever have been designated in America by such a title. 4. Herpes. This is common. It sometimes occurs as early as the second or third day, but in other instances not till toward the close of the first week or in the second. The number of herpetic eruptions varies from six or eight to clusters as large or larger than the hand. This cutaneous disease evidently has a nervous origin, the vesicles occurring in most instances on those parts of the surface which are supplied by branches of the fifth pair of nerves. Its most common seat is upon the lips, but occasionally it appears upon the cheek, upon and around the ears, and upon the scalp. Erythema and roseola fugitive skin eruptions occasionally appear, and in one instance in my practice erysipelas occurred. During the first days the skin is apt to be dry; afterward perspirations are not unusual, and free perspirations sometimes occur, especially about the head, face, and neck.

Urinary organs.—In other forms of meningitis it is well known that the quantity of urine excreted is apt to be diminished, but in this disease it is usually normal, and it may be more than normal. Polyuria has been noticed in different cases by various observers. Mosler observed a boy aged seven years, who had an excessive secretion of urine, which dated back to an attack of cerebro-spinal fever in his third year. The polyuria is probably due to injury of the nervous centre, since it is established by physiological experiment that irritation of the central end of the vagus, of certain parts of the cerebellum, and of the walls of the fourth ventricle, sometimes produces this effect. The urine occasionally contains a moderate amount of albumen, and in exceptional instances cylindrical casts and blood-corpuscles.

Arthritic inflammation, apparently of a rheumatic character, has been occasionally observed. It is commonly slight, producing merely an œdematous appearance around one or more joints. Thus in one case which came under my notice, and which was subsequently fatal, the parents, who were poor, and were therefore without medical advice till the case was somewhat advanced, had already diagnosticated rheumatism on account of the puffiness which they had noticed around one of the wrists.

The special senses.—Taste and smell are rarely affected, so far as known, but it is possible that they are sometimes perverted, or even temporarily lost, during the time of greatest stupor. In one case, which I saw, the sense of smell was entirely lost in one nostril, and I do not know whether it was ever fully restored.

The affections of the eye and ear are important and of frequent occurrence. Strabismus is common. It may occur at any period of the fever, continuing a few hours or several days, and it may appear and disappear several times before convalescence is established; occasionally it continues several weeks, after which the parallelism of the eyes is gradually and fully restored. In other instances it is permanent. Thus in a boy of five years, whom I last saw three months after convalescence, there was still convergent strabismus of the right eye, and double vision; and in a boy of three years, convergent strabismus of the right eye remained when I examined him twelve months after the occurrence of the fever.

Changes in the pupils are among the first and most noticeable of the initial symptoms, as I have already stated in describing the mode of commencement. These

are dilatation, less frequently contraction, oscillation, inequality of size, feeble response to light, etc. Most patients present one or more of these abnormalities of the pupils, and they continue during the first and second weeks, and gradually abate, if the course of the disease be favorable. Inflammatory hyperæmia of the conjunctiva often occurs. It begins early, and now and then the conjunctivitis is so intense that considerable tumefaction of the lids results, with a free muco-purulent secretion. The false diagnosis has indeed been made of purulent ophthalmia, in cases in which this affection of the lids was early and severe. But such intense inflammation is quite exceptional. More frequently there is a uniform diffused redness of the conjunctiva, not so dusky as in typhus, and the injected vessels cannot be so readily distinguished as in that disease.

In certain cases almost the whole eye (all indeed of the important constituents) becomes inflamed; the media grow cloudy, the iris discolored, and the pupils uneven and filled up with fibrinous exudation. The deep structures of the eye cannot, therefore, be readily explored by the ophthalmoscope, but they are observed to be adherent to each other, and covered by inflammatory exudation. They present a dusky red, or even a dark color, when the inflammation is recent. Exceptionally the cornea ulcerates and the eye bursts, with the loss of more or less of the liquids, and shrinking of the eye. "But ordinarily no ulceration occurs, and, as the patient convalesces, the œdema of the lids, hyperæmia of the conjunctiva, the cloudiness of the cornea and of the humors, gradually abate, and the exudation in the pupils is absorbed. The iris bulges forward, and the deep tissues of the eye, viewed through the vitreous humor, which before had a dusky red color from hyperæmia, now present a dull white color. The lens itself, at first transparent, after awhile becomes cataractous. Sight is lost totally and forever. This form of ophthalmia is sometimes rapidly developed, as in the following example:

On July 5, 1873, I was called to a boy, five years of age, who had reached the tenth day of cerebro-spinal fever without apparently any affection of the eyes, as both presented the normal appearance. On the following day the left eye was red and swollen from the inflammation and chemosis, so that the lids could not be closed, and the media were cloudy. Death occurred on the same day.

If the patient live the volume of the eye diminishes, as the inflammation abates, to less than the normal size, even when there has been no rupture, and escape of the fluids, and divergent strabismus is apt to occur. Professor Knapp, whose description of the eye I have for the most part followed, says: "The nature of the eye affection is a purulent choroiditis, probably metastatic." Fortunately so general and destructive an inflammation of the eye as has been described above is comparatively rare. On the other hand, conjunctivitis of greater or less severity, and hyperæmia of the optic disc, consequent upon the brain disease, are not unusual, but they subside, leaving the function of the organ unimpaired. "In some cases incurable blindness is noticed under the ophthalmoscopic picture of optic-nerve atrophy, probably the sequence of choked disc" (Knapp).

Inflammation of the middle ear, of a mild grade, and subsiding without impairment of hearing, is common. The membrana tympani, during its continuance, presents a dull-yellowish, and in places a reddish, hue. Occasionally a more severe otitis media occurs, ending in suppuration, perforation of the membrana tympani, and otorrhœa, which ceases after a variable time. But otitis media is not the most severe of the affections of the organs of hearing. Certain patients lose their hearing entirely and never regain it, and that, too, with little otalgia, otorrhœa, or other local symptoms by which so grave a result can be prognosticated. This loss of hearing does not occur at the same period of the disease in all cases. Some of those who become deaf are able

to hear as they emerge from the stupor of the disease, but lose this function during convalescence, while the majority are observed to be deaf as soon as the stupor abates and full consciousness returns.

Two important facts have been observed in reference to the loss of hearing in these patients—to wit, it is bilateral and complete. When first observed it is in some, as stated above, complete, but in others partial, and when partial it gradually increases till after some days or weeks, when it becomes complete. I have the records of ten cases of this loss of hearing, most of them occurring in my own practice in the epidemic of 1872, but a few of them detailed to me by the physicians who observed them in the same epidemic. According to these statistics about one in every ten patients became deaf, but in the milder form of cerebro-spinal meningitis which has prevailed since 1872, the proportionate number thus affected has been less among my patients, and the same may be said in reference to the loss of sight. One of the ten cases was a young lady, but the rest were children under the age of ten years. Professor Knapp has examined thirty-one cases. "In all," says he, "the deafness was bilateral, and with two exceptions of faint perception of sound, complete. Among the twenty-nine cases of total deafness, there is only one who seemed to give some evidence of hearing afterward." The same author has recently informed me that further experience has confirmed his previous statement, that while the blindness produced by cerebro-spinal fever is in the majority of cases monolateral, only one case had come to his notice in which the deafness was on one side only.

One theory attributes the loss of hearing to inflammatory lesions either at the centre of audition, within the brain, or in the course of the auditory nerves before they enter the auditory foramina. Thus Stillé says: "This symptom appears to depend chiefly upon the pressure of the plastic exudation in which the nerves are embedded." The other theory attributes the loss of hearing to inflammatory disease of the ear, and especially of the labyrinth. Dr. Sanderson, who is an advocate of the latter theory, remarks as follows: "As regards the nature of the affection, there appears to be good reason for believing that, like the blindness observed under similar circumstances, and sometimes in the same cases, it is dependent on inflammatory changes in the organ of hearing itself. Dr. Klebs was kind enough to show me, in the pathological museum of the Charité at Berlin, a preparation of the internal ear of a soldier who had died of epidemic meningitis, complicated with deafness, in which fibrinous adhesions existed between the bones of the internal ear and the walls of the vestibule. Dr. Klebs stated that in the recent state the mucous lining of the vestibule was detached. In the case of a young woman who was deaf from the commencement and died on the eighth day, "both tympana were natural, but in the left membrana tympani was found a dense white thickening as large as a pin's head. On the same side the lining membrane of the semicircular canals was distinctly thickened and loosed, and in the anterior canal there were semifluid purulent masses." Professor Knapp also states: "The nature of the ear disease is in all probability a purulent inflammation of the labyrinth." According to him, no disease of the middle ear could cause such complete deafness; and as evidence that the deafness is not due to central disease, Dr. Gruening obtained by electrization the normal reaction of the auditory nerve within the cranium. Moreover, if the lesion which destroys hearing be within the cranium, why is not the functions of the other cranial nerves also abolished? Moreover, Drs. Keller and Lucæ have in three post-mortem examinations found evidences of disease of the labyrinth.

An argument in support of the former of these theories is the fact that the lesion which produces the deafness is not ordinarily attended by any marked subjective symptoms referable to the ear, as otalgia, etc. Again, the

fact that the deafness is nearly always bilateral and simultaneous in the two ears, comports better with the doctrine of a central lesion, than with that which locates the lesion within the ear. But the true theory can only be positively established by dissections, and, as we have seen, several post-mortem examinations have revealed inflammatory disease of the labyrinth in those who have died having this form of deafness; while in no case, so far as I am aware, has the ear been found free from inflammatory lesions. Therefore the theory which ascribes the deafness to disease of the ear is much better established than the other, and must be accepted. Moreover, most of the aurists of this city, who have had excellent opportunities to examine these cases, believe in this theory.

(To be continued.)

THE TREATMENT OF ACUTE RHEUMATISM BY BLISTERS.¹

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In the October number, 1881, of the *Dublin Journal of Medical Science*, appeared an interesting communication by Dr. Harkin on the pathology and treatment of acute rheumatism. The pathology of acute rheumatism is believed by the author of the above paper to consist in "a specific form of endocarditis of neuropathic origin, generally allied with myocarditis;" "in its unchecked progress speedily modifying the composition of the blood, the innervation and calorification of the body;" "in its ordinary course giving rise to lesions in the textures, the joints, the pericardium, pleura, the neurilemma, the meninges of the brain;" "in fine, in any organ accessible to nervous or arterial influence." Presumably guided by these views of the pathology of the disease, Dr. Harkin was led, after a trial of its efficiency in his own hands, to suggest the treatment of acute and subacute rheumatism, and also of gout, by means of large blisters *alone*, applied directly over the cardiac region. He regards their action as in no sense constitutional, but as wholly topical. If I correctly interpret his views, he believes that by aborting the endocarditis, the further manifestations of the disease, the implication of other textures, etc., may be prevented; and that very potent and safe means for such abortion are to be found in the local application of blisters. The blistering treatment of acute rheumatism has been recommended by various authorities, notably by Dr. Dechilly, of Vancoeurs, in France (1850), and by Dr. Herbert Davies, physician to the London Hospital (1864). Dr. Harkin's method differs from other methods in that, being based upon a different pathology, he applies the blisters to the cardiac region *alone*. In the paper referred to, Dr. Harkin gives the histories of thirteen consecutive cases of acute and subacute rheumatism, and in the *British Medical Journal* of September 23, 1882, of an additional case and also one of gout, treated by his method, and "practically without the administration of a single dose of medicine."

Although the histories of several of the cases lack completeness in the omission of the results of examinations of the heart, and in some other desirable details, the success reported in relieving the arthritic pains, in controlling the pyrexia, and in shortening the duration of the disease, was very satisfactory. It seemed to me, therefore, without accepting Dr. Harkin's views of the pathology of acute rheumatism, that his method of treatment was worthy of further careful trial and observation. During the early months of 1883, I, therefore, without any preconceived opinion as to the results, very closely watched the application of the blistering treatment in four consecutive cases of acute rheumatism, and in one

of gout, in my wards at St. Luke's Hospital. The method pursued was as follows: After a careful examination of the patient, a blister sufficiently large to cover the entire cardiac area was applied and allowed to remain until a very copious serous discharge was obtained; the blistered surface was then dressed and a second blister applied as soon as the condition of the skin permitted. The discomfort caused was less than I feared. No internal medication was employed in any of the cases, with the exception of small doses of opium, given at night when demanded by the sufferings of the patient, until a fair trial of the treatment had been made. The histories of the cases are given in detail for obvious reasons:

CASE I. *Gout*.—Male, aged forty, admitted March 13th. There is no family history of gout. The patient has been a free liver. He has had several attacks of inflammation of the great toes within the past two years. The present attack began one week ago; the pain was not severe until three days ago, when the great toe of either foot became swollen, red, and painful. Examination on admission: temperature, normal; examination of viscera, negative; urine, specific gravity, 1.018, acid, free from albumen and sugar; the great toe of both feet is swollen, red, and painful. Ordered rest in bed and a blister 4 × 5 inches to be applied over the præcordium.

March 14th.—The pain is less severe, there is less swelling and redness of the toes.

March 15th.—Patient is free from pain, although there is still redness and swelling of the affected joints.

March 16th.—There is slight return of pain in toe of left foot.

March 17th.—Absence of pain, swelling, and redness. The patient was permitted to remain in hospital until April 2d, although there was no return of the above symptoms.

CASE II. *Acute rheumatism*.—Male, aged twenty-nine. Admitted March 1st. There is no family history of gout or rheumatism. The patient has had two attacks of acute rheumatism previous to the present one. Four days ago the toes and ankles of both feet became swollen, red, and painful; later both knees and left hip became affected. Examination on admission: Temperature, 102 $\frac{3}{4}$ °. All the above-mentioned joints are acutely inflamed. The apex-beat of heart is within the mammary line; a distinct systolic basal murmur is heard, with greatest intensity over pulmonary area; the first sound at apex is slightly impure, but no murmur can be detected. Urine, specific gravity, 1.028; acid, free from albumen and sugar. Ordered a blister 4 × 6 inches to be applied over præcordium.

March 2d.—There is an abundant serous discharge from blistered surface. Temperature, 102 $\frac{1}{2}$ °. There is little, if any, change in the arthritic symptoms. The examination of the heart corresponds with that of yesterday.

March 3d.—Temperature, 102 $\frac{3}{4}$ °. A moderate dose of opium was given during the night to control pain. The pain is decidedly less in all the joints mentioned above, with the exception of the right knee, but the right hip has become involved. An examination of the heart shows no change.

March 4th.—Temperature, 101 $\frac{3}{4}$ °. Left knee, right ankle, and hip are very painful. Examination of the heart gives the same result as yesterday.

March 5th.—Temperature, 102 $\frac{3}{4}$ °. There is no diminution of the above arthritic symptoms, and the right shoulder is painful and swollen. A distinct systolic murmur is heard at apex.

March 6th.—Temperature, 102 $\frac{3}{4}$ °. There is no abatement of the joint symptoms. The apex murmur has become more distinct, and is transmitted to anterior axillary line. The basal murmur is harsher in character. Ordered a blister 3 × 3 inches, to be applied over præcordium.

¹ Read before the Practitioners' Society of New York, November 2, 1883.

¹ The temperatures were taken at the same hour each day, in all the cases.

March 7th.—Temperature, 102° . The patient's condition has not improved in any respect.

March 8th.—Temperature, $102\frac{1}{2}^{\circ}$. The right shoulder, wrist, and fingers, the left ankle and knee are swollen, red, and painful. Both murmurs are very distinct. Ordered ol. gaultheriæ, 3 ij., $\mathfrak{M}$ xl. daily, to be taken in divided doses every two hours.

March 9th.—Temperature, 101° . There is marked abatement in all the joint symptoms. There is no change in the heart murmurs.

March 10th.—Temperature, $100\frac{1}{2}^{\circ}$. There is no pain in joints, except on motion.

March 11th.—Temperature, $99\frac{3}{4}^{\circ}$. There is an entire absence of arthritic pain and tenderness.

March 12th.—Temperature normal. There is continued absence of arthritic symptoms. From this date the patient's convalescence progressed without any relapse. On two single occasions he complained of pain in right knee and shoulder for twenty-four hours; it was unattended with redness, swelling, or pyrexia. Both basal and apex murmurs persisted up to the date of the discharge from hospital, the latter being distinctly harsh in character and transmitted beyond the anterior axillary line.

CASE III. *Acute rheumatism*.—Male, aged twenty. Admitted March 18th. The patient's mother and two sisters have suffered from inflammatory rheumatism. The patient himself enjoyed good health previous to twelve weeks ago, when for the first time he was "laid up" with an attack of acute rheumatism. There have been two relapses, the second developing two days ago.

Examination on admission.—Temperature, $101\frac{1}{2}^{\circ}$. Both ankles, the toes of right foot, both knees, and right shoulder are affected. The apex beat of heart is within the mammillary line; a distinct systolic murmur is heard at apex. Urine, specific gravity, 1.024; alkaline, free from albumen and sugar. Ordered a blister 4×4 inches, to be applied over cardiac region.

March 19th.—There is an abundant serous discharge from blistered surface. Temperature, $102\frac{3}{4}^{\circ}$. There is no relief from pain, the appearance of the joints is unchanged, as is the character of the murmur.

March 20th.—Temperature, 101° . The arthritic pains are of greater intensity.

March 21st.—Temperature, $101\frac{1}{2}^{\circ}$. There is little if any change in the joint symptoms or the heart murmur.

March 22d.—Temperature, 101° . There is no relief from pain.

March 23d.—Temperature, $99\frac{1}{2}^{\circ}$. The patient is still suffering greatly.

March 24th.—Temperature, 100° . There is absolutely no improvement in any of the arthritic symptoms. The apex murmur is heard with the same distinctness as on admission. Ordered ol. gaultheriæ, 3 ij. daily, in divided doses every two hours.

March 25th.—Temperature normal. There is marked relief from pain, and improvement in the appearance of the joints.

March 26th.—Temperature normal. There is entire absence of pain. From this date the patient steadily and rapidly convalesced, without relapse. The apex murmur persisted and was distinct in character on the date of the patient's discharge.

CASE IV. *Acute rheumatism*.—Male, aged twenty-nine. Admitted March 23d. Both father and mother of patient have suffered from inflammatory rheumatism. Seven years ago the patient was confined to the house for ten weeks with an attack of acute rheumatism. Two weeks ago he began to suffer from present attack.

Examination on admission.—Temperature, $99\frac{1}{2}^{\circ}$. Both ankles, knees, the left elbow, and right wrist are very painful, swollen, and red. The apex beat of heart is within mammillary line; a faint systolic murmur, not transmitted, is heard at apex. Urine, specific gravity, 1.020; acid, free from albumen and sugar. Ordered a blister 6×6 inches, to be applied over precordium.

March 24th.—There is a profuse discharge of serum from blistered surface. Temperature, $100\frac{3}{4}^{\circ}$. There is no relief from pain. The fingers of both hands and the left wrist have become involved.

March 25th.—Temperature, $101\frac{3}{4}^{\circ}$. Morphine was given during the night to relieve pain. There is no change in the apex murmur.

March 26th.—Temperature, $100\frac{3}{4}^{\circ}$. There is no abatement in the arthritic symptoms.

March 27th.—Temperature, $101\frac{3}{4}^{\circ}$. There is slightly less pain in the affected joints.

March 28th.—Temperature, 102° . Both wrists, left knee, hip, and ankle are to-day exquisitely painful, swollen, and red. It is necessary to give full doses of opium to control the patient's sufferings. The apex murmur is more distinct.

March 29th.—Temperature, $101\frac{3}{4}^{\circ}$. Even with large doses of opium there is little relief from pain. The last mentioned joints are all acutely inflamed.

March 30th.—Temperature, $102\frac{1}{2}^{\circ}$. The patient's condition remains the same. The heart murmur is distinct, but is not transmitted beyond mitral area.

March 31st.—Temperature, $101\frac{1}{2}^{\circ}$. The arthritic symptoms persist with the same intensity. Ordered ol. gaultheriæ, 3 iv. daily, in divided doses, every two hours.

April 1st.—Temperature, 101° . The pain is still severe, but of less intensity than yesterday. No morphine has been given.

April 2d.—Temperature, $100\frac{1}{2}^{\circ}$. There is marked diminution in pain in all the affected joints. There is no change in the character of the heart murmur.

April 3d.—Temperature normal. The patient is almost wholly free from pain.

April 4th.—Temperature normal. There is an entire absence of pain. From this date convalescence steadily progressed without relapse. The apex murmur persisted up to the date of the patient's discharge.

CASE V. *Acute rheumatism*.—Male, aged twenty-one. Admitted April 3d. The father of the patient has been a sufferer from acute rheumatism. During the past ten years, the patient states that he has had eleven attacks of inflammatory rheumatism, in three of which all the large joints were affected. The present attack was developed five days ago.

Examination on admission.—Temperature, $102\frac{1}{4}^{\circ}$. Both ankles and left knee are painful, red, and swollen. The apex beat of heart is felt to the left of mammillary line; a reduplication of the first sound at apex is heard, which is believed to represent a systolic murmur. Urine, specific gravity, 1.034; alkaline, free from albumen and sugar. Ordered a blister 4×5 inches, to be applied over cardiac region.

April 4th.—There is a copious discharge of serum from blistered surface. Temperature, 102° . There is no diminution of pain.

April 5th.—Temperature, $102\frac{1}{2}^{\circ}$. The arthritic symptoms show no abatement in severity.

April 6th.—Temperature, 102° . There is no relief of pain. A satisfactory examination of the heart is impossible, on account of the pain produced by the blister.

April 7th.—Temperature, $102\frac{3}{4}^{\circ}$. The patient's condition is unchanged. The reduplication of the first sound at the apex has assumed the character of a loud systolic murmur.

April 8th.—Temperature, $102\frac{1}{2}^{\circ}$. There is no abatement of the joint symptoms.

April 9th.—Temperature, $102\frac{3}{4}^{\circ}$. The arthritic pains are of the same intensity. The first sound at the apex is replaced by a loud murmur. A presystolic apex murmur is believed to also exist. Ordered ol. gaultheriæ 3 ijss. daily, in divided doses every two hours.

April 10th.—Temperature, $100\frac{3}{4}^{\circ}$. There is no pain except in the right knee, on movement. A distinct diastolic and faint systolic murmur are heard at base, in addition to the apex murmurs.

April 11th.—Temperature normal. The patient is

free from pain. There was no further pyrexia during the succeeding twelve days, and there was an entire absence of arthritic symptoms. The oil of wintergreen was gradually reduced to 3 jss. daily.

On April 23d there was a slight rise of temperature, which disappeared in thirty-six hours, without the development of any arthritic symptoms.

On May 9th the temperature began to rise again, and there were physical signs of a developing pleurisy on the right side of the chest. Very moderate effusion followed.

May 18th.—The patient had a violent chill during the night. A careful examination shows dulness with bronchial respiration and bronchophony over a limited area in the posterior scapular region of the left chest, and over a larger area of the right, above the level of flatness. Temperature, $102\frac{3}{4}^{\circ}$. A pneumonic process is believed to have developed in the lower lobes of both lungs. The heart murmurs persist. The urine is free from albumen.

May 24th.—The bronchial breathing, voice, and dulness have been marked over the areas above mentioned since the last note; the temperature has remained at about 102° , and to-day there is a slight return of pain and redness in the metacarpo-phalangeal joint of left thumb. Temperature, $101\frac{1}{2}^{\circ}$.

May 25th.—Moist râles can be detected for the first time to-day over the affected areas on both sides of the chest. Temperature, $100\frac{1}{2}^{\circ}$.

May 27th.—Temperature normal. The dulness, bronchial breathing, and voice have diminished slightly in intensity; the râles are more numerous. From this date the physical signs of consolidation gradually diminished; there was no return of arthritic symptoms, convalescence progressed slowly but satisfactorily. On the date of discharge, double basal and apex murmurs were believed to exist.

The history of the above case has been continued from the date of the discontinuance of the blistering treatment as presenting many interesting points. It illustrates the efficiency of the salicyl compounds in controlling the arthritic symptoms of acute rheumatism, and, at the same time, their failure in many cases to combat further and different manifestations of the rheumatic virus.

A careful study of the above histories will indicate at least a fair trial of Dr. Harkin's method of treatment. The cases were not selected ones, but represent the first five patients suffering from gout and rheumatism, respectively, who were admitted to my wards after I had determined to apply the blistering treatment.

In Case I. the gouty symptoms extended over a period of nearly five days. It is a common clinical experience to observe such symptoms subside within this period without other treatment than simple rest. In the four cases of acute rheumatism, the blisters were used *alone*, with the exception of an occasional dose of opium, when rendered necessary by the sufferings of the patient, for seven, six, eight, and six days respectively; and only then were discontinued, and a salicyl compound substituted, from the fact that there not only was *no* abatement, but even an increase in the severity of the local (arthritic) symptoms, and a persistence of the constitutional. An analysis of the results of the examinations of the heart during the period of the blistering treatment will not be uninteresting.

In Case II. a basal systolic murmur, heard with greatest intensity over the pulmonary area, existed on admission. A very careful examination failed to reveal more than a slight impurity in the character of the first sound over the mitral area. The latter distinctly and progressively developed into a loud systolic apex murmur, transmitted as far as the anterior axillary line, during the period of the application of the blisters, and persisted up to the date of discharge from hospital.

In Case III. there was a distinct systolic apex murmur on admission, which persisted unchanged up to the date of discharge.

In Case IV. a faint systolic apex murmur, not trans-

mitted, existed on admission, and continued without change during the patient's stay in hospital.

In Case V. the heart was found to be enlarged on the first examination, and a reduplication of the first sound at the apex was heard. During the blistering treatment the reduplication was lost, a harsh systolic apex bruit was developed, together with a presystolic mitral murmur. Under the salicyl treatment there was a further development of the endocarditis, as evinced by the appearance of a double basal murmur.

In the thirteen cases reported by Dr. Harkin there is *no mention* of the heart in five; in two cases a mitral murmur existed before the application of the blisters, but no further reference to the condition of the heart is made. In two no cardiac affection existed before or during treatment. In two cases a mitral murmur, heard on the first examination, is reported as disappearing in the course of two and three weeks respectively. In the remaining two cases a mitral murmur was detected before treatment; in both a pericarditis developed during treatment, with a persistence of the mitral murmur in at least one of the cases up to the date of discharge.

A critical study of the above *résumé* fails, it seems to me (granting for the moment the correctness of Dr. Harkin's views in regarding acute rheumatism as a specific endocarditis), to demonstrate the efficacy of large blisters applied over the precordium, to control such an endocarditis. Moreover, my experience in the cases treated under my personal observation by his method has wholly failed to convince me of its power to affect on the one hand the endocardial affection, and on the other the severity of the arthritic symptoms and the degree and duration of the pyrexia. In conclusion I would add a few words in regard to the much discussed and criticized treatment of acute rheumatism by the salicyl compounds. Continued careful personal observation of their effects may be briefly summarized as follows:

First.—In controlling the arthritic symptoms (pain, etc.) and the pyrexia of acute rheumatism they may still be considered as constituting the most successful of all hitherto suggested methods of treatment. Their marked effect upon the pyrexia cannot be explained by their well-known antipyretic power *alone*.

Second.—While controlling the arthritic pains and pyrexia they seem incapable, in many cases, of wholly destroying the rheumatic virus, as is shown in the subsequent development of endocardial and pericardial affections and inflammations of other fibrous and serous textures.

Third.—Further proof is needed of a more frequent implication of the endocardium and pericardium under the administration of the various salicyl compounds than under any other hitherto advised treatment.

Fourth.—The most efficient, if not essential mode of their administration is in frequently repeated doses (every two hours), that the economy may be kept continuously under their influence; they should be continued in the initial doses during the first ten days of the disease, and given in very gradually diminished amount during the patient's entire convalescence.

Fifth.—Their possible anæmic effects may be rationally combatted by the use of iron salts before or with the beginning of convalescence.

Sixth.—A continued experience with the salicyl compound contained in the oil of wintergreen (methyl ether of salicylic acid), in the treatment of a large number of cases of acute rheumatism, confirms my favorable opinion,¹ expressed a year ago, of its efficiency and other desirable qualities. An efficient dosage is two and a half to three drachms daily. A simple and easy mode of administration is in sealed capsules, each containing ten minims of the oil.

I would express my indebtedness to Drs. Devlin, Beach, and King, members of the hospital House Staff, for their efficient assistance in the observation of the above recorded cases.

¹ MEDICAL RECORD, November 4, 1882.

THE RELATION OF PERINEPHRITIS AND PYONEPHROSIS TO MORBUS COXÆ.

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ABSCESSES in and surrounding the kidney have long since been recognized as distinct affections. Their detection is aided by definite rules of diagnosis; their prognosis, pathology, and treatment have been written with all the elegance of scientific language. And yet an important factor of the affection, interesting both to the physician and surgeon, has found no place in the books of some of our greatest surgical luminaries. Coxalgia occupies an important part in all surgical dissertations, but perinephritic abscess or pyonephrosis, in their surgical relations, is disposed of in a few brief sentences.

One would suppose that such orthopedists as Barwell, Bauer, Brodhurst, Hueter, Taylor, or Sayre would enlighten us upon those diseases which bear a near resemblance to coxalgia, and thus offer us some points of differential diagnosis. A careful examination of their literary labors fails to disclose such suppositions; in fact, periostitis of the femur seems to be the nearest relation to coxalgia, and occupies some space in their scientific analogies. Dr. V. P. Gibney, of New York, is the first to direct our attention to the great similarity between coxalgia and perinephritis. Up to that time the medical man had absorbed whatever interest attached to these diseases, and it would be justifiable to place the proper surgical value upon them. It shall be my object to strengthen and indorse the position of Dr. Gibney, and endeavor to secure professional recognition in this matter.

The following two cases are of absorbing interest:

CASE I. Perinephritic abscess; pointing at Scarpa's triangle; operation; death.—While living in St. Louis, my friend Dr. Grayson, of Venice, Ill., requested me to see a little lad, aged nine, who had consulted a prominent surgeon of St. Louis for supposed coxalgia. He stated that "it might run into hip disease," and advised the Hutchinson treatment. The boy grew worse rapidly, and I was called to render any assistance possible. An injury had been inflicted upon the right renal origin, the nature of which I cannot recall. I found him in bed, surrounded by the worst of hygiene, and a saturated malarial atmosphere. The face bore evidences of pyæmia; temperature, 104° F.; great thirst and loss of appetite; urine high-colored and very scanty. The body was greatly attenuated; abdomen enlarged and tympanitic; the right limb in extreme flexion and adduction, and an oval tumor discernible over Scarpa's triangle. He complained of constant pulsating pain over the tumor, as well as pain upon pressure upon the hip-joint; also reflex pains during the night. I tapped the abscess by introducing the exploring trocar in the outer aspect of the thigh, thus confirming my diagnosis of abscess. The next day I anæsthetized the patient, and succeeded in reducing the flexion and adduction entirely, and then made an incision in the outer aspect of the thigh, and succeeded in removing a large quantity of matter. A drain was introduced, and the cavity washed out with an antiseptic solution. *As soon as consciousness returned all pain in the joint ceased, and I could rotate the limb in any direction without any inconvenience whatsoever.* Examination per rectum disclosed no acetabular softening or perforation, nor was there any roughness of the articular surfaces. The limb remained in normal position, but the pyæmic condition continued, notwithstanding the constant flow of pus. During this time large quantities of matter passed with the urine. My patient grew rapidly worse, and succumbed to suppression of urine.

CASE II. Pyonephrosis; coxalgic symptoms; abduction of the right foot; treatment.—S. H.—, a married lady, aged twenty-three, consulted me for what her physician designated as "flying rheumatism?" She complained of constant pain in the back, in the knee and hip-joint as well as difficulty and pain on locomotion, knowing

that she suffered from hystero-epilepsy—having fractured her acromion from a fall down stairs during one of these attacks. I paid but little attention to the lumbar pain, nevertheless, I questioned her closely as to her secretions, and could learn nothing therefrom. Her limping and pain in the hip determined me in my diagnosis of incipient coxalgia, and I therefore suggested the most valuable and beneficial treatment of Hugh Owen Thomas, of Liverpool. The pain continued and increased in severity both day and night, and while the plaster dressing was still in situ, extreme abduction of the foot set in. Any effort to restore its position produced extreme pain, extending up the entire limb and into the abdominal cavity. I discarded the Thomas treatment and placed her in bed. In recumbency, the limb was completely abducted, and the pain increased in severity. Extension apparatus with weights and morphia gave some relief. During this time she frequently had attacks of urinary retention, which was relieved by catheter. One evening she experienced a sudden desire to pass water, which was accomplished without difficulty. The urine was admixed with large quantities of pus. *As soon as this occurred the coxalgic symptoms and pedal abduction disappeared.* As soon as the discharge ceased the same train of symptoms recurred. I then learned for the first time—false modesty having prevented the statement—that she had suffered from urinary difficulties previously. This opened my eyes, and upon examining the right renal region, I detected fluctuation but no enlargement. I did not see her for some time afterward. When I returned, I found a symmetrical enlargement of the abdomen, quite dull on percussion, and a diminution in the amount of urine. Fearing hydronephrosis from an occluded ureter, I determined upon consultation. After a careful examination by my friends, Drs. Reber, Horn, and Seiple, my diagnosis was agreed upon. While I should have liked to have used some surgical method to reduce the abscess, or determine the character of the abdominal enlargement, I deferred to more conservative suggestions, and waited for developments. The case is still repeating itself, the abdomen enlarging still more, and no further developments have taken place. Notwithstanding the great pain in the hip, and the abduction of the limb and foot, no intra-articular effusion existed, and I was compelled to rest upon the diagnosis of pyonephrosis.

Remarks.—Pyonephrosis may be due to embolism; direct injury to the renal organ; suppuration extending backward from urethra, bladder, ureter, or renal pelvis; irritation of, or the closure of some renal ducts, by calculi; tubercular disintegration, or the breaking-down of hydatid cysts, and pyæmic infection.

Roberts¹ says, that pyonephrosis is usually preceded by chronic pyelitis, terminating in the production of pus. The pyelitis usually owes its origin to calculous disease, and the impaction of a stone producing some obstruction. The same cause would naturally prevent the escape of pus forming in consequence of such inflammation. Blood-clot, tubercle, or any other morbid product causes the same effects. Perinephritis may be due to pyonephrosis—the renal abscess opening into the capsule—by extension of the inflammation from the kidney or renal pelvis. But more particularly to direct injury over the kidney may be ascribed the common cause of perinephritis, as in the case of the boy. I recollect the case of an adult in middle life suffering from lumbar abscess, due to injury and undoubtedly perinephritic, in which recovery was ensured by a deep incision and antiseptic ablutions.

Abscess of the kidney may pass into the renal pelvis and be discharged through the ureter, or may burst as in perinephritic abscess in any direction. Such cavities may open into the peritoneum, colon, or to the surface. It must be borne in mind that the psoas muscle arises in close proximity to the kidney, and that this fact, together with gravitation, would presuppose a selective affinity for

¹ Renal Abscess, by Fred. T. Roberts, M.D., F.R.C.P., Reynolds' System of Medicine, page 711. 1880.

the sheath of this muscle. In fact, authorities agree that this occurs in the majority of cases. Indeed, I can recall some cases of psoas abscesses, supposedly due to spinal caries, which were undoubtedly renal abscesses of some description.

This fact being disposed of, the question naturally arises: In what way can such abscess produce coxalgic symptoms? We must, of course, assume that the pus has penetrated the sheath of the muscle and has secured no outlet, *thus occasioning a constant pressure, in every direction, upon neighboring nerves and tissues.* We know, still further, that the nerves supplying the limb arise from the lumbar and sacral plexuses, and that the psoas muscle lies in close proximity to them; and it seems logical, therefore, if we conclude that the constant irritation surrounding the renal region, coupled with the pressure upon the surrounding nerve plexuses, must be the cause of the pain as well as the muscular contraction. Indeed, the retention of urine in S. H.— can be due to the same causes.

But it is in diagnosis and treatment that the greatest importance centres. If pus were always demonstrable in the urine the diagnosis would be comparatively easy. But this occurs *usually* in pyonephrosis, and only then when the secretory ducts are permeable. In case of closure of the ureter by calculus or other foreign substances the diagnosis is rendered more obscure. In perinephritis, also, no pus is present in the urine unless it has been due to the bursting of a renal abscess proper into its capsule. The urine must naturally be high-colored and contain excess of natural and some foreign elements, but, as we have to do with a pyogenic condition, no diagnostic weight can be attached thereto. In the case of S. H.— no tumor presented at Scarpa's triangle; but there was distinct pain over the lesser trochanter, seeming to indicate that the psoas muscle had been affected by the purulent infiltration. It is a clinical fact that irritation of certain muscles will occasion temporary inflammation of a joint, as in talipes valgus, and it would seem, therefore, as if the coxalgic symptoms were due to the contraction of the flexors, adductors, or abductors, as well as the disturbed innervation of the articulation. In the moment pressure is relieved by the copious discharge of such abscesses all pain and mechanical hindrances disappear. In the case of the boy the same result occurred. When the abscess was drained the various motions of the limb were absolutely painless.

Diagnostic differentiation is rendered very difficult in the initiatory stages; in that event, where there has been any history whatever of urinary trouble, conjoined with coxalgic symptoms, scientific accuracy would require a careful examination of the lumbar region. This would apply also where such history is absent. For it can be readily inferred that the mechanical treatment of coxalgia would be ill-applied in the condition mentioned, and that it would be extremely mortifying to the surgeon, who, desiring to divide muscular contractions, finds that anæsthesia dissipates them. In the stage of adduction and flexion, anæsthesia is probably the only means of relieving our uncertainty, unless the abscesses have already discharged. For, *in coxalgia, the muscular contractions and pain are neither relieved by anæsthesia or the creation of fistulous tracts.* And in coxalgia, also, we have the undisputed presence of either articular effusion or a defined roughness of the articular cartilages.

These abscesses either discharge themselves and get well, the pus becomes inspissated, or we must resort to surgical methods. If fluctuation over the kidney is evident, aspiration is the proper solution. Should this not suffice, deep incisions would be justifiable under antiseptic precautions, and, if found necessary, the kidney could be removed. Otherwise rest, and the usual anti-pyæmic remedies, with glorious expectancy, must be resorted to. Should the distention of the abdomen persist (S. H.—), together with further purulent infection, I should most certainly consider it proper to advise the most radical surgical methods.

Progress of Medical Science.

MODIFICATION IN THE SENSIBILITY OF THE SKIN OF THE ABDOMEN DURING PREGNANCY.—Dr. R. Teuffel (*Zeitschrift für Biologie*, vol. xviii., and *Bulletin de Thérapeutique*, August 15, 1883), has repeated the observations of Czernak relating to the marked diminution in the sensibility of the cuticle of the abdomen during pregnancy. He finds that there is a constant relation between the diminution in the sensibility of the skin and the distention of the latter. Other authors have failed, according to Dr. Teuffel, to agree regarding this interesting symptom, because of the fact that, during pregnancy, the elasticity of the skin varies notably in different individuals and that consequently the relative degree of distention is likewise variable. In the neighborhood of the *striæ*, where the distention reaches its maximum, the diminution in the cutaneous sensibility is much more pronounced than at any other point.—*Journal de Médecine de Paris*, September 29, 1883.

TRICHLORACETIC ACID AS A REAGENT FOR THE DETECTION OF ALBUMEN IN URINE.—Raade proposes the following process for the ready detection and quantitative estimation of albumen in urine. Add a small quantity of the acid to the suspected urine, allowing it to glide along the inner surface of the test-tube holding the urine. The latter should not be agitated. A turbid zone of coagulated albumen is formed, if the latter be present, and does not disappear when heated, as do the urates. The urates are not, however, precipitated when the urine is diluted with one-third its volume of water. A quantity of albumen equal to .0295 gramme may be recognized by this test in 250 c.c. of urine. The relative sensitiveness of the tests for albumen by metaphosphoric acid, nitric acid, and trichloracetic acid may be represented numerically by the figures 1, 3.7, 6.2.—*Bulletin Général de Thérapeutique*, September 30, 1883.

APHASIA AND AGRAPHIA IN TYPHOID FEVER.—Dr. Baas, of Mayence, mentions in the *Deutsche Med. Wochenschrift* a case of aphasia and agraphia, with paralysis of the right facial nerve and of the right arm, in a boy eight and a half years of age in the course of a severe attack of typhoid fever. The paralysis appeared on the twenty-first day, when the sensorium was much affected; the other symptoms were first noticed on the return of consciousness. The patient could not pronounce either words or numbers, although he held up his fingers correctly to express a number suggested to him; and the scrawls which he made on attempting to write were the source of great amusement to him, as he saw them so different from what he intended to make. There were no signs of improvement in the aphasia until eight weeks from the commencement of the illness, but then the boy began to learn step by step anew to speak and to write, and by the end of the month he could do both well. The lesion was probably a capillary apoplexy in the left third frontal convolution and its neighborhood.

HOW TO GIVE QUININE.—Dr. Young, from an extended experience with quinine, in the febrile affections occurring in Rome, Italy, concludes as follows: 1. Never to give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty. 2. In cases where it is being administered and an increase of dose is desirable, this may be safely done if the skin, bowels, and kidneys maintain their normal functional activity. 3. In many cases of remittent and intermittent fevers, the combination of the drug with chloride of ammonium or a salt of potash or soda is likely to be more easily tolerated as well as more useful than if it be administered in a pure form. 4. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.—*The London Practitioner*, October, 1883.

SPASM OF THE TONGUE.—E. Ganghoffner (*Centralbl. für die Med. Wiss.*) describes the following case: A youth, aged nineteen, had from infancy suffered under a spasmodic affection of the muscles of the tongue, which, when he began to speak, protruded from his mouth. Simultaneously with this movement he experienced jerking of the right lower extremity. In repeating by heart a poem, in singing, or in rapid speaking the spasm of the tongue would pass off. The patient was anæmic, but otherwise in good health. When not speaking, he seemed to have nothing about him abnormal. His mother had suffered from deafness from her childhood; a brother also had presented a similar defect of speech; a sister was epileptic. Treatment by bromide of potassium had no influence over the spasms. Doubtless this was a case of chorea, the spasm of the tongue being a local manifestation of this neurosis.

INTERSTITIAL NEPHRITIS OF BACTERIAL ORIGIN OCCURRING IN CHILDREN.—Dr. Ludwig Letzerich writes in the *Allgemeine Medicinische Central-Zeitung* of September 29, 1883, concerning a peculiar inflammation of the kidneys occurring in children, independently of any of the acute exanthemata, which he observed and studied during the past spring and summer. There were twenty-four cases, all presenting exactly similar symptoms, and in all of which the same bacterial forms were found in the urine. Three children died of acute uræmia, the others recovered. The micro-organisms voided with the urine were cultivated through four generations, and then used in experiments upon rabbits. In every case the kidneys presented the same macroscopical and microscopical appearances as were found in the three children dying of this nephritis. The micro-organisms were in the form of rods resembling the bacilli of typhus, but somewhat longer and broader than these. When cultivated, the organisms formed no closed micrococci colonies from which the rods were developed, as is the case in the typhus organisms, but appeared as a mycoderma, as true bacilli. In the interstitial tissue of the kidneys they were seen in large collections from which long threads were traced to the cortex and medullary substance. The kidneys were very hyperæmic, and in places broad, dark red, almost black lines were visible. There were collections of wandering cells in the interstitial tissue. Dr. Letzerich thinks that the organisms were taken in with the drinking-water, though further investigation is necessary for the elucidation of this point.

DYSMENORRHOEA.—There are few subjects more worthy of sound study than dysmenorrhœa. It has received for the last fifty years more attention at the hands of gynecologists than ever before. But still it cannot be said that authorities are agreed on its essential causes. For a long time it came to be regarded as eminently a case for treatment by specialists. The mechanical theory of its causation largely ruled practice, in some few cases with brilliant relief, and perhaps cure, in others without success, and often with the effect of adding to the mischiefs which it was intended to remove. The very nature of the complaint, and the fact that in its serious forms it affects chiefly unmarried women, render the complete investigation of it a matter of much difficulty. The existence of more or less dysmenorrhœa in the majority of women is a fact. Even those who are unwilling to recognize in this fact any argument against the capacity of women for competing in the labor market with men do not deny that in a large proportion—nearly fifty per cent.—this dysmenorrhœa is considerable in amount.

In a paper by Dr. John Williams on the natural history of dysmenorrhœa, read before the Obstetrical Society of London, he divides his cases into two sets—first, cases of primary dysmenorrhœa; secondly, cases of acquired. The acquired cases are so few (22) compared with the others (873) that we need not here allude to them. His conclusions are as follows: "Dysmenorrhœa should be studied first under the least complex conditions—in

single women. 2. Dysmenorrhœa in single women is rarely acquired; it is almost invariably primary—viz., it appears with the menstrual function. 3. Dysmenorrhœa in a few, but rare, cases ceases spontaneously a few years after puberty. 4. Marriage, if sterile, aggravates the disorder in many cases; it is only very seldom that it relieves the pain. 5. Child-bearing cures a large number of cases, and it is not impossible that were all puerperal complications excluded it would cure every case. 6. The proportion of sterile to fertile women subjects of primary dysmenorrhœa is one to twelve. 7. Menstruation begins in women who become sufferers from primary dysmenorrhœa at about the estimated average age for the appearance of the function in London. 8. Menstruation is regular in about two-thirds of the cases, and irregular in about one-third. 9. The menstrual fluid is profuse in about two-fifths of the cases, scanty in about one-half. It contains clots or shreds in about three-fourths. 10. The changes which take place in the fluid in the course of dysmenorrhœa are various, and cannot at present be classified. 11. The uterus is imperfectly developed. It may be too short, or too small in volume, or it may be defective in both respects. The cervix may be conical, and the os small and round, but stricture of the canal in any part of its course is infinitely rare. 12. The changes in the uterus due to dysmenorrhœa are slight hypertrophy, erosion and eversion of the mucous membrane of the cervix, and catarrh. The cavity increases but little in length, for after years of suffering it measures rarely more than two and a half inches in length. In the early stages the tissues of the uterus are in some cases soft; in the more advanced, hard. 13. The hypertrophy of the uterus is probably the result of periodically increased muscular action. 14. Ovaritis and perimetritis are possible consequences of dysmenorrhœa. 15. The menstrual pain is the result of spasm of the uterus, excited by the separation and expulsion of shreds of decidua and clots, in an organ whose sensitiveness in the performance of its function is enhanced by inappreciable conditions of tissue dependent on imperfect development, often associated with others, such as anæmia."—*The Lancet*, September 15, 1883.

CONCUSSION OF THE BRAIN IN A YOUNG CHILD.—At the recent meeting of the French Association for the Advancement of Science, held in Rouen, Dr. Cartaz related a case of transitory hemiplegia, due to cerebral concussion in a child two and one-half years of age (*Gazette des Hôpitaux*, September 29, 1883). The patient fell, striking the back of his head on the floor. When he was raised up it was observed that he was unable to support himself on the right leg. M. Cartaz found right hemiplegia without anæsthesia, and incomplete facial hemiplegia with aphasia. The child was quiet, there were no convulsions and no coma. There was no lesion of the cranium discoverable, nor was there any febrile reaction. Three days after the injury the child articulated a word that he was accustomed to employ frequently in ordinary conversation. In another three days he had regained the power of speech, and was able to walk, dragging his leg slightly. At the end of another week he had completely recovered. In consideration of the rapidity of the development of the symptoms, the localization of the paralysis (right hemiplegia of both face and trunk), and the absence of any febrile reaction, the author was led to regard the condition as one of concussion of the brain.

ERYTHRASMA.—Dr. Besnier thus describes this little-known though, as he states, rather frequent affection: It occurs in patches having somewhat the appearance of intertrigo, but presenting a slight pigmentation. These patches, of a more or less rounded form, occupy sometimes a pretty considerable extent of surface. They are seen in the axilla, between the thighs, on the scrotum, in all parts where intertrigo is met with. In the parts where the integument is free from folds the patches present a

pale red color, whence the name of erythrasma. There is but little itching and no constitutional reaction. It is a parasitic disease, the parasite of which, extremely minute and only to be seen by means of the immersion lens, bears the name of *microsporon minutissimum*. The affection is to be distinguished from simple discolorations of the skin by the pruritus and a slight branny desquamation. It is differentiated from herpes tonsurans by its uniformity of color from the centre to the periphery of the patch as well as by its degree of pigmentation. From pityriasis versicolor it is distinguished by this same pigmentation and by the impossibility of raising any scales by the scraping of the finger-nail. The affection is devoid of gravity.—*Revue Médicale*, October 6, 1883.

INFLUENCE OF DIPHTHERIA UPON PREGNANCY.—In a communication addressed to the Academy of Medicine of Paris (*Archives Générales de Médecine*, October, 1883), Dr. Ollivier concludes that diphtheria may acquire an additional gravity when occurring in pregnant women, because of the liability it has to cause abortion. This accident is due, in the larger number of cases, not to asphyxia nor to an elevation of the temperature of the blood but to some alteration in this fluid, an alteration which, if it is undefined, is nevertheless incontestable. The possibility of abortion with its dangers calls for increased precautionary measures and more strict isolation in the case of pregnant women in the same house or in the same hospital ward with patients suffering from diphtheria.

A NEW APPLICATION OF TENOTOMY.—The limited power of extension possessed by the ring-finger is sometimes of great inconvenience, especially to pianists. In the case of men in whom this condition was very marked Dr. Forbes recently divided the cross fibres connecting the tendon of the extensor communis for the ring-finger with those passing to the middle and little fingers. The operation was almost painless and the wound healed quickly, leaving an almost imperceptible scar. Before the operation the finger could be raised scarcely one-fourth of an inch, but after the tenotomy it could be extended one and one-fourth inch, and lost nothing of its strength in consequence.—*Wiener Med. Wochenschrift*, September 22, 1883.

BILATERAL HALLUCINATIONS DIFFERING IN CHARACTER ACCORDING TO THE SIDE AFFECTED.—Hallucinations affect usually the senses on both sides symmetrically, that is, the subjective images or noises seem to be perceived by both eyes or both ears in equal degree. Sometimes, as noted by Cahneil, Moreau, and others, they are unilateral and the sounds are heard in one ear only, or images are perceived by one eye alone. In other rare cases the hallucinations are bilateral but find different expression on the two sides. The right ear, for example, hears only flattering and pleasant remarks while insults are poured into the left ear. At the recent Congress of the French Association for the advancement of science, Dr. Magnan related several instances of this peculiar condition. In one case the imaginary sounds were at first confined to the right ear, and were of an insulting nature. After a time the patient began to hear prophecies of success and riches, encouraging and commendatory voices in the left ear. Sometimes he heard bells ringing; when they were heard in the left ear they were of good omen, but when in the right they foretold, he said, the approach of evil. The good and the evil genii thus ruled him in a sort of Manichæism. In three other patients delusions of an ambitious nature were manifested through the organs of sense on the right side, while on the left the hallucinations were of a saddening character. M. Magnan summed up his conclusions derived from a study of these cases as follows: 1, bilateral hallucinations of a double character are independent of any local disturbances in the organs of sense; 2, they differ in no way from the more common forms of delusions either by their manner of apparition or by their

general characters; they are an additional proof of the functional independence of the cerebral hemispheres; their organic seat is in the sensorial centres of the cortex; 4, experiments conducted upon patients in various states of hysterical hypnotism corroborate in all points the results of clinical observation.—*Revue Médicale*, September 22, 1883.

SUBPERIOSTEAL RESECTION OF THE HUMERUS WITH OSSEOUS REPRODUCTION IN AN ADULT.—Dr. Nicaise reports the following rare instance of the growth of new bone after resection in an adult. In 1871 he performed a subperiosteal resection in a man, thirty-three years of age, whose humerus had been shattered by a bullet, the radial nerve being also severed. Suppuration ensued, and the operation was performed eighteen days after the receipt of the injury. Numerous loose sequestra were removed and also a necrosed portion of the upper fragment, two inches in length, to which a portion of the deltoid was attached. After the operation there was a separation between the two fragments of the humerus of between five and six inches, the interval being occupied only by the ragged periosteum. No attempt to approximate the two ends of the bone was made, but the arm was placed in a splint so as to maintain the limb at its full length. Repair proceeded rapidly, and so complete was the reproduction of osseous tissue that after seven months it was impossible to detect the line of union between the old and new bone. The arm was shortened less than half an inch. The radial paralysis persisted and led to atrophy of the muscles supplied by that nerve, yet the patient was able to resume his work as a stone-cutter. He remained in excellent health for eight years, and then had an abscess in the arm, which, however, healed readily under appropriate treatment. Dr. Nicaise, thinking that the constant jarring of the new bone from the use of the mallet might have caused an osteitis, advised rest or the choice of some other occupation, but his advice was unheeded. The patient continued at his work for three years longer, when, after severe pain of several weeks' duration, abscesses and fistulæ formed in the arm. The suppuration was profuse, and the patient became emaciated and feverish. A spontaneous fracture having taken place, the arm was disarticulated. In the upper portion of the reproduced bone there was found fungoid osteitis with a formation of sequestra which had led to its separation from the old bone. The surface of the new bone was rough and channelled by numerous blood-vessels; the periosteum was thickened and closely adherent. The upper end of the old humerus showed signs of a chronic osteomyelitis.—*Centralblatt für Chirurgie*, September 29, 1883.

ACUTE ASCENDING PARALYSIS.—A case of acute ascending paralysis (Landry's paralysis), eventuating in recovery, is reported by Dr. Lamberto Antonini. The patient was a small, slightly built, delicate woman, fifty-five years of age, originally of good health, but who had suffered from uterine disorders since the birth of the second of her seven children. She was somewhat nervous and presented some slight hysterical manifestations, occasional hot flashes, globus, and headaches. One morning she felt a little weakness of the limbs, which gradually increased to a complete loss of power. Examination showed motor paralysis of the lower extremities, so that only very slight movements of the feet were possible, relaxed muscles, but no atrophy. Sensibility, tendon and skin reflexes were normal; there were no painful pressure points over the spine, no feeling of constriction in the abdomen; sight was unimpaired; the pupillary reactions were normal; there was no headache; the intellect was unaffected; deglutition and the functions of the bladder and rectum were normal; the temperature was from 100° to 102° F. On the evening of the second day the patient complained of a tired feeling and formication in the hands, and the following morning there was complete paralysis of the upper extremities. There was also

difficulty of respiration and the feeling as of a heavy weight upon the chest. All the symptoms increased in severity up to the seventh day, and then continued without change for five days longer. The dyspnoea reached so threatening a point that the doctor and patient momentarily expected the end. The electrical examination, made while the disease was at its height, showed perfectly normal muscular and nervous reactions to both the galvanic and faradic currents; no reaction of degeneration. On the twelfth day the patient was able to move the arms and fingers, and the following day the dyspnoea and paralysis of the lower extremities began to mend, so that on the sixteenth day all the paralytic symptoms had disappeared. A double hypostatic pneumonia arose about the tenth day and confined the patient to her bed for six weeks. The temperature during the course of the primary disease varied from normal up to 102° . There was no enlargement of either liver or spleen, and there were no bed-sores. The treatment consisted, during the first few days, in purgatives and in wet cups along the spine; later, blisters and the internal administration of excito-motor remedies with wine and quinine. Repeated observations have shown the permanence of the cure.—*Centralblatt für Klinische Medizin*, September 29, 1883.

THE CONTAGION OF TUBERCULOSIS.—The following are the conclusions arrived at by M. Darnberg in a communication addressed to the Academy of Medicine of Paris (*Bulletin de l'Académie*, October 7, 1883): 1. Tuberculosis is a disease of parasitic nature, transmissible by inoculation, alimentation, or inhalation. 2. It is always caused by the absorption of a germ from without. 3. When occurring by inhalation the quantity of the contagion is of little moment. It can operate only in a suitable soil. In a word, contagion is an influence to which all are exposed, but which is operative only in those individuals in whom hereditary or acquired vices of nutrition have prepared a field suited to the growth and reproduction of the germ. 4. Local and general tuberculosis differ only in degree. 5. Scrofula appears to be a diathesis, while tuberculosis is an infection engrafted upon diatheses. 6. The infectious germs of tuberculosis are not usually inherited, but rather the vices of nutrition which have provoked the disease in the ancestors. 7. Therapy, while permitted to seek for specifics, ought, in the way of prophylaxis, to aim at the destruction, through general hygiene, of the causes which prepare a fit soil for the reception of the tuberculous contagion. After the disease is established it should seek to combat the phenomena arising in the economy from the presence and proliferation of the infectious agent.

DOUCHES OF COMPRESSED AIR.—Dr. Maurice Dupont publishes in the *Bulletin Général de Thérapeutique*, September 30, 1883, an original article on the above subject. He employs air under a pressure of three atmospheres, which is allowed to escape through a tube made of the material used in the manufacture of gum-elastic catheters, provided with a nozzle, the orifice of which measures from 8 to 10 millimetres. The jet of compressed air is directed upon the bare skin of the patient, who either stands or assumes a recumbent position. The first result of the flagellation is to compress the superficial tissues of the flagellated area and to repel the blood from the peripheral capillaries into those of the deeper parts. Refrigeration of the surface thus treated at once ensues, only to be succeeded by a rapid reaction, which is indicated by marked rubefaction of the skin. The patient does not need friction after the douche, as is the case when the cold water douche has been employed, and since he is not wet, there is no danger of subsequent depressing refrigeration resulting from evaporation. If excessive refrigeration be desired a few drops of liquid may be mingled with the jet of air, a genuine pulverization of the fluid thus obtained and local hemianæsthesia

produced by the rapid evaporation on the cutaneous surface. After the douche the patient experiences an agreeable sense of warmth in the skin, due to the reactionary congestion which rapidly appears, owing to the energetic percussion exerted on the cuticle by the strong current of air. Dr. Dupont regards the douche of compressed air as indicated (1) in pulmonary tuberculosis, chlorosis, anæmia, and obesity, to modify nutrition; (2) in œdema, hydrarthrosis, and ankylosis, to stimulate the circulation and to favor the reabsorption of effusions; (3) in contractures and hyperæsthesias the air-douche has anæsthetic properties, easily augmented by the addition of carbonic dioxide; (4) the air-douche may be a useful adjuvant to electricity in paralysis.

VISIBLE CAPILLARY PULSATIONS.—M. A. Ruault recently read a paper before the Clinical Society, which relates to the visible capillary pulsations. The symptomatic value of this phenomenon was first indicated by Quincke. According to this author the capillary pulse, indicated by alternate redness and pallor of the tissues concerned, isochronous with the cardiac systole and diastole, is specially observed under the finger-nails in healthy subjects, as well as in slight chlorosis and particularly in aortic insufficiency. It is occasionally accompanied by a similar pulse visible at the fundus oculi, by the ophthalmoscope. M. Ruault's communication relates, however, to a variety of visible capillary pulse which may be observed on a so-called vaso-motor spot,* produced by rubbing the forehead with the finger-nail. The capillary pulse is plainly seen in these congested areas if the observer's eye be maintained at a distance of thirty or forty centimetres from them, and the cardiac pulsations are easily counted. M. Ruault has never observed the capillary pulse in healthy persons, but in chlorotic patients and in those suffering from lead poisoning, whose arteries presented the fibroid degeneration known as arterio-sclerosis. The pulsations in question were most constantly observed, however, in patients with aortic insufficiency, especially in those whose cardiac action was regular and strong. It therefore seems that the capillary pulse can only occur in those pathological conditions attended by co-existing augmented cardiac impulse and general arterial contraction, as is frequently the case in arterio-sclerosis.—*Journal de Médecine et de Chirurgie Pratiques*, October, 1883.

BLOODY TEARS.—M. Damalix has published an article relating to the rare phenomenon of sanguineous lachrymation. He cites two well-authenticated cases of this curious affection, reported respectively by M. Hasner and by M. Brun. In these cases the eyes filled quickly with the bloody tears, the sanguineous character of which was demonstrated by microscopical examination. This affection is to be carefully distinguished from hemorrhages dependent upon orbital or conjunctival disease, such as polypoid conjunctival vegetations developed in the *cul-de-sac* of the conjunctiva. Genuine bloody tears are quite independent of any ocular or conjunctival disease and their appearance is irregular. No apparent cause leads to their effusion. In some cases the escape of the tears is unattended by pain. In others the patient experiences pain in the forehead, the eyebrow, and at the root of the nose, or a sensation of pruritus, formication, or heat in the eyelids. These morbid sensations persist only a few instants and disappear with the appearance of the tears. The escape of the tears continues only a few minutes and the quantity of sanguineous lachrymal secretion varies from a few drops to a wine-glassful. This phenomenon is usually intermittent, sometimes regular, but almost always transitory and attended by hemorrhages from various cutaneous or mucous surfaces. Sanguineous lachrymation appears, by preference, in anæmic individuals, in those inclined to hæmatophilia and in hysterical women.—*Journal de Médecine et de Chirurgie Pratiques*, October, 1883.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CONCERNING THE DANGER FROM CONTAGIOUS DISEASES THROUGH THE CIRCULATION OF BOOKS.

SOME time ago we referred to what we considered highly sensational and ill-considered remarks made in *The Lancet* and *British Medical Journal*, regarding the danger from contagious diseases through the circulation of books. We stated at the time that the subject had been very thoroughly investigated in this country, and that our English contemporaries were evidently quite ignorant of the results thus obtained. However, the alarmist cry, issued from London, has been caught up and widely echoed by various medical and lay journals. Therefore we venture to return to the subject now.

In 1878 the directors of the Chicago Public Library appointed a committee to examine into this question of the communicability of contagious diseases through the agency of books. After a careful investigation, Mr. W. F. Poole made a report in 1879. He had corresponded with the librarians of all the principal libraries in this country, and with nineteen medical and sanitary experts. Not one of the latter gentlemen had ever known of a case of contagious disease communicated by books from public or private circulating libraries. This fact is especially significant when we remember the enormous number of books annually circulated. The total number of large public libraries in the United States in 1881¹ was 3,988, containing 12,889,598 volumes, and the number of books circulated annually is, at a low estimate, 9,912,760 (883 libraries reporting). In some large libraries more than a dozen assistants are employed, who are constantly handling and moving among the books. Yet, according to the reports of the librarians, no case of contagious disease among these, communicated by the books, had been known. A recent statement from Mr. Peoples, librarian of the New York Mercantile Library, is to the effect that this immunity has continued for the four years since the inquiry of Mr. Poole was first made.

Dr. Green, of Boston, who examined this matter carefully in 1872, when an epidemic of small-pox was raging in that city, stated that among 4,700 cases whose history was obtained, in not one instance was the origin referable to books.

So far as the evidence shows, therefore, we have no

reason to believe that there is practically any danger from this source.

Discussing the question from a purely theoretical point of view, it cannot be denied that a paper-covered book can carry the contagion of scarlet-fever and small-pox. A few cases originating in this way through private volumes are alleged to have occurred. We cannot say, however, that even the evidence for this is positively established.

The danger so sensationally heralded is, therefore, so slight that it can be, in ordinary times, ignored. When contagious diseases are extensively prevailing, or an epidemic occurs, it will, of course, be proper to take precautions. These consist in the notification to librarians by the health officers of infected dwellings. It is also recommended to dust the shelves with an antiseptic powder.

TO SECURE A NEW MEDICAL LAW.

THE profession of the State has received a new evidence of the enterprise and earnestness of the Erie County Medical Society in its efforts to secure reform in our method of creating medical men and regulating medical practice. A circular notice has been sent out by the Committee on Legislation, the notice including a copy of the proposed bill to be submitted to the next Legislature, a memorial presenting succinctly the arguments for the bill, and a personal letter asking the attention of individual physicians to the matter.

The general tenor of the bill is already well known. It authorizes the appointment by the Governor of nine medical men, who shall constitute the "Medical Faculty of the University of New York." Six of these gentlemen are to be members of the regular school, two of the homœopathic, and one of the eclectic. After June 1, 1884, all persons desiring to practise medicine in this State must present themselves before this faculty, which is to meet semi-annually, show a diploma from a legally incorporated medical college, and pass a satisfactory examination. They must then register in the County Clerk's office.

The bill thus takes away from the colleges the licensing power and transfers it to an independent board, none of the members of which are connected with any medical college.

There is no question that the sentiment of the profession of the State is unanimously in favor of the objects of this bill. The only thing to be feared is that the proposed board may get into the hands of politicians, and this possibility will have to be carefully looked after. We do not despair of being able to avoid such catastrophe. There is no more pressing necessity before the profession of the State than that of putting some check upon the present practice of pouring annually masses of half-educated stupidity upon us. "If a young man is a dunce, why he is good enough to be a doctor." This is getting to be a common expression among the *commune vulgus*.

Fortunately we have not only moral but legal grounds upon which to demand help from the State. Physicians have to furnish official notices of births, deaths, and the existence of infectious diseases, and are called upon for expert testimony in other capacity. The State must have some proof that these men are competent. Let

¹ Report of Commissioner of Education.

the doctors of the State not imitate the apathy of some of their Massachusetts brethren, who fold their hands and say weakly, "Medical legislation has always failed, let us abandon it." Medical legislation has not always failed, and it need not now if physicians will continue to work in earnest.

THE COMMUNICABILITY OF PHTHISIS.

WE are told on the authority of the *British Medical Journal* that the most striking and probably most valuable part of the work done by the Collective Investigation Committee has been that relating to the communicability of phthisis. One thousand and seventy-eight replies were received to the circulars sent out. Of these 673 were simple negatives, while 261 replies affirmed the proposition that phthisis may be communicated from the sick to the healthy, and afforded evidence in support of that opinion.

Out of these 261 affirmative replies 192 were accompanied with reports of cases illustrating the communicability from husband to wife or the reverse, and in 130 instances it is stated that no family history of the disease existed in the parties to whom the disease was transmitted.

On the other hand 105 persons testified in their belief that the disease was not communicable.

The facts thus elicited show that a small proportion, probably less than five per cent., of general practitioners have met with evidence which leads them to believe that consumption is contagious. Considering the numerous sources of error in observations of this kind, we can not consider that certainty has yet been reached. If consumption is contagious, it is very feebly so, and the simplest precautions ought to be sufficient to prevent it.

THE TREATMENT OF FRACTURED PATELLA.

THE question of the best treatment for fractured patella has recently been brought into prominence. The medical and clinical societies of London at their meetings in November made the matter the subject of prolonged and animated debates, during which some interesting statistics were brought forward by Mr. G. R. Turner and Mr. Bryant. Dr. William Macewen also contributed a paper on the same subject in the *Lancet* of November 17th. The chief point at issue was the adoption of the practice of cutting into the knee-joint, drilling the two fragments, and uniting them by a stout silver wire, the whole being done under the strictest antiseptic precautions. The question further was, whether, admitting that the operation is justifiable in old and intractable cases where the leg is almost useless, it is also justifiable in recent cases. The early operation received the qualified endorsement of Mr. Lister, and the unqualified and earnest support of Dr. Macewen.

The statistics presented by Mr. Turner, however, showed that this operation is not without danger to life and limb, while the statistics of Mr. Bryant and the general experience of other surgeons showed that the treatment of fractured patella by simpler methods was attended with just as good results as was the more radical operation.

The debates on the whole show, as stated by the

Lancet, that the operation was not suitable as a primary measure, nor for general employment. That when performed the operation should be done with every possible antiseptic measure, and that when, as in intractable cases, it is positively indicated, the earlier the operation is performed the better.

THE PTOMAINES OR CADAVERIC ALKALOIDS AND THEIR SIGNIFICANCE.

IT is only of late years that it has been known that a short time after death there may develop in the body certain poisonous and non-poisonous alkaloids whose chemical and physiological action resembles that of the poisonous vegetable alkaloids. The knowledge of this fact is a most important one from a forensic point of view, and no medical man should allow himself to be ignorant of it. A very good summary of what is so far known regarding these substances has been given recently by Mr. R. N. Wolfenden.

Ptomaines begin to develop in the body within two or three days after death. It is said by some that they cannot be isolated in a crystalline form; hence their exact composition is unknown. But they undoubtedly resemble the vegetal alkaloids, and their presence is readily detected by proper tests. The ordinary test first put forward by Brouardel and Boulmy consists in adding a little sulphuric acid to the solution in order to produce a sulphate. A drop or two of a solution of this sulphate added to a solution of ferrocyanide of potassium turns the latter into a ferrocyanide (Attfeld), and the mixture then gives a dark blue precipitate with a ferric salt. Unfortunately other alkaloids give this same reaction. A French chemist has affirmed that though we can determine confidently the presence of a ptomaine and of a vegetal alkaloid, yet when the two exist in the tissues it is not possible by present methods to separate the reactions.

Subjected to physiological tests, some of these ptomaines act like strychnine, others like nicotin, muscarin, atropin, etc. The physiological tests are, however, the most important, and are the ones to be finally depended upon.

Some ptomaines seem to act like the venom of snakes, and it is probable that these two classes of poisons are allied in chemical character.

Gautier and Selmi have found that ptomaines exist in the living body in pathological and even in normal fluids. The former observer states that he has found a poisonous (to lower animals) alkaloid in normal urine and in fresh saliva. It remains to be seen, however, that he has not confounded the effect of these alkaloids with that of specific organisms. Selmi has found two poisonous alkaloids resembling conine and nicotin in the urine of patients suffering from progressive paresis. He has also found two alkaloids in the urine in cases of interstitial pneumonia, and two others in cases of typhoid fever. Alkaloids have also been found in the urine of miliary fever and of tetanus. It is suggested that some of the uræmic phenomena may be due to these substances.

Ptomaines vary much in number and character, according to the length of time during which putrefaction takes place. They may be found in all decomposing

animal bodies; for example, "gamey" meat, stinking fish, shell-fish, and lobsters.

The bodies so far described, according to Mr. Wolfenden, are: 1, ptomaines, like atropin and hyoscyamin, which dilate the pupil and accelerate the heart; 2, a ptomaine, from decomposing yeast, which resembles strychnia; 3, a ptomaine resembling morphia in its chemical, but not in its physiological reactions; 4, a ptomaine agreeing chemically with delphinin; 5, a ptomaine resembling, chemically only, strychnia; 6, ptomaines resembling conine, parvolin, and collodin.

The following conclusions present succinctly the practical facts regarding the alkaloids under consideration:

First.—There are developed in the body, post mortem, poisons of an alkaloidal character, and which can be obtained also by decomposition of albumen, peptone, casein, muscle, brain, etc. Moreover, they seem to be present in some normal secretions (saliva and urine).

Second.—These cadaveric alkaloids may be mistaken, post mortem, for vegetal poisons administered with evil intent, but if the body be examined within from twenty-four to forty-eight hours after death, any alkaloid there found would be strong presumptive evidence of poison, and not ptomaine. After a couple of days it may be a matter of doubt.

Third.—There is no satisfactory test surely indicating the presence of a ptomaine. Physiological characters must be taken in conjunction with chemical tests.

Fourth.—Probably the production of ptomaines within the living body may be the pathological cause of many obscure conditions, especially those following on poisoning by bad food, such as stale fish, etc.

BEGGING FOR STUDENTS.

SOME very disagreeable disclosures have been brought to light recently in connection with one of the Louisville medical colleges. The *Louisville Medical News* publishes letters which show beyond a doubt that a certain college in that city has been sending out circular letters to medical students, or those intending to be such, asking them to come to Louisville and take a course in the favored college at a reduced rate.

What is still worse, evidence is shown by Dr. James E. Reeves, of West Virginia, that even the very illiterate are welcomed, and no questions as to previous education asked. Under Dr. Reeves' direction a veritable medical student sent as an answer to the circular letter a "made-up" effusion, of which the following is a part:

"WHEELING, W. VA., Aug. 18, '83.

"DOCT—

"One of mi Friends who is trying to be a Doct has got a letter from you which says your College is one of the Best College For Medical Teaching in America and that the Feas are cheaper than some other good Colleges and that sutes my circumstance for I am a very poor young man and no matter how much I may Know of Thery of Medicin I cant practice in W. Va. without a Deploma from a good College like the one you have in — you offerd to take mi Friend for \$50 dollars and you will do a poor young man a favor if you will take me at the same Rate for I have that much money I can pay you in cash as soon as I get there," etc., etc.

To which an answer came promptly back inviting the student to come right along.

We regret that such things should occur, for they force us to think that reform in medical education is moving on but slowly. It is, however, some consolation to know that the practices thus going on have been so promptly disclosed, and that public agitation will probably force the school to abandon them or to close up its doors. The censorship of the medical press has done much to check the abuses in medical education, and its influence grows more powerful each year. The profession at large demands honest colleges and an honest educational training of those who are to join its ranks. Our medical teachers are finding that this demand cannot be long ignored.

News of the Week.

SOCIETY FOR THE RELIEF OF THE WIDOWS AND ORPHANS OF MEDICAL MEN.—This Society held its forty-first annual meeting last week, when the following officers were elected: *President*—Dr. Isaac E. Taylor; *Treasurer*—Dr. John H. Hinton. Seven managers were also elected. The Treasurer's report showed that the Society numbers 140, of whom 92 are for life, and 42 annual subscribers. The number of benefactors living is 20, of whom 1 is a layman; 32 benefactors are dead, of which number 6 were laymen. The annual members pay \$10 initiation fee, and \$10 dues per year; the life members pay \$100. Benefactors pay \$150 or upward. Some of the latter have left large bequests to the organization. The total assets of the Society, September 19, 1883, amounted in value to \$143,447.93, all safely invested. Aid was extended during the past year to thirteen widows and four children of dead members. The amount disbursed for this purpose was \$4,251.50, and the indispensable expenses for printing, safe, clerk hire, stationery, etc., was \$213.38.

PROSECUTED FOR SELLING ADULTERATED DRUGS.—In the Municipal Court recently, Rust Bros. & Bird, wholesale druggists, were charged with selling adulterated drugs by the State Board of Health, Lunacy, and Charity. It is understood that this is only the first of a series of prosecutions of a similar character against large manufacturing drug firms. It is stated by the medical officer of the board that in a number of specimens of commonly used drugs obtained from various firms the percentage of the active principle has been found to be very much less than is called for by the United States Pharmacopœia. For instance, citrate of iron and quinine should contain twelve per cent. of quinine, yet its proportion has been found to be as small as $3\frac{7}{10}\%$ per cent. In tincture of opium, which should contain $1\frac{2}{10}\%$ per cent. of morphine, the proportion has in some cases run down to five-tenths of one per cent.

CENSUS OF THE MEDICAL SCHOOLS OF NEW YORK FOR THE PRESENT SEASON 1883-84.—The number of matriculants at the different schools in the city is about the same as that of last year. At the College of Physicians and Surgeons the number is over five hundred and forty-three; at Bellevue Hospital Medical College not quite

four hundred ; at the University Medical College about five hundred and fifty ; at the Woman's Medical College about fifty. The number of matriculants at the post-graduate schools varies, but has been not far from one hundred. The veterinary schools are well attended, there being over one hundred students in the two. The total number of students of medicine in the city this winter is between eighteen and nineteen hundred.

DR. D. W. YANDELL, of Louisville, has been elected honorary member of the Medical Society of London. We heartily congratulate Dr. Yandell upon this honor, which he entirely deserves.

THE HEALTH DEPARTMENT AND ADULTERATED TEAS.—The complaint in the suit of the New York Health Department against a firm in this city for selling adulterated teas was dismissed by Judge O'Gorman, of the Superior Court, last week. It was proven that the tea was extensively adulterated, but it was not shown that the adulterations were injurious to health, and on this ground the complaint was dismissed. The decision is an important one, as showing certain limitations which the present law puts upon the action of sanitary authorities. ■

DEATH OF DR. W. B. MCGUIRE.—Dr. McGuire, of this city, died last week, after a lingering illness. He was born in New York and graduated in medicine at the University Medical College in 1871. For some time thereafter he was connected with one of the clinical chairs in that College.

ACTINOMYCOSIS DISCOVERED IN AMERICAN CATTLE.—Dr. William T. Belfield, of Chicago, has made the important discovery that actinomycosis exists in American cattle. He was asked by the Commissioner of Health of Chicago to investigate a disease in cattle which has generally been known as "swell-head," and has been called by veterinarians cancer, sarcoma, etc. Five animals were examined by Dr. Belfield, and a very short study of the specimens under the microscope revealed the true nature of the disease. Actinomycosis was only recognized six years ago by Böllinger, of Munich, who announced that it was a parasitic disease due to the presence of a rapidly growing fungus. It has since been discovered in the hog and in man. It generally first attacks the jaws, and probably gains access to the deeper tissues through carious or defective teeth. It spreads into the tissues of the head, causing tumefactions, suppuration, finally, if unchecked, pyæmia, and death. It may gain the blood and be transferred to other parts of the body. This happens especially with man, upon whom the parasite acts most virulently. It is supposed that its source is the grain with which animals are fed. The disease is generally fatal, though prompt measures may check it. The meat of animals dying from actinomycosis is not of first quality. It is not, however, yet known that it is absolutely injurious. Thorough cooking, at any rate, destroys the parasite. Dr. Belfield's discovery is an important one, and should become promptly known to veterinarians and sanitary officials.

ENTERPRISING UNDERTAKERS.—It is rare, we are told, that any nationality exceeds the American in business activity and enterprise. We must yield the palm to the London undertakers, however. We do not think that

even in this much maligned city the business instincts of our mortuary artists would exhibit themselves as, according to the *Lancet*, has been done in England. That journal annotates as follows: "Medical men are from time to time insulted by the overtures made by enterprising undertakers with a view to obtaining their recommendation to the families of deceased persons ; but few proposals so unblushingly impudent as that recently made by a London undertaker to the members of the medical profession, by means of a lithographed letter, marked 'private and confidential,' are happily known to history. The tradesman who has not scrupled to issue this trade circular has the audacity to offer practitioners a commission ranging from five to twenty per cent. according to the amount expended on the funeral ; and to facilitate matters, he adds, 'It will not be necessary in any case for you to wait upon me with reference thereto [that is, the receipt of the commission], but simply to send a line to say you attended the deceased, as no inquiries will be made beyond this.' We call attention to the matter, at the request of several correspondents, to mark the sense of the profession at the insult it has received, and to deter this particular tradesman—and others—from repeating the affront."

SCIENCE A PEACE-MAKER.—It is pleasant, says the *British Medical Journal*, in these times of political squabbling and dishonorable jealousies, to see science step in and disperse national animosities as effectually as it removes vulgar errors and diffuses world-wide truth. On the sad occasion of the death of M. Thuillier, Herr Koch, Director of the German Cholera Commission, and all his colleagues, promptly expressed regret and sympathy, and also their desire to be useful. On his coffin they nailed laurel-wreaths. On the day of the funeral M. Koch officiated as a pall-bearer. This graceful act of humanity was feelingly appreciated by the members of the Pasteur Commission, who described it as "un hommage précieux et touchant." We confess that we cannot see anything so remarkable and touching in the above acts. M. Koch and his colleagues would simply have been brutes if they had done any less.

THE FIGHT AGAINST QUACKS IN MISSOURI has begun in Kansas City, by the Board of Health refusing to recognize the diploma of a certain graduate of the "Cincinnati Health School." The graduate in question applied to the courts for a mandamus to compel the Board to recognize this diploma. We are not yet informed of the issue.

A MEDICAL SOCIETY VS. A MEDICAL JOURNAL.—At the recent meeting of the District Medical Society at St. Joseph, according to the *Weekly Medical Review*, an attempt to boycott the St. Joseph *Medical Herald* was made. It seems that the *Herald* took occasion to criticise the action of the society in allowing members to bring personal quarrels before the society to the exclusion of scientific questions. In addition to this the *Herald* spoke rather decidedly on the propriety of giving an entire session of the society to a St. Louis medical man, who delivered a lecture on his own specialty. Resolutions censuring and condemning the *Herald* were offered, but were hardly read before a motion to table was carried. This action so enraged the champions of the

resolutions that they launched out in speeches more forcible than elegant, and finally the climax of disorder was reached when one of the members and the editor of the *Herald* came together. The scene became very lively for a while, but the members were at last induced to quiet down.

DR. BRADLEY S. McCABE, President of the Greene County (N. Y.) Medical Society, has been chosen to represent his county in the Assembly. The more of such men the better.

TESTIMONIAL TO MR. JONATHAN HUTCHINSON.—The students and graduates of the London Hospital have subscribed the sum of \$2,000 as a testimonial fund for Mr. Hutchinson. Fifteen hundred dollars of this has been set apart as a fund for a biennial prize essay on clinical surgery. The remainder was devoted to the purchase of a personal testimonial, which was formally presented to Mr. Hutchinson on November 29th.

DEATH OF DR. G. S. PFEIFFER.—Dr. Pfeiffer, of Camden, N. J., died at his residence in that place on November 28th, aged seventy-seven years. He was a gentleman of extensive scientific knowledge, speaking seven languages, and he had written several non-medical works. He was a member of the Historical Society of Pennsylvania.

THE MUSEUM OF HYGIENE AT WASHINGTON.—The Army Medical Department has already achieved a world-wide reputation for its work in medical bibliography, for its library and pathological museum. The Naval Medical Department soon bids fair to rival it in the direction of hygiene. It has already collected a library of over five thousand volumes, chiefly of works relating to sanitary science. Its museum of hygiene is growing and already contains two hundred and sixty-four exhibits. The American Public Health Association has made it its permanent repository. We are informed that the Surgeon-General requests contributions of articles, appliances, models, drawings, etc., illustrating improvements in food, water-supply, bedding, clothing, marine architecture, house and hospital construction and furniture; apparatus for heating, illuminating, ventilation, and removal of excreta and refuse; culinary, laundry, and bath facilities; appliances for physical culture and exercise; and whatever else tends to the preservation of health and the prevention of disease. The exhibits are properly credited by descriptive labels to the persons contributing them.

SANITARY CONDITION OF THE PUBLIC SCHOOLS.—The Health Commissioners have decided to expend \$6,000 in making the most needed improvements in the public schools, leaving the rest till next summer. But what about the health of the children in the meantime?

MONCK, THE BROOKLYN CHARLATAN AND FAITH HEALER, has been indicted and convicted of deception and malpractice. He had acquired an immense popularity among the women of Brooklyn, whom he treated for all kinds of diseases, and by most extraordinary methods.

A SOCIETY FOR HOSPITAL ADMINISTRATION.—An association is to be formed in London for the purpose of studying subjects connected with hospital administration. More definitely, the objects of the proposed association are, firstly, to facilitate the consideration and discussion

of matters connected with hospital management; and, where advisable, to take measures to further the decisions arrived at; and, secondly, to afford opportunities for the acquisition of a knowledge of hospital administration, both lay and medical. The association, moreover, proposes to afford facilities for the reading, discussion, and publication of approved papers; for the delivery of lectures, and for the holding of conferences on hospital administration, hospital management, medical relief, medical education in relation to hospitals, free and provident dispensaries, and other kindred subjects, and will found a library, consisting of works on hospital administration, construction, finance, and statistics.

YELLOW FEVER AT HAVANA.—Clean bills of health were issued, after inspection by Sanitary Inspector Burgess, to vessels from Havana bound to United States ports during the week ending November 17th: American steamer Hutchinson, for New Orleans; American steamer Niagara, for New York; British steamer Marco Aurelio, for New Orleans; Spanish steamer Santiago, for New Orleans; British steamer British Empire, for New York. Dr. Burgess states that the above-named vessels were all in the open bay and had not been to the wharf. In a letter to Surgeon-General Hamilton he says that at no time during the year has so large a proportion of sailing vessels suffered from yellow fever in the harbor at Havana as at the present, and that there are about seventy-five cases of the disease in the city, among them the recently appointed Captain-General, Castillo, who is now convalescing, having been attacked about two weeks ago. Total number of deaths from yellow fever during the week, 18.

YELLOW FEVER NEWS FROM MEXICO indicates that the disease still continues in the towns of Manzanillo and Acapulco, though rapidly disappearing. There is an epidemic of scarlet fever in Pueblo, which, Assistant Surgeon Main, of the Marine Hospital Service, states, gives more alarm than did yellow fever. Quarantine restrictions have been removed at Matamoras as well as at Brownsville, Texas. At the former city a large lagoon nearly surrounding the town has been drained, thereby causing much malarial fever. The news from Havana continues unfavorable, as the weather is so warm that yellow fever has had little or no check. There were twenty deaths for the week ending November 24th, and several infected vessels sailed for the ports of Savannah, Pensacola, New Orleans, and Charleston.

THE MEDICO-LEGAL SOCIETY.—The annual election of this Society, held December 5th, resulted as follows: President, Clark Bell, Esq. (third term); Vice-Presidents, Dr. R. O. Doremus and D. C. Calvin, Esq.; Secretary, L. P. Holme, Esq.; Treasurer, A. D. Hammersley, Esq.; Curator, Dr. A. H. Smith; Chemist, Professor C. A. Doremus.

THE ORTHOPÆDIC HOSPITAL AND DISPENSARY held its annual meeting December 5th. The report of the previous year shows the institution in a prosperous condition. Over fifteen hundred patients were treated, of whom four hundred and fifty were either entirely or partially cured. Fourteen beds were endowed for one year.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

ABSCESS OF THE ANTRUM CAUSED BY AN EXTRA TOOTH.

DR. JOHN A. WYETH presented a tooth removed from the superior maxilla of a woman, twenty-six years of age, who came to him with trouble in the antrum of Highmore on the left side. She stated that *thirteen* years previously she had scarlet fever and measles, and since then had had painful sensation at times in the region of the antrum. In order to relieve the pain a dentist had been induced to extract a tooth, and through the opening thus made a discharge of pus occurred, and the purulent discharge had continued in variable quantity, but never ceasing entirely, for seven or eight years subsequently. Dr. Wyeth extracted two more teeth from the same side, and gave free drainage to the antrum. He also removed some particles of bone, and through the opening a tooth was discharged which, according to count, was an extra development in the superior maxilla. It had grown inward, and finally dropped into the antrum, where it acted like a foreign body. The discharge ceased for a time after the tooth came away, but it had recurred and Dr. Wyeth thought that dead bone yet remained, which he proposed to remove entirely by opening the antrum more freely. He regarded the cause as a very unusual one for the formation of pus in the antrum.

DR. GEO. L. PEABODY presented specimens illustrating

EMBOLISM OF THE BASILAR ARTERY—EXTENSIVE VALVULAR DISEASE OF THE HEART, WITH HYPERTROPHY AND DILATION—PERICARDITIS—DIFFUSE NEPHRITIS

J. C—, twenty-two years of age, United States, single, mechanic, was admitted to the New York Hospital July 7, 1883. His mother died of heart disease; the rest of his family are alive and well. He had rheumatism two years ago, but subsequent to that time he remained pretty well until ten weeks ago, since which date he has had dyspnoea, cardiac palpitation, swelling of the feet, headache, and tinnitus aurium. These symptoms have steadily increased in severity, and now he can hardly walk about, and is very short of breath. He gives no history of urinary symptoms. He gives a well-alcoholic history. He had at this time fluid in both marked pleural cavities and in his peritoneal cavity, and also oedema of the lower extremities. His temperature was normal; his pulse was irregular; the apex beat diffused, and a loud systolic murmur was heard over the apex. His urine gave the following record: specific gravity, 1.014, pale, acid, large amount of albumen, granular and hyaline casts; thirty ounces passed per diem. He was treated after various routine methods, with some improvement. His urine increased greatly in amount. After two weeks' hospital residence the character of the murmur changed. Instead of being a *loud systolic* murmur it became a *loud musical murmur heard with both sounds* of the heart. He improved from time to time, passed more urine, slept better, ate better, was able to go about, etc., and then he got worse again, as such subjects do.

The oedema became so great in his foreskin that puncture was resorted to with relief. His abdomen was tapped, between September 6th and October 20th, seven times, and clear serum withdrawn on each occasion, varying in amount from sixty to two hundred and sixty ounces. About the middle of October he complained of much pain in the precordial region.

On October 20th he became very silly without warning, restless, resisting efforts on the part of attendants to keep him in bed, refusing to speak at all, and merely staring

fixedly at any one who addressed him. His heart's action increased in irregularity; he had diarrhoea; he lost control over his bladder and rectum. For the two following days his restlessness increased, and he was inclined to be noisy. Anasarca became excessive. In the evening of October 22d he became very noisy and violent. Hypodermic injections of morphia and hyoscyamia were ineffectual in controlling him, and it became necessary to put him in a strait-jacket and remove him from the ward. His temperature did not rise above normal. He shouted and struggled all night. On the following morning he resisted all efforts at medication or nourishment, and it became necessary to feed him by means of a stomach-tube.

On October 24th he became less noisy, but his general condition remained without change. His urine diminished in amount to fourteen ounces, but it became possible to return him to his ward and remove his strait-jacket. On this evening he suddenly became very quiet; sank into a condition of stupor. At 11 P.M. pulmonary oedema developed, which was temporarily relieved by cupping, but he died at twenty minutes after midnight, October 25th.

DR. PEABODY presented a portion of the base of the brain, including the pons with the basilar artery attached, and also the heart.

Autopsy.—Brain: Just behind the anterior border of the pons the basilar artery was seen to be plugged by a firm clot, whose centre was partly decolorized. The entire lumen of the vessel was obliterated and the artery was somewhat distended at this point. The brain was everywhere somewhat softened by post-mortem change, but its structure was nowhere pathologically altered. The lesion spoke for itself and needed no further description. The peritoneum contained two litres of clear serum. There was no evidence of peritonitis. The height of the diaphragm on the left side was at a level with the sixth rib; on the right side, with the fifth rib. The heart was large. Both ventricles were markedly dilated. The endocardium of the left ventricle was much thickened. The attached borders of the aortic cusps were also thickened. But the chief lesion of interest was in the mitral valve; both of its cusps were markedly thickened and stiffened, and their surfaces were very rough. Upon these roughened surfaces in the fresh state one could see many little vegetations attached, some of fibrin, others, older, of connective tissue. It was not difficult to imagine these as the origin of numerous emboli. One of the chordæ tendinæ had been eroded and now terminated free in the cavity of the ventricle, and had upon its extremity a large mass of connective tissue and fibrin. The lungs were both retracted and were everywhere adherent to the chest-wall. Over the posterior and upper surface of the lower lobe of the left lung was a layer of recently exuded lymph, three inches in diameter and irregularly circular in shape. Corresponding with this area was the base of a hemorrhagic infarction of dark red color and about the consistency of a hepatized lung. The right lung was oedematous and congested, and exhibited the lesion known as brown induration. The spleen was large and had an old decolorized infarction in the upper border. The capsules of both kidneys were adherent; surfaces of both were granular. They had the peculiar firm consistency of so-called "heart kidneys." The cortex was thin, its workings indistinct, and its surface presented the scars of several old infarctions. The liver was large. The centres of the acini were pigmented and their peripheries were anæmic.

Remarks.—There are several points of interest in this case. The lodgment of an embolus in the basilar artery is unusual, and it seems strange that a plug which has passed through a small vessel should lodge in a larger one. The patient was young, and there is no change in his arteries such as might have suggested a local cause for the arrest of the embolus. The stoppage of so large a vessel would, of course, be attended by serious interference with the nutrition of the parts supplied

by it, were it not for the abundant anastomosis. In this case there was no softening, but there probably was some temporary disturbance of nutrition when the functional cerebral disturbances occurred, as noted in the history. The color of the embolus led me to suppose that it had existed only a few days, and it seems fair to infer that its lodgment coincided with the man's delirium. On the other hand, the possibility of the dependence of the cerebral symptoms upon the kidney lesion must be admitted.

Referring to the heart, the change in the character of the mitral murmur is very interesting in connection with the lesion of a tendinous cord that you see here. Unfortunately, we have no means of dating exactly the occurrence of this lesion.

DR. WYETH asked Dr. Peabody what he regarded as the immediate cause of death.

DR. PEABODY answered that with such a number of diseases, any one of which was incurable, it was difficult to determine what the immediate cause of death was.

DR. WYETH said the reason why he asked the question was because he had already presented two specimens of embolism of the basilar artery, and in each instance the immediate cause of death was attributed to disturbance of the nutrition of the pons and medulla. There had been in all about twelve cases reported, and in each the immediate cause of death had been assigned to malnutrition of the pons and medulla. Dr. Wyeth had proposed to ligate both vertebral arteries in two cases of epilepsy, acting upon the theory that miliary aneurism of the medulla and pons was the most constant lesion in that disease, but at about that time the two patients died from the bodies of whom he obtained the specimens of aneurism of the basilar artery he had presented, and he was deterred from performing the operation.

Since then, Dr. Alexander, of Liverpool, has performed the operation in ten or eleven cases of epilepsy, sometimes ligating one and sometimes both vertebral arteries, and in all the cases the patients had recovered from the convulsions. Dr. Wyeth also had tied one vertebral and the patient did not die of disturbance of the nutrition of the pons and medulla, but of pneumonia four days subsequent to the operation.

IVORY EXOSTOSIS FROM THE ETHMOID CELLS.

DR. H. KNAPP presented a specimen with the following history. He removed it from a woman forty-five years of age, apparently in robust health, except that she had suffered from nasal polypi for fourteen years. Twelve years ago these polypi were, for the first time, removed. In the course of years four more such operations had been performed, the last one being about two years ago, after which they grew much more rapidly than ever, and six weeks ago both nostrils were occupied, the left almost completely and the right to a considerable extent. There was at the inner side of the left orbit a hard tumor, apparently about the size of a filbert, which crowded the eyeball toward the temple and somewhat forward, produced a slight degree of congestion and folding of the retina, but vision was still good. There was no evidence of cerebral disease. Dr. Knapp advised removal of the polypi slowly, which was done by Dr. R. P. Lincoln, who extended the operations over four or five weeks. The growths were soft and to some extent fibrous. Dr. Knapp thought that the hard orbital tumor, felt through the skin, was either an osteoma or the bony shell of the expanded ethmoid cells, which it would be easy to break down, and so allow of the removal of the remainder of the polypi from that side. He was quite confident that the remaining polypi could not be removed by either the anterior or posterior nasal passages. So he believed that opening the lateral part of the nose by removing the bony tumor would give easy access to the polypi. The hard tumor was laid bare by an incision carried down to the periosteum, and then with the end of a small chisel he removed all the periosteum from the nodular surface

of the bony growth. When this was completed he seized one of the projecting parts of the growth with a strong bone forceps and soon found that it extended through the os planum into the ethmoid cells, and also was fastened to the nasal septum. Without the exertion of very much force, however, it was removed, and with only the slightest amount of injury to the tissues. He did not expect that any serious reaction would follow the operation. The left frontal sinus was also opened. It contained a large gelatinous polypus, which was removed. He also very carefully explored the frontal sinus with a sharp spoon, but detected neither carious bone nor other tumors. The external wound was closed completely, as free drainage could occur from the inside.

The patient did perfectly well during the first twenty-four hours, but then complained of headache, which was followed by somnolency that increased, accompanied by rapid pulse and marked elevation of temperature (104.5° F.). She died comatose on the fourth day after the operation. The autopsy was made by Drs. Prudden, Lincoln, and himself, and he asked Dr. Prudden to demonstrate the condition of the brain.

DR. T. MITCHELL PRUDDEN said the brain had been frozen, and therefore its natural color had been changed. The dura mater was perfectly normal. On removing it, the pia mater covering the right side of the concavity of brain was found completely infiltrated with pus, especially along the large vessels. The meshes of the pia, as well as the space beneath it, were so filled with serum that the convolutions were considerably flattened. Upon the side of the operation (the left) there was much less purulent infiltration than upon the other, but it was well marked in a zone about an inch wide extending along the course of the longitudinal fissure. There was some infiltration of purulent matter along the vessels at the base of the brain. The brain tissue was hyperemic. The fluid in the lateral ventricles was somewhat increased and stained red. There was no lesion of the inner table of the skull. There was no evidence of direct transmission of the inflammatory process from without inward.

DR. KNAPP also exhibited a portion of the skull, removed so as to expose the ethmoid cells, which he found plugged with polypi. It also revealed that at the site of the operation there was no irritation or inflammation. The external wound had healed by first intention. The eyeball was healthy. The sphenoid cells also were plugged; the right with a clot, probably from the operation, and polypi, while the left was completely filled with cheesy pus and its communication with the ethmoid cells was obstructed by polypi. The bulk of the tumor had an ivory consistence, its centre was somewhat cancellous.

Dr. Knapp believed that the proper way to remove these tumors was by the subperiosteal enucleation. He regarded the fatal result in this case as due not to the operation, but to the diseased condition of the ethmoid and sphenoid cells, and that the operation only rendered active a condition which would have inevitably sooner or later terminated fatally.

With regard to the treatment of nasal polypi, no human hand could have removed them in this case. He urged that if the deep-seated of these tumors are to be dealt with at all they should be removed *early*; the same rule applied to exostoses.

VESICULAR HYDATID MOLE

DR. C. HEITZMAN presented a specimen, for which he was indebted to the kindness of Dr. Danforth. As is usual, the patient had profuse hemorrhage, and as always occurs, the ovum was destroyed. He accepted Virchow's view concerning the character of the growth—namely, that it is a myxomatous degeneration of the villousities of the chorion.

DR. H. J. GARRIGUES recalled an article written by Maslowsky, a Russian physician, who had found phlebitis of the umbilical vein with formation of thrombi on the walls and consequent diminution of lumen. He takes

this to be the origin of the evil, and the changes in the chorion, decidua, and fœtus to be secondary. In consequence of the damming up of the blood the vessels persist in those villi in which normally they are destroyed, those outside of the placenta, and a transudation takes place into the stroma of the villi. Later thrombi are formed in the capillaries of the villi, and they undergo a regressive change and the vessels are destroyed. The decidua showed chronic inflammation, namely, connective tissue instead of the characteristic decidua cells, and extravasation. The fœtus was well formed, but much too small for the period of development (*Centralblatt für Gynäkologie*, 1882).

Dr. Garrigues also remarked that the fœtus did not die in all cases, for a celebrated obstetrician, Hohl, was said to have been developed in an ovum part of which formed a hydatid mole.

DISCHARGE OF SEROUS AND BLOODY FLUID FROM THE NIPPLE—CARCINOMA OF THE BREAST.

DR. A. G. GERSTER presented a very small nodule removed, together with the breast, from a woman sixty-one years of age, who had borne nine children, all of whom she had nursed. Her nipples used to be sore occasionally, but not frequently, and she never had a mammary abscess or any serious inflammation of the gland tissue of either breast. Dr. Gerster saw her first in the latter part of May, when she applied for relief from a serous and bloody discharge from the nipple. A most careful examination of the breast failed to reveal any tumor proper. The axillary glands were normal. He expressed the suspicion that a malignant process was beginning, although the skin was apparently healthy and the nipple was not retracted. Being absent from the city he did not have opportunity to examine the patient again until the first of October, but was told that the aspect of the case had not changed. At that time, however, he was surprised to find a large mass of hard glands in the axillary space, requiring very careful dissection, on account of its close adherence to the sheath of the axillary vein. After removal of the breast a very small non-incapsulated nodule of cancerous tissue was found in its outer lower quadrant. He presented the specimen on account of this peculiar fact, observed in three cases, namely: with a very small but infiltrated breast tumor he had found a disproportionately extensive involvement of the axillary glands, which rendered an otherwise simple operation rather difficult, and made the prognosis a very doubtful one.

DR. HEITZMAN said he had in his collection a specimen of primary cancer of the axillary glands. Recently Paget had directed attention to certain forms of eczematous affection of the nipple followed by cancer in which also the lymphatics are involved very early. He thought Dr. Gerster's case resembled this class.

DR. WYLIE remarked that in some cases tender spots could be made out where no enlargement could be felt.

DR. GERSTER further stated that he considered the removal in one mass of the entire contents of the axillary space—fat, glands and all—to be imperative, since the smaller glandular bodies of about the size of a hempseed cannot be felt through the integument and fascia, and can be made out only with difficulty even after the fascia was opened. Where the infiltration of the axillary glands can be distinguished through the integuments, the involvement is very extensive indeed, and a difficult dissection may be expected.

STRUMOUS ARTHRITIS OF THE KNEE-JOINT—AMPUTATION.

Dr. Gerster also presented a part of one of the lower extremities of a child two years old, removed by amputation, and with the following history. The patient had suffered from strumous disease of the knee-joint for some time, when it was suddenly taken with high fever, and the family attendant said it was due to a sprain and

ordered poultices, the result of which was an extension of the phlegmonous inflammation up and down the limb, with perforation of the capsule. The child's life seemed to be in imminent danger, and amputation was immediately performed. Dr. Gerster was compelled to operate through inflamed tissues. A strong solution of the bichloride of mercury was used, 1 to 500, and although a part of the long anterior flap necrosed, a considerable portion of the amputation-wound healed by first intention, even parts which had been the seat of an active phlegmonous process.

DR. HEITZMAN remarked that, before the time of antiseptic treatment, it was known to surgeons that even tissues which were the seat of strumous inflammation were prone to primary union after either resection or amputation. He did not know as Dr. Gerster would insist that the favorable result in his case was due to the use of the strong solution of the sublimate.

DR. GERSTER said he could not help believing that the result was due to the use of the sublimate solution, as he had amputated under similar circumstances several times, and had seen new phlegmonous conditions develop. It was an old and established principle in surgery to operate in healthy tissues, and that when surgeons were obliged to operate in tissues the seat of active septic conditions, the peculiar condition was apt to invade other parts, and very frequently terminate fatally.

CANCER OF THE ŒSOPHAGUS.

DR. HENSCHEL presented a specimen removed from the body of a man, aged seventy-three, who for some time suffered from dyspeptic symptoms, with distressing eructations, and finally came under Dr. Henschel's care, who induced him to take fluid food only, which he did for a few months, with so much benefit that he gained considerably in weight. The former symptoms then returning with ejection of the fluid food, Dr. Henschel introduced an ordinary œsophageal bougie, and found an obstruction which he was unable to pass. About three months later Dr. Janeway saw the patient with him, and at that time swallowing could not be heard below the second dorsal vertebra. The patient had then lost nearly seventy pounds in weight. Some days afterward Dr. Henschel again introduced the bougie, for the purpose of ascertaining, if possible, the exact situation of the obstruction, and with the view to dilatation.

Two days subsequently the patient spat up two large quantities of blood. Soon after that his condition began to improve, and he took milk freely, but the dulness to the right of the sternum increased. He gained in weight twenty-five pounds and remained quite comfortable until recently. On October 29th an attack of pleurisy developed over the lower lobe of the right lung, but the symptoms subsided within a few days and he was up and quite cheerful when, on November 4th, bronchitis began. On November 5th a gurgling was heard at about the middle of the lower lobe, as though the lung was breaking down. On the following day typhoid symptoms developed, the patient became unconscious, and on the next day that side of the chest was completely filled with fluid. The patient died on November 9th.

Autopsy seven hours after death revealed constriction of the œsophagus by carcinoma, which had invaded the right lung, and the pleural cavity was completely filled with fluid, which had an odor as if from the stomach. The kidneys were fatty, although during life neither albumen nor casts were detected in the urine.

DR. PEABODY said it was interesting to find an opening through the œsophagus communicating with the pleural cavity, with partly digested pleura and lung. There had been regurgitation of the contents of the stomach, and this digestion had taken place after death, probably.

(To be continued.)

Correspondence.

OUR PARIS LETTER.

(From our own Correspondent.)

THE LONGEVITY OF ACTIVE SCIENTIFIC WORKERS—WORK IN OLD AGE AS A PREVENTIVE OF DECAY—RUMINATION AS A SYMPTOM OF INSANITY—COMPARISON OF MENTAL ACTIVITY IN BOYS AND GIRLS—THE MORTALITY OF TYPHOID—ETIOLOGY OF TYPHUS—THE THEORY ABOUT MICROBES.

PARIS, November 9, 1883.

M. BENOISTON, of Châteauneuf, published some years ago a curious article on longevity among the members of the Institute. Unfortunately the work has not been continued. But in the "Annuaire de l'Institut," for 1883, we still find a great many long-lived members. The following is a list of the senior members whose elections to the Institute date prior to 1840: Chevreul, of the Academy of Sciences, elected in 1826, entered his ninety-eighth year on August 31st last; Jean Baptiste Dumas, of the same academy, was elected in 1832, now aged eighty-three; Mignet, of the Academy of Moral and Political Sciences, elected in 1832, now aged eighty-seven; Charles Lucas, of the same academy, elected in 1836, now aged eighty; Henri Milne-Edwards, of the Academy of Sciences, elected in 1838, now aged eighty-three; Augustin Dumont, of the Academy of the Beaux-Arts, elected in 1838, now aged eighty-two; Barthélemy Saint-Hilaire, of the Academy of Political and Moral Sciences, elected in 1839, now aged seventy-eight.

M. Bouchardat, Professor of Hygiene at the Paris Faculty of Medicine, protested in strong terms, at a recent lecture, against the advice given by some hygienists who recommend almost complete rest to the aged, in the following terms: "I protest against the oft-repeated adage that old age is the age of rest. This sentence has led to a very great error in hygiene. The regular general exercise of all the organs of nutrition and of locomotion is necessary to persons of all ages.

"The greatest attention on this point is all the more necessary that the tendency to rest brings on a gradual diminution of the strength. If the old man does not resist, his strength will visibly and progressively diminish, and the few days that he may have to live may be transformed into so many hours. In proof that regular daily exercise is beneficial to the aged, one has only to observe the results in some of the handsomest old men, who take little or no rest. Moderate exercise, particularly walking, should be the leading precept of the hygiene of the aged, without which longevity is impossible." Professor Bouchardat also recommends that old people should maintain their intellectual faculties, or otherwise they would get into a state of incurable torpor.

At a meeting of the Société des Sciences, Dr. Bouchaud, of Lille, drew the attention of the society of that city to a pathological condition more common in the insane than is generally believed, viz., rumination. At the asylum of Lommelet there were fourteen patients that ruminated, eleven among the idiots, of whom there were about a hundred, and three among the other five hundred and seventy inmates of the asylum. Several of these patients were reported to have ruminated long before they presented any signs of insanity. This symptom must therefore be considered of some importance whenever such cases present themselves.

In an interesting work on the studies of children, it has been brought to notice that in a large establishment containing about six hundred children, half girls, half boys, it was remarked that the girls furnished industrially work superior to that of the boys. At each periodical inspection it was also remarked with some surprise that they were mentally more alert, more developed. The

following was the explanation given for the difference between the two sexes: The girls were not so assiduous at their studies, for which they devoted only eighteen hours a week, the days for working at the establishment alternating with those at the school. The boys, on the contrary, devoted thirty-six hours a week at the school. To remedy this difference, the boys were submitted to the same rules as the girls, and the result obtained was as satisfactory.

The Paris Society for the Protection of Animals has submitted a petition to the Chamber of Deputies, requesting that bull-fights should be put a stop to, as being contrary to the principles of a civilized people, as exercising a deplorable influence on the delicacy of sentiment in the women and children, and often causing disturbances and serious accidents.

Dr. Worms, member of the Council of Hygiene of the City of Paris, lately drew up a report on the mortality caused by typhoid fever during the past four years. In 1879 there were 1,110 deaths; in 1880, 2,120; in 1881, 2,121; in 1882, 3,403. Dr. Worms remarks that in taking into account the increase of the population, the mortality from typhoid fever was fifty per cent. greater than it had been the fifteen preceding years.

Professor Bouchardat does not believe in microbes, at least, so far as they are concerned in the genesis of parasitic or contagious maladies. At the last meeting of the Academy of Medicine, the learned professor developed the subject, and gave in support of his theory the etiology of typhus fever. The following are the conclusions of his communication: 1. The parasite of typhus fever does not exist everywhere. 2. They originate by the transformation of normal organites (M. Bouchardat applies the term organites, the elementary figured elements which enter into the constitution of liquids or solids of the divers organs of an animal), following the debility arising from the continuation of famine or of typhigenetic affections. 3. The parasite, in evolving from the bodies of the famished, or from patients attacked with typhigenetic affections, is at its maximum strength; it does not propagate itself at a distance; it is very dangerous for those who approach patients suffering from typhus; the danger increases with the number of patients. 4. The parasite modifies itself in its nocuity, in its mode of action on the human economy, by a succession of transmissions, as it becomes definitely extinct. Professor Bouchardat adds that one ought to avoid, above all, to crowd patients, such as victims of famine, or those attacked by typhigenetic affections. The physicians, sisters, and nurses ought to take the greatest precaution against the danger that the parasite subjects them to, and these precautions should be taken as well during the night as during the day. One of the most imperious duties of a government is to prevent famine in all the regions that it governs. In conclusion, the hygiene of typhus has a history assured when it is founded on the notions furnished by clinical observations on the genesis and propagation of the parasite. No useful indication results from the hypothesis that this parasite exists everywhere. Everything is hidden and obscure with the Pasteurian theory of the existence of the parasite everywhere; all is easily explained, on the contrary, in admitting that the patients are the foci of the genesis and propagation of the parasite.

Whatever may come of M. Pasteur's theories about microbes, it may be observed that the lamented death of Dr. Thuillier, one of the French cholera mission to Egypt, would seem to be a flagrant contradiction of those theories, as well as of the absurd notions propounded by Dr. Burq on the microbicidal influence of copper, as we learn from the statement made by the surviving members that Dr. Thuillier, not only implicitly carried out the instructions given by M. Pasteur for their protection, but he was the only one of the mission that had saturated himself with copper before setting out for Egypt.

THE CHANCES OF THE YOUNG PRACTITIONER AS AFFECTED BY THE ADVICE GRATIS AND SMALL FEE SYSTEMS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It was with a feeling of gratitude, shared, I am convinced, by many of my young *confrères*, that I read your editorial headed "The Chances of the Young Practitioner as Affected by the 'Advice Gratis' and Small Fee Systems."

There have been occasionally sporadic denouncements of the injustice done, especially the younger practitioners in this city, through the misapplication of medical charity, but everybody went to sleep again on the subject after such a feeble effort.

My only reason for asking a little of your valuable space is in the interest of our profession, which in this city is verily going to seed under the present *régime*. I hope that these few lines of a poor advocate may stimulate better talent among our young practitioners to do something for themselves in the way of agitating the means of bettering their condition.

It is, to a very great extent, our own fault that free clinics are so numerous, for most of the workers are young men. The great majority of us think it an honor to be attached to Professor N. N. as thirty-second junior assistant. The former gets the renown and free advertisement, while we get the drudgery and the doubtful benefit of figuring in multitudinous advertisements of a free clinic. Now, the dispensary doctor is a title looked on by the majority of people as a title of incompetency, as though such a physician had not totally absolved his curriculum of study, and is glad enough to give his services gratis in consideration of the variety of diseases to be seen and studied by him.

I hope the young practitioners of this city will keep on agitating this matter, now that it has been fairly started in your widespread journal, and bring it up persistently again and again, until either the Great Moguls of the medical profession in this city will find a remnant of the justice and fair play due their former disciples left in their consciences, feel ashamed of their grasping avarice, and turn away people in comfortable circumstances; or, what is perhaps easier to bring about, that some protective means be suggested by the younger members, either as a society or by individual agitation, against *indiscriminate* almsgiving in our dispensaries, polyclinics, and especially our colleges. This will have to be done sooner or later, and I think the time is at hand to make some earnest efforts for correcting this evil.

It is imperatively demanded by the large strides that these institutions are making every year, under the guise of philanthropy and charity, as it is put, not only toward the poor of the city, but also as an act of charity toward graduates and practitioners, who, it is said, could not otherwise keep up with the times, for want of clinical material and opportunity. This latter proposition will seem to any unprejudiced thinker as absurd. These gentlemen will always find plenty of worthy poor wherever they be located, whom they can treat gratis to their heart's content.

In unity there is strength. We are the majority. All we need is a few firm and intrepid leaders. Who will lead?

ONE OF THEM.

DULNESS OF HEARING IN TYPHOID FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reading carefully the very instructive and interesting paper of Professor Delafield, recently published in the columns of your paper, entitled "Typhoid Fever in New York City," I am struck with the absence of one symptom in the one hundred and two cases he has so carefully collated, viz., dulness of hearing.

In all the typhoid patients it has been my privilege to treat, it has been present in all but one. This exception was a very mild case in which the temperature was

normal or subnormal nearly the whole time, and the patient was bright and natural in appearance.

So common have I found this symptom, that in those atypical cases where I was in doubt as to the nature of the disease for the first week, the sudden appearance of partial deafness has made it clear to me that I had a case of typhoid fever to deal with, and the subsequent course of the disease has proven that I was correct.

Whether or not dulness of hearing is often seen in the ordinary malarial fevers that run a course of several days, I am not able to say. Certain it is, that living in a malarial district and having such cases nearly all the time to treat, I do not call to mind one instance where this symptom appeared. Of course, I exclude such cases where deafness has followed the giving of large doses of the cinchona salts.

Now, in turning to distinguished authors and teachers, I find that most of those I have had opportunity to consult mention impaired hearing as one of the symptoms of typhoid fever, but not with the same degree of emphasis. Niemeyer says: "In the second week of the disease the complaints of pain in the head and limbs cease, but the dizziness becomes worse and the noises in the ears are accompanied by deafness."

Da Costa says: "Early in the disease ringing in the ears and dulness of hearing is encountered."

In "Reynolds' System of Medicine" the author of the article on typhoid fever says nothing of deafness, but Dr. Reynolds inserts in brackets, "dulness of hearing is almost invariably present."

Dr. Alonzo Clark says: "After the first week hearing is lessened, not absolute deafness, and just before deafness ringing in the ears."

Dr. James C. Wilson, in his book on "The Continued Fevers" in Wood's Library of 1881, says: "Deafness is very common. . . . It commonly appears toward the end of the second week."

None of the authorities above quoted give the relative frequency of this symptom, except Wilson, who says: "Deafness is very common." But all of them that are at all definite place the commencement of the symptom in the second week, or after the first week.

It is possible to diagnose a typical case of typhoid fever a few hours after the initial chill or chills, but as in these days of atypical diseases we often have to tell our patients that we will have to wait awhile before deciding as to the nature of the malady, it therefore behooves us to note carefully whether there is any one symptom more constant than others in such a dreadful disease, in the minds of the laity, as typhoid fever.

In my own experience this symptom has appeared somewhere in the second week, never in the first, and its disappearance has always been the commencement of the patient's improvement.

If none of those one hundred and two cases of Professor Delafield's exhibited deafness during the second week of the disease, or only a small proportion of them, then I will have to admit that my experience has been too limited to furnish me any data from which to draw conclusions.

Respectfully, E. D. COONBY, M.D.

MARINERS' HARBOR, STATEN ISLAND,
November 27, 1883.

A FEW WORDS ABOUT THE YELLOWSTONE NATIONAL PARK.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: The Yellowstone National Park is wonderful—nothing more, and very surely nothing less. All who have been privileged to visit it will admit this cardinal fact of its existence. But it is not the kind of wonderland for fairies fit to dwell in, unless, indeed, those beings had first learned to survive a twofold ordeal, consisting in alternate congelation by nocturnal cold that would do credit to the North Pole, and diurnal evaporation through heat that the Equator might feel proud of.

As for your ordinary specimen of frail humanity, it

seldom persists in feeling serenely comfortable while experiencing the intense climatic variations that this park affords. In fact, a common mortal might there be apt to suddenly lay an overweening stress on his common mortality. He might, for instance, more or less silently melt away, or freeze solid, or at any rate perish after some fashion more deserving of professional consideration. But, all the same, it is a glorious wonderland, is this great park. The chief wonder, however, is this, that in spite of the perpetual influx of conscientious visitors, the wonders are still there.

So, too, is most of the land. The missing portions have been carried away by the enterprising geologist—a strange disease that erupts sporadically in this region. But let us be consoled. The Government has already appointed a scientific commission to fully investigate that dreadful plague. And when the Government appoints a commission—but let that pass.

The typical Yellowstone wonder is a rather shy institution. You can win it, however, by judicious and persistent wooing; and when at length you have succeeded in your endeavors, you find that you have secured a much bigger wonder than you bargained for—an intermittent geyser, for instance, that throws, playfully, high up into the air several lakes a minute, either clear lakes or muddy ones. It makes an ipecac-prescribing man feel almost small by comparison to witness such powerful results. Nature is, after all, a great physician—a model instructor. Only to think of the immense *vis emeticatrix nature*, here so plainly visible!

Or if you fail to capture a spouting geyser, very likely you will find some mammoth hot springs, steaming, gurgling, bubbling, boiling, with sulphurous water trickling down over the sides of great natural basins. Or if neither geyser nor hot spring, a grotesque formation, that plainly tells of exhausted spout or primal volcanic outburst. Indeed, almost at every step you are thus confronted with the remnants of former elemental chaos, or the intact relics of past upheavals. There is but one drawback to a comfortable revelling in these and many other unrivalled sights. The wonders, as already intimated, are not easily accessible. However, this may soon be changed. Time, occasionally stimulated by congressional appropriations, will do wonders with this wonderland.

But in all earnestness some means might be devised to develop, protect, and make easier of access the great natural beauties and resources of this extraordinary region. For example, there may reside in its countless hot springs and sparkling wells medicinal virtues of high value, that might prove beneficial or curative in many obstinate diseases. But as yet we possess absolutely no trustworthy information concerning them. A beginning in the right direction has, however, now been made. Professor Hoffmann, of Berlin, the well-known chemist, has secured samples of many of these springs and waters, so that we may soon expect to have made public the results of reliable analyses.

The Mammoth Hot Springs Hotel, prettily located at the entrance to the park, must be classed with the daring enterprises of American pluck. It resembles the huge caravansaries, so called, of Saratoga, Long Branch, or Coney Island. The bill of fare is quite elaborate, the rooms are large and good, the service is satisfactory. One weak, or rather strong point, your correspondent detected in the shape of an everlasting India-rubber cow. This extraordinary animal, being properly sliced and broiled, was served by dignified and solemn waiters as game. They called it elk-steak or mountain sheep fillet. But the guests only wrestled with it, they could not chew it. It was an exasperating Yellowstone wonder.

From this great hotel as a starting-point you can travel on horseback or in vehicle through the park for days and days, in pursuit of various wonders. The writer was fortunate. He procured a pony slightly handicapped with a somewhat Mexican saddle. He immediately bounded

off with unbounded enthusiasm, apparently shared by the steed, a noble animal, that galloped up and down the steepest hills as though winged with speed. Presently he was all aglow with the inspiring conviction that such powerful equestrianism had been rarely equalled, and certainly never excelled. It must have been a latent talent hitherto submerged in excessive medical erudition. Now, when opportunity offered, it at once asserted itself. At any rate, here was a flattering and pleasant reflection, and it endured just ten miles. Then the proud certainty that, after all, it only depends upon the rider, weakened a little. The next five miles it weakened a good deal more. Then it weakened still more. And it must be confessed, for the last ten miles, logic, philosophy, and cold reason compelled the humiliating admission that, after all, it all depends upon the horse.

As for those who had selected wagons, they insisted that these vehicles were discovered from the very start to be but cunningly devised apparatus for the creation of blinding dust and promiscuous torture. The day was in all respects a memorable one, however.

We had left the Mammoth Hot Springs Hotel late in the morning, and reached our first day's halting-place, a singularly impressive spot, early in the afternoon. It was but ten minutes' walk from the Norris Geyser Basin, which your correspondent will not attempt to describe. Mr. Winsor's guide-book does ample justice to its many wonderful and striking features. In fact, the writer wishes to here express his indebtedness to the two guide-books of that author, for much suggestive and valuable information concerning the entire region traversed during this trip. The spot just mentioned, where tents had been pitched for our accommodation, was situated on a gentle slope wooded with fir and pine trees. Below was a placid valley, cut by a clear stream winding its rapid course plashingly along, eager for union with the Yellowstone River. Around all an odd frame-work of distant snow-clad mountains completed an attractive picture, here barely outlined.

Gradually, under the soothing influence of a hearty meal and sufficient rest, the depressing effects of our long ride began to wear off. The sun was scarcely set, and already round about us the shadows quickly deepened into encircling darkness. Now a huge fire was kindled, fed by crackling boughs and fallen pine-trees. Its flickering glare strangely illuminated a wide circuit. In fitful gusts the air blew chilly through the camp, forcing the flames heavenward in sudden angry leaps. An expectancy of snow was in the atmosphere.

The company were soon attracted to the fire, disposing themselves in various groups around this centre of grateful warmth. Perhaps most of them were quite unconscious of the remarkable and highly picturesque effect thus produced. There they stood, sat, or lounged in various attitudes of contemplative repose. Members of the British Parliament were there, ambassadors, several ladies, distinguished Germans, authors, statesmen, the inevitable American colonel, and others, representing foreign or native intelligence, wealth, and refinement. Never before in the history of that region was such an assembly seen gathered about a blazing camp-fire. Beyond them, and to one side of the fire, in striking contrast with these gentler folk, the drivers had assembled. The brightness of the flames lit up the weather-beaten, sun-tanned faces of these gaunt, strangely clothed men. They smoked and chatted in grim contentment, looking for all the world like gypsy brigands on a frolic. Their forms seemed sharply etched against the blackness of the woods. A tethered pony now and then timidly approached, to swiftly scamper off again in fright at some sudden noise or motion. In the far distance the jagged outline of the sombre, passionless mountains came and went, with the fitful rise and fall of the lurid flames. And above us was spread a starlit sky, with a faintly shimmering moon to mitigate its seeming coldness. Really the sight of all this was like a poem, unwritten but yet felt.

Presently some mollified German thawed out in song. His example proved contagious. Soon he was joined by a full-voiced chorus, and the night-air rang with sweet melody. They sang long and well, those foreigners in a strange land. The enchanting strains of the old German *Volksleid*, alternated with the Tyrolese *Jodler*, or the more modern students' song. At times a plaintive, melancholy music, and again bright, joyous, laughing notes resounded through hill and valley with faint and fading reverberations. Never until then was the delicious cadence of such tones heard amid those surroundings.

But at length they too must cease. We sought the inviting warmth of our blankets. Presently no sound was heard save the gentle sighing of the breeze in the tree-tops. The pines still rocked and swayed, agitated by fitful gusts of moaning wind. Now and then the dying embers of the camp-fire were fanned back to momentary life. A sudden flame leaped up spasmodically, to perish quickly in the darkness. Above, the stars still glittered, cold, keen, impassive. Shrouded in gloom the camp lay sleeping.

At early dawn there was a harsh awakening to rude toilet and shivering breakfast. The actual experiences of the night before blended imperceptibly with the vivid dreams that had followed. A shadowy memory of pleasant by-gones was alone recalled by the heap of ashes that lay before us. The journey proceeded, and many strange, weird sights were seen. But it will not be possible to do justice to all we witnessed. Enough has been said to show that the Yellowstone Park deserves a visit, and will amply repay the tourist's outlay of time and money. The imperfections and discomforts inseparable from new regions will soon be measurably relieved. In time it must become a popular resort for foreign as well as native travelers. And now these random notes have finally ended, and the reader may feel relieved. Very truly yours,

EDMUND C. WENDT, M.D.

136 WEST THIRTY-FOURTH STREET, NEW YORK,
November 10, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 24 to December 1, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Assigned to duty as Post Surgeon at Washington Barracks, D. C. S. O. 222, par. 7, Department of the East, November 27, 1883.

BROWN, PAUL R., Captain and Assistant-Surgeon. Assigned to duty in the Department of Arizona. S. O. 273, par. 4, A. G. O., November 28, 1883.

MERRILL, JAMES C., Captain and Assistant-Surgeon. Relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. S. O. 270, par. 4, A. G. O., November 24, 1883.

BREWSTER, WILLIAM B., First Lieutenant and Assistant-Surgeon. Extension of leave of absence granted September 15, 1883, further extended two months. S. O. 271, par. 4, A. G. O., November 26, 1883.

MADDOX, THOMAS J. C., First Lieutenant and Assistant-Surgeon. Granted leave of absence for two months. S. O. 136, Department of the Missouri, November 24, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 1, 1883.

KINDLEBERGER, D., Medical Inspector. To be relieved from duty on the Retiring Board, on December 9, 1883.

CHILD-BEARING LATE IN LIFE.—Dr. John Meredith, reports (*British Med. Jour.*) the case of a woman who gave birth to a child when forty-eight years of age.

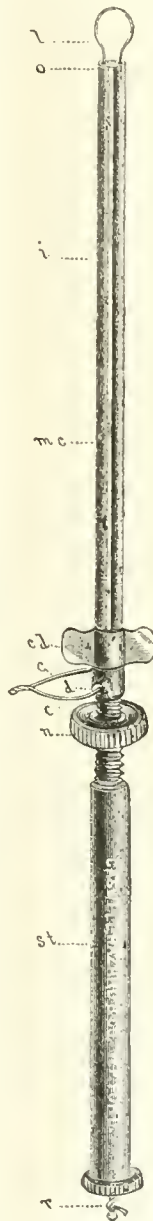
New Instruments.

A NEW GALVANO-CAUTERY ÉCRASEUR.

By WILLIAM C. JARVIS, M.D.,

NEW YORK.

THE possibility of utilizing the mechanism of my cold-wire snare-écraseur¹ for operating with the incandescent electric loop, has occupied my attention



for many months. The experiments undertaken to accomplish this object have recently resulted in the construction of an instrument differing but little in shape and mechanism from the original écraseur. An examination of the accompanying illustration will facilitate a clear comprehension of the alterations. A tube has been attached to the main canula, *m c*, of the cold-wire écraseur. This additional canula only extends to the cross bar, *c d*, the main tube alone being continuous with the handle. The tubes are properly insulated at *i*. Each tube is provided with binding screws, *d*, the binding met on the small tube also serving to jam and retain one extremity of the wire. The wire also passes through the main tube, *m c*, and is wound around the retention pin, *r*, on the slide tube, *s t*. Inasmuch as the end of the wire in the small tube remains fixed, it will be observed that the size of the loop can only be changed by sliding the tube, *s t*, to which the movable extremity of the wire is attached. The relative position of the binding screws, *d*, to the cross-bar, *c d*, is intended to prevent any interference of the connecting battery wires, *c c*, with the manipulation of the instrument. An objectionable feature of double canulæ, that of permitting the growth to become constricted against its orifices, with consequent laceration of the last shred of tissue instead of its complete division by the wire loop, may be remedied by means of a peculiarly shaped slot cut into the orifice and inner side of each tube. By connecting both canulæ properly insulated with the orifice of the handle, the loop can be tightened as in the cold-wire écraseur.

With the assistance of my friend Dr. M. J. Roberts, I subjected the instrument to a careful test, which proved perfectly satisfactory. Masses of meat, equal in size to the largest growths, were divided with ease and completeness.

I consider the instrument particularly useful for removing the peculiar form of enlarged tonsil described by me in an article on "Tonsillotomy without Hemorrhage." Rapid excision of these tonsillar growths is invariably followed by profuse hemorrhage. The protracted strain caused by the cold wire, when used to evert this issue, drawing open the soft peri-tonsillar structures, sometimes constitutes an objection to be overcome by the employment of an incandescent electric loop. Dr. Henry Schweig informs me that, in his opinion, the heated wire will more certainly sink into the substance of supra-pharyngeal adenomata, and their complete removal will be greatly facilitated by the procedure. The instrument was constructed by Mr. W. F. Ford, with Caswell, Hazard & Co., whose well-

¹ New York Medical Record, April 30, 1881, etc.

known courtesy and skill I am always anxious to recognize.

For obvious reasons the soft galvano-caustic loop, generally speaking, must always prove inferior in usefulness to the elastic ring of tempered steel wire.¹

25 EAST THIRTY-FIRST STREET.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 4, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
November 27, 1883.....	0	33	64	2	36	37	0	0
December 4, 1883.....	0	32	44	1	51	39	1	0
<i>Deaths.</i>								
November 27, 1883.....	0	12	7	2	4	16	0	0
December 4, 1883.....	0	13	9	1	6	22	0	0

THE TOXIC EFFECTS OF NITRITE OF SODIUM.—It appears from several letters published by Drs. Murrell, Ringer, and Law that nitrite of sodium is dangerous in doses of twenty grains, as at first recommended. It should not be given in doses greater than two grains at first, increased to five grains if necessary.

A BAKED BEAN CAUSES DEATH.—Baked beans will hereafter be regarded with suspicion. This succulent and nutritive edible, for ages so popular in New England, has caused the death of a man at Lynn named Wallace Cobb. He died recently, and it was supposed that death was caused by an accident, but a post-mortem examination reveals the cause to be a hard-baked bean, which lodged in the appendix vermiformis, situated in the right iliac fossa, on the lower right-hand corner of the abdomen. Inflammation followed and finally caused death.

PEPTONIZED MILK IN ACUTE DYSPEPSIA.—Five grains of extractum pancreatis and twenty grains of bicarbonate of soda are dissolved in four ounces of tepid water. This is added to one pint of fresh milk warmed to the temperature of the body, and the mixture is allowed to digest for about one hour at a temperature of 100° F. The milk, when ready, should have a slightly bitter taste, or rather after-taste. It is now raised to the boiling point, strained, and placed on ice ready for use.

MERCURIAL SOAP.—Vomacka gives the following directions for the preparation of a substitute for blue ointment, which also keeps better: One part of soft and perfectly neutral potash soap is mixed with a little glycerine in a glass mortar, and one part of mercury is gradually added with constant trituration. When no globules of mercury are any longer visible, add two parts more of potash soap to make four parts. It may be scented with lavender or other essential oil.

THE STUDY OF BIOLOGY.—At the recent meeting of the Biological Section of the British Association, Professor Lankester advocated increased provision for the advancement of the science of biology. In this respect England was far below France and Germany, and even Holland, Belgium, Italy, and Russia. There were not wanting people who were anxious to restrain rather than aid the spread of scientific knowledge. But no one could trace the limits of science nor the possibilities of

happiness, both of mind and body, which it might in the future bring to mankind. As day by day the old-fashioned stimulus to the higher life loses the dread control which it once exercised over the thoughts of men, the pursuit of wealth, and the indulgence in fruitless gratifications of sense, become to an increasing number the chief concerns of their mental life. Such occupations fail to satisfy the deep desires of humanity, they become wearisome and meaningless, so that we hear men questioning whether life be worth living. When the dreams and aspirations of the youthful world have lost their old significance and their strong power to raise men's lives, it will be well for the community which has organized in time a following of, and a reverence for, an ideal good which may serve to lift the national mind above the level of sensuality and to insure a belief in the hopefulness and worth of life. The faith in science can fill this place; the progress of science is an ideal good—sufficient to exert this great influence.

MEMORY.—A man's memory is like his stomach. To do its best work it must have good treatment. It must neither be neglected nor overloaded. It can easily be so abused by neglect, or by irregular and unsystematic employment, as to become chiefly a cause of annoyance and discomfort; or, again, it can be so overworked and heavily taxed that it becomes practically the chief organ or agent of the entire system, every other portion dwindling in its comparison. The latter course is the great danger of those who value the help of a tenacious memory. Both memory and stomach are valuable, not in proportion to the burdens they can carry, but in proportion to their training for their part in the work of the system as a whole; and either of them is made effective as much by what is kept from it, as by what is packed into it.

DR. BROWN-SÉQUARD ON ANALGESIA BY A PROPOSED NEW METHOD.—Dr. Brown-Séquard has written the following very interesting letter to the *Lancet*: "Sir—My pupils, not I, have proposed to employ on our species the method I have discovered of producing analgesia in monkeys, dogs, and other animals. I am not prepared to make such a proposal; not that there is any danger in the method, nor that the degree of analgesia is insufficient, but because I have not yet succeeded in devising for clinical use an easy means of applying carbonic acid or chloroform vapor to the mucous membrane of the larynx, without allowing these substances to go into the lungs. This last point is of absolute necessity, as when these substances enter the blood they can no longer produce, by irritation of the mucous lining of the larynx, their wonderful effects. My experiments, some already published, others quite new, show that an irritation of the laryngeal mucous membrane (and also, but in a much slighter degree, of the lining of the upper part of the trachea) can, through the superior laryngeal nerves, or even through one of them only (but then the analgesic effect is chiefly unilateral), act on the nervous centres in such a way as to produce a more or less complete inhibition of either the power of perceiving impressions able to give rise to pain, or of the power of transmitting those impressions. Every kind of irritation (mechanical, thermic, chemical, or galvanic) of the terminal ramifications of the superior laryngeal nerves can produce that effect; but none in the same degree and with so great a persistence (in monkeys sometimes the analgesia lasts more than twenty-four hours) as the excitation due to carbonic acid or chloroform vapor, the first especially. The power of the parts I have named in producing an inhibition of the kind of sensibility relating to pain, without disturbing any other power or function of the nervous centres, is so great that sometimes a partial section of the larynx or trachea produces a temporary and almost universal, but incomplete analgesia."

THERAPEUTICS OF THE NAILS.—*Incurtatio Unguium.*—When the nail threatens to grow into the skin, or has already injured it, the first indication is to put on a sock

¹ New York Medical Record, May 27, 1882.

of moderate size and to remain quiet. Afterward the nail is to be scraped on the affected side till it is sufficiently thin; then it is to be seized with a delicate forceps, raising it in a sense inversely to its natural curvature. This having been done, a small lamina of lead of a few millimetres thickness is to be inserted beneath the nail, and after folding it over the toe it is to be fastened there with a strip of plaster. In this manner the granulations being no longer in contact with the margin of the nail, the pain ceases and the sore heals more or less rapidly; during the whole of which time the apparatus should be frequently inspected, so that the lamina of lead may not become displaced. Besides this, it is necessary to scrape the nail every two or three days so as to keep it thin and flexible, until the skin returns to its natural state and can resist the pressure of the nail, and then the lead is removed. Hebra treats ingrowing nail in the following manner: Cut some flakes of lint of the length of the lateral groove of the nail or a little longer. The lint is to be placed on the nail parallel to its groove; then with a flat probe introduce the lint, thread by thread, between the flesh and nail. Thus the parts are separated with the little cushion of lint lying between. The sulcus is then to be filled with pledgets of lint, and finally, long narrow strips of adhesive plaster are to be applied, always from above the inflamed sulcus downward, in such a manner that the latter is still further removed from the margin of the nail. With such a dressing applied with sufficient care, there is no pain whatever; and the patient can in a short time put on his ordinary stocking and walk without trouble. After twenty-four hours the strips of adhesive plaster are to be removed, being previously softened in a bath of tepid water. This dressing is to be repeated daily, and in from two to four weeks it will be found that the toe is entirely well. In those cases in which it is found that the nail is not abnormally implanted, and that it is the soft tissue only that grows in a vicious manner, I believe it will be well to remove the ulcerated tissues. This little operation, which may be performed without anæsthesia, deserves to be described. A double-edged bistoury held as a pen, is to be passed through the diseased tissues, taking care to graze the lateral margin of the nail where the disease exists. The tissues are then to be removed in such a manner as to expose the side of the nail which lies buried in the pulp. The wound should be washed with a solution of carbolic acid, and some lint placed on it like a cushion, which is firmly secured by a bandage, with some compression.—*Four. of Cutaneous and Venereal Diseases.*

TWO POUNDS OF TAPEWORMS.—M. Paul Agniel reports, in the *Semaine Médicale*, the case of a man, twenty-four years of age, who had never been ill, and whose appetite had always been good, who at intervals of a week had noticed the expulsion of segments of tapeworm. After preparation, an infusion of eighty grammes of pomegranate-rind was administered, followed by castor-oil. This brought away an enormous mass of tapeworm, which was found upon examination to consist of eleven worms, with their heads as shown by the hooplets. The mass weighed one kilogram, and the combined length of the different worms amounted to 34.50 mètres.

MEDICAL NOTIONS AMONG THE CHINESE.—Dr. C. H. Daniells, of Swatow, China, sends us the following interesting item: "Medical literature among the Chinese is abundant, 'of making many books there is no end,' but the correctness of ideas relating to medicine may be judged by reference to any of them. A book entitled 'Poems Relating to the Nature of Medicine,' affords a good degree of interest, although it contains no poetry—the title is given in order to please the Chinese ear. It treats of anatomy, physiology, and therapeutics, the thoroughness of which may be judged by the fact that it contains but one hundred and twenty pages. It fully elaborates the Chinese idea of the male and female principle in nature,

claiming for the heaven's male principle heat and warmth, for its female principle cold, while the earth's male principle is the agreeable and insipid, its female principle is the bitter, the sour, and the salt. Extending this idea to anatomy it makes every part of the human system to belong either to the male or female principle. It also presents the underlying principle of all Chinese medical practice, the classification of all diseases and remedies as hot and cold, with the theory for treatment. 'Hot remedies for cold diseases and *vice versa*.' Its anatomy divides the cavity of the human subject into three *apartments*, the upper contains the heart and lungs, the middle the liver and spleen, the lower the kidneys and the generative organs. It describes three pulses at each wrist, the lower pulse of both being the index to the upper apartment of the cavity, the middle to the middle apartment, and the upper pulse to the lower apartment. Thus the lower pulse of the right hand indicates the condition of the heart, that of the left hand the condition of the lungs, the middle pulse of the right hand indicates the condition of the liver, that of the left the spleen, etc. The human body is composed of gold, wood, fire, earth, and water. During the spring the wood predominates, and the liver being strong at that time, the pulse of the liver becomes the strong pulse of the body; during the summer the fire predominates and the heart pulse is the strong pulse; during the fall the gold predominates and the lung pulse is the strong pulse, while during the winter the water predominates and the kidney pulse is the strong one. The left hand belongs to the male principle, hence a man's left pulse is stronger than his right; the right hand belongs to the female principle, hence a woman's stronger pulse is in the right hand. The therapeutics of the book show considerable system in arrangement, the animal, vegetable, and mineral kingdoms being taken in order. A few extracts will give the estimate of their correctness. 'The bones of the tiger are of a mild nature, have an acrid taste, and are not poisonous. They drive poisons from the system, cure colds, numbness, and all discharging ulcers.' 'The flesh of a black rooster strengthens the bowels, the tendons control deafness, the intestines cure incontinence of urine, and the blood of the comb increases the milk of nursing women.' 'Peppermint relieves all forms of congestion and astringents cure diarrhoea.' The Chinese make use of herbs as domestic remedies. The people prize their own system of medicine, which ought to be popular—at least with their undertakers."

PROLONGING THE EXISTENCE OF THE POCKET THERMOMETER.—Dr. C. H. Eames, of East Saginaw, Mich., says: "A number of expedients have been proposed for prolonging the life of the pocket thermometer. May I add one? Have a pocket made to fit the thermometer."

DISLOCATION OF THE ANKLE FORWARD AND OUTWARD.—Dr. H. S. Thorne, of Farmingdale, L. I., sends the history illustrating the above rare condition: "On July 20, 1883, the Rev. Mr. Y—, aged sixty, height 6 feet 2 inches, weight 200 pounds, while in the loft of his stable attempted to descend on a stationary step-ladder to the floor below. He lost his footing and fell a distance of eight feet, striking first the lower step of the ladder with his left heel, dislocating the ankle *forward*, and then, after the rebound, struck the floor with the outer side of the foot, throwing the ankle violently outward. When first seen the foot was in a position nearly at right angles to its true one. The internal malleolus was at the inner border of the plantar surface of the foot and strongly pressing against the scaphoid bone, the outer malleolus formed a prominent bony tumor at the outer side of the heel, and the articular surface of the astragalus was two inches in front of the outer malleolus and pushing the skin of that part of the dorsum of the foot on which it impinged out to such an extent as to be on the point of penetrating it, having forced its way through the ligaments, fascia, and tendons until

nothing but the skin itself stood in the way of the injury being a compound luxation. There was no fracture of either malleolus. Two hours after the injury the patient was etherized. Owing to the peculiar deformity it was not deemed advisable to follow the usual method of reduction, *i.e.*, to flex the leg and then extend. The leg was kept extended and held firmly by an assistant while the heel was grasped by the right, and the dorsum of the foot by the left hand, and forcible extension and manipulation were made. The foot was twisted in such a manner as would compel the astragalus to retrace the path it had made in getting into its abnormal position through the soft parts. In this manner the reduction was perfectly effected without very great difficulty. A roller was firmly applied and side splints put on. Hot applications were freely used and hot-water baths every day. The foot was rubbed and kneaded to prevent solidification of effused material, and the limb was elevated. On the twenty-second day the patient was able to use crutches; on the thirty-sixth he walked with a cane, and now, ten weeks after the injury, he goes without the cane, does not limp, and there is no swelling or stiffness of the joint."

THE THERAPEUTIC VALUE OF BICYCLING.—Dr. Geo. S. Hull says in the *Medical Times and Gazette*: "Concerning the therapeutics of the bicycle, it is not making too broad a statement to say that it can be recommended in nearly all cases where horseback riding is indicated, the exceptions being ladies and very old or crippled men, and for most of these the tricycle is still preferable to the horse, and certainly infinitely safer. In horseback-riding the inexperienced rider gets the most exercise (jolting, which is not always beneficial), while the skilful horseman merely gets the pure air, and very little above the usual amount of that, as his circulation and respiration are not much increased by the easy, quiet motion his *skill* as a horseman gives him. In fact, after learning to ride horseback, it often becomes tiresome, the exhilarating effect passes off, and the good results consequently diminish. In bicycling, however, the whole body is in motion, and every rider gets a like amount of exercise. The circulation is quickened to any extent; the blood-vessels of the limbs are not compressed to the extent they are in horseback-riding; there is but little or no jarring; the muscles of the trunk and upper extremities (which, as a rule, are so imperfectly developed in physicians), are brought more into play, and the mind kept actively engaged in the sport—for sport it becomes, even when flying along to a 'terrible accident,' or to a death-bed scene."

ON BANDAGING THE INFANT.—In his retiring address Captain Douglas Galton, President of the British Sanitary Institute, delivered a philippic against the baby-bandage. He condemned what he described as "those mischievous two yards of calico," which, wound round the middle of so many infants on their introduction into the world, as a sort of baptism to the numerous evils of fashion in dress to which they were admitted, constricted and hindered the expansion of that very region of the body where heart and lungs, stomach and liver, organs of no mean importance, were struggling for room to grow and do their work, and where natural mechanical conditions threw some difficulty in the way of full development. The expansion of the lower part of the chest, which was so pronounced a feature in the well-formed human figure, was attained chiefly in higher animals, and like most of such higher prerogatives, was the result of more than ordinary effort, and was, proportionately, liable to suffer from interference. The chief effort to accomplish it was made soon after birth, when breathing, and food-taking, and the various changes incidental upon them began; and at this very juncture the opportunity was taken by meddling hands to hinder the expansion of the region where these new processes, upon which the well-being of the whole fabric depended, had to be initiated

and carried out. A more pernicious device could scarcely be conceived than this relic of antiquated nursedom; and it was impossible to estimate the number of deformed or pigeon chests, of hampered stomachs, livers, lungs, and hearts, with their varied attendant life-enduring infirmities and curtailment of life, that must result from the use of these "swathers," as they were called, for which there was not the slightest necessity. The oft-condemned tight waistbanding and lacing of after years, which affected only the small fashionable section of one-half of the community, was not, even in those who were subjected to it, so mischievous as this concealed semi-strangling process which was diligently carried out in the case of a large proportion of infants of all classes. Of the three demands of the infantile period—liberty of movement, fresh air, and good food—it seemed strange that the first two should be limited by smothering bed-clothes, swathers, long petticoats, and other devices, together with imperfect ventilation of rooms, while the last was liable to be supplied sometimes in sufficient quantity and bad quality, but often, whether good or bad, in superabundance.

THE PREVENTION OF HORSE ACCIDENTS.—Mr. C. C. Baird, of the Dick Veterinary College, Edinburgh, has invented an india-rubber frog-pad for fitting into the heels of the shoes of horses, with the view of preventing the animals from slipping and falling on the causeway. The invention is exceedingly simple, and will be of great value to medical men and others who drive horses, especially on asphalt and in frosty weather. The pad can be removed in the evening and replaced in the morning. A set of pads, it may be added, is expected to wear out two sets of shoes. The trial of the invention, we believe, has fully borne out the statements of the inventor as to the merits of the apparatus.—*Medical Press*.

A leather pad, considered superior to the rubber article, is coming into use in Louisville.—*Louisville Medical News*.

A LINIMENT FOR RHEUMATISM.—The *Therapeutic Review* says: "Methyl salicylate (oil of wintergreen) mixed with an equal quantity of olive-oil or linimentum saponis, applied externally to inflamed joints affected by acute rheumatism, affords instant relief, and, having a pleasant odor, its use is very agreeable."

THE REAL MISSING LINK.—Dr. Struthers, at a meeting of the British Association, said he had once in Aberdeen had to examine the case of a body reported to have a tail, but he found that it was simply a case of misdirection of the natural bones, and so the tail case broke down. The anthropologists were often jokingly asked when they were going to find a man with a tail. It should be remembered that even the higher apes had no tail, and therefore the question of tail or no tail was of no importance. To discuss the missing link was to tread on dangerous ground. Hair would never settle the question. The great point was the brain. The missing link was not a link, but a chain. The brain was one link, and the other was erect posture. If we could conceive a monkey having somehow got one day an abnormally superior brain, it would not remain up a tree. Then his limbs would commence to adapt themselves to their new conditions. Given the larger brain and the larger intelligence, the other development would follow in the course of time. The missing link, in one of the most painful senses, could be seen any day in the idiot ward of an asylum.

COCA-PLUG.—A combination of coca and tobacco is being quite extensively advertised in the St. Louis papers. Certificates from six prominent St. Louis physicians to the effect that tobacco and coca would be less injurious to the system than tobacco alone form a part of the advertisement.—*Medical World*.

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CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

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(Continued from p. 620.)

Nature.—The theory that cerebro-spinal fever is a local disease, occurring epidemically, was commonly held in the first part of this century, a theory which is now discarded. Job Wilson, in 1815, considered it a form of influenza, and he could see no utility in drawing a distinction between spotted fever and influenza. We, at the present time, can see no resemblance between the two, except that both occur as epidemics. The theory that cerebro-spinal fever is a peculiar local disease occurring in epidemics is more plausible than that it is a form of influenza. Even Niemeyer says that it presents no symptoms except such as are referable to the local affection. But the evidence is strong that cerebro-spinal fever is a constitutional malady, with the meningitis as a local manifestation, just like measles with its bronchitis, or scarlet fever with its pharyngitis. The abrupt and severe commencement, unlike that of those forms of meningitis, which are known to be strictly local, and the early blood change, as shown in certain cases by the appearance of the skin, and extravasations under it, indicate a general disease. Constitutional diseases having prominent local symptoms and lesions are apt to be regarded at first as local. It is only as time goes on, and they are more thoroughly studied and understood, and clinical observations multiply, that their constitutional nature is recognized, as for example at this late day the profession are beginning to recognize the constitutional nature of certain cases of croupous pneumonitis.

The theory that cerebro-spinal fever is a form of typhus once had advocates, but it is now so generally discarded, as untenable and absurd, that it would be a waste of time to consider the facts which differentiate the two maladies. Cerebro-spinal fever should, therefore, be considered as distinct from all other diseases, a malady *sui generis*, and in nosological writings it should be classified with those constitutional maladies which have specific causes.

Although this disease ordinarily occurs in an epidemic form, in localities widely separated from each other, and after continuing a few weeks or months, totally disappears, perhaps never to return, or not till after the lapse of years, nevertheless in certain localities it becomes established, so that it is proper to describe it as an endemic, a fact to which we have already alluded as regards New York City. I do not know that it is endemic in any village or rural locality in this country, but it appears to be permanently established in certain of the large cities. The large cities, with their promiscuous population, foreigners and natives, their crowded tenement-houses, and many sources of insalubrity, furnish in an eminent degree the conditions which are favorable for the development and perpetuation of the specific principle. Those diseases which in the present state of our knowledge we have reason to believe are caused by micro-organisms, we would expect to prevail most where domiciles are crowded and filthy, and systems are ener-

vated by impure air, poor diet, hardships and privation. Hence in New York City, in the quarters of the poor, there is a constant succession of the infectious diseases of childhood. Often two or more of them occur simultaneously, and it is difficult to eradicate them or limit their extension when once they have obtained a foothold. The fact that a large city, with its tenement-house population, affords in an eminent degree the conditions in which the infectious diseases are developed and propagated, when once their specific principles have been introduced, is one of the chief causes of the large percentage of deaths among the city children. In New York what has been gained in saving life by the suppression of small-pox has been more than counterbalanced by the mortality produced by diphtheria and cerebro-spinal fever, both now to all appearance permanently established in our midst. The following table gives the number of deaths annually from cerebro-spinal fever in this city since the close of 1871:

	Number of deaths.		Number of deaths.
1872.....	782	1878.....	97
1873.....	290	1879.....	108
1874.....	158	1880.....	170
1875.....	146	1881.....	461
1876.....	127	1882.....	238
1877.....	116		

It is seen that the greatest mortality was in the first year after the introduction of the disease into the city, after which the number of deaths gradually diminished, year by year, till 1878, when the lowest mortality was reached. Since 1878 the mortality gradually increased till 1881, in which year the number of deaths was double that of any other year except 1872, it being half that of 1872. The weather and the season appear to exert little influence on the prevalence of this disease now that it is established in the city. From the commencement of 1882 till the end of May of the current year I find that it caused deaths in every week except one, and about the same number in each of the seventeen months embraced in this period.

The mortuary reports of Philadelphia likewise show that cerebro-spinal fever has remained in that city since its introduction in 1863, a period of twenty years, the annual deaths produced by it varying between 36, the minimum, in 1869 and 1870, and 384, the maximum, in 1864. In Providence, also, as appears from Dr. Snow's reports, cerebro-spinal fever has caused annually more or fewer deaths since 1871. Therefore, we repeat, this fact may be added to the sum of our knowledge of this disease, that once gaining a lodgment, where the conditions are favorable for it, as in a large city, it may become established and remain there an indefinite time.

Anatomical characters.—I have notes of the post-mortem appearances in 76 cases, published chiefly in British and American journals; 29 died within the first three days, 28 between the third and twenty-first days, and the duration of the remaining 11 was unknown. These records furnish the data for the following remarks:

The blood undergoes changes which are due in part to the inflammatory and in part to the constitutional and ashenic nature of the disease. The proportion of fibrin is increased in cases that are not speedily fatal, as it ordinarily is in idiopathic inflammations. Analyses of the blood by Ames, Tourdes, and Mallot show a variable proportion of fibrin from 3.40 to more than six parts in

1,000. In sthenic cases accompanied by a pretty general meningitis, cerebral and spinal, there is, after the fever has continued some days, the maximum amount of fibrin, while in the asthenic and suddenly fatal cases, with inflammation slight, or in its commencement, the fibrin is but little increased. The most common abnormal appearance of the blood observed at autopsies is a dark color with unusual fluidity and the presence of dark soft clots. Exceptionally bubbles of gas have been observed in the large vessels, and the cavities of the heart. An unusually dark color of the blood, small and soft dark clots, and the presence of gas-bubbles, when only a few hours have elapsed after death, indicate a malignant form of the disease, in which the blood is early and profoundly altered. In certain cases this fluid is not so changed as to attract attention from its appearance. The points or patches of extravasated blood which are observed in and under the skin during life in some patients usually remain in the cadaver. When an incision is made through them the blood is seen to have been extravasated not only in the layers of the skin, but also in the subcutaneous connective tissue. Extravasations of small extent are also sometimes observed upon and in the thoracic and abdominal organs.

In those who die after a sickness of a few hours or days, namely, in the stage of acute inflammatory congestion, the cranial sinuses are found engorged with blood, and containing soft dark clots. The meninges enveloping the brain are also intensely hyperæmic, in their entire extent in most cadavers; but in some cases the hyperæmia is limited to a portion of the meninges, while other portions appear nearly normal. In those cases which end fatally within a few hours, this hyperæmia is ordinarily the only lesion of the meninges; but if the case be more protracted, serum and fibrin are soon exuded from the vessels into the meshes of the pia mater, and underneath this membrane, over the surface of the brain. Pus-cells also occur mixed with the fibrin, sometimes so few as to be discovered only with the microscope, but in other cases in such quantity as to be much in excess of the fibrin, and be readily detected by the naked eye. Pus, which in these cases probably consists of white blood-corpuscles which have escaped with the fibrin from the meningeal vessels, sometimes appears early in the attack. Thus in the *Dublin Quarterly Journal*, 1866, Dr. Gordon relates the history of a case in which death occurred after a sickness of five hours, and a purulent greenish exudation had already occurred in places under the meninges. The exudation of fibrin also begins early. In a case of thirty hours' duration, published by Dr. William Frothingham in the *American Medical Times*, April 30, 1864, and in another of one day's duration, published by Dr. Haverty, in the *Dublin Quarterly Journal* for 1867, exudation of fibrin had already occurred in and under the pia mater. The arachnoid soon loses its transparency and polish, and presents a cloudy appearance over a greater or less extent of its surface. This cloudiness is usually greatest along the course of the vessels in the sulci and depressions, and where the fibrinous exudation is greatest, but it occurs also where no such exudation is apparent to the naked eye. Dr. Gordon describes a case of only eight hours' duration, in which the arachnoid was already opaque at the vertex, but of normal appearance at the base of the brain (*Dublin Quarterly Journal*, 1866), though the vessels of the pia mater were everywhere greatly congested.

The exudation—serous, fibrinous, and purulent—occurs as in other forms of meningitis, within the meshes of the pia mater, and underneath this membrane over the surface of the brain. The fibrin is raised from the surface of the brain with the meninges. It is most abundant in the inter-gyral spaces, around the course of the vessels, over and around the optic commissure, the pons Varolii the cerebellum, medulla oblongata, and along the Sylvian fissures. It is most abundant in the depressions, where

it sometimes has the thickness of $\frac{1}{10}$ to $\frac{1}{4}$ of an inch, but it often extends over the convolutions so as to conceal them from view.

Most other forms of meningitis have a local cause, and are therefore limited to a small extent of the meninges, as, for example, meningitis from tubercles or caries of the petrous portion of the temporal bone, in both of which it is commonly limited to the base of the brain; or from accidents, when the meningitis commonly occurs upon the side or summit of the brain. The meningitis of cerebro-spinal fever, on the other hand, having a general or constitutional cause, occurs with nearly equal frequency upon all parts of the meningeal surface, except that it is perhaps most severe in the depressions, where the vascular supply is greatest. In cases of great severity the inflammatory exudation, fibrinous or purulent, or both, may cover nearly or quite the entire surface of the brain. Thus in the case of a negro, thirty-five years old, only four days sick, whose body was examined in Bellevue Hospital on May 30, 1872, the record states that there was a purulent exudation over the entire surface of the cerebrum and cerebellum. The quantity of serous exudation varies according to the duration of the disease and amount of congestion. In some the quantity is so small as scarcely to attract attention, but in other instances, especially when the disease is protracted, it is large. In a case reported by Dr. Moorman, in the *American Journal of the Medical Sciences*, for October, 1866, it is stated that about three pints of turbid serum escaped from the cranial cavity in attempting to remove the brain; but as there was no measurement the statement may be somewhat exaggerated.

In those who die at an early stage of the attack, the vessels of the brain, like those of the meninges, are hyperæmic, so that numerous "puncta vasculosa" appear upon its incised surface. At a later period this hyperæmia, like that of the meninges, may disappear. If there be much effusion of serum within the ventricles, and over the surface of the brain, the convolutions are apt to be flattened, and the pressure may be so great that the amount of blood circulating in the brain is reduced below the normal quantity. Thus in the case of a child of three years, who lived sixteen days, and was examined after death by Burdon-Sanderson, the ventricles contained a large amount of turbid serum, and the brain-substance was everywhere pale and anæmic.

Cerebral *ramollissement* occurs in certain cases. At one of the examinations in Charity Hospital, the patient having been only three days sick, the brain was found much softened. The dissection was made seven hours after death, so that the softening could not have been the result of decomposition. At one of the post-mortem examinations in Bellevue Hospital, softening of the fornix, corpus callosum, and septum lucidum was observed, and in another, softening in the neighborhood of the subarachnoid space. In a case related by Dr. Moorman in the *American Journal of the Medical Sciences*, for October, 1866, it is stated that portions of the brain, medulla oblongata, and pons Varolii were softened. In a case observed by Dr. Upham softening of the superior portion of the left cerebral hemisphere had occurred. Occasionally the whole brain is somewhat softened. Burdon-Sanderson, Russell, and Githens each relate such a case. Moreover, the walls of the lateral ventricles are ordinarily more or less softened in fatal cases of cerebro-spinal fever, as they are in the usual forms of meningitis. In rare instances the brain is œdematous, as in a case published by Dr. Hutchinson in the *American Journal of the Medical Sciences*, for July, 1866. In this case the patient was only four days sick, and the whole brain was œdematous, serum escaping from its incised surface.

The ventricles contain liquid, in some patients transparent serum, in others serum turbid, and containing flocculi of fibrin, or fibrin with pus. The liquids in the different ventricles, since they inter-communicate, are the same. The choroid plexus is either injected or it is infil-

trated with fibrin and pus. With the abatement of the inflammation absorption commences. The serum, from its nature, is readily absorbed, and the pus and fibrin more slowly by fatty degeneration and liquefaction. Occasionally the serum remains, and chronic hydrocephalus results. An infant who contracted the disease at the age of five months, and appeared to be convalescent, had, two months subsequently, great prominence of the anterior fontanelle, and other symptoms which indicated the presence of a considerable amount of effusion within the cranium. In another case, one year afterward, examination showed the enlargement of the head and prominence of the fontanelle which characterize chronic hydrocephalus. A boy of ten years, treated in Roosevelt Hospital in 1878, died three months after the commencement of cerebro-spinal fever. The records of the autopsy state: "Body a skeleton; brain, dura mater and pia mater appear normal, except a little thickening of latter at base of brain; ventricles much enlarged and full of clear serum; surface of walls of ventricles appears normal, but is soft; spinal cord and membranes apparently normal; heart, lungs, stomach, and intestines normal; liver congested; kidneys pale." In this case, therefore, all the other lesions of the cerebro-spinal axis, except the serous effusion, had nearly disappeared. No post-mortem examinations, so far as I am aware, have yet revealed the state of the brain and its meninges in those who have had this malady at some former time and have fully recovered, whether there may not be some traces of it which are permanent, as opacity or adhesions.

The remarks made in reference to the cerebral apply, for the most part, also, to the spinal meninges. There is at first intense hyperæmia of the membranes, usually over the entire surface of the cord, soon followed by fibrinous, purulent, and serous exudation in the meshes of the pia mater, and underneath this membrane. The exudation is sometimes confined to a portion of the meninges, more frequently that covering the posterior than anterior aspect of the cord, and when it is general it is ordinarily thicker posteriorly than anteriorly. In severe cases nearly or quite the entire spinal pia mater may be infiltrated by inflammatory products. Thus in case of an infant that died of cerebro-spinal fever at the age of ten weeks, in the service of Dr. H. D. Chapin, in the out-door department at Bellevue, the entire spinal cord was covered by a fibrino-purulent exudation, except a space about six lines in extent upon the anterior surface.

At the meeting of the New York Pathological Society, March 23, 1881, Dr. G. L. Peabody presented the specimens from the body of a patient, aged nineteen years, who died on the tenth day of cerebro-spinal fever. The exudation extended over the base of the brain, both lobes of the cerebellum, and covered completely the cord to the cauda equina, being, as usual, thickest upon the posterior surface. In some patients the spinal meningitis is severe, while the cerebral is slight, so that the symptoms referable to the spinal axis predominate, such as pain in the back and limbs, and opisthotonos. The exudation may have the usual appearance of fibrin and pus, but it is sometimes greenish and sometimes blood-stained. Small extravasations of blood also occur as a result of the hyperæmia, and in one case related by Burdon-Sanderson it is stated there was a layer of blood one-eighth of an inch thick over the whole cord below the bronchial swelling. In post-mortem examinations the central canal of the cord has usually been overlooked. Ziemssen relates a case, and Gordon another, in which it was dilated and filled with purulent fluid. The anatomical changes which have been observed in the cord itself have been injection of its vessels in recent cases, and occasional softening of portions. Thus in a case which was examined in Bellevue Hospital, April 13, 1872, it is stated that there was softening of the cord in the upper part of the dorsal region. In most of the examinations the only abnormal appearance detected in the cord was hyperæmia, but in a consider-

able proportion of cases the records state that the substance of the cord appeared normal.

Professor Wm. H. Welch, curator to Bellevue Hospital, has recently communicated to me the following results of his examinations:

"I have records of eight autopsies which I have made upon cases of cerebro-spinal meningitis, and in six cases I have examined, microscopically, portions of the hardened brain and cord. Post-mortem rigidity is usually well marked and continues for a long time after death. Upon removal of the skull-cap, which is often hyperæmic, the dura mater appears tense, and usually more or less congested. The sinuses contain loose, dark-red coagula, and some fluid blood. In one case I found a recently formed grayish-red ante-mortem thrombus in the left lateral sinus. The subdural space is usually free from inflammatory exudation, but occasionally a slight fibrino-purulent exudation is found on the outer surface of the arachnoid membrane. The pia mater is generally hyperæmic, and frequently it contains small ecchymoses. An exudation is present in the subarachnoid spaces, over both the convexity and the base of the brain, most abundantly, as a rule, at the base. Over the convexity the exudation appears in the form of greenish-yellow streaks along the veins between the gyri. At the base the exudation accumulates in the subarachnoid cisterns, such as those of the Sylvian fissure, of the optic chiasm, of the intercrural space, of the under surface of the cerebellum, and along the basilar artery. The cranial nerve-trunks may be enveloped in a purulent exudate as they emerge from the brain. The fluid in the ventricles may or may not be increased in amount, but is usually turbid from admixture of pus-cells. The choroid plexuses are often swollen and opaque.

"The substance of the brain is usually hyperæmic, and frequently contains punctate ecchymoses, which may occur in groups. Small foci of softening may be formed before death, but extensive diffuse softening, particularly that around dilated ventricles (hydrocephalic softening) is probably cadaveric, and due to imbibition of serum, although it may form within a short time after death.

"The inflammatory exudation occupies likewise the subarachnoid space over the cord. The exudation may surround the posterior nerve-roots for a distance from the cord. Microscopic examination shows that the exudation is composed of serum, fibrin, pus cells, and red blood-corpuscles. Usually the exudation is distinctly purulent, being of a greenish-yellow color, but it may be predominantly serous in character. The pus-cells are accumulated around the small veins and capillaries. I have found the ependyma of the fourth ventricle richly infiltrated with pus-cells, which here as well as elsewhere are probably emigrated white blood-corpuscles. The connective tissue cells of the pia-arachnoid membrane are swollen and granular. The lymph spaces around the blood-vessels in the cerebral cortex are often filled with pus-cells. The communication between these peri-vascular spaces and the subarachnoid spaces renders easy the passage of wandering cells from the pia mater into the cortex. There may also be found an increased number of lymphoid cells in the peri-ganglionic spaces. In a similar manner the sheaths of the blood-vessels and the pial processes in the spinal cord may be invaded by pus cells.

"In one of my cases the symptoms of the disease are said to have existed for only twelve hours before death. Here there was an excess of serum in the cerebral and spinal subarachnoid spaces. This serum was moderately turbid. The microscope showed a more abundant exudation of pus-cells than there appeared to be from their gross appearances. The substance of the brain was pale and cedematous, nor was there marked congestion of the meninges."

No constant or uniform lesions occur in the organs of the trunk, and those observed are not distinctive of this disease. Hypostatic congestion of the lungs, bronchitis,

atelectasis, and broncho-pneumonia are common. Pleuritic, endocardial, and pericardial inflammations have occasionally been observed, but are rare. Effusion of serum, sometimes blood-stained, occasionally occurs in the pleural and other serous cavities. The auricles and ventricles of the heart, as already stated, contain more or less blood, with soft dark clots in the more malignant and rapidly fatal cases, but larger and firmer in those which have been more protracted. The spleen is enlarged in less than half the patients. The absence of uniformity as regards the state of the spleen, the fact that in many it undergoes no appreciable change, is important, since this organ is so generally enlarged and softened in the infectious diseases. The stomach, intestines, and liver are sometimes more or less congested, but in other cases their appearance is normal. The agminate and solitary glands of the intestines have ordinarily been overlooked, but in certain cases they have been found prominent. The kidneys in some exhibit the lesions of nephritis. In one of the eight autopsies made by Professor Welch acute diffuse nephritis had been present, as shown by the state of the kidneys. In the case of a child of nine years, treated by Dr. F. A. Burralk, in the Presbyterian Hospital, the urine was very albuminous and the kidneys presented a fatty appearance. Anatomical changes in these organs, however, are not common, unless in slight degree, so that in most patients their function is fully and properly performed.

(To be continued.)

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.¹

By T. GAILLARD THOMAS, M.D.,

NEW YORK.

DR. THOMAS said his motive for presenting the paper was involved in the fact that the plan of treatment of puerperal fever which he should advocate had not been anywhere fully elaborated, or in any single essay carefully systematized. Indeed the general principles of the plan of treatment had not been universally accepted as orthodox, and the question of intra-uterine antiseptic injections for the cure of puerperal septicæmia was one which would still come up for discussion. While the paper contained nothing which had not been elsewhere as fully and as clearly stated, and nothing which had not already received careful investigation at the hands of progressive obstetricians, the author hoped that on account of his large experience, the presentation of his estimate of the method might prove of some value. At the annual meeting of the American Gynecological Society, held four years ago, the subject of intra-uterine antiseptic injections for the cure of puerperal septicæmia was up for discussion, and with a single exception he stood alone in its advocacy. Furthermore, he was among the very first, if not the first in this country, who adopted this method, together with early cutaneous refrigeration in the treatment of this disease. Among all the advancements which have been made in obstetrical medicine he regarded none as more important or more signal than that relating to the prevention and cure of the febrile conditions incident to the puerperal state. Brief reference was then made to the views which have been entertained concerning its exact nature, such as a fever due to suppression of the lochia, inflammation of the uterus and peritoneum, specific puerperal fever, uterine wounds, arrest of the process of formation of milk, the doctrine of the multiplicity of puerperal affections grouped under one name, and the doctrine of puerperal blood-poisoning, etc.

Dr. Thomas then directed attention to the condition of the blood in the puerperal woman, first, being favorable to the development of thrombus, and, second, the

existence of a tendency to prove most prolific ground for sepsis and zymosis. Besides this, the nervous system is in a plus state of excitement and sensitiveness. With this general condition there existed several local conditions which result from parturition. Before enumerating these, he briefly alluded to the normal condition of the lymphatics, the blood-vessels, and the uterine tissue, and then described the appearances, as could be seen forty-eight hours after delivery. Outside all looks very well, the uterus is simply much larger than the non-pregnant womb, but the inner surface has an unhealthy, diphtheritic look, although free from exudation. There is a large raw, irregular placental site, and small clots can be seen which cover the mouths of the uterine sinuses. The odor from this surface is disagreeable. On examining the cervix uteri there may be found two or three small lacerations, and, in consequence of these, with absorption through them of irritating lochial discharge, the cervix is swollen and œdematous. Examining the vagina, it is found that in two or three places a superficial rupture of the mucous membrane of this canal has been produced. The vulva also presents several solutions of continuity, the fourchette has been torn through, and this rent has extended perhaps through a small portion of the perineum, and one or two small fissures have occurred in the mucous membrane covering the ostium vaginae.

Material taken from these surfaces at this stage of the puerperal state, and introduced by inoculation, will give rise to more or less irritation and lymphangitis, but it is not sufficiently poisonous to give rise to erysipelas or angioleucitis. And yet what are the results of parturition? Recovery is the universal rule unless some unusual occurrence manifests itself to prevent this consummation. Notwithstanding the existence of all these circumstances, which are best calculated to insure a bad result, only one or two of one hundred parturient women die when properly cared for, even in public hospitals.

But now and then all this is changed, and some poison gains access to the genital canal, and acts as rapidly and decidedly as a little yeast added to dough, and striking and alarming phenomena develop, spread, and progress steadily toward a fatal issue. At the morning visit the physician leaves the patient with a normal pulse and temperature, and in an apparently favorable condition. A few hours only may elapse when the patient has a scarcely perceptible chill, with some pelvic pain, the lochia ceases, the milk has disappeared, she suffers from severe headache, a look of indescribable anxiety is upon her face, she has a pulse of 120, and a temperature of perhaps 104° F. The poisonous element has reached the genital tract and the result is already manifesting itself. Suppose, now, that the physician remains inactive, or relies upon medicines given by the mouth which are supposed to exercise some control over this poison, the local conditions in the meantime which favor its admission remaining unchanged. The lymphatics are active, lymphangitis follows, cellulitis, peritonitis develops probably, and what was originally a septicæmia will emerge into one of those affections which have been grouped under the general name puerperal fever, and pass through all its attendant phenomena.

PATHOLOGY.

At this point the author of the paper proceeded to the consideration of the pathology of puerperal fever, and defined it as a puerperal septicæmia. It matters not whether it assumes a form of phlebitis, cellulitis, lymphangitis, or peritonitis, the essence of the disorder is absorption of poison into the blood of the parturient woman through some solution of continuity in the tissues of the genital tract. As had been well described by Lusk, puerperal fever is "an infectious disease, due, as a rule, to the septic inoculation of the wounds which result from the separation of the decidua and the passage of the child through the genital canal." In other words, he ac-

¹ Abstract of paper read before the New York Academy of Medicine, December 6, 1883.

cepted the definition given by Hervieure as long ago as 1870, who defined this disease to be "a multiplicity of affections produced by puerperal poison."

NOMENCLATURE.

Concerning nomenclature, of late an effort has been made by the Dublin school of midwifery to supplant the old term puerperal fever by the use of the word "metria." Dr. Thomas hoped the suggestion would not be adopted, as the word metria does not convey any more accurate idea of the pathology to the mind of the student than does the old term. Of the two terms metria is more objectionable than puerperal fever. On the other hand puerperal septicæmia conveys a definite and clear idea, which appears to be in accord with the truth as taught us by modern pathology, and it should be adopted despite the fact that it is far from being absolutely perfect.

Dr. Barnes had proposed to use the word in its comprehensive sense, employing it to mean that "the blood of the puerpera is poisoned," and Dr. Thomas was willing to admit this, although he believed in the existence of a specific poison which acted as surely as does a specific poison in the production of typhus or of small-pox. As to the exact nature of the poison we are not yet able to say; nor are we able to say what the exact nature of the poison is in most, if not all, the infectious diseases. German pathologists declare that the round micrococci especially are important factors in the etiology of this group of affections, but this point in bacterial pathology is too unsettled to permit of its introduction into such a paper as the present one. But even if we do not know what the nature of the poison is, we surely know that some such toxic agent exists, and it behooves us to inquire how it can be best destroyed, or how its life and activity can be best counteracted if it gains admission despite our care and watchfulness. There are only two methods by which it can reach the parturient tract. First, it may be carried into the vulva through the atmosphere; and second, it may be carried to any part of the genital tract by the fingers of the doctor or nurse, towels and cloths laid against the vulva, sponges, and instruments, and by bed and body clothing coming in immediate contact with the genital organs. Dr. Thomas then addressed his remarks to cases occurring chiefly in private practice, because even among the wealthy there is a laxity of system and a carelessness with regard to preventive measures which borders closely upon criminality. It is the duty of every practitioner to guard his patient against puerperal septicæmia by every means in his power.

PROPHYLACTIC MEASURES.

1. In all midwifery cases, whether in hospital or private practice, the floor and ceiling of the room in which the woman is to be confined should be thoroughly washed with a ten per cent. solution of carbolic acid, or a bichloride of mercury solution, one to one thousand. The bedstead and the mattress should be sponged with the same solution. All curtains and upholstery should be dispensed with.

2. The nurses and physician should take care that all their clothing is free from exposure to the effluvia of septic infection, such as typhus, erysipelas, septicæmia, scarlet fever, etc., and if there has been any exposure in this direction all the clothing should be changed and the body should be thoroughly sponged with a saturated solution of boracic acid.

3. As labor sets in the nurse should thoroughly wash her hands with soap and water, removing the dirt from under the nails, administer an antiseptic vaginal injection, repeat it every four hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child.

4. Both doctor and nurse should wash their hands

thoroughly with soap and water, and scrape the nails, and afterward soak their hands for several minutes in a solution of bichloride of mercury (1 to 1,000).

5. The third stage of labor should be efficiently produced, all portions of placenta should be removed, and ergot administered in moderate doses three times a day, to be kept up for at least one week, to secure complete expulsion of the clots and closure of the uterine vessels.

6. The doctor should take nothing for granted, but at the conclusion of labor should carefully examine the vulva of the patient. If there is any rupture of the perineum it should be closed at once by suture, and if slight lacerations are found they should be dried thoroughly with a cloth, and equal parts of a saturated solution of carbolic acid and persulphate of iron applied, and again the surface dried with a cloth and painted over with gutta-percha collodion.

7. Within six or eight hours after the termination of labor, syringe out the vagina with an antiseptic solution, and introduce a suppository of cocoa butter containing from three to five grains of iodoform.

8. The vaginal injections should be repeated every eight hours. But in all cases of difficult labor, and in those in which instruments have been employed, they should be administered twice as often, and kept up at least for ten days. The nurse must wash and disinfect her hands before every approach to the genital tract of the woman.

9. Employ a new gum elastic catheter which has been thoroughly immersed in an antiseptic fluid each time the bladder is evacuated, rather than trust the nurse to cleanse an old silver catheter.

10. The physician must inform himself by *personal observation* as to the competency of the nurse with regard to the use of the catheter, the administration of the vaginal injections, and the introduction of the suppositories.

It might be objected that so many details with reference to the lying-in woman are unnecessary, because of the enormous preponderance of cases in which complete recovery ensues without such treatment, and that to introduce them savors of the performance of some grave surgical operation. So much the more did Dr. Thomas urge them on this very ground, because he believed that the woman who is to bring forth should be treated as though she is to go through a capital operation.

At this point Dr. Thomas made a strong protest against the use of intra-uterine injections as a prophylactic resource, except after very severe operations in the uterine cavity, which rendered the occurrence of septicæmia almost certain.

But suppose that despite all these precautions the poison has entered, what are the most reliable means for checking the advance of the septic disorder? He did not believe there is any specific disease-germ which give rise to puerperal septicæmia. It is probably the same cause which gives rise to septicæmia in the stump after an amputation, or after a wound with compound fracture, or in the lacerated tract after gunshot wound.

A portion of retained placenta or membranes does not give rise to true puerperal septicæmia, but rather to a toxæmia. If the mere presence of decaying material would produce septicæmia without the agency of a specific disease-germ, the disease would develop in healthy country localities.

As soon as the patient is stricken by the poison, certain morbid phenomena develop themselves, such as chill, high temperature, pelvic pain, mental disturbance, headache, pain in the back, and sometimes, though not commonly, nausea and vomiting.

TREATMENT FOR THE CURE.

First.—As soon as the diagnosis is determined upon, all pain and nervous perturbation should be allayed by a

hypodermic injection of morphine, unless there is some special idiosyncrasy in regard to opium, and throughout the attack, whether suffering in mind or body, the hypodermic use of morphine should be repeated sufficiently often to allay it. In this particular case the drug should be used hypodermically, and special care should be taken to use a clean syringe, dipping the needle before its use into a solution of bichloride of mercury (1 to 1,000), which will prevent the formation of abscess.

Second.—Being relieved of pain, spread an india-rubber cloth over the edge of the bed, making it fall into a tub of water rendered antiseptic by the use of carbolic acid (two and one-half per cent.), or bichloride of mercury (1 to 2,000). Then move the patient very gently across the bed, place a pillow under the head, allow each foot to rest upon the side of the tub, and cover with blankets. Then introduce either a Chamberlain glass tube or a Lyman metallic tube, very carefully guided by the index finger, passing it up to the very fundus of the uterus, attach a Davidson syringe, and throw a stream of water with gentle force against the lining membrane of the organ. If there is any suspicion that there remain attached portions of placenta or membranes, they should be carefully removed, using the finger-nails as a curette, as advised by Dr. Wilson, of Baltimore.

There are dangers attending the administration of these injections: first, the entrance of air into the uterine sinuses; second, the production of hemorrhage; third, the danger of forcing fluid directly into the general circulation through the injection tube into the mouth of the sinuses; fourth, convulsions and violent pain, which produce a sudden and baneful influence upon the nervous system, and fifth, the passage of fluid into the peritoneal cavity through the Fallopian tube. All of these may to a very great extent be avoided by careful attention to details. By the use of a large tube, with water not less than 100° F., and using only a moderate degree of force, proceeding gently, cautiously, and slowly, these dangers can be avoided. The tube should not be allowed to fill the os internum or externum completely. If after the use of the injections it is found that the cervical canal hugs the tube too closely, it should be dilated before further injections are practised, and this may be done by the use of either the hard rubber or Barnes dilators. If hemorrhage occurs, persulphate of iron should be added to the antiseptic solution and ergot administered.

The frequency of the administration of the intra-uterine injection should be varied greatly with individual cases. In moderate cases, where the temperature falls readily, only once in five hours may be all that will be required, while in other cases they may be required every three hours, and in bad cases they may be administered as often as every hour. These injections should be administered by the physician always, and should be carried up to the fundus uteri, and every precaution exercised concerning detail. Dr. Thomas favored the intermittent stream. For a number of years he entertained the idea that the continuous flow was most desirable, but on that point he had changed his opinion entirely. Continuous irrigation he regarded as a delusion and a snare. For vaginal irrigation it is an excellent method; nevertheless, in severe cases he preferred to employ continuous irrigation and use the intermittent stream every three hours rather than exhaust the patient by the use of injections as often as seemed desirable. At all events, that plan is best which best cleanses the parturient canal.

Third.—Control the temperature by the use of Townsend's rubber-tube coil, placed over the entire abdomen, from the ensiform cartilage to the symphysis pubis, with ice-water flowing through it. In his service at the Woman's Hospital this means of controlling the temperature is as commonly and freely used as are gargles for diseases of the throat, and thus far no ill-effects had been produced, either in the way of chilliness or by the development of complicating diseases, such as pneumonia, pleurisy, etc. Formerly he relied upon Kibbee's

cot for the same purpose, but had found the coil much more convenient.

Fourth.—Keep the nervous system under the influence of quinine, fifteen grains night and morning, or Warburg's tincture administered in capsule, according to the recommendation of Dr. John T. Metcalf, or by the use of salicylate of soda.

Fifth.—The diet should consist of fluid food, and the staple article should be milk, but animal broths may be alternated with it.

Sixth.—Efficient and abundant assistants. Two nurses are necessary, one for night and the other for day, and at least one extra physician as an assistant, in order to carry out this method of treatment effectually.

In regard to the antiseptic substances used, they have been thymol, boracic acid, salicylic acid, carbolic acid, and bichloride of mercury. The last two are the best, and the bichloride seems to be about to supersede the carbolic acid, and for intra-uterine injections it should be used in the strength of 1 to 2,000.

POINTS OF INTEREST IN CHOREA.¹

By HENRY D. CHAPIN, M.D.,

ATTENDING PHYSICIAN TO THE CLASS FOR DISEASES OF CHILDREN, OUT-DOOR DEPARTMENT, BELLEVUE HOSPITAL.

THE child's service at the Out-door Department of Bellevue Hospital offers an inviting field for the clinical study of chorea. Many of the children brought there for treatment come from the poorest and most neglected classes in the city, among whom bad food and air readily produce the hydremia and other predisposing conditions of this disorder. An analysis of a number of cases that have come under my observation may be of some interest, as repeated clinical observations are needed to verify certain points about this interesting and obscure disease. Perhaps the relation of rheumatism to chorea is one of the most important of these points. Various observers differ as to the closeness of this relation, some considering the rheumatism to act only as a depressing agent in the production of chorea, while others assign to it a much more intimate causative relation. In the histories of thirty-eight cases of chorea, twenty-two were preceded or accompanied by rheumatism, while in the remaining sixteen no such connection could be found. In two of the latter cases, however, one of the parents had been subject to rheumatic attacks. The intensity of the rheumatism varied within very wide limits, sometimes being so pronounced as to leave no doubt as to its character, and again taking on such mild manifestations in the shape of the so-called growing pains as to need careful investigation in order to discover its true nature. Two cases will illustrate:

Rosanna K—, aged thirteen, was brought to me suffering from twitching in all the voluntary muscles. A month previous she had an attack of rheumatism, first in the right knee, then in the left knee, and finally in both ankles, accompanied by pain and some swelling. Two weeks afterward the twitching began on the left side. On examination she was found to have a mitral regurgitant murmur. No history of rheumatism in the family.

Maggie C—, aged nine, complained some about two months ago of wandering pains in legs and ankles. These pains would only last for a few days and then disappear, without preventing her from going about in any way. Two weeks ago her mother noticed that she was getting very fidgety, which ended in well-marked twitching of the face and both arms. She was also found to have mitral insufficiency. Her father and mother have both had rheumatism. In this case I have no doubt that the vague pains complained of were truly rheumatic,

¹ Read by invitation before the New York Neurological Society, November 6, 1883.

in view of all the facts of the history. Assuming that there is a close connection between chorea and rheumatism, it is difficult to determine exactly the relative influences these diseases have upon one another. Thus it is a point of uncertainty whether the same morbid underlying condition predisposes to both rheumatism and chorea, or whether the state of the system left by the rheumatism is one of the principal factors in producing the chorea. I have had several instances in which rheumatism has followed an attack of chorea, and where no previous rheumatic history could be obtained. The following is from my note-book :

April 2, 1883.—Bartholomew C—, aged eight, has always been pretty healthy. Has no history of rheumatism or growing pains, and his father and mother have never been rheumatic. Two weeks ago he seemed to fail somewhat and had some loss of power in his left arm, soon followed by twitching of the left hand and arm. He came to me again on April 12th, saying that a few days previously he had been seized with pains in both knees, which spread up and down his legs. The pains were so severe that he could hardly get up stairs, but they disappeared in about a week and have not troubled him since. Dr. A. R. Robinson, who for some years had one of the children's classes at Bellevue, tells me that in a number of cases he found a chorea to follow rheumatism, in which rigid inquiry seemed to show that a previous rheumatism had not been overlooked. In one case he treated a girl for chorea who had no history of rheumatism, but about two years afterward she was seized with an acute inflammatory affection of the joints. Rahn, in his article on rheumatism in Gerhard's "Handbuch der Kinderkrankheiten," states that Sée mentions five cases in which chorea preceded the rheumatism, and that Roger reports six such cases. Soltmann, in his article on chorea, in this connection quotes Roger, who thinks that chorea and rheumatic affections of the joints, and heart affections, are members of one and the same pathological condition. Therefore he makes a division into chorea rheumatica, chorea cardiaca, and chorea rheumatica-cardiaca, and he is unable to state which process makes the commencement. Often the chorea is primary and the heart affection secondary, or *vice versa*, or the heart affection and the chorea appear at the same time. Again, the chorea may appear first, then the rheumatism, and lastly the heart affection; but generally the rheumatism is first, next the chorea, and the heart affection afterward. I have never seen a case in which cardiac disease followed chorea without any previous rheumatic history. Certain German authors deny any special connection between rheumatism and chorea. Thus Romberg, in the majority of cases, can see no relation between the two diseases, and Soltmann, in the article already mentioned, states that Steiner in two hundred and fifty-two cases found acute inflammatory rheumatism only four times. Rahn, in the "Handbuch der Kinderkrankheiten," concludes, after most careful examination, that there is no special connection between the two diseases. He found in eleven cases of chorea that there were ten in which the heart was normal and in which there was no rheumatism, and thinks that what little connection there may be between the affections varies according to different localities. The statistics published in this paper, together with those previously found, show, I think, that in this locality the connection between the diseases is very close. I have a history of one case in which a girl during the course of three years had three attacks of chorea, each attack being immediately preceded by rheumatism. Most observers have noticed that children with chorea frequently have rheumatic parents, and Rahn himself, in his article, quotes several cases in which rheumatic parents had two children, one of whom had rheumatism and one chorea.

In taking histories of chorea, I think that merely being satisfied with a negative answer when the parent is asked if the child has had rheumatism may not be sufficient

always to arrive at the truth, but that a little more careful investigation should be made to see if such a condition may not have been overlooked. According to Roger it is oftenest the milder or subacute cases of rheumatism that are followed by chorea. Henoch also states that chorea follows, with equal frequency, mild rheumatic conditions. It is well recognized by the authorities that rheumatism in early life has often a much lighter manifestation than in adults. The pain may be but slight and the swelling of the joints absent, or, if present, quickly disappearing. The redness may be trifling, or not exist at all. The temperature is rarely high unless complicated by endocarditis. Children thus affected are seldom confined to the house and often go to school, although constantly complaining some of pain and stiffness—in fact, their parents, when questioned, will say they have had growing pains. I think careful observations will identify in many cases these growing pains with rheumatism. Organic heart disease is by no means infrequent in children, and in many cases I have only been able to get a history of such preceding pains as a cause. While certain infectious diseases may produce endocarditis, yet in children, as in adults, its most frequent cause is rheumatism, and in them this light form is often its only manifestation. I have recently had an interesting case under observation of cardiac disease in a girl of eleven years. Measles and pertussis are the only diseases she has had, but for the last eight months she has complained off and on of some pain and stiffness on exertion in her knees and ankles. There has been no swelling nor redness. A month ago she had such an attack, followed in about a week by pain in the chest, with a gradually developed intense dyspnoea. When I saw her she had marked pericarditis with effusion, with a friction sound at the base. When the fluid had sufficiently subsided I discovered enlargement of the heart, with a double aortic and mitral regurgitant murmur, showing that an endocarditis had followed one of these previous attacks of slight pains. The child dying suddenly, I obtained an autopsy. The pericardium was adherent to about half its extent, and where free both layers were covered by a thick layer of fibrin. The heart muscle was soft and fatty, showing all the evidences of a recent and general myocarditis. The whole endocardium on the left side of the heart was inflamed, with the mitral valves retracted and partially bound down. Fine fibrinous vegetations were seen on the aortic valves. Here, then, there was complete destruction of a heart from a rheumatism whose chief manifestation was a stiffness in the knees. In making a history of growing pains stand for a previous rheumatism it is obvious that a certain limitation and care must be exercised, especially among the lower classes, who are apt carelessly to give an affirmative answer to questions asked by the physician. Thus simple bruises or sores must be eliminated, also the muscular weariness developed in weakly children by over-exercise, the products of tissue metamorphosis being imperfectly removed by the feeble circulation, with resultant irritation and pain. But rheumatic pains usually go from one joint to another, or from one set of muscles to another, and exist independently of any such factors as injury or over-exercise. After all such sources of error have been carefully guarded against by rigid questioning and examination, I think it will remain true that many, perhaps the majority of such pains existing in the child are really rheumatic, and I have so considered them, when other causes could be satisfactorily eliminated.

Among 31 cases there were only 4 in which I could satisfy myself of the existence of organic heart disease. These statistics are somewhat at variance with those of some observers. Thus Radcliffe quotes Dr. Hillier as having noticed in 37 cases of chorea that there was probably organic disease of the heart in 25, and functional derangement in 4, while in 8 only was there no sign of cardiac disturbance. A peculiar functional irritability of the heart was present in most of my cases.

This often took the form of palpitations, and in over half the cases the heart was at times markedly irregular. In 2 cases the pulse was intermittent. In one or two instances young boys confessed to me that they were in the habit of cigarette-smoking, but beyond this I could find no cause, except the chorea, for this arrhythmia of the heart.

In an article in the *Medical News* of August 25, 1883, Henry G. Berkley, M.D., reports an autopsy made in a case of chorea. Upon microscopic investigation he found a pigmentary alteration of the nuclei of the vagi, and suggests that this may afford some explanation of the common implication of the heart in the choreic movements, with or without valvular lesions; that possibly the disease may cause loss of the inhibitory function of the pneumogastric nerve, with resultant irregular action of the heart muscle.

Among 35 cases 18 had a condition of general chorea, 8 had hemichorea on the right side, 5 on the left side, and in 4 the face and both hands and arms were affected, but not the lower extremities. In several instances the first point noticed was that the child could not grasp things well, as seen by dropping plates or other objects. This ataxic condition was soon followed by well-marked twitching. I have notes on two cases of chorea of the respiratory muscles and larynx, and as this subject is not generally noticed in the books, it may be of interest to detail their histories.

The first case is being treated by Dr. Landon Carter Gray, at the Polyclinic, and it is by his kind permission that I have made notes of the case and have the honor of presenting the boy before the Society. Willie D—, aged fifteen, has been troubled with twitching for the last eight years. It began in his hands, and next went to face and head, when it soon became general. His father, mother, and grandmother on his mother's side, have all had rheumatism. The affection of the respiratory muscles came on a year after the chorea began, and has lasted ever since. The sound has remained about the same during the seven years of its continuance. It stops entirely during sleep, and he says it is worse on rainy days. The barking noise is made during expiration. By placing the hands over the chest and back the expiratory muscles are felt suddenly to contract. I made a laryngoscopic examination in his case, and the cords seemed normal. While making the examination there was a sudden spasm of the pharyngeal muscles, the epiglottis was raised, and the adductors quickly contracted the glottis with the production of the peculiar bark. At times there is only a spasmodic action of the expiratory muscles, the adductors of the larynx not being involved, and hence only a sudden rush of air is produced, without the barking sound. There is some paralysis of the soft palate. The general chorea has continued throughout this affection, and three weeks ago he had a slight attack of rheumatism.

Dr. French, of Brooklyn, has kindly given me notes of an interesting case of chorea of the respiratory muscles and larynx which occurred in his practice. Charlie N—, aged nine, has no history of rheumatism. About four years ago he began to have choreic movements in the head and face, shown by twitching of the eyes, grinning, biting the lips, etc. These movements lasted for several months and then stopped for an entire winter. His mother then noticed that he began to make a peculiar involuntary sound. Upon consulting the doctor, he found the child to be suffering from choreic spasms of the muscles of the chest, abdomen, neck, and larynx, producing a forced expiration with a peculiar squeaking sound. The doctor says this sound was as much like the squeak of a young turkey as anything else. It would occur at the beginning, middle, or end of the expiration, which would be suddenly interrupted. At times as many as four distinct sounds were heard with one expiration, and whenever this happened there was invariably only one sound produced during the next expiration.

Upon the beginning of these sounds the face movements had ceased, but on one occasion they returned for two days, when the laryngeal sounds ceased. When the head and face movements again stopped, the sounds began again. In fact a peculiar feature of the case was that whenever there was twitching in any other part of the body the laryngeal sounds would cease, as if the disease were unable to institute the choreic contractions in the respiratory and laryngeal muscles and the general voluntary muscles at the same time. On laryngoscopic examination the motions of the cords were plainly seen. The sounds always ceased entirely at night. A rough scraping of the throat frequently alternated with these sounds. The mucous membrane of the larynx grew somewhat congested as a result of this scraping. The sounds all disappeared after three months' general treatment, and have not returned, except very infrequently. True laryngeal chorea has no sound, as no current of air is present to cause the cords to vibrate. As soon as a sound or bark is produced it ceases to be purely laryngeal, as the expiratory muscles are involved. Their spasmodic contractions can be felt by the hand. I think the only case of true laryngeal chorea ever reported is by Dr. Knight, of Boston. In a woman of forty-two years the vocal cords were driven together with such force that he could hear them strike, but no sound was produced.

In only seven out of thirty-three cases could I get a history of such a cause of chorea as fright or mental excitement, and in four of these there was an accompanying rheumatic history. As an example, Mary O'B—, aged eleven years, had come to me six months before, suffering from rheumatism in both knees and legs. Although there was no noticeable swelling when I saw her, she could scarcely walk; she recovered under treatment, but returned in a few months affected by a general chorea. I learned that her father was a confirmed drunkard, and had recently exercised much terrorism over the girl. In three cases, however, there was nothing but pure fright to account for the chorea. Thus, Lizzie S—, aged ten years, had always been pretty healthy, and there was no history of rheumatism in herself or family. Upon a certain occasion a teacher had punished her frequently for some offence, which was soon followed by a general twitching. As a general rule, I have noticed that children attacked by chorea are those who are intellectually rather bright than otherwise. If they are stupid, it is probably a psychical change induced by the disease, as inquiry often elicits that they were studiously inclined and ambitious of standing well at school. Radcliffe states that children attacked by chorea are usually distinguished by vivacity and restlessness of disposition, although there may be a vacancy of countenance resulting from a semiparalyzed condition of the features.

With reference to age and sex, I have statistics of 324 cases. Out of these, 288 have come for treatment to the Out-door Department of Bellevue Hospital since April, 1878, and I am indebted to the courtesy of Dr. C. L. Dana for 30 out of the remaining 36 cases. Among these 324 patients, 228 were girls and 96 were boys. M. Sée in his 531 cases had 393 girls and 138 boys. All statistics show the girls to largely preponderate in this disease.

The following is the record of the ages: 3 years and under, 5 cases; at 4 years, 3 cases; at 5 years, 14 cases; at 6 years, 19 cases; at 7 years, 35 cases; at 8 years, 53 cases; at 9 years, 40 cases; at 10 years, 39 cases; at 11 years, 41 cases; at 12 years, 34 cases; at 13 years, 20 cases; at 14 years, 16 cases; at 15 years, 5 cases.

The ages most frequently attacked, according to these figures, are, first, 8, next 11, next 9, next 10, next 7 years, and so on. From the histories of the 531 cases that were collected by M. Sée at the Children's Hospital, Paris, he finds that the greatest frequency of chorea is between the 6th and 10th years. Of the children under

3 years, 1 was 7 months and another 1 year old. Rare cases of congenital chorea, and that observed in infants at the breast, have been occasionally recorded. Von Ziemssen quotes Richter as mentioning two cases of congenital chorea occurring in girls whose mothers had received a severe fright late in pregnancy. From their birth the children were attacked with clonic spasms, which gradually almost wholly disappeared. In order to determine whether different seasons had any influencing effect on these cases, I have taken from the entry-book at the dispensary the number of patients with chorea registered for the last two years, at different periods in the year, with the following result: From November 1, 1881, to May 1, 1882, 30 cases; from May 1, 1882, to November 1, 1882, 34 cases; from November 1, 1882, to May 1, 1883, 36 cases; from May 1, 1883, to November 1, 1883, 29 cases. These figures show about the same ratio for all parts of the year.

With reference to treatment, I have been guided by a routine, which, although rather unvarying, has generally been successful. It is rare in an out-patient service to see those severe and aggravated cases that seem to defy all kinds of therapeutics, and none of my cases have been of this character. They have been of a mild or moderately severe type, and have usually yielded to the general combination of arsenic and iron. In children of from eight to ten years I have started with five drops of Fowler's solution, combined in a prescription with about five grains of the citrate of iron and quinine. If within a week or so there have been no signs of improvement, I have slightly increased the dose of arsenic, but I have never been obliged to push it to toxic doses. In other cases, where there has been much anæmia, I have given ten drops of the tincture of the chloride of iron with the arsenic, largely diluted with water, after each meal. I have also directed the children to be removed from school, and freed from all mental restraint; also to have as generous a diet as possible, and plenty of out-door exercise.

The expectant plan of treatment, based upon perfect hygiene and the best diet, has sometimes been advocated for chorea, to the complete exclusion of medicinal treatment. In the "Proceedings of the Kings County Medical Society for December, 1878," Dr. Landon Carter Gray makes a comparison of the arsenical with the expectant plan of treatment. A number of cases were kept under observation from the beginning of treatment to the entire disappearance of all symptoms. The treatment was entirely arsenical, no directions being given as to hygiene or food. The results were then compared with a number of cases published by Drs. Gray and Tuckwell in support of the expectant plan, when he finds a balance of twelve days in favor of the arsenical treatment. While arsenic is undoubtedly the best for routine treatment, certain other measures may hasten the cure. Thus, if the child is vigorous enough, the cold plunge may be employed; also cold affusions to the nape of the neck and along the spine, with frictions. Rhythmical gymnastic exercise is sometimes beneficial. Dr. C. L. Dana, in a paper read at the last meeting of the American Neurological Association, claims that he has found anodal galvanization a valuable adjunct in the treatment of chorea. It was found that by applying it daily for a week or ten days, with arsenic, he materially shortened the duration of the disease. His method of application is as follows: "A large sponge electrode of flexible brass, four by two inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the sides of the head, above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a stable current of three to six Stöhrer's, four to eight Daniell's cells is used."

1 217 WEST FORTY-NINTH STREET.

A NEW METHOD OF STAINING BACILLUS TUBERCULOSIS.

By T. J. BURRILL, M.D.,

CHAMPAIGN, ILL.

HAVING had considerable experience in the use of the alcoholic solutions of aniline dyes for staining bacteria, and having for some months used solutions in glycerine instead, I have come to much prefer the latter. Evaporation of the solvent is avoided, and in consequence a freedom from vexatious precipitations is secured, and more uniform and reliable results are obtained. There is, moreover, with the alcoholic mixtures a tendency to "creep," or "run," by which one is liable to have stained more than he wishes—fingers, instruments, table, etc.

From these things the glycerine mixtures are practically free, and there are no compensating drawbacks. For staining *bacillus tuberculosis* the following is confidently commended as preferable to the materials and methods heretofore in use. Take glycerine, 20 parts; fuchsin,¹ 3 parts; aniline oil, 2 parts; carbolic acid, 2 parts.

The solution is readily and speedily effected, with no danger of precipitation, and can be kept in stock without risk of deterioration. When wanted for use, put about two drops into a watch-glass (a small pomatum-pot is better) full of water and gently shake or stir. Just here there is some danger of precipitating the coloring matter, but the difficulty is easily avoided by gentle instead of vigorous stirring. After the stain is once dissolved in the water no further trouble occurs; if any evaporation takes place by being left too long, it is the water that goes, not the main solvent. The color should now be a light, translucent red, much too diffuse for writing-ink. Put in the smeared cover-glass, after passing it a few times through a flame, and leave it, at the ordinary temperature of a comfortable room, half an hour. If, however, quicker results are desired, boil a little water in a test-tube and put in about double the above indicated amount of the glycerine mixture, letting it run down the side of the tube, gently shake until absorbed, and pour out the hot liquid into a convenient dish and at once put in the cover with sputum. Without further attention to the temperature the stain will be effected within two minutes; but the result is not quite so good, especially for permanent mounts, as by the slower process.

After staining put the cover into nitric (or hydrochloric) acid and water, one part to four, until decolorized, say one minute; wash in water and examine, or dry and mount in balsam.

If it is desired to color the ground material, which is not necessary, put on the decolorized and washed glass a drop of aniline blue in glycerine; after one minute wash again in water and proceed as before.

Almost any objective, from one-fourth inch up will show the bacilli if sufficient attention is paid to the illumination.

SALTS OF NICKEL.—Dr. J. M. Da Costa has been testing the therapeutic value of the salts of nickel. The sulphate proved of some value in obstinate diarrhoea. The bromide, however, is the most valuable of all, and will probably take a permanent place in the materia medica. Its action is similar to the other bromides, but a much smaller dose suffices. Five to seven and a half grains is an average dose, and ten grains is a decided one. It relieves congestive forms of headache and quiets the system generally. In epilepsy it does quite as well as other bromides, but, as above mentioned, a much smaller dose suffices.

GENERAL PREVALENCE OF SMALL-POX IN MEXICO.—The *Mexican Financier* warns foreigners that, before they come to Mexico, they should be vaccinated, as small-pox is generally prevalent in the country.

¹ The common red aniline of the drug stores.

THE THERAPEUTICS OF DIPHTHERIA.

BY DIFFERENT AUTHORITIES.

ALFRED STILLÉ.—*Local*.—Ice in mouth and on neck first stages. Alum or tannin by insufflation; muriatic acid by a brush; potassium chlorate; tincture iodine; lactic acid is a good solvent of the membrane; carbolic acid; potassium permanganate. *General* treatment is the indication, as the membrane will return till the cause is removed. Emetics may be advantageous in the early stage. "Supporting of nature is the only way to treat;" nature will eliminate the poison; in grave forms, stimulate; alcohol and stimulant doses of quinia; tincture of chloride of iron is absorbed, constricts the blood-vessels, and previous exudation; food is the greatest of all indications; opium diminishes waste and nervousness; it also aids in the appropriation of other stimulants; alcohol can be borne in large doses; fluid beef, milk, farinacea; Huxham's tincture. In cases of medium intensity, give tonics rather than stimulants. Tracheotomy is fatal in about three-fourths of the cases. It is advisable under favorable circumstances.

J. SOLIS COHEN.—The two main indications consist: 1, in keeping up a supply of nourishment and stimulants, and 2, in providing for the detachment and discharge of the morbid accumulations when they threaten to occlude the air-passages. The sick room must be systematically disinfected. This is done by the free use of sprays of carbolic or sulphuric acid. Solutions of the sulphate of iron or some other disinfectant are kept in all the vessels which are brought into the sick-room to receive the discharges, the soiled clothing, refuse food, and slops of the patient.

He regards the chlorine compounds as of more efficacy in diphtheria than all other remedies. Of these he prefers the tincture of the chloride of iron, which must be administered at frequent intervals and in large doses—from five to thirty drops, according to age and vigor of patient, should be given from every half hour to every second hour as the case may be. It is given in glycerine and water, or in diluted syrup of lemon. Dr. Cohen prescribes chlorate of potassium very frequently in this disease—in the form of *chlorine* mixture (made of an equal number of grains of the chlorate and of drops of hydrochloric acid, in plain or aromatic water, or in the infusion of quassia). He always suspends the use of this remedy when there are any symptoms of renal irritation produced by it.

He administers the hydrochlorate of quinia (in preference to the sulphate) as a tonic, antipyretic, neurotic, and antiseptic. It is to be given in decided doses. When deglutition is painful it is given by enema, with proper augmentation of the dose.

Alcohol, in the form of strong wine, or as brandy or rum, is regarded as of the utmost importance when the system begins to give way. It should be given after the earliest manifestations of decided loss of vigor. At this stage it is of more importance for the time being than any remedial agent. From $f\frac{3}{4}$ ss. to $f\frac{3}{4}$ j. of brandy are to be given at intervals of from fifteen minutes up to three hours. As long as it is well borne it may be given to any extent short of intoxication. Children readily take a sort of syrup of brandy made by burning it beneath a lump of sugar, which becomes melted in the process. At moments of sinking he regards carbonate of ammonium as valuable. He gives from two to ten grains by the mouth, in syrup of acacia, or from eight to forty grains by the rectum. At moments of collapse the ammonia is given by intravenous injection.

The sore throat is treated by pellets of ice placed in the mouth and renewed more or less cautiously. The use of ice-compresses is not approved. It is thought better to apply warm cotton batting, spongio-pilin, or an actual cataplasm, or to anoint the neck with oil, lard, or cosmoline, care being taken not to abrade the cuticle

lest local infection arise as a complication. Morphia is administered when great pain arises.

Morbid products in the pharynx and nasal passages undergoing detachment should be promptly removed. This morbid product is kept diffuent as much as possible by maintaining an excess of humidity in the atmosphere of the room by keeping a steaming vessel of water on the stove. The uninvaded tissue should never be cauterized. Applications of the tincture of the chloride of iron should be made to the pseudo-membrane with a swab of cotton or sponge. After this application the attempt may be made to remove the deposit by gargle, spray douche, or syringe; employing lime-water as the medium. Forcible removal of the deposit is not regarded as judicious.

When the larynx is invaded Dr. Cohen keeps a constant stream of steam in motion directed over the patient's face. Whenever the respiration becomes obstructed, a few pieces of lime about the size of the fist are slacked by the bedside every hour or so, covering the vessel in which they are slacked with a hood of stiff paper, so as to direct the steam and particles of lime toward the mouth of the patient.

The use of emetics is indicated in children to provoke expectoration from the air-passages in the act of vomiting; but the same indication does not occur in adults who are able to expectorate voluntarily. If successful, the emetic may be repeated, at intervals of six hours, as long as the indications continue to recur. Alum, ipecac, and turpeth mineral are the most reliable agents, and may be tried in the order named; adhering to the alum if it prove efficient. Emesis should not be carried too far, or be repeated if ineffectual, as it exhausts the power of the system without any compensation in the discharge of morbid products.

Should asphyxia be threatened from accumulations in the larynx or trachea, tracheotomy is indicated, and, though most frequently unsuccessful in averting death, it facilitates due access of atmospheric air to the lungs, and often saves lives that would otherwise be lost. The most careful attention is required after tracheotomy to keep the artificial passage clear. The stimulating treatment and the lime inhalations should not be discontinued. The two main indications for favorable prognosis after tracheotomy are desire for food and ability to expectorate. All treatment should be subservient to facilitating these great ends.

BARTHOW believes that there are two objects to be kept in view in the treatment of diphtheria:

1. To modify the course and shorten the duration of the disease; 2, to obviate the tendency to death.

First head.—The application of topical agents to the fauces and the administration of internal remedies according to symptoms.

He entirely disapproves of caustic and acid applications as inviting the disease to the adjacent portions of the mucous membrane by destroying the epithelium. He does not think much of the value of benzoate of sodium. The application of sulphur, in the form of powder, by insufflation or by blowing it over the whole diseased surface as far as it can be reached, he believes to be a good treatment. He regards lime-water and lactic acid as of value as solvents. Some pieces of freshly burned lime are put in water, and the patient directed to breathe the vapor as it rises, or a solution of lactic acid strong enough to taste distinctly sour is freely applied to the throat by a large mop. He places no value in the use of chlorate of potassium or tincture of the chloride of iron as faucial remedies. When gangrenous sloughs are thrown off from the throat, carbolic acid is indicated, a one per cent. solution—not stronger than one per cent. This solution may be applied either by mop or syringe. When the exudation extends into the nares, the spray of a one per cent. solution of carbolic acid is gently thrown into them and kept up until the two canals are pervious, thus preventing the extension

and decomposition of morbid materials and the consequent swelling of the deep cervical glands and possible development of septicæmia. It is only when the exudation extends into the nares that much good can be accomplished by topical applications—so thinks Dr. Bartholow.

Second head.—The prevention of the diffusion of the morbid agent, of the development of septicæmia, and of failure of the heart.—With the earliest appearance of an exudation in the fauces, from two to ten grains of the bromide of ammonium are given every three hours. It is believed that the diffusion of this agent through the mucous membrane of the respiratory organs, and so out of the mouth, detaches the exudation. To prevent septic decomposition he advises the use of a drop or two of Lugol's solution in water every hour or two. This drug is to be given when the exudation is fully developed and spreading. He uses alcohol steadily, pushing it in large doses as an antiseptic agent. Quinia is also considered valuable in this same connection. Dr. Bartholow does not believe in the extraordinary powers of chlorate of potassium in this disease, as claimed by many. He fears its injurious effects on the kidneys.

As food, milk, egg-nog, and beef-tea are given freely about every three hours.

ABRAHAM JACOBI sums up the treatment as follows: Every case should be treated on general principles with symptomatics, roborants, stimulants, febrifuges, externally, internally, or hypodermically.

The uncertainty of the termination and the frequency of collapse, or sepsis, prohibit procrastination. Waiting long means often waiting too long. Alcohol is a very important adjuvant and remedy.

The dose must often be apparently large, from two to twelve ounces daily, according to the circumstances.

Depletion is absolutely contra-indicated. Debilitating complications, such as diarrhœa, must be stopped instantly. Stomatitis, chronic pharyngitis, hypertrophy of the tonsils, glandular enlargements, must be relieved or removed preventively. Acute catarrh of the mouth and pharynx requires the use of potassium or sodium chlorate, in doses not exceeding a scruple daily for a child of a year, one to two drachms for an adult. The single doses must be small and very frequent—every hour, half, or quarter hour. Large doses are dangerous, result often in nephritis, and have proved fatal. The main indication in local diphtheria is local disinfection. To disinfect the blood effectively we have no means. Salicylic acid changes into a salicylate which is no longer a disinfectant. The amounts of disinfectants required to destroy bacteria are so great that the living body could not endure them. But the discipline of the house, school, and social intercourse can be so modified as to prevent the spreading of an epidemic. The inhalation of steam is very useful in catarrh of the respiratory organs, and also in inflammatory and diphtheritic affections. In fibrinous tracheo-bronchitis it has proved quite successful. But it may also prove dangerous by excluding oxygen and overheating the room or tent. Drinking large quantities of water, with or without stimulants, also excites action of the muciparous glands and aids in macerating membranes. The internal use of ice, and its local application to the affected parts, can be very useful. But the cases must be selected for each and any of the remedial agents and applications. The use of baths and the cold and hot pack is controlled by general indications. The usefulness of lime-water and lactic acid has been greatly overestimated. Glycerine is a valuable adjuvant, both internally and externally, but nothing more. Turpentine inhalations are deserving of further trials, though they are more effective in purely inflammatory than in diphtheritic processes. Inhalations of chloride of ammonium act favorably in catarrhal and inflammatory conditions, and deserve a trial for the purpose of aiding maceration of membranes. Mercurials are contra-indicated in the septic and gangrenous forms of diphtheria, but in those

which assume the purely inflammatory character, with less constitutional debility and collapse, as in sporadic croup or in fibrinous tracheo-bronchitis, some reliable clinicians claim good results. Astringents, such as alum, do not work favorably. Chloride of iron is among the most reliable of antiseptic and astringent agents. Small doses at long intervals are quite useless. Moderate doses frequently repeated have a satisfactory general and local effect. A child of a year must take at least a drachm daily; a child of three or four years, from two to three drachms. The same or larger doses for an adult. The chloride is to be mixed with water and glycerine in various proportions, so that a dose is taken every hour, every half-hour, every ten minutes. Thus the local applications to the throat become almost superfluous. Potassium or sodium chlorate, half a drachm daily, may be added with advantage. Carbolic acid is useful both in local and internal administration. According to the end to be reached, it may be used either in concentrated form or in a one per cent. solution. Internally, in doses of a few grains to half a drachm daily. Salicylic acid acts as a caustic when concentrated; in moderate solutions it destroys fetor; salicylates are anti-febrile only. The anti-febrile effects of quinia are not so favorable in infectious as in inflammatory fevers; its antiseptic action is not satisfactory in practice. Deliquescent caustics are dangerous. Injury of the healthy mucous membrane must be avoided. Mineral acids, and particularly carbolic acid, when their application can be limited to the desired locality, are preferable. Bromide, both internally and externally, is warmly recommended by Wm. H. Thompson. Boric acid, in concentrated and milder solutions, has been recommended as a local application to membranous deposits generally, and to the diphtheritic conjunctiva in particular. Membranes must not be torn off, and not removed unless they are nearly detached. Caustics are contra-indicated, except where their application can be limited to the diseased surface. No healthy part must be torn. Swelled lymph glands require ice, iodine, iodoform, mercury, poultices, incision, carbolic acid, according to circumstances, and at all events frequent and careful disinfection of the mucous membrane from which their irritation originates. Diphtheria of the nose is apt to be fatal unless careful treatment is commenced at once. It consists of persistent disinfection of the nares and pharynx by injections. The tendency to sepsis forbids a long intermission of them. They must be continued day and night, for one to several days, no matter whether the glandular swelling be considerable or not. Laryngeal diphtheria proves fatal in almost every case, unless tracheotomy be performed. It is less successful the more the epidemic or case bears a septic character. Emetics are useful for the removal of the half-detached membranes. Diphtheritic paralysis requires good and careful feeding—iron, strychnia, the faradic or galvanic currents, friction, hot bathing. Urgent cases indicate the hypodermic administration of strychnia. Diphtheritic conjunctivitis is benefited by ice and boracic acid; cutaneous diphtheria by local cauterization and disinfection, besides general treatment.

C. E. BILLINGTON recommends the following prescriptions:

No. 1.—Iron and Glycerine Mixture.

R. Tinct. ferri chloridi f 3 j.
Glycerinæ,
Aquæ āā f 3 j.

M. Sig.—A teaspoonful of this and of No. 2, alternately, every half-hour through the day.

No. 2.—Chlorate of Potassium Mixture.

R. Potassii chlorat 3 ss.
Glycerinæ f 3 ss.
Aquæ calcis f 3 ijss.

M. Sig.—A teaspoonful of this and of No. 1, alternately, every half-hour through the day.

No. 3.—*Spray Mixture.*

R. Acid. carbol. ℥ xv.
 Aquæ calcis f 5vj.

M. Sig.—To be used with a small hand atomizer.

The patient is allowed to sleep for an hour or two at a time at night. When awake, doses of Nos. 1 and 2 are alternated every half-hour. The throat is sprayed with No. 3 for several minutes at a time, whenever Nos. 1 and 2 are given. In spraying, the mouth is opened widely.

Where there is nasal implication the nose is thoroughly syringed out with warm or tepid salt-water, once, twice, or three times a day. This syringing is done with the patient's head inclined forward; a two-ounce hard-rubber ear syringe is used.

Dr. Billington never applies any brush or swab to the throat. He sometimes throws a drachm of No. 1, with a syringe, directly against the affected surface in the throat. He does not give quinia or any other unpleasant medicine to children. He does not give alcoholic stimulants except where a child, who cannot be induced to take other nourishment, will take weak milk-punch or egg-nog.

The patient is nourished with an abundance of cold milk, given frequently, to which a little lime-water is often advantageously added. When the stage of extreme exhaustion has been reached in bad cases the juice squeezed from beefsteak is given.

Progress of Medical Science.

MUSCULAR ATROPHY IN RHEUMATISM OF THE JOINTS.

—Dr. Luigi Petrone (*Lo Sperimentale*) has collected a few cases in which muscular atrophy accompanied or followed immediately upon rheumatic inflammation of the larger joints, especially of the shoulder and knee. The deltoid and triceps suffered especially. The atrophy showed itself about the beginning of the second week after the articular pain; sometimes there seemed to him more loss of power than atrophy, sometimes the reverse. Similar muscular atrophy was noticed by M. Voltat after traumatic injury of the joints (*Archives Générales*, 1879); in some cases occurring more rapidly, even within twenty-four hours of the injury. This led Dr. Petrone to a series of experiments, consisting in the artificial induction of acute synovitis in animals. He found on post-mortem examination, within ten or twelve days of the experiments, that the muscles in the neighborhood of the inflamed joint had lost ten to thirty per cent. of their weight. The nerves showed nothing abnormal. He does not pretend to determine the method of the influence of the joint-affection on the surrounding muscles, but urges that the effects are too rapid to be explained either by the atrophy of disuse, or by Vulpian's hypothesis ("Leçons sur l'Appareil vasomoteur," vol. ii.) that the irritation of the articular nerve produces an effect on the gray matter of the spinal cord which leads to the muscular atrophy.

GELSEMIUM IN INTERMITTENT FEVER.—Dr. McKay, in the *St. Louis Courier of Medicine*, October, 1883, says that he uses gelsemium in chills, with as much confidence as he formerly used bark. If the stomach has been prepared for it by the use of a pill or two, or three, composed of podophyllin and leptandrin, with solid extract of hyoscyamus, one-half or three-fourths of a grain each, one at a time, gelsemium will arrest chills as often as any other remedy. He gives the fluid extract in one-fourth to one-half drop doses once in twenty or thirty minutes, beginning usually three hours or so before the time of the expected chill. This for adults; children much less. If this does not succeed, he does not increase the dose, but lessens it. He usually prepares the medicine for use by putting, say, ten drops into a teacup or tumbler, if for immediate use, and measuring in three or four teaspoonfuls of water to each drop,

and giving in teaspoonful doses as stated above. If to be kept for a few days, he puts in camphor or pepper-mint-water, which helps to keep it sweet; or, where there is much headache, he puts in bromide of potassium, and that helps to keep it. If glycerine is added it will keep indefinitely. The medicine, prepared in this way, will rarely fail to quiet any nervous chill or rigor after it is fairly under way. In such cases he gives it sometimes as often as every five minutes in severe cases, and it has never failed him.

DIPHTHERITIC NEPHRITIS.—According to Professor Fürbringer cases of pure diphtheritic nephritis without passive congestion may be divided into three classes: First, kidneys which appear normal to the naked eye with an anemic cortex. In these the essential and almost the only histological change is parenchymatous degeneration of the epithelium in the cortical tubules. This is an abortive form, closely allied to the febrile kidney. In the second form the cortex of the kidney appears slightly increased, and is pale and turbid looking on section. The degeneration of the cells in this form is both more intense and more extensive, and extends to the epithelial covering of the glomeruli. Alterations of the interstitial substance are beginning; the medullary tubules are sometimes catarrhal; there are no vascular lesions. The third form is the large yellow kidney, a form that is parallel to the hemorrhagic kidney of scarlet fever. In this form there is extensive fatty degeneration of the parenchyma and well marked alterations of the stroma.—*Virchow's Archiv*, vol. xcii., March, 1883.

RIGORS FOLLOWING INTRA-UTERINE IRRIGATION.

Dr. Fasola (*Annali di Ostetricia, Ginecologia, e Pediatria*) examines one of the accidents of intra-uterine irrigation in the puerperal state—rigors. This accident is not rare, since it was observed twenty-four times in two hundred in which irrigation was used in the clinic of Turin, in the scholastic year 1881–82. Of these observations he reports eight, those, that is, in which the appearance of the rigor after irrigation was marked and characteristic. He draws the following conclusions: 1. Disinfectant intra-uterine irrigations practised in the puerperal processes of septic endometritis, with offensive lochia, etc., are frequently followed by rigors. 2. The rigor is so much the less intense as the offensiveness of the lochia is less, and the earlier the local treatment is begun; and in these cases it frequently only amounts to a sense of chilliness rather than to a decided rigor. 3. It generally appears after the first irrigations, often after the evening irrigation; it is not always repeated. 4. The rigor is followed by elevation of temperature; but this is of short duration and is followed by a fall, sometimes great in slight cases, when the temperature did not exceed 101.3° F. before the irrigation, not uncommonly to the normal. 5. The rigor and the rise of temperature never gave rise to further alarming symptoms. He attributes the rigor to the accidental absorption of septic materials, favored or promoted by the mechanical action of the irrigation, removal of thrombi, laceration of vessels, etc. He does not consider that it in any way is to be considered as a reason why endo-uterine irrigation should be discontinued.

MEAT AS A FOOD.—The value of meat as a food is due in a degree to its heat-producing properties, though in this respect it is surpassed by fatty and amyloid substances. It is as a tissue-building material, and as an excitant of assimilative changes in the tissues, both with regard to itself and to non-nitrogenous foods, that it is most useful. It is stimulant as well as nutritive, and it therefore holds a deservedly high place in the daily dietary. Experiment has shown that three-quarters of a pound of lean meat fairly represents the quantity per diem which, taken with other less nitrogenous matter, suffices to maintain a person of average size and weight in a normal state of health. Some there are who largely exceed this standard, eating freely of meat at every meal,

and living all the time quiet, sedentary lives. Such carnivorous feeders sooner or later pay a penalty by suffering attacks of gout or other disorders of indulgence. But it is equally important to note that many others, especially women, healthy in all points but for their innutrition, are apt to err as far on the other side. Thus one meets with people who consume about a pound of butcher's meat in a week, or not even that. This fact has been fully brought out by Dr. Graily Hewitt, in his address to the Obstetrical Section at the recent meeting of the British Medical Association. He has likewise with much probability assigned this defect of diet as the chief cause of that general "weakness" which is so common among the antecedents of uterine displacement. The experience of many practitioners will confirm his observation. Different causes are at work to produce this kind of underfeeding—too rigid domestic economy, theoretical prejudices, the fastidious disinclination for food which comes of a languid in-door life without sufficient bodily exercise, tight lacing perhaps, and many more. These difficulties are all more or less removable, unless, indeed, where absolute poverty forms the impediment. No effort should be spared to remove them. The advantages derived from a diet containing a fair amount of solid animal food could not be obtained from a purely vegetable or milk regimen without either unnecessarily burdening the digestive system with much surplus material, or, on the other hand, requiring such revolutionary changes as to quantity and quality of food and times of eating as would probably altogether prevent its general adoption, even were that desirable, into household management. In our opinion, such changes are not desirable, as being inadequate to secure their purpose.—*The Lancet*, September 15, 1883.

THE SECRETION OF BILE.—Baldi has made an experimental investigation of this subject (*Lo Sperimentale*), which again shows the singular irregularity of the flow of the bile. This alone suffices to distinguish it from the other digestive secretions. The observations of the author, so far, tend to prove that the liver, as the secretory organ of the bile, must be considered as an emunctory for the waste materials of the different tissues destined to be expelled. This accords with the researches of Schiff, who has shown that the bile poured into the intestine is in part reabsorbed and taken back to the liver by the portal vein, to be again excreted and returned to the intestine. Some observers doubt if the biliary matters absorbed into the blood pass again in the secretion of the liver, thinking it possible that they may serve only to excite increased secretion without passing out again by the liver. Having repeated Schiff's experiment of injecting bile into the stomach and directly into the blood, the author shows that the liver, rather than the kidneys, expels the biliary matters from the blood. When ox-bile was injected into the stomach, the secretion of bile increased enormously, the bile having taken the green color of the ox-bile. The same happened when the bile was injected into the blood direct, while the urine showed no trace of biliary acids by Pettenkofer's test. All the bile was expelled by the liver, and not a trace by the kidneys. Admitting that the biliary acids (the only true specific elements of bile) are the exclusive products of the hepatic cells—and this remains to be directly proved—the fact is nevertheless true that the biliary secretion is distinguished in a characteristic manner from the other digestive fluids, by the irregularity of its flow and by its independence of any decided exciting influence of food or medicine. It presents instead many points of contact with the urinary secretion; both depend essentially on the collective waste of the organism, the liver having an excretory faculty for the biliary materials, just as the kidneys have for the urinary materials.

RENAL OPERATIONS.—Mr. Lucas, in a recent discussion on the surgical diseases of the kidney and the operations for their relief (*London Medical Record*, October 15, 1883), commenced by saying that the greatest ad-

vances in the treatment which had taken place of late years were those made in the indefinite border-land which separates medicine from surgery. It was in this barren and desolate tract that we must look for fresh discoveries. Ovariectomy and the various operations upon the intestines and stomach he put forward as instances of work recently advanced in this territory; but he claimed, as the most remarkable incident of this decade, the sudden light which fell upon the profession in its relation to renal disease and the rapid growth and recognition of renal surgery. The credit of having awakened a new interest in renal disease, and of having, by experiment on the lower animals, made sure of his ground, was due to the late Professor Simon of Heidelberg, who in 1869 successfully performed nephrectomy for the cure of a fistula of the ureter following ovariectomy. Since then, extirpation of the kidney has been performed upward of a hundred times. In concluding his suggestive remarks Mr. Lucas recommended for the lumbar operation a combination of two incisions which he had employed as giving the most room, viz., an oblique incision higher than the colotomy incision, within about half an inch of the last rib and parallel with it, and a vertical incision on the outer margin of the quadratus lumborum, extending from the upper edge of the last rib to the iliac crest. For the transperitoneal operation, Langenbuch's incision external to the rectus muscle is to be preferred to the median incision, as it enables the operator better to reach the kidney through the outer layer of meso colon. In conclusion, he urged that antiseptic explorations of the kidney through the loin is a simple and not at all a dangerous operation, which may be undertaken without anxiety in any case where calculus is suspected; that it is generally wiser to tap and drain fluid tumors of the kidney before proceeding to remove the diseased organ; that when nephrectomy is decided upon, the extraperitoneal operation through the loin should always be chosen for any tumor which it is possible to withdraw through the limited space at disposal; finally, if this course be adopted the transperitoneal operation will be reserved for large solid tumors and, perhaps, some floating kidneys.

SPASTIC SPINAL PARALYSIS.—Dr. N. Weiss relates the following cases (*Prager Med. Woch.*, 1883): 1. A man, aged fifty-five, suffered from weakness and stiffness of his lower extremities, the upper limbs remaining unaffected. The only other symptom that he presented was slowness of speech. After death, symmetrical sclerosis of the lateral columns was found. There were also two deposits in the brain—one a cyst of the size of a walnut, on the right side in the posterior part of the corpus striatum, reaching in the corpus dentatum. On the other side a deposit of cell-growth, of the size of a hazel-nut, was found in the corpus striatum. 2. A man, aged thirty-one, having experienced pain and sense of constriction in his limbs, found difficulty in walking. Some weeks afterward, symptoms of pressure on the cord appeared. Caries of the sixth, seventh, and eighth dorsal vertebrae was found after death, with secondary degeneration of the lateral columns of the spinal cord. 3. A man, aged twenty-nine, had only for a short period before his death the symptoms of spastic paralysis. Nerve-stretching had been employed. Death occurred in nine days; on post-mortem examination, multiple cerebro-spinal sclerosis was found.

GLYCERINE IN SKIN DISEASES.—M. Desguin, of Antwerp, gives glycerine internally in certain forms of skin disease with, it is said, marked success, especially in acne punctata and the furuncular diathesis. He commences with four drachms daily, and gradually increases the dose. He states that the secretion of the cutaneous glands, which is thick and irritating in these diseases, becomes more liquid, and cutaneous irritation is notably lessened. During convalescence from scarlet fever he believes that it facilitates desquamation.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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LAPAROTOMY FOR HEMORRHAGE IN TUBAL PREGNANCY.

TWENTY years ago, when the late Dr. Stephen Rogers, of this city, wrote his elaborate paper on extra-uterine foetation, and advised laparotomy for the arrest of hemorrhage occasioned by the rupture of the Fallopian tube, he took a long look ahead. He was so convinced that the operation was a proper one that he condemned, in very decided terms, the surgeon who should hesitate to perform it when the opportunity offered. It was a radical measure, he contended, but under the circumstances perfectly justifiable, as such hemorrhage was sure to result fatally unless a desperate chance was taken. The acknowledged difficulty was in arriving at a correct diagnosis in time to give the patient the benefit of the operation. With the recent advances in abdominal surgery, and the remarkable success which has crowned the bold invasion of the peritoneal cavity, surgeons have accustomed themselves to believe that any operative procedure in that region may be safely undertaken. For this reason, perhaps, more than any other, Dr. Rogers' suggestion grew in importance and commended itself as a measure which might challenge a practical vindication. At least for the past few years operators have held themselves in readiness for their first case, and have so far agreed with the opinion of Dr. Rogers that they have been willing to assume the risks, great as they are. We believe that to Dr. Charles K. Briddon, of this city, belongs the credit of being the first to perform this operation. The patient was a young married woman, twenty-seven years of age, the mother of two children, the youngest three years of age. She had missed one menstrual period, and at the time of the second was seized with a severe colicky pain in the lower portion of the abdomen. This attack passed off, recurring at the end of a week, and being associated with symptoms of internal hemorrhage. Dr. Briddon saw her early in the evening of October 29th, soon after this attack; diagnosticated rupture of the Fallopian tube with hemorrhage, and advised immediate laparotomy. Drs. Thomas and Walker saw the case in consultation, confirmed the diagnosis, and endorsed the operation. The latter was successfully performed by Dr. Briddon, assisted by Drs. Gerster, Walker, and Sharlau, two hours after the rupture had occurred.

The corpulence of the patient made it necessary to make a long incision, reaching from the umbilicus to

the pubes. Her collapsed condition rendered this almost a bloodless proceeding. When the peritoneum was exposed, a small incision was first made, which gave exit to a large amount of fluid blood. The incision was then enlarged sufficiently to admit the hand, and at least a pint of blood-clot was scooped out as rapidly as possible. The uterus was then drawn up as far as its connections would permit, and the cause of trouble was at once apparent. Part of an ovum, one inch and a quarter in diameter, was found protruding from a rent in the left Fallopian tube close to its uterine extremity. The broad ligament was lifted as much as possible, and a probe, armed with a double stout plaited-silk ligature, was passed through it as low down as could be done, and the ends were firmly secured above the free border. In these manipulations the ovum was forced from its bed in the oviduct, and was removed entire. The hemorrhage appeared to be entirely controlled, the ligatures were cut short, and the toilet was completed by thorough cleansing of the cavity. The wound was then closed by silver wire sutures. No time was lost in completing the dressing, but the patient was removed at once to bed, surrounded with blankets and hot bottles. Her head was enveloped in a warm woollen shawl, a small hypodermic of morphine was administered, and brandy was used subcutaneously. It was not, however, until after midnight that an occasional flicker could be felt in the pulse at the wrist. Vomiting, which occurred, was treated by frequent sips of hot water. Nutrient and stimulant enemata were used all through the night. On the morning of the 30th her appearance was much improved. She was inclined to talk, was even cheerful, and expressed herself as entirely free from pain; she only complained of the vomiting; but, notwithstanding these favorable signs, her pulse could scarcely be felt, much less counted; at times it could not be distinguished at all. The temperature was 101° , the respiration 36. At 10 A.M. her pulse could be counted, and it was 126; after this it improved for twenty-four hours, averaging 130. the temperature for the same period being 101° to 102° . In spite of the most assiduous stimulation, the circulation could not be maintained; she began to sink on the afternoon of the 31st, and died at 9.30 P.M., forty-seven hours after the operation.

The autopsy showed the abdominal wound agglutinated and adjoining omentum adherent. There was no general peritonitis, but the pelvic cavity contained two ounces of odorless fluid. The uterus was enlarged to double its size. At the junction of the left oviduct with the uterus, and encroaching upon the cornu itself, was an ovoid swelling about one inch in diameter, darker than the surrounding structures, of a mottled, violaceous maroon color. Near the junction of the posterior wall of the duct with this swelling was a ragged opening half an inch in length, and leading into a cavity formed mainly out of that portion of the duct that traverses the uterine wall, so that the specimen might be said to represent the variety known as interstitial, or, more correctly, tubo-interstitial gestation. On incising that portion of the cavity that was developed at the expense of the uterine textures, it was found filled with adherent coagulum. The cavity of the uterus was not lined with decidua, and the uterine opening of the oviduct was im-

pervious. Outside the rent were found the ligatures applied during life, and which had effectually controlled the hemorrhage.

It is much to be regretted that the patient died. The lessons to be learned from this case have, however, many practical bearings. It has been proved that a correct diagnosis can be made promptly and under difficulties; that the operation is not in itself attended with any immediate danger to the patient; that the point of rupture may be reached without difficulty, and that the bleeding parts can be effectively secured. In this case it must be recollected that the patient was in collapse at the time of the operation. She would certainly have had a better chance if the laparotomy could have been performed earlier. But obviously this was impossible in view of the necessity of dividing responsibility and of receiving a proper endorsement for an operation which was a novel and hazardous one. The precedent has, however, been established, and we congratulate Dr. Briddon on his correct diagnosis and on his courage and skill in acting up to his convictions as to what should be done in such a desperate case.

MEDICAL OBSERVATIONS CONCERNING ALASKA AND THE ARCTIC OCEAN.

THE report of the cruise of the steamer Corwin to the Northwest Arctic Ocean and the Alaska region, recently issued by the United States Government, affords much valuable and interesting information not only from its rarity, as compared with the receipt of similar reports from other parts of the world, but also from the carefully prepared statistics which it contains relative to the medical condition of that region. For the latter the profession are indebted to the services of Dr. Irving C. Rosse.

Regarding the diseases peculiar to the aboriginal population, in an epidemic which had proven fatal to a large portion of the natives (at Ounalaska), clinical observation showed marked dyspnea, bronchophony, cough, expectoration, pain, insomnia, and *great depression* both physical and psychical. The latter was found to be most characteristic, so much so that in many instances it seemed impossible to impress the patient with the slightest hope, who had made up his mind to die at the onset of the attack. The disease was, moreover, very rapid in its course, but, considering the gravity of the several phenomena, very little of the fever that usually attends pneumonitis was present; the main symptom calling for relief being marked asthenia, for which quinia and stimulants were given with much benefit. In fact the administration of quinine to these natives seemed to be attended with the most magical effects, not only in this but in other affections, an adynamic character of disease being almost invariably exhibited. In the cases in question, however, it is to be regretted that no necropsy was made, as, differing in its type from any of the various forms under which pneumonitis usually presents itself, possibly some distinctive morbid characteristic might have been shown.

Pulmonary phthisis is also not uncommon, and forms a large percentage of the cases of disease, even among the native Indians. Acute rheumatism and acute pulmonary inflammations, however, are not frequently met

with, notwithstanding that these affections might naturally be supposed to prevail in such a climate.

The principal vice which seems to affect these people is an apparently uncontrollable craving for alcoholic drinks; an appetite, moreover, which seems to be a physiological necessity—although the taste is to all appearances an acquired one—there being an “indescribable something” in the Arctic atmosphere that produces what is called the northern craving for drink.

At St. Michael's, the most northern station of the Alaska Company, and almost under the Arctic circle, it appears that no serious epidemics have occurred since 1840, when small-pox was introduced by the Russians. It was found, however, that pulmonary affections and the constitutional effects of syphilis prevailed to an alarming extent. In addition, affections of the alimentary canal are quite common, these being due chiefly to overloading the stomach after a long fast. Here, too, the thirst for rum exercised a dominating influence.

The affections of the eye and its appendages, are quite numerous. Among them several cases of opacity of the lens and of the cornea were noted, and of fatty and pigmental degeneration, together with granular inflammation of the conjunctiva, amblyopia, etc. Total blindness does not appear to prevail to the extent generally supposed, except among the older people (of fifty years and upward), in whom blindness is almost universal. These eye affections are mostly the result of snow-blindness, and are not caused by smoke, as has been erroneously supposed. An impoverished condition of the blood, brought about by bad feeding and the strumous diathesis, probably also bears a predisposing influence. An interesting question, also, in this respect, would seem to be the form of the rods and cones in the retina of the Esquimaux.

Concerning the relation of the Arctic atmosphere to surgery, it is remarked that wounds seem to heal uncommonly well in this region, a fact probably due to the highly ozonized state of the atmosphere and the absence of disease germs and organic dust—a not uninteresting point bearing on the germ theory and antiseptics. This fact is, moreover, noticeable both in man and animals, and even in extensively lacerated wounds, careful approximation of the edges and the application of a retentive bandage is followed by rapid healing unaccompanied by complications. Skin diseases also prevail extensively, which, however, might be anticipated from the condition of the inhabitants, and a few cases of chorea and of cerebro-spinal meningitis are also mentioned.

THE COMMISSIONER OF EDUCATION ON MEDICAL SCHOOLS AND EDUCATION.

THE report of the United States Commissioner of Education for the year 1882 has just appeared, and it contains, as usual, a section devoted to medical education. These sections have heretofore been of much value, but we have to confess that the present one is rather behind the times. The labors of the Illinois Health Board have produced a work which is much later in date, and which shows much more fully, in most respects, the status of our educational system. There are, however, some facts in the present report which will be of interest.

The tables given show that in 1881, there were 96

medical colleges of all kinds, with 12,417 students, and that there were 4,019 graduates at the commencements in that year.

The figures for 1882-3 show that there were in that year 119 medical colleges in the United States, having 11,854 matriculates, and graduating 3,979 doctors of medicine. This shows that despite the increase in the number of colleges, there has been a slight decrease in the number of students and graduates.

Attempts have been made by the Commissioner to show the amount of property owned by the various colleges, and the incomes received by them. The figures given are imperfect, especially as regards the latter point. We observe, however, that there is annually a considerable increase in the amounts representing the value of grounds, buildings, and apparatus. Thus in 1879 the total sum for 68 regular medical colleges was \$1,872,970; for 1880 (72 colleges), \$1,920,170; for 1881 (76 colleges), \$2,208,470.

The Commissioner in his remarks upon medical education correctly states that there is evidence of a steady improvement in the schools, as shown by lengthening of the curriculum, and requirements of preliminary education. There are now 16 colleges in the United States requiring attendance upon three courses of lectures before graduation; while 56 colleges recommend and provide for this without requiring it. There are also 71 colleges which exact some evidence of preliminary education before matriculation. Figures do not show, however, how slight this exaction really is.

THE ADVERTISING RIGHTS OF GENERAL PRACTITIONERS AND SPECIALISTS.

THE venerable and esteemed editor of the *Journal of the American Medical Association* has made some official utterances upon the subject of medical advertising, to which we beg most earnestly to call the attention of our readers. We cannot but think that our Chicago contemporary is doing a serious injury to the profession by advocating for specialists and doctors generally a license, which it never has been and is not now considered decent to assume. We quote his words, referring to medical advertisements:

"No one is prohibited from *publishing* or *using* a professional card *as freely as he likes*, simply announcing himself as doctor of medicine, and giving his residence and office hours. . . . If he desires to limit his practice to the treatment of any particular diseases, he can say on his card that 'his practice is limited' to this or that class of diseases."

We regret keenly that statements like the above should go out stamped with the approval of the "highest exponent of the Code of Medical Ethics."

To say that any physician "can publish his professional card as freely as he likes," is to take down all the barriers at once against promiscuous medical advertisement. With such a liberty one could take up half a column in a daily paper and still keep within the pale of the Code. In the large cities of the East, and in most, if not all, of those in the West, reputable physicians do not put their card and office hours in the daily papers, as do the quacks and abortionists. If it, under the

sanction of the American Medical Association, became the custom to advertise in this way, we hardly know where the end would be. In small towns it is perhaps well enough to allow the local physicians to insert their cards along with the dentists, carpenters, and tinware men. But in cities where there are daily papers this practice furnishes too great opportunities for abuse. It is wisely looked down upon by those whom we most esteem, and we trust that it will continue to be.

The permission to announce the "practice limited to" will strike sensible people as being silly, if not actually dangerous. Where shall we find the censors to say that a practice is really limited as announced? And how many who read the sign will find therein any different meaning from that of "specialty." To those who know the wiles of human nature, the opportunities here for abuse are most apparent; while the attempt to make a distinction between "practice limited" and "practice special" appears to us to be a foolish quibble.

If we are to take the position that medical men should not advertise, let us maintain it in its integrity.

MEDICINE IN ALLEGHANY COUNTY.

WE have published editorially the statements on both sides of the question as to the ethical condition of the Alleghany County Medical Society, and as the subject has not a wide interest, we will dismiss it now and finally with but brief comments. We have perfectly satisfactory evidence of the good standing and good faith of our first correspondent, while that of our second is well known.

It is evident from facts admitted by both parties, that the Alleghany County Medical Society is a reputable organization, but that it has a few very weak members who, if not actual charlatans, are dangerously near the line. As to its prosperity, we are authoritatively informed that since 1870 it has increased in size from 100 to 116 members, and that there are in Alleghany County 1,268 registered practitioners; in Pittsburg alone, 376.

We are forced to believe that some Pittsburg physicians consider it proper to announce their names, and even their specialty, by advertisements in the daily press, and we believe it is true that a number of Pittsburg physicians designate their specialty upon their office signs. Such practices are certainly derogatory to professional dignity, and ought not to be countenanced.

While some bad practices thus undoubtedly exist, we do not wish to say that the Pittsburg physicians are not fully the equal of those of other cities in professional skill and character. Only it is unfortunate that they should allow their general standing to be injured by the practices of a few.

THE STRUGGLES OF A YOUNG DOCTOR.

WE have received a letter from a young physician residing in a large interior town, and publish the substance of it elsewhere. His complaint is that the older physicians underbid the younger ones, making visits for fifty cents and furnishing the medicine. These older offenders also trust patients, and continue to treat them, although unpaid accounts have been standing for years. We infer that there are mutual recriminations between the younger and older parties. Our correspondent says that he has

spent eight years in studying medicine—six in college, two in a hospital—yet now, with a fair number of patients, he can “barely scrape along, because if I dun I lose my patients.”

Although there may be much justice in our correspondent's complaints, we cannot altogether commend the spirit which his letter shows. The circumstances described are the inevitable result of a crowded profession and weak human nature. But neither these nor any other circumstances justify younger men from abusing the old, because the latter do not act fairly.

Our correspondent does not think that there are too many doctors in his town, but that all could live comfortably if patients would pay decently, and if the older doctors had more self-respect. But behind these incidental causes we can see the working of the law of supply and demand; and the demand is for the patients, not the doctors.

At the same time, it is truly disgraceful and unjust to the profession that members should sell their services for sums less than a good corn-doctor receives.

Let the younger men and the respectable older ones attack this abuse in a manly spirit. They will then obtain sympathy certainly, and perhaps success.

THE REPORT OF THE FRENCH CHOLERA MISSION.

At a meeting of the Société de Biologie, Dr. Straus, of the French Cholera Mission to Egypt, gave some account of the work done by the mission. We have already referred to this briefly. It was found that the rice-like stools consisted of epithelial debris, and that these epithelial cells had undergone the process known as *nécrose de coagulation*.

Micro-organisms were found in vast numbers and variety in the intestines. Among them were bacteria termo and bacilli, some resembling those of tuberculosis, but smaller, others resembling the bacilli of glanders, being the same as were described by Koch. But Dr. Straus did not think these could be the bacilli of cholera, because their presence was not constant, and because they were found in other places than the intestine.

There were discovered also in the blood elongated corpuscles, recalling to mind those of the *rouget*, but much smaller. Attempts to color and cultivate these failed. Attempts to inoculate lower animals with the discharges also failed. In fine, the French Cholera Mission accomplished nothing except to furnish some evidence against the findings of Koch, and to show by the death of one of the members that copper does not prevent cholera.

M. Paul Bert offered to Dr. Straus the consolation that he had at least succeeded in pointing out the error of Koch.

This is no doubt a comfort to the Gallic mind, but unfortunately the scientific world just now feels much more confidence in German than in French methods of mycological investigation.

THE STATE OF OHIO has no Board of Health. It is proposed, therefore, to organize a State Sanitary Society and a movement to this effect has begun.

News of the Week.

A NEW MEDICAL SOCIETY IN NEW YORK has been organized and called The New York Society for Medico-Scientific Investigation. The objects of the Society are, first, the introduction and proving of new drugs; second, the re-proving of drugs of which the pathogenesis is incomplete or inaccurate; third, the collection of data bearing upon disease in general, which would include the investigation of epidemics, their causes, the conditions present, such as atmospheric and climatic, the relation of drugs thereto, the so-called season remedy, the limit of drug attenuation, etc.

THE EXISTENCE OF A MICROCOCCUS OF PNEUMONIA has been confirmed by Professor Carl Friedländer, of Berlin, who has cultivated these organisms and produced croupous pneumonia by inoculating them in dogs and mice.

THE QUEEN'S LOCOMOTION.—It is gratifying to learn from the English medical journals that “the Queen's power of locomotion is considerably ameliorated.” It would be interesting to know how she walks with her locomotive powers thus ameliorated, and perhaps some successive instantaneous views might be of interest to her loyal subjects, who appear to be more loyal than grammatical.

DR. J. MARION SIMS is said to have left, ready for publication, a story of Revolutionary times, entitled, “Lydia McKay and Colonel Tarleton.”

THE SANITARY CONVENTION AT BALTIMORE, held on November 27th and 28th, was a very successful meeting. Papers were read by Dr. J. F. McShane, on “Vital Statistics”; by Colonel G. E. Waring and Mr. C. H. Latrobe, on “Sewage”; by Dr. W. S. Forwood, on “Canning Fever”; by Dr. John Morris, on “The Etiology of Baltimore Catarrh”; by Dr. W. S. Wyman, on “Quarantine”; by Dr. E. J. Henkle, on “The Last Small-pox Epidemic in Baltimore”; and by Dr. R. Gundry, on “The Conflict of State Power and Individual Rights in Sanitary Matters.”

“GOOD ON FITS.”—A contributor to our esteemed contemporary the *Mississippi Valley Medical Monthly*, reports that he has treated 765 cases of “fits” and has cured seventy-five per cent. of them. He ought to come East and teach his less fortunate brethren the secret of his skill. We suspect, however, that he has adopted the old plan of throwing all his doubtful cases into fits and then treating them.

TESTING THE CONSTITUTIONALITY OF MEDICAL REGISTRATION LAWS.—A graduate of the Louisville Medical College in the year 1873 recently presented his diploma before the State Medical Examining Board of Minnesota, and demanded a license. This he was refused on account of unprofessional conduct. He has now brought a suit to test the constitutionality of the law.

THE BACILLUS OF YELLOW FEVER has been found, according to Dr. Domingos Freire, Commissioner of the Brazilian Government. It is a cryptococcus and has

been appropriately christened with the name of *c. xanthogenicus*. Dr. Freire states that he has cultivated the organism and has, by a different method from that of Pasteur, obtained what he thinks may be a protective vaccine. His method is founded on the principle of "anti-microbism," that is, the cultivation of organisms antagonistic to those of yellow fever. Some guinea-pigs have been successfully protected by his virus. But it is a long way from the guinea-pig to man.

PROFESSOR LEUBE has been called to Zurich to take the chair of the late Professor Huguénin.

TEMPERANCE AND MUSCULAR EXERTION.—The pedestrian Weston has started out from London on a walking and lecturing tour. He intends to walk fifty miles a day for twenty days, lecturing at the same time upon temperance, and drinking only water. It is difficult to see what this ingenious advertising scheme will prove.

THE RUSSIAN PHYSICIAN, DR. ECK, sent to Egypt to investigate the cholera, says that it was undoubtedly imported from India.

A DEFAMER OF THE PROFESSION.—The *British Medical Journal* and the *Medical Press and Circular* unite in severely blaming Dr. H. Donkin, a physician who wrote an anonymous letter to a London daily paper criticizing Drs. Ringer and Murrell for having, as he said, experimentally used nitrite of sodium in dangerous doses. "Never do we remember," says the *Press and Circular*, "an instance in which cowardly resort to anonymous publication has been resorted to by any one of position in the world of medicine," as was done by Dr. Donkin. This is the person who was so quick to publish in the *Times* a denunciation of the late Dr. Beard for his experiments in hypnotism before the British Medical Association some time ago.

THE NEW YORK STATE BOARD OF HEALTH reports as a result of its investigation into the cause of malaria along the Hudson, that this disease has been brought about, in part at least, by the railroads making embankments which prevent free drainage into the river.

THE POST-GRADUATE MEDICAL SCHOOL has been obliged to enlarge its quarters, and has taken another floor in the building which it occupies. The School has had a very prosperous opening, and begins its second term with about sixty students, all of whom are graduates in medicine.

THE NEW YORK POLYCLINIC has at the present date seventy students in its various classes. These are also all graduates. Certainly post-graduate instruction is becoming popular.

THE CASES OF TYPHOID FEVER AT YALE COLLEGE are said to have been mostly imported. Local physicians say, however, that some of the fevers are due to drinking water from the wells on the campus, these being near drains.

ENLARGEMENT OF ST. VINCENT'S HOSPITAL.—A new wing to the St. Vincent's Hospital, containing thirty-four rooms, besides open wards, was opened this week. The cost has amounted to \$150,000. It is intended for pay patients.

A NEW MEDICAL COLLEGE AT WINNIPEG was recently organized, under the name of the Manitoba Medical College.

DR. DUDLEY S. REYNOLDS has resigned the editorship of the *Medical Herald*.

THE GERMAN CHOLERA MISSION has gone to Calcutta, instead of Bombay as at first intended. Better facilities are to be found at the former place. The Mission has been cordially received by the English authorities.

THE LATE DR. J. MARION SIMS.—At a called meeting of the Faculty of the Baltimore Medical College, held on November 27th ultimo, the following preamble and resolutions were offered by Professor Harvey L. Byrd, and adopted unanimously, viz.:

Whereas, We have learned with profound sorrow and deep regret of the death of Dr. James Marion Sims, which sad event occurred in the city of New York on November 13, 1883; and

Whereas, It behooves us as a corporation and as individuals, to bear testimony to his brilliant career and great achievements, which have enriched the profession of medicine so much, especially in the knowledge and skill he applied so successfully for the relief of suffering woman-kind; be it therefore

Resolved, That we deplore the decree of our Heavenly Father which called from the midst of the living James Marion Sims, and from the profession he so much honored, and thus stilled forever the cunning hand that had wrought relief to so many suffering women in both hemispheres.

Resolved, That these proceedings be spread upon the minutes of this meeting, and that a blank page of the records of this corporation be inscribed with his name and the dates of his birth and death; and that a copy of the foregoing be forwarded to his bereaved family with the assurance of our sincere sympathy and condolence in this their irreparable loss.

Resolved, That the editors of THE MEDICAL RECORD and *Medical Times* be respectfully requested to publish the same.

A MEDICO-LEGAL SOCIETY has been organized in Philadelphia. Professor John J. Reese delivered an address before it at its opening session.

ADULTERATION OF MILK IN LONDON has, according to G. W. Wigner, F.C.S., been reduced to a science. Of three hundred samples obtained in one day from different districts only three per cent. showed no adulteration. The average of all the milk showed nineteen per cent. of added water, and it is estimated that milkmen get \$1,330,000 annually by selling water.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—The next meeting of this Society will be held Friday evening, December 21, 1883, instead of Christmas eve.

ORGANIZATION AND CO-OPERATIVE WORK AMONG STATE BOARD OF HEALTH OFFICERS.—At the last meeting of the American Public Health Association, it was determined to form some kind of organization among State Board of Health officers, for the discussion of matters belonging to their official work. A committee was appointed and it has been arranged to have a meeting

and organize, at Washington, D. C., in May next, during the meeting of the American Medical Association. The scheme thus proposed seems likely to be a most useful one.

A SUCCESSFUL CASE OF NEPHRECTOMY by the peritoneal method was recently performed by Mr. Richard Davy, of London. The patient, a man, aged fifty-three, had a large fibro-cystic left kidney.

THE NEW JERSEY SANITARY ASSOCIATION held a meeting in Trenton, December 7th. The subject of school hygiene was especially discussed.

SENSITIVE DRUG STUDENTS.—The students of the National College of Pharmacy at Washington, D. C., deserted their school because a colored student was admitted. Harmony was restored by the Faculty promising to admit no more of the offending race.

DRS. A. A. MACDONALD AND H. E. HUGHES, who were accused of falsely certifying that one Mr. Haas was insane, and of thus securing his confinement in an asylum, have been relieved of the charge. The well-known excellent standing of these gentlemen make the charge against them on the face of it absurd and unjust.

THE MONEY-VALUE OF AN ARM.—It may be of some interest to surgeons to learn that the money-value of an arm, lost in the Taunton Locomotive Works by Mr. E. H. Rankin, was, in the opinion of a jury, \$9,000.

NEW YORK ACADEMY OF MEDICINE—NOMINATIONS FOR OFFICERS.—The following candidates were placed in nomination at the stated meeting, December 6th, to be voted on at the first stated meeting in January, 1884: For *Vice-President*, Drs. Robert F. Weir, and Henry D. Noyes; for *Trustee*, Drs. Cornelius R. Agnew and Samuel S. Purple; for *Treasurer of the Board of Trustees*, Drs. Frederick A. Castle and John H. Hinton (to fill vacancy); for *Committee on Admissions*, Drs. Daniel Lewis and Edward H. Janes; for *Committee on Education*, Drs. W. Gill Wylie and John Shrady; for *Committee on Ethics*, Drs. C. Dixon Varley and Francis V. White; for *Committee on Library*, Drs. Abraham Jacobi and Henry D. Nicoll; for *Treasurer of the Academy*, Drs. William F. Cushman and Edward H. Peaslee.

PAPERS FOR THE ANNUAL MEETING OF THE STATE MEDICAL SOCIETY.—Dr. Hutchins has again sent out a notice requesting members and delegates to furnish papers for the meeting of the State Medical Society, in February next. We trust that his energetic efforts to secure a successful meeting will find a hearty response. We especially urge the general practitioners throughout the State to send in records of their experience. We do not think there is any doubt that plenty of papers will be forthcoming. It is the practice of medical men to put off writing as long as possible, and Dr. Hutchins's method of working for papers so long in advance is a good one.

MEDICO-CHIRURGICAL SOCIETY OF GERMAN PHYSICIANS OF THE CITY OF NEW YORK.—The following gentlemen have been elected officers of this Society for the ensuing year: *President*, Dr. Felix Nordemann; *Vice-President*, Dr. Otto Heubner; *Secretary*, Dr. George W. Rachel; *Corresponding Secretary*, Dr. C. A. Von Ramdohr.

Reviews and Notices.

MANUAL OF GENERAL MEDICINAL TECHNOLOGY, including Prescription Writing. By EDWARD CURTIS, A.M., M.D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Medical Department of Columbia College, in the City of New York. New York: William Wood & Co. 1883.

THIS is one of Wood's series of pocket manuals written by a competent and painstaking teacher in this department of medicine. The lecture style has been retained, and the technicalities of prescription writing have received especial attention. The book is divided into two parts: first, the technology of medicines; second, the technology of medicating. In the first are chapters containing a concise synopsis, together with brief comments, on the naming, the forms, determining the quantities, and prescribing medicines. In the last, the conveniences of the metric system are pointed out, and a comparison made between it and the old system by writing the same prescription according to both methods.

The reviewer notices the following, which seem to be errors. On page 158 the word "tablespoonful" appears for "teaspoonful," and the reverse is seen on page 165, where the word "teaspoonful" is used for "tablespoonful." Again, the approximate metric equivalent for $\frac{1}{2}$ j. given in the author's table is 30.00 gms., while the approximate metric equivalent given in the example for $\frac{1}{2}$ jss. is 35.00 gms., and for $\frac{1}{2}$ ss. 20.00 gms. If these are not errors they will do to other readers just what they have done to the reviewer, give rise to an uncomfortable degree of confusion.

The reader will also notice that the author calculates on the basis of six teaspoonfuls for a fluidounce, and three tablespoonfuls for two fluid ounces. This is worthy of note because it varies considerably from the average quantities heretofore regarded as equivalents.

The book will interest those who wish exact instruction in prescription writing, according to the methods now in use.

EPITOME OF SKIN DISEASES, WITH FORMULÆ FOR STUDENTS AND PRACTITIONERS. By the late TILBURY FOX, M.D., F.R.C.P., and by T. COLCOTT FOX, M.B., M.R.C.P. Third American edition, revised, and with additions by T. Colcott Fox, B.A. (Cantab.), M.B. (Lond.), Physician for Diseases of the Skin to the Westminster Hospital, etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1883.

AFTER the many crude and unscholarly volumes, yclept manuals, with which medical literature teems at present (and which are usually the abortive deliverances of ambitious gentlemen with an unfortunate aptitude for compilation, and which owe whatever popularity they may attain to the specious allurements they offer of a royal road to a lucrative specialty), it is a relief to turn to this little book, which one can distinctly and cordially recommend. It is an admirable condensation of the classical views of Tilbury Fox, developed and elaborated to conform to the more modern ideas of British dermatology. The classification of dermal diseases endorsed by the American Dermatological Association is inserted, a practice which more of our foreign authors would do well to imitate.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES. By FREEMAN J. BUMSTEAD, M.D., LL.D., and ROBERT W. TAYLOR, A.M., M.D. Fifth edition, revised and rewritten, with many additions, by Dr. Taylor. 8vo, pp. 906. Philadelphia: Henry C. Lea's Son & Co. 1883.

It is known to many that for some months before his death the health of Dr. Bumstead was so bad that almost the whole of the labor of preparing the fourth edition of this work for the press devolved upon Dr. Taylor, the

junior member of the firm of authors. That the work was well done is evident from the fact that but four years have elapsed since its appearance, and a fifth edition has already been called for and published.

In the new edition Dr. Taylor has made but few changes in the text, the principal alteration being the substitution of the first personal pronoun for his own name. He has, however, made many additions to it, about seventy pages in all being devoted to them. A mere enumeration of the more important of these will furnish an opportunity of judging how well he has succeeded in keeping the book up to the high position it had attained in the estimation of the medical profession under its original editor. The great merits of the earlier editions were so generally recognized that it would surely be a work of supererogation to point them out here.

Among the additional subjects discussed are: some additional means by which syphilis may be communicated, the possibility of inoculating animals with the disease (to this more than five pages are given), the theory of its nature advocated by Dr. Otis (which the author mentions but to condemn), excision of chancre, chancre of the cervix uteri, the influence of syphilis on the healing of wounds, the use of salicylic acid in palmar syphilides, of chromic acid in lingual affections, a modification of Schede's method of treating wounds as applied to ulcerating gummata, the use of local mercurial fumigations (illustrated by a new plate), congenital syphilis of the throat, the use of coca, the treatment of syphilis by the "chromwasser," so strongly advocated by Güntz, and even the decoction of various herbs recently praised by the late Dr. Marion Sims. Another important addition to the work consists of a chapter devoted to syphilis and marriage.

A careful perusal of all this new matter will undoubtedly convince the reader that in choosing Dr. Taylor as his literary heir and successor, Dr. Bumstead took the best possible step to render it certain that at least one good thing that he did should live after him, and it also warrants the belief that future editions of the work will be worthy of their predecessors. The present edition well sustains the enviable reputation that Dr. Taylor had already earned for himself as an original worker and thinker, a careful observer, a man of positive views, and as the author of a large number of valuable contributions to our knowledge of syphilis and kindred diseases.

Thirteen chromo-lithographic pictures have been added to the present edition. These will prove of great assistance to those who desire to become familiar with the appearances of such lesions, but who lack opportunity of observing them in the living subject.

Regarding the work as a whole it is confidently asserted that no physician or student who wishes to learn how to recognize, or to properly treat, the different venereal diseases, or to have an authority at hand containing the latest and best views on these affections, can afford to neglect to read and keep the latest edition of Bumstead and Taylor.

AN ETHICAL SYMPOSIUM; being a Series of Papers concerning Medical Ethics and Etiquette from the Liberal Standpoint. By A. C. POST, W. S. ELY, S. O. VANDER POEL, L. S. PILCHER, T. HUN, W. C. WEY, J. ORDRONAU, D. B. ST. J. ROOSA, C. R. AGNEW, A. JACOB, and H. R. HOPKINS. New York: G. P. Putnam's Sons. 1883.

This little volume is a campaign document, just as Dr. Flint's manual was part and parcel of a great medical canvass. Now that the active contest is as good as over, having resulted in victory for the New Code party, it will not be necessary to do more than glance at the contents of this ethical symposium. It embodies the best arguments clothed in plain English that the advocates of liberalism can advance. And it must be said that they appear in the shape of a formidable phalanx of common

sense, honesty of conviction, and fearless prediction of remote consequences. Gauged by the standard of these liberal essays, the Old Code has certainly outlived its period of usefulness, and it was well that it was thrown overboard as useless ballast. The progress of that noble vessel, called medicine, should now be all the quicker.

A HAND BOOK OF THERAPEUTICS. By SIDNEY RINGER, M.D., Professor of the Principles and Practice of Medicine in University College. Tenth Edition. New York: W. Wood & Co. 1883.

It is only necessary to chronicle the appearance of a new edition of this well-known hand-book. All other comment is superfluous. The general plan and arrangement of the volume remain unaltered. A concise account of new and important discoveries made in pharmacology and therapeutics since the appearance of the last edition has been incorporated with this the last issue. Ringer's therapeutics will be read with advantage by students, and will be occasionally referred to with benefit by the practitioner.

THE AIMS OF THERAPEUTICS.—At the recent Congress of German Naturalists and Physicians Professor Liebermeister delivered an address upon the aims of modern therapeutics (*London Lancet*). He said that owing to the "epoch-making" discoveries upon the nature of disease which have been made within the last decade, great changes were taking place in treatment which had by no means yet attained their full development. Although theoretically therapeutics is based upon pathology, advances in pathology had not always been followed by a similar advance in therapeutics, and he instanced the fact of the marked transition from the old symptomatological system of medicine to that based upon pathological anatomy which occurred early in the century, as leading to no corresponding change in methods of treatment. But as anatomical study increased and physical diagnosis improved a period of skepticism with regard to the influence of remedies and expectant treatment came into vogue. Regarded by some as a retrogression this was really a great advance in therapeutics. It was not only the liberation from the dogmatism of the schools and systems, but the opening up of a scientific study of the object. Then it came about that the anatomical standpoint yielded to the etiological the recognition of the important part played by micro-organisms in many diseases being the cause of this change. The doctrine of *contagium vivum*, strenuously disputed twenty years ago, has practically become generally accepted, and prophylaxis is now the first aim in dealing with disease. He pointed out how the pathogenetic organisms may be considered in two great classes—those, namely, which prevail everywhere, and those which require special conditions for their occurrence. In this way he contrasted the poison of pyæmia, septicæmia, osteomyelitis, etc., on the one hand, with those of malaria, cholera, typhus, scarlet fever, and other endemic and epidemic diseases on the other. Measures of prophylaxis were identical with general sanitation and public and personal hygiene. He strongly insisted upon quarantine as protective against the spread of epidemics, and rebuked England for allowing, in the face of the cholera, its mercantile interests to render it blind to the interest of the public welfare of the whole of Europe. When the infective germs have gained entrance into the body, then specific treatment is called for, as quinine in malaria, calomel in typhoid fever, salicylate of soda in rheumatism. Further, there are measures for direct prophylaxis, as in curing a susceptibility to catarrhs, which afford so favorable a soil for the tubercle bacillus. Other methods are symptomatic and alterative; and although therapeutics is still largely empirical, the path along which it must advance has been much cleared by the advance of general medical knowledge, so that there was much to hope for in the future.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from page 635.)

HYPERTROPHY OF THE HEART—CORS BOVINIS—WEIGHT FIFTY-THREE OUNCES—VENESECTION, BLISTERS, AND THE ACTUAL CAUTERY USED WITH BENEFIT FOR THE RELIEF OF SYMPTOMS.

DR. BEVERLEY ROBINSON presented a heart removed from the body of a man thirty-nine years of age, whose stature was very much above the average. His family history was negative. He had been a free drinker of malt liquor and spirits and gave a doubtful history of chancre, occurring seven or eight years ago. He came to St. Luke's Hospital suffering from the ordinary symptoms of chronic valvular disease of the heart, such as dyspnoea, etc., and there was well-marked anasarca. He was treated with all the ordinary cardiac stimulants, but without special benefit. A blister was applied over the precordium and it relieved the dyspnoea very notably. The Paquelin cautery also was applied over the precordium at sixty or seventy points, with the result of giving marked temporary relief from the dyspnoea. At one time eighty ounces of fluid were taken from the right pleural cavity, and forty ounces subsequently. Finally, the jugular vein in the right side being much distended and tense, the patient was bled and *fourteen* ounces taken, and again he was markedly relieved. There was some evidence of pericardial effusion, and a hypodermic needle was introduced, but only half a syringeful of pure blood was obtained.

The case was especially interesting on account of the size of the heart, the temporary relief afforded by venesection, and the absence of serious results following the puncture of the pericardium, although the needle entered the heart-wall.

The following notes of the autopsy were furnished by Dr. F. Ferguson:

The body is fairly nourished; rigor mortis is well marked and there is general anasarca. The peritoneum contains eight ounces of clear serum. The diaphragm on the right side is at the fourth interspace on the left side at the fifth rib. Thorax: There are old loose adhesions binding the right lung to the chest-wall at different points over its entire surface. There are nine ounces of fluid in the right pleural cavity. There are no adhesions or fluid in the left pleural cavity. The pericardium contains three ounces of pus and serum. Heart: The heart is enormously increased in size, it weighs with the pericardium attached three pounds and five ounces. Both the parietal and visceral layers of the pericardium are intensely congested. There are several areas of thickened pericardium on the surface of the heart and there are circumscribed areas of thickening in the walls of the coronary arteries. From the upper portion of the right auricle to the apex of the heart it measures twenty centimetres; and from the attachment of the segments of the aortic valve to the apex it measures fourteen centimetres. The ventricular walls, especially the left, are much hypertrophied. The thickness of the left ventricular wall varies from one to three centimetres, its greatest thickness is at the base of the heart. The ventricles are enormously dilated and distended with recently clotted blood. The mitral valve admits three fingers, and its segments are thicker than normal. There is fusion of two of the cusps of the aortic valve and a rupture between them which admits a cylinder one and a half centimetres in diameter. The edges of this opening are jagged and covered by shreds of fibrin. The cusps of the aortic valve are much thickened. There are extensive areas of endarteritis and patches of atheroma in

the aortic wall. Valves in the right side of the heart are normal. The lungs are intensely congested and oedematous. The spleen is normal in size, firm in structure, and deeply pigmented. The kidneys are firm in structure, surfaces slightly granular and lobulated. Markings are wanting, and there is fat in the tubules of both the cortex and pyramids. The stomach is intensely congested, and its mucous membrane is thickened slightly. The mucous membrane of the intestines is congested. The liver is small, stained with bile-pigment, throughout contains much connective tissue and some fat.

Microscopic examination.—The muscular fibre of the heart contains much fat, the transverse striæ are not generally visible. The vessels of the lungs are everywhere distended with blood, and the epithelium lining the air-vesicles is pigmented. The kidneys contain an excess of connective tissue, there is much fat in both the convoluted and straight tubules. There are also granular casts in some of the straight tubules and in some of the tubules of the cortex. The vessels are everywhere distended with blood. The liver contains much fat, in places arranged around the periphery of the lobules, but sometimes around the central vessels. It is stained with bile-pigment. The fibrous tissue is everywhere increased. There are areas of atrophy of hepatic cells around the central vessels and in the intralobular regions.

THE PRESIDENT referred to the fact that Dr. Alonzo Clark had presented to the society a heart that weighed fifty-seven ounces.

DR. ROBINSON also presented specimens which illustrated

THE INTESTINAL LESIONS OF TYPHOID FEVER.

They were removed from the body of John G—, twenty-three years of age, a native of Scotland, and a plasterer by occupation, who entered St. Luke's Hospital October 3, 1883. The notes of the history were furnished by Dr. Samuel T. King, acting senior assistant physician. The patient was admitted suffering apparently from a relapse of the fever which began six weeks previously. There was notable tympanites, marked adynamia, and elevated temperature. On October 3d the temperature was 104° F.; on the 4th, 101° F.; on the 5th, 103° F.; on the 7th, 98½° F.; and on the 8th, 101.5° F. On the evening of the 8th the temperature began to fall, and on the morning of the 10th it was 96.6° F., and during that time there was active delirium, which continued until death, which took place October 14, 1883.

The following is Dr. F. Ferguson's report of the autopsy: The alveolar walls of the lungs are thickened, the vessels are filled with blood, and the epithelium lining the alveoli and loose in their interior contain pigment granules. The epithelium lining the urinary tubules is excessively granular, but there are no casts nor increase in the fibrous tissue of the kidneys. There is pigment in the liver-cells surrounding the central vessels, the organ otherwise is normal. There are numerous irregular ulcers in the intestines with elevated edges and many of them with smooth bottoms. No tubercles were found associated with these ulcers, and microscopically they are surrounded by a zone of hyperæmia, and their edges and bottoms are composed of smooth muscular fibres and numerous small round cells.

There are no giant cells nor the bacilli of tubercle.

Remarks.—At the autopsy it was found that there were two distinct perforations of the small intestine, due to typhoid ulcerations. One of these, which seemed to be of somewhat older date, opened directly into the peritoneal cavity; the other, more recent, opened into a purulent cavity which was shut in, in part by intestinal convolutions, in part by false membranes which united these convolutions together. A moderate amount of purulent fluid was found in the peritoneal cavity, but it was doubtful whether or not this effusion took place before death, or was occasioned by rupture of the wall of the abscess during the autopsy, and at the time when the

contents of the abdominal cavity were examined. It will be noticed that on the evening of October 8th, the temperature fell rapidly from 101.4° until the morning of October 10th, when it marked only 90.6° .

During life it was not determined what the sudden and great fall of temperature could fairly be attributed to. The patient had excessive tympanites and had become delirious, and remained so until his death. In view of the fact that the patient was suffering probably from a relapse of typhoid fever, that a pneumonia of the left apex had shown itself a few days before, and that subcrepitan râles were found all over the lungs posteriorly, a condition of acute phthisis was strongly suspected. It now would appear, inasmuch as the lungs and other organs contained no tubercles, that the patient's temperature curve and general bad condition before death was brought about by the purulent formation in and around a portion of the intestine, as well as by the perforations themselves.

PERICARDITIS—CARDIAC HYPERTROPHY—CHRONIC DIFFUSE NEPHRITIS.

DR. F. FERGUSON presented specimens illustrating the above lesions, removed from the body of a man, aged twenty-five, single, a native of the United States, and a cigar-maker by occupation, who was admitted into New York Hospital on March 25, 1883.

There was no rheumatism or nephritis in his family, but he had himself suffered from rheumatism two years before his admission into the hospital. He was for a long time a steady drinker of beer and whiskey, but considered himself quite well, although not of robust physique, up to three months before his admission into the hospital, when he began to suffer from frontal headaches, dyspnoea, oedema of the feet and ankles, and cardiac palpitation on exertion. He also complained of disturbance of vision, slight pain in the lumbar region, nausea and vomiting.

On admission he was well nourished, there was no oedema, the post-cervical and inguinal glands were slightly enlarged. His heart was normal in position, there was a loud systolic bruit heard at the left nipple and over the base on both sides of the sternum, also in the left infra-spinous fossa. Respiration was intense, and blowing in character, and there were coarse râles heard over both lungs. His temperature was 99° , respiration 30, and his pulse 100 per minute.

He was given diuretics and appropriate diet, and his headaches disappeared and his condition in every respect improved markedly until April 16th, when his headache returned; he complained of anorexia, and suffered from a general sense of depression. At this time, as ever since his admission, he passed from fifty to sixty ounces of urine every twenty-four hours. Urine contained considerable albumen, small amount of blood and pus, also hyaline and granular casts.

On April 23d, and up to May 1st, he complained of a sense of oppression over the front of the chest, dyspnoea, and at times orthopnoea. At this time he was passing less urine, thirty-five to forty-two ounces a day, with a specific gravity of 1.014, and presenting the same chemical and microscopical character noted above. Examination of the heart at this time did not indicate any lesion of the pericardium. His symptoms continued—headache, dyspnoea, pericardial pain, and a sense of oppression over the anterior part of the chest.

On May 6th physical examination revealed an area of flatness one and one-half inch to the left of the apex beat, which was in its normal location. The area of flatness continued to increase, and on May 15th systolic roughening was appreciable over the entire precordial area. On the 18th there was a distinct pericardial friction murmur with the maximum of intensity at the apex. All the above symptoms were constantly becoming more aggravated; physical examination from time to time detected the presence and increase of fluid in both pleural cavities. His respiration was irregular, super-

ficial, and labored. He suffered much from nausea and vomiting. The quantity of urine diminished to twelve ounces in twenty-four hours. During the night of May 26th he was delirious, his heart-action was very feeble, sixty to eighty beats per minute, his respiration eighteen to twenty-eight per minute, and temperature not at any time higher than 99° . He died on the following day.*

At the autopsy the body was found emaciated. The peritoneum was normal. The pericardium contained 60 c.c. of bloody serum. Both layers of the pericardium were covered by recent fibrin, and the pericardium beneath the exudata was intensely congested and hemorrhagic in places. The left ventricular wall is much hypertrophied and the ventricle considerably dilated; the valves are competent. The sarcois elements of the cardiac cells are largely degenerated into fat. The lungs presented the condition of brown induration. The kidneys were firm, surfaces slightly granular; markings were obscure. They contain excess of connective tissue, and the epithelium of the tubules was very generally converted into fat. The mucous membrane of the stomach was intensely congested. The mucous membrane of the intestines was also congested. The liver was small; there was increase in its fibrous tissue; it was throughout deeply pigmented.

DR. HENRY J. GARRIGUES presented specimens illustrating

DISSECTING METRITIS.

In the last year I presented specimens from four cases of dissecting metritis (MEDICAL RECORD, vol. xxii., p. 413, and vol. xxiii., p. 215). Later I described the disease more at length in an article in the *Archives of Medicine* (April, 1883), adding two new cases. I present here the specimens from these two cases, besides two others from cases not yet published, which form my seventh and eighth cases.

CASE VII.—Jane K—, aged twenty-eight, Irish, tripara, was delivered in Maternity Hospital on March 3, 1883. The head was extracted by means of the forceps in left occipito-posterior position of the vertex.

The following days there was a somewhat increased temperature (101° to 102.5°). The lochia at the same time being fetid, an intra-uterine injection of two per cent. carbolyzed water was given, besides vaginal injections, quinine, and salicylate of soda.

On the fifth day (March 8th) the fundus was yet only one and a half inch below the umbilicus, and a little tender. Tenderness was likewise found on deep pressure in the right iliac fossa. She had no pain, and the temperature was normal. She was very anæmic and had a poor appetite. The lochia were fetid. At the posterior commissure and involving a slight laceration of the peritoneum were found several diphtheritic ulcers. The vagina was clean, but of a dull reddish color. On the anterior lip of the cervix was seen a small, suspicious spot. All these spots were cauterized with a fifty per cent. solution of chloride of zinc, and the uterus washed out with two per cent. carbolyzed water.

The next day (March, 9th) the patient was delirious. The uterus was washed out with a concentrated solution of boracic acid. An ice-bag was applied over the uterus and groin, and the patient was given ergot, quinine, and brandy.

The condition remained about the same until the nineteenth day after confinement when a body was seen protruding through the vulva. By means of a speculum it was seen to pass through the cervical canal, whence it was easily removed with a pair of dressing-forceps. It was oval and measured seven centimetres in length by two in width. Like similar specimens it showed many sinuses with thrombi, and microscopical examination revealed that it was composed of smooth muscular fibres interspersed with inflammatory elements. The highest temperature reached 102.5° F. (March, 7th). Mostly it was normal in the morning, with a slight rise in the

evening. The pulse varied between 80 and 102. After the expulsion of the muscular mass the patient made a rapid and complete recovery.

CASE VIII.—Bessie R—, aged twenty-three, Russian, primipara, was delivered in Maternity Hospital on September 15, 1883. Normal labor. Slight rupture of the perineum which was touched with tincture of iodine. The next day the fundus was somewhat tender, the lochial discharge not very free and somewhat fetid. On the vaginal wall was seen a diphtheritic ulceration extending from the perineum one inch backward, which was dressed with Peru balsam and iodoform four times a day. The vagina was syringed as often with one and a half per cent carbolyzed water.

The next day (September 17th) she complained of great pain in the abdomen. The lochia were profuse and fetid, the uterus very tender on pressure, and the temperature rose to 103.6°. Ordered flaxseed-meal poultice and salicylate of soda.

On September 20th the fundus was three and a half inches above the symphysis; pulse, 96, feeble; extremities cold. She vomited.

Five days later (September 25th) the fundus was yet three inches above the symphysis, and tender.

Ten days later (October 5th), the patient was still weak and downcast. The fundus was still three inches above the symphysis and a little sensitive on pressure. The lochia were no longer fetid; ice-bag.

On October 16th she sat up for the first time.

On October 20th, the twenty-sixth day after confinement, she passed, without any pain, more blood from her vagina, and a pear-shaped body, measuring 7.3 by 4 centimetres, exactly representing a cast of the uterine cavity. With exception of the part corresponding to the fundus, there ran a line of demarcation lengthways between the two halves, which, by slight pulling, were easily separated, showing that the specimen had been doubled up in the interior of the womb. It presented an appearance similar to the other specimens. The outer surface was gray, but the interior of the mass had the color of flesh. Everywhere were seen sinuses with thrombi. Microscopical examination showed that the whole mass was composed of uterine muscular tissue, the single fibres being in many places very large, as always in pregnancy, undergoing fatty degeneration, and interspersed with heaps of small round cells and sinuses filled with fibrin.

When I presented the first specimens a distinguished member said that in the last volume of the "Transactions of the Edinburgh Obstetrical Society," a series of such cases were reported, but neither he nor I, myself, have been able to find the article in question, and there was therefore probably some mistake about it. So far as I know, the disease has not yet been described as a feature of the puerperal state except by myself. All I have found in the literature about it are the two cases of the Russian physician, Siromjatnikow (*Centralblatt für Gynäkologie*, 1881, vol. v., p. 276), who tried to bring the disease in relation to a very problematic typhoid fever and to syphilis. But both his patients were puerperal, and the same was the case with all my eight cases and that of Dr. Kucher. In four of my cases there was diphtheritic inflammation of the vagina or cervix, and I feel much inclined to think that in the others a similar process went on unseen in the interior of the womb. This view is substantiated by an autopsy published in my article above referred to, in which there were no diphtheritic patches visible during life, but after death they were found in the interior of the womb, connected with a diphtheritic infiltration, which formed a layer extending out toward the subperitoneal part of the wall, by the melting of which a considerable part of the muscular tissue of the womb would have been cast off, exactly like the specimens I have presented.

The disease is at all events, as proved by the microscopical examination, an inflammation of the muscular tis-

sue, and must therefore be called metritis. It differs from *gangrene* or *putrescence of the uterus*, in which the destruction simply extends from the inner surface more or less deeply into the muscular tissue. It differs likewise from *endometritis desiccans* or *exfoliativa*, three cases of which are described by the Russian physician, Kubasow, in the last number of *Zeitschrift für Geburtshilfe und Gynäkologie*. In the latter disease it is the whole mucous membrane which is thrown off, in the shape of a sack, to the outer surface of which is attached in some places a very thin layer of the adjacent muscular tissue. The figures show that it is much thinner than the mucous membrane, and in one of the cases the author states that it measured only one-fourth of a millimetre. Two of his cases occurred in virgins and the third in a not pregnant married woman. Dissecting metritis, on the other hand, has so far only been observed as a puerperal disease.

DR. J. LEWIS SMITH presented specimens illustrating

MEASLES COMPLICATED BY CAPILLARY BRONCHITIS, after which the Society went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 6, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. T. GAILLARD THOMAS read a paper (see p. 646) on

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

The paper being open for discussion, DR. W. M. POLK believed he echoed the voice of every Fellow when he said that we are deeply indebted to Dr. Thomas for the able and even eloquent presentation of this most important subject, and most of his views were too well recognized, and too generally accepted to require more than commendation on his part. Dr. Thomas had entered upon the subject so thoroughly that there was but little left to say, especially with reference to treatment. With regard, however, to the question of pathology, Dr. Polk thought that perhaps it would have been better, in view of the stress which the author of the paper laid upon antiseptic treatment, if he had planted himself squarely upon that pathological view which regards puerperal fever as identical with septicæmia and pyæmia. So long as there is any question on this part of the subject, it seemed to him that some doubt would still exist in the minds of many concerning the propriety of most of the remedial measures advocated by Dr. Thomas. So far as he was concerned, Dr. Polk was free to say that he considered the disease as identical with surgical septicæmia and pyæmia, and that the variations which exist in the clinical history or in the pathological lesions are simply those which are peculiar to the organs invaded. With regard to the view that there must be a special puerperal fever poison, or a multiplicity of poisons upon which the disease depends, Dr. Polk thought, if it were taken into consideration that a woman recently delivered had within her pelvis a large amount of rapidly retrograding material; that a large number of uterine and vaginal arteries, veins, and lymphatics were dilated and in places collapsed, giving areas of sluggish circulation; that the blood of such people, besides being deficient in red corpuscles (the oxidizing element) and containing an excess of fibrin, was so filled with waste material that its vital and chemical forces were often taxed to the utmost—then one could readily understand how an amount of septic poison, which in any other condition would be inoperative, would here be all-sufficient.

As to the question of treatment, standing as he did upon this basis of septicæmia and pyæmia, it seemed to him the principles of Listerism, as laid down by Mr. Lister and his followers, and advocated by Dr. Thomas,

entirely covered the ground. With regard to precautionary measures, there was absolutely nothing to be added. He would simply suggest, especially with reference to this city, that the question of purity of air is one which should be especially inquired into. Concerning measures of actual treatment, he had but a single suggestion to make, and it was this, that according to his experience intra-uterine injections had oftentimes been used when in reality the sole lesion which was killing the patient existed in the cervix. The stream of water, as it ordinarily flows from the interior of the uterus, is in many instances of insufficient weight to separate the closely applied surfaces, which are frequently in a sloughing condition. His rule, then, had been to thoroughly inspect, by means of Sims' speculum the entire vaginal canal as far as the external os, and then draw down the cervix with the tenaculum and separate its edges, and if he found that there was anything demanding attention, he applied directly to the spot a strong solution of carbolic acid, or some other similar strong disinfectant. In fact, in many cases it had been the only treatment which he had found necessary.

With regard to the interior of the uterus, if he did not find the vagina or cervix in conditions which seemed to be responsible for the disturbance, it had been a practice advocated to introduce borated cotton upon an ordinary applicator, wet in a strong solution of carbolic acid (two per cent.), into the interior of the uterus, and thoroughly wipe it out. He had introduced the broad curette (Skene's), when he suspected remaining portions of placenta or membranes, and removed whatever material might be found there. Of course his remarks were not at all at variance with the general principles advocated, but were simply items of personal experience concerning the details in carrying them out; but he believed that if we are to adopt the measures which have been so properly advocated by Dr. Thomas, we must go a little farther than the author of the paper had done and plant ourselves upon the ground that we have to do with a condition of things which differs in no essential respect from surgical septicæmia and pyæmia.

DR. JAMES B. HUNTER said that while Dr. Thomas had left but little to say, there were two or three points which he thought worthy of attention concerning the details of carrying out the method of treatment, and on which he should differ somewhat with the author of the paper. He had firm convictions with regard to the propriety of washing out the uterus, and was well aware of the great difficulty of accomplishing it thoroughly. He did not believe that *any nurse* should be trusted to administer the intra-uterine injections.

In the next place, it was important to disturb the patient as little as possible, and he thought this could be accomplished without moving the patient at all, if a bed-pan of large size is used, and the patient permitted to lie upon her back. He did not approve of the use of the Chamberlain tube of the size which had been exhibited, but preferred one of about half the calibre and half the length, and he had found it necessary to have the openings confined chiefly to the end of the tube. He had found that, after a few injections had been administered, the uterus contracts, so that it is difficult to pass a tube of large size into it. He then resorted to a smaller tube, and liked the silver tube of Dr. Lyman, or, what he had frequently used with more satisfaction, was Knott's double catheter. He had in some cases had occasion to dilate the canal before using the tube.

A point of special importance is regularity in carrying out this plan of treatment—thoroughness and gentleness without disturbance to the patient.

With regard to the effect produced by the injections, he had found, very commonly, fear of shock and other bad results, but he did not think these had at all been realized. Where the water had been used sufficiently warm, that is 100° F. to 110° F., the danger of chill was reduced to a minimum.

Again, when the water returns clear one is very apt to think he has made a mistake, but according to Dr. Hunter's experience, even though the water does come away clear, the temperature falls, showing the beneficial effects of the treatment. He had resorted to this method as late as the seventh week after parturition.

With regard to the use of the coil, he did not regard it as proper in simple puerperal septicæmia. In puerperal peritonitis he had the strongest possible confidence in it. He preferred the metal or Leiter's coil to the rubber coil, because he regarded it as more manageable, and as more easily kept clean.

DR. E. L. PARTRIDGE spoke with reference to a few practical points in the method of treatment. Concerning the pathology of the disease, he thought there could not be any essential difference in the minds of those who had had experience in the management of obstetrical cases. With regard to prophylactic treatment, he would impress the importance of personal cleanliness on the part of the medical attendant as strongly as Dr. Polk had spoken of the importance of the purity of the atmosphere. It is absolutely essential that the medical attendant observe the utmost strictness with regard to cleanliness, keeping the nails clean, etc., and as a prophylactic measure.

With regard to the management of the case after the disease is established, he was in favor of the use of intra-uterine injections, and would resort to them with the same frequency recommended. Concerning the agent employed, he had only to add that about one year ago the late Dr. Beverley Livingston introduced into the practice at the Nursery and Child's Hospital what Dr. Partridge believed to be a most excellent supplement to the intra-uterine treatment, namely, after cleansing the intra-uterine cavity, he used a mixture of iodoform and glycerine in the proportion of 1 to 10, and injected one, two, or three ounces into the uterine cavity after finishing with the uterine douche. Dr. Partridge regarded it as an excellent adjuvant, both in hospital and in private practice, and thought it possible that a certain amount of intra-uterine injection might be dispensed with by adopting this measure. With reference to the bichloride solution, he could declare himself in favor of its use. With regard to the coil, he believed in it for the reduction of temperature, and thought it the most efficient agent we have in our possession. He also thought we should not look for immediate and marked results from the plan of treatment, as Dr. Thomas had already stated. Again, absence of peritonitis is not a good reason why the agent should not be used. There is no area of the body where applications give the same results as when made over the abdomen. He favored, contrary to the opinion of Dr. Hunter, the rubber rather than the metal coil, and for precisely the same reason given by Dr. Hunter, namely, that it is more easily kept clean. In hospital practice he had not found any objections to its use arising from the patient *herself*, as to the liability to produce chilliness, etc., and he doubted if it produced any more discomfort than did the ordinary rectal injection administered for the first time.

THE PRESIDENT said the subject was a most important one, and, owing to the lateness of the hour, several gentlemen of large experience and competent to discuss the question were unable to have an opportunity to speak, and he therefore would suggest a proposition. Several years ago he himself advocated views with which not a single one present was in accord, and he had the pleasure and honor of presenting them to the London Obstetrical Society. But he thought that, at the present time, a very large number of prominent obstetricians in different parts of the world were in full accord with what he at that time expressed. The author of the paper of the evening did not consider it worth while to make allusion to these views, and inasmuch as he thought that opportunity should be given to have all views upon this important subject brought forward, and receive full discussion, he would propose that the subject of the paper be

made the topic of discussion at some future meeting of the Academy. With regard to the pathology of the affection, he should hold views which were at variance with those expressed by Dr. Thomas. He should accept in every particular the views expressed by the author of the paper so far as the description of septicæmia is concerned as it exists in the puerperal state, but he should differ with those stated concerning the sum total of the affection; that is, the various local inflammations which occur in the puerperal condition. So also with regard to several points in the treatment of these different conditions. He therefore suggested that the evening of the first meeting of the Academy in February be devoted to the discussion of this subject, and if it would not be regarded as improper he would ask the Academy that he be permitted to open the discussion.

On motion, the suggestion of the President was adopted.

DR. E. C. HARWOOD introduced a resolution, which was adopted, calling upon the delegates from the Academy of Medicine to the American Medical Association at its last meeting, held in the city of Cleveland, to report at the next regular meeting.

The Academy then adjourned.

Correspondence.

KAIRINE IN TYPHOID FEVER AND ALBUMINURIA IN INTESTINAL HEMORRHAGE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the recent discussion on typhoid fever at the Academy of Medicine I alluded to the value of kairine in controlling the temperature of typhoid fever, and to the appearance of albumen in the urine when intestinal hemorrhage occurred. I have been requested to give more in detail my experience with kairine, and likewise my authority for the statement as to the appearance of albumen in the urine after intestinal hemorrhage.

There are three varieties of kairine in the market, namely, kairine M. (or methylic), and kairine E. (ethylic), and kairine E. (ethylic), (W. Filehne, *Berlin. Klin. Woch.*, No. 6, 1883). Kairine M. is given in doses of 7.5 to 15 grains. The temperature is rapidly lowered, and rises very rapidly. The effect of the administration of 15 grains of kairine M. passes off in about three hours. Profuse sweats appear on the beginning, and cease with the action of the remedy. The temperature then rises rapidly.

The effects of kairine E. (kairine E. is said to act in the same way) are said by Filehne to persist for some six hours when administered in doses of 20 to 30 grains. Sweats occur as with kairine M. At the end of the six hours the temperature gradually rises. Filehne made many trials in acute and chronic febrile troubles and obtained always the same results.

He advises the use of kairine E., since the administration of it is more easily managed and the effects more lasting. He prescribes it in the following manner: The first day of any disease when antipyretics appear indicated, the temperature should be taken every two hours, and when it is decided to administer the remedy, $7\frac{1}{2}$ grains are given every hour until four doses have been taken; or, more exactly, this amount is administered until the temperature falls to 100.4° F. This result obtained, he gives from hour to hour only $3\frac{1}{2}$ grains, but as soon as the temperature begins to rise, or the patient complains of a chilly sensation, he resumes the administration of $7\frac{1}{2}$ grain doses. If hourly doses of $7\frac{1}{2}$ grains do not lower the temperature, the amount given hourly is increased to 10 or 15 grains until the temperature is lowered to 100.4° F.

I had not read the communication of Filehne when I first made use of kairine, and I was not then aware that there were several varieties of kairine. The method of

administration that I adopted was to begin with 7 grains of kairine, and have the temperature taken every hour. Unless the temperature was above 102° F. I did not regard the remedy indicated, but when the temperature was above this point I had the remedy administered and the temperature taken hourly. If after the first dose the temperature began to fall, say $\frac{1}{2}^{\circ}$ to 1° in the hour, I continued the drug in doses of $3\frac{1}{2}$ grains every hour or half hour, and as soon as the temperature had fallen to 101° F. I discontinued the medicine, and directed that the temperature be taken every hour or two, and that on the slightest indication of a rise of temperature that $3\frac{1}{2}$ or 7 grains be administered at once, and repeated as often as necessary.

I do not believe it wise to reduce the temperature below 101° , since, if the temperature is quickly reduced to a lower point it is more apt to rise rapidly, and if not, you may have some of the signs of collapse appearing—cold extremities, failing heart action, cyanosis, etc.

Moreover, if the temperature has been brought down to 101° the amount of tissue destruction will not be very great at that degree, and cardiac paralysis will certainly not be likely to occur.

Considerable attention has been given to the occurrence of chills during the administration of kairine, and this has been regarded as a very great objection to the use of the remedy, and indeed the chills have been regarded by some as having been induced by the drug. Bear in mind that there are two kinds of chills—one, well called a "nervous chill," which is often observed in hysteria, spinal irritation, and which is also observed in a certain form of epilepsy, but in these chills there is no rise of temperature, or no rise of over 100° F. The second variety, which *always*, I may say, accompanies the rapid rise of temperature. Given any disease in which the temperature rises above 102° F. in a few minutes or an hour, and you almost invariably find that a chill has occurred, and if closely watched it will be observed that the rise of temperature to a certain extent has preceded the chill—has been present throughout the cold stage. The peripheral temperature may be low, but the oral, rectal, urethral, and vaginal temperature will always be found high. The axillary temperature cannot be depended upon. The occurrence of a chill in any fever, as typhoid fever, treated by kairine, will always be found as succeeding and accompanying a rise of temperature. If a close watch be maintained as to the exact degree of temperature of the body, the early administration of kairine will prevent the occurrence of a chill.

The kairine which I have used has been the kairine E., and I am not aware that kairine M. can be found in this city.

It seems to me, however, that it is very important that the profession should know which form of kairine they are using, and be sure that the preparation is a good and pure one. I have come to look upon kairine as one of the most valuable antipyretics that we possess, and I trust that its use will be greatly extended.

I have transgressed much upon your space, and shall advert briefly to the appearance of albumen in the urine on the occurrence of intestinal hemorrhage in typhoid fever.

I remember having my attention directed to this matter some years ago, when in the hospital, I think. During the discussion of Dr. Delafield's paper, I asked how soon after intestinal hemorrhage albumen appeared in the urine, hoping to hear something on the subject from those present, but I did not succeed. Since then I have searched for some account of it, but have only the testimony of some three physicians as to its occurrence.

Very truly yours, T. A. McBRIDE, M.D.

47 EAST TWENTY-FIFTH STREET.

MEASLES IN WASHINGTON SCHOOLS.—Several schools in Washington have been closed on account of the prevalence of measles.

THE CHANCES OF THE YOUNG PRACTITIONER AND THE ADVICE GRATIS SYSTEM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you kindly allow one of the younger members of the profession—who can, however, lay claim to the title of practitioner only by a species of *lux a non lucendo* courtesy—to extend to you his hearty thanks and congratulations upon the manly stand taken by your journal in the recent editorial upon the “Advice gratis system” and its *mélange* of abuses. We have all heard of the Irishman who endeavored to impress upon a credulous and somewhat myopic horse, through the medium of colored glasses, that a meal of shavings was as satisfactory as one of oats, with the usual result—“the operation was successful, but the patient died.”

The experience of the past few years of my life has evolved in me a most sympathetic and kindly feeling toward that horse. You will hence, I feel sure, pardon any “Green grow the glasses o’er me” expressions, or *morituri salutamur* symptoms which may be apparent in what I have to say.

The correspondent in your last issue (whose signature as one of the young practitioners, let us hope, is not so much a figure of speech as it would be in my own case) states very forcibly the truth, that any ameliorative action must come from the younger members of the profession. I think he will agree with me that any such action must be universal and constant, as well as decided, to accomplish any result. I also think he will agree with me that it would be bravado, and not intrepidity, in any one to hope or attempt to constitute himself a leader by *merely* resigning any position which he may believe helps to bolster up this crying outrage, or, indeed, by any spasmodic outburst of well-meaning but necessarily ineffectual enthusiasm. This would doubtless receive from the dignified Bumbles of the profession the same measure of success that greeted poor Oliver Twist’s plaintive request, “Please, sir, I want some more.” Though we may be the exact analogues of the pitiable “workus” lad, though we may be “desperate with hunger and reckless with misery,” we shall certainly get no “more” by the “commission of such an impious and profane offence.”

Plainly, all reform in this direction must be gradual, and—we may as well recognize it—slow. What we must all work for is to make it sure. The unfortunate phase of the subject is that the contest which thinking men admit is inevitable is not to be decided by one blow, or even one united effort, but by a persistent, continuous, conscientious struggle; and, what is hardest to accept philosophically, is that the benefits will accrue to those who follow us, and not to ourselves.

The evils of our present charity system are easily traced to the naturally fierce competition in an overcrowded profession, and to our national anxiety to obtain a short cut to fame and fortune. The solution of the whole difficulty is merely to put down the brakes on each. If we can do that, we can do all. The task is hard, but not impossible. The present agitation about State examining boards is a hopeful sign. The mills of diplomas, like the mills of the gods, must be made to “grind slowly and grind exceeding small.” It is worse than a farce, it is a disgrace, that, because it is considered the best and most ethical advertisement for a man to be a professor in a medical college, that medical colleges must exist to advertise the professors. Policlinics, polyclinics, post-graduate and practitioners’ schools, sprout up in profusion to give the finishing touches to the crude material the colleges claim to have educated, and I suppose ere long there will be post-polyclinics, with a corps of professors and a large clinical *clientèle*. Now colleges mean clinics, dispensaries mean clinics; these obliging schools which will make over the aged practitioner as good as new mean clinics, and—here’s the rub—clinics mean ma-

terial, and material means money from the pocket of the young doctor.

In one of Elia’s most piquant essays, the human species is divided into “those who borrow and those who lend.” Now it would not require an extraordinary knowledge of algebra for one to go the imaginative *littérateur* one better, and calculate, from the present rate of production, the exact date at which the population of the world will consist of equal parts of medical profession and clinical material—each doctor enthusiastically holding his individual clinic upon his own individual patient, while those lucky individuals who preside over a twin confinement, appoint the mother janitor, to open a medical college.

I have already transgressed too freely upon your valuable space; I should like, however, to offer one more suggestion, which is simply this: That it is not alone in the indiscriminate gratuitous treatment of patients that our charities are at fault, but likewise, and perhaps equally, in the gratuitous treatment of the physicians who do the drudgery part of the work. No doctor, no dispensary, no hospital, has any more right to expect (what we tacitly allow them to claim) gratuitous services from a legally qualified practitioner of medicine, than they have from a member of any other calling. It is “whipping the devil around the stump” in the most barefaced manner to pretend in an unctuous and owl-like manner, “That these gentlemen who compose our hospital house-staffs and clinical *corps* get an adequate return in training and experience; it is really a part of their education.” Granting that it is, the colleges are at fault. But look at the other professions: when their members are licensed, they claim a fee for their services and get it. The young theologian gets his hand in as chaplain at a hospital, the young lawyer draws up the papers for a damage suit in the wards. They get valuable experience, and what is more, they get paid for their crude efforts. The attending doctor even gets a fat fee from a private hospital patient, while the interne, who has the immediate personal care, responsibility, and the larger part of the treatment, gets—rarely, a “Thank you.”

THE MEDICAL RECORD has started a good work, and may God speed it. Young men are beginning to think for themselves, if the fact that they are almost unanimously opposed to any and all codes has any significance. They respectfully, but firmly, decline to impale themselves upon either horn of the dilemma so assiduously proffered them. All they want is a “fair field and no favor.” Let THE MEDICAL RECORD stand by and see fair play.

M. D.

FAILURE OF THE HOT-WATER DOUCHE IN THE TREATMENT OF A CASE OF POST-PARTUM HEMORRHAGE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The use of hot water as a hæmostatic, especially in hemorrhage after parturition, is coming to be pretty generally recognized by the profession. Many of its advocates, however, appear to me to regard it as infallible in its effects, and not without some justification if one were to judge from the number of successes recorded. But I am not sure that cases of failure are as industriously brought to the knowledge of the profession as frequently as they occur, and therefore I hope you will consider the following history of sufficient interest to lay before your readers:

Mrs. K—, aged twenty-nine; primipara. Has always enjoyed excellent health and is of good constitution. Was delivered of twins at 7 A.M. July 14, 1883, after a labor of four hours. Gave 3 jss. of ergot (fl. ext.), which was followed by expulsion of placenta in fifteen minutes and firm contraction of uterus. I was suddenly summoned at 1 P.M. and found slight amount of blood flowing from vaginal orifice; removed binder immediately and found uterus enlarged to nearly midway between umbilicus and ensiform cartilage. Gave ergot by mouth and hypodermically, cleaned the uterine cavity of clots,

and performed pressure over fundus with little effect. Then water as hot as could be borne was injected in large quantity, which was followed by good contraction, but in short time relaxation took place. The douche was again tried and followed by contraction and relaxation as before. Becoming exhausted by my efforts at douching and pressure on fundus, I sent for assistance. Hot water was now used a third time, but with no better result than on the two previous occasions, notwithstanding the constant and powerful pressure of Dr. Martin Burke, who assisted me. About three ounces of tincture of iodine were now thrown into uterus, with the same result as followed the use of hot water. We finally had recourse to electricity, with the effect of causing firm and continuous uterine contraction. Found it safe to leave patient at 4 P.M., after applying a compress over fundus strapped down tightly with adhesive strips, with binder over all. Patient after this did well.

THOS. J. KEARNEY, M.D.

107 LEXINGTON AVENUE, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 1 to December 8, 1883.

CARTER, W. F., Captain and Assistant Surgeon. Relieved from duty at Washington Barracks, D. C., to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas. S. O. 224, par. 4, Department of the East, November 30, 1883.

SHUFELDT, R. W., Captain and Assistant Surgeon. Now on sick leave, relieved from duty at Jackson Barracks, New Orleans, La. S. O. 224, par. 3, Department of the East, November 30, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Assigned to duty at Jackson Barracks, New Orleans, La. S. O. 224, par. 2, Department of the East, November 30, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 8, 1883.

KINDLEBERGER, D., Medical Inspector. Ordered to the U.S.S. Hartford, Pacific Station, per steamer of the 10th inst.

GIHON, A. L., Medical Director. Detached from duty as Member of Board of Inspection and Survey on the 15th inst., and placed on waiting orders.

PECK, GEORGE, Medical Director. Ordered to report on the 15th inst. as Member of the Board of Inspection and Survey.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 11, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 4, 1883.....	0	24	46	4	46	50	0	0
December 11, 1883.....	0	20	59	3	35	43	0	0
Deaths.								
December 4, 1883.....	0	12	7	4	7	16	0	0
December 11, 1883.....	0	4	8	3	6	28	0	0

THE STRUGGLES OF A YOUNG DOCTOR.—A correspondent writes: "In the town in which I am located we have twelve physicians and enough patients to go around, and myself and two other young physicians could do well enough but for a crime the older ones have committed, and are still committing, against the well-being and dignity of the profession. They prescribe for fifty cents and furnish from one- to six-ounce mixtures, either giving themselves away or the medicine. They make calls for one dollar and furnish medicines most of the time. They trust patients, and continue to do business for them, when accounts have not been settled for years. Of course they abuse us, patronize us, consult with us (the last is the worst, for we are very apt to lose our patient when they do), and sometimes let us assist at a surgical operation. We, on the other hand, are obliged to collect our bills in order to live, and so have adopted the rule of sending bills every thirty days; we charge the same fees without furnishing the medicine, and can you blame us if we retort upon their stories of drug clerks' mistakes, by stating our belief that their drugs must be poor, and that the patient has often to take what the doctor has in his office, not what would be the best thing for him. Lest this locality should be recognized, I would say there is one honorable exception, one who charges as is his right, is kind and just to the young men, and honest with his patients. Can you wonder, Mr. Editor, that in this place the physician is not treated with the respect due to his profession? Here his standing is something between that of a man who labors and the village storekeeper."

HINTS FOR MEDICAL STUDENTS.—According to the *Boston Medical and Surgical Journal*, the following was found posted on the bulletin board of the Harvard Medical School after the late examinations: "Dr. Edes wishes to call the attention of the graduating class to the following facts, which may be important to them and their patients. The doses referred to are NOT all from books which failed to receive 50 p. c. The following are too large doses: Half a grain of morphia, ten drops of Fowler's solution, to begin with; 10 c.c. of fl. ext. of conium; calomel, 7 grams; $\frac{1}{8}$ or $\frac{1}{4}$ grain of sulphate of atropia; 1 gram of sulphate of copper; half a gram of aloes every night, in habitual constipation. The following would make inconveniently large pills: One gram of pil. aloes et myrrh (no such pill made is officinal); 390 grams of sulphate of quinine and 130 grams of confection of roses made into six pills; 7 grams of calomel and 6 centigrams of blue mass. Pepsine and bismuth should not be given together. Lactopeptine is less efficient than pepsine. A teaspoonful of lime-water in a tumbler of milk does neither good nor harm. Calomel should not be used as an habitual cathartic (as was recommended in a good many books). Mercury alone cannot conveniently be made an ingredient of an extemporaneous pill. Blue-pill does not contain calomel. An apothecary cannot reasonably be expected to go out and kill a pig to make fresh pepsine for each prescription that comes in."

THE DIAGNOSTIC VALUE OF THE TUNING-FORK IN AURAL DISEASE.—Dr. Charles H. Burnett, of Philadelphia, after giving the conclusions on the above subject from a paper read by Dr. Sexton, before the American Otological Society, July 17, 1883, submits some original and practical reflections on the erroneous deductions made from the use of the tuning-fork, regarding the nature of aural disease, especially in reference to so-called cochlear inflammation, supposed disease of the auditory nerve, and altered perception of sound in syphilitic disease of the ear. Burnett thinks the phenomena of the vibrating tuning-fork when placed on the head or teeth have been misunderstood, and that false conclusions have been drawn in considering that the results thus obtained are reliable data for estimating the *perceptive* power of the nerve, rather than the *conductive* power of the auditory apparatus in the external and middle ear.

He therefore concludes that in the attempt that has been made to "establish" the existence of a "syphilitic cochlitis," the so-called acoustic phenomena may be accounted for much more easily by the supposition of altered conduction by reasons of changes in the mucous membrane, so well known to occur in syphilis, than by the difficult and entirely untenable view that the changes in audition are due to alteration in the nerve, and hence are phenomena of altered perception. This endeavor to remove the diagnosis from the nearer and more probable ground to a remoter and less known one has been not only unnecessary, but misleading; unnecessary, because the experiments of Helmholtz, Politzer, Buck, Hensen, C. H. Burnett, and McKendrick, upon the mechanism of the ossicles, and their relation to audition have been demonstrable *ad oculos* and have made clear the phenomena of condition of sound and how it may be interfered with; whereas we now know positively nothing about the mechanism of perception of sound in the labyrinth. Considering these statements to be correct, the endeavor to refer phenomena most probably occurring in the tympanic cavity, and attributable to changes in the conductive region, to a part of the ear unknown, excepting that it is concerned in all probability with perception, cannot but be regarded as unscientific, and misleading to younger minds. Moreover, it by no means follows that, because in the sudden deafness in syphilis a patient has been cured by an antisiphilitic remedy, that the disease lay in the cochlea and was due to "cochlitis," since it would be just as much proof, perhaps more, that the disease lay in the mucous membrane of the drum cavity, or of its contents, and, by interfering with sound conduction, had caused deafness, and that the latter had been removed by the anti-syphilitic action of the drug upon the mucous membrane. The writer furthermore believes that were we to encounter inflamed cochlear nerve-tissue, a cure could not be so easily accomplished as has been claimed, by any remedy, or, if the disease were removed, hearing would not be under such circumstances either quickly or completely restored.

THE USE OF THE RECTAL LEVER IN AMPUTATION OF THE THIGH.—Mr. Crowell, of Westminster Hospital, recently amputated through the left hip-joint for old-standing disease of that articulation. The common iliac artery was successfully compressed by Davy's rectal lever. Only four ounces of blood were lost. The patient is reported to be progressing favorably. Recently Mr. Turner tied the right gluteal artery at the Seamen's Hospital, Greenwich. Mr. W. Johnson Smith communicated the following note on the case to the *British Medical Journal*: "Mr. Turner's patient was the subject of a very extensive traumatic aneurism of the gluteal artery, which vessel it was thought necessary to expose by dissection so as to tie it above and below the opening. As the patient was old, and had been much weakened by hemorrhage, it was very necessary to do all this without causing much further loss of blood; and as the abdominal compressor is an uncertain instrument, and likely by itself to cause shock, the operation on this patient would have been difficult, if not impossible, without the use of Davy's lever. This was applied, by the house surgeon, with thorough success. We saw the opening in the artery, and the double ligature was applied in an almost bloodless wound, and, beyond the blood already extravasated into the sac of the aneurism, there was not a further loss than of, at the most, half an ounce."

A SCHOOL FOR RICKETY CHILDREN.—Mr. Bernard Roth, of London, gives an interesting account in the *Lancet* of a school for rickety children, in Milan, Italy. He writes: "I paid in 1877 a long visit to the school for rickety children in Milan (Pio Istituto dei Rachitici in Milano), which is under the able medical superintendence of my friend Dr. G. Pini. The object of this school and of the similar one at Turin is to have rickety

and deformed children under regular daily treatment for some years during school life. The afflicted children are fetched daily by omnibuses from the various public schools, and returned the same evening to their homes. At the School for Rickets a portion of each day is devoted to special orthopædic treatment by "medical gymnastics," rubbing and splints where necessary, while the rest of the day is devoted to lessons under certificated teachers, and to out-door games in a spacious playground. The children are also fed at the school, and receive the diet most suitable for rickets—viz., plenty of milk, phosphates, cod liver oil, etc., according to each case. Forty children were present at my visit; most of them had more or less severe rickety deformities of the extremities, but I saw one case of severe spinal caries, and another of severe lateral curvature. Children as young as two years of age are received. There is a well-arranged bath-room on the premises. I noticed several rocking-horses and three different sizes of tricycles for the use of the children. Froebel's Kindergarten educational system is followed as far as possible.

PLASTIC CLAY FOR SUPPOSITORIES.—The use of plastic clay as a convenient material for suppositories in some cases is recommended by Dr. Trippier (*L'Union Pharmaceutique*, xxiv., 398). The ordinary sculptor's modelling clay is used, the medicaments being dissolved in water and then worked into the mass; in this way salts of iron and copper, alum, or even vegetable extracts may be incorporated by taking proper precautions. It is proposed to supply patients with the medicated clay, so that they can break off a portion and mould it between the fingers as required. There are difficulties in the way of maintaining the proper consistence. These accidents may be overcome by keeping the clay under a bell-glass in a moist atmosphere, or by the employment of glycerine, which is also said to have the additional advantage of giving stability to a mixture containing iodide of potassium. The formula for such a mass is: clay, 500 grammes; water, 50 grammes; potassii iodidi, 30 grammes; glycerine, 100 grammes.—*Pharmaceut. Journ.*

PREMATURE SEXUAL DEVELOPMENT.—The following interesting case is reported in the current number of *Amer. Jour. of Obstetrics*: Child now two years seven months old, began to menstruate when four months old. Flow comes regularly every twenty-eight days, and lasts four or five days. She weighs forty-nine pounds. Has features and form of a girl ten or twelve years old. Mammary glands as large as small oranges. The mons veneris is well developed and covered with a full growth of hair. The external labia large, and all parts of the vulva fully formed. All functions seem to be performed normally. Has never shown any disposition to handle her parts or masturbate in any way. Is quite modest with her mother, and particularly so with her father. Her tastes belong to a child much older. She is bright and intelligent, but easily irritated, especially at the beginning of the menstrual epoch. Parents not related. Family history good. No other case of the kind ever known in family. Her future sexual history will be very interesting. At what age can the menopause be expected? In a Brooklyn Museum the "Baby Venus" is on exhibition. She is a child three years old, weighs sixty-five pounds, health perfect, has never been sick, features of a young lady, and mammary glands fully developed. Pelvis and vulva much more fully developed than in children of her age. Has never menstruated. In our last number we mentioned two cases of temporary sexual development in children, caused by local irritation and reflex action it was thought. These two cases have no local cause and are permanent.

CHLOROFORM AND CARBONATE OF AMMONIA IN LABOR are recommended by Dr. W. C. Van Bibber (*Maryland Medical Journal*). Dr. Van B. thinks that the combination is safer and less depressing than chloroform alone.

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CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

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(Continued from p. 646.)

Prognosis.—Cerebro-spinal fever is justly regarded as one of the most dangerous maladies of childhood. It is dreaded not only on account of the great mortality which attends it, but on account also of its protracted course, the suffering which it causes, the possible permanent injury of the important organ which is chiefly involved, and the not infrequent irreparable damage which the eye and ear sustain.

I have the records of the result in 52 cases which I attended or saw in consultation in the epidemic of 1872. Of these just half recovered. Sixteen of the twenty-six who died were hopelessly comatose within the first seven days, most of them dying within that time, and some even on the first and second days, while others of the sixteen lingered into the second week and died without any sign of returning consciousness. The remaining ten, who subsequently died, but did not become comatose in the first week, were nevertheless seriously sick from the first day, but their symptoms, though severe, were not such as necessarily indicated a fatal result, so that there was some expectation of a favorable ending till near death, which occurred for the most part from asthenia. One succumbed to purpura hæmorrhagica, the hemorrhages occurring from the mucous surfaces, and two died after a sickness of more than two months, in a state of extreme emaciation and prostration. The twenty-six who recovered convalesced slowly and usually after many fluctuations.

Their highest temperature and most severe and dangerous symptoms occurred in the first week. Most of them were several weeks under observation and treatment before they sufficiently recovered to be out of danger. The statistics of this epidemic therefore show, and the same is true of other epidemics, that the first week is the time of greatest danger, and if no fatal symptoms are developed during this week recovery is probable with proper therapeutic measures and kind, intelligent, and efficient nursing, the latter of which is very important.

Since the epidemic of 1872 I have treated, or seen in consultation, 35 cases that I was able to follow to the close, most of them in the last four years. Of these 19 recovered and 16 died. Of the 16 fatal cases 8 died in the first week, 5 in the second week, 1 on the twenty-fifth day, 1 on the thirty-first day, and 1 in the sixteenth week. This last patient, a boy of ten years, would, in my opinion, have recovered with better nursing. His death occurred from large bed-sores which extended to the bones, produced, though attended by his mother, by lying a long time in one position on a hard bed when he was too weak to move, and often with soiled bed-clothes underneath him.

There is probably no disease which falsifies the predictions of the physician more frequently than cerebro-spinal fever. This is due partly to the severity of the cerebral symptoms in the commencement, which, did

they occur in other forms of meningitis with which he is more familiar, would justify an unfavorable prognosis, and partly to the remissions and exacerbations, the occurrence alternately of symptoms of apparent convalescence and recrudescence or relapse, which characterize the course of this malady. Grave initial symptoms, which may appear to have a fatal augury, are often followed by such a remission that all danger seems past, and in a few hours later, perhaps, the symptoms are nearly or quite as grave as at first.

Under the age of five years, and over that of thirty, the prognosis is less favorable than between these ages. An abrupt and violent commencement, profound stupor, convulsions, active delirium, and great elevation of temperature, are symptoms which should excite solicitude and render the prognosis guarded. If the temperature remain above 105° death is probable, even with moderate stupor. Numerous and large petechial eruptions show a profoundly altered state of the blood, and are therefore a bad prognostic, and so is continued albuminuria, since it shows great blood change, or nephritis, while other organs than the kidneys are probably also involved. In one case, a boy, whom I examined nearly a year after the cerebro-spinal fever, the kidneys were still affected. He had anasarca of the face and extremities, with albuminuria. Chronic Bright's disease had occurred from the acute nephritis, which complicated cerebro-spinal fever. Profound stupor, though a dangerous symptom, is not necessarily fatal so long as the patient can be aroused to partial consciousness and the pupils are responsive to light; so long as it does not pass into actual coma it is less dangerous than active or maniacal delirium, which is apt to eventuate in this coma.

A mild commencement, with general mildness of symptoms, as the ability to comprehend and answer questions, moderate pain and muscular rigidity, some appetite, moderate emaciation, little vomiting, etc., justify a favorable prognosis, but even in such cases it should be guarded till convalescence is fully established.

We may repeat and emphasize the important fact shown by the above statistics, that patients who live till the close of the second week without serious complication will probably recover. The danger after this period is, in most instances, from exhaustion and feeble action of the heart, resulting from the impaired nutrition and protracted course of the disease.

Complications, which most frequently pertain to the lungs, increase greatly the gravity of many cases and contribute to the fatal ending. The fact that Webber, in his prize essay, describes a variety of cerebro-spinal fever which he designates pneumonic, and that those who make post-mortem examinations find that "cedema, hypostatic congestion of the lungs, bronchitis, atelectasis, and broncho-pneumonia, are extremely common lesions in cerebro-spinal meningitis" (Welch), indicates a source of danger in addition to that located in the cerebro-spinal system. One close observer of an epidemic writes: "In all the fatal cases which came under my notice, the most prominent symptoms which preceded death were those which indicate impairment and perversion of the respiratory functions. As the breathing became more hurried and difficult, the general depression became more intense, the pulse became weaker and quicker, and the temperature of the skin more elevated."

Parenchymatous degeneration of the liver and kidneys

is another serious complication. The kidneys are probably more frequently, and to a greater extent, diseased than the liver. Acute diffuse nephritis was present in one of the eight cases examined after death by Prof. Welch. In the *Revue Médicale* for June 3, 1882, M. Ernest Gandier published the case of a female who died comatose on the sixth day of cerebro-spinal fever. Examination of the urine had revealed the presence of "retractile albumen of Prof. Bouchard, attributable to renal lesions, and non-retractile albumen, considered as an indication of some general infection of the system." Microscopic examination of the kidneys "showed considerable swelling and granular degeneration of the renal epithelial cells, with effusion of granular matter within the lumen of the tubules." We have seen from the case alluded to above that the renal complication may persist and become chronic. Those who fully recover often exhibit symptoms usually of a nervous character, as irritability of disposition, headache, etc., for months after convalescence is established.

Diagnosis.—Cerebro-spinal fever, on account of the nature and severity of its symptoms and the suddenness of its onset, may be mistaken for scarlet fever, and *vice versa*. In one instance, to my knowledge, this mistake was made. High febrile movement, vomiting, convulsions, and stupor, are common in the commencement of scarlet fever, and the same symptoms commonly usher in the severer forms of cerebro-spinal fever. It will aid in diagnosis to ascertain whether there be redness of the fauces, for this is present in the commencement of scarlet fever, and a few hours later the characteristic efflorescence appears on the skin.

The diagnosis of cerebro-spinal fever from the common forms of meningitis is ordinarily not difficult, for while in the former the maximum intensity of symptoms occur in the first days, in the latter there is a gradual and progressive increase of symptoms, from a comparatively mild commencement. Moreover, cases of ordinary or sporadic meningitis occurring at the age when cerebro-spinal fever is most frequent, are commonly secondary, being due to tubercles, caries of the petrous portion of the temporal bone, or other lesion, and are therefore preceded and accompanied by symptoms which are directly referable to the primary disease. We have seen how different it is in cerebro-spinal fever, which in most patients begins abruptly in a state of previous good health. Again, in cerebro-spinal fever, after the second or third day, hyperæsthesia, retraction of the head, and other characteristic symptoms occur, which are either not present or are much less pronounced in ordinary meningitis. Some of the milder cases of cerebro-spinal fever might be mistaken for hysteria, but the pain in the head and elsewhere, muscular rigidity, and especially the occurrence of more or less febrile movement, enable us to make the diagnosis. Continued fever, typhus or typhoid, resembles cerebro-spinal fever in certain particulars, but it lacks the muscular contraction and rigidity which characterize the latter. It does not usually begin so abruptly, with such severe symptoms, especially such severe headache, has less marked fluctuations, and a more definite duration. These facts, in connection with the character of the prevailing epidemics, will enable us to make the diagnosis. In one instance commencing retro-pharyngeal abscess, probably associated with vertebral caries, was at first mistaken by me for cerebro-spinal fever. The patient was an infant, had a temperature of 104, stiffness of the neck with some retraction of the head, and cried from pain when the head was brought forward. The speedy occurrence of two large abscesses in other parts of the system, difficult deglutition and noisy respiration, led to a digital exploration of the fauces, when the abscess was found and lanced.

Treatment.—Since in epidemics of cerebro-spinal fever cases are most frequent and severe where anti-hygienic conditions exist, it is evident that measures looking to the removal of such conditions, measures designed to

procure pure air in the domicile, wholesome diet and a quiet and regular mode of life, in fine, measures designed to produce the highest degree of health, are of the first importance for the prevention of the disease. Cleanliness of the streets and areas, as well as apartments, perfect sewerage and drainage, the prompt removal of all refuse matter, avoidance of over-crowding; in a word, the strict observance of sanitary requirements in every particular, will, there can be little doubt from what we know of the causation and nature of cerebro-spinal fever, diminish the number and severity of the cases. The avoidance of fatigue and overwork, of mental excitement, the use of plain and wholesome diet, sufficient sleep, the utmost regularity in the mode of life with the least possible exposure to depressing agencies, are the important preventive measures which should be recommended wherever an epidemic of cerebro-spinal fever is occurring.

It is probable that the young man who, still weak from an attack of typhoid fever, applied himself closely to his business, of a perplexing nature, which had suffered from his absence, and in a few days was seized with headache and vomiting and soon died of this malady, would have escaped by a more prolonged rest, and less mental excitement and worryment. It has seemed to me that those children whose cases are embraced in my statistics, that left home in the morning entirely well, and when engaged in their studies, subject to the noise and discipline of the public schools, which is often too severe and rigorous for sensitive children, were attacked with this disease, would probably have escaped in the quiet of their own homes. The girl that, failing of promotion in her school, returned home crying, and closely applied herself to her studies till she was compelled to desist by the severe headache which ushered in cerebro-spinal fever, perhaps would have remained well had her experiences in the school been more pleasant and less depressing. In a similar manner the two children that were attacked with cerebro-spinal fever immediately after mild punishments which they had received, but which produced mental excitement, perhaps would have escaped under less severe family discipline.

The enjoining of a quiet and regular mode of life as a preventive measure, during the occurrence of an epidemic of cerebro-spinal fever, is not inconsistent with the theory that the cause is a micro-organism. It is not unreasonable to suppose that the system may be more or less under the influence of the specific principle, that this principle may obtain lodgment in the blood or tissues without result until some exciting cause occurs which depresses the system and disturbs the functions, when the resisting power fails and cerebro-spinal fever appears; just as those exposed to Asiatic cholera may remain well until some imprudence in the diet or the mode of life causes an outbreak of the malady.

Curative treatment.—In the commencement of cerebro-spinal fever, intense inflammatory congestion occurs of the cerebral and spinal meninges, and also to a certain extent of the brain and spinal cord. As regards treatment, the obvious indication is to reduce the hyperæmia of the vessels as quickly as possible and subdue or diminish the inflammation. For this purpose bags or bladders of ice should be immediately applied over the head, and to the nucha, and constantly retained there as long as there is no complaint of chilliness, no marked diminution of the temperature, and the patient experiences some relief from the intense headache and other symptoms. Bran mixed with pounded ice produces a more uniform coldness and is sometimes more agreeable to the patient than the ice alone. The bag or bags should be about one-third full, so as to fit upon the head like a cap, and the nurse should be instructed to renew the ice as soon as it melts. In severe cases, with marked elevation of temperature, it is proper to apply cold over the dorsal and lumbar vertebrae, as well as upon the head and nucha. A hot mustard foot-bath or a general warm bath in those

cases in which convulsions are present or threatening, or there is delirium or great agitation or severe peripheral pains, is also useful, since it has a calmative effect and acts as a derivative from the hyperæmic nerve-centres. One writer states that he obtained marked benefit in a case by immersing the body to the neck in hot water.

The abstraction of blood, usually by leeches applied to the temples, behind the ears, or along the spine, has been employed, but even in the commencement of the present century, when it was customary to bleed generally and locally in the treatment of inflammatory and febrile diseases, a majority of the American physicians whose writings are extant discountenanced the use of such measures in the treatment of this disease. Drs. Strong, Foot, and Miner, though under the influence of the Broussaisian doctrine, were good observers, and they soon abandoned the use of the lancet and leeches in the treatment of these patients for more sustaining measures. Strong, who published a paper on spotted fever in the *Medical and Physiological Register*, in 1811, states that certain physicians employed venesection as a means of relieving the internal congestions, but finding that the pulse became more frequent after a moderate loss of blood, they soon laid aside the lancet. Some experienced physicians of that period, however, continued to recommend and practise depletion, general as well as local, as, for example, Dr. Gallop, who treated many cases in Vermont, in the epidemic of 1811.

Venesection in the treatment of cerebro-spinal fever is universally discarded at the present time in this country and in Europe, but some intelligent physicians, as Sanderson and Niemeyer, approve of local bleeding in certain cases. It is, in my opinion, after examining the histories of many cases, uncertain whether the abstraction of blood should ever be recommended, but if it be prescribed, it should be on the first day, when the hyperæmia is greatest, by the application of only a few leeches behind the ears, and never except when convulsions or coma are present or threatening, and the patient is robust. The fact should not be forgotten that cerebro-spinal fever is in its nature asthenic and protracted, and that the intense inflammatory congestion of the nervous centres can ordinarily be relieved, if relieved at all, by the other measures recommended, which do not reduce the strength. The alarming symptoms which usher in an attack, the intense headache, restlessness, delirium, sometimes eclampsia or coma, seem to demand the most energetic treatment, and yet it is surprising to one who has his first experiences with this malady how patients under proper treatment, without the abstraction of blood, emerge from an apparently almost hopeless state and ultimately recover. There may be total unconsciousness, the pupils dilated like rings and insensible to light, the head intensely hot, tonic convulsions present or alternating with frequent clonic convulsions, and yet these symptoms, which in any other disease would be regarded as sufficient to justify the prognosis of certain death, may gradually pass off toward the close of the first or in the second week, and the case afterward progress favorably. In the New York epidemic of 1872, previously to which physicians of this city had no personal experience with cerebro-spinal fever, many cases were pronounced hopeless which ultimately did well without abstraction of blood. In a case occurring in the practice of Dr. Griswold the patient was comatose for three days, with pupils not responding, or but very feebly responding to light, but he recovered without the abstraction of blood, and with the remedies ordinarily employed. In a case which we will presently relate, in speaking of another local treatment, the patient was still insensible in the third week, with pupils greatly dilated and insensible to light, and yet recovered without losing blood. Such cases show that the most urgent symptoms, such as seem to indicate the prompt employment of leeches in order to reduce the meningeal hyperæmia and the consecutive congestion of

the nerve-centres, may be relieved and the patient recover without such depletion, and with the preservation of the blood, which is so much needed in the subsequent asthenic course of the malady.

In only one case have I recommended the abstraction of blood, and this was so instructive that I will briefly relate it: A girl, four years of age, was seized on March 7, 1873, with vomiting, chilliness, and trembling, followed by severe general clonic convulsions lasting about fifteen minutes; was semi-comatose; pulse, 132, and a few hours later, 156; temperature, $101\frac{1}{4}^{\circ}$; respiration, 44; eyes closed, pupils moderately dilated and feebly responsive to light, dusky mottling of skin, constant tremulousness with twitching of limbs. Bromide of potassium was administered in hourly doses of four grains, ice applied to the head and nucha, and a hot mustard foot-bath followed by sinapisms to the nucha. On the following day, March 8th, she was partly conscious, when aroused, but immediately relapsed into sleep, head retracted, bowels constipated; pulse, 136; temperature, 102° ; vomits occasionally. It was thought proper, on account of the extreme stupor, to apply one leech to each temple and the bites trickled slowly nearly five hours. The other treatment was continued. On the 9th the pulse was 180, so feeble that it was counted with difficulty; temperature, $101\frac{1}{2}^{\circ}$. The patient was evidently sinking. It was necessary to order whiskey in teaspoonful doses every two hours, with beef-tea and other most nutritious drinks. Evening, pulse, 172, still feeble. March 10th, pulse, 180, barely perceptible; great hyperæsthesia; axillary temperature, 100° ; axes of eyes directed downward. After this the patient gradually rallied for a time, the pulse becoming stronger and less frequent, but death finally occurred after nine weeks in a state of extreme emaciation and exhaustion. Slight convulsions occurred in the last hours.

It is seen that in the above case, which may be regarded as typical, the patient passed into a state of extreme prostration after the application of the leeches, so that for three days I did not believe that she would live from hour to hour, and death occurred after an illness of nine weeks, apparently from sheer exhaustion. Experience like this, which corresponds with that of most other observers, shows the necessity of preserving the blood and thereby the strength, however urgent the initial symptoms, inasmuch as cerebro-spinal fever in its subsequent course is attended by such marked asthenia. On May 3, 1878, a boy of ten years was admitted into one of our best hospitals, in the service of a prominent New York physician. It was stated that he had been four days sick with cerebro-spinal fever, and among other characteristic symptoms he had had delirium every night and on May 2d delirium in the daytime, which had abated considerably after free epistaxis. In the hospital the application of ten leeches along the spine was ordered, but it does not appear to have diminished the delirium or any other symptom, and on the following day the pulse was so frequent and feeble that active stimulation by brandy was resorted to. He had three severe convulsions on May 13th, which were relieved by ice to the head and nape of neck, and by six minims of Magendie's solution. Severe pains occurred at times in the back and limbs, and on the 29th, one month after the commencement of the disease, the severe pain frequently recurring, twelve leeches were ordered to be applied to the spine. On June 2d the limbs were flexed and quite stiff, and the effort to move them was attended by great pain. The pain in the back was also more constant, and in consequence sixteen leeches were applied to the spine. The next day there was no pain, but the patient was very stupid. On June 6th the records state that he was obviously losing strength day by day, that his emaciation was extreme and his anæmia very marked. But he had great vitality, and although he had strabismus, bed-sores, incontinence of urine and feces, and extreme prostration, he lingered till August 1st. At the autopsy,

"body, a skeleton; brain, dura mater, and pia mater appear normal, except a little thickening of latter at base of brain; ventricles much enlarged and full of clear serum; surface of walls of ventricles looks normal but is soft; spinal cord and membranes appear normal to the naked eye." No disease was discovered in other organs except that the liver appeared congested and the kidneys pale. It can scarcely be doubted that, although some temporary relief from the pain may have resulted to this patient by the repeated application of leeches, which diminished the meningeal hyperæmia, yet his chances for ultimate recovery would have been far better without such depletion. Therefore the histories of cases show that the result of abstraction of blood has been unsatisfactory, on account of the asthenic nature and protracted course of cerebro-spinal fever, and it should be very rarely, if ever, recommended as a remedial agent.

Some benefit is apparently derived from the application of stimulating and moderately irritating lotions along the spine. A liniment consisting of equal parts of camphorated oil and turpentine briskly applied by friction with flannel up and down the spine till redness is produced, appears to cause some alleviation of the suffering and it does not conflict with the use of the ice-bag. Dr. William H. Sutton, of Dallas, Texas, has published the following interesting case, showing the benefit from stimulating and irritant applications over the spine made in an unusual manner. A child, aged three and one-half years, had been three weeks under treatment through error of diagnosis for supposed continued fever. When Dr. Sutton assumed charge of the case on November 20, 1877, the pupils were greatly dilated and insensible to light; features pallid and pinched; pulse, 130; temperature, 103°; patient totally unconscious. November 21st, morning temperature, 105°; pulse, 140; evening temperature, 101½°; pulse, 120. November 22d, morning temperature, 106½°; pulse, 160; restless; evening temperature, 105½°; pulse, 120; had not slept except for a few moments for nearly two weeks. A strip of flannel saturated with turpentine was placed over the spine from the neck to the sacrum, and a hot smoothing iron was run up and down it, and eight drops of the fluid extract of ergot were given every three hours. Dr. Sutton adds: "The father stated to me that as soon as the application was finished the child fell asleep, and slept several hours—the first for two weeks—and the fever rapidly declined. From this time he began to improve and gradually and fully recovered. The use of irritating applications over the spine in the treatment of cerebro-spinal fever has been long and favorably known, but the mode of applying it practised in the above case is novel.

Internal treatment.—It will aid in the selection of the proper remedies to recall to mind the pathological state which we know to be present from the many autopsies which have been recorded. We have seen that the largest mortality, and consequently the most dangerous period, is in the first days, when there is intense suddenly developed inflammatory congestion of the meninges, with more or less secondary hyperæmia of the underlying brain and spinal cord, producing great headache, delirium, or somnolence, with exaggerated reflex irritability of the spinal cord, so that eclampsia is a common and fatal complication.

Fortunately a remedy has been discovered in modern times, the bromide of potassium, which acts promptly and efficiently. It can be safely administered in large and frequent doses to the youngest child. It is quickly eliminated from the system through the kidneys and other excretories in children, so as to prevent the occurrence of bromism, at least to the extent of causing any unpleasant consequences. It causes contraction of the minute vessels of the nervous centres so as to diminish the hyperæmia, as shown by the experiments and observations of Dr. Putnam-Jacobi and others, and at the same time it diminishes, in a marked degree, the reflex

irritability of the spinal cord, two most beneficial and important effects of its use in this disease. Many children by its timely employment are saved from the dangers of eclampsia, and by its sedative effect on the nervous system and contractile action on the capillaries it probably diminishes the intensity of the inflammation and the amount of exudation. I usually prescribe it, as recommended by Dr. Squibb, dissolved in simple cold water. In ordinary cases not attended by eclampsia or marked symptoms which show that eclampsia is threatening, I usually prescribe at my first visit about four grains every two hours to a child of two years, who has the usual restlessness and apparent headache, and six grains to a child of five years. If eclampsia occur, the bromide should be given more frequently, as every five or ten minutes till it ceases. It is important to be able to determine when the quantity of the bromide administered should be diminished, and when its use should be discontinued. I have very rarely observed bromism in children, and never to the extent of doing any serious harm, though for many years I have administered it in large and frequent doses whenever the occasion seemed to require it, but the symptoms of bromism cannot readily be discriminated from those which may result from cerebro-spinal fever such as muscular weakness, dilated pupils, with perhaps impaired vision, unsteady gait, nausea, or vomiting, and abdominal pains. If the case progress favorably, frequent and large doses should, in my opinion, be given only in the first week, after which the doses should be at longer intervals or smaller. But during exacerbations, which are apt to occur from time to time till the patient is well on the way to recovery, the use of the bromide in full doses is again indicated till the urgent symptoms begin to abate.

Ergot is another very important remedy. It is scarcely less useful than the bromide, from its known action in contracting the arterioles and diminishing the flow of arterial blood. The fluid extract, tincture, or wine of *secale cornutum* can be employed, or its active principle ergotine. In this city I think that Squibb's fluid extract has been more used than any other preparation. I have commonly prescribed it except for patients old enough to take ergotine in the pill. The doses employed by different physicians vary greatly. Dr. William A. Thomson, Professor of Materia Medica in the New York University, has prescribed, so far as I am aware, the largest doses in the treatment of this disease, to wit, one teaspoonful of the fluid extract of *secale cornutum* every three hours to a boy of ten years in Roosevelt Hospital in 1878, with apparent benefit as regards the meningeal hyperæmia, although the case was fatal after the lapse of several months from asthenia. The alkaloid ergotine, to which the beneficial effects of the *secale cornutum* are due, may be given in the pill or in solution. In case of much irritability of the stomach it can be employed hypodermically, dissolved in water with glycerine. The efficacy of this agent is most marked during the first and second weeks, when the congestion of the nervous centres is greatest. At a more advanced stage, when there is less congestion and the danger arises from the inflammatory products and structural changes, the time for the use of ergot is passed, or if it is still of some service it is less needed than at first and should be given less frequently.

The severe headache and restlessness which attend many cases, require the occasional use of an opiate, or the hydrate of chloral. The chloral in proper dose never fails to give quiet sleep, and it is supposed by some who have studied its therapeutic action that it diminishes the cerebral circulation. It is therefore an useful adjuvant to the bromide. Five grains usually suffice for a child of six to eight years. The chloral is especially useful in cases attended by eclampsia, or symptoms which threaten eclampsia, since it acts promptly and decidedly in diminishing reflex irritability. Formerly it was considered injudicious and unsafe to prescribe opiates in meningeal inflammation, since it was supposed that

they increased the liability to coma, but experience shows that they are sometimes very useful in this disease when administered in small or moderate doses, and without the risk which was once supposed to be incurred by their use. The thirty-second part of a grain of morphia administered at intervals of some hours was sufficient to relieve the suffering of one of my patients at the age of six years.

Quinia does not seem to exert any marked controlling effect on the course of cerebro-spinal fever or its symptoms, although the paroxysmal character of the severe pains in many patients suggests the use of this agent as an antiperiodic. It was frequently prescribed by New York physicians in the epidemic of 1872, but I believe that the opinion was unanimous that it was not the proper remedy. I have prescribed it in large and small doses, in one instance giving fifteen grains to a child of thirteen years, but do not know that I ever derived benefit from its use in this malady.

When the acute stage has abated, measures designed to remove the serum, which is apt to remain, constituting a hydrocephalus, are indicated. For this purpose the iodide of potassium is probably more useful than any other agent. It is administered by some physicians early, along with the bromide, as they have been in the habit of treating other forms of meningitis. I have prescribed it with the bromide, and alone when the bromide was discontinued, but whether it produces a sorbefacient effect in this disease seems to me doubtful.

The result depends to a great extent on the nursing. The skill of the physician may be thwarted and the life of the patient lost by inefficient nursing. No other disease more urgently requires kind, intelligent, and constant attendance night and day on the part of the nurses. Not only should the medicines and nutriment be given punctually and regularly, but the great restlessness of the patient in the first days requires constant readjusting of the ice-bags, and during the long period of convalescence the utmost care is required to remove at once the excretions in order to prevent bed-sores, and to give the proper amount and kind of nutriment to prevent the emaciation and weakness from which many perish. Among my cases are those who owe their recovery largely to the untiring devotion of mothers. The one that died of bed-sores I have little doubt would have recovered had the nursing been such as some of the others received.

The diet, from the beginning to the end of the malady, should be the most nutritious, and such as is easily digested. It is necessary to give it in the liquid form, unless in mild cases in which the appetite may not be entirely lost. It is proper to aid the digestion by pepsine preparations. Nutritive enemata, consisting of beef-tea, or Leube's extract of beef, milk, and brandy aid in averting the fatal prostration in protracted cases. After the acute stage has passed by and the meningeal hyperæmia has abated, the alcoholic compounds in moderate doses, which in the beginning would be very injurious, may now be useful, administered regularly by the mouth. The room should be dark, well ventilated, and quiet. All sympathizing friends who are not required in the nursing should be excluded. I know no other disease in which this is so necessary, for mental excitement may produce dangerous aggravation of symptoms. Recently a young lady, to whom I made one visit in consultation, and whose recovery seemed probable, was allowed to receive the visit of a young gentleman. Immediately after his departure her headache was intensified, the symptoms became generally aggravated, and the result in a few days fatal.

THE PROPORTION OF MEDICAL PRACTITIONERS TO POPULATION OF DIFFERENT COUNTRIES.—The proportion of medical practitioners in different countries is as follows: France, 2.91 per 10,000; Germany, 3.21 per 10,000; Austria, 3.41 per 10,000; England, 6 per 10,000; Hungary, 6.10 per 10,000; Italy, 6.10 per 10,000; Switzerland, 7.06 per 10,000; United States, 16.24 per 10,000.

WIRING OF FRACTURED PATELLÆ.

By FRASER C. FULLER, M.D.,

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THE following cases were operated upon by me in Bellevue Hospital during the visiting service of Dr. Charles McBurney, and my obligations are due to him for his kindness in deputing to me the treatment of cases during his absence from the city on summer vacation, it being during this time that these cases entered his wards.

I am prompted to report them thus early in their history, and during the convalescence of one case, as the reading of Mr. Lister's paper at the meeting of the Medical Society of London on October 27th has excited an active discussion in that city, evidencing wide differences of opinion as to the propriety of the operation in certain cases.

It gives me great pleasure, then, to have this opportunity to report three successful cases; firstly, as evidence of the success of the operation in securing bony union of the fragments; and, secondly, as to the dependence of success upon antiseptic methods, the laying open of a knee-joint presenting the best of opportunities for testing the value of one special form of operating.

As the details of the operation have differed somewhat in my cases from those described by Mr. Lister in his paper (*vide Lancet*, November 3d), I will, for brevity's sake, omit a formal description of the operation and include it in the history of the cases.

CASE 1. *Compound comminuted fracture of left patella.*—Alex. C—, aged forty-five, contractor's foreman, entered Ward 8, July 22d, 11 P.M. About two hours before, when under the influence of liquor, he fell from the second story of a building, striking his knee on an iron grating covering a coal chute. On entrance patient still alcoholic. Examination revealed a compound comminuted fracture of the patella. The wound was on the front of the joint, directed downward and outward, somewhat ragged, and one and one-half inch in its long diameter. A temporary dressing of iodoform and bichloride of mercury was applied for the night; a posterior splint and an ice-cap.

On the following day, Dr. McBurney being engaged in a private operation, he directed me to attend to the case. The operation was performed under almost constant irrigation with bichloride of mercury—one part to two thousand; the limb having been previously prepared by shaving, washing with soap and water and the bichloride solution, and the arrangement of wet towels about it having been made, the extremities of the wound were extended, the incision then being oblique to the axis of the limb. The capsule was found only moderately lacerated. This moderate degree of laceration I believe to be the case in fractures due to direct violence. The lower half of the patella was found badly comminuted, and the fragments so loosely attached to the periosteum that it was necessary to remove all but two pieces. The larger of the two was about the size of an ordinary chestnut, the smaller half that size. The patella now consisted of three pieces, the upper fragment comprising a little more than one-half the bone. With a common bradawl I then drilled one channel in the upper fragment, the drill passing obliquely down to, but not through, the articular cartilage. A corresponding channel was bored in the larger of the two lower fragments, and they were brought together with a suture of silver wire. The hospital wire was so fine and brittle that I was obliged to use it double. The smaller lower fragment I found was best kept in position by suturing it to the larger lower fragment. For this I used a large violin string, which I had prepared and made aseptic after Kocher's method. The next step was to wash out the joint, which I thoroughly did through a Nélaton catheter, using the bichloride solution. Mr. Lister does not mention this step in his description of his operation, and I am told

that he does omit it, but it seems to me that freeing a joint of blood clots and bloody serum renders it purer than it would be if they were permitted to remain in.

Next the insertion of the drainage-tubes and the suturing of the capsule occupied my attention. The wound in the capsule was about an inch in length on either side of the patella, and I was satisfied to place a drainage-tube at each extremity of the wound, believing that with the subsequent elevation of the foot the tubes would be at nearly the most dependent portion of the joint. The tubes were of rubber, medium size, and their inner ends were just within the capsule, not more. I then, with cat-gut, sutured the capsule, finding no difficulty in taking it up laterally to the patella, and in front of the bone where it is continuous with the periosteum it can be sewed with little trouble. This suturing of the capsule I regard as a very important procedure. Mr. Lister omits it in his description of his operation, and, I believe, also in his practice; but to my mind it is one of the most important steps in the operation. If the capsule is well sutured the joint is practically closed and shut, and what serum exudes or synovia forms, drains through the tubes into the dressing, and not into the loose cellular tissue between the capsule and the skin, where it must drain if the capsule is not sutured. Again, with the capsule sutured it heals independently of the skin, lessening the danger of an adherent cicatrix. Moreover, the soft tissues in front of the joint must be thicker and stronger with a sutured capsule than without it.

The ragged edges of the skin were trimmed and then united with cat-gut. Three short drains leading into the areolar tissue between the capsule and the integument were employed. I neglected to mention that the disposition I made of the twisted ends of the wires was to turn them down between the fractured surfaces. I think this preferable to hammering them into the anterior face of the patella. Of course it is intended that the wire should remain permanently in the bone. When drawn tightly, and the ends disposed of as above, it becomes embedded in the bone, and I have never heard of it causing trouble either in patellæ or in long bones where I have employed it in resections. If the wire is employed for a temporary purpose, complete healing of the skin is delayed, and its removal is not always an easy matter. A final washing-out of the joint through the tubes was made, the fluid running through clean and clear. The tube ends and the wound were well dusted with iodoform, protectives applied, more iodoform, then moist bichloride gauze to act as the absorbent part of the dressing. Then a thick boracic acid cotton dressing, an evenly compressing bandage, and the wound dressing was complete. I should have mentioned that all vessels were ligated, as cut, with cat-gut, and the wound was perfectly dry in a vascular sense when closed. An anterior plaster-of-Paris splint was applied, reinforced with a wire-gauze frame. Patient put to bed and the leg suspended at an angle of 45°. No special after-treatment was employed. Patient's temperature never went above 100°, and after the fourth day it was normal.

August 7th.—Fifteen days after the operation, the dressings were changed to remove the tubes. Primary union of the skin had taken place. The joint looked normal.

August 17th.—Again dressed, and the sinuses formed by the tubes were found closed.

August 24th.—Splint removed and patient allowed to move the leg as much as he felt inclined. Motion was gradually established, and October 15th patient was discharged.

No passive motion had been employed, and he could flex his leg to a right angle with the thigh, and there was no doubt but that there was bony union. One leg was as good as the other.

CASE II. *Simple fracture of left patella, due to muscular action; wide laceration of the capsule.*—James S—, aged twenty-three, watchman, entered Ward 10,

September 6th. The history pointed directly to a fracture from muscular violence. Up to the day of the operation patient was treated on a posterior splint, with foot elevated and an ice-cap over the joint.

September 24th.—The inflammation having nearly subsided I proceeded to wire his patella. A transverse incision about one and half inch in length was first made, and either extremity of it extended until the incision in the skin corresponded to the rent in the capsule. This was nearly four inches in length. I would digress from the description of the case to discuss the relative merits of the vertical and the transverse incision. In this case especially, and in the two others to a greater or less extent, a vertical incision would not have permitted me to examine the torn capsule, or the joint, or the fractured bone as I desired to. Mr. Lister and the other gentlemen in Great Britain who have done this operation all employ the vertical incision, and it is noticeable that they omit to say anything about the capsule. If the capsule is disregarded the vertical incision is all sufficient for purposes of wiring the bone, and leaves a smaller and perhaps a better situated scar than does the transverse incision; but to my mind the capsule is all important, and the incision through the skin should be made to facilitate getting at it for the purpose of suturing it. In a fracture due to direct violence, be it simple or compound, the vertical incision may be sufficient, for in such a case the rupture of the capsule is insignificant; but in a fracture from muscular violence the transverse incision will be necessary, as the capsule in that class of cases is widely ruptured. To return to Case II., the direction of the fracture was transverse, and exactly through the middle of the bone. The separation of the fragments was about an inch. Fringes of aponeurotic and fascial structure hung down between the fragments, and on each fractured surface was a blood clot so hard and tenacious that it could only be detached by means of a sharp spoon. Underlying this was healthy bleeding bone. The joint contained blood clots and bloody serum. It was washed out as in the first case. Two wires were employed, the fragments accurately adjusted, and the wire ends thrust down between the fractured surfaces. The edges of the capsule were trimmed, sutured with one line of catgut, the skin with a second. A similar arrangement of tubes as in the first case; dressing the same.

This patient's highest temperature was 100.5°. Dressing changed and tubes removed on the eleventh day. A narrow line of the sutured integument had sloughed, probably due to pressure over the patella from the dressing, but a few skin grafts rapidly closed the ulcer. At the end of seven weeks patient was allowed to walk about the ward, the joint being kept stiff by light pasteboard splints. At the end of the eighth week motion commenced, and November 29th patient was discharged with 30° flexion, increasing every day from simply walking upon his leg. Patient is a professional base-ball player, and now runs well, feeling his leg to be as strong as ever.

CASE III. *Simple fracture of left patella from muscular action.*—C. R—, aged twenty-four, driver, entered Ward 10, October 9th. Operated upon twenty-four hours after injury. It was with some trepidation that I operated in this case so soon after the injury; but I looked upon it as a radical way to relieve the inflammation then commencing in the joint, and that it was successful is proven by the fact that when I removed the dressing at the expiration of twelve days, the circumference of the joint was four inches less than when the dressing was applied. In this case the lower fragment was very small and tilted, so that the broken surfaces were greatly at variance with each other. This class of cases, although not so pleasing to operate upon, are surely the most appropriate, as it is difficult to imagine a good result accruing from any treatment that would not direct the fractured surfaces in a measure toward each other. Treated in the ordinary way it is impossible to do this, the lower fragment being so small that one is unable to

obtain any purchase upon it. Two wires were introduced, and a mortise cut in the upper fragment to partly contain the lower, good apposition being obtained. The rupture in the capsule in this case was at least three inches, and was treated similarly to the others. As stated above, the case was dressed on the thirteenth day. Primary union of the skin was perfect. His temperature was once 101° , at all other times not above 99.5° . Patient allowed to walk about ward with knee kept stiff by splints at seventh week, and to-day, December 5th, they have been removed, and he is allowed to commence motion himself. There is no doubt but that he has good bony union.

The secret of success in these cases, and I think the remark is applicable to all surgery, instances of pure luck being excepted, is antiseptic surgery in the true sense of the term, and in detail especially. The reading of Mr. Lister's paper at the meeting of the London Medical Society, October 29th, immediately excited an active interest in the operation. The discussion of the paper by the society, November 5th (vide *Lancet*, November 10th), brought forward opinions from many surgeons for and against the operation. It is gratifying to notice, however, that those gentlemen who advocated the operation are those who practise antiseptic surgery. The unbelievers have not yet been converted. In *The Lancet* for November 17th appears a report by Dr. Wm. McEwen of four cases, all successful.

At the meeting of the London Clinical Society, November 9th (vide *Lancet*, November 17th), Mr. G. R. Turner presented a table of fifty cases, this table not including cases operated upon in his country. Of the fifty cases there were two deaths. In the same number of *The Lancet* is a fatal case published, occurring in the practice of Mr. John Wood. Antiseptic precautions are claimed to have been employed, yet a horse-hair drain appears to me to be insufficient for the purpose of drainage from a knee-joint. The reporter refers to the joint as being very tense at subsequent dressings. For the same reason I prefer a rubber to a bone drain, on account of the danger of the capsule cutting the tube or collapsing it.

Regarding the results from the old treatment of fractured patella, I do not consider them satisfactory. Many cases recover with fairly good function, but as many go about with weak, unreliable joints; and, whether it has been my particular experience to meet them, I have seen many examples of refracture of the bone, fracture of the opposite patella, rupture of the ligament, and other injuries resulting from falls due to an unreliable limb. Regarding the results following wiring, I believe bony union to be the rule, especially in recent fractures, otherwise a very close ligamentous union. Regarding the danger of the operation, and it should be the first consideration, I conscientiously believe it to be fractional, if the case is treated thoroughly antiseptically. It is proper, however, that I should leave the discussion of the ethics of the operation to such a man as Mr. Lister, and they are to be found fully analyzed in his most interesting paper.

SULPHATE OF SODA may be advantageously substituted for sulphate of magnesia. According to Fothergill, the soda salt acts on the liver, while the magnesia salt acts on the intestinal glands. It has the disadvantage of a more nauseous taste than the common salts. Dr. T. Curtis Smith, of Aurora, Ind., in the *Medical and Surgical Reporter*, recommends the following method of disguising the taste. Put a half ounce or an ounce of the powdered sulphate of soda in a gill of hot water, add to this twenty to thirty drops of arom. sul. acid. and an ounce or two of sugar. This is easily taken. This should be taken fasting—generally just after rising in the morning. It is useful whenever a cholagogue saline, so to speak, is indicated. Dr. Smith finds it useful in acute articular rheumatism occurring in plethoric subjects.—*Medical World*.

THE CURE OF URETHRAL STRICTURE IN ONE SITTING.

BY GEORGE M. SCHWEIG, M.D.,

NEW YORK.

WHEN, some years ago,¹ I published a description of a new stricture-dilator, I laid claim to nothing further than furnishing the profession an instrument which, for certain recognized and established purposes, was superior to any other then known. I was, at the time, myself unaware of the possibilities of the method when carried out in a more perfect manner than it had been with the instruments previously in use. It is only within the last year or two that clinical experience has taught me the facts that justify the title of this monograph. Be it understood, moreover, that the claim implied by that title is by no means intended to be universal. But while I freely admit that many cases of urethral stricture present collateral conditions that render it either difficult or inadvisable to pursue such a course, yet a very respectable majority admit of permanent removal at a single sitting without any appreciable risk of harm or injury.

Prior to the introduction of my instrument, "divulsion," or "forcible expansion," was a term synonymous with violence and more or less traumatism, accompanied frequently by very disagreeable accidents or sequelæ, such as shock, hemorrhage, laceration of mucous membrane, urethral fever, etc., and was always a painful operation. The results, moreover, were not such as to compensate for the attendant risks. As the lesser of two evils internal urethrotomy became gradually more popular. Those who have frequently practised this last, however, will admit that a mode of treatment which is painful, accompanied by hemorrhage, often of so alarming a nature as to tax the utmost skill of the surgeon to check; that, as a rule, confines the patient to bed for some days, confessedly requires more or less after-treatment, and withal shows a certain percentage of relapses, does not present a very acceptable substitute for even the crude divulsion of former days. My experience for the last five years (I have used my instrument since 1878) has only the more firmly convinced me of the truth of the statement made in the paper above referred to, that "dilatation carried to a *sufficient extent* is not only the *safest* method of treating the great bulk of cases of organic stricture, but the one which is at the same time the most likely to secure *radical and permanent results*."

In THE MEDICAL RECORD of August 2, 1879, I published a paper entitled "The Treatment of Urethral Stricture by Slow Divulsion." I am free to admit that I have almost entirely abandoned *slow* divulsion. If I had recourse to it at first it was for lack of boldness. It was because the experience with divulsion of others bade me be cautious. As I treated case after case, however, without any of the dreaded accidents occurring, I became gradually less conservative, until I was finally brought to realize that, performed with a proper instrument, rapid divulsion is as harmless a proceeding as passing a sound.

Now as to results. These are, so far as I have been able to judge, absolute, perfect, and permanent. I will not say that I have never failed. I did fail in one case last summer. It was that of a gentleman with an exceptionally large urethra. The largest instrument I possessed at the time dilated to 40 only. His natural meatus was 36. Urethral calibre a trifle above that. By dilating to 40 I did not obtain a *sufficient* degree of over-distention; hence the failure. The patient was anxious to leave town, and I had no time to get a specially large instrument made for him. I performed internal urethrotomy with Otis' instrument, obtaining at the time a urethra with a minimum calibre throughout of 36. The patient left for the West shortly after the operation. He returned a few weeks later for a stay of only a few days prior to his departure for Europe. There had

¹ MEDICAL RECORD, May 3, 1879.

then been some recontraction, although not much, at the site of the stricture. He wrote to me not long since to the effect that a slight urethral discharge that he had had right along still continues. I have no doubt that had I possessed at the time an instrument dilating to 44, the result would in this case have been as satisfactory as it was in all my others.

The one fixed rule to go by is to dilate to a *sufficient extent*. When it is borne in mind that the object is to destroy the continuity, or at least the resiliency of the stricture-fibres, it becomes obvious that to accomplish such a result with certainty the expansion must go, to some extent, *beyond* the normal urethral calibre; yet, if confined within proper limits, the distensible urethral walls will remain intact, and the traumatism be submucous, and limited to the unyielding stricture tissue.

I have dispensed with after-treatment altogether. An occasional bulb or sound for the purpose of observation within the first year completes the attendance, and even this I have thus far found superfluous. I will give a few aphoristic cases from private practice by way of illustration.

CASE I.—A. S.—, traveller, about thirty years of age. Saw him first January 5, 1882. Stricture in penile portion. Would not admit large dilator. Introduced small dilator and stretched to 32. January 7th, introduced large dilator. Stretched to 40. January 20th, passed a 28 sound (full size of meatus). Saw him again May 5th; passed 28 bulb; all clear.

CASE II.—Mr. S.—, collector, twenty-seven years of age. First examination August 18, 1882. Had gonorrhoea three years prior to that. Contracted meatus. Urethral discharge. Urethra unevenly strictured at from 4 to 6 inches. After some preparatory treatment, cut meatus and dilated strictures to 40, on September 17, Dr. Henry Herman assisting. Passed 33 sound after operation. Passed sound and 30 bulb several times by way of observation until November 1st. All remained well and discharge had ceased. I saw him recently. He had married, and had felt none of his former symptoms.

CASE III.—J. J.—, letter-carrier, twenty-seven years of age. Seen first November 9, 1882. Strictures at 2½, 5½, and 6½ inches, the two anterior ones exceptionally hard, unyielding, and resilient. After some preparatory treatment I introduced dilator on December 31st; dilated to 40. On account of the large amount of residual callus I gave him some after-treatment, consisting of sounds and electrolysis, to produce absorption. There was never any further obstruction. March 11, 1883, callus had wellnigh disappeared. April 1st, passed bulb 26, which came back unchallenged.

CASE IV.—R. M.—, merchant, thirty-five years of age. Had gonorrhoea seven years ago. First examination January 1, 1883. Found well-marked stricture at 4½ inches. By passing sounds of increasing size in rapid succession, I made way for dilator, and at once stretched to 40. January 6th, passed 27 sound. January 27th, passed 29 sound; slipped in easy. He called next July 17th, when on examination I found all as I had left it.

CASE V.—C. H.—, cattle-dealer, twenty-eight years of age. Called February 21, 1883. Found multiple stricture at from 5½ to 6½ inches, also contracted meatus. Next day, February 22d, cut meatus. March 5th, stretched strictured portion to 40. There was no after-treatment whatever. He left at once for his home in Montana. From late advices he remained well.

CASE VI.—E. D.—, salesman, thirty-five years of age. Examined July 2, 1883. Stricture extending from 5 to 5½ inches. July 3d, passed small dilator, stricture being too close to admit large one. Stretched to 32. July 5th, stretched to 40. July 6th, passed 28 sound (full size of meatus). Did not see him again until the beginning of November. Passed 26 bulb. All clear.

CASE VII.—F. B.—, merchant, fifty-five years of age.

Called August 23, 1883, accompanied by his family physician, Dr. F.—. Found contracted meatus, imperfect phimosis, and strictures at 1½ and 5½ inches. September 18th, operated for phimosis and cut meatus. Strictures being close, especially the posterior one, dilated with sounds at intervals of several days until wide enough to admit large dilator. October 12th, dilated anterior stricture to 38. October 20th, dilated posterior stricture to 40. October 30th, passed 31 sound. November 11th, passed 30 bulb and 31 sound. No recontraction.

CASE VIII.—H. W.—, merchant, twenty-seven years of age, from western part of New York State. Called August 26, 1883. Found stricture at 5½ and 6½ inches. Dilated at once to 40. Passed 30 sound (full size of meatus) August 27th, and again August 28th. He then left for home. Returned October 28th; passed bulb 26 and 30 sound. All clear. Called again November 25th. A like examination showed not the slightest recontraction.

CASE IX.—Mr. R.—, aged fifty-eight, from Albany, called September 22, 1883, accompanied by Dr. B.— of Brooklyn. Found stricture at 5½ and 6½ inches. Urethra highly hyperæsthetic. Put him on sedative treatment. He left for home and returned October 27th, again accompanied by Dr. B.—. I then dilated to 40, followed with a 35 sound, which slipped to bladder by its own weight. He left at once for home. Came down again November 24th, no instrument having been passed meantime. Passed 33 sound, which slipped in without the slightest halt. There was no sign of a recontraction.

Now I am well aware that most, if not all, of the above cases are of too recent a date to warrant permanence of results. I give them merely to illustrate the feasibility of rapid divulsion with perfect safety. Still, I think I may justly expect *at least* as good results from them as have been obtained from those where *slow* divulsion has been practised; and as of this latter class I have had cases under observation for about five years without any relapse, I shall continue to believe, until I have evidence to the contrary, that the results obtained in the cases given are permanent. I may add here that not one of my stricture patients has been confined to bed for a single hour as the result of this treatment, and that not a single undesirable accident has occurred.

It may not be out of place here to say a word concerning the electrolytic treatment of stricture, more especially in that I have been quoted as a *quasi*-advocate of that method. I employ electrolysis for the removal of residual callus in persons of advanced years, or others where spontaneous absorption does not go on readily. As for galvanism removing or curing a stricture—while I do not desire to deny possibilities—I confess I have never had the patience to see a case through. At any rate, even if feasible in favorable cases, it would be taking a long, tedious, roundabout way to accomplish what can be obtained with infinitely more speed and certainty, and with less discomfort, by a short cut.

157 EAST FIFTY-FIFTH STREET.

AMERICAN *versus* ENGLISH DENTAL EDUCATION.—The President of the American Dental Society of Europe, at their meeting at Cologne in August, made the following remarks during a discussion on the causes of failure of gold as a filling material: "I am an examiner at one of the dental hospitals in London, and I have been surprised and pleased to remark the excellence of the operations made by the students. The skill in operating is accompanied, as you all know, by a most thorough theoretical knowledge. I have myself passed seven different medical examinations. The easiest of these was that for M.D. at the University of New York. My subsequent examinations for D.D.S. at the Philadelphia Dental College amounted to absolutely nothing; and I am convinced that the English system of education, combining, as it does, thoroughness both in theory and practice, must in the long run triumph over the American system."

THE MILD WINTER CLIMATE OF NEWPORT, R. I., AS THE EFFECT OF THE GULF STREAM.¹

By H. R. STORER, M.D.,

PRESIDENT OF THE NEWPORT MEDICAL SOCIETY.

SEVERAL months ago I had somewhat to say in the *Sanitarian*,² and subsequently in the *Boston Medical and Surgical Journal*,³ concerning the fitness of Newport for the residence during winter of delicate people and convalescents, who desired to avoid the inclemency and extreme changes of temperature of the main land at that season, and who did not care to have the fatigue, expense, uncertainty of comfort, and distance from home friends, of the journey to Florida, Bermuda, or the West Indies. The facts that I presented upon evidence, from personal and other medical testimony, and from meteorological and mortuary statistics, could not be gainsaid; the only criticism that was attempted having been to the effect that, however valid the facts, they conflicted with another person's preconceived theory. Since the dates of my previous communications, additional proof has been given by Mr. Ernest Ingersoll, of the very direct effect upon the Newport waters, and therefore upon its climate of the neighboring Gulf Stream, and to cite this may interest the readers of THE MEDICAL RECORD.

In speaking hitherto of the general effect of the gulf stream in this connection, I might have quoted the following, by Lorin Blodget, of Philadelphia: "Climates distinctly maritime, or directly controlled by adjacent water surfaces, exist in but few positions on the eastern borders of the continent. At Norfolk, Newport, Nova Scotia, and Newfoundland on the Atlantic coast, there are quite decisive maritime influences, particularly at or near Newport, and over most of the Nova Scotian peninsula; but these are due to unusual exposure and close proximity to the Gulf Stream."⁴

In one of my former papers I alluded to the absolute difference in the temperature of the sea-water north and south of Cape Cod, produced by the outward projecting of that promontory as an abrupt dividing line between the eastward flowing Gulf Stream and the inner and westward arctic current, and to the evidence of this afforded by the distinctly northern and southern character of the marine floræ and faunæ of these portions of the Atlantic coast. This fact seems first to have been intimated, in a general way, in reference to the geographical distribution of our coast-fishes, by my father in 1839, nearly fifty years ago.⁵ A dozen years later, in 1852, Professor Harvey, of Dublin, in describing the sea-weeds of North America, indicated the following as the "regions of algæ into which the eastern and southern shores of the North American States may be divided:

"First.—Coast north of Cape Cod, extending probably to Greenland.

"Second.—Long Island Sound to the sands of New Jersey.

"Third.—Cape Hatteras to Cape Florida.

"Fourth.—The Florida keys and shores of the Mexican Gulf."

Of the first region, including Massachusetts Bay, "all the species," he said, "are arctic forms, confined in the European waters to very high latitudes, and all appear to vegetate nearly as far south as Cape Cod, to which limits they are almost all confined. The marine flora of this region as a whole bears a resemblance to that of the shores of Iceland, Norway, Scotland, and the north and northwest of Ireland." Of the second region, that of the neighborhood of Newport, "in comparing its plants with those of the first, a very marked difference is at once seen. We lose the arctic forms whose place is sup-

plied by sargassum¹ (one species of which is the distinctive weed of the Gulf Stream), etc." Of the third region, some of whose forms are "tropical," "many of the species found within these limits are common to the second region."²

Twenty and twenty-seven years later, in 1872 and 1879, Professor Farlow, of Harvard University, was still more explicit in his statements. "As long ago as 1852," he said, and this I have already quoted, "when the first volume of the 'Nereis Boreali-Americana' appeared, it was understood, in a general way, that Cape Cod was the dividing line between the northern and southern marine ora. The question has since been raised whether Cape Cod is as strictly the dividing line as Harvey had supposed; whether northern species do not occur at exposed southern points, as Gay Head and Montauk, and southern species wander northward to Cape Ann. Most decidedly, I think, such is not the case. None of the characteristic algæ of the north, with a solitary exception, are found south of Cape Cod."³ To the above I might have added also from Professor Farlow, in a subsequent year, the following: "Cape Cod is the dividing limit between a marked northern and a southern flora. In fact the difference between the floræ of Massachusetts' and Buzzard's Bays, which are only a few miles apart, is greater than the difference between those of Massachusetts Bay and the Bay of Fundy, or between those of Nantucket and Norfolk. This difference in the flora corresponds precisely with what is known of the fauna. That Cape Cod formed a dividing line was known to Harvey, and subsequent observation has only shown, on the one hand, that the floræ north of Cape Cod is more decidedly arctic than he supposed, and that, on the other hand, south of the Cape it is more decidedly that of warm seas."⁴ That most of the more than one hundred species of sea-weed or algæ collected for the United States Fish Commission by Professor Farlow in the vicinity of Newport are southern or subtropical as compared with those of Massachusetts Bay, and almost none of them northern, shows that the difference in the temperature of the waters north and south of Cape Cod must, as has been said, be absolute. This difference must necessarily be a permanent one, and comparatively very nearly as decided during winter as in summer.

Of interest in this connection is the apparently accepted fact that the cold Labrador southward or shore current is less marked in winter than in summer, or descends beneath the surface during that season at a higher latitude, so that during winter the Gulf Stream itself is thus permitted a more northerly set, and its inner margin comes nearer than to the Rhode Island coast. This question is discussed at length, and charts are given of the summer (July) and winter (January) direction of the currents, by Petermann, of Gotha, in his very elaborate paper upon the Gulf Stream, and thermometrical knowledge of the Atlantic Ocean.⁵

It may be well, such is the great importance of this subject, not merely to students of the natural history of open sea, and to climatologists, but to all practising physicians, having as they do frequently to consider what are the most favorable localities for them to utilize for general and special purposes in the treatment of their patients, to present Professor Farlow's evidence as to the two floral regions above mentioned in even greater detail. "If we regard," he says, "the marine vegetation of the northeastern coast of the United States as a whole, we see that, beginning at Eastport, we have a strongly marked arctic flora, which is a direct continuation of that of Greenland and Newfoundland. As we proceed

¹ "A pre-eminently Southern species."—Farlow.

² Nereis Boreali-Americana. Smithsonian Contributions to Knowledge, vol. iii., article iv., pp. 26-27. 1852.

³ List of the Sea-weeds or Marine Algæ of the Southern Coast of New England, Report on the Condition of the Sea-Fisheries of the South Coast of New England in 1871 and 1872. United States Commission of Fish and Fisheries, p. 281, 1873.

⁴ The Marine Algæ of New England. United States Commission of Fish and Fisheries. Report of the Commission for 1879, p. 4. Washington, 1882.

⁵ Mittheilungen, etc., 1876.

¹ Read before the Newport Medical Society, November 6, 1883.

² January 11, 18, 25, and February 8, 1883.

³ March 22 and April 26, 1883.

⁴ Appleton's American Cyclopædia, article Climate, vol. iv., p. 680, 1873.

⁵ D. Humphreys Storer: Report on the Ichthyology of Massachusetts (concluding remarks). Boston, 1839.

southward toward Boston, although the luxuriance of growth is less, the general appearance of the flora is still unmistakably arctic, if we except a few sheltered localities. As soon as we pass to the south of Cape Cod, however, the flora assumes an entirely different aspect. The Arctic and Northern European forms have disappeared, except at a few exposed points, and in their place we find a number of species characteristic of warmer seas." "The general fact," he continues, "of the distinctness of the two floræ is not weakened by the knowledge that we now possess, owing to the investigations of the Fish Commission, of the existence in a few sheltered localities north of Cape Cod of some of the characteristic species of Long Island Sound, and in a few exposed spots south of the Cape of northern species." And again, "the marine flora of Southern New England is much like that of the Mediterranean."²

What has been stated by Professors Harvey and Farlow of the marine flora of the vicinity of Newport, has been shown to be also true of its marine fauna. Professor Verrill, of Yale College, has particularly referred to this in his "General Remarks upon the Habits and Distribution of the Invertebrate Animals of Southern New England Waters." "In prosecuting our explorations (for the United States Fish Commission)," he said, "we soon found that there are in the waters of this region quite distinct assemblages of animal life, which are dependent upon and limited by definite physical conditions of the waters which they inhabit." The first of these regions is that of the bays and sounds "along the coast from Cape Cod westward and southward," at the mouth of one of which Newport is situated. "These shallow waters consist of nearly pure sea-water which has a relatively high temperature, for it is warmed up both by the direct heat of the sun and by water coming directly from the Gulf Stream, and bringing not only its heat but also its peculiar pelagic animals. Owing to this influence of the Gulf Stream, these waters never become very cold in winter, for some of the small, shallow harbors never freeze over. The greater part of the animals inhabiting these bays and sounds are southern forms."³

In his recent article upon Professor Alexander Agassiz' laboratory or aquarium for research at Newport, in the September number of *The Century* magazine, Mr. Ingersoll corroborates Professor Verrill, and is even more distinct in his language. "There is found," he says, "to be a startling difference in the oceanic fauna north and south of Cape Cod. The bather who has tried the surf at Nahant and then at Newport needs no thermometer to understand the immense contrast of temperature between the two coasts. The reason is plain: into Massachusetts Bay pours the icy flood from Labrador and the berg-haunted Banks of Newfoundland, while the south shore is washed by the great tepid current from the tropics, which the Cape swerves off until it strikes straight out to sea to warm the Irish coast. North of Cape Cod one picks up on the beaches and dredges from the bottom of the bay few sea-animals (at least of invertebrates) except those of arctic habit, and these grow more abundant as he proceeds northward; while he misses dozens and dozens of species that he knows may be collected merely by crossing the narrow peninsula which has stood for ages in some shape, a barrier to the southward extension of northern forms, and to the northward travel of those animals whose home is in the southern seas."⁴ And again: "This particular locality (Newport) is highly favorable to the study of marine zoölogy, because the jutting headlands on each side of the harbor make a funnel into which, twice a day, the entrapped tide drives the pure ocean waters fresh from the warm path of the

Gulf Stream, bringing a harvest of living things that elsewhere along the coast remain far outside. Mr. Agassiz is therefore able to get, at the very door of his laboratory, a large series of thoroughly pelagic animals, which other naturalists (at least everywhere north of Hatteras) must go far afloat for, and would regard as wholly extra-littoral."¹

Now, to those who may claim, however unreasonably, that the researches of Professor Agassiz and those of Professor Verrill have thus far been confined to summer types and species, and that the lower marine fauna of Newport, even to the molluscs, echinoderms, annelids, and sponges, may, like the higher forms, seals, porpoises, sea-turtles, and fishes, be but migratory in their character, and disappear as winter draws on—although, in point of fact, some of these vertebrates appear in greater number during this very season—it may be replied that the criticism cannot be true of a great many of the marine invertebrates studied by Professors Verrill and Agassiz, nor of that very large portion of the sea-weeds and mosses constituting the marine flora, which remain permanently attached to the rocks of their birth, and indeed are, some of them, in full fructification during the winter months. Since they are southern species, they would of course be destroyed were the water very materially chilled at any season of the year. It is well known that Newport's outer harbor and the mouth of Narragansett Bay are seldom or never frozen, even close along the shore. If, accordingly, the water thus keeps moderately warm, the atmosphere in contact with it must necessarily be favorably affected to a corresponding extent, and even if we grant that from the thermometric condition of the neighboring coast, and of the slightly brackish water of upper Narragansett Bay, twenty and thirty miles away, at Fall River and Providence, there is a tendency, during certain winds and at ebb-tide, to chill the waters of the lower Bay, it must not be forgotten that each incoming tide brings in a fresh supply of warmth from the never-failing source close at hand, the inward sweeping curve of the Gulf Stream, before it is deflected eastward by Cape Cod.

That the average winter climate of Newport is a very mild one, has long been known. That the temperature of its atmosphere during winter is raised through the warmth of its surrounding sea, has become a matter of evident demonstration. That its climate, in the truest sense, is to be called oceanic, can therefore no longer be denied.

From the meteorological data collected by the late Professor Henry, of the Smithsonian Institution, I have prepared the following tables. In each instance, it will be noticed, the evidence is from Government observers, whose instruments and methods of observation were presumably identical. The comparisons of the winter climate of Newport, with those of Boston, New York, and Philadelphia, are therefore the more reliable.

I. MEAN YEARLY TEMPERATURE. (Isothermal.)—The curve for Philadelphia passes near Sandy Hook, south of and parallel with Long Island.

Boston (Fort Independence, Castle Island), 48.76°, 26 years, during 1824-70.

Newport (Fort Adams), 50.14°, 19 years, during 1842-70.

New York (Fort Columbus, Governor's Island), 51.82°, 48 years, during 1821-70.

Philadelphia (U. S. Naval Hospital), 52.25°, 8 years, during 1843-69.

II. MEAN SUMMER TEMPERATURE. (Isothermal.)—The curve for Philadelphia passes to the ocean near Atlantic City.

Boston..... 68.47° | *New York*..... 72.64°
Newport..... 69.90° | *Philadelphia*..... 72.44°

III. MEAN WINTER TEMPERATURE. (Isocheimal.)—

¹ *Ibid.*, page 731.

¹ Loc. cit.: *The Marine Algae of New England*, pages 3, 4.

² Loc. cit.: *List of the Seaweeds, etc., of the South Coast of New England*, page 282.

³ Report upon the Invertebrate Animals of Vineyard Sound and the Adjacent Waters, etc. Report U. S. Fish Commission, pages 298, 299. Washington, 1873.

⁴ Ernest Ingersoll: *Professor Agassiz' Laboratory*. *The Century*, September, 1883, page 728.

The curve for Philadelphia passes near Sandy Hook and the eastern extremity of Long Island, close to Newport, and by the elbow of Cape Cod.

Boston.....	28.60°	New York.....	31.30°
Newport.....	31.46°	Philadelphia.....	32.25°

IV. WINTER MONTHLY AVERAGES.—

	December.	January.	February.
Boston.....	31.24°	26.85°	27.72°
Newport.....	33.63°	30.23°	30.53°
New York.....	33.50°	29.87°	30.53°
Philadelphia.....	33.26°	30.79°	32.71°

From the above it will be perceived: *First*.—That the difference in mean winter temperature between Boston and Newport, 2.86°, is nearly four times greater than that between Newport and Philadelphia, which is 0.79°; and that the mean winter temperature of Newport is 0.16° warmer than that of New York.

Second.—That while there is a difference of 2.39° in the monthly average for December, between Boston and Newport, in favor of the latter, Newport is during that month warmer by 0.13° than New York, and 0.37°, an even larger fraction, warmer than Philadelphia.

Third.—That the difference in the monthly average for January, between Boston and Newport, 3.38°, is six times greater than that between Newport and Philadelphia, and that during this month Newport continues warmer than New York by 0.36°, a third of a degree.

Fourth.—That in February, the coldest month of the year in a great many places, the monthly average for Newport is higher than during January; that it is now precisely the same as that of New York for this month; and that the difference between the averages for Boston and Newport for February, 2.81°, is greater by nearly a degree (0.63°) than that between those for Newport and Philadelphia, 2.18°, although the latter of these places has already begun to feel the influence of approaching spring.

Fifth.—In other words, that while the isothermal, like the isothermal line of Philadelphia, passes to the southward of Newport, their isothermal or winter curves but slightly vary.

In view of the above, and the peculiar equability and "softness" of the Newport climate, of which I have elsewhere given evidence, it is not perhaps too much for me again to claim that Newport is better adapted, all things considered, than any other point upon the northern coast, and perhaps than any other in the Northern States or Canada, for the residence of delicate persons and invalids during fall and winter, as can easily be determined for himself by any physician who will take the trouble to visit the place at those seasons, or to put himself in correspondence with any of the following members of the Newport Medical Society: Drs. Francis, Rankin, Rives, Barker, J. P. and P. F. Curley, News, Sears, Wheeler, Goddard, Angell, Hurley, Dyer, Mason, Powell, and Fisher; or with Drs. Turner, Engs, Odell, Birkhead, and Brackett, also of Newport, or Drs. Argyle Watson and W. D. McKim, now of New York City. As to the advisability of Newport for invalids at other seasons of the year, evidence will doubtless willingly be given by Drs. Marion Sims, E. S. F. Arnold, Cleveland, Roosa, J. C. Peters, Beverley Robinson, Weir Mitchell, Stearns, and many other New York, Philadelphia, and Southern and Western physicians who have had personal experience of its curative effects. To Dr. Sims is undoubtedly due the credit of having commenced the sanitary agitation at Newport, which has given the city a better water supply, and will soon result in perfected sewerage, and a general conformity by hotels, boarding-houses, and dwellings for lease, to the requirements of modern hygiene.

The question is often asked as to what quarter of New-

port is best suited for winter residence? My reply is always unhesitatingly, "the Point," and this not merely because it best suits my own taste for quiet and yet accessibility to the centre of the town, and that it is the only shore whence the use of boats is possible in all weather and at all seasons of the year, and that as the residence *par excellence* of Philadelphians, especially of Germantown people, during the summer, it is becoming better appreciated with every year, but it is completely sheltered from easterly weather. The drier northwest winds are temperable by a furnace and outer sashes; easterly winds, even the comparatively mild ones of Newport, are not to the same degree.

That the writer sought Newport as an invalid six years ago, and solely for its winter climate; that he has remained there, partially convalescent, but in far better health than theoretically he could ever have hoped to regain, and that he is no longer in active practice, may possibly render his opinion, as to the advantages of the place as a winter health resort, of the more weight with the profession.

As the result of the present inquiry, it may be seen that, despite the theoretical assumption sometimes urged, that the main Gulf Stream lies too far off shore from Newport to exert any real influence upon it—

I. The southern character of both the fauna and flora of Newport prove the immediate proximity, presence, and direct influence of the warm waters of the Gulf Stream; and that—

II. The contact of its atmosphere during winter with this relatively warm sea produces a sensible modification of the local climate of Newport to such an extent that, already insular, it becomes, and even more distinctly than its favorable thermometric averages would imply, truly oceanic as compared with that of the neighboring mainland coast.

Progress of Medical Science.

THE SEVENTH SENSE.—Sir William Thomson, Professor of Mathematics in the University of Glasgow, in a recent address, broached the idea of the existence of a magnetic sense. This sense he called the seventh sense, to distinguish it from our other six senses—namely, those of sight, hearing, taste, smell, heat, and force. He said that, in speaking of a possible magnetic sense, he in no way supported that wretched grovelling superstition of animal magnetism, spiritualism, mesmerism, or clairvoyance, of which they had heard so much. There was no seventh sense of a mystic kind. Clairvoyance, and so on, was the result of bad observation chiefly, somewhat mixed up with the effects of wilful imposture, acting on an innocent and trusting mind. If there were not a distinct magnetic sense, it was a very great wonder that there was not. The study of magnetism was a very recondite subject. One very wonderful discovery that was made in electric magnetism was made by Faraday, and worked out very admirably by Foucault, an excellent French experimenter, showing that a piece of copper, or a piece of silver, let fall between the poles of a magnet, would fall down slowly, as if through mud. Was it conceivable that, if a piece of copper could scarcely move through the air between the poles of an electric magnet, a human being or living creature, in the same position, would experience no effect? Lord Lindsay got an enormous magnet, so large that the head of any person wishing to try the experiment could get well between the poles; and the result of the experiment was marvellous, the marvel being that nothing was perceived. Sir William Thomson, however, was not willing to admit that the investigation was completed. He could not but think that the quality of matter in the air which produced such a prodigious effect on a piece of metal, could be absolutely without any

¹ Schott; Tables, Distribution and Variations of the Atmospheric Temperature in the United States, etc. Smithsonian Contributions to Knowledge, vol. xxi. 1876.

perceptible effect whatever on a living body. He thought the experiment worth repeating; and it was worth examining whether or not an exceedingly powerful magnetic force was without perceptible effect on a living vegetable or animal body. His own speculations had led him to conclude that there might be a seventh or magnetic sense; and that it was possible an exceedingly powerful magnetic effect might be produced on living bodies that could not be explained by heat, force, or any other sensation.—*British Medical Journal*, October 13, 1883.

MALIGNANT TUMOR OR TUBERCULOSIS OF THE TESTIS.—Mr. Butlin, in the *Medical Times and Gazette*, records two cases where tuberculosis of the testicle was mistaken for cancer. In both cases there was a rapid enlargement of the body of the testis, perfectly smooth, oval, and firm, without any sign of inflammation, characteristics which pointed to the presence of a malignant tumor rather than to a tuberculous testicle. Mr. Butlin, however, points out that the absence of elasticity is a great point in favor of the tumor being non-malignant. Another feature worthy of notice is, that in both cases the tumor was punctured, and yielded bright blood, which very quickly ceased to flow, and the hemorrhage was not subsequently renewed. In conclusion, the author remarks that the diagnosis in a difficult case will often rest chiefly on the importance attached to one or two symptoms, among which sufficient weight has not been given to the unequal consistence, and especially to the elasticity of the tumor.

DESQUAMATION OF THE INTESTINAL EPITHELIUM.—In his lectures on general pathology, Cohnheim considers the separation of the epithelium from the intestine in cholera to be entirely a post-mortem phenomenon. Virchow protests strongly against this view, insisting that exfoliation of the epithelium of the small intestine not only occurs during life, but that sometimes during life the exfoliated epithelium is evacuated. This occurs not only in cholera, but in spotted fever, and sometimes in typhoid. In reference to these observations of Virchow, Boehm (*Virchow's Archiv*, vol. xciii., 1883,) notes that a similar desquamation of the epithelium may be produced during life by the administration of poisons. It occurs in acute arsenical poisoning, and in poisoning by substances of the muscarin group. The animals in which this phenomenon is best observed are cats, which, after injection of muscarin or similar substances, exhibit choleraic symptoms, vomiting and purging, the motions being at first fecal, and afterward white and slimy; the slimy masses consist partly of isolated epithelial cells and partly of epithelial tubes like the fingers of a glove. In arsenical poisoning the epithelium undergoes peculiar alterations within the intestine; the body of the cell swells up to a hyaline ball, the margin splitting into the form of small cilia, cells thus altered looking very like flagellate monads, from which they are distinguished, however, by the absence of motion, and by the fact that all the intermediate forms, from an unaltered intestinal epithelial cell to a ciliated ball, can be seen together in a single field.

THE ETHER DOUCHE OR LAVEMENT FOR LOCAL PAIN.—In the *Medical Times*, September 8, 1883, Dr. C. H. Hughes says: A recent paragraph, referring to the ether spray in the cure of neuralgia, prompts me to call attention to the fact that ether lavements have been employed by me in all painful surface affections for many years, whether with or without inflammation, but mainly in neuralgic affections. In facial, sciatic, and cervical neuralgias, no remedy except galvanism has given me such signal satisfaction during the past ten years of my practice in neurology. These lavements will cure some cases of recent origin; they will relieve all. I use the ether douche, not the spray, and Dr. McLane Hamilton is in error in his reference to my treatment of the intense pain of cerebellar abscess by ether spray. In the case

referred to, which I reported in 1877 (*Journal of Mental and Nervous Diseases*, October), I simply poured the ether on the head so copiously as to benumb all sensibility and restore a state of ease and mental tranquillity to a patient absolutely maddened with pain. The ether douche or lavement in trigeminal neuralgia is quite uncomfortable to many persons, on account of the unpleasant impression of the ether on the nose and eyes; and when applied to the supra-orbital region great care should be taken to keep the ether out of the eyes by laying the head back and covering the eyes with a handkerchief. If the ether should get in the eyes, the patient should be cautioned not to rub them, but simply to sponge the eyes with cold water and wait patiently till the ether evaporates. The same is true in regard to ether getting in the ears. There is no need of a spray apparatus for ether. It should be used freely, in quantities adequate to the effect desired. It should be poured on the part till relief is obtained. I apply it in this way to the motor regions of the head and down the spine in general or unilateral chorea likewise. No better agent can be employed for cephalalgia and for acute muscular tremor than the ether douche or lavement. Of late years I have heard of the ether spray, but the ether *douche* or lavement has been with me a most common and efficient agent in the local therapy of pain, especially superficial pain, for more than a decade, ranking with electricity, and better than mechanical vibration.

PARALDEHYDE AS A HYPNOTIC.—Paraldehyde has during the past year been made the subject of occasional contributions from various sources to the journals. Its introduction as a drug is due to the Italians, and especially to Cervello, of Palermo, and Morselli, of Turin. The medicinal dose is from thirty minims to two fluidrachms. Dr. J. C. Wilson has found a drachm to be the average dose for an adult under ordinary circumstances. It is to most patients disagreeable, and must be administered with a considerable draught of water. The taste and odor are ethereal and penetrating. Patients complain of this taste several hours after taking it, and it may be recognized by its odor in the breath. It is probably eliminated unchanged by way of the lungs. Dr. Wilson has prescribed it in nine cases, with a view to its influence as a pure hypnotic. In one hysterical patient it acted well for a short time, but lost its effect, and was discontinued. In a patient who could not sleep, after having acquired the habit of watching an invalid at night, it procured prompt and refreshing sleep. In a lady rendered sleepless by a sudden and appalling bereavement, it caused sleep, but was abandoned on account of the nausea which followed its administration. A gentleman who had sleeplessness and great mental depression after a debauch, and who failed to sleep for several nights after reasonable doses of the bromides and chloral, took a drachm of paraldehyde, and slept seven hours, waking refreshed and hungry. On the next day, this patient, being disturbed after he had taken it, failed to sleep, but succeeded in sleeping on taking a second dose. The other cases were sleeplessness from ordinary causes, and were all more or less fully relieved. It appears to speedily require an increase of the dose. Dr. Wilson ventures to express the personal view, that paraldehyde will prove a useful addition to our sleep-inducing drugs, but will supersede neither chloral, which it resembles in its effects, nor any others among them. It is, like new products of the chemical laboratory, at present expensive. There is no reason why a demand for it should not cheapen it.

ON LEAD POISONING.—Harnack came to the conclusion from his experiments that lead was a muscular poison, causing a peculiar loss of irritability of the muscular substance, so that when a muscle was subjected to the action of stimuli at regular intervals, it responded by very unequal contractions, which were sometimes large, sometimes small, and sometimes entirely absent, al-

though the stimulus was of equal strength in each case. A number of experiments have been made by Von Wyss (*Virchow's Archiv*, vol. xcii., 1883) on this subject, and he finds that lead tri-ethyl causes in frogs restlessness, quivering of the whole body, and loss of spontaneous movement, followed by loss of reflex action. The result was exactly the same as that obtained by Harnack, but the author thinks that it is simply that of complete paralysis of the central nervous system. At this time the muscles of the body were readily irritable, and continued to be so for several hours. After twenty-four hours, when the animal was entirely dead, the muscles presented a peculiar whitish discoloration and stiffness. This appeared earliest, and was most intense in the neighborhood of the injection, and presented the greatest similarity to a weak caustic action, while the general action on frogs was exactly that observed by Harnack; the author could not find any marked evidence of muscular paralysis. The muscles become paralyzed at a very late period after poisoning, and no difference could be detected between the irritability of a poisoned muscle and one from which the poison had been excluded by ligation of the afferent artery. These experiments, therefore, appear to show that lead has no special affinity for the muscles, and is not to be regarded as a muscular poison. On the other hand, the acetate of lead tri-ethyl is a powerful poison for frogs, and appears to paralyze the central nervous system. When lead is administered to frogs internally in increasing doses the animals die with epileptic convulsions. These facts appear to indicate that lead has a tendency to affect the central nervous system rather than the muscles, and that the cause of lead-poisoning is to be sought in an affection of the nervous system rather than of the muscles.

LOCAL ANÆSTHETIC ACTION OF CHLOROFORM.—Dr. Heusner writes, in the *Deutsche Medicinische Wochenschrift* of October 31, 1883, concerning a little procedure adopted by him to facilitate the local application of chloroform for the relief of superficial pains. Although chloroform will be absorbed in greater or less degree in whatever way it is applied to the skin, yet its irritant action is much less marked and its anæsthetic effect equally as great if it can be applied only in the form of vapor. To obtain this mode of application easily and without any waste of the drug, the author had made some shallow cups of tin, curved in such a way that they might be applied closely to the skin of the face, trunk, or extremities. To render them air-tight when on the skin, the rims of the cups were provided with rubber edges. To the outside was attached an elastic band, to retain the cups in whatever position might be desired, and inside was fastened a pledget of lint. When used, a few drops of chloroform are poured on the lint and the cup then inverted over the painful part. A sensation of tingling and warmth is first felt, which soon passes on to pretty severe burning, while the original pain becomes more faint. A moderate pain may be entirely cured, and even very severe pain is rendered quite tolerable. Dr. Heusner has used this mode of application successfully in pleurodynia, dry pleurisy, gastralgia, earache and headache. It is of little use, however, in deep-seated pain, and often the worse forms of neuralgia are uninfluenced. Instead of the specially made cups a simple wine-glass will answer the purpose. The applications should not be too long continued for fear of causing vesication.

A NEW METHOD OF TREATING CHRONIC RHEUMATISM BY ELECTRICITY.—Professor Seeligmüller claims to have met with remarkable success in the treatment of chronic articular rheumatism by electricity. He uses a metallic brush electrode with stiff wires, which he connects with the negative pole, the positive pole being attached to a flat sponge electrode. The latter is dampened and placed on the limb near the offending articulation, then the metallic brush is applied over different parts of the

joint, being held in contact with the integument in each place for the space of from one to ten seconds. The application is very painful, but the professor remarks that the patients soon grow used to it. After a sitting the skin is covered all over with little dots, looking as if the Baunscheid instrument had been employed. The mode of action, the author does not explain, but thinks it cannot be entirely owing to the counter-irritation, for he has used other equally severe cutaneous irritants without meeting with anything near the success obtained by this method. One patient, who had been treated for eight years for chronic rheumatism by all sorts of methods, was able, after the first application of electricity, to raise his arm, which had been powerless for six months; after the third application all the movements were normal. Another man was unable to move either his wrist or his shoulder, owing to rheumatism, and after five sittings was discharged as cured, and was able to resume his work as a stone-mason.—*Deutsche Medicinische Wochenschrift*, October 17, 1883.

ANGINA PECTORIS AS A SYMPTOM.—In a recent clinical lecture, Dr. Landouzy (*Le Progrès Méd.*, 1883, Nos. 35 and 36), reminded his hearers that angina pectoris should not be regarded as a morbid entity. Like epilepsy, it is not an autonomous disease, and, like it, there is no such thing as angina pectoris as a unity. No doubt there is a dramatic completeness about an attack of this affection: retrosternal pain, anxiety, painful immobility, pallor, cold sweat, painful irradiations down the cervical and brachial nerves. This completeness attracts the attention of the patient and physician, so that it has come to be regarded as always presenting the same characters and bearing the same grave prognosis. But this involves an error, not only doctrinal, but of great practical importance. Just as there are epilepsies which depend on this or that condition, more or less transient or amenable to treatment, so there are anginas which may be due to transient or curable conditions. This form of purely nervous angina is well attested, but deserves to be better known. These patients have more to complain of than to fear; the angina is one of the numerous phases of their neurosis, which may depart after a time never to return, is never dangerous to life, and depends on a mere functional derangement of the nervous system. In another type, the occasioning causes are obscure, irregular in their effects, and instead of the kind just related are usually a little fatigue, an emotion, or some slight digestive trouble. No doubt, there is some pathological element which determines the occurrence within one minute of an attack which was absent a minute before. But this is often hard to define, as such attacks may come on when the patient is in perfect repose, sometimes in bed, and often during the first sleep. It may sometimes happen that a patient with some slight cardiac lesion, who is also nervous, may have angina, which should be ascribed rather to the neurotic temperament than to the cardiac lesion. Thus Mme. K.— had a slight aortic obstruction; but after the menopause she became decidedly nervous, with sudden attacks of flatulence, outbursts of laughter and tears, œsophageal spasm, neuralgia, transitory paraplegia, palpitations, asthma, loss of memory, difficulty of articulation, slight convulsive seizures, etc. Upon these supervened an attack of angina, which, in virtue of her cardiac lesion, was alarming. The aortic lesion under treatment appeared to improve; but the neurasthenia increased, diabetes supervened, and then new attacks of angina appeared, and these were regarded as rather the results of the neuropathy than of the cardiac condition; and she was told that they were no more dangerous than the asthma, palpitation, neuralgia, etc., which had so long troubled her.

A NEW CODE SOCIETY has been organized in St. Louis, Mo. It is called the Pathological Society.

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THE PATHOGENY OF RICKETS.

WE are indebted to the philosophical treatise of Bouchard on "Diseases Due to Retardation of Nutrition,"¹ for one of the best expositions yet given of the pathogeny of rickets.

Rachitism may be defined as an anomaly of nutrition in the child giving rise to an excessive growth of the osseous tissues, with imperfect calcification of those tissues; this entailing as a consequence temporary or permanent deformity of divers parts of the bony framework of the body. Rickets was for the most part unknown in Europe till the sixteenth century, and even during this epoch but one well-pronounced case is reported, and that by Theodosius in 1554, of a child, seventeen months old, which presented the characteristic deformities of the vertebral column and ribs. This appearance of rachitism in Europe just after the first great outbreak of syphilis, gives some support to the thesis so ably maintained by Professor Parrot (though on the whole not consistent with all the facts), that rachitism is always a manifestation of hereditary syphilis. Coming down to the seventeenth century we find the classic description of Glisson, bearing date 1650, and abundant evidence that the disease was prevalent in Switzerland, France, Holland, and Germany, as well as in England.

Many opinions have been advanced as to the nature of this disease; some authorities, as Portal, regard rickets as common to these four diatheses, syphilis, scurvy, scrofula, and gout, of any one of which it may be a manifestation. Hufeland ascribed it to scrofula, Boerhaave to syphilis; Glisson considered it as identical with osteomalacia, an opinion supported by Trousseau, though ably combated by Virchow.

Rachitism exists in all parts of the world, but is especially frequent in cold, damp climates. It develops preferably in houses deprived of pure air and sunshine, and hence is more known among the poor than among the rich, and is especially a disease of crowded cities. It manifests itself during the period of first dentition. Very frequent between six and thirteen months, its frequency diminishes between the ages of one year and five, and it is rare at puberty. Glisson was the first to remark the influence of defective alimentation on what he considered the osteomalacia of infants. Premature weaning is assigned as the principal cause by Petit, and too long deferred weaning by Zeviani. The experiments of Guérin

have often been appealed to in explanation of the pathogeny of this affection, this experimenter having succeeded in rendering dogs rachitic by feeding them exclusively on meat. It has also been sought to establish experimentally the influence of an alimentation poor in phosphate of lime; Dusard, Wegner, and others have thus succeeded in producing rachitic deformities in animals, recognizable by their histological lesions. The experiments of Heitzmann and Tessur go to show that the ingestion of lactic acid by animals whose food is poor in phosphates favors rachitism. Thus far one of the essential elements of rachitism is grasped, the lack of phosphate of lime in the ossifying tissues, but no explanation is given of the increased formative activity of the bony medulla. Bouchard believes it to be the consequence of the failure of calcification; the protoplasmic elements finding themselves no longer imprisoned in their calcareous envelope, are free to proliferate luxuriously.

Too prolonged nursing, premature feeding of the suckling with meat or potatoes, are conditions which may be attended with imperfect supply to the growing organism of lime and even of phosphates. Insufficiency of acidity of the gastric juice, excess of alkalinity of the intestinal juices by diminishing the solubility of phosphate of lime or favoring the precipitation, oppose the absorption of this salt. The use of the salts of lime, lime water, calcic carbonate (so much employed in the therapeutics of infantile complaints), has certainly the effect, judging from the experiments of Kletzensky and Rehn, to prevent the absorption of phosphates in any notable proportion, and increase their elimination by the feces.

In this question of phosphate of lime and its fixation in the anatomical elements, it will not do to lose sight of this particularity, that in all probability the phosphate of lime utilized does not enter the economy in the state of phosphate of lime. The lime penetrates on the one part, in the condition of chloride, or in combination with a vegetable acid, for in the form of phosphate only minute quantities can be absorbed; the phosphoric acid enters the circulation as an alkaline phosphate, or very probably, as Bouchard thinks, as phospho-glyceric acid. But if the theory of Bencke is true, if the phospho-glyceric acid is generated in the duodenum and absorbed in the intestine, its production demands the concurrence of numerous circumstances and almost complete integrity of all the digestive functions, for it supposes a high degree of acidity of the gastric juice, a notable alkalinity of the intestinal juices, and integrity of the biliary and pancreatic secretions.

The different steps in the formation of this complex organic acid are probably as follows: ingestion of fat and ingestion of soluble or insoluble phosphates; setting free of a part of the phosphoric acid of the phosphates by the hydrochloric acid of the gastric juice; emulsification, then breaking up of the fatty substances under the influence of the pancreatic ferment; production of glycerine, which combines in the nascent state with the free phosphoric acid. If the phospho-glyceric acid thus formed in the intestine combines later with lime in the recesses of the organism to form the phosphate of lime of ossification, it is at once seen that the question of pathogeny is removed from its once supposed basis, and that we are not so much concerned with the ingestion of phos-

¹ Ch. Bouchard: *Maladies par Ralentissement de la Nutrition*. Paris, 1882.

phate of lime with the food, or with its faulty elaboration, as with the divers physiological processes by which phospho-glyceric acid is produced in the alimentary canal. If now rachitic children ingest enough of fat, and even of alkaline phosphates, and even if the acidity of the stomach be sufficient, it is too often the case that they become sufferers from digestive troubles, the result of too rich food or a diet unsuited to their time of life, and that as a consequence of such faulty alimentation lactic acid predominates over hydrochloric acid in the stomach, a condition not favorable to the setting free of phosphoric acid; moreover, the alkalinity of the intestinal secretions may be insufficient, or these secretions may even be acid; a circumstance unfavorable to the decomposition of fat and the production of glycerine.

There are in rachitic persons other circumstances which interfere with the union of lime and phosphoric acid in the ossifying tissues, and the precipitation of this salt in the bone-forming cells. There are acid conditions of the blood which keep the phosphate of lime in solution, or cause it to be dissolved again after it has fixed itself in the cells. The fluids of rachitic patients are acid in a marked degree, and the peccant element has generally been found to be lactic acid, though acetic, formic, and even oxalic have been detected. What is the cause of this excessive acidity of the "humors" of rachitic patients? The solution of this question leads us deeply into the mysteries of nutrition and denutrition, of which we are just beginning to learn some facts. In a given time a healthy man completely transforms a determined quantity of organic alimentary matters, which, by successive steps of digestion and nutrition, pass in downward metamorphosis to the state of carbonic acid, water and urea. If during the same time only a lessened quantity of organic material can be completely oxidized, or if the same quantity is brought down only to inferior or intermediate degrees of metamorphosis, and if the various emunctories are called upon to eliminate not merely water and carbonic acid, but organic acids, fixed or volatile, not merely urea, but an excess of uric acid and of extractive matters, then we have retardation of nutrition, with all its attendant evils.

This nutritive languishment may result from insufficiency of alimentation, or from excess; in the latter case the blood becomes charged with imperfectly elaborated materials. It may also result from hygienic influences, which interfere with and retard respiration and circulation, and thus lessen the activity of the nutritive metamorphoses. Under these circumstances, the organic acids are not burned, the alkalinity of the fluids of the economy diminishes, uric acid augments in the urine, and the urates are more readily precipitated, and oxaluria supervenes. In these cases volatile fatty acids are eliminated by the sweat and perspiration. The histological integrity of the tissues is altered by the fact of the too ready solution or the imperfect fixation of the mineral ingredients which constitute the framework of the anatomical elements. The whole organism suffers, certain tissues more especially, and among these the osseous tissues.

Among the circumstances which favor this retardation of nutrition, it is needless to say that confinement in

impure air, such as results from residence in damp, shady, and ill-ventilated tenements, and want of outdoor exercise, are especially influential.

In its application to the disease under consideration, this fact of retarded metamorphosis explains why the *best fed* children as well as the *poorest fed* sometimes become rickety, as alimentary principles may be imperfectly digested, and fail to be appropriated, or the forces of denutrition may predominate over those of assimilation, as a consequence of alteration of the fluids of the economy entailed by some serious hygienic vice.

A field of profitable inquiry is opened by these considerations, which Bouchard improves by showing how other diatheses, as gout, rheumatism, glycosuria, are explicable by facts pertaining to retardation of nutrition. Pathologists have hitherto been too exclusively occupied with one side of the question of nutrition—that pertaining to the primary digestion, to assimilation, to organization. Therapeutics has been fruitful in suggestions as to the supply of nutritive principles believed to be wanting, and feeding and dosing has been believed to be the chief end of the physician.

There is another and no less important side—that of denutrition, of destructive metamorphosis, of waste, which is destined in the coming years to have more prominence, and to be more studied.

HOSPITAL SATURDAY AND SUNDAY.

CONSIDERING the preparations that have been made the coming week for the reception of Hospital Saturday and Sunday funds, and the conveniences that have been offered to that end in the admirable systematic distribution of the yellow boxes, the promises are good for a large contribution. At least there will be no excuse for even the humblest giver that ample opportunities are not afforded for the display of charity toward the sick and suffering poor in our hospitals.

No form of charity appeals more directly to the public sympathy than that which insures for the man stricken by disease or the victim of accident, the proper help in time of direst need.

The public are being gradually educated to the point of understanding how necessary it is to support the hospitals that are always so ready to help the sick poor. On the part of the hospitals, also, there is a commendable rivalry to do their utmost in that direction. It is indeed a matter of ambition, which cannot be too highly appreciated, to show a large list of urgent charitable cases that were promptly and efficiently cared for. Willing to encourage this disposition, the Hospital Committee has wisely decided to distribute the funds collected in proportion to such work done.

As we have said on previous occasions some of the hospitals on the list are running in debt on account of their free-heartedness, and the managers and other friends of these institutions bear the brunt of the deficiencies by personal donations. This certainly should not be allowed by a public capable of appreciating good intentions and of encouraging true charity.

The hospitals belonging to this Association have altogether over one thousand free beds for the use of poor patients. Even this number falls far short of the actual

requirements of a great city in which the population of the sick poor is very large, and in which the chances of sudden accidents are proportionately increased. It is really the poor who are oftener sick, and who are more frequently the victims of accidents. They are the emergency cases which must be provided for at all hazards and without question as to expense. If the hospitals stand ready to bear the burden and render necessary help besides, they should not be allowed to become pecuniarily embarrassed. But it is only necessary to bring these facts to the notice of the public to invite liberal responses. There is a reasonable promise that the auxiliary associations, of which there are now several, will do good work. Each dollar subscribed by these auxiliaries will insure for each sick member one day's treatment in hospital. Under such an arrangement any trade society of large membership can care for all its sick poor without any extra expense.

The wide distribution of collection-boxes gives opportunity to all. Even the humblest contributor can drop in his mite, and feel that he is doing as much in his way as the millionaire whose charities, disproportionately small, are often proclaimed from the house-tops.

PREMATURE SURGERY OF THE LUNGS.

WE noticed recently the pulmonary experiments performed on dogs by Biondi, whereby it was shown that considerable portions of one or both lungs could be removed with impunity, and even when one entire lung was extirpated recovery was as much the rule as the exception. Indeed, Dr. Biondi seems to think that the operation *per se* is attended with but little, if any, danger, for he remarks that his failures were attributable chiefly to the neglect of antiseptic precautions.

But we do not stop with dogs. The term pulmonary surgery already sounds familiar in our ears, and the reports of operations upon these vital organs in the human subject are appearing with increasing frequency in various journals, especially in the continental periodicals. In the *Deutsche Medicinische Wochenschrift* of July 18, 1883, is an account of an operation by Dr. Kaczorowsky upon a young girl who presented signs pointing either to an empyema discharging through a bronchus or to a cavity formed from bronchial dilatation. A portion of the sixth rib was removed, and through the opening thus formed the operator introduced his finger, pushing it through the lung-tissue until the cavity was reached. This was washed out and drainage established. Some improvement followed, but owing to a number of unfortunate circumstances the wound in the lung closed, and a reaccumulation of pus in the cavity occurred. The parents of the child objecting to a second operation, Dr. Kaczorowsky dismissed the case, and was unable to report upon the ultimate result.

In a journal published in this country, the *Medicisch-Chirurgisches Correspondenz-Blatt* for September, 1883, is contained a notice by Dr. Proegler of two instances of cauterization of the walls of a cavity, performed by Koch. The first case was that of a man with an enormous cavity in the lower lobe of the right lung. After resection of a portion of the sixth rib, the thermo-cautery was passed through the lung-tissue into the cavity, the

walls of which were then carefully cauterized. Some improvement in the quality and quantity of the expectoration resulting, the operation was repeated in four days, this time a piece of the eighth rib being removed. It was Koch's intention to operate a third time, but the patient meantime had died. The second case was that of a woman, who presented a cavity the size of a fist in the upper lobe of the right lung. The operation was performed as in the preceding case, and the patient was said to be greatly improved. Unfortunately, she died of septicæmia at the end of a week.

May we not express the hope that these examples will not be generally followed, at least for the present, for the measure of success thus far met with is not such as to give much encouragement to others. It would certainly appear preferable to let the poor consumptive end his days as peacefully as may be permitted him, rather than to subject him to the pain and distress of a formidable surgical operation, with a fair prospect of cutting short the few remaining weeks or months that might have been his on earth.

There certainly seems need of further experimentation upon animals before the human lung shall be considered a legitimate field for the exploits of the surgeon. And these experiments should be genuine efforts to relieve diseased conditions. Because a healthy dog will survive the removal of a part or the whole of one lung, it by no means follows that a like result is to be anticipated in the case of a man whose lungs are infiltrated with tubercles and whose vital power is already greatly reduced. When it is found that an animal with tuberculosis can be cured, or even greatly benefited, by the cauterization or exsection of the diseased pulmonary tissue, it will then be time enough to make cautious attempts in the same direction upon the lungs of the human subject.

THE EXTENT TO WHICH A MEDICAL EXAMINATION CAN BE FORCED BY LAW.

AN interesting case, touching the extent to which a medical examination of the person can be forced for the purpose of obtaining testimony to be used in court, has recently been decided in the northern part of this State. The plaintiff, a lady, sued the Ogdensburgh and Lake Champlain Railroad Company for injuries said to have been incurred in a collision by reason of the negligence of the company and its employees. The defendant claimed that no serious injury was received by her, and that she was either feigning sickness or was suffering from a disease not caused by the alleged accident. In order to carry out this theory of a defence, the railroad company obtained an order requiring her to submit to an examination of her person by three physicians selected by the company, under the direction of a referee. The order also provided that such other physicians as the plaintiff desired, might be present at the examination, and that she should answer such questions as the physicians chosen by the company should put to her regarding her sensations and feelings at that time.

The plaintiff appealed from this order, and it was reversed by the higher court in an opinion, some parts of which are of interest and are as follows: "It is undoubtedly true that not unfrequently plaintiffs suing for

bodily injuries, do exhibit in court the injured part. Nor do we know of any reason why they should not do this, notwithstanding the exhibition may excite sympathy. And on the other hand, all unreasonable concealment of an injured part (not justified by any dictate of modesty or otherwise) may excite a doubt in the mind of the jury as to the genuineness or extent of the alleged injury. But we cannot admit the principle that, either in the presence of the jury, or in the presence of a referee, a party can compel his opponent to exhibit his body in order to enable physicians to examine and question and testify.

"Section 834 of the Code, forbidding a physician to testify to information obtained while attending a patient, necessary to enable him to act, is not strictly applicable to the question now under consideration.

"But, if the law will not permit a physician, voluntarily consulted, to reveal what he has learned, can it be that the law will compel a party to reveal, by exposure of the body and by answers to questions, facts to a physician to which he may afterward testify in court?

"There may be danger that in actions of this nature plaintiffs will exaggerate the injuries they have received, and that defendants may be at a disadvantage in ascertaining the exact truth. But this evil is far less than the adoption of a system of bodily and perhaps immodest examinations, which might deter many, especially women, from ever commencing actions, however great the injuries they had sustained."

THE VALUE OF RECREATION.

SIR JAMES PAGET has been addressing the Workingmen's College on "Recreation," and a great treat it must have been to the members to hear the "golden-mouthed" surgeon. It is certainly good for one whose position places him above all suspicion, as his good nature and sincerity puts him above envy, to display this interest in workingmen. He discoursed to them on change as the essential of recreation, but said that wonder should be awakened and the exercise of skill called forth. Then he tried to show that special pleasures are a sort of survival of our ancestral instincts. Our forefathers had to clear the forests, make roads, fish, hunt, and so on. Sir James is strong on hereditary habits and instincts, but we do not suppose he would go in this direction further than to the time when all were hunters. Perhaps after all those are right who look for the greatest degree of change in employment as recreation. Thus mental should give way to physical exercise. At any rate, it has been found that students, although relieved from fatigue by sedentary change, do not benefit so much as when they cease to make mental efforts. A game of chess may be very well after a spell of medical study, but a game of cricket would be better for any one who has physical energy enough to enjoy it. So to workingmen an evening at their college should be regarded as recreation—the process being merely reversed.

M. CHARCOT has been elected a member of the Academy of Sciences, Section of Medicine and Surgery, in place of the late Baron Cloquet.

News of the Week.

THE LATE DR. J. MARION SIMS.—At the last meeting of the Newport (R. I.) Medical Society, Dr. Samuel W. Francis, Vice-President, presented the following resolutions, which were adopted:

Whereas, It has pleased Almighty God to remove from this earth Dr. J. Marion Sims; therefore

Resolved, That, in his death, Science has lost a star; Surgery a pioneer: Gynecology an originator; America one of her philanthropists; and the fair sex their best friend.

Resolved, That the name of J. Marion Sims will live till woman dies.

Resolved, That the boldness of his operations was only equalled by his tenderness and sympathy at the bedside.

Resolved, That, as he belonged to the world, both hemispheres will mourn his loss and cherish his memory.

Resolved, That a copy of these resolutions be transmitted to the family.

THE PROPOSED MONUMENT TO THE LATE DR. J. MARION SIMS is taking a definite shape. We have received the first contribution for the same to the amount of ten dollars from R. C. Derby, Newport, R. I., on behalf of the Sanitary Protective Association of that place. This example will doubtless be followed by others. THE RECORD will gladly do anything in its power to make the project a success. No more worthy name than that of Sims could be chosen to represent the genius of the profession of this day and generation. As suggested by Professor Byrd, of Baltimore, the monument should be erected in Central Park. There is no more appropriate place than this. Any subscriptions to the fund will be duly acknowledged in THE RECORD.

SIR PRESCOTT HEWITT RETIRES FROM PRACTICE.—One of the recently created medical baronets has already disappeared from London practice. Sir Prescott Hewitt, always fond of sport, retires to the country, where we may wish him long life to enjoy his *otium cum dignitate*.

ACCUSED OF MANSLAUGHTER FOR TRACHEOTOMY.—A further illustration of the risks medical men run has turned up recently. A London surgeon is now accused of manslaughter for a tracheotomy after which the patient died. The father of the child when the operation was performed sucked the tube to free it, and thus contracted diphtheria from which the patient was suffering. He brought an action against his doctor for damages for not preventing him sucking the tube—the lawyers thinking with the father that the doctor should have himself taken the risk! Failing in this action, the bereaved parent, or his lawyers, seek to convict the doctor of manslaughter of the patient, which the operation did not save. When patients talk of gratitude and what they owe the profession such things as this should be remembered. One cannot help feeling that such actions are got up by an inferior class of lawyers.

THE MANUFACTURE OF CIGARS IN TENEMENT-HOUSES.—The act of the last Legislature prohibiting the manufacture of cigars in tenement-houses has already been brought before the Court of Appeals. The constitution-

ality of the act is disputed on the ground that it is an unauthorized interference with the private pursuits of citizens, and defended on the ground that it is a legitimate exercise of police power for the protection of the public health. The real question is whether cigar-making in tenement-houses is injurious to the public health in the sense that justifies an interference by the State to prevent it, or whether the real object of the law is not to prevent the competition of tenement-houses with the regular factories in cigar-making.

FEMALE PHYSICIANS IN INSANE ASYLUMS.—Dr. Sarah Stockton has been appointed physician to the female department of the Indiana State Insane Asylum.

SELLING ADULTERATED DRUGS.—In the test case against Billings, Clapp & Co., wholesale druggists, the defendants were found guilty last week of selling tincture of opium containing a less quantity of morphine than that prescribed by the Pharmacopeia. They were fined a nominal sum, and will take the case to the Superior Criminal Court.

CHARITY ORGANIZATION.—A very successful meeting was held at the Union League Club Theatre last week, for the purpose of popularizing the methods of the Charity Organization Society. Mr. Joseph H. Choate, Mr. Curtis, Judge Daly, and a number of others spoke. We can only regret that the medical side of the matter, which is not the least important, was not represented. The following interesting facts regarding the need and the supply of charity were given: In New York one in every twenty-seven receives charitable help. The experience of other cities which have adopted organization proved that only one-third of the applicants were entitled to immediate money relief; that only one-tenth required continuous relief; that between ten and twenty per cent. were impostors, and that one-half only needed advice and encouragement to help themselves.

BROOKLYN VITAL STATISTICS.—In his annual report to Mayor Low, Health Commissioner Raymond says the health of the city of Brooklyn during 1883 has been better than in any year since 1879. The total number of deaths in the city in the twelve months ending November 30, 1883, was 13,833 or 1,180 less than the actual mortality during the calendar year 1882. Estimating the population at 624,118, the death rate is 22.16 in each thousand of persons. Among other things Dr. Raymond says: "I am impelled to state my conviction that the efficient operations of the Department of City Works have vastly improved our sewer system, and for some months at least have given us pure air to breathe by giving us relatively cleaner streets under the new contract, and have thus indirectly come to the aid of the sanitary authority in its fight against zymotic disease." Attention is called by Dr. Raymond to the great need for new sewers in the outer wards of the city, which are now being so rapidly built up, and he also recommends that the slaughter-houses be removed from the crowded portions of the city.

A NATIONAL VETERINARY ASSOCIATION FORMED.—Delegates from various State Veterinary Associations held a meeting at Chicago on December 13th, for the purpose of forming a National Association. Among the

Eastern representatives were S. V. Plageman, of Brooklyn; J. Finley and W. J. Connody, of New York City. The morning session was devoted chiefly to a discussion of the eligibility of delegates. In the afternoon a permanent organization was effected under the title of the National Veterinary Medical Association, and the following officers were elected: *President*—L. V. Plageman, of Brooklyn; *Vice-Presidents*—W. C. Fair, Cleveland; William Sheppard, Ottawa, Ill.; W. T. Connody, New York; *Secretary*—R. A. Harding; *Treasurer*—A. J. Chandler, Detroit; *Corresponding Secretary*—Joseph Hughes, Chicago. In the evening a banquet was held, a constitution adopted, and the organization perfected.

A "NATURAL BONE-SETTER" SUED FOR MALPRACTICE.—One of the family of Sweets, of Connecticut, who have long been known for their reputed skill in setting bones, has been arrested and will be sued for malpractice. We believe that "natural bone setters," taking it all in all, do a great deal of harm, and ought to be abolished as public nuisances.

CINCINNATI AS A MEDICAL CENTRE.—Cincinnati has, according to a correspondent of the *Chicago Medical Journal*, four hundred and sixty-three doctors, "regular, irregular, and defective," five hospitals, two medical colleges, two medical libraries, five medical societies, three medical journals, and a health board, and an extra proportion of midwives and bogus medical colleges.

A NOVEL STRIKE.—It is rumored that the wet-nurses (*nourrices*) in the pay of the Assistance Publique, intend to strike. They receive from fifteen to eighteen francs a month, but consider it insufficient, as private families pay at a higher rate. The director of the Assistance Publique has enumerated in this year's budget a sum of one hundred and fifty thousand francs for the benefit of wet-nurses. It is unknown whether this is a coincidence or a result.

DR. H. Z. GILL has accepted the chair of Clinical and Operative Surgery in the medical department of Wooster University, Cleveland, O.

DR. W. H. HOOVER, of Philadelphia, died December 18th of Bright's disease, aged fifty-nine.

PROFESSOR ALONZO CLARK reminds us that we have, in speaking of the medical fathers of New York, bestowed on him more years than he deserves, he having been born March 1, 1808. We are only too glad to transfer the difference in calculation to the credit side of hopeful realization—and more, too.

ENLARGING THE OPPORTUNITIES FOR DISPENSARY WORK.—Several New York City dispensaries have evening hours, and recently a Philadelphia dispensary has adopted Sunday morning hours.

A CREMATORY ASSOCIATION has been formed in Washington, and Congress is to be asked to give it a charter. A German physician has given a lot on which to erect a crematory similar to that in Washington, Penn. One of its members says that the expense of burning a body will not be more than \$35, and that soon they may be able to reduce it to \$20.

TRICHINOSIS IN ILLINOIS.—Several cases of trichinosis have appeared in a German boarding-house at Bloomington, Ill. The disease was caused by eating raw sausage made from a hog raised in the place.

CHOLERA STATISTICS.—A communication from the United States Consul-General in Cairo, Egypt, to the State Department, gives an official statement of the cholera epidemic in Egypt, in which it appears that from forty-eight to fifty thousand persons have died of the scourge during the period from June to September 1, 1883. Dr. Salem Pasha, President of the Egyptian Sanitary Council, states that the Council of Health is engaged in collecting precise statistics of the number of victims. He also states that the disease broke out anew at Alexandria after it had disappeared, with a daily mortality of three to twelve persons. It has not re-appeared elsewhere. He says that the "Sanitary Bulletin," which was published during the prevalence of the disease, gave erroneous accounts, and instances one case in Cairo where the "Bulletin" gave the number of deaths on July 24th at 456, when in fact there were more than twelve hundred. It is believed the total mortality for four months will reach nearly seventy thousand.

In many villages a majority of the laboring population have died, while in others entire communities have disappeared, hardly leaving enough people to cultivate and harvest the crops. At Calcutta the deaths from cholera for the week ending October 27th numbered 20 out of a total mortality of 243.

YELLOW FEVER deaths at Havana, Cuba, for the week ending December 8th amounted to 23. Only two suspicious vessels sailed for American ports during the week: American schooner Elwood Burton, for Pensacola, and Spanish bark Antonieta, for New Orleans. In Mexico the disease still prevails, with twenty deaths at Acapulco, and several sporadic cases at Vera Cruz. A new outbreak of the disease at Orizaba is reported by Assistant-Surgeon Main, consequent upon too early raising quarantine against Vera Cruz.

EGYPTIAN RAGS are hereafter to be disinfected before shipment to this country. This precaution has been inaugurated by the State Department at the request of Surgeon-General J. B. Hamilton of the Marine Hospital Service. Pressure under steam and such other measures as may be found to be efficient for the purpose will be used.

MEASLES IN WASHINGTON.—Washington, D. C., is undergoing a siege of measles, and many of the public schools have been forced to close on account of the epidemic.

THE DWIGHT INSURANCE CASE.—Apropos of this now celebrated case, we have received a letter from Dr. Daniel G. Burr, of Binghamton, N. Y., criticising the action of the medical experts for the insurance company. There were, he writes, a well-known New York physiologist, a neurologist, and an Albany physician, who were most prominent as expert witnesses and "coachers" for the counsel. Dr. Burr says that these gentlemen worked and associated together, although two were staunch Old Code adherents, while the third was of homœopathic affiliation.

The turning-point in the suit was the post-mortem appearance of the neck of the deceased, the defence claiming that the person deceased had committed suicide by hanging himself in bed, the plaintiffs that he

did not. Fifty-eight hours after death an autopsy was held, which was conducted by Dr. Francis Delafield, of New York City, in the presence of thirteen or fourteen other physicians. Some six or seven of us average doctors who witnessed the autopsy were subpoenaed by the plaintiffs to testify to the question of fact, *i.e.*, whether there was any mark of a cord across the windpipe. Our testimony was duly given, we stating that *no such mark was present*. Despite this, the experts in question testified that his death was caused by hanging. At the time when this case came up, we expressed that opinion, based upon Dr. Delafield's careful autopsy that there was no evidence of suicide. Under our present system, however, it is expected that medical men will help the side for which they are engaged if they can conscientiously do so. Our correspondent is particularly indignant that the absolute facts, testified to by half a dozen "average doctors," should be ignored, or their existence practically denied under oath, by learned experts. And he concludes: "Is our civilization a failure? and the 'average doctor' played out?"

Obituary.

THOMAS S. KIRKBRIDE, M.D.,

PHILADELPHIA, PA.

THOMAS STORY KIRKBRIDE, M.D., Superintendent of the Pennsylvania Hospital for the Insane, died on December 17th at his home in Philadelphia. Dr. Kirkbride suffered a protracted illness about four years ago, from which he never fully recovered. Last spring he was again prostrated, and never rallied to any hopeful extent. For more than forty years Dr. Kirkbride's name has been familiar to the medical world as associated with the study of insanity. He was born near Morrisville, Bucks County, Pa., July 31, 1809. He was a descendant of Joseph Kirkbride, of the parish of Kirkbride, in the county of Cumberland, England, who came to America with William Penn. He received his education at Trenton, N. J., whence he came to Philadelphia and graduated at the medical department of the University of Pennsylvania in March, 1832. One month later he was appointed resident physician to the Friends' Asylum for the Insane, situated near Frankford, where he remained for one year; and in the spring of 1833 was elected to the same position in the Pennsylvania Hospital, which he held for two years, after which he engaged in private practice in Philadelphia. In the autumn of 1840 a new institution for the insane, now well known as the insane department of the Pennsylvania Hospital, commonly called "Kirkbride's," was so near its completion that it became necessary to select a superintendent. To this post, in October, 1840, Dr. Kirkbride was elected, and he remained the head of the institution until his death.

Under the promptings of Dr. Kirkbride and kindred spirits the association of the Medical Superintendents of the Insane Asylums of America was formed in 1866, of which he was President for eight years. He was elected a Fellow of the Philadelphia College of Physicians in 1839, was a member of the Philadelphia County Medical Society, the American Philosophical Society, the American Medical Association, and the Medical Society of the State of Pennsylvania. He was the author of the volume on "The Construction, Organization, and General Arrangement of Hospitals for the Insane," and on "Rules for the Government of those Employed in the Care of the Insane." In addition, he contributed a number of valuable monographs and reviews to the *American Journal of Insanity* and other periodicals. Personally

Dr. Kirkbride was remarkable for his genial temperament, which quickly endeared him to those members of the profession with whom he was thrown in contact. He was a man of modest and retiring character, but exceedingly clear and pronounced in all his social, political, moral, and professional opinions.

Reviews and Notices.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, A.M., M.D., LL.D. Fifth edition, revised and enlarged. New York: D. Appleton & Co. 1884.

THE author has adapted the present edition to the changes made in the sixth edition of the United States Pharmacopœia. He has also given the whole work a careful revision, incorporating the more recent improvements and additions to therapeutics. About one hundred pages are thus added to the volume. The valuable practical character of Dr. Bartholow's treatise has been recognized by the profession, and probably no one has succeeded better in popularizing the physiological in distinction from the empirical mode of studying therapeutics. The book is so excellent a one that we can hardly pick out any faults without venturing dangerously near hypercriticism. It appears to us, however, that there is a certain lack of definiteness in his description of the physiological action of the drugs; thus it is not enough to say that a drug increases the strength of the heart-beat and the volume of the pulse, we must know, and pharmacology does know in very many cases, upon what part of the nervous mechanism the action takes place. The book contains notice of several recently introduced drugs. The author would not, perhaps, recommend muscarin so readily if he knew that it was sixty cents a grain. He is, perhaps, a little too ready to recommend drugs, and to endorse their usefulness. All this, however, does not prevent the book from being a most admirable one, and a credit to American medicine.

SUICIDE: History of the Penal Laws relating to it in their Legal, Social, Moral, and Religious Aspects, in Ancient and Modern Times. By R. S. GUERNSEY, of the New York Bar. Read before the New York Medico-Legal Society, September 23, 1875. Revised and enlarged. New York: L. K. Strouse & Co., Law Publishers. 1883.

A MONOGRAPH on this particularly important medico-legal subject by an accomplished lawyer cannot fail to be instructive and interesting to the practitioner of medicine. Mr. Guernsey has certainly given us an admirably thorough, systematic, and complete treatise within the necessarily brief compass of a society paper. It is far from a bare digest of ancient and modern laws. If we may be allowed the comparison, the book resembles a well-written novel, not so distinctively from its pleasant grasp on the reader's attention, but from the masterly touches, which insensibly and without effort impress one with the motive behind the facts. Mr. Guernsey's wealth of research and aptness of illustration give us the side lights necessary to a rounded conception of each stage of his subject. We are made to understand so easily, as we advance, the social character of the period, that we appreciate at once the actions which induce the individual to suicide and the portent of the laws devised to meet each exigency.

The book is, on the face of it, a simple and unostentatious effort, and would naturally preclude anything like elaborate analysis or criticism (the few sentences we offer are certainly not intended to bear such an interpretation), but we have in it happily exemplified a manner of treatment which medical authors rarely attempt, or at least rarely attain. The average medical text-book is prac-

tically nothing but an elaboration of the quiz compend; and bears about the same resemblance, so far as method is concerned, to the work under consideration that an anatomical remembrancer bears to the better chapters of Ziemssen. The former is mechanical, the latter philosophical; the one gives at best an imperfect photographic, the other a stereoscopic view.

The fault of a medical man's style is due in a great measure to his imperfect literary training, but it is a very unfortunate fault, nevertheless, for it exalts memorizing at the expense of independent thought. The knowledge gained from the one is evanescent, from the other permanent.

The profession should learn more thoroughly to regard facts from a lawyer's standpoint. It would conduce to an exact balancing of evidence, and to an habitual suspension of judgment without evidence and hence to an accurate and adequate diagnosis. It would compel a presentation of facts that would appeal to the reason rather than the memory, and would in so far help to banish dogmatism from the lecture-room and medical literature and empiricism from practice, "a consummation devoutly to be wished for."

A MANUAL OF PATHOLOGY. By JOSEPH COATS, M.D., Pathologist to the Western Infirmary and the Children's Hospital, Glasgow, etc. With 339 illustrations. Philadelphia: H. C. Lea's Son & Co. 1883.

OF late years British and American students have had to depend for a treatise on pathology upon translations from the French or German, or such elementary textbooks as Green's "Introduction." It is, therefore, pleasant to be reminded that an English author can produce a work on this all-important branch of medicine which may compare favorably with foreign books. Dr. Coats has not attempted to write a new pathology that rests upon his personal observations alone, and yet an examination of his work plainly shows that it is no mere compilation. In fact, one of the best features of this treatise consists in the judicious admixture of foreign observation with private experience. Thus the subject is presented in a harmonious manner, facilitating the study of single topics, and making the entire volume profitable and even pleasant reading. The book is a rather bulky one, because the author includes in his descriptions general pathology as well as the special pathological histology of the different systems and organs. Many of the drawings are well-executed originals, and it is quite refreshing to be relieved from cuts that through frequent appearance in different works have bred the contempt of excessive familiarity. On the whole, it is but fair to say of Coats' pathology, that its author has succeeded in offering to English students and practitioners a thoroughly acceptable work that will now enable them to get along without translations.

TREATMENT OF DISEASES OF INFANCY AND CHILDHOOD, WITH OVER FOUR HUNDRED FORMULÆ AND PRESCRIPTIONS, as exemplified in the Services of Drs. A. Jacobi, J. Lewis Smith, Alonzo Clark, Austin Flint, W. A. Hammond, A. L. Loomis, W. H. Thomson, J. H. Ripley, T. Gaillard Thomas, J. R. Leaming, F. Delafield, L. A. Sayre, C. R. Agnew, L. Duncan Bulkley, Beverley Robinson, R. W. Taylor, G. H. Fox, F. N. Otis, A. A. Smith, E. C. Seguin, F. A. Burrall, E. G. Janeway, F. H. Bosworth, A. H. Smith, C. E. Billington, G. M. Lefferts, etc., etc., and in the hospitals of New York City. By CHARLES H. GOODWIN, M.D. Second edition, revised. New York: C. H. Goodwin, M.D. 1883.

WE are glad to note the cordial approval with which Dr. Goodwin's compact and complete little manual has been received by the profession, and the gratifying rapidity with which a second edition has been demanded. We take pleasure in congratulating its painstaking author, and in again commending the book to our readers.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. J. W. HOWE presented, in behalf of a candidate, a specimen of "Diffused Aneurism of the Popliteal Artery."

CHRONIC HYDROCEPHALUS.

DR. H. N. HEINEMAN presented a brain removed from a hydrocephalic child, two years old, and weighing only twelve pounds. It was interesting, especially on account of the thinning of the brain-tissue.

SARCOMA OF THE STERNUM, PLEURA, AND LUNGS.

DR. C. HEITZMAN presented a specimen with the following history: Dr. M——, forty-five years of age, came to his laboratory in April, 1882, for the purpose of having his blood examined, fearing the existence of leucocythæmia. For a year he had suffered from malarial poisoning, and claimed that his spleen was enlarged. Dr. Heitzman made a microscopical examination of blood taken from the finger, and found a decrease rather than an increase of the colorless blood-corpuscles; but the red blood-corpuscles exhibited a brown, reddish color, which he regarded as evidence that the normal formation of blood was being interfered with somewhere in the system, and he advised a change of climate, etc. At the same time Dr. M—— showed a tumor over the sternum, about the size of a pigeon's egg, movable superficially, but attached to the periosteum, and soft to the feel. Suspicion arose that it might be malignant, although it was stated that it had existed for a long time and had grown very slowly. Three months afterward Dr. Heitzman examined a specimen of blood drawn from the right pleural cavity of the patient, and found no pus corpuscles, no inflammatory corpuscles, but the red corpuscles exhibited the appearance already described. The fluid was non-coagulable. Dr. Gerster aspirated the pleural cavity several times, and subsequently Dr. Lange aspirated the tumor, and the blood removed from that was also examined, and exhibited elements which reminded one of sarcoma, although nothing specially characteristic was found. The diagnosis of sarcoma could only be suspected.

In August last another specimen of blood was sent to Dr. Heitzman, who examined it and found that of the few colorless corpuscles present many were undergoing disintegration, which always indicates approaching death.

Every time aspiration was performed, indicated by great difficulty of breathing, it was followed by considerable relief. In September dyspnoea returned, and while aspiration was being performed the patient died.

At the autopsy Dr. Heitzman found the body much emaciated. The tumor, then about the size of half a small goose-egg, was united to the periosteum, and on cutting into it an opening was found leading into the sternum, and large enough to admit his little finger. This perforation led to a cavity filled with blood, and evidently bounded by a tumor of the size of a small apple in the mediastinum. Both pleuræ were considerably thickened; both apices of the lungs were peculiarly changed into a callous-like substance, difficult to cut, somewhat resembling cirrhosis, but not having the gray color usually seen in old cicatrices in the lungs. There was a small quantity of blood in each pleural cavity. The heart was flabby. The liver was slightly increased in size, browner than normal, and showed very numerous dark purple specks, from which small drops of dark purple blood oozed, characteristic of cavernous tumors of the liver. The spleen was enormously enlarged, very firm, and gave a peculiar creaking noise when cut. All the other

organs were quite normal. The bronchial glands were somewhat enlarged.

The question arose, Was death due to an inflammatory process, or to a neoplasm? The appearance of both pleuræ indicated chronic pleurisy. Microscopical examination determined that the original tumor was sarcoma of the sternum, which grew inward rather than outward, and led to the destruction of the bone and the development of a sarcomatous growth in the anterior mediastinum. Both pleuræ and both apices of the lungs were transformed into dense fibrous tissue with innumerable aggregations of small globular bodies, which are seen with chronic inflammation and also in fibro-sarcomatous tumors, but the absence of inflammatory elements in the blood at previous examinations pointed toward the conclusion that the thickening was fibro-sarcomatous rather than inflammatory. The bronchial glands were sarcomatous. The little specks on the liver exhibited the usual features of cavernous tumors, or angiomas, and there was also interstitial hepatitis. The spleen was entirely destroyed. It contained myxomatous tissue, traversed by blood-vessels filled with blood, and evidently the organ was the seat of intense congestion.

The points of interest in the case were: (1) the remarkable combination of a malignant and benign growth, in the liver vascular tumors, and in the thorax sarcoma and fibro-sarcoma; and (2) although the tumor in the thorax was decidedly malignant, it gave rise to only few symptoms. Whether or not this peculiar feature was due to the impaired condition of the blood he was unable to say. To be sure, the condition of the spleen pointed directly to alteration in the formation of red blood-corpuscles.

DR. VAN GIESON said that about three years ago he presented a specimen in which the condition of affairs was just the reverse of that which existed in Dr. Heitzman's specimen—namely, primary sarcoma of the lung, and the sternum affected secondarily. With regard to the difficulty of diagnosis and the statement made by Dr. Heineman that more diagnoses of sarcoma and cancer of the lung and pleura are made post-mortem than during life, there might possibly be some difference of opinion. The diagnosis of the existence of a tumor of the lung, whether carcinomatous or sarcomatous, is sometimes a comparatively easy matter, when all the surrounding circumstances are taken into consideration, and the history of the case thoroughly known from the beginning.

In the case, the specimen from which he presented, there was no great difficulty in making the diagnosis, and it was confirmed by autopsy. Shortly after the report of the case was published he received from a gentleman, whose name he could not then recall, a table containing forty-five cases, and in over forty per cent. of those a correct diagnosis was made during life. In the case which he had reported, the symptoms were of such a character, it would seem, that no other diagnosis could be made which would account for them. There are cases, however, in which the difficulty of diagnosis is very great.

DR. HEITZMAN said that in one case he succeeded in making a diagnosis of sarcoma of the lung without even seeing the patient, and by examining the sputa, which contained globular elements smaller than pus-corpuscles or mucous corpuscles, and very numerous.

PERICARDITIS—ULCERATIVE ENDOCARDITIS—ABSCESS OF THE HEART—MICROSCOPICAL ABSCESES OF THE KIDNEY WITH COLONIES OF MICROCOCCI, AND THE BLOOD-VESSELS IN THE NEIGHBORHOOD FILLED WITH MICROCOCCI, RESULTING FROM THE INTRODUCTION OF A URETHRAL SOUND.

DR. GEORGE L. PEABODY presented the heart and one kidney removed from the body of a man who died of pyæmia following the introduction of a sound into his urethra. He had been treated on previous occasions for stricture above the bulbous portion, at no time close,

which admitted a No. 23 French. On November 18th a surgeon passed a sound, and on its withdrawal a few drops of blood followed, as had frequently occurred after the use of the instrument on previous occasions. Within twenty-four hours the man had a severe chill, followed by marked rise of temperature, delirium, and death on the eighth day.

Autopsy.—The heart showed the lesion of acute pericarditis, and also acute ulcerative endocarditis, with partial destruction of one of the cusps of the aortic valve. There was also an abscess in the heart as large as a small chestnut, just below the site of the aortic valves. The kidney contained abscesses, each surrounded by a zone of intense congestion.

Microscopical examination.—Dr. Peabody presented several microscopic slides, which showed micrococci in greater abundance than he had ever found before. Many of the abscesses in the kidney were of microscopic size. They contained colonies of micrococci, and the blood-vessels in their neighborhood were, very many of them, apparently completely plugged with micrococci.

DR. HEITZMAN asked whether Dr. Peabody examined the primary lesion, especially with regard to purulent phlebitis, which invariably precedes pyæmia.

DR. PEABODY said he examined the urethra with care and found no evidence of phlebitis.

DR. HEITZMAN also asked Dr. Peabody whether he held that the abscesses in the kidney were due to emigration of pus-corpuscles or to the breaking down of the entire kidney tissue itself.

DR. PEABODY said it was difficult to answer the question, because both conditions are found according to the stage of the disease in which the patient dies. In some of these abscesses it is evident that there is an intense aggregation of young cells without breaking down of tissue, while in others there is the same aggregation of cells but with breaking down of tissue. His own belief was that the presence of these irritants (micrococci) was sufficient to cause breaking down of tissue; and that they differ from other emboli in that they are distinctly infected by irritant properties, which are capable of causing the death of tissue in which they lodge. With regard to the pus, he believed that it originated here, as in inflammatory processes elsewhere, in part from colorless blood-corpuscles, but by no means entirely in that manner.

DR. HEITZMAN remarked that the statements made by Dr. Peabody fully agreed with what he had seen in abscesses of the liver and kidney.

SPINA BIFIDA—PARAPLEGIA, WITH LOSS OF CONTROL OVER THE VESICAL AND ANAL SPHINCTERS—OPERATION—CURE—DISAPPEARANCE OF THE PARAPLEGIA AND RESTORATION OF CONTROL OVER RECTUM.

DR. R. VAN SANTVOORD presented the liver and kidneys removed from the body of a boy twelve years of age. Early in life the patient was afflicted with spina bifida, attended by paraplegia and paralysis of both rectal and vesical sphincters. When six months old he was operated upon, and the result was a cure of the spina bifida, followed by restoration of power to the legs, almost complete control over the anal sphincter, but from early infancy he had been the subject of incontinence of urine. Occasionally he was unable to pass his urine and it was necessary to use the catheter. Sometimes he had a certain amount of control over the discharge of urine. The patient came under Dr. Van Santvoord's observation about the middle of last August. It occurred to him that possibly the cause of the urinary trouble might be contraction of the bladder, and he suggested the daily introduction of a catheter, with gentle dilatation by hydraulic pressure, but the bladder was found to be of considerable size. The boy soon began to lose his appetite, his urine contained pus and albumen, there was a daily elevation of temperature, and death occurred in November from exhaustion.

The autopsy was made by Dr. E. A. Maxwell, who found the bladder much thickened and sacculated; the ureters dilated—especially the left, which was larger than the small intestine, with enormous dilatation of the pelvis of the kidney on the same side—and filled with pus. There were abscesses in the structure of the right kidney and dilatation of the pelvis. The case, therefore, was one of spina bifida causing paralysis of the sacral plexuses on both sides, which was cured by an operation, and with the cure the paraplegia disappeared and control over the anal sphincter was restored. The dilatation of the left ureter was the most remarkable feature of the specimen.

HALLUX VALGUS—OPERATION—CURE.

DR. LEWIS HALL SAYRE presented the heads of the metatarsal bones of the great toe on each foot, removed on September 24th for the relief of hallux valgus. The man was forty years of age, and otherwise perfectly healthy. The condition had existed for many years. The joint on the right foot had suppurated twice, but no bone had ever been discharged. A straight incision was made over each joint and carried down through the periosteum, which was raised with an elevator, and the head of the metatarsal bone removed by means of bone forceps. The operation was performed antiseptically, horsehair drainage was employed, and the wound was closed with black silk sutures. Union was complete within two weeks, without suppuration. The patient was discharged able to walk without trouble and with movable joints.

ULCER OF THE STOMACH.

DR. BEVERLEY ROBINSON presented a specimen with the following history: H. G.—, male, single, fifty-eight years of age, a native of United States, and a salesman, was admitted to St. Luke's Hospital, November 13, 1883. Patient had been suffering four or five months from palpitations and dyspnoea. At present he has considerable cedema of the legs, no lumbar pains, micturition normal, no intestinal symptoms, no chest pains, temperature subnormal; urine 1.020, acid, faint cloud of albumen, a few epithelial scales; sonorous and sibilant râles are disseminated throughout the chest; more marked over left side; heart sounds feeble, though normal. Digitalis and whiskey were ordered.

November 14th, examined by Dr. Robinson. Old pleuritic adhesions are discovered on both sides of the chest. Considerable pleuritic effusion in lower half of right pleural cavity, less amount of effusion in left pleural cavity. Superficial pleuritic râles heard over both lungs, principally during inspiration, resembling sub-crepitant râles.

November 19th.—Patient becoming suddenly worse the house physician was called; when he arrived patient was quiet, comatose, breathing heavily; no jactitation; no sighing respiration; body and extremities not cold; heart action feeble. Night before patient had a bloody stool. Stimulated with digitalis and whiskey hypodermically; death.

Autopsy by Dr. F. Ferguson; notes by Dr. King, junior assistant.—Body is fairly nourished; rigor mortis is well marked. There is general anasarca. There are twenty-four ounces of clear serum in the peritoneal cavity. Diaphragm on right side is at the fourth intercostal space; left, fifth intercostal space. There are forty-eight ounces of reddish serum in the right pleural cavity, and thirty-six ounces in the left. There is one band of old adhesion at the apex of left lung, no adhesions on the right side. The heart is hypertrophied, its cavities are dilated; the muscular tissue contains fat; the valves are competent; there are some atheromatous patches on the anterior segment of the mitral valve; the aortic cusps are thickened. The lungs are in the condition of brown induration, they are poorly aerated. The mucous membrane of the bronchial tubes is normal. The spleen is normal. The kidneys are

lobulated, a trifle small; capsules are not adherent, surface is smooth and the markings are not distinct. The intestines contain blood, otherwise normal. There is an ulcer on the larger curvature of the stomach, irregularly ovoidal and two inches from the pylorus, with elevated edges (nearly half an inch above the rough bottom of the ulcer); there is a vessel in the ulcer plugged with fibrin, of considerable size. The mucous membrane of the stomach is markedly thickened; the stomach contains sixteen ounces of blood. The liver contains an excess of fibrous tissue. The brain is anæmic; there is atrophy of the convolutions; the lateral ventricles are distended with serum.

Microscopical examination made by Dr. Ferguson.—Stomach: There is no evidence of malignant disease in the neighborhood of the ulcer. It is surrounded by fibrous tissue, small areas of fat, and numerous small round cells of inflammatory origin, small spindle cells, and a few non-striated muscular cells. The muscular cells of the heart contain some fat-globules in places, but the transverse striæ can be seen generally.

Remarks.—"The features of interest in this case are: 1, patient did not accuse any local pain in stomachal or dorsal region while in the hospital; further, he digested the ordinary hospital fare without accusing any functional difficulty; 2, the absence of the usual symptoms indicating severe internal hemorrhage, such as jactitation, sighing respiration, and coldness of trunk or extremities."

ABSCESS OF THE SCALP—MENINGITIS.

DR. W. P. NORTHRUP presented a specimen with following history: Female child, aged eight months; New York Foundling Asylum. Was brought to the Out-door Department, November 13th, with symptoms of erysipelas of the scalp. Child was irritable and restless. November 13th, was returned to the Asylum hospital wards, when the following points were noted. Well-marked abscess over the right parietal bone, general hyperæsthesia, stiffness of back of neck. Pupils sluggish, otherwise no eye symptoms. Nurse who returned the child said it had "inward spasms" all the previous day. While in the house it lay in a rather apathetic condition. When undisturbed it would lie quietly for a long time, and when tickled on the soles of the feet "twitched all over." Died quietly November 25th.

Autopsy, November 28th.—Body well nourished. Abscess undermining scalp, covering whole right parietal bone; scalp thinned, bone bared of its periosteum. Opening about size of a silver twenty-five cent piece over the boss, edges of opening sloughy, outer table of the skull undergoing rarefying osteitis. Fontanelles normal: scalp elsewhere normal. On removing the calvarium no fluid escaped. All the sinuses were examined; all contain fluid blood; nothing abnormal. The walls were entirely normal. Beneath the parietal bone of the right side the dura mater was adherent. Nowhere from the inside of the skull-cap could any signs of communication with the abscess be found, neither were there any discolorations nor localized congestion. Brain: Nearly the whole convexity was covered with a thick, continuous, greenish-yellow, fibrino-purulent exudation, so thick over most of the surface as to cover the largest vessels and hide their color; in some places the outlines of the large vessels were seen encased in a thick coating; the exudate extended irregularly around to the base and there was found in scattered regions; about the optic commissure and medulla there was no exudate; ventricles normal; vessels of pia mater injected, giving the bright reddish tint in strong contrast with the greenish-yellow exudation. Spinal cord: vessels of pia mater injected, no exudation. Lungs: Moderate hypostatic congestion. Heart, spleen, and kidneys normal. Liver fatty. Stomach and intestines showed moderate increase of tenacious mucus, with dull gray, sodden, mucous membrane; mesenteric glands enlarged, firm, and reddish.

A SKULL ONE-SIXTEENTH OF AN INCH THICK.

DR. J. A. WYETH presented a piece of bone removed with the trephine from the skull of an adult. It showed the average thickness of the skull and was the thinnest he had ever seen, being only about one-sixteenth of an inch thick.

The Society then went into Executive Session.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, November 2, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, *pro tem.*, IN THE CHAIR.

DR. VIRGIL P. GIBNEY presented

A CASE OF MULTIPLE JOINT DISEASE OF SYPHILITIC ORIGIN OCCURRING IN A PATIENT WITH SCROFULOUS CARIES OF THE KNEE.

The subject of the present history has been under the observation of the out-door department of the Hospital for the Ruptured and Crippled, since February, 1872. At that time she was three years of age, and the diagnosis recorded then was synovitis of the left knee.

From February, 1872, to February, 1876, there are no notes in the case; but in this interval suppuration appeared and continued, so that in February, 1876, a note was made that an examination of the urine presented negative results. It was thought at that time that lardaceous changes were developing, but the urine furnished no conclusive evidence.

At the present time the mother is quite positive in stating that swellings about the wrists, fingers, and ankles were only from six to eight months' standing. But a reference to notes recorded under date of March 16, 1877, shows that there were eleven open ulcers, varying in size from a line to half an inch in diameter, without very profuse discharge; a knee ankylosed at an angle of 145°, with outward rotation of the leg over a small arc, and no very marked bony enlargement.

It is further recorded that on that date she stood and walked with comparative ease, *i.e.*, when a knee-splint was applied. Mention is also made of the right ankle in the following words: "Still boggy, though motion tolerably good, and no pain." And concerning the wrists it is recorded: "About the same condition; uses the hands well." So that it appears now that these swellings have existed at least six years, and that the mother's present anxiety is due to an increase of the joint deformity. It was also recorded on the above date, in the way of family history, that this child was the eighth of ten children; that the first died when fourteen days of age; the second was living and healthy at this time; the third was premature and still-born; the fourth had cicatrices and several granular swellings about the neck, of three years' standing, and was regarded generally as a scrofulous child; the sixth and seventh children were still-born; the ninth and tenth were still living and healthy.

In addition to the notes recorded, Dr. Ripley has quite recently examined the child, and found additional proof. For instance, he finds the mother had seven miscarriages or premature births, and that one of the children who had died was covered with an eruption called measles. The mother's throat showed loss of tissue about the pillars of the fauces, and one very characteristic cicatrix was seen just in front of the uvula. The patient herself had convulsions when four months of age, and shortly afterward a conjunctivitis for about two months; and had rubeola, followed by bronchial pneumonia.

At present she has epitrochlear glands almost as large as peas. The post-cervical glands are enlarged. The hair is thin; the spleen is enlarged; her throat and teeth show nothing characteristic.

From June, 1877, to August, 1879, the notes refer only to the condition of the knee from time to time, under different remedial measures, and especially under the calcium sulphide. The results were all negative.

No notes are on record in this interval bearing upon the other joints.

It was thought in August, 1879, that the wrists presented rheumatic signs, but a case was not made out. Iodide of potassium was administered, but not in large doses.

There is nothing further with regard to her wrists or fingers until July, 1883, when it was recorded that there were peculiar swellings about the joints of the upper and lower extremities, the wrist- and ankle-joints notably. Her urine at this time had a specific gravity of 1.008, without albumen.

During all these years she has had comparatively little pain. The discharge has been rather profuse from numerous ulcers, and yet the patient has gone about with little discomfort. The deformity of the knee has not increased. Numerous sinuses remain open, even from the middle third of thigh to the calf.

The knee-joint is pretty well ankylosed. The wrist swelling is peculiar, in that the radial epiphysis is enlarged, and the synovial sac is somewhat distended. There is bony enlargement about the distal ends of the first phalanx of the index and middle fingers. The second phalanx of the little finger is held flexed on the first phalanx. The swellings are not tender, and only occasionally painful. The tibio-tarsal joints present similar swellings, but the metatarsal and phalangeal are free.

The case seems to present both syphilitic and strumous elements, and they seem quite independent the one of the other.

The patient is presented to illustrate—1, the prolonged suppuration, extending over a period of ten years without any marked lardaceous changes; 2, the facility with which a patient thus affected can get about; 3, the immunity from pain; 4, the coincident swellings of other joints, and apparently of a different nature.

DR. SAMUEL SEXTON presented

A CASE OF EXCESSIVE AND TORMENTING ITCHING IN THE EXTERNAL AUDITORY CANAL OF SEVEN YEARS' DURATION, WITHOUT LOCAL LESION (PRURITUS AURIS).

The patient, a gentleman, aged forty-eight, had come to Dr. Sexton's office in February, 1877, with the following history: For one year previously there had been most distracting and intolerable itching in the left ear; sleep often had been impossible, and to relieve the itching he constantly scratched the inner extremity of the external auditory canal with the head of a large brass pin and rubbed the auricle with his hand. Some of the numerous physicians whom he consulted had advised him to instil oil, glycerine, etc., into the ear, and one of them informed him that there was an obstruction of the canal. He had occasional pains in the knees and hands, and about twice a week he had headache. He had long employed Hill's dye, an article supposed to contain sugar of lead, on the hair of his head and on the beard. Nasal catarrh existed in a mild form, but gave rise to no complaint. The external auditory canals were large and the inner end of the left one and the parts about the anterior superior quadrant of the left tympanic membrane were considerably injected by the constant use of the pin. The drum-heads were lustreless and the seat of trophic changes. The hearing was almost normal in the right ear, but somewhat impaired in the left; of this, however, he did not complain. The patient made two or three visits at this time, but treatment did not promise to give him any relief and he ceased to come.

In January, 1883, he came again, on account of the itching, which had not been relieved in the six years that had elapsed since his former visits to me in 1877. He had in the meantime again sought the advice of numerous medical men, and one of them, an aurist, under

whose care he was about a year ago, made a diagnosis of aspergillus and advised the instillation of dilute alcohol into the ear several times a day; this was kept up for six months, during which time he used several quarts of alcohol, at first under the doctor's observation, but without relief. This treatment at times made him dizzy. He also took Fowler's solution of arsenic at this time.

This case puzzled me very much, but my attention having been directed more particularly to aural neuroses since his first visit, I determined to make a more searching examination of the patient than hitherto, with the hope of getting at the etiology of the disease. In the first place it was ascertained that his mother and several brothers and sisters had broken down in health rather early in life; they were some of them especially subject to head troubles.

The patient himself, who is now fifty-four years of age, is well nourished. He finds, however, that his memory is failing, and that he is easily confused. He never has a single night's uninterrupted sleep, his dreams are unpleasant, and, especially after three o'clock in the morning, the itching and nervousness prevent rest entirely, and he arises feeling worse than when he went to bed. Mental depression is at all times very great; he has frequent headaches, and is easily fatigued by any mental or physical exertion, especially by the former. After the more marked periods of excitement he perspires freely about the head. For one or two years past he has had attacks, coming on suddenly every few weeks, of mental disturbance, characterized by a confusion of ideas and attended with a sense of heat in the head and cold extremities. An attack observed during a visit to my office was marked by slow pulse and frequent sighing.

These attacks, in which constant sighing and other nervous symptoms are observed, would in women, perhaps, burst forth as hysterical storms. In the case under consideration, however, the frequently recurring waves of depression seemed to discharge themselves, as it were, in unrestrained sighs.

Four months ago some new and very disagreeable sensations were experienced; there was an explosion in the left ear like a pistol-shot, which shocked him severely and gave rise to vertiginous symptoms; he was very nervous, and distressing tinnitus aurium of a roaring, buzzing character supervened; these symptoms were the cause of so much confusion that for a time the sense of hearing was entirely perverted and both mental and physical prostration were extreme. The next day autophony phenomena were observed. When he attempted to speak he could not understand himself, nor could the voice be modulated; it came and went, or, in other words, the autophony was intermittent. The next day after this attack being Sunday, he was very much bothered while preaching. Ever since the attack he has experienced frequent snapping in the left ear, occurring usually when he is in bed and all is quiet.

It is worthy of note that his life has been much of a struggle, and that since the death of his wife, which took place ten years ago, this has been increased.

Another fact seems of sufficient interest to be mentioned here, namely, a susceptibility to rhus poisoning. Ten years before the trouble began in his back—to be alluded to presently—he was frequently and severely poisoned by the rhus toxicodendron, the face and other parts, especially the scrotum, being much swollen. The attacks occurred several times during a period of four years, when he was engaged in handling the drug in a pharmacy. The eyes were often closed from the facial swelling, and he was sometimes confined to his room for several weeks. A son of his has a like idiosyncrasy.

An important fact remains to be mentioned: I allude to a trouble to which can in a measure be traced the aural difficulty. But a short time before the aural trouble began he experienced a severe itching on the back, between the shoulders, and extending from the nape of the neck to the lumbar region. It was not attended by any

eruption. This itching gave rise to great distress, interfering with his preaching and other work. After undergoing various treatment for this, including wet cupping, etc., he finally applied to a dermatologist for relief. A diagnosis of pruritus cutaneus was made, and a strong galvanic current was applied to the back so effectively at one sitting that *shortly afterward the trouble in the back ceased, but soon afterward began to manifest itself in the left ear.* The itching in the ear was more severe than it ever had been when confined to the back, since it never permitted him to enjoy a single night's rest. He now constantly found himself making desperate reaches for the spot of intensest irritation, usually employing the large brass pin before alluded to for the purpose, the head of which was inserted deep down into the canal. The ear, however, usually seemed worse afterward. He often rubbed the auricle violently until the friction was painful. Years ago he had practised pinching the auricle and the integument about it until the parts were red and sore, and thus masked for a time the deeper itching which he could not reach.

In general terms the patient's condition was fair, bodily nourishment being pretty good; the rheumatic diathesis had slightly increased, and the finger-joints were somewhat stiff. An important etiological factor was, perhaps, the long-continued dental irritation. The teeth began to trouble him at the age of twenty-five, and between thirty and forty they decayed very rapidly, giving rise to frequent attacks of periostitis of the alveolar processes. Only four years ago some of them were extracted. He has worn a large upper vulcanite plate for the past eighteen years.

The aural catarrh seems to have been uninterruptedly progressive; the drum head is less lustrous than when first seen; that the transmitting mechanism of the ear has suffered the acoustic phenomena before-mentioned plainly shows.

The inner end of the left external auditory canal is considerably macerated from the prolonged application of the alcohol, and some epithelium has exfoliated. It should be stated here that at no time when examined by me were there any other local disturbances or lesions present in the internal auditory canal than could be accounted for by the constant irritation caused by the violent scratching of the canal and the introduction of oils, etc., by the patient himself.

When a certain spot on the lower and posterior wall of the inner end of the canal is touched with the point of a silver probe, it is observed that the act of swallowing is performed, and although this reflex phenomenon is involuntary, the patient fancies that he does it to relieve himself of something that ought to be removed from the throat.

In considering the history of this case, with a view to adopting a rational plan of treatment, it was found, as has been above stated, that a certain degree of heredity existed; that periodical headaches had been experienced, which may or may not have been due to malarial influences. He had long experienced great irritation of the dental branches of the fifth pair of nerves, and perhaps above all he had suffered from mental troubles. That imperfect mastication of food from loss of teeth may give rise to digestive disturbances is evident enough, and we also have a history of the existence of a rheumatic diathesis. That the rhus poisoning and the effects of using a hair-dye containing lead about the head and face, may have had their influences in originally causing the itching in the back is probable. The acoustic phenomena, consisting of autophony and tinnitus aurium, are not to be considered as a direct cause of the itching, but rather as remotely influencing the trouble by increasing the mental distress. On arriving at a diagnosis in this case it appeared that the causative influences were mainly to be found in some central nervous disturbance, which, through the aural distribution of branches from the fifth cranial and the second spinal nerves, seemed to manifest

itself in the outward reflex that has been above described. Naturally, the prognosis was not encouraging, since the patient's age and habits of life were unfavorable.

The treatment consisted, in the first place, in recommending a more cheerful life, out-door exercise and other hygienic measures. It was believed that inasmuch as the dorsal cutaneous pruritus was very much less distressing than the aural symptom it would be well to invite a recurrence of the former while general mental and physical improvement were brought about, and accordingly irritation was produced on the skin of the back by means of painting with cantharideal collodion over small surfaces at a time, and he was encouraged to direct his attention to this region and indulge himself in any desire to scratch the parts.

Previously to this treatment it had been observed that pressure over the lower cervical vertebræ was somewhat painful. *For two days after the first application of the collodion was made there was no itching whatever in the ear,* and for a week subsequently it was scarcely observable, the patient speaking of it as a "dead itching." No desire to scratch the ear was experienced even during this period of time; it was the first omission in seven years to perform this act many times daily, although it had been long strictly forbidden. After several of these irritating applications, extending over some weeks, *the back finally began to itch severely,* and some of the post-cervical glands became enlarged and painful.

In the meantime the patient had been getting as much out-door life as possible, and had tried to free his mind from care.

At the end of a month the left ear was quite free of disagreeable sensations and whatever of them were at times experienced seemed masked, as it were. The right ear, however, was now occasionally the seat of titillating sensations. The above treatment began in February, 1883, and was continued until May, slight exacerbations being occasionally experienced in both of the ears, especially the left, while the itching of the back was less. Relief not being complete under the above treatment it was now determined to test the efficacy of occasional applications of a solution containing four grains of the sulphate of atropia to the ounce of water applied to that portion of the external auditory canal where the sense of itching seemed to be most intense. At first the effect was not satisfactory, the application appearing to increase rather than lessen the trouble. It was, nevertheless, persevered in and finally proved a source of relief whenever slight attacks came on. I am of the opinion that a stronger solution could be employed in some cases with advantage. It is to be hoped that further improvement will take place as the patient's general health becomes restored, but his condition is at present one of comparative comfort as compared with his former experiences; he regards himself as being seventy per cent. better than he was before treatment. The management of the purely acoustic symptoms I have purposely omitted, since they are only of special interest to the otologist.

DR. T. A. McBRIDE read a paper entitled,

PEPTONURIA.

He had observed last February that in some urine the addition of a saturated solution of picric acid produced a white precipitate, which disappeared entirely on the application of heat. This reaction was noted in some twenty-three cases. For reasons referred to later he excluded all but ten cases for study, and none of the ten had been under any previous treatment and had taken no medicines whatever. In the ten cases the exhibition of heat, nitric acid, and terchloroacetic acid had produced no precipitates. The precipitate was evidently not albumen. He then subjected the urines of the ten to the following tests: mercuric chloride, mercuric-iodide-potassium, Millon's reagent, tannic acid, argentic nitrate, plumbic acetate (neutral and basic), produced precipitates; absolute alcohol produced precipitate to some

extent. Dialysis was performed and the dialysate responded to all of the above tests. The following tests were applied to the urine and likewise to the dialysate without producing any precipitate: nitric, hydrochloric, and sulphuric acids; monochloroacetic, dichloroacetic, and trichloroacetic acids; acetic acid; acetic acid and ferrocyanide of potassium. The dialysis was conducted with great care and under the most improved method. The reactions indicated the presence of peptones, but no reaction had been obtained to the bi-auret or sulphate of copper and hydrate of soda or potassa test. Professor Charles Rice, who had corroborated the research so far in the specimens of urine and the dialysates thereof, advised concentration of the dialysate, and when this was done and the cupric alkaline solution added, a rosy-red color was very apparent. All of the reactions for peptones were thus obtained. The clinical consideration of the ten cases was deferred for the present.

Dr. McBride called attention in his paper to other precipitates produced by the addition of picric acid to urine, other than albumen and peptones. Hager in 1879,¹ and more recently Drs. Cook and Watkins,² called attention to the fact that a solution of picric acid produces a white precipitate in the urine of those who are taking quinine, whether in large or moderate doses. They have not stated, however, that this precipitate disappears on the application of heat. It should also be borne in mind that quinine in the urine answers to all of the tests for peptones, with the single exception of the bi-auret or the alkaline sulphate of copper test. One must depend on the absence of response to this test and to the history. In none of the ten cases investigated had any quinine been taken by the individuals. A solution of picric acid also occasions a precipitate of mucin when that substance is present in sufficient quantity. In three specimens Dr. McBride observed the precipitate was not great and did not disappear on the application of heat. Hager states that normal urine boiled with a saturated solution of picric acid yields a flocculent precipitate. Dr. McBride thinks that there is no danger of confounding this with albumen.

Dr. C. L. DANA referred to the experiments of Pohl and Meixner which, among other things, had covered some of the points of Dr. McBride's inquiry. These investigators had found peptonuria constantly in all chronic purulent diseases, abscesses, bronchorrhoea, cancer, the dissolving stage of pneumonia, and in acid urine in sixty-five per cent. of high fevers. The speaker himself had found traces of peptone in the urine after a full meal. It was sometimes desirable to estimate the amount of peptone in the urine. He had found some difficulty in finding a good method of removing the albumen and mucin from the suspected fluid. The former, if present, interfered with the characteristic purple-red color which pure peptone gives with alkalies and copper. The ordinary method of acidulating, boiling, filtering, then precipitating with alcohol was not always satisfactory. He had tried recently a test devised by Hofmeister and recommended and used by Pohl. This consists in adding to the fluid to be tested about three per cent. of a saturated solution of sodium acetate, then a solution of ferric perchloride, drop by drop, till the mixture is well reddened, then sodium acetate again until the reaction is neutral or feebly acid. On boiling this, all the albumen and mucin are precipitated, leaving the peptone, if present, in solution. The liquid is filtered and tested for peptone. The speaker believed with Dr. McBride that an examination of the urine for peptone might sometimes reveal or suggest facts of importance, such for example as an internal suppuration or cancer, or a beginning leukaemia. For peptonuria seemed to exist wherever there was an active movement of wandering cells.

Dr. F. P. KINNICUTT said that the use of picric acid as a *bedside* test for determining the presence of albumen

in the urine is open to many objections. It has been demonstrated that the peptones and other proteids are precipitated by it; among the latter mucin is to be particularly mentioned, as it is not re-dissolved by heat.

The presence of quinine in the urine, as Dr. McBride has mentioned, may also give rise to erroneous conclusions. As a laboratory test for detecting the presence of minute quantities of albumen and of *peptones* in the urine, I believe it to be of much value.

Dr. McBRIDE said that he thought the recognition of peptonuria was rather an important matter. A simple test for the presence of peptone was therefore very desirable. It was necessary to remove the sources of error that exist in the use of picric acid.

As regards the use of this acid as a test for albumen, it was first employed for this purpose as long ago as 1872, a fact of which Dr. Johnson, its introducer, seemed to be unaware.

Dr. F. P. KINNICUTT read the paper of the evening, entitled

THE TREATMENT OF ACUTE RHEUMATISM BY BLISTERS.

[The paper was published in a previous issue of THE RECORD.]

In opening the discussion, Dr. BEVERLEY ROBINSON said that in a considerable per cent. of cases the existence of a cardiac murmur in acute rheumatism does not indicate any inflammatory condition of the endocardium. There was always a considerable degree of anæmia in this disease with consequent relaxation of muscular fibre, including that of the heart, which became dilated, thus causing murmurs. Recently he had been using

BLISTERS OVER THE HEART

in certain cases of chronic cardiac disease with enfeebled action and accompanying dyspnoea. They were cases where the ordinary methods failed to give relief. The blistering seemed to strengthen the heart's action. From these experiences he could see how by using blisters in acute rheumatism some increase of the heart's power might be brought about, and thus lessen the effusion into the joints.

Dr. SAMUEL SEXTON said that some time ago he had occasion to look up the subject of blistering in connection with the aggravation of symptoms which seemed to take place in blistering over the mastoid process in inflammation of the middle ear. He then found that blistering the chest had been known to produce pleurisy, and clinical evidence seemed to show that severe blistering might increase inflammatory troubles.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HOSPITALS AND THEIR DRAINAGE—MORE DEATHS FROM MISADVENTURE AMONG MEDICAL MEN—THERAPEUTIC EXPERIMENTS.

LONDON, December 1, 1883.

PRACTICAL hygiene appears to be at a low ebb amongst hospital physicians and surgeons, for sanitary defects seem to be as frequent in medical as in other institutions. The Hospital for Sick Children, Great Ormond Street, has just been closed for some time for repairs and to overhaul the drainage. More than one metropolitan hospital has, I believe, had to pursue the same course within the last few years, and the state of some of our provincial hospitals used to be notorious.

I have to chronicle additional deaths amongst the profession. I have had to report several suicides lately. To the latter must be added the case of a Scotch medical student—presumably insane—who committed a double murder and then suicide. Two deaths from accidental poisoning have lately occurred. One was that of

¹ Pharmaceut. Central., No. 36.

² Medical Times, October 27, 1883. Philadelphia.

a well-known surgeon, Mr. James Shuter, M.A., M.B., LL.B., F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital. Mr. Shuter was a distinguished graduate of the University of Cambridge, a rising surgeon, and a popular and successful teacher. He seems to have by mistake swallowed about an ounce of a hypodermic solution of morphia (containing about forty grains of morphia) thinking he was drinking a saline draught he had prepared. Medical assistance was summoned, but was unavailing. The other death is that of a Brighton practitioner, Dr. J. M. Crombie, who died this week from accidentally taking an overdose of morphia. It is a singular fact that Dr. Crombie was the author of several papers on narcotics and anesthetics and their administration. Dr. Crombie advocated the self-administration of chloroform for the relief of pain and invented an apparatus for the purpose. Dr. Crombie's invention cannot be said to have been favorably received by the profession, who naturally have no wish to encourage so dangerous a practice as the self-administration of anesthetics. Dr. Crombie's own death adds yet another to the long list of unfortunate deaths from narcotics injudiciously administered, and evidently points the moral that too great care cannot be taken, even by experienced practitioners, in the administration of such dangerous remedies as narcotics and anesthetics.

A subject which has excited great attention in the papers lately is an escapade of Drs. Ringer and Murrell, who published lately an account of some experiments with nitrite of sodium. The effects of the drug were stated in such exaggerated terms, and the poisonous qualities of large doses so obviously shown, that the paper attracted the attention of the lay press, where the natural comment was that such apparently useless experiments on poor hospital patients were cruel and unjustifiable. Thereupon, of course, followed the howl of the antivivisectionists. The matter has since been explained to the satisfaction of a committee at the Westminster Hospital appointed to investigate the conduct of Dr. Murrell. It is well that he has escaped so easily, as he is a promising young physician and a censure would have much damaged him. I hope though the lesson will not be lost either on him or Dr. Ringer, or, indeed, on the host of men who are experimenting with potent drugs. Dr. Ringer only contributed the experiments on animals to the present paper, but I well remember his experiments on patients in University College Hospital, some years ago, with jaborandi. I then thought that it was as unjustifiable as it was useless to repeat doses which had acted so violently as to give rise to most distressing symptoms. I asked myself why he would not try smaller doses when repeating the experiments. Perhaps Dr. Ringer thinks it makes it even to administer infinitesimal doses of other drugs to other patients.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 8 to December 15, 1883.

MCKEE, J. C., Major and Surgeon. Assigned to duty as Medical Director, Department of the Columbia, G. O. 31, Department of the Columbia, December 3, 1883.

SHUFELDT, ROBERT W., Captain and Assistant Surgeon. Now on sick leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon General of the Army. S. O. 284, par. 12, A. G. O., December 12, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 15, 1883.

DEARBORNE, F. M., Surgeon. Placed on the retired list from December 10th.

HEFFINGER, A. C., Passed Assistant Surgeon. In addition to his duties at the Navy Yard, ordered to attend officers at Portsmouth, N. H.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 18, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
December 11, 1883.....	0	20	59	3	35	43	0	0
December 18, 1883.....	2	22	64	5	44	42	0	0
<i>Deaths.</i>								
December 11, 1883.....	0	4	8	3	6	28	0	0
December 18, 1883.....	1	3	6	4	13	21	0	0

THE EASTERN AND THE WESTERN PHYSICIANS AND THEIR RELATIVE ADVANTAGES.—Dr. J. A. Rafter, of Holton, Kansas, rather pointedly writes: "I have read with considerable interest the letters of Dr. Edmund C. Wendt that have appeared in the last three or four issues of your journal, in which he so well describes the different characteristics of the country and people of the great West and Northwest. I believe, however, that I voice the sentiments of nine-tenths of the profession of the West when I state that 'the impressions' of Dr. Wendt, from a medical standpoint, were hastily arrived at, and his deductions need many modifications. I think, still further, the tone of his letters are liable to make a false impression among the physicians of the East in regard to our professional attainments and standing. Several years' residence here, and something of an acquaintance among the profession, inclines me to the conclusion that Eastern and Western physicians differ but little, and that little is due to circumstances and surroundings. I have looked up the statistics, and as near as I can come at it, about one-half of the doctors practicing this side of the Mississippi are graduates from Eastern schools, and usually of New York or Philadelphia. Now I state it as a fair proposition that until the graduate turns his face westward he is (other things being equal) standing upon about the same level as the one who locates in New York, and speedily becomes 'professor' or 'adjunct professor.' The practitioner here can quote from the lectures of Flint, or Loomis, or the venerable Alonzo Clark as readily. They can practice medicine as intelligently, and surgery as successfully, as practitioners of the same ability there can do. In the face of this we can hardly forgive Dr. Wendt for saying (let me quote from his letter): 'Our Western confrère has perhaps heard of the Code. In rare instances he has even read it some, that is the old one. But he cares very little for it, and about as much for the new.' After this rather surprising piece of intelligence comes the most astonishing statement of all, 'He rarely hesitates to meet his homœopathic brother.' Now, without wishing to be impertinent in the least, I most emphatically challenge those assertions. I believe we are moderately familiar with the Code of Ethics, and are satisfied with it as it exists. We are only too familiar with the disgusting jangles that have been enacted in the Societies of the State and County of New York, and in the Academy of Medicine, by men whose petty jealousies and grasping ambitions have gotten the better of their heads. We are not proud of them here, and I am not willing to allow a stigma to rest upon the profession

of the West without a remonstrance, when it was a thrust given through them by a code contentions at those who possibly honestly differ with him nearer home. Neither do we claim kindred with pretenders, nor do we meet pretenders of any kind in consultation. We despise quackery, we despise deception probably as thoroughly as you do in New York. I will admit we are not as much given to recommending quack nostrums, but possibly the reason may be that we have no 'official position' to annex which will serve as an advertisement. We claim, and I think facts will justify it, that we are equal as practitioners to our Eastern brethren, and need not go to New York to learn 'differential diagnosis.' "

CAN WE SEPARATE MATTER AND FORCE?—Dr. F. A. Tuttle, of Jefferson, Ohio, sends the following very suggestive item: "Dear Sir—I see your London correspondent calls Maudsley the OLD name of materialist. Is force material? Can we separate matter and force? From the irritability of protoplasm up through reflex action, instinct, memory, reason, and will, are not the clustered nerve-cells always in proportion to the amount of mentality? Is it not humiliating to a thinking man working on a hypothesis, when puzzled, to call in the supernatural? We shall never learn how matter thinks, but is not the reign of law supreme there as elsewhere? Is not mind a phase of force? If not, why the need of constant supply of red, rich blood? Can we study this great question only with the inductive method? In an editorial a short time ago, reviewing Galton's inquiry into human faculty, you confessed you could not understand it. Neither can I; but the supernatural does not help us. It is just as easy for me to conceive how brain-cells think as to conceive how kidney-cells can eliminate poison from the blood. Where did they learn that strychnia and morphia are poison? How can matter taste, smell, or see? This awful mystery, could we understand it, is all founded on that one UNIT, the irritability of protoplasm; adaptation and heredity, working through the unchanging law of an all-wise Creator, tells the rest of the wondrous story. I do not know the ultimate nature of matter any more than I do the many phases that force may assume. Our profession must study the yet untold mysteries of insanity through the mal-nutrition of nerve-centres, as metaphysical moonshine has as yet afforded but little light to help us out."

WHAT IS MEANT BY THE SALE OF A MEDICAL PRACTICE.—The following statement of a recent English case, May 25. Thomson, appears in one of the legal journals: "The Master of the Rolls intimated the opinion, although the point seems not to have been decided, that a contract for the sale by a physician of his practice cannot be ordered to be specifically performed, as it is merely for the sale of a personal service, the vendor's introduction of the purchaser to the patients. He concedes that there is a good-will of an apothecary's business, or, as he called it, a 'doctor's shop,' meaning to include, doubtless, a physician who kept an office or shop where he sold to his patients the medicines he prescribed. The dictum does not throw any doubt on the assignability of a physician's practice, nor on the value of it, as a consideration for a promise to pay for the transfer, but only raises the nice question whether the Court would order the physician to perform such a contract, and enforce the order by process for contempt. The Master of the Rolls regarded the contract to introduce and recommend to patients as analogous to the contract of an actor or singer for his services, the performance of which the Court could not superintend."

VANILLISM.—A distinguished professor of the Faculty of Medicine of Bordeaux, Dr. Layet, has just read an interesting communication (*Lancet*) on certain injurious properties of vanilla, of which a satisfactory explanation has up to the present been wanting. The affections have been studied at a warehouse in Bordeaux, where on an

average 25,000 to 30,000 kilogrammes of vanilla arrive every year. In these storehouses the pods are cleaned, sorted, and classed according to their quality. These manipulations seem to cause certain symptoms among the workmen and women. At first an itching of the face and hands, associated with a powerful smarting sensation, is experienced, and the skin becomes covered by a pruriginous eruption, swells, reddens, and desquamates at the end of some days. At other times there is a feeling of malaise with dulness, stiffness, and muscular pains, which oblige the worker to give up this kind of labor. The cutaneous malady seems to be due to an acarus which appears as a small white rounded body occupying generally the ends of the pod. This insect does not penetrate the skin like the acarus scabiei, but determines the affection by its mere contact. Probably the parasite is aided in its irritant effects by the presence of "give" in the form of pale acicular crystals. The nervous symptoms M. Layet is inclined to put down to the manipulation of inferior pods of vanilla, containing much oily juice enveloping the seeds in the interior of the siliquæ.

CRITICISING THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—A correspondent from Hartford, Conn., sends us a very severe criticism upon the typographical inaccuracies of the *Journal of the American Medical Association*, especially with reference to the number containing a review of the Proceedings of the Connecticut Medical Society, 1883. We believe that the editor has explained the cause of the trouble.

DR. E. D. COONLEY, not E. D. Coonby, was the name of the correspondent on page 637.

OPHTHALMOLOGICAL METHODS IN PARIS.—A correspondent of the *Orvosi Hetilap* writes from Paris that the most eminent representatives of ophthalmological science in the French capital are foreigners of German, Polish, or Greek extraction. Among these he considers Dr. Meyer to be rather conservative. Dr. Gabrowski, who has the largest *clientèle*, is very fond of abstractions of blood. He orders leeches freely in different forms of conjunctivitis. He treats phlyctenular ulcers of the cornea by instillations of pilocarpine. For cataract he employs the old flap operation, without iridectomy, having entirely discarded Von Graefe's method. He uses the latter's knife, however, and makes the flap upward. He has made a series of about ninety of these flap operations, but has not yet published the results. De Wecker performs keratotomy for *ulcus corneæ serpens*, and follows up the incision by instillations of eserine. For the latter he substitutes atropine if there is a recurrence of hypopyon. For superficial abrasions of the cornea he also orders a solution of pilocarpine to be dropped into the eye. In cases of serous iritis, he avoids atropia and employs subcutaneous injections of the alkaloid of jaborandi. The number of patients at his clinique is smaller than at Gabrowski's, but his operative material is greater. He extracts cataracts by his well-known modification of Von Graefe's method. He uses antiseptic precautions. After performing tenotomy for strabismus, he closes the conjunctival wound by a suture applied in such a way as to approximate the angles of the wound and not the sides. He claims that by this suture the sinking of the caruncle is effectually prevented. He prefers sclerotomy to iridectomy for glaucoma. If the disease returns in an eye which has been already operated upon, he incises the scar. This operation he terms cicatriscotomy. He still continues his experiments of forcibly stretching the optic nerve in case of atrophy. The most peculiar notion of De Wecker is certainly his substitute for the protective bandage in cases of corneal ulcer. It consists in an apparatus made of glass and shaped somewhat like an artificial eye. This being introduced behind the lids allows the patient to see, at the same time that it protects his cornea from the air and the contact of the lids.

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FUNCTIONAL DISEASES OF THE HEART.

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NEWBURYPORT, MASS.

(Continued from p. 540.)

PART III.—CLINICAL.

THE following interesting observation, from a recent work by Lecorché and Talamon,¹ may be regarded as occupying the border-land between functional and organic diseases. This case is regarded as a "cardiac affection of nervous origin;" an example of heart strain, "without valvular lesion, the result of violent passion." It well illustrates the effect of powerful emotion in deranging the heart, and the concatenation of morbid phenomena—asthenia, palpitations, arrhythmia, asystolia, syncope (*vide* Parts I. and II. of this series).

Professor Lecorché prefaces this report with the following comments: "The cardiac troubles were the manifest consequence of violent emotions. The patient was a very choleric, excitable man; during the Commune he had a narrow escape from death by being shot, and his hair turned suddenly white from the terror which this occasioned; it was finally a fit of anger which determined the crisis of cardiac oppression which brought him to our hospital. We noted in this person the most complete arrhythmia—a veritable 'folie cardiaque;' there was, however, no notable hypertrophy; the heart was somewhat dilated. We detected no souffle, and there was no œdema of the lower extremities, and no pulmonary congestion. It seemed to be wholly a case of disorder of the cardiac innervation. At the same time this man was a prey to an orthopnea as terrible as in the most advanced asystolia, with tendencies to syncope. Was there here a lesion of the myocardium? Has the arrhythmia ended in complete and permanent want of systolic power? We cannot say, nor can we be certain whether, in the event of his death, the autopsy would disclose any cardiac lesion referable to other causes than those of a moral or nervous character. This man had, in fact, been addicted at times to alcoholic excesses, and we know well that alcoholism entails arterial and cardiac degenerations. Hence it is that in questions of etiology the complexity of causes hardly ever, to an impartial mind, permits an absolute solution."

CASE I.—A case of "forced heart" without valvular lesion; arrhythmia.—Name of patient, J—, aged forty-eight; gilder; entered the Maison Dubois, February 6, 1879. Twelve years ago, after a drunken debauch, he had an unknown disease, referred by him to the intestines; was very sick; lost consciousness, remaining in this state four or five days. No other sickness; never had rheumatism.

Is very excitable and irascible. Has suffered great reverses of fortune. After the Commune he barely escaped being shot, and the alarm so affected his mind that he was insane for six months; his hair and his beard turned white from this fright. He never had previously suffered from any heart trouble whatever (whether palpitations or oppression), when, two months ago, as the sequel of a violent fit of passion, he was taken with an

attack of palpitations and precordial distress. Since then this disorder has never left him, and the least fatigue or emotion aggravates it, and puts him out of breath. No œdema and no cough. Urine scanty and high colored.

Present condition.—The patient cannot lie down, either night or day, his breath is short and labored, and his speech quick and interrupted. The least movement increases the dyspnea. Pulse weak, small, and irregular. The beatings of the heart are very irregular; sometimes they are slow, with prolonged pauses between each pulsation; sometimes precipitate, running riot, as it were, for eight or ten pulsations. The heart shock is very much diffused, and the area of cardiac dullness is greatly increased. The apex beats in the sixth interspace. There is no appreciable murmur, either at base or apex. No œdema of ankles. Pulmonary sounds are normal. No signs of congestion or œdema at bases. Urine scanty and loaded with lithates; free from albumen and sugar.

Treatment.—Digitalin, one granule night and morning. Morphia subcutaneously, *pro re nata*.

February 8th.—Dyspnea continues, with paroxysms of suffocation. Great prostration; at times lipothymia. Feels himself "going." Weight in the precordial region, and painful throbbings. Heart beats heavily, striking the thorax with dull, massive blows. Pulsations disorderly, slow or rapid, feeble or violent, with pauses, intermissions; one series of beats trespassing on the succeeding series.

February 9th.—Has had a prolonged faint with loss of consciousness. Heart's condition as before—complete arrhythmia.

February 10th.—Patient has been removed by his family.

Remarks.—If the above explanation of the pathogenesis of this case be correct, then we are to believe that a strong nervous or "moral" shock may so disturb the nutrition and innervation of the heart as to cause functional disease of an alarming and protracted, if not permanent character. The supposition is, however, a tenable if not probable one, that in this patient, J—, alcoholism had induced atheromatous changes in the coronary arteries with fatty myocardium. As remarked in a former article, the functional diseases continually trench on the organic, and in the case of the former we are seldom privileged with an autopsy to clear up the diagnosis.

The following case, which came under my own observation while in practice in Canada, is one concerning which there can be no doubt, as the patient eventually recovered.

CASE II.—Heart-strain from overwork.—Patient, S. N—, aged thirty-four, married; farmer; residence, Ship-ton, Canada. Has always enjoyed good health. Parents and grandparents, brothers and sisters free from cardiac troubles.

History of attack.—One year ago (August 1, 1867) while at work in the hay-field mowing heavy grass, and trying to keep up with his hired men, he "felt something give way as if a blood-vessel had burst," became faint, and was obliged to cease work. It seemed, he said, as if his vital forces had left him. It was with difficulty that he walked to his house. From that time the least exertion brought on palpitations, faintness, and some degree of dyspnea. On one occasion it seemed imperative that he should help secure a load of hay, but the attempt to use the pitchfork determined such a heart-pang and such

¹ Lecorché et Talamon: *Études Médicales*, p. 447. Paris, 1881.

oppression that he had to be carried to the house, and he did not leave his bed for several days.

About this time he went to Montreal and consulted the late Dr. Scott, who referred him to me, with the following note: "Mr. N—— has enlargement of the heart from overstrain. I have prescribed for him small doses of digitalis with tincture of chloride of iron. I would advise that this medicine be continued a long time: that he be much in the open air, but he must refrain from work. There is much dilatation, but the heart-muscle will thicken up, and he will be all right by and by if he will be patient and rest for a year or so."

This commended itself as sound advice, and I did little but urge that Dr. Scott's instructions be carried out. Mr. N—— seemed a stout, robust man, with a strong, regular pulse of 86 when not excited. The exertion of ascending a flight of stairs would run his pulse up to 120, with violent diffused throbbing and pain in the precordial region. Never had severe dyspnoea at night. Extremities warm; circulation did not seem to be notably impaired. Auscultation and percussion revealed an increase in the area of transverse dulness; apex in the fifth interspace, and nearly on a line with the nipple. There was no bruit with either sound of the heart, and no pulmonary congestion or œdema.

"At this date" (these notes were written August 3, 1868) "Mr. N——'s condition has materially improved, but he can do no work but light work, such as teaming, doing chores, etc. Is able to superintend his farming operations, has a fair appetite and digestion, sleeps well, and has no heart-trouble as long as he keeps free from excitement and does not exert himself. Takes no medicine."

I have not seen this patient since writing the above memorandum, but have several times heard from him, and understand that he completely recovered from his cardiac malady, being able in a few years to do as much work as at any former period of his life.

Remarks.—This was evidently a case of primitive dilatation of the heart from forcing of the myocardium by overwork; a compensatory hypertrophy followed, which thus far enables the heart well to fulfil its functions. Here, again, the barriers between the functional and organic are trespassed upon, if not overpassed, for dilatation and hypertrophy cannot be said to be strictly normal structural states.

CASE III.—Long-standing dyspepsia, resulting in the symptoms of the forced heart.—Mrs. A. C——, aged sixty-five, a dyspeptic valetudinarian. This patient has been continually under my observation for the past ten years. During all this time, and for several years previous while she was under the care of Dr. Cross, she has suffered from gastric troubles. Has not been altogether incapacitated for housework; appetite has been good, and she has been able to eat and digest sufficient food to prevent emaciation; but her dietary has been necessarily plain, and any overstepping certain limits has always been followed by severe retribution. Attacks of gastralgia, with palpitations, at first infrequent and readily relieved by simple remedies, became more and more frequent and severe, necessitating fasting for a day or two, and very gradual return to solid aliments. Since 1876 these attacks have been chiefly nocturnal, occurring about midnight; have been always attended with eructations of gas and liquids, and (what has distressed Mrs. C—— the most) violent palpitations, or complete rhythmical disorder. These attacks were generally relieved very promptly by a powder of bismuth, calcined magnesias, and charcoal, each ten grains, with a fourth of a grain of opium. The quantity of opium has been gradually increased to a grain.

October 1, 1883.—I have examined the heart of this patient more than fifty times, during the attacks and in the interval, and never detected any murmur, and till recently have always failed to detect any signs of dilatation. At present there is marked evidence of dilatation, an increased area of dulness being discoverable, with apex

displacement. Mrs. C—— now suffers from frequent paroxysms of arrhythmia, with oppression in the precordial region and dyspnoea. There is no lung complication, and nowhere any œdema. The pulse in the interval of the attacks is steady and slow, seldom being more than 75. The arrhythmia is characterized by irregularity in the series of pulsations, with intermissions, pulsations following pulsations in the true style of the *folie cardiaque*, with long pauses between the series of pulsations. Nothing has ever seemed to relieve the patient but remedies addressed to the condition of the stomach. A strict enforcement of rigid dietary rules, with attention to the bowels, has always been followed by good results, with sometimes exemption from the nocturnal attacks of arrhythmia. She now takes at bedtime a little bromide with *chloranodyne* and digitalis; the digitalis is repeated twice during the day, in ten-drop doses of the tincture.¹

CASE IV.—False angina pectoris and palpitations in a hysterical person.—Patient, Mrs. N——, aged thirty-five, widow. Father died of some heart disease at an early age; mother and several sisters died of consumption. Patient is of bad reputation; habits of life for several years irregular; her vicious conduct has impaired the nervous forces. One year ago she had a long sickness which kept her confined to her bed two months; it was pronounced hysteria by the attending physician.

Present condition.—Keeps her bed constantly; says that she is not able to move. When asked what is the matter with her, says that she is in the last stage of consumption; that she is dying of the same disease that her mother and sisters died of. If asked about her appetite, she replies that she has no appetite and has retained no nourishment for four weeks; this account is corroborated by the nurse, who declares that N—— vomits all food and drinks as soon as taken. "They are no sooner down than they are up again." She gets no sleep night or day, according to the statement of her attendants and her own asseveration. There is unimpeachable testimony that she coughs blood and vomits blood every day. She complains bitterly, when undergoing examination, that her chest is sore in every point.

The most thorough examinations, several times repeated, find nothing wrong with the heart and lungs. Her pulse is normal, and she has no fever heat. Despite the fact that she takes no food, she does not emaciate. Tongue is clean, and bowels are regular. Menstruates normally. There is only one diagnosis to make of this case, and that is the one word—made to cover so much ignorance—*hysteria*.

The interesting feature of the case for us now is the fact that she has frequent attacks of palpitations and cardiodynia, during many of which I have been present. The pain is very severe, radiating to all parts of the thorax, though never shooting down either arm; this is simultaneous with the palpitations. The pulse beats from 120 to 140 a minute, and the heart throbblings are intense. There is coldness of the surface and extremities. Acting on the supposition that there was vaso-motor spasm at the bottom of this disturbance, I have lately used nitrite of amyl during the paroxysms, and with

¹ December 3d.—Since writing this report (October 1, 1883) I have again made a careful examination of this patient, and detect a well-marked systolic bruit at the apex, indicating mitral insufficiency; there is also a diastolic murmur at the base. The long-persistent nutritive derangements of the organ, then, have terminated in valvular endocarditis with calcification of the aortic and mitral valves.

Here, then, is a clear case of functional, leading step by step to organic, disease. The concatenation of morbid phenomena is thus indicated by Clifford Allbutt (*Braithwaite's Retrospect*, Part 64, page 72): "1st, dilatation of the right heart; 2d, dilatation of the left heart; 3d, hypertrophy of the left ventricle, or of both ventricles; 4th, chronic inflammation of the aorta and aortic valves; 5th, dilatation of the aorta; 6th, incompetence of the aortic valves; with, 7th, further compensatory hypertrophy of the left ventricle; 8th, loss of compensatory hypertrophy, with consequent rapid failure, and often with consequent mitral regurgitation."

Dr. Allbutt is satisfied, from clinical experience and examination of the dead, that by sheer stretching of the chambers the auricular valves may become incompetent, but oftener the sequence of events is as above described.

In the case of Mrs. C——, the history points clearly to a long series of years in which the strictest examination, repeated almost weekly, failed to discover any signs of structural disease, albeit the functional disturbances were very frequent; when finally, as with progressing age, the failure in the nutrition and innervation of the organ became more decided, dilatation and rhythmical disorder became marked, yet no murmur was audible, till at last a double murmur becomes manifest. Here there is no previous history of alcoholism to explain the endocardial degenerations.

considerable benefit. She also takes glonoine internally, in drop doses three times a day of a one per cent. solution, and this is about all the medicine she takes, owing to the irritable stomach. This patient will in time get well, as she did last year when she had a similar attack.

November 20th.—The above notes were made September 30, 1883. I then considered Mrs. N—the despair of therapeutics, but formed a hopeful prognosis. This patient appears now to be convalescent, and the remedy that is doing all the good—prescribed by an old woman who chanced to visit her—is *Horsford's acid phosphates*. We wonder at the results of metallotherapy (while in our hearts believing it a humbug), and here is something quite as wonderful as anything Mons. Burq has wrought!

†CASE V. *Irritable heart; palpitations; incurable.*—The following case, reported by Dr. J. W. Corson in his "Functional and Sympathetic Affections of the Heart," will come under the head of "Nervous Palpitation."

"A female hat presser, aged thirty-five, unmarried, tall, muscular, apparently healthy, though suffering from want and poverty, in a damp basement, consulted me in 1848 for nervous palpitation of ten years' duration, and for which she bore the marks of counter-irritation while under ineffectual treatment some years previous in Edinburgh. The heart was natural in size and sounds, with a little precordial tenderness to the finger, *painful palpitations* more or less constant, increased by excitement, and accompanied by a smart knocking impulse. Under the use of preparations of iron, Fowler's solution, in combination with vegetable tonics, digitalis, hyoscyamus, conium, valerian, with mild counter-irritation, followed by the external application of belladonna, she continued for two years with slight palliation at times, but no permanent improvement, till at last she grew discouraged and discontinued treatment. A year or so afterward she died somewhat suddenly of pneumonia without affording the desirable opportunity of a post-mortem."

CASE VI. *Cardiodynia, palpitations, and arrhythmia from the use of tobacco.*—From the same paper of Dr. Corson, long out of print, I select the following interesting observation: "A highly intelligent friend, aged sixty-five, stout, ruddy, early married, temperate, managing actively his large business, after premising that he commenced chewing tobacco at seventeen, swallowing the juice, as is sometimes customary, 'to prevent injuring his lungs from constant spitting'—and that years after he suffered from a gnawing, capricious appetite, nausea, vomiting of meals, emaciation, nervousness, and *palpitation of the heart*, dictated to me quietly at his desk, recently, the following story:

"Seven years thus miserably passed, when, one day after dinner, I was suddenly seized with intense pain in the chest, gasping for breath, and a sensation as if *a crowbar were pressed tightly from the right breast to the left, till it came and twisted in a knot round the heart, which now stopped deathly still for a minute, and then leaped like a dozen frogs*. After two hours of death-like suffering, the attack ceased, and I found that, ever after, my heart *missed every fourth beat*. My physician said that I had organic disease of the heart—must die suddenly—and need only take a little brandy for the painful paroxysms, and I soon found it the only thing that gave them any relief. For the next twenty-seven years I continued to suffer milder attacks like the above, lasting from one to several minutes, sometimes as often as two or three times a day or night; and to be sickly looking, thin, and pale as a ghost. Simply from revolting at the idea of being a slave to *one vile habit alone*, and without dreaming of the suffering it had cost me, after *thirty-three years' use* I one day threw away tobacco forever. Words cannot describe my suffering and desire for a time. I was reminded of the Indian, who, next to all the rum in the world, wanted all the tobacco. But my firm will conquered. In a month my paroxysms nearly ceased, and soon after left entirely. I was directly a

new man, and grew stout and hale, as you see. With the exception of a little asthmatic breathing, in close rooms and the like, for nearly twenty years past I have enjoyed excellent health."

CASE VII. *Heart distrain and palpitation from exhausting mental application.*—We cite one or two more interesting illustrations from the same source:

"A friend, distinguished as a divine and author, aged about forty-two, after several years of severe application, in which he habitually studied till three or four o'clock in the morning, was at last greatly incapacitated for a long period by irritable palpitation of the heart. He was most relieved by a succession of blisters the size of a twenty-five cent piece over the heart, and rest with tonics, and at length nearly restored by a tour in Europe, mental relaxation, and more generous diet. Any great mental effort, however, still exhausts his stock of nervous energy and brings on irritability of the heart."

CASE VIII.—"A celebrated Methodist clergyman, of middle age, having by protracted and severe studies brought on irregularity of the heart, was obliged to suspend his labors, and was pronounced a victim to incurable organic disease by good medical authorities. In his retirement he was surprised by the opinion of a shrewd country practitioner that his disease was merely functional, and that he might with proper treatment gradually resume active work; and finding by a little experience the last opinion correct, in a few months he accepted the highest office in the church. He has since labored several years as bishop."

Dr. Corson alludes to the fact, of which I have had personal experience, and seen instances among my classmates, that "medical students exhausted by a winter session are apt to be special subjects of real or fancied irregularity of the heart."

CASE IX. *Arythmia and intermissions from tobacco.*—A. B—, of Salisbury, a cornet-player, consulted me during the past summer for cardiac disorder. When I first examined him, and during two subsequent examinations the heart's action seemed perfectly normal, except that there was now and then an intermission of four or five seconds between the beats, then the pulsations, a little precipitate and violent at first, became regular again. At the fourth visit there was marked arrhythmia of the kind described by Guttman, *i.e.*, after several regular strokes one stroke was omitted, and this was followed by complete disorder in the next series of five or six pulsations. A. B— had been an inveterate smoker, this habit was at once discontinued. He was given digitalis, then cactus and convallaria with, however, little seeming benefit; sleep at night had long been interrupted, and he was now urged to go to bed regularly at nine o'clock, giving up his usual brass band exercise; digestion was disturbed, and an attempt was made to restore this function by dietary hygiene with muriatic acid and strychnia; for the constipation a morning dose of Hunyadi Janos was directed. The disordered rhythm of the heart was only an expression of the disordered rhythm of the other organic functions; the physiological processes had badly adjusted themselves to insalutary conditions, and it required an entire change of scene and of habits, a return to country and to farm life, and an utter abandonment of tobacco, before tolerable health was regained, and even now, when B— is fatigued or excited, some slight cardiac irregularity is noted.

CASE X. *Dilatation, with failing heart from age, successfully treated by cactus grandiflorus.*—This case is imperfectly reported by Dr. O'Hara in *Medical News*, November 10, 1883. The patient, Mrs. L—, was sixty-five years of age, had vertigo, anæmia of the brain, dropsy, etc., all due to failing heart. Dr. O'Hara gave five minims of Parke, Davis & Co.'s fluid extract cactus grandiflorus every four hours to this patient, with marked relief of all the cardiac symptoms and probable prolongation of life.

CASE XI. *Intermittent pulse; dilated and failing heart;*

relief by cactus. (Reported by Dr. O'Hara.)—In a similar case, in which the diagnosis was "dilatation and failing heart, compensation gone by," digitalis, iron, and nux vomica had been given with no effect. The patient became swollen generally, had orthopnoea, suffered very much, heart becoming very intermittent on the least effort. He was going downward daily, and on June 22d ult. the pulse was very intermittent and only thirty-four beats to the minute; patient was very waterlogged in the lungs and over the whole body. Dr. O'Hara obtained a hint from Flint's "Clinical Medicine" as to the efficacy of the cactus in such cases, and ordered five-minim doses of the fluid extract (the preparation of P., D. & Co.) every four hours. In a few days every symptom improved, the dropsy disappeared, and he could lie down to sleep at night. He has been taking the medicine now for five months (the last month fifteen minims *ter die*) with marked benefit; the dropsy has left him; has rarely an intermittent pulse.

Remarks.—The above case is here reproduced, not because it is a well-marked instance of functional disease—there was a soft mitral systolic murmur, and Dr. O'Hara is inclined to regard the valvular incompetency as primary—but because it illustrates the *pulsus tardus* and *intermittences*; how the functional and organic shade into each other; and that practically we have to treat both forms by the same remedies.

CASE XII. *Palpitations from anæmia; relief from iron and glonoine.*—This patient is an elderly woman (past sixty), residing on Unicorn Street, and living in abject poverty and wretchedness. Were it not for the meagre rations which she receives as a city pauper she would starve. She is very anæmic, and has many symptoms which would pass for hysterical.

The notable feature of this case is the frequent attacks of palpitation on exertion; these sometimes come on in the night-time from trifling causes. The nocturnal attacks are generally preceded and accompanied by tremblings of the limbs and coldness of the entire surface, indicating spasm of the vaso-motors. This spasmodic condition of the arterioles is undoubtedly the etiological antecedent of the cardiac disorder.

I am giving this patient perchloride of iron and glycerine, also three times a day one drop of a one per cent. solution of nitro-glycerine; a fifteen-grain dose of bromide at bedtime. I cannot control the dietary of this patient, or procure for her country air and all the benefits of a first-class sanitary residence, therefore I do not expect any lasting amelioration.

CASE XIII. *Dilatation and failure of the heart; palpitations, anasarca; relief from digitalis and convallaria.*—Patient, Miss T—, a maiden lady, aged seventy, residing in High Street. This case is very similar to No. X. (vide supra). There is marked increase of area of cardiac dulness, but no murmur. Pulse generally normal, but exertion brings on palpitations. A notable feature of the case is the anasarca of the lower extremities, which pit, on pressure, as far as the knees. No lung complication, no dyspnoea accompanying the palpitations.

The failure of cardiac power, in fact, the gradual development of the symptoms of the "forced heart," is clearly traceable to the anæmiating and obstructing influence of cancer of the rectum. The case is loathsome in the extreme. The rectum is impacted with cancerous nodules, and there is almost complete constriction and obliteration of its upper portion, so that only liquid feces can filter through. Here, then, we have an agency operating, like a cirrhotic kidney, to interrupt the circulation in quite an extensive mucous tract. This of itself is sufficient to overtax the heart, which, moreover, participates in the general constitutional cachexia and debility. There is nothing to be done but sustain the forces, and make the patient comfortable with anodynes.

I have prescribed digitalis, afterward convallaria, with benefit for the cardiac asthenia and dropsy. The most

good was derived from the convallaria (ten-drop doses of the fluid extract of the flowers) which for some time gave exemption from the annoying palpitations, with marked diminution of the anasarca. The action on the kidneys was quite perceptible.

The preparation of the lily of the valley used was the fluid extract of Parke, Davis & Co., Detroit. I have no experience with any other preparation than that of the Detroit firm, who import all their convallaria from eastern Europe, believing that only the Russian plant is medicinal. Whether this be so or not, we do not seem to have as yet sufficient data for determining. If the European plant possesses medical virtues which the American does not, may we not in this fact find an explanation of some of the failures in the therapeutic employ of this drug which have lately been reported by certain practitioners in this country? It is worthy of remark in this connection that in some instances in which I have known the infusion of the native plant to be used, no results of any account were noted.

CASE XIV. *Irregularity of the heart from lithæmia.*—The following case is reported by Dr. J. M. Da Costa in his "Nervous Symptoms of Lithæmia":¹ "A gentleman, forty-eight years of age, fond of intellectual pursuits, and leading the life of a student in addition to bearing the cares and anxieties of the responsible direction of heavy interests, has been, at least for twelve years, subject to attacks of vertigo which distress him and demoralize him. . . . The attacks are of about a minute's duration; he has had them at night, awakening him out of sleep; they are objective, and followed by dull headache. . . . Irregularity of the heart I found to be very common with him, the pulse some days intermitting every fourth beat, and on others only every twentieth. When these irregularities were most marked he would have rapidly-passing spells of oblivion, during which his mind was a blank, and he would stagger in his gait; he was gloomy and haunted by the idea that he was becoming an epileptic. The intellectual powers were always acute, but long spells of listlessness requiring strong will-power to force himself into exertion were not infrequent. . . . The urine often deposited lithates in abundance; specific gravity 1.020 to 1.024; often oxalates. . . . Slight sallowness of the skin and elevation of the temperature, not exceeding one degree, were occasional symptoms. The joints of the right hand were occasionally tender on pressure, pain in the toes, and so-called rheumatism in the leg were also at intervals observed. Lithæmia existed in the family. The father had suffered from similar symptoms, including the vertigo. A brother had the uric acid diathesis very marked, and had passed renal calculi of uric acid. A system of active exercise, shower-baths, regulated diet, produced very good results; but the cure was completed by a European trip, and the taking, while in Europe, of a course of Kissingen water."

There is no doubt that blood laden with the products of nitrogenous waste is a general irritant and a disturber of all the trophic processes of the economy. There is not one of the organic functions which may not suffer from lithæmia, a condition becoming more and more common as a result of our civilization, and which is, as Dr. DaCosta describes it, "a half gout which does not bring with it the pain, inflammation, and obvious swellings of the gouty paroxysm, but which works more silently, is characterized by the abundance of lithic acid or lithates in the urine, frequently coexists with signs of ill-assimilation of food, and with aches and pains unaccompanied by any perceptible changes of the aching part. Hepatic derangement is also often found, and from this end of the chain the links are stretched through many vague, almost nameless, symptoms to outbreaks of true gout, or to structural change in heart-vessels and kidneys."

That this kind of nitrogenous poison severely affects

¹ American Journal of Medical Sciences, October, 1881, page 315.

the nerve-centres, causing, on the one hand, vertigo, failure of the memory, and mental depression; and, on the other hand, the whole train of symptoms usually referred to spinal irritation (headache, nausea, pains in the upper and lower extremities and sides, gastralgia, dysuria, ischuria, etc.); that it also disturbs the vaso-motor centre, causing general or local spasm of the vaso-constrictors, hence embarrassment of the heart's action and palpitations, we infer from facts that are increasingly numerous. But no theory of this toxic action is complete which does not make account of the influence of lithiasis on the entire cardiac nervous mechanism, a problem for whose solution we have not the data.

Several severe cases of palpitation have, during the past year, come under my observation, which I saw good reason for referring to lithæmia. I have, unfortunately, not been able to follow out these cases.

CASE XV. *Palpitations from loss of blood.*—Mrs. B—, a widow lady, of Newburyport, forty-five years of age, suffered severely from metrorrhagia consequent on change of life, and was rendered thereby very anæmic. For some days after these attacks of flooding she was subject to palpitations, with precordial distress and a diffused knocking impulse of the heart against the chest; there was a bellows murmur and a jerking pulse. After the establishment of the climacteric these symptoms disappeared.

CASE XVI. *Hepatic congestion accompanied by palpitation.*—Dr. Hope "gives a very interesting case of a lady, forty years of age, stout, with intermission, palpitation, and oppression of a heart otherwise natural, and with constipation, succeeded by bilious stools and enlarged liver. Spare diet, and 'active mercurial purgatives, employed almost without intermission for two months, brought off an incredible quantity of dark-green and deep-orange bile.' Suspension of these aggravated the symptoms. In three months she enjoyed 'perfect health.'"¹

CASE XVII. *Uterine disease; palpitation; recovery.*—I am once more indebted to Dr. Corson for the following case: "A lady, twenty-six years of age, having four months previously suffered much in an instrumental first labor, called my attention, in 1850, to palpitation, uneasiness, and a smart, knocking impulse of a heart otherwise healthy, accompanied by dragging pains about the loins. On examination with the speculum the vagina was slightly smeared with leucorrhœal discharge, and the os uteri was prolapsed, swollen, tender, and excoriated. Under the use of occasional applications, with a camel's-hair brush, of a solution of the nitrate of silver of ninety grains to the ounce; vaginal injections of a solution of extract of conium and tannin, alternated with cold water; twenty drops of a mixture of equal parts of the muriated tincture of iron and the tincture of hyoscyamus three times a day in a wineglass of sweetened water; porter, and beefsteak, she gradually recovered her health."

CASE XVIII.—*False angina pectoris in a gouty patient; relief by bleeding and nitrite of amyl.*—The following case from Dr. Lauder Brunton is cited by Huchard in a late number of the *Bulletin Générale de Thérapeutique*: "A gouty patient was suffering from nocturnal attacks of angina pectoris, varying in duration from an hour to an hour and a half, and coming on between two and four o'clock in the morning. During the intervals digitalis, aconite, and lobelia were given without success; during the attack alcohol and stimulants produced little effect; chloroform momentarily calmed the pain. A venesection of three or four ounces and the application of wet cups brought relief. Thinking that the benefit derived from bleeding was attributable to consecutive diminution of arterial tension Brunton was prompted to employ nitrite of amyl, which lowers vascular tension. The patient was made to inhale five or six drops, and immediately with the production of

redness of the face the pain disappeared. Generally the attack of the following night was 'nipped in the bud.' Sometimes a slight paroxysm came on five minutes after the disappearance of the first, but always yielded to the inhalation of a few drops of the amyl. The patient was eventually completely cured."

Dr. Huchard, in commenting on this case, makes this remark: "Lauder Brunton speaks of two kinds of angina pectoris; the one with sudden invasion, which rapidly disappears, whose duration is only a few minutes and is characterized by a sharp pain in the precordial region, the head, and the arm, with a feeling of approaching death; the other, in which the pain may be very intense, but with gradual invasion and rather slow disappearance, whose duration may be from several minutes to half an hour or more, and in which the sensation of approaching death is less accentuated, or even absent. It is useless to remark that the characters assigned by Brunton to the second variety of angina are those which I have attributed to the false anginas of the arthritic."

PREVENTION OF PUERPERAL INFECTION.

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MANY years before Pasteur, by his experiments with microbes, founded the germ theory of zymotic diseases, and before Lister, applying the theory to the treatment of wounds, revolutionized surgery, the theory that puerperal fever is due to infection was propounded, and a specific preventive treatment instituted to guard against it. In my paper on "Lying-in Institutions," published in the "Transactions of the American Gynecological Society," in 1877, I showed that as early as 1847 Semmelweis, of Vienna, acting on the principle that puerperal fever was due to infection with cadaver poison, introduced in one of the two departments into which the large Viennese Lying-in Hospital is divided, the use of chlorine-water for disinfecting the hands before any vaginal examination was made, and that he thereby brought the mortality down to a comparatively low figure.¹ Since that time the theory, divested of its exclusiveness, has constantly gained ground, but it was especially after Listerism had begun its triumphant march through the world, that a methodical antiseptic treatment was used as a preventive of puerperal fever. As far as I can find, this was first done in 1870 by Stadfeldt, of Copenhagen,² who used carbolic acid, and soon similar measures were more or less adopted everywhere. I myself have used carbolic acid regularly for the last eight years for my hands and instruments, for vaginal injections twice daily during the first week after delivery, for washing out the uterus when indicated either as a prophylactic or a curative measure, and for covering the genitals during the lying-in period.

So pleased was I with this treatment, that when I was appointed Visiting Obstetric Surgeon to Maternity Hospital I followed it there, and am convinced that it was of some value both in preventing and curing disease, but nevertheless it was far from satisfying the demand for an efficient antiseptis. In private practice it is comparatively easy to avoid infection if we take care not to cause it ourselves. A hospital is the true place in which to try the value of an antiseptic, and I doubt there are many places which present the conditions for a more crucial test than our New York Maternity Hospital, an institution which, properly speaking, does not exist at all except in so far that it has a medical board of its own, while in every other respect it is only a department of Charity Hospital—a large general hospital in which all diseases, medical and surgical, are treated. Seventy women or more, expecting to be confined within a period

¹ Corson, in Boston Medical and Surgical Journal, February 1, 1854, page 22.

¹ Semmelweis: Die Ätiologie, der Begriff und die Prophylaxis des Kindbettfebers, pp. 61-63. Wien, 1861.

² A. Stadfeldt: Les Maternités, leurs organisation et administration, p. 12. Copenhagen, 1876.

varying from four months to a few days, occupy two "waiting wards." When labor pains set in, they are transferred to the "pavilions," two small wooden buildings, each of which contains two large and two small wards, but one of the large and two of the small are used as dormitories for the pupils of the training school for nurses. As soon as feasible the patients are therefore returned to the main building and placed in the so-called "convalescent ward," which accommodates twenty-four patients. When at times there reigned much disease in the pavilions, the whole service was transferred to a ward in the main building, where the results became still worse until the pavilions had been disinfected and could be occupied again.

As everybody would expect who knows how dangerous a place a general hospital is for lying-in women, the mortality has at all times been much greater than nowadays we find it in real lying-in asylums. Since the maternity service was brought in connection with Charity Hospital the mortality has been :

Year.	Deliveries.	Deaths.	Percentage.
1875	570	15	2.67
1876	536	20	3.73
1877	480	32	6.67
1878	225	7	3.11
1879	254	11	4.40
1880	149	8	5.37
1881	382	9	2.36
1882	431	14	3.25 ¹

While some of these deaths are attributable to diseases for which the hospital is not responsible, the great majority were the effect of hospitalism.

The present year will show as bad a record as any on the preceding list. Of 345 women delivered during the first nine months of the year, 30 have died, and, in order to avoid the appearance of throwing blame on others, I will add that I was myself on duty during the first three months, in which 108 women were delivered, 11 of whom died.

The bad condition of the hospital becomes still more apparent if we examine the frequency of disease after delivery. It used to be rather an exception than the rule to see a perfectly normal lying-in period. During the six months from October 1, 1882, to March 31, 1883, in which I was on duty last, 192 women were delivered, and 46 of these, or almost 1 in 4, were seriously sick, 39, or almost 1 in 5, of inflammatory puerperal diseases.

The special diseases are seen by the following table :

A. *Inflammatory puerperal diseases.*—(a) Diphtheritic vulvitis, colpitis, or metritis, 19 cases (3 of these developed peritonitis, 4 died). (b) General peritonitis, 10 cases (3 of them had diphtheritic inflammation, 7 died). (c) Metritis, 10 cases (6 of them had dissecting metritis,² none died). (d) Perimetritic inflammation, 2 cases (local peritonitis, parametritis, none died). (e) Erysipelas, 2 cases (1 with mammary abscess, 1 with diphtheritic inflammation of the genitals, both died). (f) Pleuritis, 1 case. (g) Mammary abscess, 5 cases (1 developed gangrenous erysipelas and died).

B. *Non-inflammatory puerperal diseases.*—(a) Shock after Cesarean section, 1 case (died). (b) Hemorrhage, 2 cases (died). (c) Cerebral hemorrhage during delivery, 1 case (died). (d) Mania, 1 case (recovered). (e) Uræmic coma, 1 case (died). (f) Eclampsia, 1 case (developed diphtheritic inflammation, recovered).

C. *Non-puerperal disease.*—1 Double pneumonia before delivery, 1 case (died).

When I again went on duty on October 1st of this year, the condition of the hospital was at its worst, nine women having died during the last month, and half a dozen

seriously sick, puerperæ being left over from the preceding service, one of whom succumbed a few days later.

In the meantime, bichloride of mercury had begun to be praised as an antiseptic in surgical and obstetric practice. I therefore laid a detailed plan for its use in Maternity Hospital, and the Commissioners of Public Charities and Correction kindly furnished the apparatus and appliances requisite to carry it out. But not trusting in the sole effect of a yet untried antiseptic drug, I adopted several other measures, each of which may have contributed somewhat to the splendid results obtained.

The service was divided into two departments, one for the well, the other for the sick patients, each of which had its separate doctors, nurses, and utensils. Two large wards with accommodation for nine patients each, and a small one which shelters six, besides the delivery-room, were reserved for the first class; a large ward and two tents were destined for the sick puerperæ.

Rapid alternation in the use of the wards was insured by only keeping each patient eight days in the pavilions, and transferring her on the ninth to the convalescent ward. When the last patient in a ward has reached her ninth day, it is under all circumstances emptied, and if for some particular cause it is deemed desirable to make an exception from the rule, so as to keep a patient a few days longer in the pavilions, she is transferred to the ward used for the last confined women.

If a patient, either in the pavilions or in the convalescent ward, shows any sign of infectious disease, she is immediately transferred to the department for the sick puerperæ.

The doors between the wards were locked, and the chinks filled with tow and pasted over with paper. Doors leading to water-closets were furnished with springs, and the windows in the water-closets nailed so as to prevent them from being closed.

As soon as a ward is empty it is fumigated with sulphur—twenty pounds to the larger and fifteen pounds to the smaller wards. After that the windows are kept open day and night. The floor is scrubbed with soap and water, and subsequently with a solution of bichloride of mercury (1 to 1,000), and so is every piece of furniture, bedsteads, chairs, etc., and the beds are provided with fresh bedclothes and new straw.

In all the wards are placed large demijohns, filled with a solution of bichloride of mercury (1 to 1,000), which for brevity's sake is called *the solution*. For the hands it is used undiluted, or when the weather is cold, with the addition of a small quantity of hot water. For the patients it is mixed with equal parts of water, the temperature of which is regulated according to circumstances, so as to obtain a lukewarm solution for the skin, the vagina, and the uterus when the sole object is to clean them; or a very hot one for arresting or preventing post-partum hemorrhage.

When a patient is brought to the delivery-room she is given an enema and a bath as heretofore, but after that her abdomen, genitals, buttocks, and thighs are carefully washed with lukewarm solution (1 to 2,000). At least two quarts of the same fluid are injected into the vagina by means of a fountain syringe, consisting of a glass bucket, a rubber tube, and a straight glass tube, and in protracted labor these injections are repeated every three hours. The rubber sheet covering the delivery-bed is washed with the undiluted solution immediately before every delivery.

In order to limit the danger of infection by vaginal examinations as much as possible, no nurses are allowed to make any except the one in charge of the waiting ward and the head nurse in the pavilions, and even these are directed not to repeat them more frequently than they need for notifying the doctors. The latter are urgently requested not to introduce their finger into the womb in common cases, but to be satisfied with such information as is derived from abdominal palpation and the examination of the part presenting at the external os.

¹ These figures are taken from Dr. W. R. Gillette's Report for 1875, published in the American Journal of Obstetrics, Dr. Kitchen's and Dr. Estabrook's Reports to the Commissioners of Public Charities and Correction, and for the last two years from the written records of Charity and Maternity Hospitals.

² On this disease, see my articles in The New York Medical Journal, December, 1882, vol. XXXI, p. 387; Archives of Medicine, April, 1883, vol. ix, No. 2; and THE MEDICAL RECORD, December 15, 1883, p. 664.

At the beginning of a labor doctors and nurses wash their hands in the solution, using soap and large, stiff nail-brushes; and if more than one patient is in labor at a time, the same precaution is taken before going from one to the other. Besides this, the hands are held for a minute or more in the warm solution, kept for that purpose in a particular basin at the side of the bed, every single time before the genitals are touched, and no other lubricant is used than the fluid adherent to the fingers, except in operations in which the whole hand has to be carried into the genitals, or the forceps is to be used. Then I use glycerine with bichloride of mercury (1 to 2,000), which I prefer to the carbolized oil or vaseline heretofore in use, because the glycerine itself possesses antiseptic properties which are still enhanced by the addition of the bichloride.

When the foetus appears at the vulva a piece of lint, soaked in the solution, is applied to it, and kept there all the time, in order to prevent the surrounding air from being pumped into the vagina by the alternate progression and recession of the presenting part. After the expulsion of the child the genitals are kept covered with a similar compress.

The placenta is expressed by Credé's method, so that the accoucheur need not introduce his fingers inside the rima pudendi: and if in exceptional cases it becomes necessary to do so, the vagina is washed out with the solution; otherwise not.

Acting on the same principle, intra-uterine injections are only used when the hand or instruments have been introduced into the interior of the womb, or in case of the birth of a macerated child.

I never allow any part of the placenta or the membranes to remain in the womb. With good antiseptic treatment the introduction even of the whole hand into that organ is of no account compared with the danger of hemorrhage and septicaemia by leaving any part of the secundines behind.

The intra-uterine injection is given immediately after the removal of the secundines; a large amount of fluid is used (from two to six quarts), and it is taken so hot that the hand can just be held in it. For its administration I have had made a curved glass tube, fifteen inches long, a little over a fourth of an inch wide, with a large opening at the end and eight side-openings, all of which have well-rounded edges, and are placed on the last four inches of the tube. It differs from Chamberlain's by its small calibre, its open end, and the greater number of lateral holes. The small calibre I prefer because it enables me to use the same tube any time during the first two weeks, even after considerable contraction of the internal os has taken place. The opening at the end I take to be necessary in order to be sure to wash the fundus thoroughly, and the larger number of side-openings insure the same effect on the side walls of the uterus. The perforated part of the tube being only four inches long, it is entirely within the internal os, which prevents a premature escape in the cervix.

Before the tube is introduced into the womb the vagina is thoroughly washed out, and during the passage from the latter to the womb the solution is kept running, so as to avoid the introduction of any septic substance from the vagina to the womb, and insure the exclusion of air.

When used immediately after confinement this tube is introduced between two fingers held in the cervix. Later in the lying-in period, if symptoms of inflammation are developed I place the patient on her back on a table and introduce Cusco's speculum, in order to be able to inspect every part of the vagina and the vaginal portion of the cervix, and be sure not to overlook any diphtheritic infiltration, the disease which has caused the greatest ravages at Maternity Hospital. A bed-pan is then shoved under the patient, and the tube introduced through the speculum after careful disinfection of the vagina. If no indication is found for intra-uterine treat-

ment the douche is only applied to the vagina. After this little digression we will return to our supposed case of normal labor.

After the expulsion of the secundines the patient is washed with the solution and the vulva covered with a *dressing* consisting (1) of a piece of lint, six by eight inches, folded lengthwise, so as to be three inches wide; (2) outside of that a piece of oiled muslin, nine by four inches; (3) outside of that a large pad of oakum; and (4) the whole is fastened with four pins to the binder in front, and behind by means of a piece of muslin eighteen inches square, and folded diagonally so as to form a kind of boat, five inches in width, for the reception of the other pieces of the dressing.

This dressing is put on with the same care as we dress a wound after a capital operation, and renewed four times in the twenty-four hours, twice by the day-nurses and twice by the night-nurses. At the same time the parts nearest the genitals are washed with the solution. Before each washing the nurses disinfect their hands as before labor. Any substance, such as cotton, lint, etc., brought in contact with the genitals is beforehand thoroughly soaked in the solution. No vaginal injections are given, except in the rare cases in which the lochia become offensive. By the effective antiseptic treatment at the entrance, preventive injections become superfluous, and thus one great source of infection is avoided.

Four times a day the floors of the wards are sprinkled with the undiluted solution. In order to avoid the introduction of infection by visitors coming from people suffering from diseases which might endanger our patients, these are not allowed to receive any visitors as long as they are in the pavilions, a rule which even applies to clergymen, except in danger of death. Baptisms are performed outside the wards. It goes without saying that the doctors and nurses employed in the pavilions are forbidden to enter the wards of Charity Hospital or the dead-house. Unfortunately, a similar restriction in regard to hospital wards cannot be laid on those in the convalescent ward, since they are employed in Charity Hospital simultaneously.

The severe exclusion of strangers was deemed necessary as long as I did not know how much I could rely on the dressing. Since I have seen its admirable effects I have ventured to let a few doctors, under my personal control, visit the wards and witness operations, and it is my hope that in the course of time the institution may be used for clinical instruction on a larger scale, and thus a very serious lacuna in our medical education be filled.

The use of carbolic acid is restricted to the disinfection of metallic instruments, which is done with a five per cent. solution, all metals being corroded by the bichloride solution, and consequently weakening it.

The local effect of the dressing is to impart a whitish hue to the skin, a bright scarlet color to blood, and a yellow color to abraded surfaces. Mucous membranes lose somewhat of their slipperiness. The lochia are kept uncommonly sweet. Very few patients have complained of a little smarting, and in one there appeared a pustular eruption on the thigh near the genitals, both of which conditions were easily remedied by the application of a little glycerine. In no case has the dressing been abandoned. In one case a papular erythema appeared on the chest and above the knees, but as I have observed similar eruptions before the use of the bichloride, I do not think there was any connection between the two; so much less so, as the erythema disappeared in two days, although the dressing was continued. In no case has there been any general symptoms attributable to the drug. Some of the nurses complained in the beginning of sore hands, but inunction with glycerine obviates that.

All linen coming from sick women is immersed for at least one hour in the undiluted solution.

In the convalescent ward the dressing is continued as long as the patients are kept in bed. As soon as their

condition warrants it, commonly between the tenth and the fifteenth day after their confinement, they are discharged. Protracted cases of a non-puerperal character are transferred to Charity Hospital, and no waiting-women or helpers are allowed to sleep in this ward. By these different means the air is kept as fresh as possible, and room is obtained for new patients coming up from the pavilions; but it is very much to be regretted that lack of room does not permit a regular alternation, as in the pavilions, and that, on account of ventilators communicating with other wards, it is not practicable to fumigate this one. In this ward, as well as in the waiting ward, hands and instruments are disinfected as in the pavilions.

The effect of the described treatment has been wonderful. As by magic all trouble disappeared. Ninety-seven women have been delivered since its introduction, and not only has *none of them died*, but there has *scarcely been any disease* among them, and especially no trace of diphtheritic inflammation, by which we used to be persecuted. Up to this day we have only had six sick women: two had local perimetritic inflammation, three metritis, and one eclampsia. None of them, with the exception of the latter, has been seriously ill, and yet we have had two cases of podalic version and a craniotomy. Of the six patients, three only had a rise in temperature; the eclampsia case had none, and two of the patients with inflammation had none; and yet the presence of the inflammation was sure enough as proved by the other symptoms, spontaneous pain, sensitiveness to pressure, and exudation. This lack of fever I can only explain by the perfectly aseptic condition in which the genitals were kept by the dressing, and in this respect it seems that our results are better than those observed elsewhere. Kehler, for instance, claims only to have reduced the number of his febrile patients from two-thirds to one-third of the whole number of confined women. The pavilions are scarcely recognizable. Where we used to have offensive odors, feverish, prostrated or despairing patients, overworked nurses and despondent doctors, the air is pure, the patients look well, their temperature is normal, the nurses are cheerful, and the doctors happy.

I am particularly indebted to the house-surgeon, Dr. H. A. Leipziger, who with great energy and intelligence carried out my plan in all its details, and instructed the nurses in their part of the work, and what he began has been faithfully continued by his successor, Dr. D. P. Pease.

The bichloride of mercury presents great advantages over carbolic acid. First of all, it is a much more reliable disinfectant; next, it is not only free from odor itself, but it is an excellent deodorizer; it affects the skin of the accoucheurs and nurses much less; and even from an economical standpoint the new treatment is a great improvement. The oiled muslin costs $3\frac{3}{4}$ cents per day for each patient, and the lint a little over $4\frac{3}{4}$ cents per day,¹ but even this expense is a trifle compared with the cost of the quinine, morphine, and whiskey used in treating puerperal inflammations—not to speak of the great saving by the cheapness of the bichloride compared with carbolic acid.

In private practice I use the same treatment with slight modifications, substituting cotton for oakum, using the common rubber fountain syringe, or, if the latter is not at hand, even a Davidson's syringe, and having the dressing renewed only three times a day. Instead of the glass tube, which is easily broken in the obstetric bag, I use a tin tube with a large opening at the end. It has one advantage over the glass tube, viz., its flexibility, that allows it to bend according to circumstances, which I have found useful in cases of abortion. Metal is indeed corroded by the bichloride, but in private practice, where instruments are not used so often, where they

are less frequently exposed to contact with septic matter, and where it is easier to disinfect them, this is of less importance than in a hospital.

It might be objected to this paper that the time in which the treatment has been tried is too short to form a final opinion of its value, but the change in the condition of the patients and the wards before and after its adoption has been so sudden and surprising that it must convince everybody who knew the institution before. Secondly, the same good results can only be obtained by the constant attention to all the details of the treatment, and since that depends on the good will and the firm conviction of many individuals, and the uninterrupted supply of the materials used for the dressing, there is always some danger that puerperal infection may again find its way to the hospital. Finally, reports from other places coincide with my experience.¹

In conclusion I would state that, although I am convinced that the bichloride of mercury is in itself a better antiseptic than carbolic acid, I attribute our success in a great measure to the dressing, by which this drug is applied in such a way that no air gains access to the genitals without passing through the disinfectant.

137 WEST TWENTY-SECOND STREET.

SEVERE AND EXTENSIVE INJURY OF FORE-ARM, WITH RECOVERY.

By MEIGS CASE, M.D.,

WASHINGTON, D. C.

THE extension of the railway system and corporate neglect to provide substitutes for hand-coupling has already created an army of men, who, with absent and crippled fingers, hands, and arms, are silent witnesses of the hardships of an indispensable vocation. A statistical exhibit of the number and character of these injuries would be interesting and valuable. The unpromising appearance of these cases usually suggests amputation, and it is believed that the undefined limitations of surgical enterprise too often permit it.

The illustration shows one of these injuries, as it was presented for treatment:



Thomas Lane, twenty-eight years of age, engaged in coupling a locomotive to a "gondola," was caught by the heavy iron bar, which was driven through his left arm, fracturing both radius and ulna, about one and one-half inch in front of the elbow-joint. An additional fracture of the radius in its middle third completely detached a four-inch piece, which lay transversely across

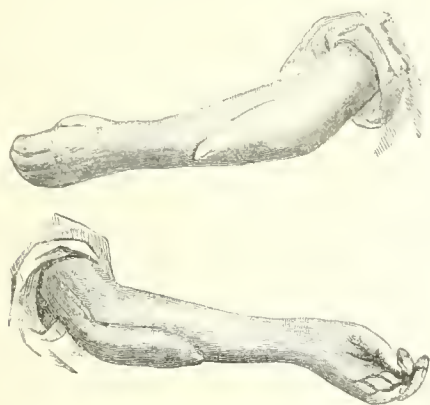
¹ Ad. Olivier, Tarnier's assistant, in *Annales de Gynécologie*, November, 1882, vol. xvii., p. 338; A. Toporski, Fritsch's assistant, in *Centralblatt für Gynäkologie*, September 1, 1883, vol. vii., p. 553; Wiedow, Hegar's assistant, *ibid.*, September 15, 1883; P. Bröse, Schroeder's assistant, *ibid.*, September 29, 1883; Paolo Negri, of Novarra, in *Bulletin général de Thérapeutique*, October 30, 1883, p. 373; Kehler, of Heidelberg, *Centralblatt für Gynäkologie*, November 3, 1883, p. 709. It is Tarnier who first introduced it in obstetric practice, and that before it was used in surgery; but he uses it only during labor and in sick puerperæ.

¹ A piece of oiled muslin, one yard wide, five yards long, costs \$1.70; a pound of lint, fourteen inches wide, seven yards long, costs 75 cents.

the wound. Two other small pieces of loose comminuted bone were removed. The soft parts were crushed through near the radial attachment of the biceps, and nothing remained unsevered but a few fibres of the supinator longus and the extensor radialis longior. The weight of the forearm, thrown upon these thin attachments, and a band of skin less than two inches wide, permitted the most extraordinary downward displacement of the nearly severed arm. The patient said that he feared it would "drop off" before he got home. The median nerve was torn half across the ulnar artery, and the soft parts adjacent were crushed, and the wound filled with soot. The borders of the wound were twenty-three inches in length, and extended nearly around the arm, terminating at points opposite and not to exceed two and one-half inches apart. The brachio-radial artery was, however, uninjured, and he had a good pulse at the wrist.

I determined at once to give the patient the benefit of this fortunate circumstance, removed portions of crushed tissue, and carefully replaced the parts, and secured them by interrupted sutures. The whole was held in position by lateral splints of flannel and plaster-of-Paris, and the whole arm laid upon a pillow and covered with yeast poultices.

The venous hemorrhage was considerable during the first two days, and extensive swelling occurred with *sloughing* of the injured muscular tissue and bulging of the under lips of the wound. By the free use of nitric acid, this process was facilitated and controlled. There was no sloughing of the skin, and union by first intention took place in nearly one-third of the suture. At the expiration of ten days, the sloughs having disappeared, and the swelling greatly diminished, drainage-tubes were inserted from bottom to top, running through the centre of the arm. An opening was made for this purpose on the lower side, about three inches in front of the olecranon, and the entire arm surrounded by plaster-of-Paris bandage, with the exception of a half-inch opening for the drainage-tubes at the most dependent part.



The patient began to go about, and at the expiration of three months recovered, with some paralysis of the forearm and ankylosis of the elbow-joint; but he is able to carry a pail of water or handle a shovel and hoe as well as ever. The ankylosis at the elbow is slight, and could be easily broken up and motion restored.

The above illustration is taken from a photograph, and was made by direction of Dr. D. I. Huntington, Acting Surgeon-General of the United States, who has kindly suggested this publication.

November 7, 1883.

SIXTY BUSHELS OF PAMPHLETS, advertising a patent medicine, were received in the Boston Post Office last week, and were found, on examination, to contain also a circular advertising a Kansas lottery.

SOME FACTS REGARDING LARGE INFANTS.

By W. P. BRECHIN, M.D. (HARV.),

BOSTON, MASS.

MRS. A—, primipara, aged twenty-two, five feet three inches in height, weight 127 pounds, was taken in labor November 1st, at 11 P.M. The pains continued with great violence until 1 P.M. the following day, when I was summoned.

On my arrival I found the patient very much exhausted and pains very weak. On examination I found the occiput presenting to the left, and the os fairly dilated. After waiting about two hours, and there being little or no advance, the forceps were applied, without ether and with but little difficulty. After a great deal of traction had been made, continuing for about one hour, I succeeded in delivering her of a very large male child, which I then estimated would weigh about 15 pounds. On the following day I went prepared to take the exact weight and measurements. The result was as follows: Weight, 18 pounds 6 ounces; length, 22 inches; biacranial diameter, 9 inches; circumference of thorax, 15½ inches; circumference of breech, 14 inches; circumference of thigh, 8 inches; circumference of arm, 5 inches; occipital mentalis diameter, 16½ inches; occipital frontalis diameter, 15½ inches.

The size of children at birth has been greatly exaggerated. Some are said to have weighed 24 and even 30 pounds, and to have been three feet in length. Cazeau states that in three thousand cases the largest weighed 10 pounds. Lachapelle states that of four thousand the largest weighed 12 pounds. Baudelocque records one that weighed 12¾ pounds; Merriman one weighing 14 pounds; Crofts one of 15 pounds. Owens records one weighing 17 pounds 12 ounces; extreme length, 24 inches.

Cazeau was called in consultation with Dr. Rimbault, and with great effort, after turning, succeeded in delivering a woman of a dead child, which weighed 18 pounds, its extreme length being 25½ inches.

Dr. Meadows reports a case in which the length of child was 32 inches and the weight 18 pounds 2 ounces, the child surviving but four hours. Dr. Rice, of Springfield, reports a case where the child weighed 20 pounds 2 ounces; extreme length, 23¾ inches; mentalis occipital circumference, 16¾ inches; frontalis occipital, 16 inches; around shoulders, 20¼ inches.

Dr. A. P. Beach, of Seville, O., who delivered the Nova Scotia giantess of a male child, reports the dimensions as follows: weight, 23¾ pounds; height, 30 inches; thoracic circumference, 24 inches; breech circumference, 27 inches; head circumference, 19 inches; foot, 5½ inches in length. Six years previous she was delivered in London of a still-born child weighing 18 pounds and 24 inches in length.

As to the cause of children attaining such gigantic proportions, we can only say that it is a "*lusus naturæ*." Some have attempted to explain it by supposing that the child is carried beyond the normal period of gestation, but this view does not seem to be borne out by facts, for in these cases the child usually assumes pigmy proportions. Reasoning from analogy, I can see no reason why we cannot have giants in foetal life as well as giants and liliptians in adult life. When we see children of such gigantic proportions born we are almost forced to think that craniotomy and embryotomy are often performed when there is no necessity for so doing. Why one physician should have so many craniotomies and embryotomies while others pass through a large and life-long practice without encountering a single case is, to me, inexplicable. I am acquainted with a physician who during his first year of practice had no less than six craniotomies, and if his cases have increased in the same ratio he must have ere this performed an astounding number. It seems as if there was a wanton destruction of infant life. If there is no deformity of the pelvis I

am borne out by facts when I say that any child varying from six to twenty pounds can be forced with safety through the pelvis.

The fact of not administering ether in this case was a great advantage to me, as the patient was able to give me a great deal of assistance. She made a good and rapid convalescence, the only complaint being a numbness alternating with pain in the lower limbs. The child at the time of its birth was apparently dead, but by the use of resuscitating measures it began to breathe. It continued cyanotic and died at the end of three weeks. These large children rarely do well; the greater proportion of them are dead when born, or survive but a short time.

A CASE OF CONGENITAL GOITRE CURED BY A SINGLE APPLICATION OF MERCURIC BINIODIDE.

By J. C. WORTHINGTON,

CAPTAIN AND ASSISTANT SURGEON U. S. ARMY.

I FIRST saw the patient, S. D. B.—, a well-developed male infant, July 26, 1883, six hours after birth. The mother, a healthy woman, native of Prince Edward Island, and for a year past resident on her husband's rancho on the Uncompahgre River, Colorado, had had a slight goitre for over two years, the swelling having first been noticed during her previous pregnancy. The family was much alarmed at the appearance of the child's throat.

On examination I found a marked goitrous swelling, soft, but not fluctuating; on the right of the trachea. The tumor was as large as a hen's egg. I advised that nothing should be done until the child was three months old, when I would attempt to cure it by an external application, which I thought would not be advisable before that time.

I did not see the child again until November 12th, when it was brought to me by the mother for the treatment that I had promised. I found him a well-nourished baby, healthy in every respect except the deforming tumor on the right side of his throat, which had increased with his growth, and now filled the whole space between the chin and sternum on that side. His mother stated that the tumor now interfered with the child's breathing when he lay on his back. The flattening of the crown of the head, mentioned by Aitken, was now well marked. I confess it was with some misgivings that I prescribed for the child the treatment mentioned in Aitken's "Practice of Medicine," as having been attended with such wonderful success in India. I ordered the following:

R. Mercuric biniodide gr. x.
Lard 3 j.
M. and S. Apply as directed.

I directed as follows: At ten o'clock A.M., on a bright sunny day, rub well into the skin over the whole tumor a lump of the ointment of the size of a filbert. Then hold the child, with the tumor exposed to the sun, at a closed window, as the weather was cool, for half an hour, then for an hour in front of a fire. At 2 P.M. of the same day repeat the application, and expose to the sun and fire as before.

On November 28th the child's mother brought him to me—cured. She stated that the treatment had been carried out as directed on the 17th, except that the exposure to the sun in the afternoon had been for less than thirty minutes, on account of its being so painful to the little patient. That he had had much pain and cried a great deal the following night; that the skin had become very red and had peeled off wherever the ointment had touched it; that she thought the next day the swelling seemed smaller, and on the 20th—three days after the application—the tumor was almost gone, and had grown smaller ever since until it entirely disappeared. When seen November 28th—eleven days after the application—there was no evidence of cutaneous irritation, and the

thyroid gland was just perceptible to the touch, as in a normally formed infant. The cure was complete. No salivation or other indication of constitutional effects of mercury occurred.

CANTONMENT ON THE UNCOMPAGHRE, COLORADO,
December 1, 1883.

Progress of Medical Science.

THE TREATMENT OF FÆCAL FISTULA OF INFLAMMATORY ORIGIN.—Dr. B. Riedel has lately recorded (*Centralbl. für Chir.*, No. 14, 1883) two cases of fæcal fistula of inflammatory origin treated with success by operation. Fæcal fistula of such origin, being of much less frequent occurrence than fistula resulting from strangulated hernia, has not, he points out, engaged the attention of surgeons so much as the latter variety. Dr. Riedel states that in neither of his cases could the starting-point of the lesion be clearly made out. As there was no indication of previous intestinal disturbance, it cannot be assumed to have been typhlitis. Although the view of a glandular origin might be opposed by the fact that no lesion was observed on the lower limbs or on the genitals, still Dr. Riedel is disposed to think that the abscesses in these two cases, as in many instances of acute psoas abscess, really started in suppuration of some pelvic glands; and it is suggested that this glandular mischief may have been started by abrasion or fissure of the mucous membrane of the anus. Such pelvic abscess may burst at an early date into the gut and the pus be discharged by the rectum, whilst the passage of fæcal matter into the cavity of the abscess may be prevented by a valvular disposition of the margins of the intestinal opening. In the first case, the fistula had at one time remained closed for two years, although during this period there remained a large opening in the wall of the intestine. This opening must during this time have been hermetically closed by the firmly applied superjacent skin. In dealing with the fæcal fistula of inflammatory origin Dr. Riedel exposes the seat of perforation, sets free the affected portion of intestine so as to be able to drag this to the surface, and then closes the orifice by sutures. He doubts whether the peritoneal cavity was opened in either of his two cases. No loops of smooth intestine were observed. Probably around the seat of the fistula in each case there had been formed, between the intestine and the abdominal wall, thin membranous adhesions which allowed the perforated portion of intestine to sink back into the abdomen, and yet prevented the passage of fæcal matter into this cavity. In Dr. Riedel's cases, the conditions for the success of his operative treatment were favorable, as the adhesions between the intestine and the anterior abdominal wall were of slight extent. In an instance of wide union of these structures it would be necessary to have recourse to resection of the perforated portion of intestine.

NERVOUS CORYZA.—Dr. Joseph Herzog relates the case of a young lady, of nervous temperament, and coming from a nervous family, who suffered nearly every day from sudden paroxysms of sneezing. The nasal mucous membrane became swollen and the nose was stopped up; there was a serous, and sometimes later, a purulent discharge from the nostrils, lachrymation, and diminished sense of smell: the face became flushed, there was frontal headache, ringing in the ears, and sometimes a burning sensation in the throat and external ear. The entire attack lasted only two or three hours, and was usually shortened in its duration if the patient placed herself with her back to the fire. During the menstrual periods the attacks were more severe and the discharge from the nose very profuse. Nothing abnormal was to be discovered in the throat or nose during the intervals between the attacks. The injection of a weak soda solution into the nostrils was ordered, while internally arsenic, in increasing doses,

was exhibited with good effect. The author observed the same condition, which he denominates *rhinitis vasomotoria*, in a child two years old. The child usually took a nap in the afternoon, lying in a hammock in the garden, and whenever he did so, would be awakened by a strong fit of sneezing accompanied by a nasal discharge, lachrymation, and all the other symptoms of severe coryza. The attacks lasted about two hours, and did not occur if the child was put to sleep in the house. Dr. Herzog regards the affection as a vasomotor neurosis, and thinks that it arises in individuals of nervous disposition in consequence of some peripheral irritation, which, by reflex influence, excites the vasomotor nerves of the nasal cavity to greater activity. As a consequence, there is increased afflux of blood to the parts, giving rise to swelling of the mucous membrane and increased secretion. The author states incidentally that hay-fever is also a nervous coryza, and that the asthma accompanying it is of reflex origin. The treatment consists, locally, in the application of any of the commonly employed remedies. Internally, the author recommends the vasomotor remedies, aqueous extract of ergot (9 to 13 grains per diem in pill form), atropine, and especially Fowler's solution (3 to 10 drops three times a day). Other drugs may be used, as quinine, cannabis indica, iron, zinc, bromide and iodide of potassium, and the salicylic preparations. Sea-baths, cold water applications, and electricity may sometimes be of service.—*Allgemeine Medicinische Central-Zeitung*, October 24, 1883.

CHANGES IN THE INFERIOR VENA CAVA OCCURRING WITH CIRRHOSIS OF THE LIVER.—The study of oedema of the subcutaneous connective tissue in cirrhosis, and the thereby induced belief that this oedema could not be explained wholly by the mechanical conditions existing in the liver, led Dr. de Giovanni to examine particularly the condition of the vena cava in this affection. These investigations disclosed the fact that the oedema in question was owing chiefly to disease and consequent disturbance in function of the vena cava ascendens. He found peri- and endo-phlebitis, thickening of the adventitia, hypertrophy of the entire wall of the vessel, and increase in size of its lumen. In one case of cirrhosis of the liver in which, notwithstanding there was meteorism and marked ascites, no oedema was present, he predicated the absence of disease of the vena cava, and the correctness of his assertion was confirmed at the autopsy.—*Centralblatt für Klinische Medizin*, October 27, 1883.

TUBERCULOSIS WITH ASTHMATIC SYMPTOMS.—Certain forms of tuberculosis are, according to Professor Germain Sée, difficult of diagnosis because of the fact that the most prominent symptom is the frequent occurrence of attacks of dyspnoea simulating very closely ordinary asthma. The recognition of this form of phthisis is all the more important, since between true asthma and tuberculosis there exists an antagonism by reason of the atrophy of the alveoli and destruction of the capillaries consequent upon emphysema, thus opposing a barrier to the development of tubercle in the lungs. The following are the chief points of value in the differential diagnosis: True asthma occurs usually at night, manifesting itself in sudden oppression of breathing, difficult inspiration, and sibilant expiration, and at the termination of the attack there is a peculiar expectoration. The return of the paroxysms in each individual is always accompanied by phenomena of a remarkable sameness and peculiar to that patient. These precursory phenomena are most frequently a nasal catarrh with the anomalous sensations resulting from it, tympanitic swelling of the stomach and intestines, diuresis, or a change of character in the individual, with an inaptitude for work. Nothing of this kind is seen in the dyspnoea of tuberculosis. Almost always the attack is brought on by some exertion, quick walking, going up-stairs, rapid muscular movements, or the effort of severe coughing, or repeated vomiting. It occurs usually in the daytime, the patient

seeks repose and generally obtains relief by lying on the back. There is no whistling expiration, the respiratory movements are increased, but at times there is no such marked distinction. The pseudo-asthmatic paroxysms may be clearly intermittent, may occur at night, and may be followed by catarrhal symptoms. The liability to error in such cases is all the greater, since the general condition of the patient is usually so good as not to give rise to a suspicion of tuberculosis, and it is only by studying the general and physical symptoms with great care that we are able to arrive at a correct diagnosis. The asthmatic form of tuberculosis is of very slow growth. The general symptoms are slight and the patients often preserve their digestive functions unimpaired for years. They have but little fever and only a moderate cough; the expectoration, though muco-purulent, is not abundant. The general condition, indeed, is so good that it is often an occasion of surprise to find at the apices the evidences of sometimes pretty extensive tubercular infiltration. The prognosis is fairly favorable, yet, as in other forms of tuberculosis, it should be based partially upon the state of the digestive organs.—*Revue Médicale*, October 20, 1883.

ACTION OF TOBACCO ON THE TEMPERATURE AND PULSE.—Dr. Troitski has made a number of observations upon the effects produced on the temperature and pulse by smoking. He found that in every case, varying according to the condition of the individual, there was an acceleration of the pulse rate and a slight elevation of temperature. If the average temperature of non-smokers were represented by 1000, that of moderate smokers would be 1,008, and while the heart in the former case was making 1,000 pulsations, in the latter it would beat 1,180 times. It is in the latter effect that he thinks the danger of tobacco smoking is manifested.—*Journal de Médecine de Bruxelles*, vol. lxxvii., 1883.

THE TECHNIQUE OF MASSAGE.—Dr. Benster summarizes the method of practising massage, followed by the French, as follows: 1. *Effleurage*, gentle friction, consists in making long, gentle, centripetal strokes along the course of the veins and lymphatics with the oiled hand. The pressure is intermittently firm and gentle, so made as to produce a sort of passive peristalsis. 2. *Massage à friction*, the rubbing stroke. This is accomplished by making elliptical strokes perpendicularly to the long axis of the limb with the finger-tips of one hand, while the fingers of the other hand pass from above downward, parallel to the axis of the extremity. A subdivision of this class is the *massage par ondulation*, as used by Laisné in lumbago. 3. *Pétrissage*, kneading, is made always in a direction from the periphery toward the centre, and in such a way that the morbid tissues are seized by the hand, raised up and kneaded. This is employed in oedema of the skin, infiltrations into the subcutaneous connective tissues, and on muscles which have lost their pliability through infiltration, inflammation, or contractures. 4. *Tapotement* consists in a tapping or beating of the diseased parts by the finger-tips, the hollow hand, the side of the hand, the fist, the percussion hammer, or a little rubber ball fastened to a piece of whalebone. This is employed chiefly in neuralgia.—*Wiener Medicinische Wochenschrift*, October 27, 1883.

DIRT SIMULATING ICHTHYOSIS.—Dr. C. Mettenheimer saw an old maiden lady, aged eighty-seven years, whose foot and outer side of the thigh were covered with brown, polygonal, horny scales, from a half to one inch in thickness, resembling the hide of an alligator, and which might well be taken for ichthyosis. They were, however, composed of nothing but old, so to speak, crystallized dirt, which, as the reporter learned, had been accumulating for twenty-five years. Warm water, assisted by a weak solution of caustic soda, brought about a cure. The scales dropped off and disclosed to view the perfectly normal integument.—*Schmidt's Jahrbücher*, October 17, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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New York, December 29, 1883.

THE REPORT OF THE SURGEON-GENERAL OF THE U. S. MARINE HOSPITAL SERVICE.

THE annual report of the Surgeon-General of the Marine Hospital Service for the year 1882-3, is a larger document than usual, and contains a good deal that is suggestive and interesting.

We learn that during the past year 40,195 persons received relief from the Service, 13,356 being in-patients. The number of deaths was 502, or somewhat over one per cent. of the total, and less than four per cent. of the in-patients. In the list of diseases we observe the prominence of syphilis, of which over three thousand cases are reported, with a mortality of only nine. The working sailor appears to have a low mortality-rate, if we exclude the losses due to accident and shipwreck. One-half of the deaths are due to general diseases, including especially phthisis and the fevers. The remainder are due to various local diseases, especially those of the respiratory, vascular, and digestive systems. Out of 502 deaths, four per cent. were due to injuries.

The Marine Hospital Service embraces a *clientele* of about 100,000 seamen, who pay a tax of forty cents a month. This tax gave an income of \$415,945.80 last year. The expenditures, on the other hand, were \$469,966.21, this sum including, however, about \$35,000, which was expended for extraordinary repairs and alterations.

This amount of money, though very large, is not excessive, but the contrary, when it is considered that the patients are treated at over ninety different ports and in more than a dozen different hospitals. A bill is now before the House to reduce the hospital tax to twenty cents. If this is done, Congress must make some provision to prevent a deficit. In fact, if the policy is continued of using the officers of the service, paid by the sailors, for purposes of national quarantine, then the Government ought to pay its share.

One is especially struck with the rapid increase in the annual amount of medical and surgical work. This has increased from ten thousand cases annually, a few years ago, to the present number, forty thousand. At such a rate, the Service will have in ten years to enlarge greatly its working capacity. We are of opinion, however, that in time there will be a more discriminating limitation of those who should pay hospital dues. In justice it should only include those seamen who have no legal residence or home, who are truly wards of the nation. Travelling

workmen on the river vessels really seem to have no more claim on the tax-money system than travelling salesmen.

The demand for entrance into the Marine Hospital Service is yearly becoming greater. Thirty-seven applications were made for position as assistant-surgeon last year. Nineteen candidates were examined and five passed. The examination of pilots for color-blindness has continued and there is now no objection to this useful practice. The Surgeon-General wisely urges that the examination should be made to cover acuity of vision and also the sense of hearing.

The subject of the physical examination of seamen previous to shipping is also touched upon, and the recommendation is renewed that there shall be a compulsory physical examination of all of this class. This is of especial importance to those who are about to go on long voyages. The examinations thus far made show that about four per cent. of those applying for shipment are unfit for active service.

Dr. Hamilton devotes a few pages to the subject of national quarantine. His views in brief are that our country needs a maritime quarantine, and that the United States can and should render service in making this efficient. The duty of the general Government ends, however, under existing laws, with maritime quarantine. Local port sanitation and internal quarantine belong to the States and municipalities. An account is given of the quarantine work of last summer and the claim that the exertions of the Service were largely instrumental in keeping out yellow fever are no doubt correct.

The usual tables showing the medical work of the year are given. These could be studied to much better advantage if the statistics were tabulated as a whole as well as by districts.

To the report proper is appended a considerable number of medical and surgical contributions illustrating the work of the medical officers. There are also elaborate reports of the Mexican-Texas Yellow Fever Epidemic, by Surgeon Robt. A. Murray, and of the Florida Epidemic, by Dr. Jas. S. Herron.

FALSEIFYING THE RETURNS.

WE have been asked to refer to a practice which has long existed among our medical charitable institutions, and which is fast doing injury to them in the eyes of the public. It is that of "falseifying the returns," so as to create the impression that a greater amount of work is done than is actually the case. For example, a dispensary reports that it has treated ten thousand cases during a single year. The facts are that the real number treated is about one-fourth or even one-half less. It is a very common custom in dispensaries to give a patient a ticket which lasts a month; when the month is ended, if the patient is still under treatment, a new ticket is issued and the patient is counted again. The number of cases treated is also increased (on paper) by other means. The object of these practices is twofold. The public is appealed to with additional force by these deftly manipulated statistics. For to say that "twenty thousand poor sufferers have been substantially relieved" is more emphatic than to speak of only ten thousand. Again,

the charities of the city receive pecuniary aid from the city in proportion to the amount of work done, and the more patients the more money.

We do not mean to charge the managers of our dispensaries with intentional dishonesty. The practices alluded to are common to nearly all, and are doubtless known by the city authorities. It would be hard for one institution to attempt reform if the others failed to follow its example. None the less is the practice a discreditable one, and we earnestly trust that there will be an attempt made to end it. We might add here that charities other than medical do substantially the same thing, and exaggerate their work for the sake of engaging the public sympathy and getting more of the public money.

VETERINARY MEDICAL ORGANIZATION.

FOR the past year there has been a great deal of organizing activity among American veterinarians, and State Veterinary Associations have been formed in nearly all of the Western and Middle States. This activity is the result largely of the enterprise of a very wide-awake Chicago quasi-professional veterinary journal. The organizing work progressed very smoothly until it reached this State, since which time there has been trouble. It appears that the Western veterinary editor wished to create a new State association here under similar auspices with those of other States. Unfortunately, there was a State society already existing; a feeble thing to be sure, but with enough vitality to protest against extinction. The result is, as we are informed, that two State societies now nominally exist, with reciprocal ill-feeling between them.

Nor is this all. The movement to organize veterinarians assumed finally a national aspect, and a call was issued to form a United States Veterinary Medical Association. This call was responded to and a society has been established, as was noticed in *THE RECORD*. It happens, however, that a national association of the same kind was already in existence, and had been for a number of years. The fact that this society was ignored has naturally produced much dissatisfaction.

As matters now stand, therefore, American veterinarians, though organized, are not harmonious, the factions being led by rival journals. There is doubtless some blame attached to both parties; that of the West has been somewhat obtrusive and uncomprising, while the older party in New York was a poor specimen of the kind.

We trust that the agitation will result eventually in improving the status of comparative medicine. There is not yet any great opportunity for organizing useful scientific societies, since the total number of educated veterinarians in the United States is probably less than a thousand.

GERMS AND GERMICIDES.

OUR forefathers of the good old fox-hunting and gourmandizing kind lived upon high mutton, venison, and birds, and devoured millions of germs in their well-ripened cheese. The same happens to a greater or less extent now. It could not have been the port wine and brandy

which killed all these germs, for some forms of bacteria will live in alcohol for months. They must have been destroyed by the acid gastric juice which these active, out-door-sport-loving squires were furnished with. It is well known that food in a state of partial decay has this process arrested in the healthy stomach, and indigestion goes on as sweetly as if the food had been very fresh. Now, if putrefaction is caused by bacteria, either the pepsin must attack and digest them, or the acids of the stomach kill them. It is supposed that the germs of typhoid fever and cholera are not generally operative until they reach the lower portions of the small intestine, where the secretions become alkaline. In short, that most healthy persons will escape the effects of these poisons, when taken in their food or drinking-water, provided the stomach is in full digestive operation, or the quantity of the living poison be not so great that some of it escapes into the small intestine before it can be killed or digested. Cholera- or typhoid-water or milk drunk into an empty stomach by thirsty souls is especially dangerous. It has required Koch's almost unrivalled skill to prove that cholera bacteria, which have long been known, are merely more abundant in the small intestine and only penetrate farther into its coats than ordinary bacteria.

Nedwetsky proved, as far back as 1872, that cholera-bacteria were not killed by quinine, camphor, carbolic acid, calomel, or chloral; that opium, nux vomica, and chloroform destroyed them very slowly, while the dilute acids, sulphuric, nitric, and muriatic, decompose them very quickly, as did tannic acid, sulphate of iron, and chlorine water; also corrosive sublimate, bromine, and iodine. But perhaps milder remedies may have the same effect; at least one per cent. of tartaric acid will kill the yeast plant, but allow bacteria to thrive, while a five per cent. solution will allow mouldy growths to appear; or a stronger solution will kill both these and bacteria. It is known that yeast plants, moulds, and bacteria feed upon each other, but that bacteria will destroy or eat up all the others. One part of corrosive sublimate in 20,000 of water will kill bacteria in ten minutes; 1 part in 5,000 is a certain disinfectant, and of course as safe as stronger solutions of the milder tartaric acid. But sulphurous acid, generated by burning sulphur, which is the most commonly used disinfectant, requires thirty minutes to kill bacteria, and their spores will sometimes live for ninety-six hours. A five per cent. solution of carbolic acid requires twenty-four hours, and a three per cent. will not kill them at all. A five per cent. solution of chloride of zinc requires one month, and they have even been found alive at the end of that time. Iodine, 1 part to 5,000 of water, destroys them; and bromine, 1 part to 1,500 of water. Chlorine water requires two days, and a five per cent. of chloride of lime, ten days. Benzoic acid, benzoate of soda, chlorate of potash, and quinine, which have been vaunted as specifics, have little or no effect upon them. Bacillus spores will germinate after lying for months in absolute alcohol, but a small quantity of acid will kill them. Carbolic acid is not an acid, but an alcohol. Alkalies rather seem to favor their growth. The oils of mustard, peppermint, turpentine, and cloves, even in dilute solutions, have a restraining influence upon bacterial development. We understand that experiments

are being made with turpentine as a disinfectant and curative in diphtheria. The simple mineral acids may be better than the muriatic tincture of iron, and tartaric acid may turn out as good as any; but large doses of pepsine, with dilute muriatic acid, are not to be forgotten.

News of the Week.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.—

At the regular annual meeting of the Northwestern Medical and Surgical Society of the City of New York held on December 19, 1883, the following officers were elected for the ensuing year: *President*—Dr. Ed. C. Harwood; *Vice-President*—Dr. T. H. Burchard; *Secretary and Treasurer*—Dr. J. Henry Fruitnight.

LAPAROTOMY FOR HEMORRHAGE IN TUBAL PREGNANCY.—Dr. C. K. Briddon of this city writes: Dr. J. C. Reeve of Dayton, O., has drawn my attention to the following extract from the *Amer. Journal of the Medical Sciences*, April, 1879: "Dr. Veit (*Deutsche Zeitschrift für Prakt. Med.*, No. 49, 1878) says that about one-fifth of the cases of hæmatocele are due to rupture during tubal pregnancy, and that the latter is more frequent and capable of a more favorable prognosis than is generally supposed. In the rare cases in which an early diagnosis of tubal pregnancy can be made expectant treatment is indicated. When rupture occurs an attempt must be first made to arrest the hemorrhage by external means; and as a last resource, laparotomy must be performed, although it does not afford a very good chance. The method of arresting hemorrhage will vary in different cases. Sometimes it will consist in the application of sutures, sometimes in removal of the sac, etc. Dr. Veit performed laparotomy on a moribund patient to arrest the hemorrhage produced by rupture in tubal pregnancy. The Fallopian tube was tied, the sac sewn to the lower angle of the wound, and plugged with salicylized cotton-wool. After two days, plastic peritonitis set in, of which the patient died sixty-four hours after the operation.—*British Med. Journal*, Feb. 15, 1879."

ARMY MEDICAL DEPARTMENT.—The following gentlemen have passed the Army Medical Board: William D. Dietz, of New York; William Stephenson, of Maine; John L. Phillips, of the District of Columbia; William C. Borden, of the District of Columbia; Guy L. Edie, of Virginia; William L. Kneedler, of Pennsylvania; Charles S. Black, of New York; Alonzo R. Chapin, of Illinois; Walter R. W. Fisher, of Virginia; Adrian S. Polhemus, of New York; Reuben L. Robertson, of Virginia; Edgar A. Mearns, of New York; William D. Crosby, of New York; Charles M. Gandy, of New Jersey, and James E. Pilcher, of New York.

THE NEW YORK SKIN AND CANCER HOSPITAL is trying to secure a piece of land for its suburban convalescent department. We trust the managers will be successful in their benevolent object. In this connection we would say that it has been asked why the dermatologists have taken up the management of cancer, which belongs to surgical pathology. One of our New York dermatologists, in his work on "Skin Diseases," has said

that "the dermatologist should interfere in carcinoma only in those cases which have the character of epithelioma, and are easily destroyed by caustics." It is certainly true that patients with cancer should have the attendance of general surgeons and practitioners.

DR. MILTON JOSIAH ROBERTS, of New York, was tendered a brilliant reception by Dr. Wm. H. Daly, of Pittsburg, Pa., at the latter's residence, on Thursday, December 20th. There were in attendance a large number of representative medical gentlemen.

MEDICAL TRAMPS IN BOSTON.—At a meeting of the Suffolk District Medical Society, Dr. H. I. Bowditch requested the privilege of occupying a few moments for the purpose of warning the profession against a band of medical tramps which was infesting Boston and its suburbs, and by every expedient seeking to obtain pecuniary aid from physicians. One of these impostors had suffered an amputation of the thigh, wore an artificial limb, professed to be a graduate of Harvard, and the son of a physician, and presented plausible testimonials recommending him to the profession. The letters of commendation were found by Dr. Bowditch to be forgeries, and the man himself is a swindler. Another member of this band of conspirators is a young man who is elaborately dressed and makes a favorable appearance, and whose habit is to call at the physician's house when the doctor is away. He represents himself to be the son of a celebrated physician of New York, who is a very intimate friend of the physician at whose door the young man is standing. He further states that he has been robbed of all his money and desires to borrow a sum, generally from three to five dollars, to aid him in reaching his home. Upon being informed that the doctor is not at home, his eyes fill with tears and he appears to be in great distress of mind, and at length endeavors to borrow the sum required of the person who has come to the door. If he does not succeed in this ruse, he asks the time at which the doctor will return, and is very particular *not* to return at that time. Another is a man of swarthy complexion, who pretends to be from India, but is probably an arrant cheat.

FIRE IN THE WARD'S ISLAND LUNATIC ASYLUM.—The towers, spires, roof, attic, and part of the fourth floor of the new east wing of the City Asylum for the Insane, on Ward's Island, were destroyed by fire December 21st. No patient or employé was hurt, and the loss, about \$20,000, is not covered by insurance. But for a westerly wind the greater part of the seven buildings of which the asylum consists would probably have been destroyed, because the fire apparatus on the island was out of order, the water-supply inadequate, and there was gross blundering in the transmission of intelligence of the fire to this City. The fire started in the attic, from what cause is not known. There were 90 patients in the burning building, but they were safely transferred. Subsequently all the patients in the eastern buildings, 497 in all, were transferred to the western wings. Some one blundered in that the provisions for suppressing the fire were so inadequate. The responsibility appears to be chiefly upon the Commissioners of Charities and Correction, who for eight years have known the defects without remedying them.

Reviews and Notices.

A] TREATISE ON SYPHILIS IN NEW-BORN CHILDREN AND INFANTS AT THE BREAST. By P. DIDAY, ex-Surgeon to the Hospital de l'Antiquaille, Lyons. Translated by G. WHITLEY, M.D. With Notes and Appendix by F. R. STURGIS, M.D., Professor of Venereal and Skin Diseases in the New York Post-Graduate Medical School; Surgeon to the Venereal Division of Charity Hospital, Blackwell's Island, etc. New York: William Wood & Co. 1883.

THE publishers are certainly to be congratulated upon their choice of M. Diday's scholarly treatise for this (October) number of their Library of Standard Medical Authors. They have, moreover, been especially fortunate in having secured the services of Dr. Sturgis to edit this American edition, who, it is needless to state, has admirably performed a somewhat thankless task and added materially to the value of the book. The *ensemble* of the issues of this Library is far too well known to call for further mention at this time. In this particular instance, however, we desire to call attention to the elegant colored lithograph which faces the title-page. A single artistic and carefully executed plate like this is worth a thousand of the fearfully and wonderfully made cuts with which our present literature is so largely besprinkled.

The book proper is primarily divided into five parts: etiology, description, prognosis, medico-legal bearings, and treatment. The subdivisions under each are exhaustive; and each point is discussed vividly, earnestly, and thoroughly, while a wonderful profusion of illustrative cases is advanced. The author succeeds in clinching the reader's attention at the start, and deftly holds his interest to the end with that graphic art and delicate cogency so characteristic of the French, the essence of which the translator has for the most part very happily caught.

In the Appendix, Dr. Sturgis expands, in a masterly manner, two of the more important points: "First, the question of the viability of children born with the taint of hereditary syphilis, the mortality which occurs among them, and the causes which produce death; and, secondly, the accidents known under the name of syphilis hereditaria tarda, or late congenital syphilis."

We have no hesitation in ranking the work among the most suggestive and valuable books of the year.

HEMIATROPHY OF THE TONGUE IN LOCOMOTOR ATAXIA.—Dr. Gilbert Ballet writes in *Le Progrès Médical* of October 27, 1883, concerning a symptom of tabes dorsalis, mentioned by few writers, yet of frequent occurrence according to his experience, viz., hemiatrophy of the tongue. The atrophy is in every case unilateral, although the other signs of locomotor ataxia are bilateral and often nearly symmetrical. There is a marked diminution of size on one side, whether right or left, and on this half there are numerous ridges and grooves, giving a peculiar appearance to the organ. There is sometimes a slight trembling with fibrillary contractions. The tip of the tongue is sometimes deviated slightly toward the atrophied side. This hemiatrophy interferes very little with speech, and not at all with mastication and deglutition. In most of the cases observed by the author there was paralysis of some of the eye-muscles or atrophy of certain muscles of the extremities. A fact that renders this symptom of special importance is that it is among the earliest manifestations of tabes dorsalis. It may, in fact, exist at a time when the other signs are either very obscure or have not yet made their appearance. When, therefore, unilateral atrophy of the tongue is encountered, one ought at once to think of the possibility of locomotor ataxia.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, December 21, 1883.

S. O. VANDER POEL, M.D., PRESIDENT, IN THE CHAIR.
THE PREVENTION OF PUERPERAL INFECTION.

DR. H. J. GARRIGUES read a paper on the above subject. (See page 703.)

The discussion was opened by Dr. R. A. MURRAY, who was Dr. Garrigues' immediate predecessor at Charity Hospital. He had been especially interested in Dr. Garrigues' good report, because, despite all the precautions used while he was in charge of the service the mortality from puerperal fever was nearly eight in one hundred cases of confinement, and the form of fever seen was very similar to that met with in Bellevue Hospital. Puerperal peritonitis was seldom seen, but puerperal diphtheria occurred very frequently, usually beginning at the vulva and extending up the vagina, but in only a few cases was it seen in the uterus. It was also seldom ushered in with marked symptoms. The ward was disinfected from time to time, but it was finally given up, and when Dr. Garrigues began his service it was a new ward so far as confinement cases were concerned, and probably that fact influenced the results somewhat at least, yet he questioned whether so good results would have been obtained without the practice of antiseptic midwifery. Dr. Murray thought it would be difficult to carry out in private practice the details given by Dr. Garrigues, but the material part could be adopted by thorough disinfection of the napkins, and washing out the vagina before and immediately after delivery, and treating all lacerations with bichloride of mercury solution or iodoform. He had seen cases in which the parts had been actually cauterized with carbolic acid, and yet the diphtheritic exudation returned as quick as ever after the removal of the eschar. It might seem that such details as had been given by Dr. Garrigues are meddlesome and not warranted, but in hospital practice they must be adopted in order to prevent the spread of puerperal fever, although he thought it was unnecessary to adopt them in private practice.

DR. W. GILL WYLIE said the paper by Dr. Garrigues confirmed the views which he expressed in a paper read about six months ago, and he was thoroughly in favor of the use of antiseptics, even in private practice, as it is well known that the most successful obstetricians have, occasionally at least, had cases of puerperal fever develop in their practice. Since he began their use in Bellevue Hospital he had employed them in private practice; that is, had caused the vagina to be washed out with a solution of carbolic acid—usually one to thirty—the body of the patient washed with the same solution, all the bed-linen, two sets of blankets, and napkins to the number of thirty at least, all carbolized, and in only a single case had he seen any signs of septic fever, and that was one in which he used forceps in a dry labor. Now he would use the bichloride of mercury solution in place of carbolic acid.

In all that had been said recently on this subject he thought sufficient stress had not been placed on *perfect drainage*, and especially after abortion. This can be secured by dilating the cervix, and, if necessary, a drainage-tube should be used.

DR. W. R. GILLETTE thought all must admit the importance of the subject under discussion, and while there might be some difference of opinion concerning the exact methods by which the principle was to be applied, it was scarcely worth while to dwell upon them. With regard to the compress presented by Dr. Garrigues, however, he was unable to understand how it could be of special service with the woman lying in bed; certainly it could not

be kept in close coaptation with the parts, and therefore sufficient space would be left for the entrance of germs. Still the theoretical objection should not weigh much against the results of actual experience in its use. He sincerely hoped the good report made by Dr. Garrigues would be continued, but his experience in the same hospital allowed him only to hope for its continuance. He thought the fact that Dr. Garrigues' service began in a new ward, as mentioned by Dr. Murray, may have had considerable to do with the immunity from puerperal fever, and he also wished that Dr. Garrigues had gone back to 1875, and given the statistics for that year, when the service was transferred from Bellevue.

At the time the change was made forty women were transferred and only one suffered from puerperal fever, and the prophylactic measures were simply cleanliness, bathing with carbolic-acid water, and keeping them as far apart as possible in the lying-in room. Of the six hundred and thirteen women confined during that year, only three had puerperal fever. He thought this record was even cleaner than that given by Dr. Garrigues, and it was obtained by perfect cleanliness.

DR. A. S. HUNTER was in accord with the author of the paper, as to the value of cleanliness and the use of antiseptics, and there was no question but that better results had been obtained since their adoption than were secured before special antiseptic measures were introduced. He was in accord with Dr. Gillette concerning the compress to be applied to the vulva, and thought the rubber muslin would be liable to get folded so as to bring a waterproof surface against the vulva and do more harm than good. Moreover he thought it impossible to keep it in close position with the external genitals. Besides he thought clots would be retained in the pad, and in that way the door opened for the entrance of germs. He also preferred to use Dr. Lyman's silver tube rather than the glass tube, and preferred Davidson's rather than the fountain syringe. He thought that carrying out the suggestions made by Dr. Garrigues was not at all difficult. In private practice he would reject the compress, would use vaginal injections, and in cases of septicemia, intra-uterine injections, and in addition would have a napkin, partially saturated with carbolic or bichloride solution, laid against the external genitals.

DR. S. BARUCH congratulated the Society on having had presented to it a paper in which the praises of antiseptic injections in normal labor had not been sung. He had attended about nine hundred cases of labor, had met with very many complications, and had had only one death preceded by febrile symptoms. He had not used prophylactic injections very much until Dr. Wylie read his paper, and since then had followed the directions given, but his experience in their adoption had been somewhat singular, as in each of the six cases in which he employed them fever developed, undoubtedly due to septic process, occurring from the fifth to the eighth day after labor. Dr. Baruch then spoke of the objections to antiseptic prophylactic injections, such as disturbing the woman, displacement of clots, and thus opening avenues for auto-infection, tearing of recent adhesions, etc., all of which had been seen in hospital practice. He believed that simple cleanliness before, during, and after labor would do all that can be done to render labor safe, and that, if it was necessary to meddle, the introduction of iodoform pencils into the uterus or vagina was the least harmful probably.

DR. F. V. WHITE referred to his experience in Bellevue Hospital thirty years ago, when it was the practice to wash out the vaginas of all lying-in women every morning with liquor sodæ chlorinatæ. Certainly in this respect Bellevue had priority. He cited an instance where obscure symptoms of puerperal fever developed in one of the patients, and she was transferred to another ward. The vaginas of the remaining women were washed out, he continued in his service, yet no other case appeared.

The patient removed died about two weeks afterward and autopsy revealed extensive peritonitis. He had endeavored to have his private patients use vaginal injections on the second day after confinement; sometimes had succeeded, and many other times had failed. Of the two thousand cases of labor which he had attended he had not lost any patients from puerperal fever. He had not been able to remove the placenta with the ease mentioned by Dr. Garrigues.

DR. J. P. GARRISH had attended four thousand cases of labor in forty years, and had had only two cases of puerperal fever. He never allows a nurse to attend who has recently been in attendance on a case of any contagious disease. He thought intra-uterine injections should be avoided in normal labor. The duty of the physician is to assist nature when she is wrong. He had had only private practice, to be sure. Dr. White had said that Bellevue deserved credit for being the first to wash out the vaginas of lying-in women; so also it had the reputation of being the place where the greatest number of women died when the lying-in service was there.

DR. WHITE said they did not in his time.

DR. GARRISH objected to applying anything like a compress to the external parts.

DR. J. C. PETERS believed that bichloride of mercury solution would prove a more successful germ destroyer than any agent which has been used.

DR. GARRIGUES said his statistics were based upon experience in the *old* wards and not the new one first occupied. He emphasized the necessity of adopting precautionary measures in private practice. He also stated that the compress had been found by actual measurement to be adapted to the distance between the thighs as the woman was lying in bed; that it was applied by the nurses with the exactness with which any surgical dressing was applied, and that while it was not absolutely air-tight, it was as much as could be used with the presence of a lochial discharge. Dr. Garrigues then read from his paper where he had made a quotation from Dr. Gillette's report, and it appeared that he had included the year 1875, but the figures varied considerably from those given by Dr. Gillette. A metallic tube cannot be used if the bichloride solution is employed. He would never use intra-uterine injections except for cause, and for him that cause would be fear of entrance of septic material, as in manual or instrumental interference, or the presence of a dead child. He thought that under ordinary circumstances vaginal injections may have done a great deal of good in hospital practice, although he had given them up because he had reached the same result by other means. In private practice he thought there was no danger in their use, and at the same time he thought no harm would follow if something else was substituted, but if not, they should be resorted to. The dressing recommended rendered vaginal injections superfluous, and the nurses had nothing to do with the genitals of the patients. Of course, cleanliness is proper, but it is not sufficient. He agreed that labor is a normal process, but a woman confined in a hospital is in an abnormal situation, and statistics have established the fact that antiseptics have markedly reduced the mortality in lying-in hospitals.

The Society then adjourned.

AN AGED PARENT AND A LONG UMBILICAL CORD.—Dr. F. W. Putnam, of Binghamton, N. Y., writes: "On December 5, 1883, I attended Mrs. B—, aged thirty-seven, in her second confinement. Cranial presentation, first position; labor normal, terminating three hours after my arrival. The umbilical cord was thirty-one and one-half inches long, and had a knot in it eight inches from the body of the child. The child, a boy, is alive and doing well. The father is seventy-seven years of age!"

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 20, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE PROGRESS OF BIOLOGY IN EUROPE.

DR. C. HEITZMAN spoke on the above subject and said that in 1872 and 1873 he published a series of new observations concerning the structure of the single elements of which the entire animal body had been supposed to be composed. He did not expect the immediate approval of scientists, nor had he received it, but within the last two or three years very great progress had been made in this direction. A little more than one year ago he published a book in which these new views were set forth, and it was met by warm friends and bitter enemies. Some of the criticisms deserved attention; others were the outbreak of personal enmity. The theory was that so-called protoplasm, which had been thought to be structureless, has, at a certain stage of development, a well-marked reticular structure; that the nucleus, if hollow, has in its interior a reticulum; that the so-called nucleoli were thickenings at the points of intersection of these delicate fibres, formerly called granules; that the locomotion observed depends upon contraction of one part and expansion of another. Quite recently a large number of German microscopists had observed changes in the reticulum of the nucleus, and special reference was made to the writings of Strasburger Flemming and others.

Dr. Heitzman said he was aware that the existence of this reticulum had been denied by some microscopists in this country. One gentleman in Philadelphia had denied its existence because he was unable to see it.

The second point in his theory was that the basis substance seen between these so-called cells is endowed with all the properties of living matter due to the presence of a reticular structure identical with that seen in the protoplasmic bodies. Dr. Heitzman then gave an account of his method of procedure to demonstrate this point, namely, by experiments with cartilage, and best shown when a slight amount of inflammation is obtained with calcareous deposition in the basis substance.

Having proved this point satisfactorily to himself he then advanced the view that instead of the body being built up of cells, these so-called cells are uninterruptedly connected with each other by delicate fibres of living matter and the whole body is of the general structure of the amoeba. Dr. Heitzman then spoke of Stricker's views concerning the reticulum of the protoplasm, nucleus, and basis substance, and said that he had admitted there is no difference whatever, with reference to capacity for producing life, between the basis substance and the cells. "Why use the term cell, then?" asked Dr. Heitzman. To which Stricker replied that the word should not be altogether abandoned, and he continued to use it in order that he might be understood by those whom he addressed. Concerning the exact function of the basis substance there was some difference of opinion between S. Stricker and Dr. Heitzman.

The speaker then directed attention to the changes in view concerning the essential nature of inflammation which necessarily accompanied his theory, and discussed at some length the views held by Recklinghausen and Cohnheim concerning the origin of pus-cells. Dr. Heitzman then spoke of the structure of epithelia and the views of Ranvier, who admitted that they are connected with each other by what he calls "filamentous connections," without committing himself to any theory concerning their essential character.

Passing from this point the speaker touched upon the question of tuberculosis and defined tubercle to be a vascular inflammatory product, and the reason why new vessels do not form in the little nodules is because there is not sufficient living matter for their reproduction. He

rejected Koch's theory of the bacillus as a cause of tubercle, and maintained that tuberculosis can be produced artificially by the introduction of various substances into the tissues of animals. Special reference was made to the work of Spina, and to the fact that he (Spina) had introduced sterilized lycopodium seed into the abdominal cavity of a guinea-pig, and ten or twelve days afterward found tubercles in the liver, kidneys, and intestines, which on microscopical examination were found, each one of them, to contain a few lycopodium seeds. He regarded Koch's bacillus as the product and not the producer of tubercle. In conclusion, Dr. Heitzman spoke briefly of the theory of constitutional conditions being diagnosed by microscopical examination of the colorless corpuscles of the blood.

DR. W. H. WELCH remarked that Dr. Heitzman had chosen for his theme a very broad subject, but he had confined his remarks to a small department of biology, namely histology, and chiefly to one corner of histology, the morphology of the cell.

In 1873 Dr. Heitzman promulgated his doctrine regarding the structure of cells and of the animal body. The main features of this doctrine were, first, that the cell-substance is pervaded by a network of fibrils; second, that the nucleus and the nucleolus are simply condensations of this network, accumulations of living matter identical in structure with that in the cell-body, and, third, that this network of living substance passes out from the apparent cell-boundaries and pervades the basement substance and connects the cells with each other. The human body, therefore, is essentially a large amoeba.

As regards the first point Dr. Welch remarked that before Dr. Heitzman's publication a differentiated structure of protoplasm had been described. After Max Schultze, Brücke, and Beale, in 1862, had overthrown the views of Schwann and Schleider as to the vesicular structure of the cell, protoplasm was usually described as granular or hyaline. In the bodies of some cells, however, particularly of ganglion-cells, certain details of structure had long been made out by Stilling, Schultze, Arnold, and others. For certain cells of amphibia Leydig, in 1865, described a reticulated structure of the protoplasm. The first, however, to ascribe a fibrillated structure to cells in general was Frommann. In 1866 he described in neuroglia-cells, not first in ganglion-cells as Dr. Heitzman had quoted him, fibrils proceeding from the nucleoli through the cell-bodies into the surrounding substance. In 1867 Frommann extended this observation to many other kinds of cells and claimed a fibrillated structure as a general characteristic of cells. Flemming is therefore right, in his important work on cell-substance, in granting to Frommann, and not to Dr. Heitzman, the priority in the discovery of the fibrillated structure of protoplasm. It must be admitted, however, that Dr. Heitzman surpassed all his predecessors in the definiteness and boldness with which he described the reticulated structure of protoplasm.

The existence of a fibrillated structure to protoplasm has been demonstrated during the last few years by several competent observers. Especially on specimens hardened in chromic acid, which Dr. Heitzman prefers, it is by no means difficult for any one, even without a trained eye and without remarkable lenses, to see a reticulated structure in the bodies of many cells. How far the reticulum, demonstrable by chromic acid and by some other reagents, corresponds to structures in the living cell is a question not easily answered. That chromic acid often exaggerates the distinctness with which a reticulum can be seen is certain.

Dr. Welch said that the most satisfactory studies on the structure of cells had been made by Flemming. Flemming, working with the best objectives, such as Zeiss' oil-immersion No. 18, had apparently demonstrated that most, if not all, animal cells have a fibrillated structure of the cell-substance. Whether the fibrils are arranged in the form of a network Flemming had not been able to satisfy himself. Flemming's descrip-

tions and drawings are calculated to inspire confidence by their objective nature, and by the absence of such uniformity of detail as characterize the drawings and descriptions of Dr. Heitzman. It is questionable whether Dr. Heitzman's descriptions apply to the structures seen and depicted by Flemming.

Dr. Welch remarked that the really novel features in Dr. Heitzman's doctrines related to the structure of the nucleus and the pervasion of the basement substance by a network of living matter continuous with that in the cells. In neither of these points had Dr. Heitzman's views been confirmed by competent observers.

There are serious objections to regarding the nucleus simply as an accumulation of the substance composing the cell-body. No histological studies of late years surpass in interest and importance those of Auerbach, Strasburger, Flemming, Hertwig, and others, relating to changes in the nucleus attending cell-division. These observations go to show that the nucleus has a dignity and a function of its own. The nucleus differs from the cell-body by its optical properties, by its reaction to staining dyes, and probably in its structure. A fibrillated structure of the nucleus is often more easily demonstrated than that of the cell-body; but Flemming, who speaks with the greatest authority in this matter, says that on the clearest specimens and with the best optical means, he has never been able to satisfy himself of a continuity between the fibrils in the nucleus and those in the cell-body. He therefore, and it appears justly, rejects Dr. Heitzman's view that there is no difference, except in density, between the nucleus and the cell-body.

Dr. Welch said that the third and the essential point in Dr. Heitzman's doctrine was unconfirmed by competent observers. This point is that the cells throughout the body are connected by a network of living substance which lies everywhere in the basement substance. That certain cells are connected with each other by processes has long been known. In 1870 Bizzozero corrected Max Schultze's error, and established the true relations of the so-called prickly-cells to each other. The anastomoses of other cells, particularly of connective-tissue cells, have also been generally, although not universally, admitted. But it is mainly upon his observations as to the existence of a reticulum of living matters in the basement substance of hyaline cartilage that Dr. Heitzman bases his doctrine. This reticulum he claims to demonstrate by nitrate of silver, chloride of gold, and even to see without the addition of reagents. Dr. Welch said that the silver pictures in general are notoriously difficult to interpret, but even these cannot be satisfactorily produced in cartilage, except near the perichondrium. To base a new scheme of structure of protoplasm, intended to overthrow all previous conceptions of the subject, upon such uncertain pictures, is a bold and unjustifiable proceeding. Dr. Heitzman's views concerning the structure of hyaline cartilage have not been confirmed, or, more strictly, have not been confirmed except in his own laboratory and in that of Stricker in Vienna; and, as he has justly remarked, these laboratories stand alone, as islands in the scientific world. The only original features of Dr. Heitzman's doctrine—namely, the structure of the nucleus and the existence of a network of living substance throughout the basement substance—remain unproved and unaccepted, save in the two laboratories mentioned.

Dr. Welch said that Dr. Heitzman had touched upon several other topics of too wide scope to admit of satisfactory discussion at present. He would, however, say that upon none of these topics was he in accord with Dr. Heitzman. As regards the subject of emigration of white blood-corpuscles, Dr. Welch considered that if anything in pathology was certainly established it was the fact of this emigration, and he doubted whether Recklinghausen would admit that he occupied the same position regarding inflammation as Dr. Heitzman does.

As regards the question of tuberculosis, Dr. Welch

said that there was only one point in Dr. Heitzman's remarks which he would touch upon. Dr. Welch said that Dr. Heitzman was in error when he claimed that inoculation of rabbits and guinea-pigs with various non-tuberculous substances was capable of producing artificial tuberculosis. Cohnheim and Wilson Fox have both retracted the results of their former experiments, and admit, as is generally admitted by the best modern pathologists, that inoculation only with substances containing the tuberculous virus is capable of producing artificial tuberculosis. The experiments and observations of Spina are worthless, and bitter and caustic as was Koch's criticism of Spina, it was justified. Spina's competency is well illustrated by the attempt to produce tuberculosis by inoculation with lycopodium seeds. As might have been expected, each lycopodium seed was the centre of a little inflammatory nodule. But who, besides Spina and Dr. Heitzman, would identify such nodules with a genuine tuberculosis?

The only addition, Dr. Welch said, which Dr. Heitzman had made to this doctrine of the structure of protoplasms, since he had been in New York, was the remarkable statement that by examining the living matter of certain cells he was able to tell the constitution of the individual from whom they came. This addition Dr. Heitzman had not presented fully to the Academy to-night. Dr. Welch would not therefore discuss it, but he supposed that this view could hardly have been seriously advanced by Dr. Heitzman. Dr. Welch protested against Dr. Heitzman's assertion that his peculiar doctrines had been widely accepted in America, and this protest was needed when it was asserted in certain German journals that it was only in America that such views could gain credence.

DR. L. ELSBERG, before discussing the subject, asked Dr. Heitzman concerning Virchow's views with reference to his theory, as he had been quoted for and against it.

DR. HEITZMAN replied that Virchow said he would put arms to the ground only when it is proven that the basis substance has the same physiological dignity as the cells proper, which he (Virchow) did not accept as yet demonstrated.

DR. ELSBERG then said that two years ago he presented to the Academy the results of investigations made with hyaline cartilage, especially in a case where he had examined the hyaline thyroid cartilage of a man forty-eight years of age that had simply been hardened in chronic acid, and showed not only connecting filaments between the cartilage corpuscles, but within the inter-corpuscular space accumulations of matter which were proved to be essentially of the nature of living matter, and the same as that contained in the corpuscles themselves. He would not object to the name cell, provided it was accompanied by the explanation of its real nature; but if it had been proved that it was not a cell, in the sense in which the term had been employed, he thought the word might as well be abandoned. After all, as long ago had been maintained by Fletcher, there are only two kinds of matter in the human body, the living and the non-living. Living matter, however, is not simply vital force added to an otherwise non-living substance, but a matter endowed with all the manifestations of life which are due to this peculiar matter, call it protoplasm, bioplasmon, or what not, and the main points on which Dr. Heitzman's views and the cell doctrine really diverge are the real points as to whether the view of those who maintain that the living properties pervade every portion of the organism to which life can be ascribed is true or not.

DR. HEITZMAN, in closing the discussion, directed attention to the fact that as far back as 1839 the reticulated structure of epithelium had been very well illustrated. The question was not who saw it first, or whether or not there is a reticulum, but his observations had been such as showed that the protoplasm is living matter. He

had not claimed any priority, but Theodore Eimer had claimed it for him, and all Dr. Heitzman wished to show was that to-day the best microscopist in Europe, S. Stricker, has acknowledged the correctness of the claims he made in 1872 and 1873.

The Academy then adjourned.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 15 to December 22, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon. Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Ky., to New York City, and assume the duties of Attending Surgeon in that city. S. O. 284, par. 12, A. G. O., December 12, 1883.

CLEMENTS, BENNETT A., Major and Surgeon. Relieved from duty as Attending Surgeon, New York City, and detailed as member of Army Medical Examining Board, now in session in New York City. S. O. 284, par. 12, A. G. O., December 12, 1883.

WILLIAMS, JOHN W., Major and Surgeon. Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. S. O. 286, par. 6, A. G. O., December 14, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 25, 1883 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
<i>Cases.</i>								
December 18, 1883.....	2	22	64	5	44	42	0	0
December 25, 1883.....	0	26	65	1	42	40	0	0
<i>Deaths.</i>								
December 18, 1883.....	1	3	6	4	13	21	0	0
December 25, 1883.....	1	5	6	2	8	24	0	0

LIABILITY OF SHIP-OWNERS FOR MEDICAL ATTENDANCE.—A very important decision, relating to the liability of ship-owners for medical assistance to sailors injured on shipboard, has recently been given by the Supreme Court of Pennsylvania, and a full account of it is given in the *Maritime Register*. It was an appeal from the Court of Common Pleas, Philadelphia, and the judgment of the lower court was affirmed. It appears that the engineer of a tug-boat lying alongside a wharf, was severely scalded by a burst of steam from the cylinder head. Medical assistance was immediately summoned, and the injured man was, at his own request, taken home, instead of to the marine hospital, to which place the master of the tug offered to take him. The tug-boat owners were called upon to pay for medical attendance to the engineer, but refused upon the plea that the marine hospital service was offered to the man, and his refusal to accept it absolved the vessel owners from any liability for such attendance. This plea would by many ship-owners be held well taken. But the lower court decided

against it upon the ground that the acts of Congress relative to the marine hospital service “do not supersede the right of the seamen, under the general maritime law, to be cured at the expense of the ship to which they belong, of all sickness or injury occurring to them while in the service of the ship.” The Supreme Court takes the same view. The liability of the ship for medical attendance to sick seamen is well settled. The tug-owners claimed, however, that the ship is not responsible if the seamen be taken home from the vessel, that the sailor should remain with his ship, and that if he is removed he cannot of his election choose for his recovery whatever place he may wish. This would leave the election as to place with the ship-owner—a position which is untenable. Upon this point and upon that relating to medicine-chests and medical attendance on shipboard, the Supreme Court gives an opinion which is good law, and what is better, good sense. In the first place it shows that a seaman, for injuries incurred in its service, is entitled to be cured at the expense of the ship. It further points out the fact, which ship-owners often overlook, that hospital dues collected for the support of the marine hospital service are paid by the sailor himself, and have really nothing whatever to do with the ship. A sailor is entitled, upon proper application, to free hospital service, but that is not a service furnished by the ship-owner. The sailor can take it or not as he elects. It is a wise provision which the law has made compulsory upon him, not upon the ship-owner. It is not a provision made by ship-owners “in relief of their liability under law maritime.” The maritime law protects the sailor in all the seas and seaports of the world. The marine hospital service is confined to some few of our home ports. The several acts of Congress relating to hospital dues are, therefore, only auxiliary to the ancient maritime law giving injured seamen the right to be cured at the expense of the ship, and simply afford seamen an additional safeguard. This view is generally adopted by the courts.

CHLOROFORM NARCOSIS INDUCED DURING NATURAL SLEEP.—Dr. H. Culbertson, retired Assistant Surgeon, U.S.A., of Zanesville, O., reports the following case : “Early last September I was called by Dr. A. Ball, of this place, to see a child two years of age, which had, the day before, incurred an extensive lacerated wound of the right cornea at its lower and inner margin. The iris was enclaved in the cut. Dr. E. A. Hildrith, of Wheeling, W. Va., was present. The child was asleep when we arrived, and nothing had been given to induce somnolency. It was proposed to chloroform without awaking the child. Dr. Ball did this successfully by holding the chloroform upon a napkin about eight inches from the child's face, and gradually approaching the inhalant to the face as long as the patient did not move, withdrawing it when it stirred to the original distance, and then gradually approaching again, until finally, bringing it close to the face, it no longer moved, and in ten or fifteen minutes complete narcosis was secured, when the enclaved iris was drawn out, excised, and the eye bandaged. When we departed the child was still asleep, but awoke half an hour later.”

A CASE OF SPINA BIFIDA WITH THE LARGEST TUMOR ON RECORD.—Dr. M. D. Briggs, of Belle Plaine, Iowa, writes : “On the 2d of November last I was called to see the child of Major J—. On arriving I found an infant of ten months burdened with an immense growth springing from the lumbar region, the entire left buttock and hip, and from the upper portion of the posterior aspect of the left thigh. It was a large sac distended to its utmost capacity with a straw-colored fluid. Of course the diagnosis and prognosis were not difficult to make. I only report it as interesting on account of the great size of the tumor, which measured *thirty inches in its longest circumference and twenty-six inches in the transverse*. In all the literature to which I have had access

I cannot find an account of any such growth that even approximates it in size. I endeavored to have it photographed, but could not obtain the consent of the parents. It was already ulcerating at the most dependent portion. In a few days it ruptured with a fearful gush, and in five days the child died from meningitis. A post-mortem could not be obtained.—The growth was about the size of an orange at the time of birth."

A FATAL CASE OF INVERSION OF THE UTERUS DUE TO TRACTION ON THE CORD.—Dr. Geo. Huntington, of La Grangeville, N. Y., gives an account of a case which bears an instructive lesson. He was called to attend a woman in labor, but as she lived some distance off, the labor had terminated and the woman was dead before he arrived. It seems that she had been attended by an old colored midwife who, after the birth of the child, had made such traction on the cord that the uterus was inverted. Great hemorrhage occurred, and the woman died within an hour after delivery. "The case shows," writes Dr. Huntington, "two things: one being the danger that country women more especially run by entrusting their lives to ignorant old women, who doubtless mean well, but whose ignorance often leads them to do irreparable mischief; and the other, that forcible traction on the cord is dangerous and should never be resorted to."

TWO UNUSUAL PARTURITIONS.—Dr. L. Byron Dawley, of Seneca Falls, N. Y., relates the history of an unusual parturition, but which, though rare, was almost exactly like one reported by Dr. W. H. Borham in the *Lancet* last August. Dr. Dawley says: "I attended, October 2, 1881, Mrs. C——, aged twenty-seven, Irish, well made, fair woman, the mother of one child born at full term. Had been in labor about four hours when I got there. As I entered the door I heard very loud cries, and heard her say, 'There, it has come.' I went as soon as possible to the bedside, and on lifting the covering, to my great surprise, found the placenta, membranes, waters, and child all intact. The child was floundering about in the liquid, trying to free itself. I lifted the mass, and to my much greater surprise found that the membranes did not rupture. I then tried them with my fingers, but finally had to resort to the scissors. The child, a female, was quite small, but lived, and is a smart child to-day. The mother made a good recovery." In Dr. Borham's case the patient was also a fair-complexioned, well-made woman aged twenty-eight. The child, membranes, and placenta came away together, the child being alive and the membranes unruptured.

AN ANTIPESSARIST.—Dr. J. Mathews Duncan is responsible for the following outburst: "In the present great abundance of contorted bits of wood, and metal, and vulcanite, and what not, called pessaries, my advice to you is *Punch's* advice to a young man contemplating marriage—Don't! Think twice before beginning the often baneful practice of using any instrument, teaching a woman to depend on what, if not positively useful, is positively injurious, though perhaps not much so. Many a woman has suffered from, and many a woman has died of, a pessary; but most pessaries, as I find them in use, are nearly innocuous for evil or for good. They are always harborers of dirt, and they always keep the mind watching the part; they are all liable to decay, and require, if long used, to be renewed. They are all undesirable additions to the contents of the pelvic excavation, and, if they are efficient, must, of course, cause more pressure, though perhaps on different parts, than that caused by the organ or organs which they keep in an altered position. Curious things are anteflexion pessaries. In regard to their giving relief I express no opinion, but I do say that if they give relief it is not by undoing the flexion, and keeping it undone, keeping the womb straight. I have seen most kinds of anteflexion pessaries as placed by their inventors, and too often replaced and replaced, but I have never seen one materially modify the flexion. I have myself never used one, and have no intention of doing so. There is another bad and too

common practice which I must not omit to mention here, that is, what is called straightening or putting up the womb, or replacing it time after time by the probe or finger. This has no other effect than to irritate the organ, for the displacement recurs immediately after the probe or finger is removed, as the practice itself shows."

A CASE OF KEROSENE POISONING.—Dr. C. S. Wheeler, of Williamsburg, Mass., sends us the history of a case of kerosene poisoning, which is instructive, as these accidents are rare. He says: "I was called October 29th to see a child, eighteen months old, who had swallowed an unknown quantity of kerosene, though the amount probably did not exceed two ounces. The little patient, seen one hour subsequent to the swallowing, was vomiting, purging, cyanotic; a tendency to coma existed, the pulse was 130, weak, and somewhat irregular; respiration was also irregular. Treatment: ordinary emetics were given before my arrival, hence only stimulants and alkalies were ordered. After a few days of gastro-enteric febrile movement the child recovered. I have heard of several ounces of kerosene having been taken by adults without perceptible results, but the above case compels me to doubt the statement."

LET NATURE REMOVE THE PLACENTA.—In the *Deutsche Med. Wochenschrift* Dr. Dohrn thus sums up his experience: "1. In one thousand lying-in women, in whom the expulsion of the placenta was left to nature, the results were far better than in one thousand others in whom Credé's method of expulsion was used. 2. The one thousand lying-in women in whom the placenta was spontaneously expelled had considerably less hemorrhage and fever after delivery. In those cases treated by Credé's method portions of the membranes were frequently retained, and there were more fatal cases than in the others. 3. The disadvantages which are conditional to the method of Credé are especially seen in the cases in which the placenta is expressed during the first five minutes. After a longer time the expression was more complete, but never as safe as by the spontaneous method."

AMERICAN PROFESSORS.—America's contributions to science are by no means very extensive, or very often important, that is, as compared with the great volume of German production, in which comparison they seem almost insignificant. We have never duly fostered research, for we have bestowed upon it neither the proper time nor office. There are, we suppose, at least six thousand "professors" in the United States. Are there one hundred and fifty of them active investigators? The time seems remote when every American professor will be expected to be also an investigator, or to contribute aught to the common fund, but among us is a little band of men who have before them the model of Germany, and who are earnestly working for the intellectual elevation of their country. The first object is necessary to render research more important in public estimation, and so to smoothe the way for a corps of professional investigators. Every thoughtful person must wish success to the attempt.—*Science*.

MEDICAL SUPPLY AND DEMAND.—Statistics show that among 1,000 doctors the number of deaths annually ranges between 15 and 25. At this rate the number of deaths annually among the 90,000 medical men of this country would be on an average 1,800. Among the 14,000 physicians of Austro-Hungary the annual death-rate is said to be about 320. If the same ratio existed in this country, the number of deaths annually would be slightly over 2,000. Probably the actual figure is not far from 1,800. On the other hand, the number of medical graduates in 1882-3 was 3,979, or nearly four thousand, and more than double the estimated number of deaths. Account must be taken of the number of physicians who annually retire from practice, and on the other hand of the number of graduates who never enter the practice of medicine. The annual increase of population is probably over a million.

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